Site Allocations Plan and Aire Valley Leeds Area Action Plan

Leeds Local Development Framework

Development Plan Document

Infrastructure Background Paper

July 2015

INFRASTRUCTURE BACKGROUND PAPER RELATING TO SITE ALLOCATIONS PLAN AND AIRE VALLEY LEEDS AREA ACTION PLAN

Introduction

1.1 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.

1.2 The purpose of this paper is to explain the process of identifying the infrastructure requirements arising from the proposed allocations set out in the Site Allocations Plan (SAP) and the Aire Valley Leeds Area Action Plan (AVLAAP) Publication Drafts. Details are provided of the methodology used, infrastructure organisations and City Council services involved, and how this has informed the process of identifying site requirements for the proposed site allocations.

1.3 Appendices to this Infrastructure Background Paper are:
1) The Leeds Infrastructure Delivery Plan (IDP) (June 2015)
2) School Provision and the Implications for School Places Background Paper
3) Transport Background Paper

1.4 The IDP is targeted to support the Site Allocations Plan (SAP) Publication Draft and the Aire Valley Area Action Plan (AAVAAP) Publication Draft. It is an update of the previous April 2013 IDP which supported the Core Strategy Submission Draft. The IDP is inherently a 'living' document which means it is necessary to review it over time. It identifies as far as possible the currently planned infrastructure provision in the Leeds District, including the critical infrastructure necessary for the delivery of the SAP as based on the Core Strategy up until 2028. It provides an overarching framework for other service providers' plans and programmes, to bring them into one place and to ensure that all providers are planning for the predicted locations of future growth as set out in the SAP and AVLAAP.

Legal Requirement

1.5 The requirement to reflect infrastructure requirements arising from future growth is recognised in the National Planning Policy Framework (NPPF):
- "Local planning authorities should set the strategic priorities for the area of a Local Plan, including the provision of infrastructure" (Para 156).
- "Local Plans should plan positively for the development and infrastructure required in the area to meet objectives, principles and policies" (Para 157).
- "Local planning authorities should work with other authorities and providers, to;
  - assess the quality and capacity of infrastructure for transport, water supply, wastewater and its treatment, energy (including heat), telecommunications, utilities, waste, health, social care, education, flood risk and coastal change management, and its ability to meet forecast demands; and,

- take account of the need for strategic infrastructure including nationally significant infrastructure within their areas" (Para 162).

1.6 The NPPF also states that for good infrastructure planning the local planning authority should work collaboratively with private sector bodies, and utility and infrastructure providers.

1.7 The Core Strategy embeds the requirement to plan for infrastructure needs arising from the planned growth within the Spatial Vision and Objectives, and Spatial Policies 1, 6, 8, and 11. The Key Diagram identifies the key elements of the Leeds Transport Strategy, which is also shown in Map 9 of the Core Strategy. Policy ID1 summarises the methods for delivery and implementation of the Core Strategy.

Process of Involving Infrastructure Consultees

1.8 From the early stages of the SAP and AVLAAP preparation, infrastructure consultees have been involved in the process of assessing infrastructure issues and requirements arising from the sites which were considered for their suitability for development. Section 1 of the IDP explains this process in detail.

1.9 This includes a summary of the process involved in working alongside colleagues from the Council's Children's Services department, and the outcomes in identifying sites for school provision. Appendix 2 of this Background Paper is a separate paper setting out more detail on school provision and the implications for school places planning, including a detailed schedule of each school planning area.

1.10 Appendix 3 is a Transport Background Paper which summarises the forecast impacts of the proposed developments in the SAP and AVLAAP on the transport network in Leeds. A number of interventions have been identified to mitigate the forecast impacts of growth at key junctions across the Leeds highway network. It is expected that contributions will be obtained from developers towards the delivery of these interventions, alongside contributions towards schemes within the West Yorkshire Plus Transport Fund.

1.11 Any further comments received by infrastructure providers or other relevant infrastructure comments received during the Publication Draft consultation period will also be considered prior to the final Submission of the plans.

Site Specific Requirements

1.12 The most appropriate sites for SAP and AVLAAP allocations have been proposed having regard to planning, highways, environmental and other considerations. This site selection process has been informed by the consultee comments of infrastructure providers or technical planning consultees. A key way in which the Plans aim to ensure or promote infrastructure delivery is that some site allocations contain site specific requirements relating to infrastructure. These set out where sites cannot come forward without contributing land or payments towards locally identified priorities. These sites have been identified as set out above and in the appendices.

Mechanisms for Delivery

1.13 The IDP sets out a range of mechanisms for delivery of the SAP and AVLAAP, including developer contributions through the Community Infrastructure Levy and Section 106 or 278 Agreements, the Leeds City Region Deal and the West Yorkshire Plus Transport Fund, bidding to a range of national and European sources or Government supported borrowing and grants, grants from other external bodies, Council tax, generation of capital receipts, the New Homes Bonus, and other innovative sources of funding and borrowing such as TIF and the Aire Valley Enterprise Zone.

APPENDICES

1) Leeds Infrastructure Delivery Plan (IDP) (June 2015)

2) School Provision and the Implications for School Places Background Paper

3) Transport Background Paper

APPENDIX 1: LEEDS INFRASTRUCTURE DELIVERY PLAN (IDP) JUNE 2015

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1. INTRODUCTION

i) Purpose of the Infrastructure Delivery Plan

1.1 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.

1.2 The previous version of this Infrastructure Delivery Plan (IDP) dated April 2013 supported the Core Strategy through Examination. This current version is targeted to support the Site Allocations Plan (SAP) Publication Draft and the Aire Valley Area Action Plan (AAVAAP) Publication Draft. Minor updates will be made as necessary prior to the public consultation on the Publication Draft in Autumn 2015, and the IDP will then undergo a further review to make it as up to date as possible prior to Submission of the SAP and AVLAAP for examination. This is because the IDP is inherently a 'living' document which means it is necessary to review it over time. N.B. all future references to the SAP in this IDP also refer to the AVLAAP unless specifically drawn out separately. There are also two separate AVL background papers specifically relating to greenspace and infrastructure.

1.3 This IDP identifies as far as possible the currently planned infrastructure provision in the Leeds District, including the critical infrastructure necessary for the delivery of the SAP as based on the Core Strategy up until 2028. It provides an overarching framework for other service providers' plans and programmes, to bring them into one place and to ensure that all providers are planning for the predicted level and locations of future growth as set out in the Core Strategy.

1.4 The requirement to reflect infrastructure requirements arising from future growth is recognised in the National Planning Policy Framework (NPPF):

- "Local planning authorities should set the strategic priorities for the area of a Local Plan, including the provision of infrastructure" (Para 156).
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- "Local planning authorities should work with other authorities and providers, to;
  - o 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,
  - o take account of the need for strategic infrastructure including nationally significant infrastructure within their areas" (Para 162).

1.5 The NPPF also states that for good infrastructure planning the local planning authority should work collaboratively with private sector bodies, and utility and infrastructure providers. As all organisations must invest in their future in order to maintain,

improve, or expand their services, the IDP for Leeds has helped to improve communication and partnership working between service providers. It has integrated their individual processes and programmes which not only allows an overview of the infrastructure provision in Leeds, but also enables providers to more effectively target areas of need and achieve greater efficiencies, for instance in identifying co-location possibilities.

1.6 The Core Strategy embeds the requirement to plan for infrastructure needs arising from the planned growth within the Spatial Vision and Objectives, and Spatial Policies 1, 6, 8, and 11. The Key Diagram identifies the key elements of the Leeds Transport Strategy, which is also shown in Map 9 of the Core Strategy. Policy ID1 summarises the methods for delivery and implementation of the Core Strategy:.

POLICY ID1: Implementation and Delivery Mechanisms
The Council will undertake to ensure the delivery and implementation of the Core Strategy through a variety of mechanisms, initiatives, and investment decisions, including:

- Partnership working,
- Working with communities, including through neighbourhood planning,
- Use of Council assets,
- Supporting evidence,
- Further guidance and development management,
- Bidding for funding sources and promoting the City for this purpose,
- The use of innovative funding opportunities (such as Tax Incremental Financing to help stimulate local investment, Business Improvement Districts (BIDS), European
- Development Fund, New Homes Bonus, Community Infrastructure Levy, Asset
- Leverage - either directly using City Council assets or through an Asset Liquidity
- Vehicle / Joint Venture),
- Linking greenfield and brownfield development,
- Recognising the need for contingency planning,
- Allowable Solutions.

1.7 The IDP also helps to further embed the relationship between the Vision for Leeds and the Leeds Local Development Framework (LDF), has helped to provide the evidence base in working up the Community Infrastructure Levy (CIL) (see Section 7iv), and will identify future infrastructure priorities for the CIL and other sources of funding.

1.8 Although the IDP seeks to identify the key infrastructure items which are required to meet the growth objectives set out in the Core Strategy and the SAP, 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.

ii) Developing the SAP Infrastructure Requirements

1.9 From the early stages of the SAP preparation, infrastructure consultees have been involved in the process of assessing infrastructure issues and requirements arising from the sites which were considered for their suitability for development. This has included external organisations and relevant departments within Leeds City Council.

This approach included a focus on the duty to co-operate, as evidenced throughout this IDP in the range of schemes and interventions that are cross-boundary, and for instance in the development of the West Yorkshire Plus Transport Fund. Such a duty is integral within the consultation processes already undertaken, for instance Highways England and Network Rail are just two examples of providers which have a strategic view and are inherently 'cross boundary' in their input. Please see the 'Duty to Co-operate Background Paper' for more information.

1.10 Two initial meetings were held in 2012 to discuss the SAP and to agree the general scope for consultation and involvement of the consultees. The transport topic was discussed at a meeting on the 19th April 2012 and was attended by representatives from Highways England (formerly the Highways Agency), Network Rail, West Yorkshire Combined Authority (formerly West Yorkshire ITA) and LCC's Highways Development and Transport Policy team. The topic of water and flood risk was discussed on the 9th July 2012 and was attended by representatives from Yorkshire Water, the Environment Agency and LCC's Flood Risk Management.

1.11 The process agreed for both topic areas was to send a list of the sites being assessed to the infrastructure contacts, for their individual site comments (and proposed mitigation measures where necessary) to then be provided to the officers involved in the SAP process.

1.12 These infrastructure comments and responses were incorporated into the SAP database which logs all information relevant to every site. The information was then used to inform the site selection process and Sustainability Appraisal of sites. The sites were assessed for housing, employment and mixed use (housing, employment, or retail dependent on the site submission). This has been an iterative process throughout the preparation of the SAP, as new sites have been submitted to the Council prior to, during, and after the Issues and Options stage of the Plan.

1.13 The Council's Children's Services department have also been working with planning officers for a number of years through the preparation of the Core Strategy and the associated IDP. This was to identify the approximate numbers of pupil growth in each Housing Market Characteristic Area (HMCA) resulting from the Core Strategy housing requirements, and to calculate the number of new forms of entry required, divided into primary and secondary places. Work on the SAP started in 2012. Since that time officers from Children's Services have considered all the sites assessed for potential suitability for housing use. Prior to the SAP Issues and Options stage, the comments provided by Children's Services were of a general nature and did not take account of overall housing numbers as the number of potentially suitable housing sites exceeded the HMCA requirements. The purpose of the Issues and Options document was to present potential housing options. Since that stage officers have been working on identifying the sites most suitable for allocation for housing use in each HMCA. Once the list of proposed housing allocations was more fully developed, Children's Services were then able to provide more site specific comments on the mechanism for providing additional school places in response to the new housing allocations. The Background Paper on Schools Provision provides more details on the process of identifying new school provision.

1.14 Northern Gas was contacted in late 2014 and spring 2015 regarding allocated housing and employment sites that either have a gas pipeline running through or adjacent to the site, or are within the blast zone for a gas holder and would trigger the

need for consultation as part of a planning application. Northern Gas provided a standard response to be included in the site constraints for affected sites including the requirement that further consultation with Northern Gas would be necessary by a developer prior to the development of a site.

1.15 In addition to the separate contact made with infrastructure consultees, all statutory consultees were consulted as part of the Issues and Options consultation on the SAP and representations received were considered. Where site specific comments were made these have informed the process of site selection.

iii) Developing the Aire Valley Leeds AAP Infrastructure Requirements

1.16 The update of the IDP as set out further below was an iterative process that included the emerging Aire Valley Leeds AAP proposals. This is also discussed further in the AVL Infrastructure Background Paper. The IDP schedule update includes the position, timescales and phasing of the key infrastructure projects in relation to Aire Valley Leeds.

iv) Developing the IDP

1.17 The initial IDP (April 2013) followed the following methodology in its development:

a) Identification of partner service providers and setting up of an infrastructure group.
b) Review of providers' published plans, asset management strategies, and projects.
c) Information gathering through targeted questionnaire, group meetings, and information review in order to share emerging plans and priorities.
d) Assess infrastructure proposals and capacity, standards and deficits, against the emerging Core Strategy policies and growth targets.
e) The above steps enabled the preparation of the schedule and the Draft IDP, although due to the long timescales involved in the Core Strategy preparation dating from 2006, it was an iterative process which required regular updating and review.
f) The infrastructure planning outlined above also helped to refine the Core Strategy, identify requirements, and shape its policies.
g) Wider public and partner consultation on the draft IDP, alongside the Publication draft of the Core Strategy in March 2012.
h) Further informal consultation throughout 2012 with infrastructure providers and LCC departments to support the evidence base for the CIL Preliminary Draft Charging Schedule.
i) Final refinement and preparation in early 2013.
j) The IDP was then subject to public Examination in October 2013 as part of the evidence to support the Core Strategy, including a specific examination session on infrastructure and monitoring (plus another session on infrastructure issues relating to certain community areas

1.18 The IDP also informed the emerging Community Infrastructure Levy infrastructure evidence as tested at the CIL Examination in June 2014, and development of the Regulation 123 List (see below for further information).

1.19 The IDP was then iteratively reviewed and updated in order to prepare the current draft (July 2015), to take into account the processes and comments made for the SAP and AVLAAP as outlined above.

v) Infrastructure Delivery

a) Site specific requirements

1.20 As described above, the most appropriate sites for SAP allocations have been proposed having regard to planning, highways, environmental and other considerations. This site selection process has been informed by the consultee comments of infrastructure providers or technical planning consultees. Some allocations in the SAP contain site specific requirements relating to infrastructure. These set out where sites cannot come forward without contributing land or payments towards locally identified priorities following the agreement of the list of proposed allocations by Executive Board in February 2015, the site requirements for individual sites have been identified. Paragraph 2.52-2.54 and the Site Details in the SAP provide details of the site requirements identified.

b) Neighbourhood Plans

1.21 Neighbourhood Plans prepared by community groups will also elaborate on the infrastructure requirements and priorities from their own viewpoint, and will work in tandem with the Site Allocations Plan and other Council support to help deliver the necessary infrastructure at the right time. The Council has designated 33 neighbourhood areas, including 8 Neighbourhood Forums. There are also a number of other communities who are actively working on Neighbourhood Plans but have not yet formally applied for neighbourhood area designation. In total there are over 40 communities involved in neighbourhood planning in Leeds.

1.22 The Council is working closely with many of these communities to support and guide them in the neighbourhood plan process. It has established an overarching Neighbourhood Planning Steering Group to coordinate and guide neighbourhood planning at a strategic level across the City as well as individual officers assisting specific communities at a local level. The Council secured funding for four Frontrunner Pilot areas. These areas have been making good progress with the benefit of the money available and support.

1.23 Further work is underway in order to assist communities (both within and outside of neighbourhood planning areas) to identify their local infrastructure needs and priorities. This is to help inform future infrastructure spending decisions, and particularly for those pots of money which are locally managed or for local funding bid processes.

c) The Community Infrastructure Levy and S106 Agreements

1.24 Local authorities can charge a Community Infrastructure Levy (CIL), a tariff system on new development to help contribute to new infrastructure. It is a non-negotiable charge on new buildings in £s per square metre on gross internal floor area. A development generally becomes liable on the grant of planning permission, and the CIL is paid in instalments from when the scheme commences on site. The Leeds CIL Charging Schedule was adopted in November 2014 and charges were implemented

from April 2015. The rates underwent various stages of public consultation and a public examination, and the Examiner considered that the CIL charges are a cautious but realistic approach, at levels that will not put the overall development of Leeds at risk. The Council "must apply CIL to funding the provision, improvement, replacement, operation or maintenance of infrastructure to support the development of its area."

1.25 The CIL aims to support and incentivise sustainable growth, because it will directly meet some of the infrastructure needs created by new growth, although it is important to note that the Government's intention has never been for the CIL to pay for all necessary local infrastructure. Planning Policy Guidance explicitly states that "the Government recognises that there will be uncertainty in pinpointing other infrastructure funding sources, particularly beyond the short-term." A wide range of other funding sources will continue to be necessary and will be fully investigated by the Council.

CIL and Section 106 Agreements

1.26 From April the previous method of gaining pooled developer contributions through 'Section 106 Agreements' has been greatly limited due to national CIL Regulations. This was the key reason for introducing the CIL in Leeds. The CIL replaces the previous method of S106 pooled contributions (via Supplementary Planning Documents) for:

- Off-site greenspace
- Public transport improvements
- Education
- Public realm in the Holbeck Urban Village

1.27 However, the CIL is intended to provide infrastructure to support the development of an area rather than to make individual planning applications acceptable in planning terms. As a result, S106s still have an important role in mitigating on-site or very local impacts in order to make an individual development acceptable. To ensure that individual developments are not charged for the same infrastructure items through both S106s and the CIL, the Regulations require the Council to publish a list of those projects or types of infrastructure which may be funded by the Council's strategic proportion of the CIL, called the Regulation 123 List. A S106 contribution (or a S278 Highways contribution) cannot then be required towards the same item on the List.

1.28 A further restriction on the use of S106s is that there is now a limit of five separate obligations which can be pooled towards an individual infrastructure project or type of infrastructure, as it is intended that the CIL becomes the main mechanism for pooled contributions. This is discussed further below in relation to the implications for infrastructure planning in the SAP.

1.29 The Reg123 List does not signify a commitment to fund the projects listed or identify spending priorities. The List as at June 2015 is:

Sustainable transport schemes: New Generation Transport (NGT) Leeds Core Cycle Network The Public Right of Way network
Leeds Flood Alleviation Scheme (FAS)

Secondary education
Primary education, except for large scale residential development identified in the Site Allocations Plan, which will be expected to provide primary schools either as an integral part of the development or as the result of no more than 5 separate planning obligations
Green infrastructure and public greenspace, except for on-site provision required by Core Strategy policies
Community sports facilities
Cemeteries
Public realm improvements, except for on-site provision or where this is required as a direct result of an adjacent development
District heating networks
Public health facilities

1.30 The List will be reviewed as necessary, subject to appropriate local consultation and justification. It is likely that the first review will be by the end of 2015, and further reviews will particularly need to support and link closely with the approach agreed in the SAP.

1.31 For clarity therefore, there are a number of matters which will continue to be addressed through S106 or S278 Agreements:

- Affordable housing
- Employment and skills agreements e.g. local employment or apprentice contracts
- Site specific matters needed to make the development acceptable in planning terms, including:
  - o New bus connections or services and cycle / pedestrian routes and connections if directly required by the development
  - o Local junction / highways improvements and access into the site
  - o Primary and secondary schools as a direct result of large sites
  - o On-site greenspace as required by Core Strategy Policies G4 and G5 (which include requirements for a financial contribution in lieu of on-site provision in certain circumstances).
  - o Public realm improvements on-site, and off-site where this is required as a direct result of an adjacent development.
  - o On-site drainage and flooding solutions
  - o On site sustainable energy requirements
  - o Metrocards, travel plans and monitoring fee / co-ordinator posts

1.32 Of particular note, the current R123 List states that the CIL will contribute towards primary education, “except for large scale residential development identified in the Site Allocations Plan, which will be expected to provide primary schools either as an integral part of the development or as the result of no more than 5 separate planning obligations.” It was originally intended that the SAP would not only identify those large sites which in themselves generate the need for a primary school on site, but also up to 5 other sites per proposed new primary school/extension which could pool contributions where they are not large enough to require one on their own. However, because the wording of the CIL Regs refers to pooling of S106 ‘obligations’, it is not up to 5 sites which could contribute in such a way, but only 5 obligations. This is important because it means that the tally includes where schemes may change and new/revised applications/S106s are required, and where reserved matters

applications come forwards in phases spread across one sight which would each then require a S106.

1.33 It can be seen therefore that even a single site could on its own generate 5 obligations, after which no more could be taken into account either from that site or from any other site, no matter what was set out in the SAP and no matter whether the contributions would ever actually be received (i.e. if superseded by another application). This loophole along with the fact that it cannot be guaranteed which sites would come forwards first, means that there is the likely scenario that even if 5 sites per school proposal are identified, only some or none of them may eventually be able to contribute the primary school S106 funding. An additional issue is that the CIL rates were set based on evidence that assumed the CIL would pay for primary schools. While there are likely to be some sites which could viably pay both the CIL at the current rate and provide a S106 contribution, this would require a viability appraisal on every such site proposed for a contribution.

1.34 A final point relating to the justification which would be required at Examination is that it is very difficult to identify which should be the specific 5 sites to contribute towards the school need in each area. This is because it does not work out evenly basing this on size or location or phasing, because the need for the school and the timing of it will alter in each case depending on which sites come forwards at which points, and because there are inevitably more than 5 sites in most instances that will generate a cumulative demand for places.

1.35 In summary therefore, it is now proposed that the Site Allocations Plan does not identify any sites where off-site S106s will be required for primary school provision, but that all primary schools (except those provided within large sites) would be paid for out of the CIL and other funding sources in the same way as has always been assumed for secondary schools.

CIL Spending

1.36 Up to 5% CIL receipts are to be retained for LCC costs. A further 70% to 80% receipts are directed towards LCC strategic fund whereby priorities for strategic CIL spending will be decided annually as part of the budget setting process. This will be in line with the Reg123 List, and taking into account the impact of specific and cumulative infrastructure needs arising from new development. By the date of the SAP Submission there will be more clarity on strategic CIL spending priorities, as income projections will be more certain and the first budget setting post-CIL will have taken place.

1.37 The Council is also required to pass over a % of the CIL as a ‘meaningful proportion’, known in Leeds as the ‘neighbourhood fund’:

- Town or Parish Council area: 15% if no neighbourhood plan or 25% with neighbourhood plan, given to that Council.
- Non-parished area: 15% of the CIL generated in that area if no neighbourhood plan or 25% with neighbourhood plan. The Council has determined that spending decisions will be made by LCC Community Committees in consultation with the relevant community.

1.38 There is more discretion over spending of the neighbourhood fund than the City Council’s strategic fund, as not only can it be on “the provision, improvement,

replacement, operation or maintenance of infrastructure", it can also be on "anything else that is concerned with addressing the demands that development places on an area." Spending does not have to be towards projects on the Reg123 List. LCC will continue to work closely with parish councils and other groups, including through the SAP and Neighbourhood Planning, with the aim of shared infrastructure planning and maximising use of CIL resources. For instance, the neighbourhood fund could be used towards additional school capacity if this is identified as a local issue. Community Committees will direct local spending decisions, with overall guidance/protocols being established by Autumn 2015. In order to align infrastructure planning, communities need to consider the relationship between potential sites, phasing, infrastructure needs and mitigation, and CIL income.

Viability

1.39 The CIL was tested against the cumulative impact of all the Core Strategy policies on the development viability of a range of hypothetical sites, as specific sites were not known at the point the CIL evidence was generated. The Economic Viability Study (GVA, Jan 2013 and update May 2014) was the key piece of evidence. It was an iterative process in balancing for instance how much the authority wants to collect under the CIL, against the amount of affordable housing on each site. Ultimately, the CIL rates were set after all the other policy considerations had been taken into account.

1.40 It should also be noted that the Government has recently abolished the Code for Sustainable Homes and brought in the Nationally Described Space Standard (NDSS) and optional Building Regulations in relation to water efficiency and access. In both cases they must be supported by viability evidence if they are to be adopted by the Council. To a large extent these costs were already covered within the parameters tested in the Economic Viability Study, but some further testing may be necessary.

1.41 The Government is clear that the CIL must strike a balance between providing sufficient infrastructure funding, whilst not having a detrimental impact on the economic viability of development as a whole across the area. The NPPF also states in paragraph 173 that "pursuing sustainable development requires careful attention to viability and costs in plan-making and decision-taking. Plans should be deliverable. Therefore, the sites and the scale of development identified in the plan should not be subject to such a scale of obligations and policy burdens that their ability to be developed viably is threatened. To ensure viability, the costs of any requirements likely to be applied to development, such as requirements for affordable housing, standards, infrastructure contributions or other requirements should, when taking account of the normal cost of development and mitigation, provide competitive returns to a willing land owner and willing developer to enable the development to be deliverable."

1.42 The main piece of evidence in developing the CIL was the CIL Economic Viability Study (Jan 2013, update May 2014, by GVA). The rates were not set by where the Council does or does not want new development, but by a standard set of residual development appraisals where representative development typologies were tested across range of use classes and results benchmarked against 'market value'. The Study recommended that if CIL and future planning obligations reduce benchmark (market value) by more than 25%, it is likely to stop sites from being developed.

1.43 There is an increase in land values when sites are allocated for housing, particularly for Green Belt sites. There is also some 'hope value' added to the basic current agricultural land value even prior to formal allocation. As outlined, above, it is not the intention to stop development coming forwards by requiring sites to provide unreasonable levels of on-site infrastructure or other contributions. However, landowner aspirations have to consider the sustainability needs for such site requirements to be set out in the SAP, and that developers cannot go below certain profit levels in building their schemes. Therefore ultimately if viability becomes marginal on particular sites, and in particular on former Green Belt or Rural Land sites previously without hope of gaining planning permission, it is the approach of the SAP that it has to be the landowner who takes the 'hit' and accepts a lower value for their site rather than to reduce the policy requirement for infrastructure or other elements such as affordable housing.

d) Leeds City Region Deal and the West Yorkshire Plus Transport Fund

1.44 The City Deal for the Leeds City Region was agreed by the Government and the Local Enterprise Partnership in September 2012. It brought together a range of funding sources to create an investment framework that has a number of components including a commercial revolving fund that will lend on projects that the banks are unwilling to lend on, along with EU Funds, a potential single capital pot, and Enterprise Zone income. The investment framework began funding projects in 2013. Working as a City Region allows greater potential in bidding for infrastructure funding.

1.45 The Leeds City Region achieved a very positive outcome from the Local Growth Fund settlement. Over the 6 year period (2015/16 – 2020/21) of the Deal, the Leeds City Region secured £572.9 million, which is the largest settlement in the Country. The settlement also included the previously accepted Department for Transport 'legacy' schemes, such as Leeds Station Southern Entrance and NGT.

1.46 In July 2014, the Government announced that the WYCA had, uniquely, secured funding to establish a £1bn West Yorkshire Plus Transport Fund. The Fund will comprise £600m of Government funding government over 20 years, £183m of other devolved transport funding previously secured through the City Deal, and local contributions.

Period	Funding Available	£m
2015/16 – 2020/21	LGF - 6 years @ £30m per year	180
2015/16 - 2024/25	Devolved DfT Major Scheme Funding	183
2021/22 – 2034/35	LGF - 14 years @ £30m per year (subject to independent assessment of satisfactory delivery and economic impact)	420
2015/16 – 2034/35	Public Sector match funding including committed levy	217
Total		1,000

1.47 The Fund has the potential to generate significant additional economic investment that would deliver jobs in the short and longer term, enhance connectivity to, from and within West Yorkshire, and establish a fully integrated transport system for the region. In addition, it would substantially reduce dependence on central funding to include

significant devolution of spending decisions and give local communities and businesses surety over a 10 year programme of Major Transport Schemes. All projects will be tested through a single appraisal framework. A fund of this scale will support a transformation of the transport network, develop it in a way that is not constrained by District boundaries and support future economic growth. By committing to and publishing a plan and a Fund to deliver it, West Yorkshire will be in good position to attract investment and economic growth as the UK moves out of recession. The WYCA will use the £1bn West Yorkshire Plus Transport Fund targeted at reducing congestion, improving the flow of freight and making it easier for people to commute to and from expected major growth areas.

1.48 At the December 2014 meeting of the WYCA, a £1.4bn programme and funding strategy for the West Yorkshire Plus Transport Fund was approved. The agreed programme contains 21 schemes to be delivered in full by 2021. In addition, there are another 12 schemes (or phases of schemes) to be on site by 2021 and a further 6 schemes to be delivered by 2025.

1.49 All of the schemes in the programme have been devised and assessed for impact on unlocking economic benefits in terms of GVA created, employment and housing growth across West Yorkshire and York. These objectives are in line with the Strategic Economic Plan drawn up by the Leeds City Region Enterprise Partnership (LEP) and adopted by the Combined Authority. As part of the Growth Deal settlement announced in July 2014, West Yorkshire and York secured a unique 20-year settlement of £30m per year to support the West Yorkshire plus Transport Fund. This will deliver a further £420m in government funding from 2021-22 to 2034-35.

1.50 The full list of the schemes to be delivered is included in the Transport Section below.

1.51 Along with the Leeds City Region Enterprise Partnership (LEP) the West Yorkshire Combined Authority is also committed to seizing the economic benefits of high-speed rail for the region. HS2 is expected to directly benefit Leeds City Region to the tune of £1bn a year in extra economic growth, and Transport Fund investment will ensure the key towns and cities in this large and diverse City Region have fast, efficient access to the high-speed network.

e) <u>Other Funding Sources</u>

1.52 The Council makes all attempts to gain a range of funding, including through bidding to the Local Enterprise Partnership, national and European sources and programmes. The Council also progresses programmes and development incentives in order to advance and prioritise aspects including infrastructure, improvements to the environment, and business promotion. This includes promoting Leeds as a City at a wider level within the national and international arena in order to attract investment and fulfil the Vision for Leeds and Core Strategy, SAP, and AVLAAP ambitions.

1.53 Some of the infrastructure planned for Leeds is essential for the proper delivery of the SAP and AVLAAP whereas other infrastructure is less critical. These delivery strands have been identified in the IDP Schedule, to enable funding streams to be prioritised. As much certainty as possible at the present time regarding funding has also been indicated. Should key projects not receive funding, then the Council can respond at that time as necessary through other mechanisms, such as changing the type of infrastructure proposed (e.g. the new NGT has evolved out of the former ‘Supertram’),

safeguarding land for the future for when funding does become available, or looking for funding from a different source such as developer contributions or a partnership with the private sector. Monitoring is an important aspect of contingency as it provides up to date evidence and feedback to enable review of policies and progress.

1.54 The use and development of Council owned land, or the sale of that land, will be essential in some areas in order to promote growth, and to achieve the most sustainable forms of development. The Council undertakes to use its assets wisely and at the appropriate times in order for this to occur. Protection and improvement of environmental assets on Council owned land is a similarly important aspect of the delivery of the SAP.

1.55 As outlined in the Schedule, the Council will continue to seek funding through a wide range of sources to provide the necessary infrastructure to support the District. For instance, this may be provided by central Government in the form of supported borrowing and grants (normally for specific purposes, and particularly from the Department for Transport and the Department for Education), in the form of grants from other external bodies, or from developer contributions. Funding sources investigated for LCC services also include the capital programme including council tax, generation of capital receipts, the New Homes Bonus, the City Centre Business Improvement District and other innovative sources of funding and borrowing associated with the Leeds City Region Enterprise Zone, such as £8.57m Building Foundations for Growth Fund from central governments and potential to reinvest business rates retained by the City Region to further facilitate delivery of the Enterprise Zone.

1.56 The New Homes Bonus (NHB) was introduced in 2010 as a grant paid by central government to local councils for increasing the number of houses built in their area. It is paid as a match of the council tax raised on each new home (new-build homes, conversions and long-term empty homes brought back into use) for the following 6 years. There is also an extra payment for providing affordable homes. It aims to offer a clear incentive and reward for councils and communities to agree to new housing. The Leeds allocation for 2015/16 was £ 2,642,988.

2. PHYSICAL INFRASTRUCTURE

i) Transport

2.1 The West Yorkshire Integrated Transport Authority (WYITA) was the Local Transport Authority for the West Yorkshire area from 2009-2014, comprising the five district local highway and traffic authority areas of Bradford, Calderdale, Kirklees, Leeds and Wakefield. It had the sole statutory responsibility for the development and oversight of the West Yorkshire Local Transport Plan; 'MyJourney West Yorkshire – Local Transport Plan 2011-2026', which was prepared for the WYITA by the former Metro (the West Yorkshire Passenger Transport Executive) working in partnership with Leeds City Council and the other West Yorkshire District Councils. The Authority funded the implementation of its policies and raised its money through a levy on the relevant councils. The councils received part of that cost from Government grants and raised the remainder from their council tax and other sources.

2.2 On 1 April 2014, the WYITA and the West Yorkshire Passenger Transport Executive were dissolved and the West Yorkshire Combined Authority (WYCA) was created (N.B. the 'Metro' brand name still exists for its public transport function). It has wider transport and economic regeneration functions, while still working alongside the five District Councils. It sets policies, and maintains the public transport network through promotion (e.g. providing information or pre-paid tickets), and through subsidy (e.g. through subsidising non-profitable but socially necessary routes). It also manages and maintains the majority of bus stations and stops. This has been a step change in devolved decision making affecting the delivery of transport investment across the Leeds City Region. The WYCA was set up to manage the £1 billion West Yorkshire Plus Transport Fund and support economic growth. In addition, as a member of RailNorth, WYCA will also be involved with the management of the Northern and TransPennine rail franchises from April 2016 onwards.

2.3 Transport for the North (TfN) is a new partnership involving the northern city regions, LEPs and Government. In combination with Highways England, Network Rail and HS2 Ltd, TfN is aiming to transform the Northern economy and create a 'Northern Powerhouse' through a long term investment in transport networks and infrastructure.

2.4 These significant changes will enable local decision makers to have a much greater level of control over transport investment, enabling the delivery of the key pieces of infrastructure required to support the Leeds Core Strategy and accompanying Site Allocations Plan.

2.5 Local Authorities in England produce and regularly update Local Transport Plans (LTPs). LTPs identify priorities for maintaining and improving local transport systems, based on the needs and wants of residents and organisations in the region, and put forward plans for how they will be achieved. These improvements are then given funding to be put into action. The WYCA is currently in the process of developing a Single Transport Plan for West Yorkshire. The new plan will be a twenty year vision for developing an integrated transport network that supports the Leeds City Region Enterprise Partnership's Strategic Economic Plan for sustained and healthy economic growth, especially for jobs and housing. The Single Transport Plan will update the current West Yorkshire LTP3 and will set out a step change in the quality and performance of the transport system within West Yorkshire, and its connections with the rest of the UK.

2.6 The WYCA has identified an emerging set of five core principles that could give focus to the new Plan and help to prioritise where transport investment is directed (Jan 2015):

- 1: One System, High Speed Ready. The ambition is for a 'metro-style' public transport network that integrates all transport modes, including High Speed Rail, into one system that is easily understood, easy to access by a range of options and offers quick, convenient connections.
- 2: Place Shaping. The ambition is to make our cities, towns and neighbourhoods more attractive places to live, work and invest, with an emphasis on improving road safety, air quality, the image of places and the health of residents.
- 3: Smart Futures. The ambition is to exploit technology to improve the customer experience and assist effective management of the transport system. This includes development of real-time customer information, extending payment options to include a 'best value' offer and extension of smartcards to car clubs, cycle storage, charging points and taxis.
- 4: Inclusion. The ambition is to offer a high level of access by public transport in our urban areas. However, we also have to consider our extensive rural areas, where we will look to more imaginative solutions through collaboration with other public and private operators of vehicles. We also propose using a wider range of transport options such as car clubs, car sharing schemes, taxis, private hire vehicles, linked into the development of local transport hubs.
- 5: Asset Management. The ambition is to manage all of our transport system - roads, bridges, street lights, public transport stations and shelters, footways and cycle routes - in a way that offers maximum value for money and meets the needs of users.

2.7 The currently extant LTP3 acknowledges that the national economic position means that funding will be very restricted in its early years. The response therefore is to focus on supporting the economy and maintaining existing assets and services in the first few years, alongside ensuring that the spending programme is flexible to respond to changing circumstances or new opportunities as they arise. It sets out to tackle congestion and a lack of transport investment which are key contributory factors to lower than average economic performance in West Yorkshire. It also aims to prepare for the predicted, post-recession growth in employment, population and housing and their impact on the reliability of the transport network. Four themes run through the Plan to help ensure it achieves its aims:

- Transport Assets – focusing on the existing components of the transport network such as roads, bus stations and stops, and traffic lights to ensure they are giving the most value.
- Travel Choices - enabling customers to make the most sustainable choices about when and how they travel.
- Connectivity - ensuring people can make integrated and safe journeys using transport networks on which they can rely.
- Enhancements - improving the overall network to make it more fit for journeys in the future.

2.8 As outlined under the funding section above, the following projects comprise the agreed programme for the West Yorkshire Plus Transport Fund (December 2014).

2.9 Projects directly affecting Leeds to be delivered in full by 2021

- Rail station gateways – Phase 1
- Highways network efficiency (UTMC) across West Yorkshire strategic highway network
- East Leeds Orbital Road and northern outer ring road junctions
- Aire Valley - Leeds Integrated Transport Package (phase 1 park and ride only)
- West Yorkshire package of highways efficiency (all vehicles) and bus improvements (HEBP) (Phase 1 - focusing on priority corridors)
- Rail Station parking expansion programme across West Yorkshire
- A65 to the Airport Link Road, Leeds
- Leeds city centre network improvements – Phase 1 orbital capacity on the Inner Ring Road

2.10 Other projects directly affecting Leeds to be on site by 2021

- Rail station gateways – Phase 2
- Aire Valley - Leeds Integrated Transport Package (Phase 2 highway Access)
- West Yorkshire package of highways efficiency (all vehicles) and bus improvements (HEBP) (Phase 2)
- A653 Dewsbury to Leeds corridor
- M62 Junction 24a on A641 Bradford Road south of Brighouse (this project is dependent on the Highways Agency)
- East Leeds Parkway

2.11 Further projects directly affecting Leeds to be delivered by 2025

- Rail station gateways - Phase 3
- West Yorkshire package of highways efficiency (all vehicles) and bus improvements (HEBP) (Phase 3)
- NGT to Aire Valley, Leeds
- A6110 Leeds Outer Ring Road Route Improvement (Stanningley Bypass to M621)

Transport Background Paper

2.12 The IDP is supported by a separate Transport Background Paper (which is also an Appendix to the Infrastructure Background Paper). It includes an overview of the current key transport projects and funding sources, and summarises the forecast impacts of the proposed allocations in the Site Allocations Plan (SAP) on the transport network in Leeds. Therefore only the key headlines will be included in this chapter, in order to avoid duplication.

2.13 The population increase and increased car ownership is considered to result in an increase in traffic of between 15-23% across the District by 2028. Past trends, however, suggest that traffic growth has tended to be well below forecasts, particularly in the peak hours, and so these figures must be regarded as a worst case scenario.

2.14 Nevertheless a significant step change in transport investment is planned across the City and the wider City Region to support the economic growth of Leeds, provide good alternatives to the private car, and to reduce carbon emissions. Schemes prioritised in the West Yorkshire Plus Transport Fund, together with existing major transport

schemes such as City Connect, Kirkstall Forge station and NGT, represent an investment of over £830m. In addition, Highways England and the rail industry are also investing in additional capacity on the strategic road and rail networks

2.15 In combination these programmes are being delivered to support the economic growth of Leeds, to provide good alternatives to the private car and to reduce carbon emissions, in line with the objectives of the Local Transport Plan and the Core Strategy.

2.16 In addition to these projects, a number of further interventions have been identified to mitigate the forecast impacts of growth at key junctions across the Leeds highway network. It is expected that contributions will be obtained from developers towards the delivery of these interventions, alongside contributions towards schemes within the WYPTF. As well as sites that have a direct impact upon specific junctions, sites have also been identified where the additional traffic generations are lower, but in combination with other sites have a cumulative impact at these junctions and along corridors. It is expected that contributions will also be obtained from these sites to support appropriate improvements.

2.17 It is proposed that support for public transport, walking and cycling schemes will be sought through the Community Infrastructure Levy and other funding sources.

a) Public Transport Major Schemes

2.18 Two major public transport schemes have been identified as key priorities for Leeds. The first is the 'New Generation Transport' trolleybus routes, including provision of new park and ride facilities. The second is the provision of a Leeds City Region smartcard called the 'Yorcard' which would be similar to the Oyster Card in London, and allow use across all modes of transport, and electronic top up and payment. Park and Ride locations, and major changes to the City Centre transport strategy are also discussed in this section.

New Generation Transport (NGT)

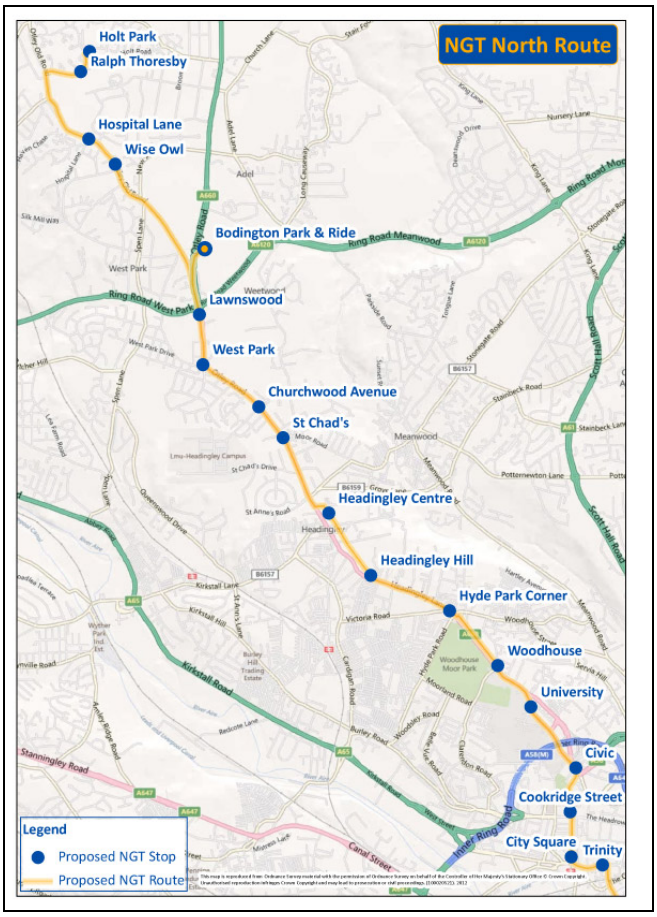
2.19 NGT is a rapid transit network for Leeds using trolleybuses, which run on rubber tyres like a regular bus but are powered by electricity from overhead wires. NGT will mean modern, accessible vehicles providing reliable, comfortable and frequent journeys into the City Centre including from Park and Ride sites located on the outskirts of Leeds. They attract more passengers than a bus system on these routes due to their fixed nature, good infrastructure, increased reliability, and reduced journey times.

2.20 The aim of the NGT scheme is to provide a high quality public transport system operating within the three corridors reserved and previously intended for Leeds Supertram (a tram system proposed in the 1990s which was ultimately not approved for Government funding in 2005).

2.21 The proposed network first phase is to cover 14.3km comprising a City Centre link and routes going outwards to Stourton (South Line), and Holt Park (North Line). The network includes 31 accessible and secure stops, whilst Park and Ride sites are to be provided on the North Line at Bodington and at the South Line terminus at Stourton. NGT would be a high quality rapid transit system with significant benefits over conventional buses. These include 56% of the routes being segregated from general traffic, including 43% exclusively reserved for NGT, leading to faster and more reliable

journey times. Where NGT is mixed with other traffic, extensive priority measures and traffic management are planned to help ensure high levels of reliability and a comparative advantage over other traffic.

Proposals for northern and southern NGT routes



2.22 The total cost of the first phase of the scheme is £250.6 million. A Best and Final Funding Bid was submitted to the Department for Transport in September 2011 with funding of £173.5m confirmed with the remaining £77.1m to come from Metro and LCC. The Transport & Works Act Order Inquiry was held in 2014, and subject to the outcome the scheme is due to start construction in late 2017, and be operational in 2020. It is important to note that the Government's funding is specifically for the NGT trolley bus system and would not be granted for another type of public transport system such as additional bus routes or a tram.

2.23 Although not included under the Phase 1 scheme it remains the Council's aspiration to deliver subsequent phases including a full City Centre loop, links to St James's University Hospital and the Aire Valley and potentially an extension on to Seacroft. Funding for the Aire Valley link (Line 3) has been prioritised in the West Yorkshire Plus Transport Fund to be delivered by 2025. At present no funding has been identified for the other elements and further study is required once construction has commenced on Phase 1.

Yorcard

2.24 Yorcard Limited was set up by the South Yorkshire Passenger Transport Executive (SYPTE) and the West Yorkshire Passenger Transport Executive (Metro) to deliver the benefits of smart ticketing to public transport users in the Yorkshire Region, based

on schemes such as the Oyster card in London. Passengers will be able to use electronic ticketing to access all modes of public transport across the Leeds City region.

2.25 This is a key priority for the WYCA and for the 11 Councils which make up the City Region as it will greatly improve the image and attractiveness of public transport, and especially multi-modal and cross-boundary journeys. The scheme will encourage interchange, speed up boarding and allow selected fare reductions and promotions.

2.26 Yorcard will require an extensive system of physical infrastructure, such as card readers and other equipment on buses and at stations, provision of card vending machines and top up points, and also the integration of other services onto smartcards (e.g. school and leisure services). It will also need systems to enable internet sales, and the development of the product by smart media. These investments are being managed through six related projects forming part of the Smartcard and Information Programme (SCIP). A successful Better Bus Area Fund bid is supporting the roll-out of smartcard ticketing. The majority of buses in West Yorkshire now have smartcard readers and are recording concessionary travel. Currently it is just senior, disabled and blind concessionary pass-holders who can swipe on to local bus services, the scheme is aimed to open up to all bus users as soon as possible. The Yorcard back office, developed with SYPTE, is operational and processing data.

City Centre Proposals

2.27 Please see the Transport Background Paper for details of the emerging City Centre transport strategy and specific proposals.

b) Buses

2.28 The majority of public transport journeys in Leeds District are made by bus, and this mode will continue to perform a significant role during the plan period. There are a number of bus companies operating within the Leeds district, now coordinated and monitored by the WYCA. The majority of bus services are run on a commercial basis, however, the WYCA does provide financial support for some evening and weekend services.

2.29 The West Yorkshire Bus Quality Contract Scheme (local bus service franchising) is a way of achieving a fully integrated, stable system with clear branding, high standards of customer care and incentives for reliability, punctuality, patronage growth and passenger satisfaction. At its meeting on Thursday 18 September 2014, the WYCA agreed that it would continue to develop and evaluate both the Quality Bus Contract and Partnership approaches and continue discussions with the Association of Bus Operators in West Yorkshire.

2.30 A number of improvements to the bus network have been made in recent years, and these are detailed further in the separate Transport Background Paper. Key priorities have been to reduce journey times by creating more dedicated bus lanes and bus priority junctions, and improved enforcement of these lanes to ensure that they are not used by other vehicles. Enforcement of bus priority measures is important to ensure that they deliver the desired outcomes. In the next few years all bus lanes/gates in Leeds will be enforced by the use of camera technology. In addition, a programme of

traffic light priority measures is being implemented in Leeds to reduce delays for buses at some of the busiest junctions.

2.31 The Transport Background paper lists a variety of schemes, including park and ride proposals across the City. Some of these fall under the umbrella of the WYPTF highways efficiency and bus programme (HEBP – see paras 2.09-2.11). The others are currently unfunded. The HEBP interventions are in the very early stages of development and may be subject to change, however, the corridors include a dozen or more junctions that are listed in the site requirements and therefore the Council will be seeking S106/278 money for these. To avoid double counting the HEBP schemes will therefore only be added to the CIL Regulation 123 list as more detail becomes available and they can be broken down into individual elements.

2.32 Bus schemes:

- Elland Rd park and ride expansion
- A61 Alwoodley park and ride
- A64 Grimes Dyke park and ride
- A61(N) Bus Corridor enhancements (WYPTF HEBP scheme)
- A58 (N) Bus Corridor enhancements
- A64 Bus Corridor enhancements (WYPTF HEBP scheme)
- A639 Bus Corridor enhancements (WYPTF HEBP scheme)
- A61(S) Leeds – Wakefield Bus Corridor (WYPTF HEBP scheme)
- A653 Leeds – Dewsbury Corridor (WYPTF scheme)
- A62 Bus Corridor enhancements (WYPTF HEBP scheme)
- A58 Bus Corridor enhancements (WYPTF HEBP scheme)
- A647 Leeds – Bradford Corridor (WYPTF HEBP scheme)
- A65 Bus Corridor enhancements (WYPTF HEBP scheme)
- A660 (Adel-Otley) Bus Corridor enhancements (WYPTF HEBP scheme)

c) Railways

2.33 Network Rail provides, operates and maintains rail infrastructure on behalf of train and freight operating companies. Leeds is on the national rail network and acts as a hub with lines radiating from Leeds City Station to nearby towns and cities. Local freight facilities are located at Whitehall Yard, Marsh Lane, Stourton, Balm Lane Hunslet, Neville Hill South, and Hunslet Riverside. The major train maintenance depot is located at Neville Hill, with smaller depots at Hunslet and Holbeck.

2.34 Please see the Transport Background Paper (Appendix 3 of the Infrastructure Background Paper) for details of the proposed rail improvements over the Plan period. The Infrastructure Schedule also provides further detail on specific schemes.

East Coast Rail Franchise

2.35 In November 2014 the award of the East Coast rail franchise was given to InterCity Rail (Stagecoach/Virgin). The franchise is set to see more than £140m invested in delivering an improved service including the following proposed improvements:

- Faster journey times – regular services to Leeds in two hours.
- New trains from 2018 with multi-million pounds train refresh programme for existing fleet.
- Direct links / more trains to:-
    - Huddersfield, Dewsbury – 1 train per day each way

    - Bradford/Shipley - 7 trains per day each way
    - Harrogate/Horsforth – 7 trains per day each way
    - Leeds – an additional 5 services per day each way
- New technology such as new website, smartphone apps and free Wi-Fi on trains and stations.

2.36 The additional through links proposed reflect the strong case made by WYCA and dialogue with the three bidders to improve connectivity to/from places not currently well-served by the East Coast Main Line. The new franchise commenced in March 2015.

Northern and TransPennine Franchises

2.37 The Invitations to Tender for the Northern and TransPennine franchises were published in February 2015. Both franchises are due to start on 1 April 2016 and will be managed jointly by a Rail North / DfT partnership team based in the North of England. The Northern franchise will run for nine years with the option of a one year extension. The TransPennine franchise will run for seven years with the option of a two year extension. The new train operators will need to cooperate with local smart ticketing schemes, simplify fares, and improve the door-to-door journey experience for passengers. The franchise includes the following proposed improvements

- Better trains including at least 120 new-build carriages for use on non-electrified routes and the modernisation of all remaining Northern trains.
- The Pacer units currently in use on the Northern network to be completely phased out by 2020.
- Longer trains with more seats, particularly on the most crowded routes into the North's largest cities. By 2019 additional capacity on services into Leeds during the morning peak will accommodate a further 5,900 passengers.
- More train services will run in the week and on Saturdays and there will be more services to more places on Sundays.
- Northern stations will be improved, with at least £30 million of investment across the franchise.

Leeds Rail Infrastructure Projects

2.38 A number of major schemes within Leeds are under construction, including a new southern entrance to Leeds City Station, and a new station at Kirkstall Forge. The infrastructure schedule provides further details of these and other rail projects.

2.39 Some rail station car park expansion schemes fall under the umbrella of the WYPTF highways efficiency and bus programme (HEBP – see paras 2.09-2.11), including Morley and Horsforth stations. There is also an aspiration for expansion at New Pudsey station.

High Speed Rail (HS2)

2.40 The Secretary of State for Transport announced in early 2012 the Government's intention to proceed with the development of a high speed rail network (HS2). High speed rail is considered by the Government to be a way of providing for the country's inter-city mobility needs in the future (as the existing "classic" network is becoming full), in a more sustainable way than aviation and motoring, that will also help rebalance the national economy by bringing economic centres closer together. The

policy proposal known as High Speed 2 (HS2) is for a 'Y' shaped network from London to Birmingham (for which the route has been confirmed), then legs to the north to both Manchester and Leeds using separate alignments with anticipated completion by 2033. Although still the subject of further study, and outside of the Core Strategy time period, development and preparatory work is ongoing to ensure the High Speed Rail facilities and anticipated station are fully integrated with the public transport and road networks, especially in the City Centre. The detailed route from Birmingham into Leeds including a new City Centre HS2 station to the south of the existing City station was announced in January 2013, although this is currently subject to a review of station options with a report to the Government expected in autumn 2015.

d) Cycling

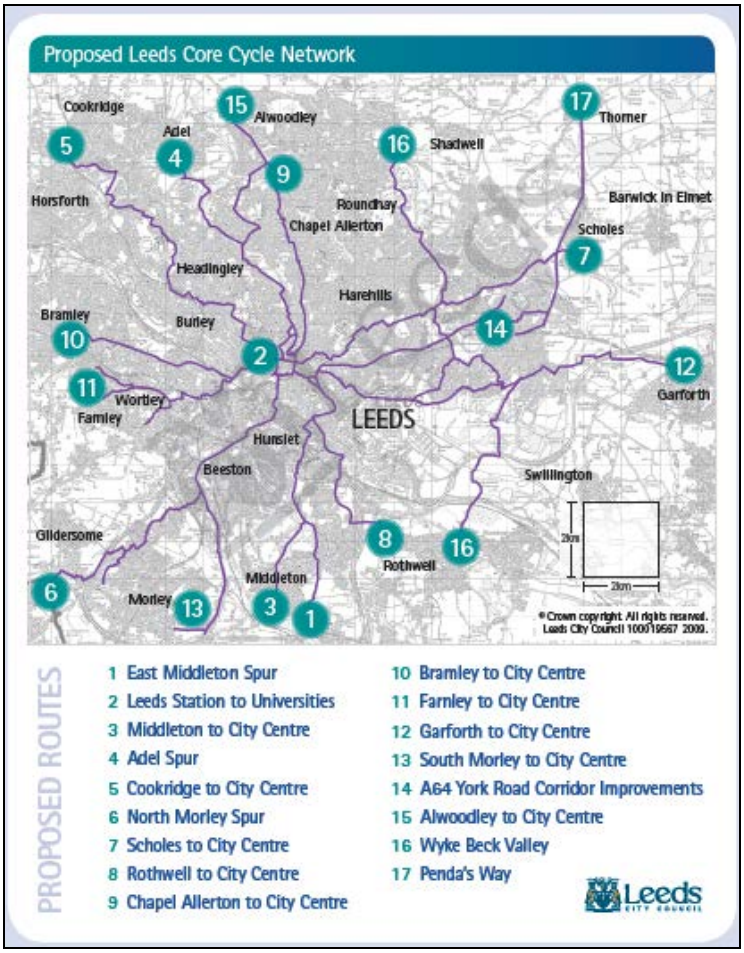
2.41 A number of infrastructure items help to improve safety for cyclists, and attract people to using a bike as an effective means of transport for commuting, or for leisure rides. These include cycle lanes, advanced stop lines, toucan crossings, contraflow cycle lanes and access control exemptions, and traffic calming to slow down the speed of motorised vehicles. The CyclePoint at Leeds City Station is a key piece of cycle infrastructure, with secure and staffed storage, a rapid service, repairs, equipment sales, and cycle hire.

Leeds Core Cycle Network

2.42 The Council is working with Sustrans in developing a network of 17 core cycle routes across the city, which provide safe and direct routes for commuters into the City Centre, school children and university students to education facilities, and leisure cyclists. Associated maps and signage have been developed to encourage activity and increase visibility and attractiveness. Five routes have been completed into the City Centre; from Alwoodley, West Park, Middleton, Armley, and Garforth. The most recent section is Meanwood Road to Quarry Hill which opened in May 2015. The Wykebeck Woods/Wykebeck Way route is also completed, with funding approved and work underway on progressing others identified in the Schedule. The Wykebeck Way route is also an important phase in the wider city vision of creating a continuous greenway connecting Roundhay Park to Temple Newsam Park. Other potential cycling routes, especially on disused railway lines, have been identified for protection and are discussed further in the Transport Background Paper:

- Cycle Superhighway: Leeds – Shadwell
- Cycle Superhighway: Morley – Moortown
- Cycle Superhighway: Morley – Middleton
- Cycle Superhighway: Leeds – Wakefield
- Cycle Superhighway: Leeds Outer Ring Road Corridor

2.43 The City Connect scheme is currently being built and will deliver a segregated 23km cycle superhighway connecting Bradford to East Leeds via Leeds City Centre, upgrades to the canal towpath between Kirkstall and Shipley and additional City Centre cycle parking. The scheme is due to open by the end of 2015 and represents a significant step change in provision for cycling and the Leeds Core Cycle Network. In addition further funding has been awarded for a second phase covering works in and around Leeds City Centre, including the direct approaches from the north, with delivery planned by 2018.



e) Pedestrians

2.44 The provision of facilities for pedestrians is explicitly considered during the development of all transport schemes and where appropriate opportunities for enhancing provision are included in scheme designs. In addition, there is a regular programme of new pedestrian crossings, with typically around ten being delivered each year in response to local needs and safety issues.

2.45 Within the City Centre, provision for pedestrians is considered particularly important, and as part of proposals to reduce traffic levels and remove through traffic, opportunities will be taken to enhance and expand the pedestrianised areas. Improved linkages to neighbouring communities and across the River Aire will also be provided.

2.46 The network of Public Rights of Way (PROW) represents the arteries that help people access the countryside and urban greenspaces, linking people with places and linking urban to rural. The Leeds Rights of Way Improvement Plan (ROWIP) was launched in 2009 and forms a ten year management plan setting out areas for improvement across the public rights of way network within the Leeds District. The Plan should mainly be viewed as an aspirational document highlighting improvements (which in part) are over and above the basic statutory requirements. It provides an opportunity to bid for additional funding on an informed basis and will be reviewed again by 2017. If all of the identified projects were to be delivered over the next ten years, the City Council would need to seek funding between £2.3m and £3.9m, including through developer contributions, West Yorkshire Transport Plan and third party grants. The Definitive Map and Statement is a legal record that indicates the location and status of

a public a right of way. This is a key information source used by many different users, landowners, agents and organisations who require accurate public rights of way information for recreation, land management and business purposes.

2.47 The public rights of way network in Leeds is both extensive and varied and includes a number of key recreational routes. Key aspects include a total length of path network of 819km, plus permissive paths, which are not included in this figure and are very important as they enhance overall public access. There is 350 ha of open access land and Woodland Trust Sites. Key strategic and recreational routes are the Dales Way Link, Ebor Way, Leeds Country Way, Trans Pennine Trail and the Aire Valley Towpath. Local recreational routes include the Meanwood Valley Trail, Calverley Millennium Way, Pudsey Link Bridleway, The Linesway, Harland Way, Rothwell Greenway, Temple Newsam bridlepath, West Leeds Country Park and the Wykebeck Valley Way.

f) <u>Airport</u>

The Leeds Bradford International Airport (LBIA) makes an important contribution to the economic growth of Leeds and the City Region. It provides direct flights to 78 destinations, with flights via Heathrow providing worldwide connectivity to over 150 destinations. LBIA had over 3.3m passengers in 2013, with 5 new airlines and 25 new routes in the last 3 years. The airport employs over 2,700 people, and over £40m has been invested since privatisation including a £11m redevelopment of the existing terminal in 2012.

2.48 LBIA is developing a masterplan, currently in draft stage. The growth plan includes improved airport facilities, a hub for commercial development and inward investment, and having new road and rail connections. Its strategy aims to:

i) Seek City Region support for delivery mechanisms to help attract inward investment to the airport,
ii) Establish a delivery plan for improved road and rail access,
iii) Gain City Region support for flight routes to penetrate the mainland European market,
iv) Agree a planning strategy for expanding the airport as an economic hub in the Leeds Site Allocations Plan.

2.49 In parallel, LBIA is developing a Surface Access Strategy (current draft November 2014) which looks at short, medium (to 2025) and long (2025+) measures to improve access to the airport. The main medium term measure is a new road link between the A65 at Rawdon and the A658 north of the Airport, including extension of the A65 Quality Bus Corridor, which now has agreed funding through the Combined Authority for completion by 2021. For the long term, the Strategy presses for a rail connection from the Leeds-Harrogate line which is currently the subject of a feasibility study by the WYCA. Core Strategy Spatial Policy 12 sets out that: “The continued development of Leeds Bradford International Airport will be supported to enable it to fulfil its role as an important regional airport subject to:

i) Provision of major public transport infrastructure (such as Tram Train) and surface access improvements at agreed passenger levels,
ii) Agreement of a surface access strategy with identified funding and trigger points,
iii) Environmental assessment and agreed plans to mitigate adverse environmental effects, where appropriate,

iv) The management of any local impacts and implementation issues, including visual and highway issues."

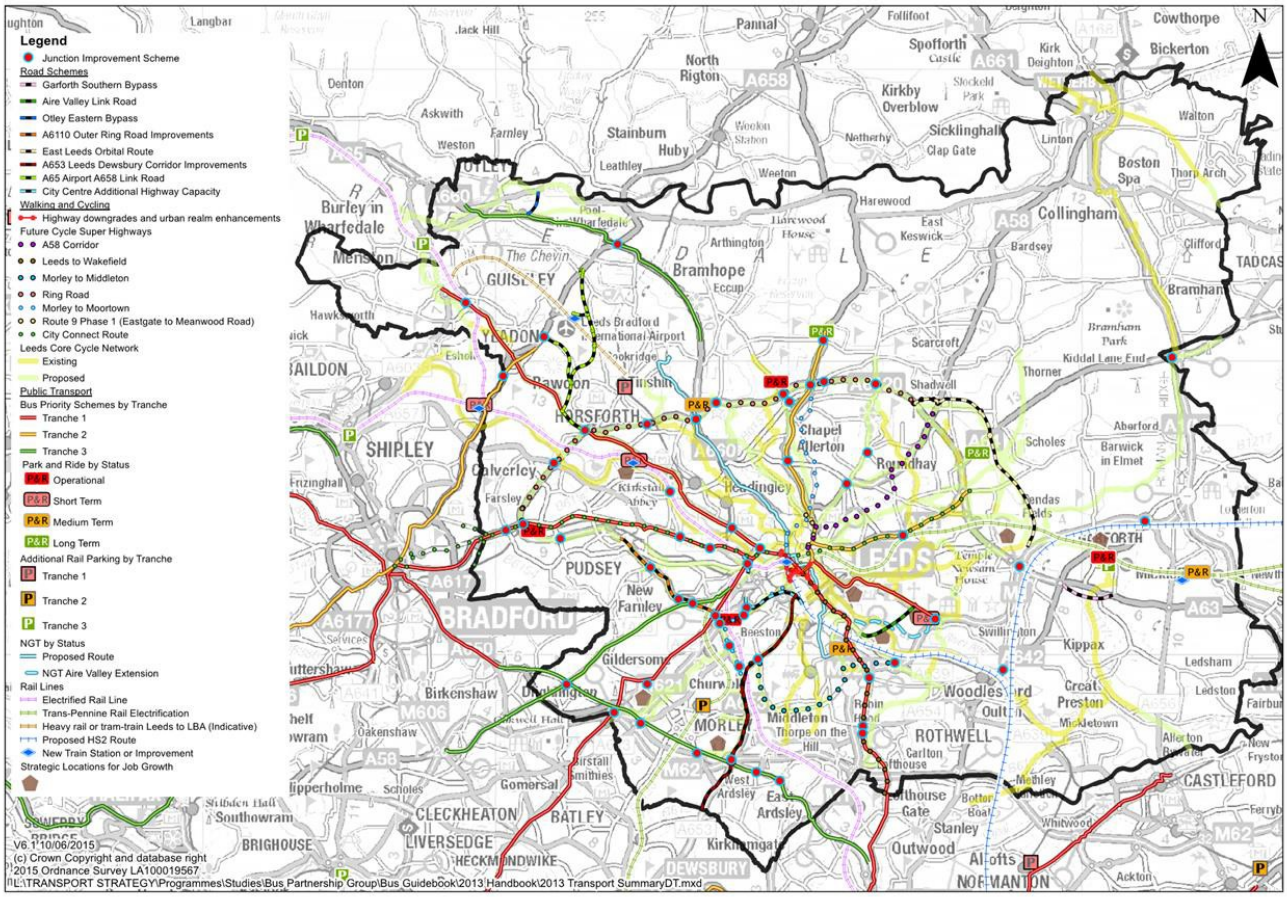
2.50 Proposals for an expansion of employment land provision at LBIA were formally made by LBIA to the Site Allocations Plan Issues and Options public consultation in July 2013. The case for growth at LBIA draws upon the independent study for the DfT in 2013 which looked at regional UK airports and concluded that LBIA had more potential than any other regional airport to grow, citing that LBIA could grow by 114% to 2030 with passenger numbers rising to 7.1m per year.

g) <u>Highways</u>

2.51 Highways England is responsible for operation and stewardship of the strategic road network, which in the Leeds District is the M1, A1(M), M62 and M621. The key interventions on the M1 and M62 are the Smart Motorway. The M62 improvement between junctions 25-30 was completed in 2013 and the M1 scheme (junctions 39-42) is due for completion by autumn 2015. In addition, M1 Jn 44 was signalised in 2015 and additional capacity is to be provided at M1 Jn 45. Leeds City Council is responsible for the local adopted road network.

2.52 In order to inform the Plan site requirements the Leeds Transport Model (LTM) was used to forecast future highway conditions in 2028. The model tests included all the residential and employment sites contained within the AP. This has enabled the potential contribution of significant housing and employment sites to traffic growth and congestion at key junctions to be estimated. For the purposes of this exercise all residential development sites of 50 or more dwellings and significant employment sites have been assessed. In addition, locations where these is a cumulative impact have also been identified. This analysis has led to the identification of a number of transport interventions that are likely to be required during the Plan period. These mitigation measures are deemed to be key schemes to facilitate the delivery of the housing targets. Once feasibility studies have been completed for these junctions a clearer picture of the scale and cost of these interventions will be available. At this stage, however, it has not been possible to model the schemes and assess the cumulative impact on the wider network.

2.53 The plan below shows these identified interventions, together with other major transport schemes, the planned WYPTF schemes, and those from Network Rail.



2.54 Please see the Transport Background Paper (Appendix 2 of the Infrastructure Background Paper) for details of the proposed improvements to the strategic and local highways network, and how these link to the proposed allocations in the SAP and AVL.

Aire Valley Leeds

2.55 Please see the Aire Valley Area Action Plan for further details of the proposed improvements to the local highways network within the AVL, and how these link to the proposed allocations. The AAP contains detailed policies and requirements for the development of specific sites.

ii) Utilities

a) Energy – Electricity, Gas, Renewable Energy, District Heating

2.56 The supply of energy for Leeds is a complicated process involving a number of different stages, suppliers/companies, scales, and provision which covers a much wider area than the Leeds District. Ofgem is the regulating body for the whole of the UK gas and electricity markets, and governs elements including the level of infrastructure investment and the prices charged by the private companies.

2.57 There is currently sufficient energy supply to adequately serve the Leeds Metropolitan District. The majority of the power comes from sources which are centrally generated

and distributed, i.e. the national grid, power stations, and the distribution network. Responsibility for the physical infrastructure for gas transportation for Leeds is Northern Gas, for electricity it is Northern Power Grid. When developing new sites, developers normally pay directly for energy infrastructure necessary within their sites, and also the costs of the connections necessary to enable energy supplies to be provided from outside the site, including new sub-stations as necessary. A key scheme identified in the Schedule is the replacement of 190km of gas pipes across the District, a 23 year project.

2.58 The potential exists for a number of sources of renewable energy within Leeds, including electricity from wind power, water power (hydro-power), solar energy (active solar), landfill gas, electricity and heat from biomass treatment and waste plants, and combined heat and power (CHP). Heat network distribution is also expected to be extensively progressed during the plan period. As well as larger, more commercial projects for renewable energy (0.5 MW and above), potential also exists for smaller, community based projects where the benefits are fed back into the local area. The Leeds Natural Resources and Waste Local Plan (adopted January 2013) provides detailed information regarding the targets, location, and delivery of energy infrastructure, with a focus on low carbon and renewable energy.

2.59 For instance, the Council is progressing hydro-power schemes at Armley Mills and Thwaite Mill on the River Aire, and the other weirs also offer potential for new hydro power generation. Leeds has a huge resource of facades and roofs facing south, enough to produce several MWs of electricity if fitted with solar thermal systems. Through progressing a Local Development Order in the Aire Valley Leeds, the Council aims to promote the use of solar panels as they will no longer have a requirement to gain planning permission. The Natural Resources and Waste Local Plan also allocates strategic sites suitable for energy from waste (discussed further in the 'Waste Management' section below). Developments within a viable distance from these facilities are expected to connect into the heat distribution network.

2.60 By distributing heat to multiple users through a pipe network, up to several thousand homes and businesses can be connected to the same sustainable heat source. This is called a heat distribution network (district heating) and in Leeds a number of opportunities will present themselves across the Core Strategy time period. Developers will be encouraged to provide such networks, including through the setting of policy. Opportunities particularly exist around the City Centre, the Aire Valley (including as part of the Recycling and Energy Recovery Facility), the universities, and St James' Hospital, as a consequence of high heat loads, which offer the potential for low carbon energy for local communities.

2.61 A key role for the Council is to help create the conditions where connecting to district heating becomes very attractive to developers. This may require LCC to put in enabling works (i.e. install sections of pipework when major road repairs take place on key DH routes), developing supportive planning policies, using well-being powers to support district heating, and showing strong leadership. There is to be further investigation as to how the Council can commit to underwriting significant district heating schemes e.g. through the City Deal process, and other elements such as developing an appropriate governance structure with the private sector.

b) Waste and Waste Water

2.62 Yorkshire Water (YW) is the Water and Sewerage Company for the Leeds District. Ofwat is the regulating body for the UK water industry, and governs elements including the level of infrastructure investment and the prices charged by the providers. YW is required to produce a five-year Asset Management Plan to set out the level of investment necessary to meet their customer and legislative obligations.

2.63 YW supplies clean water to the whole district (with the exception of rural sites on a private supply), approximately 760,000 people. This water is taken from a variety of sources, including reservoirs, groundwater and rivers. It is then treated at one of the Water Treatment Works (WTW); within Leeds these include Headingley, Reva, Eccup, Kirkhamgate, Bramham, and Thorp Arch.

2.64 YW has a statutory duty to provide clean drinking water to a minimum standard, this is set and monitored by the Drinking Water Inspectorate. Leeds is also connected to the Yorkshire Water Grid system which allows the pumping of water across the operational area, therefore mitigating the risk of limited public water supply during drought conditions.

2.65 YW are also responsible for the public sewerage network that transports foul and surface water flows from properties. Waste flows are also treated at the waste water treatment works (WWTW) across the district. There are 16 WWTW within Leeds, with the main works at Knostrop serving approximately 593,000 people. The waste is treated and the final effluent discharged to the local watercourse at a consent and quality standard agreed with the Environment Agency for both hydraulic level of flow and quality.

2.66 The necessary quality of final effluent has tightened over the last few years due to the Freshwater Fisheries Directive and Water Framework Directive. The WWTW meet the current standards required by the Environment Agency, and YW is given a series of measures and targets which it has to meet within a certain time period. YW, as will all Water Companies, works within five year investment periods known as Asset Management Plans (AMP); AMP5 began in April 2015, and Yorkshire Water is currently working on developing AMP6.

2.67 When developing new sites, developers pay directly for water and waste water related infrastructure necessary within their sites, and also the costs of the necessary connections to the wide water provision network. This includes taking care that surface water is adequately drained through the appropriate system.

c) Broadband

2.68 A £13m agreement between the West Yorkshire Combined Authority and BT will make superfast fibre broadband available to tens of thousands more households and businesses in the second phase of a major digital infrastructure project. The funding will come from the Government's Superfast Extension Plan. This is the second phase of the project, building on the successful work of Superfast West Yorkshire and BT's own commercial roll-out of the high-speed technology whereby more than 60,000 homes and businesses in the City Region are now able to connect to high-speed fibre broadband as a direct result. The first phase of the project is to complete in September 2015, with the second phase to extend coverage of fibre broadband

throughout the current programme area and into York and Kirklees. By the end of 2018 more than 98 per cent of homes and businesses in West Yorkshire and York are expected to have access to fibre broadband. Funding includes £6.89 million from the Government's Superfast Extension Plan and £6.1 million from BT. Additional investment will also be made by the WYCA and local authority partners to support the delivery and resource for the day-to-day running of the project.

iii) Flood Defences

2.69 The 2009 Flood Risk regulations and the 2010 Flood and Water Management Act set out new responsibilities for authorities to manage flood risk. The Leeds Strategic Flood Risk Assessment (SFRA) (2007) collated and mapped information on all known sources of flooding, including river, surface water (local drainage), sewers and groundwater, that may affect existing and/or future development within the district. It informs the development of policy on managing flood risk and the allocation of land for future development, and recommends possible flood mitigation solutions that may be integrated into the scheme designs.

2.70 Leeds has suffered from localised flooding in recent years which has caused significant disruption to local residents, businesses and commuters. However, there is always the risk of a much larger flood, especially taking into account the impacts of climate change. The Leeds Flood Alleviation Scheme (FAS) for 19km of the River Aire from Kirkstall through the City Centre to Woodlesford, is being developed by the Environment Agency in partnership with the Council, and supported by a number of other parties e.g. Yorkshire Forward, Yorkshire Water, the Canal and River Trust (formerly British Waterways), and the Leeds Civic Trust. A number of potential flood risk management options have been considered including flood storage, channel improvements and/or raised defences.

2.71 The FAS is proposed in 3 phases:

- Phase 1 will create flood defences protecting the city from flooding along a 3.5 kilometre stretch of the River Aire between Leeds Central Station and downstream to Knostrop Weir, at a 1 in 75 years standard of protection from flooding. The FAS Phase 1 comprises 3 elements: i) Remove existing weirs and install moveable weirs at Knostrop and Crown Point ii) Provide defences: embankments, terracing, setting back of defences, walls as required between Leeds Train Station and Granary Wharf iii) Remove Knostrop Cut to merge the Canal and River Aire. The cost is £47m cost plus £5m maintenance (from the European Regional Development Fund £10m, Regional Growth Fund £4m, Flood Defence Grant in Aid (FDGiA) via Yorkshire Regional Flood and Coastal Committee and EA £8.8m, Business Improvement District (assume nominal £1m), development industry contributions). The scheme is under construction and completion expected late 2016.
- Phase 2 is to provide a 1:75 year standard of protection along the River Aire, from Newlay Bridge to the City Centre and from Knostrop to Woodlesford. £25m is the current best estimate of costs although has not been sufficiently costed to allow for an accurate figure.
- Phase 3 is to increase the overall level of protection offered by the defences to a 1:200 standard of protection for the whole scheme. Again, £25m is the best estimate of costs.

2.72 It is useful to note that all Government funding for flood defence (delivered by the Environment Agency) is expressly provided to protect existing development, and so cannot be used for future redevelopment of 'at risk' areas.

2.73 Please see the separate Flood Risk background paper for further information.

iv) Waste Management

2.74 The way in which waste is managed is undergoing a rapid period of change, and Leeds is planning for a major reduction in landfill and a significant increase in more efficient forms of waste management capacity and recycling. The Leeds Natural Resources and Waste Local Plan (NRWLP) was adopted in January 2013 and sets out in detail how this will be achieved, and how the vision and objectives match those of the Council's Integrated Waste Strategy.

2.75 Leeds has more than sufficient existing landfill capacity for the plan period and beyond, however, land is needed for new treatment facilities for municipal waste and commercial and industrial waste. It is also likely that further provision will be needed for organic waste treatment such as anaerobic digestion.

2.76 It is realistic to expect that waste generated within the City will continue to be transported to other areas, particularly where there is substantial capacity at an existing facility or where an un-implemented planning permission for a new facility is already in place. This also works in the opposite direction. For example, Leeds is a net importer of liquid hazardous waste and also has an end of life vehicles processor, which imports vehicles from all over the north of England. Both Peckfield and Skelton Grange Landfill sites accept waste from both North and West Yorkshire.

2.77 At present, Leeds is heavily reliant on two major landfill sites at Skelton Grange and Peckfield for its waste management provision. With a declining amount of waste disposed through landfill new facilities higher up the waste hierarchy will be required. To achieve self sufficiency it is important that existing capacity within Leeds is maintained, and over 100 existing waste management sites are safeguarded by policies in the NRWLP.

2.78 Three strategic waste management sites have also been allocated within the Aire Valley; Skelton Grange (a former power station), Knostrop (an existing waste water treatment works), and the former Wholesale Market in the Cross Green Industrial Estate which was chosen through an extensive procurement process as the preferred location for a residual municipal solid waste treatment facility to serve the City. In late 2012 Veolia Environmental Services signed a 25-year Private Finance Initiative contract with the Council to install a high-tech recycling and energy recovery facility that will save £200 million compared with the cost of sending to landfill the Council's residual municipal waste. It is designed to remove recyclable waste from black bins and recover energy from what is left over, and can accept 214,000 tonnes per annum (including some commercial waste). The remaining household waste will be used as a fuel to generate energy which will be used on the National Grid to power up to 20,000 homes. It is also designed to be enabled to produce power and heat via a future local heat network. Construction commenced in 2013 and the facility is to open in 2016.

v) Minerals

2.79 Leeds contains resources of coal, sand, gravel, sandstone, limestone and various clays. These have been extensively worked in the past, but now tend to be of modest volumes. It is important to ensure that the growth of Leeds is not hindered by a restriction in supply of building materials and minerals. There are currently no surface coal working sites in the district. Sand and gravel extraction is a constant, but with declining overall permitted reserves. Hard rock quarries still have significant reserves and building stone production is steady, having recovered in recent years, however output is small compared with aggregates. Total aggregate production is around 430,000 tonnes per year, however, in order to meet demand Leeds has to import a lot of aggregates. There are two clay quarries and each contain large factories where some 80 million facing bricks are produced each year, making Leeds self-sufficient in bricks. The Council has identified Mineral Safeguarding Areas (MSAs) to protect proven deposits of coal, sand and gravel from developments that could jeopardise future working. Reserves of clay are sufficient to support the needs well beyond the plan period, such that a MSA for clay is not required.

2.80 The Natural Resources and Waste Local Plan (adopted January 2013) contains detailed information on the Council's strategy for infrastructure to supply minerals, including specific site allocations and the definition of Preferred Areas. Through the policies set out in the Core Strategy and the NRWLP to preserve and enhance the working of minerals deposits within the District, alongside the historic importation of aggregates from outside of it, it is not considered that there will be any significant issues with the minerals supply or infrastructure requirements within the Core Strategy timescale.

3. SOCIAL AND COMMUNITY INFRASTRUCTURE

i) Education

3.1 Please see the School Provision and the Implications for School Places Background Paper (Appendix 2 of the Infrastructure Background Paper) for further details of the proposed school provision as part of the Site Allocations Plan, including detailed data on location and size of new school provision.

3.2 An increasing school age population means that Leeds is facing significant pressure to ensure that there are sufficient local school places for all children that live in the City. A change in national education policy is leading to a greater diversity of schools with the development of academies and free schools in addition to a change of role for Local Government in relation to education matters. However, Local Authorities retain the statutory duty of ensuring the sufficiency of school and nursery places as well as the additional duties to promote choice and diversity of education, as well as responding to parental representation. In planning education places there needs to be consideration of local geography, travel distances and, as well as parental choice. This requires the authority to operate with a small surplus of places based on a recommended surplus capacity of between 5% and 10% of total numbers (National Audit Office estimate). Children's Services are responsible for ensuring the sufficiency of all school and early years provision, and work with a wide range of stakeholders to find appropriate solutions.

3.3 The context in which this work has been completed is challenging. The city is facing a rising demand for school places due to a rise in the birth rate from a low of 7,500 in 2000/1 to an average of just over 10,000 for the last 5 years. As a result the authority has been engaged in an extensive programme of expansion of provision, with the creation of over 9,000 primary school places over the past four years, through expansions of existing schools, creation of new schools, and restructuring of existing schools. There is a rolling programme of further places coming forward for consultation.

3.4 As a result the capacity of the existing school estate to respond to significant new housing is limited, particularly in certain hotspots within the city, and new sites will need to be secured initially through the site allocations process and later through detailed planning applications.

3.5 This demand for school places in both the primary and secondary sectors arising from population growth is known as 'Basic Need'. Central government provides some funding to local authorities to meet the building costs associated with these needs, but not for site acquisition costs. It also expects local authorities to continue to collect monies from developers for demand arising directly from new housing, and basic need grant allocations reflect this.

3.6 With new schools and with different school provider partners emerging, there is opportunity to co-locate other public services, particularly other children's services, alongside the school. Children's centres and early years provision are already commonly co-located, and other opportunities such as inclusion and health care as well as workplace/office accommodation for support staff would also be considered.

3.7 Local authorities are already the providers of last resort for school places, and are dependent on working with partners to commission new provision. Any new school provision is assumed to be an Academy or a Free School and as such a sponsor or promoter will be required to be identified by the Authority. In addition, Free Schools are commissioned independently of the local authority. This can open up opportunities to acquire privately owned land and buildings which may not feature in this plan. Given the long term nature of the housing strategy, and the likelihood of changes to the statutory and educational context of school place planning, as well as the possibility of further changes up or down in the birth rate, it is therefore not necessarily an issue to progress with the SAP without fully sufficient school provision being identified at this stage. However these risks are highlighted for transparency and to enable an informed choice.

3.8 The Education Background Paper (Appendix 2 of the Infrastructure Background Paper) describes the context for the school planning areas in terms of current pressures for places, current scope of the existing estate to meet existing demand, and the needs arising from the housing allocations. It highlights the areas of concern where no solutions for school places have been found. Appendix 1 within the School Provision Background Paper summarises the number of houses approved, the pupil yield anticipated, and the sites identified as needing school provision as site allocations for school use or site requirement within housing allocations by planning area. Data is described in terms of forms of entry (FE). Schools are organised and funded around class sizes of 30 children, and a 1FE primary school has 1 class of 30 pupils in each year group, 2FE is 2 classes etc.

3.9 To ensure as far as possible that schools will be delivered alongside new housing, the SAP therefore includes a number of site specific policy requirements setting out the need for certain housing allocations to include the provision of a school site. The Council will then be able to confirm or decline that requirement as necessary at the time of the detailed planning application being brought forward, including the precise location of the school within the site.

3.10 Aside from site specific requirements for providing schools as part of housing allocations, there are also a number of sites proposed for school allocation. Two of these sites fall within existing Green Belt (HG5-7 Robin Hood West and HG5-1 at Victoria Avenue in Horsforth. The latter is proposed to allow for potential future extension of Newlaithes Primary School). Site HG5-8 Bradford Road, East Ardsley is an existing Protected Area of search.

3.11 It is generally inappropriate to name a specific scheme to meet the demand as this would need to be tested through the statutory process required by school organisation legislation. Naming of a site, and especially a particular scheme, does not presuppose that this will be supported by the consultation and statutory process. The situation at the time the school provision needs to be brought forward will need to be appraised afresh.

a) <u>Early Years Education</u>

3.12 Leeds has a very wide range of provision of public and private early years, nursery, and Children's centres. Across the Plan period there will clearly be a need for increased services. There is also a sufficiency duty around early years provision, whereby the authority should ensure that all 2, 3 and 4 year olds are able to access

their entitlement to free education per week, and also that sufficient childcare exists for the needs of the local community to access work and education. There is a further entitlement to places for eligible 2 year olds many of whom live in the most deprived areas. There is an extensive private, voluntary and independent sector who can deliver this and the authority is the provider of last resort. This has different cost implications, and has therefore been excluded from the Schedule.

b) Primary Education

3.13 There are 24 primary schools in Leeds in 2015, including one free school. Bearing in mind the existing context of primary school place supply, demand arising from new housing presents a considerable challenge. Primary schools need to be located close to the communities they serve. When considering options for provision, the existing estate will always be considered for expansion, however, in many cases this may require relocation, or significant rebuilding. The Council is also active in considering its own assets especially prior to any disposals, to ensure that the potential for school provision on the sites is considered at an early stage.

3.14 In total approximately 80 FE of additional primary provision is needed as a result of the housing plans, equivalent to 40 new 2 FE primary schools. The site allocation process has identified options for 50 FE. With safeguarded sites/land included, this rises to demand of 88FE and solutions for 60FE.

c) Secondary Education

3.15 There are 40 secondary schools in Leeds in 2015, including 2 free schools. Secondary school place delivery planning is more complex than for primary, with children more able and willing to travel longer distances to school, and schools working with local partners to deliver a broad curriculum off site as well as at the main school site. As well as opportunities for simple expansions or new schools, these partnerships offer opportunities for different types of solutions, in particular the opportunity for shared 14-18 year old provision. These relationships are relatively new, and so the method of delivering additional capacity would need to be developed in partnership with the schools in each locality.

3.16 A cautious approach has been taken when projecting the pupil yield for secondary school places. In total approximately 61 FE of additional secondary provision are needed as a result of the housing plans, equivalent to 7-8 new secondary schools of around 8 forms of entry each. The site allocation process has identified options for 32 FE. With safeguarded sites/land included demand rises to 67 FE (with no further sites agreed).

d) Further and Higher Education

3.17 Leeds has a strong higher education sector with three universities; the University of Leeds, Leeds Beckett University, and Leeds Trinity University. The City is also home to Leeds City College, Leeds College of Building, Leeds College of Art, the Leeds College of Music, and the Northern School of Contemporary Dance. The Raising of the Participation Age will involve more young people considering a range of courses and training opportunities that require the Local Authority and the Colleges to plan together to ensure sufficient suitable options are available.

3.18 The University of Leeds is now the UK's second-largest, and is the third largest employer in the city, with Leeds Metropolitan University being the city's fourth-largest employer. The Universities have their own estates strategies and priorities identified in order to maintain and improve their built estate and infrastructure.

ii) Health

3.19 Local health facilities need to be accessible to all, therefore it is important that they are provided in sustainable locations. Town and local centres are considered to be sustainable locations as they have sustainable transport access and are the focus for other community facilities which in turn can encourage services to co-locate to enable linked trips.

3.20 This supports the decentralised approach of providing health and social care services closer to where people live and away from central hospital locations, unless that is appropriate. Wherever possible, health and social care services will be integrated, to give individuals more choice and control over the services they need to stay healthy or return to independent lives following recovery from illness.

3.21 In May 2010, the government announced the proposal to abolish Primary Care Trusts and replace them with Clinical Commissioning Groups, National Health Service England supported by Local Area Teams, Public Health England and the delivery of public health functions by Local Authorities. The Health and Social Care Act 2012 transferred substantial health improvement duties to local authorities from April 2013. In performing their public health functions Local Authorities must work with Clinical Commissioning Groups (CCGs) and representatives of NHS England and Public Health England (PHE). The Department of Health gives the Council a ring-fenced public health grant to target health inequalities to improve outcomes for the health and wellbeing of their local populations. Local authorities now have the key leadership role for public health locally.

3.22 The provision of health facilities falls within the remit of NHS England and at a local level, Leeds' 3 Clinical Commissioning Groups (CCGs). The CCGs and partners work closely with GP practices, pharmacists, optometrists, dentists, hospital trusts, social services, mental health services and community and voluntary organisations to commission and fund the healthcare they provide to people in Leeds.

3.23 Infrastructure requirements are identified and planned through various plans and programmes. The Leeds Five Year Strategic Plan was submitted to NHS England in July 2014. It sets out how the NHS and the Council are working together to improve the health and wellbeing of local people, including the two key challenges in terms of sustainability; to bring the overall cost of health and social care in Leeds within affordability limits; and to change the shape of health provision so that care is provided in the most appropriate setting.

3.24 The Council and the Clinical Commissioning Groups also have a shared legal duty to prepare and publish a Joint Health and Wellbeing Strategy. The evidence on which the Strategy was based came in particular from the Joint Strategic Needs Assessment of 2012, which gave a detailed picture of the health needs and assets of the Leeds population, as well as other research and the opinion of multiple organisations, interested parties, and the citizens of Leeds.

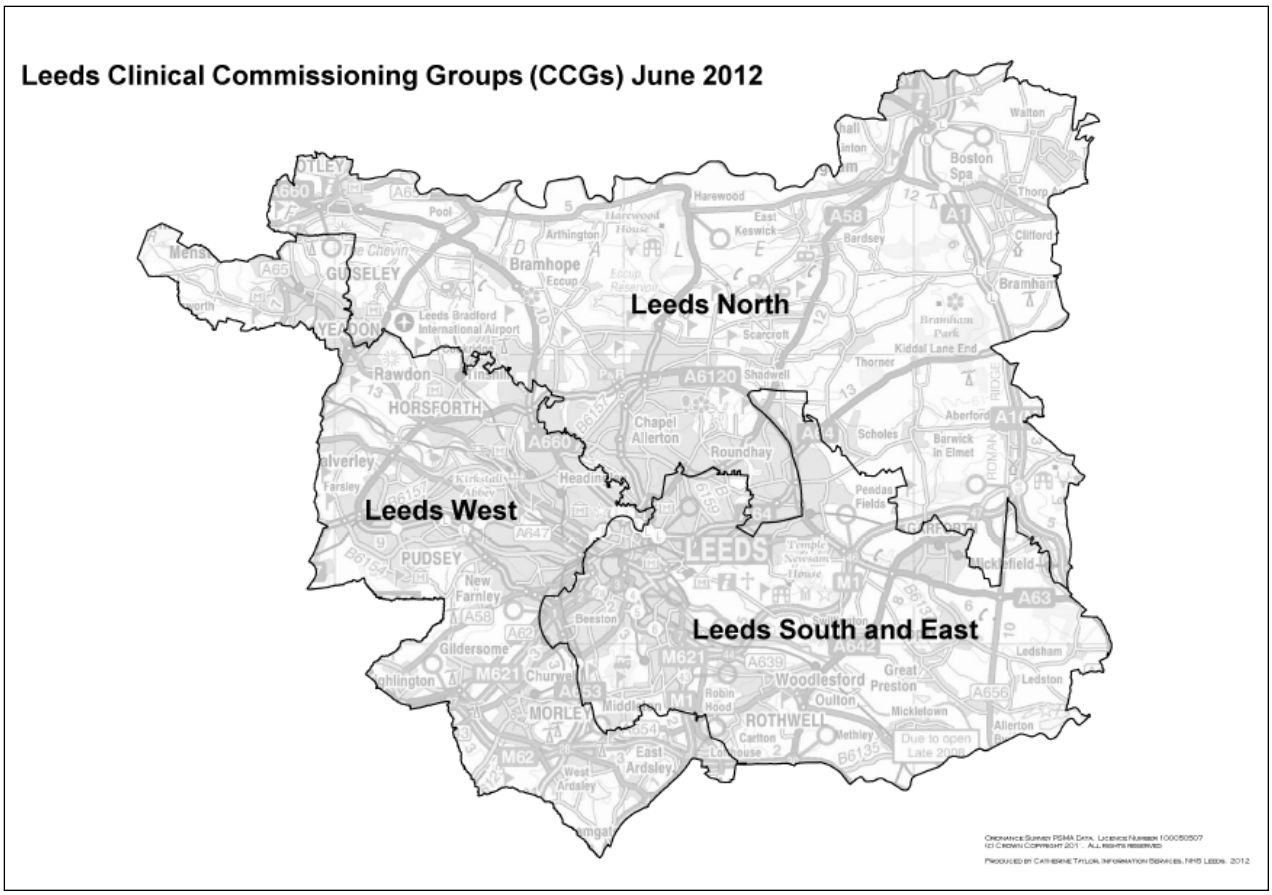
3.25 The Leeds Joint Health and Wellbeing Strategy 2013-2015 is the result of commissioners coming together to provide the strategic direction. It sets out how they will make the best use of collective resources and help in decisions on bringing in the right level of resources for different needs across the city. The vision for health and wellbeing is that Leeds will be a healthy and caring city for all ages, with a reduction in the differences in life expectancy between communities. The proposed outcomes include that people will live longer and have healthier lives, with active and independent lives, enjoying the best possible quality of life. They will be involved in decisions made about them, and will live in healthy and sustainable communities.

GP Practices

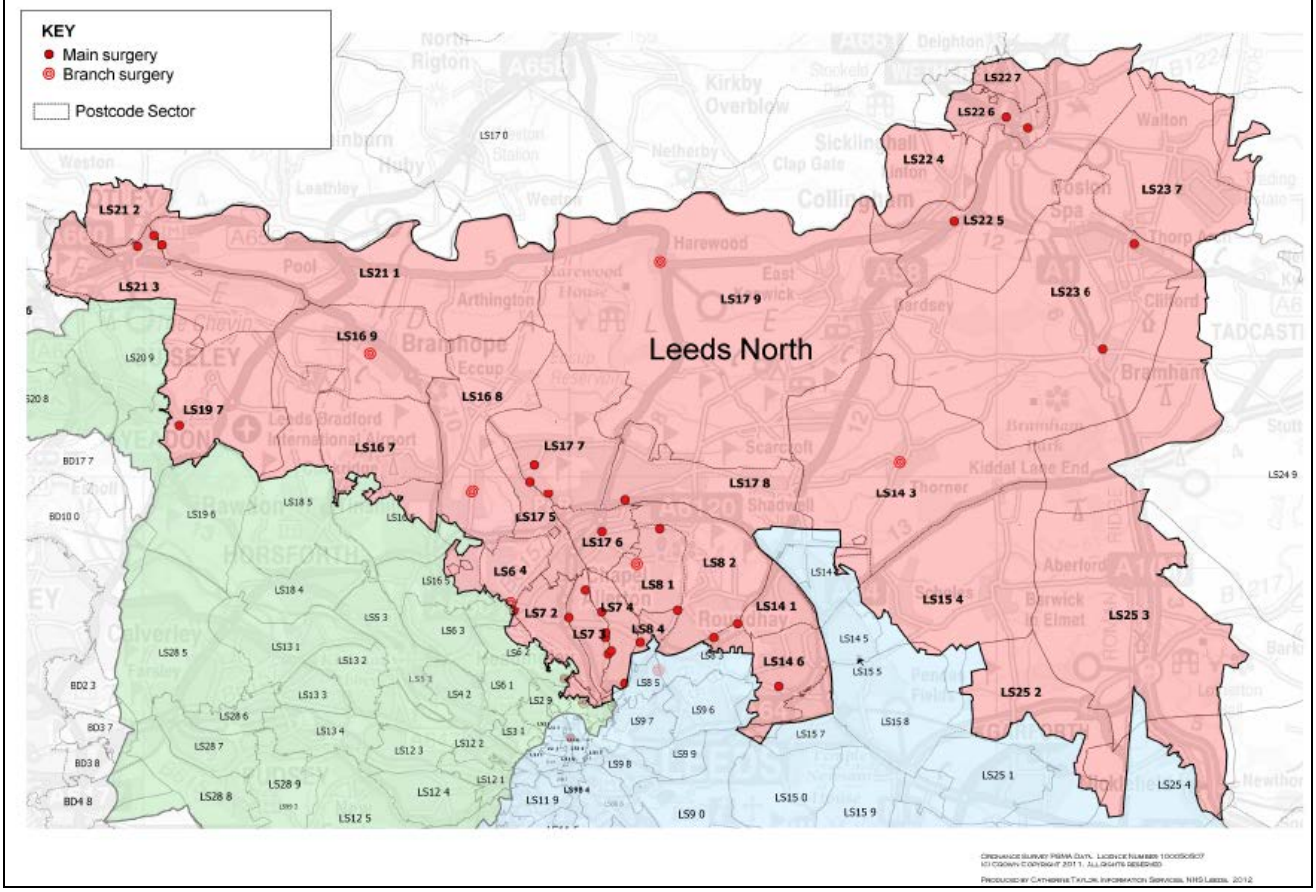
3.26 Clinical Commissioning Groups (CCGs) are groups of GPs responsible for designing local healthcare services (all GPs have to belong to a CCG). They manage local health budgets and ensure that the NHS continues to provide high quality healthcare for local people. Leeds has three CCGs: NHS Leeds West CCG, NHS Leeds North CCG, and NHS Leeds South and East CCG. They are committed to working together to ensure that high quality community, hospital, emergency, urgent care, learning disability and mental healthcare services are available throughout the City.

3.27 Leeds South and East CCG is made up of 43 GP practices covering around 258,000 people. Leeds West CCG comprises 38 GP practices and is responsible for an area covering a population of around 355,000. Leeds North CCG has 28 GP practices covering a population of around 211,000. Maps of the CCGs are included below, from the respective NHS websites.

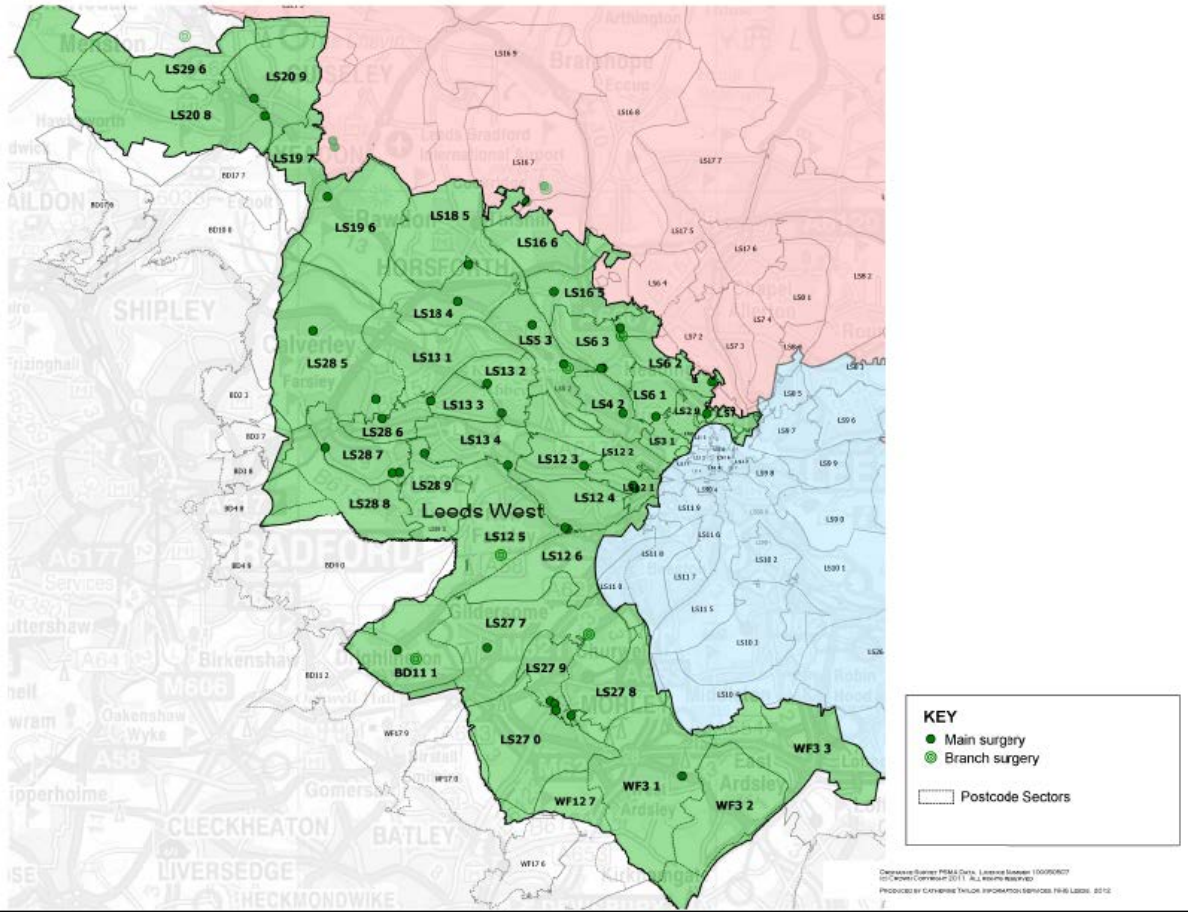
Map of Clinical Commissioning Groups and GP Practices across Leeds

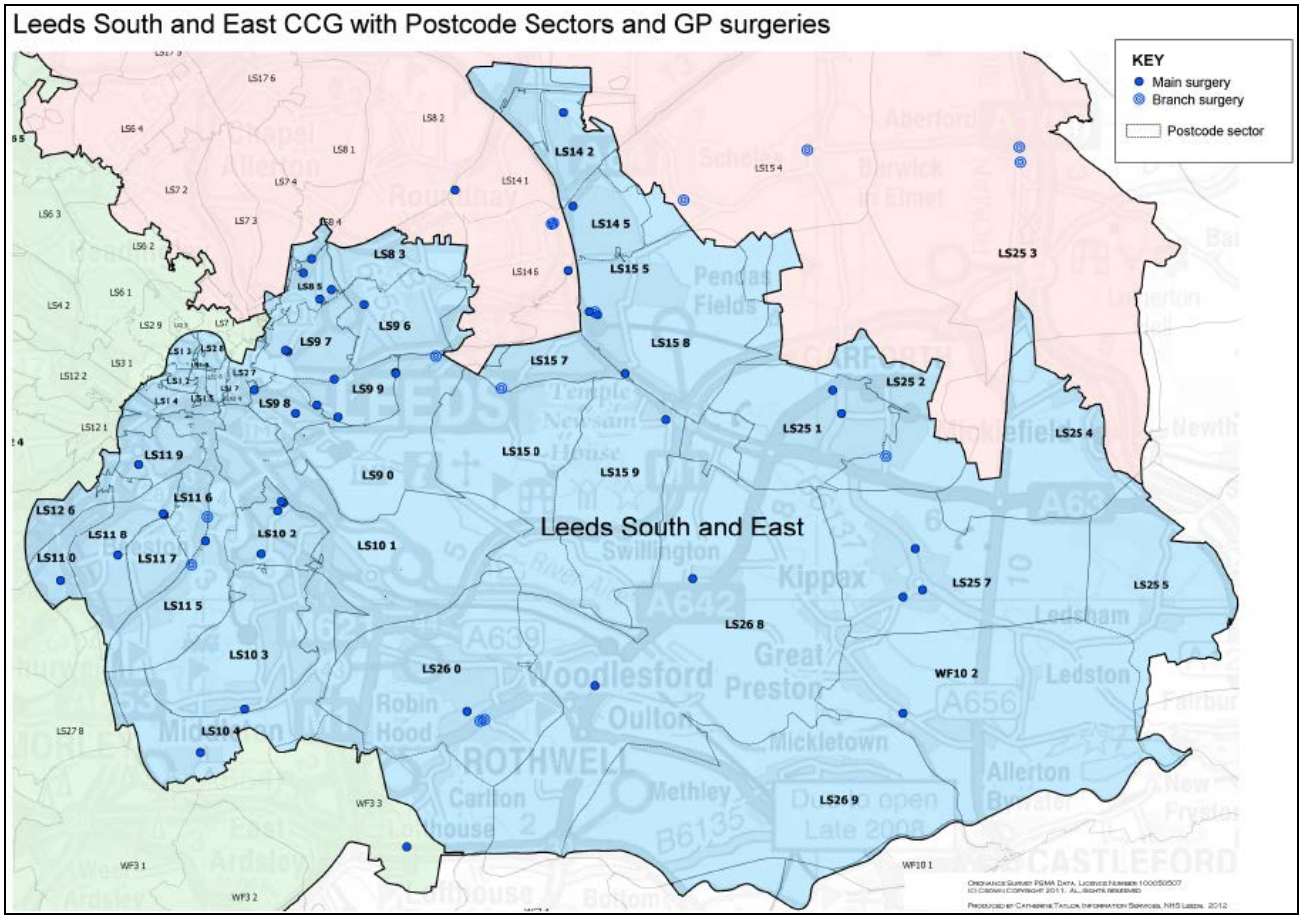


Leeds North CCG with Postcode Sectors and GP surgeries



Leeds West CCG with Postcode Sectors and GP surgeries





3.28 The amount of new housing identified for Leeds up to 2028 would equate to on average 5-6 new GPs a year across Leeds based on a full time GP, with approximately 1800 patients. Leeds already has over 100 existing practices of varying sizes, so the addition of 5-6 GPs a year is not a significant number for the population of Leeds.

3.29 The Site Allocations Plan cannot allocate land specifically for health facilities because providers plan for their own operating needs and local demand. New GPs do not necessarily require new physical buildings. Existing practices determine for themselves (as independent businesses) whether to recruit additional clinicians in the event of their practice registered list growing. Practices can also consider other means to deal with increased patient numbers, including increasing surgery hours. It is up to individual practices how they run their businesses to respond to increased patient numbers. Practices consult with the NHS about funding for expansion, albeit that funding is limited.

3.30 Notwithstanding this, in accordance with Core Strategy Policy P9 developers will be encouraged to consult with the relevant Clinical Commissioning Group to ensure consideration of health provision in association with proposed developments. The largest sites allocated in the SAP will be expected to include land for local facilities, which could include new GP surgeries. Proposals for health facilities e.g. doctors surgeries and dentists will be supported subject to need, site constraints and location in relation to planning policy.

NHS Trusts

3.31 There are two main provider NHS Trusts in Leeds: Leeds Teaching Hospitals NHS Trust runs the majority of acute hospital services in Leeds and is also a regional treatment centre; and Leeds Mental Health Trust which is in the process of becoming an NHS Foundation Trust.

3.32 The teaching hospitals in Leeds are the Leeds General Infirmary (LGI) (City Centre), St James's Hospital (Burmantofts), Seacroft Hospital, Wharfedale Hospital (Otley), Chapel Allerton Hospital, and St Mary's Hospital (Armley). There are two accident and emergency departments, at the LGI and St James', and St George's one-stop centre in Middleton, Wharfedale Hospital, and the Burmantofts Health Centre also provide minor injury and walk in centres. There are 60 community bases spread across the whole Leeds District. Most services are specific to the needs of Leeds, however some specialises have a wider regional/national impact.

3.33 Health infrastructure provision undergoes frequent changes due to changing standards at the nation level, and the swift level of health intervention innovation and advancement. The current key change of emphasis is to focus on prevention rather than cure, alongside aiming to move provision out of hospitals and closer to people's homes. Particular infrastructure issues identified by the Leeds Teaching Hospitals NHS Trust are:

- Utilities protection of supply to hospitals
- Access and travel for patients and staff
- Impact of major infrastructure breakdown
- Opportunities for joint working on infrastructure issues
- Being included in consultations on major changes to the city profile to allow full consideration of health impacts.

3.34 Across the Leeds Teaching Hospitals, a clinical services reconfiguration is already underway, whereby LGI has become the main emergency department with children's services also centralised onto that site, elderly services centralised at St James', and elective orthopaedics, plastics, dermatology, and rehabilitation services at Chapel Alperton. The general estate rationalisation strategy aims to reduce the overall size of the estate by 25%, including a focus on ambulatory and local services at the other hospitals.

3.35 Of particular note, the LGI site is underused in terms of floorspace, and has been included in the SAP as a mixed use site primarily for residential and office. This does not mean that the clinical functions are relocating off the site or predetermine any specific proposals, it simply means that there is the opportunity to reduce the overall floorspace needed for the hospital.

3.36 The Foundation Trust for mental health and learning disabilities has units spread throughout the city catering to the different needs, with St Mary's Hospital being the most significant site. The current emphasis is for improved community services which in turn reduces the need for inpatient beds. Current high demand is being managed within the existing resources and better crisis prevention whilst maintaining standards is the approach taken to mitigate the demands of an ageing population. The opportunities for joint delivery of services and also co-location are fully recognised by the Trust.

3.37 Rationalisation has been underway in the past few years to make better use of the estate, including using Local Improvement Finance trust (LIFT) schemes to provide new or rationalised provision of community health facilities. This has allowed the PCT to invest in new premises in new locations, not merely reproduce existing types of service, to provide patients with modern integrated health services in high quality, fit for purpose primary care premises. The one-stop-shop principle is an important component of NHS LIFT - allowing the patient to be treated in their locality in 'One-Stop-Centres' that are modern, convenient, and easy to access and staffed by a wide range of healthcare professionals.

iii) Community Centres and Libraries

3.38 The provision of existing and new social and community facilities is integral to creating sustainable communities. However, in planning for strategic infrastructure it is not possible to identify the need for and location of such centres. The Core Strategy sets out that community centres will generally be located in centres for ease of linked trips, and where proposals for development would result in the loss of an existing facility or service, satisfactory alternative provision should be made elsewhere within the community if a sufficient level of need is identified. Neighbourhood planning is expected to identify aspirations and need, potential locations, and funding solutions for new community centres. The Site Allocations Plan identifies that some allocations will need to provide a new centre as a requirement of their development, and these centres would be an appropriate location for new community facilities.

3.39 The Service provides 36 libraries across the City including the major Central Library, as well as 6 mobile libraries, a Library at Home vehicle, a service for 3 prisons, and a school library service. The service provides access to a wide range of books and electronic material recorded in the public access catalogue, and attracts around 4 million visitors each year. The service has also been innovative in its adoption of modern technology offering an electronic reference library available at home, work and in the library; 24/7 access to a wide range of services, including online loan renewals and e-books which can be downloaded at home and transferred to portable devices. 2013/4 statistics:

- 87,223 people as active members,
- 2,976,376 items borrowed.
- 3,610,013 visits to libraries
- 681,375 visits to the Central Library.
- 10.5 million virtual visits worldwide.

3.40 Leeds Libraries have been faced with the need to deliver improved services, whilst at the same time maintain tight budgetary control. By implementing one of the UK's leading electronic supply chain services, Gateway, over the past 3 years, Leeds Libraries have streamlined existing services and delivered significant annual returns. All of these initiatives have helped to broadly maintain visitor numbers and book issues set against a trend of general decline in library use nationally.

3.41 Within the Leeds District there is also the Thorp Arch Wetherby site of the British Library, a highly important national archive and library service.

iv) Emergency Services

3.42 The increase in the number of households across Leeds will place increased demands on emergency services resources, and as growth develops across the city there will be the further need for re-assessment of provision.

a) Police

3.43 Police services across the Leeds District are provided by West Yorkshire Police. The new City and Holbeck Police Divisional Headquarters at Elland Road became operational in 2014. The existing neighbourhood policing stations will remain in their present locations. There are no further major infrastructure schemes planned.

b) Fire and Rescue

3.44 The fire and rescue service is provided by the West Yorkshire Fire and Rescue Service. Following a major review of emergency cover and as part of West Yorkshire Fire and Rescue Authority (WYFRA) Integrated Risk Management Plan, the service agreed a range of measures including a new fire station in Killingbeck to replace fire stations in Gipton and Stanks, and a new station in Menston to replace ones in Rawdon and Otley. The Draft IRMP 2013-14 consulted on further changes including mergers of six existing stations into three new ones, but after extensive consultation revised plans were agreed whereby the only merger would be a new station in the Weetwood area to replace the ones at Cookridge and Moortown. Due to difficulties in identifying a suitable site for a new fire station in Menston, West Yorkshire Fire and Rescue Service has now revised its plans and Rawdon and Otley stations will remain as they are.

3.45 The new stations are part of proposals to enable WYFRS to deliver a first-class emergency service which meets community risk, protects firefighter safety and contributes significantly to addressing the financial gap West Yorkshire Fire and Rescue Authority faces. The changes also reflect a significant reduction in risk and demand experienced over the past ten years. The new site at Killingbeck is currently under construction and programmed to open in December 2015. The station will be staffed by 44 whole time firefighters delivering a 24 hour immediate response to the community, and will also accommodate the East Leeds Young Firefighters Scheme. This is an independent facility for students and is being relocated from Gipton fire station. This unique scheme will continue to flourish in its new home, enabling the youth of East Leeds access to a first class learning experience. An independent community room will also allow partner agencies to interact and share working experiences with WYFRS.

3.46 Rothwell's existing fire station was built in 1963 and the new plans involve replacing the existing fire station with a brand new station in the same location for 14 firefighters. The new station is schedule to open in July 2015.

3.47 There is also the need for incremental provision of fire fighting water supplies and fire hydrants where new growth is to occur, and it is assumed that these would be provided directly on site by the developer where necessary.

c) Ambulance Service

3.48 Ambulance accident and emergency services and patient transport services are provided by the Yorkshire Ambulance Service. The Trust is currently working towards becoming a NHS Foundation Trust, which is a membership organisation free from central government control. Although data for the Leeds District has not been collated, the Service operates from 62 ambulance stations across the county, and 19 hospital based patient reception centres, and has a fleet of over 500 emergency vehicles and 460 patient transport service vehicles. The communication centres are based outside the District, in York and Wakefield.

4. GREEN INFRASTRUCTURE AND GREENSPACE

4.1 Green Infrastructure is the network of multi-functional greenspaces, both urban and rural, which includes protected sites, woodlands, nature reserves, river corridors, public parks and amenity areas, together with green links. It extends from urban centres through green corridors to open countryside and supports the natural, recreational and ecological processes which are integral to the health and quality of life of sustainable communities. A key function of Green Infrastructure is to help maintain and enhance the character and distinctiveness of local communities and the wider setting of places.

4.2 Two-thirds of the Leeds District is Green Belt, and one of the City's distinguishing features is also the way in which green corridors stretch from the surrounding countryside into the heart of the main urban area. Alongside these more natural spaces, the Council manages around 4,000 hectares of parks and greenspaces including 6 flagship City Parks. Trees and woodland cover are also important components of Leeds' landscape character, with 4,450 hectares of woodland cover in the district, 6 Local Nature Reserves, 17 Sites of Special Scientific Interest, 120 Local Nature Areas and 44 Sites of Ecological or Geological Importance.

4.3 The SAP and AVLAAP will protect over 1700 greenspace sites serving the Leeds population. Each site has been recorded, plotted, assessed (quality and facilities available), and classified according to typology using the categories:

- Parks and Gardens
- Amenity Space
- Children and Young People's Play Provision
- Outdoor Sport
- Allotments
- Natural Green Space
- City Centre Civic Space
- Cemeteries/Churchyards
- Green Corridors
- Private Gardens open to the public i.e. Harewood House

4.4 Please see the separate Greenspace Background Paper for detailed information on all the typologies of current and proposed greenspace in Leeds, and how the SAP and AVLAAP greenspace designations have been identified.

4.5 The greenspace needs of the District were comprehensively identified in the Leeds Open Space, Sport and Recreation Assessment (OSSRA 2011, formerly known as the PPG17 Audit), which fed into the associated policies of the Core Strategy. The Core Strategy protects existing greenspaces where required and appropriate, and seeks to enhance their quality and accessibility. New development will contribute both to the amount of new greenspace in areas of deficiency, and to quality improvements on existing spaces, as set out in Core Strategy Policies G4 and G5. These new areas of greenspace will then have the same level of protected as for the designated greenspace sites in the SAP and AVLAAP. Furthermore, a number of housing sites have specific greenspace policy requirements.

4.6 The City Centre is a focus for both residential and economic growth which greatly limits the potential for provision of all greenspace types. Primarily the City Centre needs areas for circulation and to break up the townscape, both in terms of

greenspace and public realm (hardstanding). There is the intention to create a network of improved greenspaces and public realm infrastructure throughout the City Centre, including improved links to the larger greenspaces located at the boundary of the City Centre, such as Woodhouse Moor. The recently approved pocket park scheme on Sovereign Street alongside new office development is an example of this. Also, one of the key priorities for green infrastructure in the City Centre is the proposed City Park along the South Bank of the River Aire, and support is being sought from developers and land owners in the form of land or financial contribution, as well as other funding sources.

4.7 At the SAP Issues and Options stage an assessment of the quantity of green space against the standards set out in Core Strategy Policy G3 was undertaken for each ward to establish which typologies had a surplus of provision and which were in deficit. All wards were in deficiency in at least one typology so none met the full standards. Amendments made since that date has led to slightly revised provision, which has again been assessed against the standards to identify which wards and which typologies are in surplus and deficiency. The findings of this re-assessment are set out in the Greenspace Background Paper. In summary, there is a great variety of provision across the typologies and wards with no ward meeting the standards of provision for all typologies. Provision of allotments is particularly poor and outdoor sports provision in deficit in many wards whilst the provision of natural greenspace is in surplus across many wards. There has also been an assessment to determine whether the accessibility standards set out in Core Strategy Policy G3 are met. This will allow for resources can be channelled to meeting any deficiencies, and where surpluses exist, alternative uses may be an option.

4.8 Within the AVLAAP there are 130 hectares of greenspace on 21 sites, plus an additional 3.2 hectares of civic space across 7 sites in Leeds City Centre. Sites have been assessed using the standard criteria and provision has been assessed against the standards set out in Policy G3 using an estimation of the population of the Aire Valley area. A similar assessment exercise has been undertaken which has identified that there is a surplus of amenity, children's play and natural green space.

Cemeteries

4.9 Leeds City Council manages 75 cemeteries and churchyards within the Leeds District, including 24 cemeteries covering 82 hectares, 3 crematoria covering 15 hectares (Lawnswood, Cottingley, and Rawdon), 43 war memorials, and 51 closed and disused churchyards covering 18 hectares. Cemeteries are located at Armey Hill Top, Beckett Street, Beeston, Cottingley Hall, Garforth, Gildersome, Guiseley, Harehills, Holbeck, Horsforth, Hunslet, Kippax, Lawnswood, Lofthouse, Morley, New Farnley, New Wortley, Otley, Pudsey, Rothwell, Upper and Lower Wortley, Whinmoor, Whitkirk, Grange, and Yeadon.

4.10 The Bereavement Service administer on average 7,570 funerals per year of which cremations make up 93%. Kippax cemetery opened in 2013 and improvements have been made to Garforth, Lawnswood, Cottingley and Rawdon. A new five-acre multi-faith cemetery (a £350,000 scheme) at a council-owned site at Whinmoor Grange opened in 2013. Harehills and Cottingley cemeteries also have specific sections for Muslim burials and Harehills has a section for Jewish burials. A site at Elmete is also proposed that will be used once Harehills cemetery becomes full.

Sports Facilities

4.11 Outdoor sports facilities are a wide-ranging category of open space which includes both natural and artificial surfaces for sport and recreation that are either publicly or privately owned. Facilities included within this category are playing pitches (including football, rugby, cricket, hockey), synthetic turf pitches, tennis courts, bowling greens, athletics tracks, and golf courses.

4.12 Outdoor sports facilities often function as a recreational and amenity resource, in addition to a formal sports facility. This is particularly true of public grass pitches, which often have a secondary function for walking and kick about area. Many recreation grounds double up as local parks. Taken together, the large city parks of Roundhay and Temple Newsam provide 27 public grass playing pitches, while Roundhay provides five public cricket pitches. When these pitches are not in formal use, which is for most of the week and over the summer months, they are available as open parkland, although this does impact on quality

4.13 In 2002 the Council undertook a Playing Pitch Strategy, for which a major driving factor was the need to identify a hierarchy of investment priorities for pitch improvement and development. Among other recommendations and priorities, since the publication of the Strategy the Council has sought to reduce the overall number of non-significant single pitch sites and initiate and encourage the development of local networks of 'community clubs', which reflect local priorities for sports development, and provide for junior and senior teams, training, and competitive play. The Council is in the process of refreshing the Playing Pitch Strategy, which is anticipated for publication in Spring 2016.

4.14 The Leeds OSSRA recommends that the standard for outdoor sports (excluding golf courses) is set at the existing level of city wide provision, with a focus on improving quality of existing sites, and better access to them. For instance, the majority of outdoor sports facilities in Leeds are effectively private, being provided on education sites. For example, the university sports grounds concentrate large numbers of good quality outdoor sports facilities in North West Leeds. The influence of education controlled sporting facilities on the overall number of facilities is highly significant.

4.15 Provision of additional quality changing facilities is a capital intensive and longer term objective. As outlined above, the Council's policy resulting from the Playing Pitch Strategy is to encourage community hub sites for sporting facilities so that the provision of capital infrastructure such as changing accommodation can be shared and better utilised. Collective provision of pitches and facilities at some sites is already well established, such as Roundhay and Temple Newsam. Some sites, such as Stonegate Road in Moortown already exist and have previously provided formal sports provision, but due to drainage problems or lack of other facilities, their use was reduced or suspended pending substantial investment and improvement. The existing and proposed hub site locations are Prince Phillips (Meanwood), Stonegate Road (Meanwood), Church Lane (Methley), Neville Road (Halton Moor), Middleton Leisure Centre, Queens Park (Pudsey), Tinshill Recreation Ground (Colton), Archie Gordon (Kirkstall), King George's Field (Horsforth), Whinmoor Cemetery, Roundhay Park, Fearnville (Gipton), and Temple Newsam.

4.16 Refurbishment of the Council's Leisure Centres, including swimming pool provision, is an ongoing process, and projects have been identified in the Infrastructure Schedule.

Private provision of facilities such as gyms is also an important element of sports provision and is encouraged by the Council in appropriate locations.

4.17 Leeds also has a number of high profile sports venues that attract major events, and the Council supports ongoing improvements at the city's major sporting venues, such as Headingley Carnegie Stadium and Elland Road. The Universities also provide high quality facilities across a wide range of sports, and again improvements and additions to these are strongly supported.

Children's Play

4.18 Facilities for children and teenagers/young people across Leeds ranges across four types of formal equipped play space. Children's equipped play areas are for toddlers and young children and consist of equipment ranging from traditional swings and slides, to zip lines and more advanced play equipment for older children. This type of equipment also caters for disabled children. Multi-Use Games Areas are aimed at children aged 8 and above and consist of all weather courts with multiple play functions, including goal ends and basket ball hoops. Skate parks are aimed at children aged 12 and above and consist of a couple or a series of ramps depending on the size of the facility. Teen Zones are aimed at teenagers aged from 13 years and act as shelters where they can meet.

4.19 The Core Strategy recommends that the number of facilities provided across all four types is based at a rate of 2 per 1,000 population. This will bring about an improvement in the provision of play facilities across Leeds without dictating what type of facility is provided. The justification for grouping the facilities together is that child demographics vary between analysis areas and the decision about what type of facilities are provided should be in consultation with the local community.

5. THE LEEDS INFRASTRUCTURE SCHEDULE

5.1 The following pages set out the Infrastructure Schedule for Leeds. A number of schemes have been completed since the previous April 2013 Schedule, and are recognised as a separate table. The delivery periods are organised into five year time bands dating from 2015, with the final 20 year band being outside of the Core Strategy and SAP timescale but included as being important to show the longevity of major infrastructure provision.

5.2 The Schedule includes identification of the projects which are critical for the delivery of the Core Strategy and the SAP and AVLAAP, alongside identifying those which are desirable but not essential. This includes consideration of the schemes which are funded, and those where the funding is more uncertain. Predicting future levels of funding beyond the short-term is difficult and it is particularly problematic in the current economic and funding climate, where funding has considerably reduced from the levels available in previous years. This is recognised in national guidance. Where exact levels of funding are unknown, the Schedule identifies the project alongside any funding information or estimates currently available.

5.3 The information in the schedule is organised into three levels of priority with green (1) / amber (2) / red (3) colour coding. This coding is used to identify both the priority of a specific project, and the likelihood of its funding as set out below:

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

INFRASTRUCTURE DELIVERY PLAN AREAS

D - DISTRICT WIDE
AVL – AIRE VALLEY LEEDS SPECIFIC PROJECTS (WITHIN EAST, INNER, OR CITY CENTRE)
A - AIREBOROUGH
CC - CITY CENTRE
E - EAST LEEDS
I - INNER AREA
N - NORTH LEEDS
ONE - OUTER NORTH EAST
ONW - OUTER NORTH WEST
OS - OUTER SOUTH
OSE - OUTER SOUTH EAST
OSW - OUTER SOUTH WEST
OW - OUTER WEST
R - REGIONAL OUTSIDE OF LEEDS DISTRICT

LEEDS INFRASTRUCTURE SCHEDULE – FULL SCHEDULE – JUNE 2015

APRIL 2013 IDP PROJECTS NOW COMPLETED

AREA	TOPIC	SCHEME	TOTAL COST	DELIVERY NOTES
D	Cycle	Leeds Core Cycle Network Route 10 Bradford – City Centre	£248,000	Implementation Plan 1: £223k 2011/12, £25k 2012/13. Phase 1 Complete.
D	Cycle	Leeds Core Cycle Network Route 12 Garforth to City Centre	£478,000	Phases 1 and 2 complete.
D	Highways (local)	Traffic light priority	£710,000	Enhanced priority for buses at signalised junctions. LTP3 scheme.
D	Transport (Bus)	Bus Lane Enforcement Cameras Phase 2	Neutral	LTP3 scheme
CC	Cycle	Leeds Core Cycle Network Route 2 – Leeds station to universities	£315,000	Opened spring 2014
CC	Cycle	Leeds Core Cycle Network Route 9 – Chapel Allerton to City Centre. Phase 1	£1, 600,000	Opened May 2015
CC	Transport (Bus)	Leeds City Bus additional routes – route 70	Not known	Started operation April 2015
E	Highways (strategic)	M1 Jn 44 signalisation	Not known	Opened April 2015
I	Emergency Services - Police	City and Holbeck new Police Divisional Headquarters at Elland Road - Private Finance Initiative scheme	Not known	Home Office awarded £215.9 million for 3 new Police facilities including Elland Rd. Planning application approved 2012, completed April 2014.
I	Highways (strategic)	M621 Junction 2 Islington roundabout	£325,000	Introduction of full-time traffic signal controls to address nose to tail collisions at roundabout entry points and manage traffic movement effectively along A643.
I	Public Transport	Roundhay Road Integrated Transport Scheme (Bayswater Rd - Harehills Lane)	£433,000	Outbound bus lane
I	Transport (Bus)	Elland Road Park and Ride	£2,550,000	Opened June 2014
OS	Fire and Rescue	New replacement fire station on the existing Rothwell site	Not known	Opening July 2015
OW	Highways (local)	Thornbury Barracks roundabout	£3,400,000	Opened May 2015
OW	Transport (Rail)	New Pudsey park and ride extensions and access	£1,140,000	Opened 2014
R	Highways (strategic)	M62 Jn 25-30 Smart Motorway	Not known	Completed September 2013
R	Water	Linking East Coast area to the grid, to pump water over a greater area to better allow for localised droughts	£6,700,000	Yorkshire Water £6.7m 2010 - 2015 to connect Scarborough and Filey area to the Yorkshire Grid.

PLANNED INFRASTRUCTURE PROJECTS 2015 ONWARDS

AREA	TOPIC	SCHEME	TOTAL COST	PRIORITY	FUNDING SOURCES AND PARTNERS	DELIVERY NOTES	DATES	5 yr	10 yr	15 yr	20 yr
D	**Education**	School requirement District wide resulting from SAP and AVLAAP allocations (Core Strategy housing growth)	£800,000,000	1	1 Developer contributions including sites / CIL / LCC sites, LCC budget including Basic Need grant allocation	Approximate build costs (notwithstanding land costs) approximately: £7 million for 2 form entry primary school £30 million for 8 form entry secondary school Approximately 80 FE of additional primary provision needed to 2028, equivalent to 40 new 2 FE to be provided by extensions and new schools. The site allocation process has identified options for 50 FE. With safeguarded sites included, this rises to demand of 88FE and solutions for 60FE. Approximately 61 FE of additional secondary provision needed to 2028, equivalent to 7-8 new secondary schools of around 8 forms of entry each. The site allocation process has identified options for 32 FE. With safeguarded sites included demand rises to 67 FE (with no further sites agreed). Shortages will need to be addressed through a mixture of other site acquisition, the existing estate and possibly Free Schools (although these are outside the authority's influence). Therefore build costs are approximately: 80 x 2FE primary schools = £560m 8 x 8FE secondary schools = £240m Total = £800m		✓	✓	✓	

D	**Green Infra**	Improvements to greenspace quantity and/or quality as result of new housing development	£187,300,000	1	1 £111.3m provided on site by developers, £74.3m via contributions including the CIL and grant funding	The increase in population will lead to need for new areas of greenspace as well as improvements to existing parks. Core Strategy housing figures of 66,500 dwellings gross to 2028 (74,000 minus AVL provision of 7,500) (and assume 25% flats). Core Strategy G4 requires 80 sqm per dwelling. Assume 60% delivered on-site, which equates to 355 ha. The cost to lay out and maintain this is approximately £111.3m. 40% improvements to existing local greenspace infrastructure approximately £74.3m.		✓	✓	✓	
D	**Green Infra**	District wide child's fixed play as a result of new housing development; play areas, MUGA, and skate/BMX	£34,600,000	1	1 Provided on site by developers or via contributions including the CIL and grant funding	At 0.62 children per house and 0.1 children per flat = costs £658 per house and £106 per flat (rounded at 2015 rates). Core Strategy housing figures of 66,500 dwellings gross to 2028 (74,000 minus AVL provision of 7,500) (and assume 25% flats). Assume 60% delivered on-site, leaving 40% to be via new infrastructure on existing greenspace. Total cost of child play improvements to existing greenspace is approximately £34.6m.		✓	✓	✓	
D	**Cycle**	Leeds Core Cycle Network Route 16 - Wyke Beck Valley (phase 2)	£573,000	1	1 Sustrans, British Coal Residuary Authority, HS2	Connections to East Leeds Link, Aire Valley and Trans Pennine Trail.		✓			
D	**Cycle**	City Connect 2 - Cycle super highway	£6,750,000	1	1 DfT/LTP	Scheme to extend current network of cycle superhighways by 5km within Leeds City Centre. Connecting to communities in the north and the south of the city, linking to Leeds City College and the emerging South Bank Area of Leeds. Also includes Leeds City Centre – Morley Phase 1.	2018	✓			
D	**Cycle**	City Connect - Cycle Super Highway Bradford – Seacroft	£17,995,000	1	1 DfT/LTP	23km segregated cycle superhighway	2015	✓			

D	**Flood Defence**	River Aire Flood Alleviation Scheme – Phase 2	£25,000,000	1	2 ERDF, BID, FDGiAF Jessica, LCC, development industry contributions	Phase 2 - to provide a 1:75 year Standard of Protection along the River Aire, from Newlay Bridge to the City Centre and from Knostrop to Woodlesford.		✓	✓		
D	**Flood Defence**	River Aire Flood Alleviation Scheme – Phase 3	£25,000,000	1	2 ERDF, FDGiA, BID Jessica, LCC, development industry contributions	Phase 3 - to increase the overall level of protection offered by the defences to a 1:200 Standard of Protection for the whole scheme.		✓	✓		
D	**Highways (local)**	20 mph limits and zones	Range of schemes	1	1 LTP3 IT Block	LTP3 scheme. Supported through LTP3 for next 3 years, likely to extend beyond this - ongoing work. Currently undertaking 15 schemes per year.		✓	✓		
D	**Highways (local)**	Pedestrian crossings	Range of schemes	1	1 LTP3 IT Block	LTP3 scheme. Supported through LTP3 for next 3 years, likely to extend beyond this - ongoing work.		✓	✓		
D	**Housing**	Affordable housing initiatives including via S106	Not yet costed	1	2 Developers, LCC, Government grants	Delivered as result of new development providing S106 funding, LCC programmes, and Government grants		✓	✓	✓	
D	**Public Transport**	Leeds NGT trolleybus network; Stourton - Holt Park, Stourton Park and Ride, Bodington Park and Ride	£250,600,000	1	1 £173.5m DfT, £77.1m LCC and Metro	Overall cost £250m, Transport & Works Act Order Inquiry 2014, due to start construction late 2017, start of operation 2020.	2016	✓			
D	**Transport (Bus)**	Investigation of Bus Quality Contracts/Partnership under consideration by WYCA	£300,000	1	1 LTP3, WYCA and Bus operators	WYCA agreed in Sept 2014 to continue to develop and evaluate both the Quality Bus Contract and Partnership approaches.		✓			

D	**Transport (Rail)**	Provision of additional rolling stock	Not known	1	2 Rail operators	Northern and TransPennine franchise requirement to provide additional capacity for 5,900 additional peak passengers into Leeds	2019	✓			
D	**Water**	Water and sewerage pipe replacement District wide, plus modelling to investigate areas of deficiency	£8,000,000	1	1 Yorkshire Water	Currently spending £8 million replacing 40,000 lead pipes in Leeds to improve drinking water quality.		✓			
D	**Education**	Nursery and child care provision	N/A	2	2 Private, voluntary and independent sector	To be delivered primarily through private, voluntary and independent sector.		✓	✓	✓	
D	**Energy**	Gas pipe replacement district wide - 190km 20 yr project	Not known	2	1 Northern Gas Networks	20 year project, initial phases completed/underway.		✓	✓	✓	
D	**Green Infra**	Playing pitch and facilities improvements	Cost within overall cost of outdoor recreation	2	2 Sport governing bodies, developer contributions /CIL	In accordance with the existing Playing Pitch Strategy for Leeds there are on-going playing pitch facility projects at numerous sites. The objective is to develop a series of community sport hub sites and these schemes are at varying stages of development. Funded by Sport governing bodies including the FA, RFL, and RFU, and developer contributions/CIL.		✓	✓	✓	
D	**Green Infra**	Development of new woodland (location not yet determined)	Not yet costed	2	3 Grant funding, developer on-site/ contributions	Ambition in the Core Strategy and other LCC plans but not costed as will be broken down into specific projects.		✓	✓	✓	
D	**Health**	New health centres where necessary to support new population	Not yet costed	2	2 Generally funded by NHS/individual practices	To be assessed on a site by site basis as necessary through the planning system, and through the evolving national context of health care provision.		✓	✓	✓	
D	**Parking**	Town and District Centre Parking Schemes	£120,000	2	1 LTP3 IT Block	LTP3 scheme. Supported through LTP3 for next 3 years, likely to extend beyond this - ongoing work.		✓			

D	Pedestrian	Public Rights Of Way Network	£1,200,000	2	2 £800k from LTP, grants, and on-site provision	The Leeds ROWIP will be reviewed again by 2017. If all of the identified projects were to be delivered over the next ten years, the City Council would need to seek funding between £2.3m and £3.9m, including through developer contributions, West Yorkshire Plus Transport Plan and third party grants. The Plan should mainly be viewed as an aspirational document highlighting improvements (which in part) are over and above the basic statutory requirements. A cautious estimate has therefore been used of £1.2m (half the lowest estimate) to reflect that schemes are aspirational. The current PROW network is a LTP3 scheme, supported through LTP3 for next 3 years with £75k and likely to extend beyond this through ongoing work. An assumption of £75k LTP funding has therefore been assumed for each 3 year period = £300k. Additional 3rd party grants and provision on site as part of development schemes has assumed an additional £500k.		✓	✓		
D	Transport (Rail)	Local rail network electrification schemes	Not yet costed	2	3 -	Studies required to confirm costs, business cases and priorities			✓		
D	Community Centres	New community centres as necessary	Not yet costed	3	3 Via S106 / CIL / ward based funding / other grants	Increase in population may lead for need for new community centres, or enhanced use/reconfiguration of existing centres. Funded and delivered when necessary through S106 / CIL / ward based funding / other grants.			✓	✓	
D	Cycle	Leeds Core Cycle Network Route 7 - Scholes to City Centre	£611,000	3	3 LTP3 IT Block	Connects to Penda's Way (17) and Wyke Beck Way (16).			✓		
D	Cycle	Leeds Core Cycle Network Route 8 - Rothwell to City Centre	£887,000	3	3 LTP3 IT Block	Connects to Route 3 and Aire Valley.			✓		

D	**Cycle**	Leeds Core Cycle Network Route 13 - Morley to City Centre	£932,000	3	2 LTP3 IT Block	Links to White Rose shopping centre and Holbeck regeneration area. Likely to be superseded by City Connect 2 scheme			✓		
D	**Cycle**	Leeds Core Cycle Network Route 11 - Farnley - Leeds City Centre	£1,110,000	3	2 LTP3 IT Block	Links to Route 10.			✓		
D	**Libraries**	Libraries	Not yet costed	3	3 Ward based funding, LCC, other grants	Increase in population may lead for need for reconfiguration of existing libraries. Funded and delivered when necessary through LCC capital funding / ward based funding / grants.			✓	✓	
D	**Transport (Rail)**	Additional park and ride capacity local rail stations	Not yet costed	3	3 None	Additional park and ride capacity at West Yorkshire rail stations. Pontefract and Mirfield to be progressed through IP1 funded by LTP but are yet to be approved, further study required.			✓		
AVL	**Education**	2FE primary to the SW corner of the Copperfields site and 2FE primary / 4FE secondary through school at Skelton Grange	£19,600,000	1	1 Developer contributions / CIL / LCC sites, LCC budget	Education Funding Agency build rates: • £12,320 per primary pupil, so £2.6m for 1FE and £5.2m for 2FE primary • £15,400 per secondary pupil, so £9.2m for a 4FE (only implemented with a 2FE primary as a through school).		✓	✓	✓	
AVL	**Flood Defence**	River Aire Flood Alleviation Scheme (FAS) – Phase 1	£45,000,000	1	1 LCC capital programme £10m, ERDF £10m, RGF £4m, FDGiA £8.8m, BID £1m, developer contributions	Phase 1 - Create flood defences protecting the city from flooding along a 3.5 kilometre stretch of the River Aire between Leeds Central Station and downstream to Knostrop Weir. The FAS Phase 1 will provide a 1 in 75 years Standard of Protection from flooding. The FAS Phase 1 comprises 3 elements: i) Remove existing weirs and install moveable weirs at Knostrop and Crown Point ii) Provide defences: embankments, terracing, setting back of defences, walls as required between Leeds Train Station and Granary Wharfiii) Remove Knostrop Cut to merge the Canal and River Aire £47m cost plus £5m maintenance. Under construction. Completion late 2016.	2016	✓			

AVL	**Green Infra**	Child's fixed play as a result of new housing development; play areas, MUGA, and skate/BMX	£3,550,000	1	1 Provided on site by developers or via contributions including the CIL and grant funding	At 0.62 children per house and 0.1 children per flat = costs £658 per house and £106 per flat (rounded at 2015 rates). AAP housing target of 7,500 dwellings gross to 2028 (assume 25% flats). Assume 60% delivered on-site, leaving 40% to be via new infrastructure on existing greenspace.		✓	✓	✓	
AVL	**Green Infra**	Improvements to green space quantity and/or quality as result of new housing development	£21,000,000	1	1 £12.6m provided on site by developers, £8.4m via contributions including the CIL and grant funding	The increase in population will lead to a need for new areas of greenspace as well as improvements to existing parks. AVLAAP housing figures of 7,500 dwellings gross to 2028 (assume 25% flats). Core Strategy G4 requires 80 sqm per dwelling. Assume 60% delivered on-site, which equates to 36 hectares. The cost to lay out and maintain this is approximately £12.6m. 40% improvements to existing local greenspace infrastructure approximately £8.4m.		✓	✓	✓	
AVL	**Highways (local)**	Logic Leeds Link Road	£2,500,000	1	1 EZ business rates, prudential borrowing,	In LCC Capital Programme, initially funded by prudential borrowing. £2.5m provided to support a new spine road through Logic Leeds. This will allow public transport to connect directly from the LCREZ to Halton Moor residential community, thereby facilitating sustainable access to the new jobs. The LEP has agreed to repay the borrowing using retained EZ business rates.		✓			
AVL	**Highways (local)**	Aire Valley Leeds - North-South Link Road and river crossing	£24,800,000	1	2 Enterprise Zone borrowing, developer funding, WYPTF	New river bridge and link road to connect East Leeds Link Road with Pontefract Road. Includes Skelton Grange link route protection for a new road link and river crossing into Cross Green industrial estate and improvement at the junction between Skelton Grange Road and Pontefract Road. A potential role for the CIL. Funding prioritised in West Yorkshire Plus Transport Fund (which includes DfT devolved major scheme funding).			✓		
AVL	**Highways (Strategic)**	M1 Junction 45 Phase 2 improvement	£8,000,000	1	1 Highways England	Widening of northbound and southbound off slip road and ELLR entries to roundabout, roundabout widening from 2 to 3 lanes, enhancement of traffic signal control (including entry to Skelton Business Park). Funded Route Investment Strategy scheme	2017	✓			

AVL	**Pedestrian**	Improved connectivity through provision of bridge infrastructure	Not yet costed	1	3	Specific ambitions/ requirements to improve connectivity. For example the South Bank area requires the Sovereign Square footbridge and the Low Fold footbridge. At approximately £1m per pedestrian/cycle bridge.	2028			✓	
AVL	**Public Transport**	Temple Green Park and Ride	£8,500,000	1	1 WYPTF	Part of package of transport connectivity enhancements, 1,000 parking spaces. Funding prioritised in West Yorkshire Plus Transport Fund (which includes DfT devolved major scheme funding) The £8.5m scheme to open in summer 2016.	2016	✓			
AVL	**Public Transport**	Leeds NGT trolleybus network Line 3 - extension to Aire Valley Leeds	£98,300,000	1	2 WYPTF, CIL, developer contributions	NGT extension from City Centre to Aire Valley. Funding prioritised in West Yorkshire Plus Transport Fund (which includes DfT devolved major scheme funding), which includes the Temple Green Park and Ride.			✓		
AVL	**Transport (Rail)**	High Speed Rail (HS2)	Not yet costed	1	3 DfT	Network proposals with links from London to Birmingham, Manchester and Leeds. Subject of national study. Timetable envisages completion of route to Leeds by 2033.	2033				✓
AVL	**Waste Management**	Residual Waste Solution, Aire Valley	£460,000,000	1	1 Veolia, LCC	Veolia Environmental Services appointed through PFI 2012 for 25 year £460m contract. Construction commenced 2013, to open 2016.	2016	✓			
AVL	**Green Infra**	Green Infrastructure improvements in the Aire Valley	Not yet costed	2	3 Provided on site by developers or via contributions including the CIL and grant funding	Green infrastructure and green space will be provided and enhanced in Aire Valley Leeds in relation to both specific development sites and structural masterplanning. Information on costs not yet available, some overlap with the improvements to greenspace quantity and/or quality as result of new housing development.		✓	✓	✓	
AVL	**Highways (strategic)**	Skelton Grange Power Station obligations, Aire Valley Leeds - M621 J7 as per Valley Park	Not known	2	1 Developer funded	Developer funded, although development has not come forward yet.		✓	✓		

AVL	**Highways (strategic)**	M621 J7 improvements and coordinated traffic signal control - at M621 southbound off-slip and A61(N) entries to roundabout.	Not known	2	1 Developer funded	To be implemented when Leeds Valley Park trip generation trigger is reached, expected 2015.		✓			
AVL	**Highways (strategic)**	Skelton Grange Power Station obligations, Aire Valley Leeds - M621 J7 as per Valley Park	Not known	2	1 Developer funded	Developer funded, although development has not come forward yet.		✓			
AVL	**Pedestrian / Cycle**	Trans Pennine Trail (National Cycle Network Route No. 67)	£1,200,000	2	3 Developer funded, grants, Sustrans	• Renew and upgrade surfacing of the canal and riverside paths which together form the TPT/NCN walking and route (Royal Armouries to Woodlesford Locks- 6km) Estimated cost £600k. • Skelton Grange Road Bridge - New footbridge to replace current unsatisfactory (and non-Equalities Act compliant) stepped access onto and off-road bridge. Estimated cost £500k. • Fishpond Lock – Installation of re-located, ramped, wooden footbridge from Knostrop Flood Lock to create cycle/wheelchair access over canal for Skelton Lake link to Wykebeck Valley Way. Estimated cost £75k. Some elements may now be funded from the HS2 Cycle Scheme.		✓	✓		
AVL	**Highways (local)**	Knowsthorpe Lane Link - route protection	Not yet costed	3	3 -	Route protection for link for route north of Knowsthorpe Lane and a pedestrian / cycle link to the proposed new bridge crossing of the River. Outline costs not currently available, as likely only be brought forwards in the longer term, or when an associated development is progressed.					
AVL	**Highways (local)**	Thwaite Gate Junction - route protection	Not yet costed	3	3 -	Route protection for junction improvement at Thwaite Gate / Pontefract Road / Wakefield Road. Outline costs not currently available, as likely only be brought forwards in the longer term, or when an associated development is progressed.					

A	**Airport**	A65-Airport-A658 link road	£38,200,000	1	2 WYPTF and third party contributions, LBIA	LBIA has been developing a Surface Access Strategy which looks at short, medium (to 2025) and long (2025+) measures to improve access to the airport. The main medium term measure is a new road link between the A65 at Rawdon and the A658 north of the Airport. As at July 2015 this has agreed funding through the Combined Authority for completion by 2021.	2021		✓		
A	**Airport**	Leeds Bradford International Airport – new tram-train link from the Harrogate Rail line	£132,600,000	2	3 None	LBIA has been developing a Surface Access Strategy which looks at short, medium (to 2025) and long (2025+) measures to improve access to the airport. For the long term, the strategy presses for a rail connection which is currently the subject of a feasibility study by the West Yorkshire Combined Authority. Included within the City Region Connectivity Study and Core Strategy priority (on Key Diagram). Listed as a development scheme in the West Yorkshire Plus Transport Fund.			✓	✓	
A	**Leisure**	Aireborough Leisure Centre Refurbishment	£3,800,000	3	3 None	Refurbish changing rooms, reception, and exterior, extend gym, access work. By 2020 and dependent on funding.		✓			
CC	**Green Infra**	City Centre public realm	Not yet costed	1	3 In part through development of sites	Identified in Core Strategy as aspiration and key priority for development of City Centre.		✓	✓	✓	
CC	**Green Infra**	City Park and smaller pocket parks in City Centre	Within overall greenspace cost	1	2 In partnership with developers, LCR, LCC	A broad estimate including restructuring works of some highways is £40m.		✓	✓	✓	
CC	**Highways (local)**	Leeds Inner Ring Road Stages 1 and 2 - reconstruction and renewal	£25,000,000	1	1 DfT, LCC	Major maintenance scheme approved by DfT. Under construction, to be completed late 2015.	2015	✓			

CC	**Highways (local)**	Meadow Lane / Victoria Road scheme	Not yet costed	1	2 WYPTF	Meadow Lane / Victoria Road scheme. This would form part of the City Centre transport strategy still in development. Identified as West Yorkshire Plus Transport Fund priority			✓		
CC	**Highways (strategic)**	A58(M) Leeds Inner Ring Road Major Maintenance Scheme.	£25,000,000	1	1 Fully funded from DfT and LTP, University of Leeds, Leeds Teaching Hospitals	Underway, scheduled for completion by end of 2015.	2015	✓			
CC	**Development Project**	Victoria Gate – Phase 1	£150,000,000	1	1 Hammersons, LCC	New retail and leisure scheme. Phase 1 includes three main buildings: a flagship John Lewis store, Victoria Gate arcade, and a multi-storey car park for up to 800 cars. It will in total accommodate around 34,000m² of retail and leisure space. Under construction since April 2014, to open late 2016.	2016	✓			
CC	**Development Project**	Victoria Gate – Phase 2	Not known	1	1 Hammersons, LCC	Phase 2 will include additional retail for major high street brands, leisure space, restaurants and a food court, additional parking spaces and a Low Carbon Energy Centre.		✓	✓		
CC	**Regen**	Kirkgate Market	£12,300,000	1	1 LCC	Refurbishment approved March 2013. Capital budget of £12.3m to include prudential borrowing.	2016	✓			
CC	**Transport (Rail)**	Leeds City Station Southern Access	£14,400,000	1	1 DfT/ Local contribution, Metro, Network Rail	Under construction. Completion late 2015.	2015	✓			

CC	**Transport (Rail)**	Infrastructure to maximise the regeneration benefits of HS2 and effectively integrate HS2 into the South Bank.	Not yet costed	1	3	Upon completion of HS2 station masterplanning and growth strategy, the Council will have a comprehensive plan and list of infrastructure required to maximise growth associated with HS2, as well as a funding ask/ proposal. This exercise will inform the specific projects in the South Bank. Costs unknown at this stage.	2028			✓	✓
CC	**Highways (local)**	City Square renaissance public space and public transport priority	Not yet costed	2	2 WYPTF	TFL study. This would form part of the City Centre transport strategy still in development. Identified as West Yorkshire Plus Transport Fund priority		✓			
CC	**Transport (Rail)**	Leeds City Station new platform and platform 17 extension	£30,000,000	2	2 DfT	Scheme not currently funded but forms part of the High Level Output Specification for Control Period 5 (2014-2019).	2019		✓		
CC	**Energy**	City Centre Esco, and Civic and Victoria Gate district heating projects	Not yet costed	3	3 -	Aspiration. Existing Combined Heat and Power (CHP) system serving LGI and Leeds University could be extended to provide a central CHP.		✓	✓	✓	
E	**Highways (strategic)**	M1 Junction 45 Phase 2 improvement	£8,000,000	1	1 Highways England	Widening of northbound and southbound off slip road and ELLR entries to roundabout, roundabout widening from 2 to 3 lanes, enhancement of traffic signal control (including entry to Skelton Business Park). Funded Route Investment Strategy scheme	2017	✓			
E	**Highways (strategic)**	M621 J7 improvements and coordinated traffic signal control - at M621 southbound off-slip and A61(N) entries to roundabout.	Not known	2	1 Developer funded	To be implemented when Leeds Valley Park trip generation trigger is reached, expected 2015.		✓			
I	**Fire and Rescue**	New fire station in Killingbeck to replace fire stations in Gipton and Stanks	Not known	1	1 WYFRS	Construction underway, to open in December 2015.	2015	✓			

I	**Teaching Hospitals**	St James's Hospital and Leeds General Infirmary - further reconfigurations and centralisation of services under consideration	Not known	1	2 Leeds Teaching Hospitals	Underway and ongoing		✓	✓		
I	**Highways (local)**	Armley Gyratory major improvement	Not yet costed	1	2 WYPTF	Capacity enhancements. Linked to planned closure of City Square to general traffic. This would form part of the City Centre transport strategy which is still in development and not yet costed. Identified as West Yorkshire Plus Transport Fund priority	2021		✓		
I	**Highways (strategic**	M621 Corridor Management Plan Jn 1-7	Not yet costed	1	2 Highways England/WYPTF	Junction enhancements and localised widening of sections of the M621 in central Leeds. Funded Route Investment Strategy scheme. Integrates with WYPTF City Centre Package	2021		✓		
I	**Public Transport**	Leeds NGT trolleybus network extension to East Leeds (including City Centre loop)	£97,400,000	2	3 None	NGT extension to St James' Hospital and east Leeds (WYTF scheme) Currently unfunded, further study required.			✓	✓	
I	**Highways (local)**	Buslingthorpe Lane - route protection	Not yet costed	3	3	Route protected to improve poor alignment of road length. Outline costs not currently available, as only brought forwards in the longer term, or when an associated development is progressed.					
I	**Transport (Bus)**	A64 Quality Bus Corridor extension and Grimes Dyke park and ride	Not yet costed	3	3 None	Bus corridor now forms part of the WYPTF highways efficiency and bus programme.					
N	**Highways (local)**	Horsforth Roundabout	£3,000,000	1	2 LTP3 matched with developer funding	Improvements to the A6120 / A65 junction to replace the existing roundabout with a signalled junction to alleviate congestion and improve road safety. The proposals fit with the longer term strategy for the Leeds Outer Ring Road and will match LTP3 funding with developer funding.	2015	✓			

N	**Highways (local)**	Moortown Outer Ring Road junction signalisation and improvement	Not yet costed	1	2 WYPTF	Signalisation of existing A61/A6120 roundabout. Funding prioritised in West Yorkshire Plus Transport Fund (which includes DfT devolved major scheme funding).	2021		✓		
N	**Highways (local)**	King Lane roundabouts with A6120 and Stonegate Rd	Not yet costed	1	2 WYPTF	Improvements to the A6120 / King La and Stonegate Rd/King La junctions to replace the existing roundabouts with signalled junctions to alleviate congestion and improve road safety. Funding prioritised in West Yorkshire Plus Transport Fund (which includes DfT devolved major scheme funding)	2021		✓		
N	**Transport (Rail)**	Kirkstall Forge new rail station - as part of Leeds Rail Growth Package	£9,000,000	1	1 Developer CEG £5.5m, DfT proportion of £10.3m, Metro proportion of £1.3m	To open in October 2015.	2015	✓			
N	**Fire and Rescue**	New fire station in the Weetwood area to replace the ones at Cookridge and Moortown	Not known	2	2 WYFRS	Property search underway.		✓			
N	**Highways (local)**	A6120 dualling – Dawson's Corner-Horsforth	£24,200,000	2	3 None	Conversion of single carriageway to dual carriageway (TfL scheme).				✓	
N	**Cycle**	Leeds Core Cycle Network Route 4 - Adel Spur	£157,000	3	3 LTP3 IT Block	Spur to extend coverage of route 15. Potential IP4 scheme.			✓		
N	**Leisure**	Kirkstall Leisure Centre	£1,000,000	3	3 None	Refurbish changing room, re-orientate reception, works to heating / lighting / ventilation, reception, access. By 2020 and dependent on funding.		✓			
N	**Transport (Bus)**	A61 Quality Bus Corridor enhancements and Alwoodley park and ride	Not yet costed	3	3 None	TfL study.			✓		

N	**Transport (Rail)**	Horsforth Woodside Station	Not yet costed	3	3 -	Requires further study. Outline business case is prepared but scheme has no status in DfT publication "Investment in Local Major Transport Schemes' and is not included in LTP Railplan 7. To be progressed with developer funding. No funding from Network Rail for this scheme.			✓	✓	
ONE	**Cycle**	Leeds Core Cycle Network Route 17 - Penda's Way	£1,440,000	2	3 LTP3 IT Block	Links to Routes 7 and 14. LTP3 scheme post 2014. At least IP4.		✓			✓
ONE	**Cycle**	Wetherby to Boston Spa disused railway - cycle route	Not yet costed	3	3	Route protected for the existing disused railway for use as a cycle track (scheme is partially complete). Outline costs not currently available, as only brought forwards in the longer term, or when an associated development is progressed.					
ONE	**Cycle**	Cross Gates to Thorner disused railway - cycle route	Not known	3	3 Developer on-site/contribution, LCC	Possibility for delivery through East Leeds Extension / East Leeds Orbital Route.			✓		
ONE	**Leisure**	Wetherby Leisure Centre	£1,400,000	3	3 None	Refurbish changing rooms, extend gym, access work. By 2020 and dependent on funding.		✓			
ONW	**Cycle**	Pool to Otley disused railway - cycle route	Not yet costed	3	3	Route protected for the existing disused railway for use as a cycle track. Outline costs not currently available, as likely only be brought forwards in the longer term, or when an associated development is progressed.					
ONW	**Highways (local)**	East of Otley Relief Road	Not yet costed	3	3 Developer funded	Route protected for new road link between the A659 and A660 routes east of Otley, to remove through traffic from the town centre. This scheme will be delivered by the developer of the East of Otley housing site.		✓	✓		
ONW	**Leisure**	Otley Chippindale Swimming Pool	£250,000	3	3 Prince Henry Grammar School	Accessibility, energy and wider refurbishment. By 2020 and dependent on funding.		✓			

OS	**Cycle**	Methley disused railway - cycle route	Not yet costed	3	3	Route protected for the existing disused railway for use as a cycle track. Outline costs not currently available, as likely only be brought forwards in the longer term, or when an associated development is progressed.					
OS	**Leisure**	Rothwell Leisure Centre	£5,800,000	3	3 None	Pool hall refurbishment - new atrium, circulation and relaxation area. Refurbish dryside changing, additional car parking, fitness studio / spinning area, extend gym. By 2020 and dependent on funding.		✓			
OSE	**Highways (local)**	A6120 Strategy - East Leeds Orbital Road as part of East Leeds Extension. Possible need for associated improvement to M1 J46.	£116,000,000	1	2 Options under investigation including WYPTF, LCC capital receipt from Red Hall site, developer contributions	Subject to development of allocated housing land. Original intention to be primarily developer funded and assumed in addition to CIL contributions as need has already been established as part of site specific infrastructure in relation to specific development. Northern section through Red Hall to be funded by LCC, in part through capital receipt. In January 2013 Executive Board decision for LCC to take a more leading role in investigating feasibility for delivery, therefore LCC in partnership with ELE consortium currently investigating overall costs and funding mechanisms for provision of whole stretch of road. Funding prioritised in West Yorkshire Plus Transport Fund (which includes DfT devolved major scheme funding) with an expectation of a significant element of developer funding.	2021	✓	✓		
OSE	**Highways (strategic)**	M1 J46 southbound slip road - ramp metering	Not yet costed	1	1 Highways Agency	Original target 2015 although currently being renegotiated to be traffic dependent. The scheme is to be delivered by Leeds City Council under a Section 6 agreement with the Highways Agency. Current Agreement states works to be delivered in 2019.		✓			
OSE	**Highways (Strategic)**	M1 J46 Junction Improvements	Not known	1	1 Developers	Junction improvements likely to be required as a result of developments across East Leeds and East Leeds Orbital Road. Modelling underway to identify scheme. Likely to be developer funded.			✓		

OSE	**Transport (Rail)**	East Leeds Parkway Station, Micklefield	£10,100,000	1	2 National Rail/ WYPTF	Scheme identified in regional RUS and Initial Industry Plan for CP5 (2014-19). Subject to further study, positive business case and funding, identified in January 2015 as one of 4 sites across Yorkshire with the best potential to serve the most passengers. Implications of Trans-Pennine electrification yet to be understood. Funding prioritised in West Yorkshire Plus Transport Fund (which includes DfT devolved major scheme funding) with £10m committed. Would involve closure of Micklefield station.				✓	
OSW	**Cycle**	Leeds Core Cycle Network Route 1 - East Middleton Spur	£190,000	2	2 LTP3 IT Block	Spur to extend coverage of Route 3. LTP3 scheme post 2014. Potential IP4 scheme			✓		
OSW	**Transport (Bus)**	A653 Dewsbury Road corridor	£19,800,000	2	2 WYPTF	Cross boundary corridor improvement, incorporating bus priority measures, junction improvements, park and ride and enhanced express bus services.		✓			
OSW	**Cycle**	Leeds Core Cycle Network Route 6 - North Morley Spur	£448,000	3	3 LTP3 IT Block	Spur to extend coverage of Route 13. Potential IP4 scheme			✓		
OW	**Highways (local)**	A6110 Outer Ring Road improvements	£17,600,000	1	2 WYPTF	Highway improvement package for the A6110 from M621 Jn 1 to A647 Stanningley Bypass. Includes enhanced pedestrian and cycling facilities as well as junction improvements at key intersections. Complements measures planned elsewhere on the Leeds Outer Ring Road. Funding prioritised in West Yorkshire Plus Transport Fund (which includes DfT devolved major scheme funding).			✓		
OW	**Highways (local)**	Rodley roundabout	£3,200,000	1	2 DfT Pinch Point bid with 30% developer funding and LTP3	Improvements to the A6120 / A657 junction to replace the existing roundabout with a signalled junction to alleviate congestion and improve road safety. The proposals fit with the longer term strategy for the Leeds Outer Ring Road.	2015	✓			

OW	**Highways (local)**	Chapel Lane, New Farnley - route protection	Not yet costed	3	3	Route protected to improve alignment of existing carriageway. Outline costs not currently available, as only brought forwards in the longer term, or when an associated development is progressed.					
OW	**Leisure**	Pudsey Leisure Centre	£2,000,000	3	3 None	New entrance and frontage, interior refurbishment, extend gym. By 2020 and dependent on funding.		✓			
R	**Highways (strategic)**	M1 J39-42 Smart Motorway	Not known	1	1 Highways England	Major Scheme. Scheduled for completion autumn 2015	2015	✓			
R	**Information technology**	The West Yorkshire BDUK Local Broadband Plan	£2,350,000	1	1 ERDF, DCMS, LCC, private sector	Aims to ensure that 90% of premises across West Yorkshire have access to superfast broadband (24mbps+), with the remaining areas able to get a minimum of 2mbps. For Leeds there is ERDF funding of £780k, Department for Culture Media and Sport funding of £1.5m, and a LCC commitment of £72k, with private sector investment expected to match the public sector investment as appropriate. Current phase 1 due to complete in Sept. 2015. Phase 2 to run Oct. 2015 to 2018.		✓			
R	**Information technology**	Leeds and Bradford Super Connected Cities programme	£8,700,000	1	1 DCMS, LCC, private sector	The funding area covers the whole of Bradford, Calderdale, Kirklees, Leeds, and Wakefield. The project aims to focus on urban areas and deliver a step change in the availability of digital connectivity. There is DCMS funding of £14.4m (shared with Bradford) and LCC funding of £1.5m. This also assumes a gap funding model of additional private sector investment. Project must be complete by March 2016.	2016	✓			

R	**Public Transport**	Castleford Interchange – rail station redevelopment	Not known	1	1 LTP3	Following the February 2015 opening of the new Castleford Bus Station and the improved links between the bus and rail stations, WYCA has started the third phase for rail station redevelopment. Overall funding yet to be approved but outline feasibility options have been drawn up, to include a range of improvements. Aiming for public consultation in late October 2015, works commence May 2016, complete November 2016.		✓			
R	**Public Transport**	Yorcard - provision of card vending machines and topup points, integration of other services onto smartcards (school and leisure), on-bus equipment, enabling internet sales, development of Leeds City Region MetroCard product by smart media.	Not yet costed	1	3 £6.14m for first phase	West Yorkshire Integrated Transport Authority Executive Board on April 27 2012 agreed £6.14m to be spent on the project from the Better Bus Area Fund (£4.33 million plus £0.65 million relating to York City Council funding) and LTP3 funding £1.16million. Later phases assume contributions from City Region Authorities and Metro although split not yet determined. Metro, together with local bus operators, recently made a successful Better Bus Area Fund bid to the Department for Transport for almost £5m to develop West Yorkshire's smartcard network.		✓			
R	**Transport (Rail)**	Northern Hub train proposals: up to 700 more trains per day (44 million more people each year).	£580,000,000	1	1 Department for Transport	2 new fast trains per hour between Manchester Victoria and Liverpool. Increase from 4 to 6 fast trains per hour Leeds to Manchester. Journey times Leeds to Manchester reduced by 10 mins, Liverpool to Manchester by 10-15 mins. New direct service Manchester City Centre to Manchester Airport. Faster journey times to Sheffield, East Midlands, Chester, Bradford, Halifax, Hull, Newcastle, and North-East. RUS Infrastructure programme, funding confirmed.	Aim by 2020	✓	✓		
R	**Transport (Rail)**	Low Moor Rail Station, Bradford	£7,200,000	1	1 LTP3	On the line between Bradford Interchange and Halifax rail stations. Network Rail are aiming for the detailed designs to be completed mid 2015. Building work can then commence, subject to some land acquisition.		✓			

R	**Transport (Rail)**	Apperley Bridge new rail station - as part of Leeds Rail Growth Package	£8,000,000	1	1 DfT proportion of £10.3m, Metro proportion of £1.3m. Developer funded.	To open September 2015.	2015	✓			
R	**Transport (Rail)**	TransPennine electrification between Manchester Victoria and Leeds, and on through Garforth to Colton Junction west of York and Selby	Not yet costed	1	2 Dft/Metro, LPA & developer contributions for Garforth only	Announced in Chancellor's Statement Nov 2011. Preliminary feasibility work undertaken, with a view to implementation around 2016/17 and services starting December 2018, although likely DfT will ask for programme to be accelerated. Work on GRIP stage 3 start Autumn 2012. DfT commitment to fund core route Stalybridge to Leeds, Neville Hill to Colton Junction and Selby. Potential S106/CIL contribution for access improvements at Garforth station (£1.5m). Total costs over £100m. Project currently (June 2015) 'paused'.			✓		
R	**Transport (Rail)**	Inter-regional rail capacity and infrastructure improvements	Not yet costed	2	3 -	Line improvements between Leeds and Sheffield / Midlands / Manchester / London. Unfunded but is a Network Rail, RUS and a national priority.					
R	**Highways (Strategic)**	M62 J27 northern and southern dumbell works	£1,500,000	3	2 Potentially Highways England	Highways England has identified this potential scheme and is intending to bid for funding to deliver the scheme in the next 4 years.		✓			
R	**Highways (Strategic)**	M62 J28 west bound exit slip and circulatory carriageway	£2,000,000	3	2 Potentially Highways England	Highways England has identified this potential scheme and is intending to bid for funding to deliver the scheme in the next 4 years.		✓			
R	**Highways (Strategic)**	M62 J27 lengthening of west facing slip roads	Not known	3	3 -	Potential safety scheme required longer term. Not yet costed but expected to be more than £10m.					

R	**Highways (strategic)**	Strategic highway improvements	Not yet costed	3	3 -	Highways England is carrying out a Leeds Infrastructure Study to identify the infrastructure requirements on the Strategic Route Network over the plan period. Ongoing work.					
R	**Highways (Strategic)**	M1 J41 Snowhill Developer Scheme	Unknown	3	1 Developer Funded	Developer funded scheme secured by S278. Works to provide freeflow links.					
R	**Highways (Strategic)**	M62 J25-32 capacity enhancements and or demand reduction	Unknown	3	3 -	Longer term further enhancements will be required to provide mainline capacity or reduce demand.					
R	**Highways (Strategic)**	M62 J29 Lofthouse Interchange	Unknown	3	3 -	Significant capacity enhancements required to interchange in medium to longer term. Further work required to identify schemes. Unfunded.					
R	**Highways (Strategic)**	M62 J30 improvements to west bound off slip and signalisation	Unknown	3	3 -	Unfunded					

APPENDIX 2: SCHOOL PROVISION AND THE IMPLICATIONS FOR SCHOOL PLACES BACKGROUND PAPER

1 Introduction

1.1 This report provides an outline of the implications of the proposed site allocations for school places in Leeds, including reference to sites identified for new schools, in order to inform the final decision on site allocations.

2 Background

2.1 The Core Strategy, and site allocations which support its delivery, are essential to the economic growth of the city, and to its aspiration to be the best city in the country. This paper outlines the work done to ensure that the school provision necessary to support it can be delivered.

2.2 The context in which this work has been completed is challenging. The city is facing a rising demand for school places due to a rise in the birth rate from a low of 7,500 in 2000/1 to an average of just over 10,000 for the last 5 years. This has necessitated the creation of over 9,000 primary school places over the past four years, through expansions of existing schools, creation of new schools, and restructuring of existing schools.

2.3 As a result the capacity of the existing school estate to respond to significant new housing is limited, particularly in certain hotspots within the city, and new sites will need to be secured initially through the site allocations process and later through detailed planning applications.

2.4 As the discussions with ward members and officers regarding site allocations have progressed, Children's Services have given their views on the potential impact in each Housing Market Characteristic Area (HMCA), and suggested sites which would be well placed to create additional school provision. In addition to considering the location relative to existing schools and the impact on them, consideration has been given to the size of particular sites, and priority has been given to locating provision in the larger sites which most directly give rise to the new demand. The recommendations for school sites should therefore be sustainable in the long term.

3 The Process and Key Considerations

3.1 As the site uses and sizes have been refined, the analysis of the impact on school places has been adjusted. This has been a lengthy iterative process balancing housing, employment and green space allocations with other infrastructure needs including schools. The site allocations commentary reflects the school as an essential requirement of any subsequent planning application for that site, and housing yields have been adjusted to allow for the school site area on housing allocations.

3.2 As far as possible schools have not been proposed on safeguarded land sites. Concern has been raised that to progress a school on safeguarded land ahead of housing progressing may risk of premature housing development through challenge of the status. Where a school is proposed on safeguarded land, consideration has been given to whether this arises purely directly from that site, or form a wider need and so be needed sooner. Where it may be needed sooner, consideration has been given to how a phased opening could reduce that risk and by initially open to meet existing demand and expanding when the housing goes forward.

3.3 School attendance patterns do not map well onto the HMCAs, and having largely concluded this iterative process it was then necessary to re-aggregate the data into meaningful school place planning areas to provide a final assessment of the adequacy of provision. Whilst this represents a position statement at July 2015, any further iteration may impact on the position described.

3.4 The report describes the context for these planning areas in terms of current pressures for places, current scope of the existing estate to meet existing demand, and the needs arising from the housing allocations. It highlights the areas of concern where no solutions for school places have been found.

3.5 Local authorities are already the providers of last resort for school places, and are dependent on working with partners to commission new provision. In addition, Free Schools are commissioned independently of the local authority. This can open up opportunities to acquire privately owned land and buildings which may not feature in this plan. Given the long term nature of the housing strategy, and the likelihood of changes to the statutory and educational context of school place planning, as well as the possibility of further changes up or down in the birth rate, it is therefore not necessarily an issue to progress with the site allocations without fully sufficient school provision being identified at this stage, however these risks are highlighted so that members can make an informed choice when approving the plans.

3.6 Establishment of new school provision is subject to a statutory process, which may or may not support the suggestions made in this report. However failure to secure sites now will almost certainly leave the authority with a significant gap in its ability to respond to the planned housing. Given the context described, it is therefore essential that the site allocations describe the provision of a school site as a requirement, but that the authority is able to confirm or decline that requirement at the time of the detailed planning application being brought forward.

3.7 It is generally inappropriate to name a specific scheme to meet the demand as this would need to be tested through the statutory process, and consultation in this site allocations process would not meet the needs of school organisation legislation. In some villages options are clearly more limited, and consideration is given to the sustainability of more than one school. Relocation to facilitate expansion may be suggested as an obvious option to meet demand. In other cases sites immediately adjacent to existing schools offer obvious expansion options. Naming of a site, and especially a particular scheme, does not presuppose that this will be supported by the consultation and statutory process. The situation at the time the school provision needs to be brought forward will need to be appraised afresh.

3.8 There is some uncertainty about the impact of new housing on this scale in terms of pupil yield. For many years now the council has used a pupil yield of 25 primary aged pupils per 100 house, and 10 secondary aged children. Adjusted by the number of year groups this equates to 3.5 children per year group in primary and 2 in secondary. These figures, particularly for primary, are not dissimilar to those used by other authorities, and have generally served Leeds well in planning school places.

3.9 Whilst the impact on primary school places from new housing is relatively immediate, the different rates at which houses sell, the life stages that families initially occupy houses, and the length of time families tend to stay in an area are among many factors that can take time to establish and influence school place demand, particularly for secondary. It is known that there is a small (typically 5%) drop off in cohort sizes between year 6 and year 7, as some pupils access provision in the independent sector or out of the Leeds area. There is considerable doubt if the difference in the pupil yield would be so large when whole new communities are being created and significant housing areas are being developed, and a concern that the yield should be adjusted accordingly. Work is underway to formally review and validate this, however in the meantime an average between the two pupil yields of 2.75 per year group has been used.

3.10 This more cautious approach should ensure the authority is not left with a strategic shortfall of provision, but proposals will only be brought forward where the demand is confirmed. This reinforces the need to ensure that the planning conditions insist on the need for a school to be factored in, but not necessarily enacted.

3.11 Annex 1 summarises the number of houses approved, the pupil yield anticipated, and the sites identified as needing school provision including in the site use allocation by planning area. The following commentary summarises any residual concerns for primary provision by planning area.

3.12 Data is described in terms of forms of entry (FE). Schools are organised and funded around class sizes of 30 children, and a 1FE primary school has 1 class of 30 pupils in each year group, 2FE is 2 classes etc.

4 Primary School Place Impact

4.1 In total approximately 80 FE of additional primary provision are needed as a result of the housing plans, equivalent to 40 new 2 FE primary schools. The site allocation process has identified options for 50FE. With safeguarded sites included, this rises to demand of 88FE and solutions for 60FE.

4.2 The biggest gap in provision is in the city centre, where 10 FE of additional demand could be created, with no sites identified. There is a high degree of uncertainty about the pupil yield from city centre locations, but we do know that increasingly families are moving into flats, and into these locations. Some sites have been identified in peripheral areas in the inner HMCA, but this will not be sufficient to meet all needs. Between the two HMCAs 21.5FE of demand has been identified and only 11FE of primary provision. This is not to say that schools cannot be

provided, as demonstrated by the recent establishment of the Ruth Gorse Academy, a secondary school due to open in 2016 on Black Bull Street, however it is to note the high degree of risk attached with this site allocation plan.

4.3 This pressure is located mainly around the northern / north eastern part of the city centre, in the Kirkstall / Burley, Hyde Park, Woodhouse areas and through to parts of the Burmantofts, Chapel Allerton, Harehills. These are all areas where school provision is already facing pressure.

4.4 The preferred size for new provision is 2FE this provides a degree of educational and financial breadth and stability, and allows options for downsizing rather than closure in times of declining birth rates. This does not preclude opening 1FE primary schools A number of areas do not present sufficient extra demand to warrant a new school but equally there may be problems meeting demand from the existing estate.

4.5 An analysis by planning area follows:

a. **Alwoodley** – Site HG2-36 (2053B) Alwoodley Lane, Alwoodley, was agreed should contain a new 2FE primary school to absorb demand in this area which is also impacting on the adjacent Roundhay / Wigton Moor planning area.

b. **Ardsley / Tingley** – Site HG2-23 (2127) Tingley Station was identified as a safeguarded site and would require a 2FE school only if and when it was developed due to its remote location. Sites HG5-8 (1032) and HG3-25 (2128) were identified as safeguarded sites, and may potentially require a school site for any future housing allocation. This could potentially be phased to be a 1FE school in the short term to meet demand from other sites already progressing, expanding later to meet the needs arising directly from the safeguarded land itself if that were developed.

c. **Armley / Wortley** – A site for a 2FE primary school is to be reserved on MX2-9 (198_3390_3393) Kirkstall Road. 2.5FE of additional demand created. Mobile population creating some uncertainty. Of moderate concern as exiting estate already exhausted. Could link to Otter island development.

d. **Beeston** - No school sites agreed but around 0.3FE of additional demand created. Mobile population creating some uncertainty. Of moderate concern as exiting estate already exhausted.

e. **Belle Isle** - No school sites agreed but 0.9FE additional demand created. Mobile population creating some uncertainty. Of less concern as options may exist in existing estate.

f. **Boston Spa** – Site MX2-33 (3391) Headley Hall to include 2 x 2FE primary schools.

g. **Bramhope / Pool** – Site HG2-17 (1080_3367A) Breary Lane East in Bramhope and HG3-5 (1095B_1369) Old Pool Bank (safeguarded site) in Pool were agreed should include a primary school site each for potential solutions which create an

additional 0.5FE places in each for demand from sites within the villages. The safeguarded site would only be needed if the PAS were developed.

h. **Bramley** – No sites agreed for school use, and 0.6FE of additional demand created. Of less concern as options may exist in existing estate once other changes have settled.

i. **Burmantofts** – Site HG5-5 (2145) Dolly Lane agreed to be reserved for educational use. At this stage it has notionally been outlined as a through school with 2FE primary and 4FE secondary capacity. This would meet demand arising from the allocations, however the site has been subject to other interest including Free School bids and the optimum type of educational use has yet to be properly established.

j. **Calverley** – No sites for school use agreed, and 0.2FE additional demand created. Existing estate already facing some pressure, but solutions in adjacent areas of Horsforth and Farsley are likely to resolve pressure.

k. **Chapel Allerton** – HG5-4 (264) Roundhay Road agreed for a 2FE school, subject to AMB agreement – there is known current interest in the site. Although only 0.3FE of additional demand created directly in this area it is close to parts of other planning areas i.e. City Centre / Woodhouse /Burmantofts and Harehills, and in all these areas the existing school estate is already exhausted. The site is strategically well placed to meet demand arising from a number of sites allocated for housing.

l. **Cookridge / Adel** – HG2-18 (2130) Church Lane agreed for a 2FE school. HG5-2 (2049) West Park Centre agreed for school use. In total housing will generate almost 5FE of additional demand created, and there may be options for expansion in the existing estate to meet the remaining shortfall. Moderate risk.

m. **EPOS Villages South** – HG3-13 (2134) safeguarded site to the east of Scholes agreed to contain a school solution to create an additional 0.5FE to partially meet 1FE of additional demand from that site. Only needed if the safeguarded site is developed.

n. **EPOS Villages West** – No school sites agreed 0.2FE of demand identified. Moderate risk.

o. **Farnley –** No sites identified, 0.9FE of additional demand. Options believed to exist in the existing estate. Low risk.

p. **Farsley –** HG3-15 (1114) and HG3-14 (1110) Kirklees Knowl safeguarded site agreed should contain a 2FE primary school. Would be sufficient to meet 0.5FE of demand from site itself and also strategically well located to meet demand from sites within walking distance at Clariant/Riverside, and would redistribute pupils from Rodley, all of which is currently feeding into pressures in Horsforth and Calverley. Only develop school if safeguarded site progresses.

q. **Garforth** – Agreed site HG2-124 (1232B) Land rear of Cliff Top Park bounded by Ridge Road and Selby Road, to contain 1 x 2FE primary and 1 x through school with 2FE primary and 4FE secondary. Would be sufficient to meet the additional demand of in excess of 3.4FE and also address Micklefield.

r. **Gildersome / Drighlington** – Agreed site HG2-145 (3000/3064) adjacent to Birchfield could provide for expansion by 1FE to partially meet 1.4FE of demand. Shortage is of moderate risk.

s. **Guiseley / Yeadon / Rawdon** – A 2FE school from somewhere within site HG2-5 (1311A_1180A_2163A) Coach Road/Park Road, Guiseley has been agreed in principle. All are in a good general location but have access issues which may compromise housing or school use in reality. High risk as other options limited after extensive recent consultation.

t. **Harehills** – No sites agreed with an additional 0.4FE of demand. Whilst in part this could be addressed by Roundhay Road HG5-4 (264), this is still a high risk as there are no known options in the existing estate at this time.

u. **Holbeck** – No sites have been identified, 10.4FE of demand created. Very high risk.

v. **Horsforth** – Site HG2-41 (4240) A65 off Horsforth Roundabout has been agreed should contain a through school with 2FE primary and 4FE secondary. Part of site HG5-1 (1202) Land off Victoria Avenue, Horsforth (adjacent to Newlaithes Primary School) also needed, but this was not put forward for housing.

w. **Hunslet** – No sites identified, but 1.3FE of demand generated. Of moderate concern, some potential may exist in current estate.

x. **Hyde Park / Headingley** – No sites identified, and 1.7FE of demand generated. Option of the use of West Park (in Cookridge / Adel Primary Planning Area) being considered through AMB, otherwise of concern as existing estate largely exhausted.

y. **Kippax** – No sites identified, but 0.2FE of demand generated. Not of concern, scope in existing estate to accommodate.

z. **Kirkstall / Burley / Hawksworth Wood** – A site within the Otter island complex (in Armley / Wortley PPA) MX2-9 (198_3390_3393) was agreed should include a 2FE primary. Masterplan approach needed to confirm precise scope as this site has little access to existing schools but is only around 1.9FE of demand. Site MX1-3 (626) Abbey Road, Kirkstall Forge to include a 1FE primary to accommodate children from this development. Current discussions with developer. In total 1.9FE of additional demand created and solutions do not map particularly well to demand. Of some concern due to similar pressures in adjacent Woodhouse and Hyde Park / Headingley planning areas.

aa. **Lower Aire Valley** – Site HG3-20 (1149A) Park Lane Farm including Owland Farm, Doctors Lane, Allerton Bywater, safeguarded land if and when progressed

would need to provide a 2FE primary school. It is adjacent to Brigshaw High School which may have some development potential on site to meet secondary need.

bb. **Manston and Swarcliffe / Whinmoor** – ELE site HG1-288 (797) to include provision for 3 x 2FE primary and 1 x 8FE secondary in addition to Northern Quadrant site already agreed should be sufficient to meet local demand. Site HG1-296 (2154) Seacroft Hospital, requirement for a 6FE-8FE secondary school.

cc. **Meanwood** – No sites identified but 0.5FE of additional demand created. Of moderate risk due to limited options in existing estate and current Basic Need pressures.

dd. **Middleton** - No sites identified but 0.5FE of additional demand created. Moderate risk due to limited options in existing estate and current Basic Need pressures.

ee. **Morley** – Site HG2-150 (1220A) East of Churwell identified for 2FE school to meet 2.4FE of demand needed. Moderate risk, options for expansion largely exhausted.

ff. **Osmondthorpe / Temple Newsam** – 5.2FE of additional demand. Free School already progressing on part of site HG5-6 (259B) and the adjacent leisure centre site as a through school with 2FE primary and 4FE secondary which should address the demand arising from this housing. Also site AV11 (1295A) Skelton Lake in the AVLAAP agreed to contain a similar through school. Another site within the AVLAAP (AV38/2080) has also been reserved for a 2FE school. This includes the former Copperfields site and has been agreed to include a new 2FE primary school, however the precise location is important and must not be directly on the old school site. These would be sufficient to meet demand.

gg. **Otley** – Site HG1-24 (745) East of Otley was identified for a 1FE primary school, which may involve relocation and expansion of an existing school and so is only counted as 1FE net increase. Shortage of approx. 0.5FE compared to additional demand is of low concern as other options believed to exist within existing estate and some housing already underway is already accounted for in current projections.

hh. **Pudsey** – Site HG2-72 (3464) Land adjacent to Tyersal, was identified to include a school expansion option of 1FE. Total additional demand of 2.7 FE. An area of some concern as while some options for expansion may exist in the existing estate the area is currently facing pressure and this may not be sufficient.

ii. **Richmond Hill** – site HG2-201 (1146) bounded by Upper Accommodation Road, Lavender Walk, Pontefract Lane and Berking Avenue South of York Road, was identified for a potential 1FE net expansion of existing provision.

jj. **Robin Hood / Rothwell / Woodlesford** – Site HG2-180 (4222A_B_C) Fleet Lane agreed for a new 2FE primary provision. Site HG5-7 (3081A) was not supported for housing, but was suggested for a school instead. This has been

included in the allocations and analysis, but is not clear if it would be progressed and would depend on changes in surrounding areas at that time.

kk. **Roundhay / Wigton -** No sites identified. 0.2FE demand created. An area of current Basic Need pressure.

ll. **Seacroft** – Site HG5-3 (4090) East Leeds Family Learning Centre was reserved entirely for school use for a 2FE primary, to meet the additional demand plus potentially also other educational priorities. This has been supported through the brownfield land disposal/development process.

mm. **Stanningley** – No sites agreed for school provision with 0.3FE of additional demand. Of less concern as options thought to exist in current estate.

nn. **Wetherby** – No sites agreed for school sue as options exist within the current estate to meet the 0.8FE of demand arising. Low concern.

oo. **Woodhouse** – No sites agreed for school use, and 1.5FE of demand expected. Of some concern due to existing estate being exhausted and adjacency of a number of areas with insufficient solutions identified.

5 Secondary School Place Impact

5.1 In total approximately 61 FE of additional secondary provision are needed as a result of the housing plans, equivalent to 7-8 new secondary schools of around 8 forms of entry each. The site allocation process has identified options for 32 FE. With safeguarded sites included demand rises to 67 FE, but no further sites were agreed.

5.2 There is considerable current uncertainty about the capacity of secondary schools to meet anticipated demand. Changes to sixth form funding mean that any sixth form of less than around 250 pupils is not financially sustainable. As sixth forms are established collaboratively and increasingly in off-site provision, there will be additional space available for statutory school age children. Translating the number of places made available by this is not straightforward as the delivery of the curriculum is not based on simple classes of 30 as in primary, and requires use of specialist facilities. Admission numbers are often therefore not rigid multiples of 30, although the language of FE is still used as an approximation.

5.3 As described in 3.6 above, a cautious approach has been taken when projecting the pupil yield for secondary school places. This uncertainty around both the projection of demand for secondary places and how it might be met should be borne in mind when considering the implications for planning school provision.

5.4 New provision agreed within this process in East Leeds Extension, AAVLAAP, Horsforth and Garforth should address the demand arising from this site allocations plan for areas where the existing estate would otherwise be insufficient to cope. Site HG1-296 (2154) - Seacroft Hospital, requirement for a 6FE-8FE secondary school.

5.5 There is estimated to be over 16FE of demand arising in the inner and city centre HMCAs, with only the potential for 4FE of provision at Dolly Lane agreed through this process. Within this area the inner East and inner North East of the city already face considerable pressure for places, and work will be starting in the spring term on consultation events to address this, however it will add to the difficulty in meeting demand arising from this housing. The local authority has already started a piece of work to look at the funding of site acquisition and demand arising from this housing plan will need to be considered as part of that plan.

6 Conclusion

6.1 Housing growth is an essential requirement for the economic and social development of the City, and as we strive to be the best City for children, school place planning is a critical part of the infrastructure planning that runs alongside this. There are a number of sites which have been identified as requiring school provision to be included in any future use, and are put forward within the SAP and AVLAAP.

7 PLEASE SEE NEXT PAGE FOR ANNEX 1: Anticipated Pupil Yield and Sites Needing School Provision

HMCA area	Primary Planning area	Current basline position for primary school places	Safeguarded land/sites					Non-Safeguarded land/sites					Sites refs	Comments and outstanding issues.
			Housing Capacity	Number of primary FE demand generated	Number of secondary FE demand generated	Primary school FE sites identified	Secondary school FE sites identified	Housing Capacity	Number of primary FE demand generated	Number of secondary FE demand generated	Primary school FE sites identified	Secondary school FE sites identified		
City Centre								8,383	10.0	7.7			no sites identified	
Aire Valley (city Centre)								2,930	3.5	2.7			no sites identified	
Inner								9,703	11.6	8.9	**11.00**	**4.00**	HG5-5 (2145) Dolly Lane, HG5-4 (264) Roundhay Road, MX2-9 (3390/3393/198) otter island, HG2-201 (1146) great clothes, HG5-3 (4090) East Leeds Family Learning Centre,	
Aire Valley (Inner)								1,986	2.4	1.8				
Aireborough								2,426	2.9	2.2	**2.00**		Options within Guiseley sites HG2-5	
Outer North West			540	0.6	0.5	**2.0**		1,800	2.1	1.7	**5.00**		HG2-18 (2130) Church Lane Adel, HG1-24 (745) East of Otley,Adjacent site HG2-17 (1080_3367A)	
North								5,828	6.9	5.3	**8.00**	**4.00**	HG2-36 (2053B) Alwoodley Lane, HG2-41 (4240) Horsforth, HG5-1 (1202) Horsforth, MX1-3 (626) Kirkstall Forge.	
Outer North East			1,359	1.6	1.2	**2.0**		5,371	6.4	4.9	**4.00**		MX2-33 (3391) Headley Hall not proposed at this stage but subject to further review. HG3-13 (2134) Scholes (East of) Safeguarded land/site - 2FE site requested if this site comes forward for housing.	
East								7,787	9.3	7.1	**6.00**	**16.00**	HG1-288 (797) ELE and HG1-296 (2154) Seacroft hospital	
Aire Valley (east)								2,647	3.2	2.4	**4.00**	**4.00**	2195A Skelton :Lake 2080 site incl Copperfields	
Outer South East			1,616	1.9	1.5	**2.0**		4,045	4.8	3.7	**4.00**	**4.00**	HG2-124 (1232b) Stourton Grange Farm (land at), Selby Road - Ridge Road, Garforth LS25	
Outer South			220	0.3	0.2			2,465	2.9	2.3	**4.00**		HG2-180 (4222A_B_C) Fleet Lane.	
Outer South West			1,845	2.2	1.7	**2.0**		6,807	8.1	6.2	**3.00**		HG2-150 (1220A) East of Churwell, HG2-145 (3000_3064) next to Birchfield, HG5-8 (1032) East Ardsley Safeguarded land/site	
Outer West			715	0.9	0.7	**2.0**		4,723	5.6	4.3	**1.00**		HG2-72 (3464) adjacent to Tyersal, HG3-15 (1114) Kirklees Knoll (Safeguarded land/site)	
GRAND TOTAL			**6,295**	**7.5**	**5.8**	**10.0**		**66,901**	**79.6**	**61.3**	**52.00**	**32.00**		
	Alwoodley	**1FE short**						424	0.5	0.4	**2.00**		HG2-36 (2053B) Alwoodley Lane	
	Ardsley / Tingley	**1FE short**	1,450	1.7	1.3	**2.0**		1,727	2.1	1.6			HG3-23 (2127) Tingley Station Safeguarded land/site HG5-8 (1032) East Ardsley Safeguarded land/site	1032/2128 Safeguarded land/site recommended by members - school needed
	Armley / Wortley	**0.5FE amber**						2,104	2.5	1.9	**2.00**		MX2-9 (3390/3393/198) Kirkstall road	
	Beeston	**0.5FE short**						259	0.3	0.2				
	Belle Isle	**0.5FE short**						759	0.9	0.7				
	Boston Spa	**Green - OK**	249	0.3	0.2			3,362	4.0	3.1	**4.00**		MX2-33 (3391) Headley Hall Not proposed at this stage but subject to further review	
	Bramhope / Pool	**Green - OK**	540	0.6	0.5			449	0.5	0.4	**2.00**		HG3-5 (1095b_1369) Pool, HG2-17 (1080 / 3367A) in Bramhope	
	Bramley	**1FE amber**						648	0.8	0.6				
	Burmantofts	**1.5FE short**						1,472	1.8	1.3	**2.00**	**4.00**	HG5-5 (2145) Dolly Lane	
	Calverley	**0.5FE short**						141	0.2	0.1				
	Chapel Allerton	**1FE short**						368	0.4	0.3	**2.00**		HG5-4 (264) Roundhay Road	
	Cookridge / Adel	**Green - OK**				**2.0**		4,171	5.0	3.8	**4.00**		HG2-18 (2130) Church Lane. HG5-2 (2049) West Park Centre	
	EPOS Villages South	**Green - OK**	910	1.1	0.8	**2.0**		1,559	1.9	1.4			HG3-13 (2134) East of Scholes Safeguarded land/site	
	EPOS Villages West	**Green - OK**	100	0.1	0.1			203	0.2	0.2				
	Farnley	**Green - OK**	445	0.5	0.4			784	0.9	0.7				
	Farsley	**Green - OK**	465	0.6	0.4	**2.0**		399	0.5	0.4			HG3-15 (1114) Kirklees Knoll Safeguarded land/site	
	Garforth	**Green - OK**	500	0.6	0.5			2,887	3.4	2.6	**4.00**	**4.00**	HG2-124 (1232B) Stourton Grange Farm	
	Gildersome / Drighlington	**Green - OK**						1,207	1.4	1.1	**1.00**		HG2-145 (3000_3064) adj to Birchfield	
	Guiseley / Yeadon / Rawdon	**Green - OK**						837	1.0	0.8	**2.00**		HG2-5 (2163A / 1180A / 1311A)	
	Harehills	**1FE short**						368	0.4	0.3				
	Holbeck	**amber - monitor**						11,374	13.5	10.4				
	Horsforth	**1FE short**						1,060	1.3	1.0	**3.00**	**4.00**	HG2-41 (4240) off A65 off Horsforth roundabout and HG5-1 (1202) Victoria Ave	
	Hunslet	**amber - monitor**						1,055	1.3	1.0				Includes 1FE primary from Aire Valley sites. Schools solutions progressed outside of this process.None in this area
	Hyde Park / Headingley	**1FE amber**						1,457	1.7	1.3				
	Kippax	**Green - OK**	166	0.2	0.2			176	0.2	0.2				
	Kirkstall / Burley / Hawskworth	**1.5FE short**						1,592	1.9	1.5	**1.00**			626 - Kirkstall Forge
	Lower Aire Valley	**Amber - monitor**	1,055	1.3	1.0	**2.0**		827	1.0	0.8			HG3-20 (1149A) Adj to Brigshaw Safeguarded land/site	
	Manston	**1FE amber**						1,068	1.3	1.0		**8.00**	HG1-288 (797) ELE, HG1-296 (2154) Seacroft hospital	
	Meanwood	**0.5FE short**						388	0.5	0.4				
	Middleton	**1.5FE short**						749	0.9	0.7				
	Morley	**0.5FE short**	80	0.1	0.1			2,040	2.4	1.9	**2.00**		HG2-150 (1220A) East of Churwell	
	Osmondthorpe / Templenewsam Area	**0.5FE Amber**						4,370	5.2	4.0	**6.00**	**4.00**		Includes Aire Valley sites. School solutions progressed outside of this process but inlcude 1295A Skelton Lake for a 2FE Primary/4FE secondary through school. Includes over 2FE primary from Aire Valley sites. Schools solutions progressed outside of this process but include part of site 2080 which contains ther former Copperfields site for a 2FE primary. Site 259b part of the former Whitebridge PS - plans already in progress for Temple Learning Academy 2FE PS & 4FE HS.
	Otley	**Green - OK**						1,248	1.5	1.1	**1.00**		HG1-24 (745) East of Otley	
	Pudsey	**1FE short**	120	0.1	0.1			2,243	2.7	2.1	**1.00**		HG2-72 (3464) adj to Tyersal	
	Richmond Hill	**Green - OK**						2,809	3.3	2.6	**1.00**		HG2-201 (1146) Great Clothes	
	Rothwell / Robin Hood / Woodlesford	**Green - OK**	115	0.1	0.1			2,357	2.8	2.2	**4.00**		HG2-180 (4222A_B_C) Fleet lane HG5-7 (3081A) Robin Hood West	
	Roundhay / Wigton	**1.5FE short**						150	0.2	0.1				
	Seacroft	**1.5FE short**						928	1.1	0.9	**2.00**		HG5-3 (4090) East Leeds Family learning Centre	
	Stanningley	**1FE short**						234	0.3	0.2				
	Swarcliffe / Whinmoor	**Green - OK**						4,715	5.6	4.3	**6.00**	**8.00**	HG1-288 (797) ELE	
	Wetherby	**Green - OK**	100	0.1	0.1			661	0.8	0.6				
	Woodhouse	**Green - OK**						1,272	1.5	1.2				
GRAND TOTAL			**6,295**	**7.5**	**5.8**	**10.00**		**66,901**	**79.6**	**61.3**	**52.00**	**32.00**		

APPENDIX 3: TRANSPORT BACKGROUND PAPER

1 Summary

1.1 This report summarises the forecast impacts of the proposed developments in the Site Allocations Publication Draft Plan on the transport network in Leeds.

1.2 The population of Leeds is forecast to increase by 15% between 2012-28 and alongside increased car ownership it is considered that this will result in an increase in traffic of between 15-23% across the District. However, at the same time the level of investment in transport infrastructure is increasing substantially.

1.3 Schemes prioritised in the West Yorkshire Plus Transport Fund, together with existing major transport schemes such as City Connect, Kirkstall Forge station and NGT, represent an investment of over £830M. On top of this Highways England and the rail industry are also investing in additional capacity on the strategic road and rail networks.

1.4 In combination these programmes are being delivered to support the economic growth of Leeds, to provide good alternatives to the private car and to reduce carbon emissions, in line with the objectives of the Local Transport Plan and the Core Strategy.

1.5 In addition, a number of further interventions have been identified to mitigate the forecast impacts of growth at key junctions across the Leeds highway network. It is expected that contributions will be obtained from developers towards the delivery of these interventions, alongside contributions towards schemes within the WYPTF.

1.6 It is proposed that support for public transport, walking and cycling schemes will mainly, but not exclusively, be sought through the Community Infrastructure Levy.

1.7 Annex 1 provides a detailed breakdown and analysis of the congestion hotspots across Leeds.

2 Introduction

2.1 This report sets out the work undertaken to understand the impacts of the proposed development sites contained within the Site Allocations Plan (Publication Draft) upon the transport system of Leeds. It documents the current conditions for travel, provides an overview of planned interventions and a forecast of conditions at the end of the plan period in 2028 if all development is delivered.

2.2 The evaluation assumes that all Identified and Allocated sites in the Plan will be built out by 2028. No sensitivity tests have been undertaken around the delivery timetable.

2.3 The sections below examine the transport changes from a high level, strategic view across the main road network in Leeds. Local issues and appropriate mitigation are

assumed to be dealt with via the development control process of transport assessments.

3 Background

3.1 In recent years there has been a step change in devolved decision making affecting the delivery of transport investment across the Leeds City Region. The West Yorkshire Combined Authority (WYCA) was set up in 2014 to manage the £1 billion West Yorkshire Plus Transport Fund and support economic growth. In addition, as a member of RailNorth, WYCA will also be involved with the management of the Northern and TransPennine rail franchises from April 2016 onwards.

3.2 WYCA is currently in the process of developing a Single Transport Plan for West Yorkshire. The new plan will be a twenty year vision for developing an integrated transport network that supports the Leeds City Region Enterprise Partnership's Strategic Economic Plan for sustained and healthy economic growth - especially for jobs and housing. The Single Transport Plan will update the current West Yorkshire Local Transport Plan (LTP3) and will set 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.

3.3 Transport for the North (TfN) is a new partnership involving the northern city regions, LEPs and Government. In combination with Highways England, Network Rail and HS2 Ltd, TfN is aiming to transform the Northern economy and create a 'Northern Powerhouse' through a long term investment in transport networks and infrastructure.

3.4 These significant changes will enable local decision makers to have a much greater level of control over transport investment, enabling the delivery of the key pieces of infrastructure required to support the Leeds Core Strategy and accompanying Site Allocations Plan.

4 Historic Trends and Current conditions

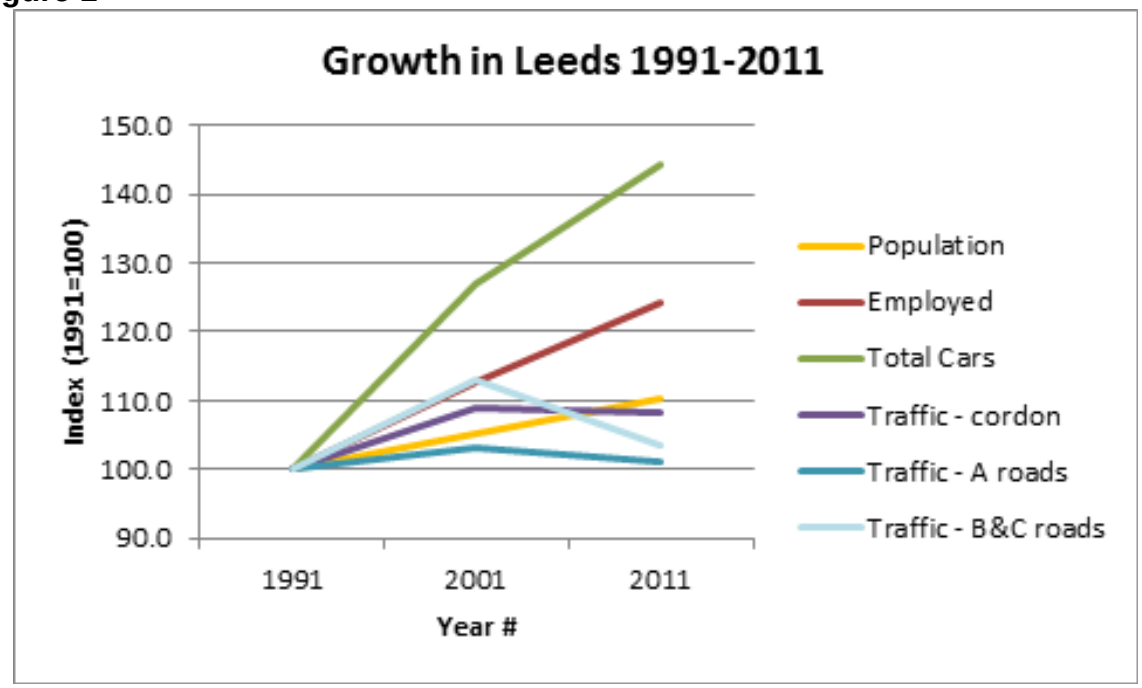
4.1 The Core Strategy housing allocations represents a significant increase in population for Leeds District of around 15% between 2011 and 2028. Past trends in Leeds, however, show that despite significant increases in population, employment and car ownership, traffic growth has not been as great.

4.2 Figure 1 shows that over the twenty years from 1991 the population of Leeds grew by 10%, the number of employed residents by 24% and the number of cars by 44%. However, all day traffic levels over the same period grew by only 8% on radial roads approaching Leeds City Centre, while growth on a sample of A, B and C roads across the District was less than 5%.

4.3 An examination of peak traffic levels on radial routes approaching the City Centre shows that the trend has been more marked with peak hour flows actually falling and peak period flows increasing by less than all day traffic. These changes reflect greater flexibility in the labour market, the growth of part time jobs, a shift away from

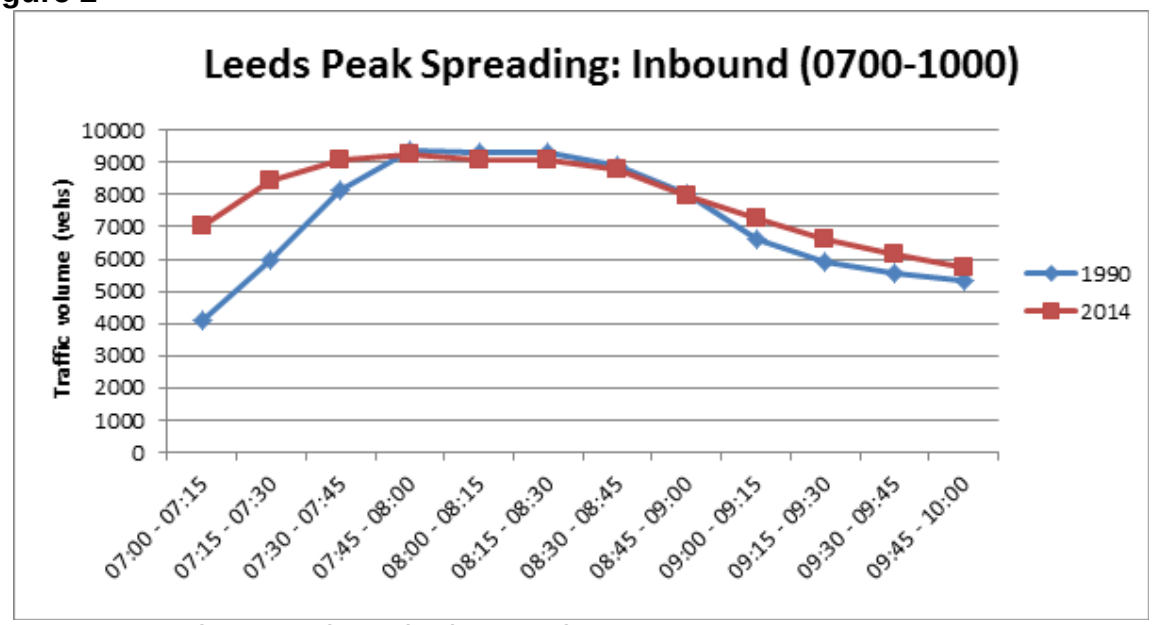
the traditional 9-5 working day and the consequent growth in peak spreading. Figure 2 shows morning peak traffic levels since 1990.

Figure 1



Source: Census, Leeds Central Monitoring Cordon and LCC Note 13.
 # Note cordon data relates to 1992, 2002 and 2012 as data not available for all years.

Figure 2

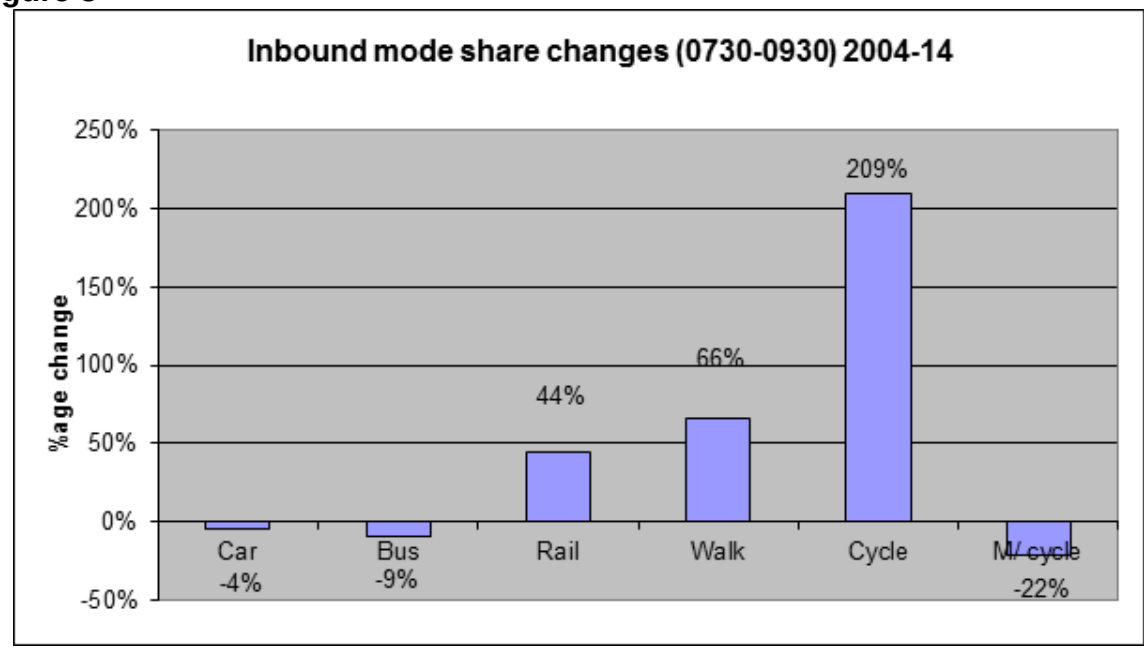


Source: Leeds Central Monitoring Cordon

4.4 Over the past decade modal split surveys covering morning peak period journeys approaching the City Centre show that there has been a significant growth in

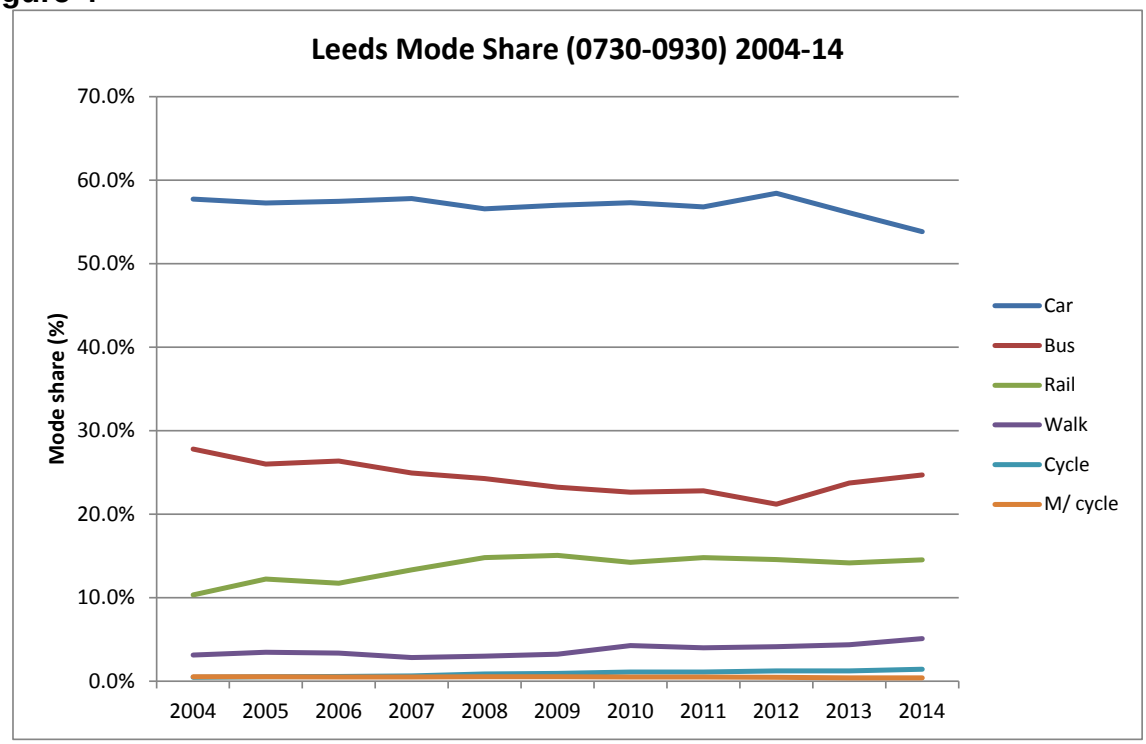
cycling, walking and rail usage, while bus, car and motorcycle usage have all fallen – see Figures 3 and 4.

Figure 3



Source: Leeds Monitoring Cordon Mode Split Surveys

Figure 4



Source: Leeds Monitoring Cordon Mode Split Surveys

4.5 Although car remains the principal mode it should be noted that not all the journeys recorded here are to the City Centre as many vehicles use the inner ring road and M621 to travel to other destinations within the city. Census data shows that between

2001 and 2011 car commuting to the City Centre fell in absolute terms by 9% although the number of people working there rose by 4%.

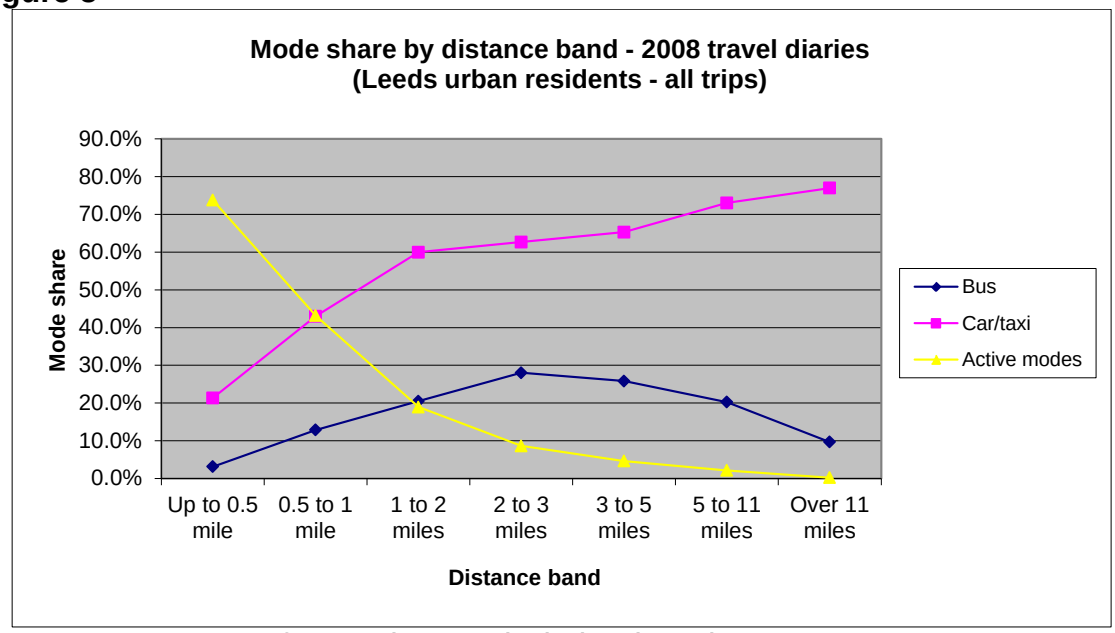
4.6 One key trend in terms of the City Centre has been the growth in City Centre living. Although not everyone who lives there works in the City Centre, the majority of residents travel to work by sustainable modes so that only 24% travel by car compared with 65% across Leeds District[1].

4.7 As a major city within a wider city region Leeds' transport activity reflects the many employment options available to residents. Analysis of census data[2] shows that 25% of Leeds residents (with a fixed place of employment) work outside the District and that 31% of people working in Leeds travel in from outside. This rises to 37% for those working in the City Centre.

4.8 Within Leeds District 20% of residents either work at/from home or stay within their own ward; 18% work in the City Centre. A very significant proportion therefore are travelling either to another ward within Leeds or outside the District. Catering for these journeys by sustainable modes is challenging and this is reflected in the high car mode share for these trips (75%).

4.9 Like other urban areas in the UK a high proportion of journeys made by Leeds residents are relatively short. Surveys in 2008 covering the main urban area of Leeds revealed that almost half (48%) were less than 2 miles and 72% were less than 4 miles. A high proportion of these short journeys are made by car as illustrated in Figure 5.

Figure 5



Source: Transport for Leeds Travel Diaries (2008)

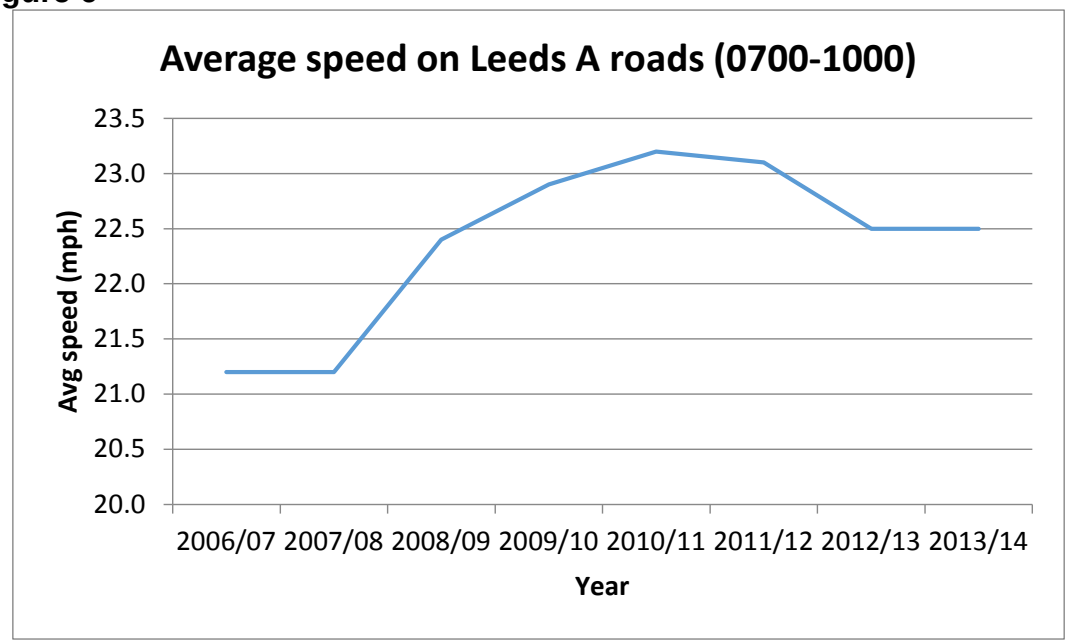
4.10 The Department for Transport (DfT) provide all local authorities with data on vehicle travel times that has been collected from vehicles with GPS devices. This

[1] 2011 census QS701EW (excludes those working at/from home)
[2] 2011 census WU03EW

information is currently supplied to the DfT by TrafficMaster and allows average journey times and speeds to be analysed by individual road and time of day.

4.11 DfT published statistics show that average morning peak period (0700-1000) speeds on all local authority A roads in Leeds are faster than other comparable cities in England and have improved by around 6% between 2006-07 and 2013-14. See Figure 6.

Figure 6



Source: DfT Cgn0201a

4.12 Leeds City Council officers have undertaken a detailed analysis of the TrafficMaster data to derive journey times on radial and orbital routes in Leeds for the academic year 2011-12 (weekdays excluding school holidays). This shows that the highest levels of peak congestion in 2011-12 occurred on the A61 N, M621 E, A62, A647, A65 (between Rawdon and the Inner Ring Road) and the A660.

4.13 When average peak hour journey times are compared with daytime free flow conditions congestion adds at least 80% to travel times on these routes – see Table 1 below. Across the whole urban main road network congestion adds 68% to journey times on inbound radial routes (0800-0900) and 60% to outbound radials (1700-1800).

Table 1 - Routes where congestion adds 80% or more to journey times (2011-12)

Route	***Level of Congestion Delay***

	0800-0900 inbound	***1700-1800 outbound***
A61 (N)	*Over 100%*	*Over 100%*
M621 (E)	*Over 80%*	*Over 80%*
A62	*Over 80%*	
A647	*Over 80%*	
A65b #	*Over 100%*	*Almost 80%*
A660	*Over 100%*	*Over 100%*

Notes: # Rawdon to City Centre – affected by A65 QBC roadworks

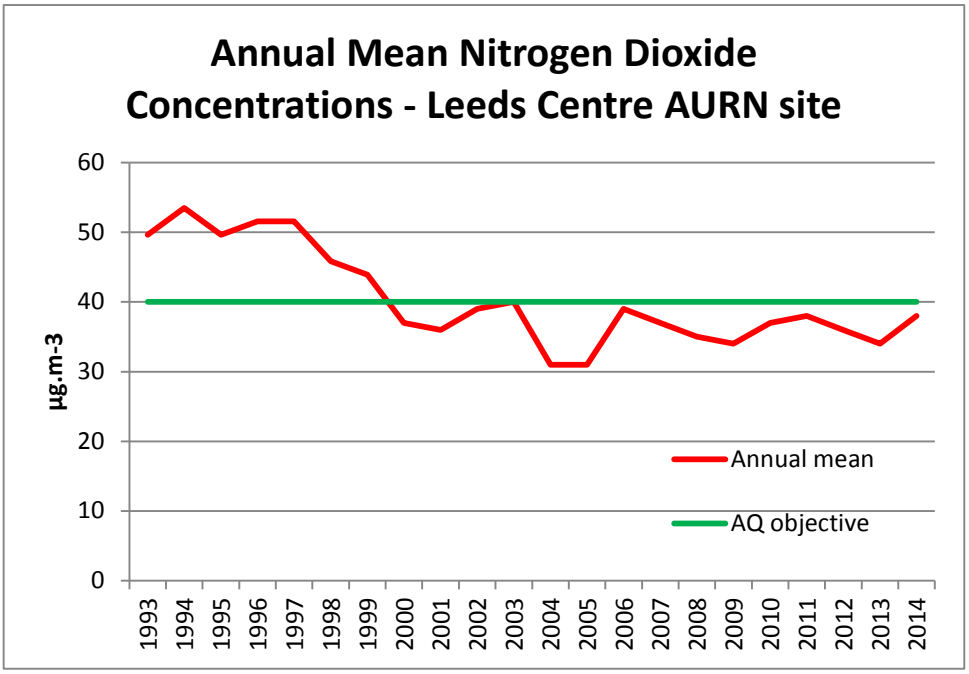
4.14 Using the same journey time data, junctions that are seen as congestion hotspots have been analysed to gauge the current levels of delay. 96 sites were examined for weekday morning and evening peak hour delays as well as 12 hour delays from 7am to 7pm.

4.15 Figure 9 shows the location of the sites, highlighting those with the greatest levels of delay. The majority of these junctions are within the main urban area of Leeds. Sites marked in orange 'with notable delays' have at least one approach with more significant delays than the other legs of the junction. In the main, junctions within the City Centre were not assessed. Further details of these sites are included in Appendix 1.

4.16 Carbon emissions across the local authority road network are estimated annually by the government. This shows a sustained downward trend in recent years in Leeds District and across West Yorkshire. The most recent data shows that between 2005 and 2012 carbon emissions due to traffic on local roads fell in Leeds by 13% and in West Yorkshire by 12%. These changes are in line with national trends.

4.17 Results from the City Centre monitoring site for nitrogen dioxide (NO2) show that background air quality improved significantly during the 1990s but there has been little change since 2000 (Figure 8). Although background concentrations are unlikely to exceed EU Directive or UK AQ Regulation objectives, air quality remains a concern. Currently, there are six Air Quality Management Areas in Leeds (where residential properties close to heavily trafficked roads are exposed to concentrations of NO2 in excess of the AQ objective) and there are parts of the city failing to meet the EU Directive for NO2. In addition, while the standards set for particles (PM10 and PM2.5) are achieved, any reduction in these pollutants will have health benefits for the whole population

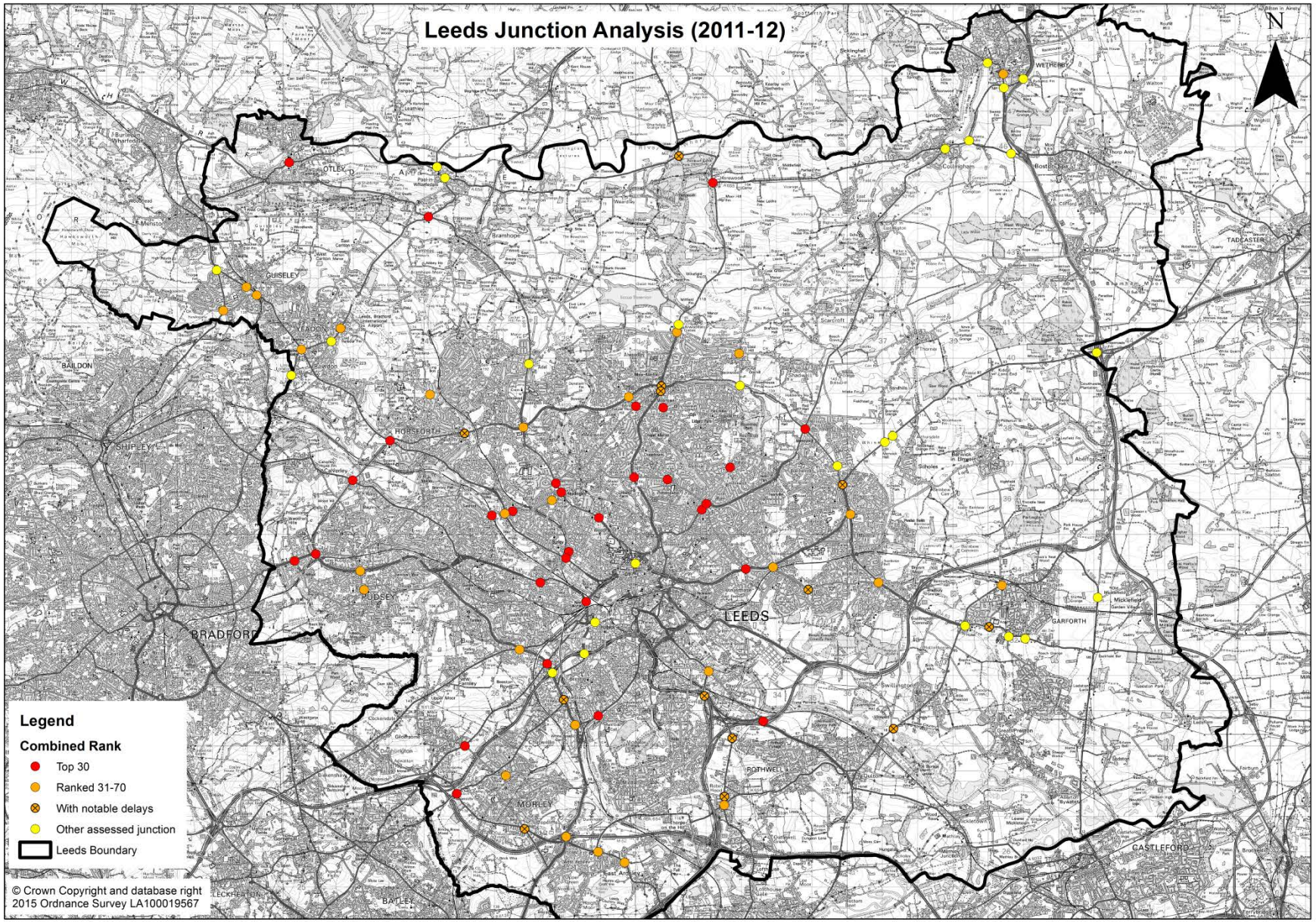
Figure 8



4.18 Summary of significant trends:

- Traffic growth over the past two decades has consistently been significantly less than growth in car ownership and employment;
- Peak spreading and changes in employment patterns mean that peak hour flows on radial routes around Leeds City Centre are lower now than in 1990;
- Rail and cycling levels have risen significantly over the past decade;
- Bus usage has fallen overall, however, there are signs of growth since 2012;
- A significant proportion of Leeds residents work outside Leeds District and equally a high proportion of jobs in Leeds are undertaken by people commuting into Leeds;
- Almost half of all the journeys made by residents within urban Leeds are less than 2 miles long;
- Morning peak traffic speeds on A roads across Leeds are faster than in other Core Cities, however, on the most congested radials journey times are twice as long in the peak as at other times of the day;
- Carbon emissions due to transport on Leeds' roads have fallen since 2005, however, previous falls in NO2 emissions have levelled off and there has been no improvement since the year 2000.

Figure 9 - Leeds Congestion Hotspot Junctions (2011-12)



5 Strategy

5.1 Core Strategy Spatial Policy 11 provides a strategic framework for the delivery of new transport infrastructure across Leeds in line with the objectives of LTP3 and the Leeds City Region Transport Strategy. Specifically the delivery of schemes to enhance radial public transport, including rapid transit and park and ride, and targeted highway improvements to expand orbital capacity and target congestion hotspots. Interventions to improve access to the Aire Valley and Leeds Bradford international Airport are also included, as well as measures to support new developments and improve connectivity for cyclists and pedestrians.

5.2 SP11 also references interventions to address the needs of people with impaired mobility, improve road safety, address accessibility and support low carbon technologies. Lastly the policy supports the delivery of HS2 and the substantial connectivity enhancements that it will deliver in the longer term.

5.3 Transport Policies T1 and T2 contain measures to manage travel demand by the use of travel plans, the control of parking, requirements for developments to be located in accessible places and to contribute to infrastructure to mitigate their impacts and ensure that developments do not materially add to existing problems

5.4 The aim of the strategy is to provide choice and ensure that suitable alternatives to the private car are available – in particular for journeys to local services, education, employment, shopping and to the City Centre – and to therefore increase the proportion of these trips made by sustainable modes. As shown earlier, the relatively high car mode share for many short journeys means that there is significant scope for increasing the use of walking and cycling; equally the high public transport accessibility of the City Centre (together with planned improvements) should ensure that car usage can be reduced.

5.5 For travel to work the diversity of destinations outside the City Centre makes it hard to cater for direct travel to these locations by public transport (unless residents live on the route of a direct bus or train service) and therefore it is important that they are linked directly to major public transport interchanges (such as the City Centre) to facilitate these journeys. This is reflected in the Accessibility Standards in the Core Strategy. It is nevertheless recognised that for many people car will remain the primary mode for a high proportion of these journeys and therefore the provision of additional orbital highway capacity will be a key outcome of the strategy.

5.6 City Centre living forms an important component of the spatial distribution of the housing locations in Leeds with a planned 11,500 dwellings being allocated to the City Centre in the Site Allocations Plan. Census data shows that although not all City Centre residents chose to work in Leeds City Centre, the availability of good alternatives to the private car means that the vast majority (76%[3]) use sustainable modes to travel to work.

5.7 It has long been recognised that the interaction of transport and land use can have a significant effect on travel patterns. Thus delivery of significant infrastructure can

[3] 2011 census QS701EW (LSOA within Leeds IRR, excludes those working at/from home)

encourage people to move to the local area to make use of the new facilities to access employment elsewhere. Historically rail investment around London lead to the growth in commuting. It has been estimated that people on average change jobs every 3 years and move home every 7 years – this means that there is significant scope for individuals and families to change their travel patterns during this process. It is considered that investment in NGT, park and ride and rail will in turn have an effect upon local travel in and around Leeds and Leeds City Region.

6 Transport Interventions

Local Projects

6.1 The first West Yorkshire Local Transport Plan (LTP) was adopted in 2001 and since then investment in local transport has been guided by the strategies and policies within the plan and its two successors. The current plan (LTP3) runs from 2011-26. As highlighted in section 3 the WYCA is in the process of creating a Single Transport Plan that will update and incorporate LTP3.

6.2 A number of key interventions have been delivered in Leeds in recent years to address existing problems and to cater for future travel demand resulting from a growing economy. Key amongst these was the completion of Leeds Inner Ring Road in 2008; the opening of the A63 East Leeds Link Road in 2009; the delivery of the A65 Quality Bus Corridor in 2012; and the opening of the 800 space park and ride site at Elland Road in 2014. Further works to signalise three key roundabout junctions to the west of the city: Thornbury Barracks, Rodley and Horsforth are due for completion during 2015.

- The Inner Ring Road scheme, in combination with the M621, for the first time completes a full ring road around the City Centre. Future plans for the City Centre, described below, will build upon this to remove through traffic and enhance the urban realm and local environment so that the city is better able to attract new investment.

- The East Leeds Link Road (ELLR) provides a dual carriageway link through the Aire Valley between the City Centre and the M1 to the east. This scheme therefore forms a key component in opening up the Aire Valley to investment in employment and housing, and supporting the Local Enterprise Zone. Plan are already well advanced to open a 1000 space park and ride site adjacent to the ELLR in 2016 (see below).

- The A65 Quality Bus Corridor (QBC) has significantly enhanced bus priority on this major radial route, complementing previous investment on the A61 Scott Hall Road and the A64 and A63 in east Leeds. The provision of good local bus services that are insulated from future congestion by priority measures is an important component of the city's transport strategy.

- Although rail based park and ride is common across West Yorkshire, Elland Road represents the first major investment in bus based park and ride in Leeds. Providing a good alternative for car commuters to reach the City Centre is key to reducing traffic levels on congested radial routes and improving the environment within the City Centre.

- The roundabout improvement and signalisation schemes at Thornbury Barracks, Rodley and Horsforth will support housing growth in the west of the city.

6.3 As a city Leeds has a good track record of delivering major transport schemes however, this has to some extent been constrained by the need to seek government funding on a project by project basis and the lengthy timescales involved in gaining approval. Recent significant changes in government policy has led to the City Deal, the creation of the West Yorkshire Combined Authority, RailNorth and Transport for the North. These changes will facilitate more local decision making and in combination with the West Yorkshire Plus Transport Fund will result in a significant increase in investment and a more streamlined delivery process.

6.4 The £1 billion West Yorkshire Plus Transport Fund comprises £600m of Government funding over 20 years, £183m of other devolved transport funding previously secured through the City Deal and local contributions. It will underpin growth by improving the City Region's roads and railways and connecting people to jobs and goods to markets seamlessly.

6.5 Managed by the West Yorkshire Combined Authority (WYCA), the fund will be targeted at reducing congestion, improving the flow of freight and making it easier for people to commute to and from expected major growth areas. A package of transformational transport schemes which meet the WYCA and the LEP's aims of supporting economic growth has been identified and includes a number of major projects in Leeds. Four of these have been prioritised for early implementation: East Leeds Orbital Route and Outer Ring Road junction Improvements; A65-Airport-A658 Link Road; Leeds City Centre Package; and Aire Valley Temple Green Park and Ride.

6.6 The WYPTF projects will build upon other major schemes that are being delivered through direct investment by the Department for Transport and local contributions. These include: Major Maintenance on Leeds Inner Ring Road; Leeds Station Southern Entrance; Leeds Rail Growth Package; City Connect Cycle Superhighway and New Generation Transport.

6.7 In total these nine schemes represent a substantial £610M investment in the city's transport infrastructure that will act as a catalyst and driver for Leeds and the City Region's economic growth and regeneration. All the schemes are in line with the transport infrastructure investment priorities specified in Core Strategy Spatial Policy 11.

- East Leeds Orbital Route (ELOR) is a proposed dual carriageway road from M1 Jn 46 to the A6120 to the west of the A58 Wetherby Road. The southern section of this route – Manston Lane Link – is to be provided by the Thorpe Park development. This scheme is directly tied to the East Leeds Extension housing proposals and will provide direct traffic relief to the existing outer ring road through Cross Gates and Seacroft. In addition to ELOR, improvements to four junctions on or adjacent to the A6120 are also contained within this package (A6120/King La; King La/Stonegate Rd; A6120/A61 Harrogate Rd and A6120/Roundhay Park La). In combination with ELOR these schemes form part of the Council's proposals for enhancing orbital highway capacity on the outer ring road.

- A65-Airport-A658 Link Road is a proposed single carriageway road linking the A65 west of Horsforth with Leeds Bradford Airport and the A658 to the north. This proposal would also include bus priority measures on the A65 eastbound approach to the A6120. This scheme represents a key transport intervention to facilitate growth of the airport and reduce traffic levels on local roads, in line with Core Strategy Spatial Policies 11 and 12. Further work is also being undertaken to investigate options for a future heavy/light rail link to the airport.

- Leeds City Centre Package is a key component of the emerging City Centre transport strategy. The proposed scheme will provide additional orbital capacity on the inner ring road (specifically at Armley Gyratory) and the M621 to facilitate orbital movements and to enable traffic levels to be reduced within the City Centre. To support this it is proposed to close City Square to general traffic and to reduce the scale of highways within the South Bank, reallocating road space to pedestrians, cyclists and public transport. The growth in City Centre living and employment contained within the Core Strategy will require a new approach to the transport networks and urban realm to accommodate the greater levels of walking, cycling and public transport use associated with this growth. The emphasis here is to significantly enhance the City Centre as a place and reduce the dominance of highway infrastructure. The scheme is a key project to enable the city to be HS2 ready and will complement the proposals to increase rail usage, the Council's plans for park and ride (including NGT) and the enhanced cycling network contained within City Connect.

- The Temple Green Park and Ride proposal is scheduled to be operational by the spring of 2016 and represents the first phase of the Aire Valley Enterprise Zone Package. This scheme will provide a 1000 space car park served by a dedicated bus service to the City Centre which will also serve other locations within the Aire Valley. This scheme, in combination with the Council's other park and ride proposals (including NGT), is a key element in supporting the growth of the City Centre as well as directly enhancing public transport connectivity to the Enterprise Zone.

- The Leeds Inner Ring Road Major Maintenance Scheme is due to be completed by the end of 2015 and will ensure the continued availability of the critical Woodhouse tunnel. The inner ring road carries up to 85,000 vehicles per weekday and performs a vital component of the city's highway network, not only for traffic heading for the City Centre but also facilitating city wide movements within the main urban area.

- The Leeds Station Southern Entrance scheme will provide a new entrance to the City Station from the Holbeck/South Bank area and is due to be completed by autumn 2015. This will directly support the Core Strategy's employment and residential growth plans for the City Centre, and by enhancing rail connectivity forms a key element of the emerging City Centre transport strategy.

- Leeds Rail Growth Package comprises two new stations with associated car parks on the electrified Airedale and Wharfedale lines. These are due to open during the autumn on 2015. Apperley Bridge station will provide an alternative option for travel to Leeds City Centre (and other wider destinations) from the north west of

Leeds and communities to the north east of Bradford and alongside Kirkstall Forge station will work to relieve traffic levels on the A65 Kirkstall Road. Kirkstall Forge station will directly support the associated residential and employment developments.

- The City Connect Cycle Superhighway scheme will provide 23km of segregated cycle superhighway connecting Bradford to East Leeds via Leeds City Centre, upgrades to the canal towpath between Kirkstall and Shipley and additional City Centre cycle parking. The scheme is due to open by the end of 2015 and represents a significant step change in provision for cycling and the Leeds Core Cycle Network. In addition further funding has been awarded for a second phase covering works in and around Leeds City Centre, including the direct approaches from the north, with delivery planned by 2018. These schemes will directly support the increased use of sustainable modes across the city as well as the emerging City Centre transport strategy.

- New Generation Transport (NGT) comprises a two line trolleybus network with associated park and ride sites that will link Stourton (M1 Jn 7) and Holt Park/Boddington with Leeds City Centre. The scheme is currently subject to the result of a public inquiry. NGT represents a transformational enhancement to the city's public transport network. It represents a key component of the emerging City Centre transport strategy as well as connecting people to key employment sites, education, health and leisure facilities across the wider city.

6.8 In addition to the interventions outlined above, a further £220+M worth of Leeds projects have been prioritised within the West Yorkshire Plus Transport Fund as well as a number of other schemes where a proportion of the investment will have a direct role to play in facilitating the economic growth of the city. These comprise:

- Leeds Outer Ring Road A6110 – junction improvement package
- A653 Leeds-Dewsbury Corridor – bus priority measures, highways efficiency, express bus service and local safety scheme
- Aire Valley Enterprise Zone Package Phase 2 – provision of a new north-south cross river link road between B6481 Pontefract Rd and A63
- NGT Trolleybus Line 3 to Aire Valley – trolleybus link to the Aire Valley Enterprise Zone from Leeds City Centre and City Station
- East Leeds Parkway – strategic rail park and ride site east of Leeds
- Leeds City Station Gateway – enhancements to public realm and accessibility in line with the emerging station masterplan
- Rail Park and Ride Package – 2,000 additional spaces at stations across West Yorkshire (including Horsforth, Morley and Garforth) to accompany DfT investment in additional rail capacity.
- Core Bus and Highway Network Upgrade – targeted interventions to address key corridors and congestion hotspots
- Highway network efficiency programme – improvements to traffic signals control systems

Strategic Road Network Projects

6.9 Significant investment in the Strategic Road Network (SRN) by Highways England (formerly the Highways Agency) has also been undertaken in recent years and will continue through their Route Strategies. Key interventions comprise:

- M62 Smart Motorway Upgrade (Jn 25-30) – open autumn 2013
- M1 Jn 44 pinch point scheme – open spring 2015
- M1 Smart Motorway Upgrade (Jn 39-42) – completion planned autumn 2015
- M1 Jn 45 improvement – start on site 2017
- M621 (Jn 1-7) localised improvements and widening – start on site by 2020 (elements of this form part of the Leeds City Centre Package)
- M1/M62 Lofthouse Interchange reconstruction (2020-25)

Rail Investment

6.10 New rail franchises for the Northern and TransPennine services are due to start on 1 April 2016 and will be managed jointly by a RailNorth / DfT partnership team based in the North of England. RailNorth is a Limited Company set up by the 29 Local Transport Authorities in the north of England, including the West Yorkshire Combined Authority. The Northern franchise will run for nine years with the option of a one year extension. The TransPennine franchise will run for seven years with the option of a two year extension.

6.11 As shown earlier, there has been a substantial growth in rail travel in recent years and the industry is now planning for further growth into the future. This is reflected in the requirements for the new franchises which require the provision of additional capacity for travel into and out of Leeds during the peak periods. By December 2019 this will deliver space for at least an additional 5,900 standard class passengers. Based on DfT passenger counts for autumn 2013 this represents approximately a 25% increase over existing levels of demand. Further capacity expansion requirements are expected through the DfT High Level Output Specification for 2019-24.

6.12 The franchises will deliver at least 120 new-build carriages for use on non-electrified routes and the modernisation of all remaining Northern trains. The Pacer units currently in use on the Northern network will be completely phased out by 2020. Trains will be longer with more seats, particularly on the most crowded routes into the North's largest cities. Northern stations will be improved, with at least £30 million of investment across the franchise.

6.13 In addition to these changes, Network Rail are working in parallel to increase the proportion of the electrified rail network within West Yorkshire. Electrification of the TransPennine route from Manchester to Leeds and York, along with the line from Leeds to Selby, was announced in 2011. Completion of these works is expected by 2020.

Transport for the North

6.14 Transport for the North (TfN) is a new partnership between northern city regions, LEPs and Government working closely with Highways England, Network Rail and

HS2 Ltd. The Partnership's aim is to transform the Northern economy through the long term investment in transport networks to create the 'Northern Powerhouse'. TfN will allow the Northern cities to speak with one voice about our future vision and to be clear with Government about where investment is needed.

6.15 A TfN Partnership Board has been established to oversee the development of a Northern Transport Strategy. Key elements include:

- Rail Plan – fast frequent and quality high speed TransNorth (or 'HS3') rail services connecting the northern cities, and committing to the full HS2 Y shaped network which should be delivered as soon as possible. For the Leeds/Manchester/Sheffield triangle, journey times of 30 minutes between the 3 cities are envisaged including looking at new route options across the Pennines. The study (to report in autumn 2015) to find the best solution to integrate HS2 and TransNorth with local services at Leeds Station is a critical part of the plan.

- Highways Plan – a core free flowing east-west motorway network with a 'mile a minute' typical journey times for more reliable journeys between the major cities. This plan draws on Highways England's Roads Investment Strategy (RIS1) which includes upgrading the M62 to 4 lane 'smart' motorway between Leeds and Manchester and tackling hotspots around the M621. Strategic studies into upgrading key trans-Pennine road links that could relieve pressure on the M62 will be undertaken for the A66/A69 and a new road/tunnel link between Sheffield and Manchester. There is also a commitment to look at the capacity of the M62 itself alongside these studies.

- Freight and Logistics Plan – that covers both road and rail networks will be developed over the next year including ports, warehousing and distribution networks.

- Integrated and Smart Travel Plan – a vision for an integrated single smart ticketing and fares solution across the North that works on all modes of public transport with pan-Northern customer travel information. TfN will start to take immediate action to simply rail fares and align the different tickets and approaches in the different cities, including building on our successful MCard smart ticketing scheme.

- Airports Plan – to encourage more destinations served from the North's intercontinental and regional airports, and to work with individual airports, such as Leeds-Bradford, to improve surface access connectivity.

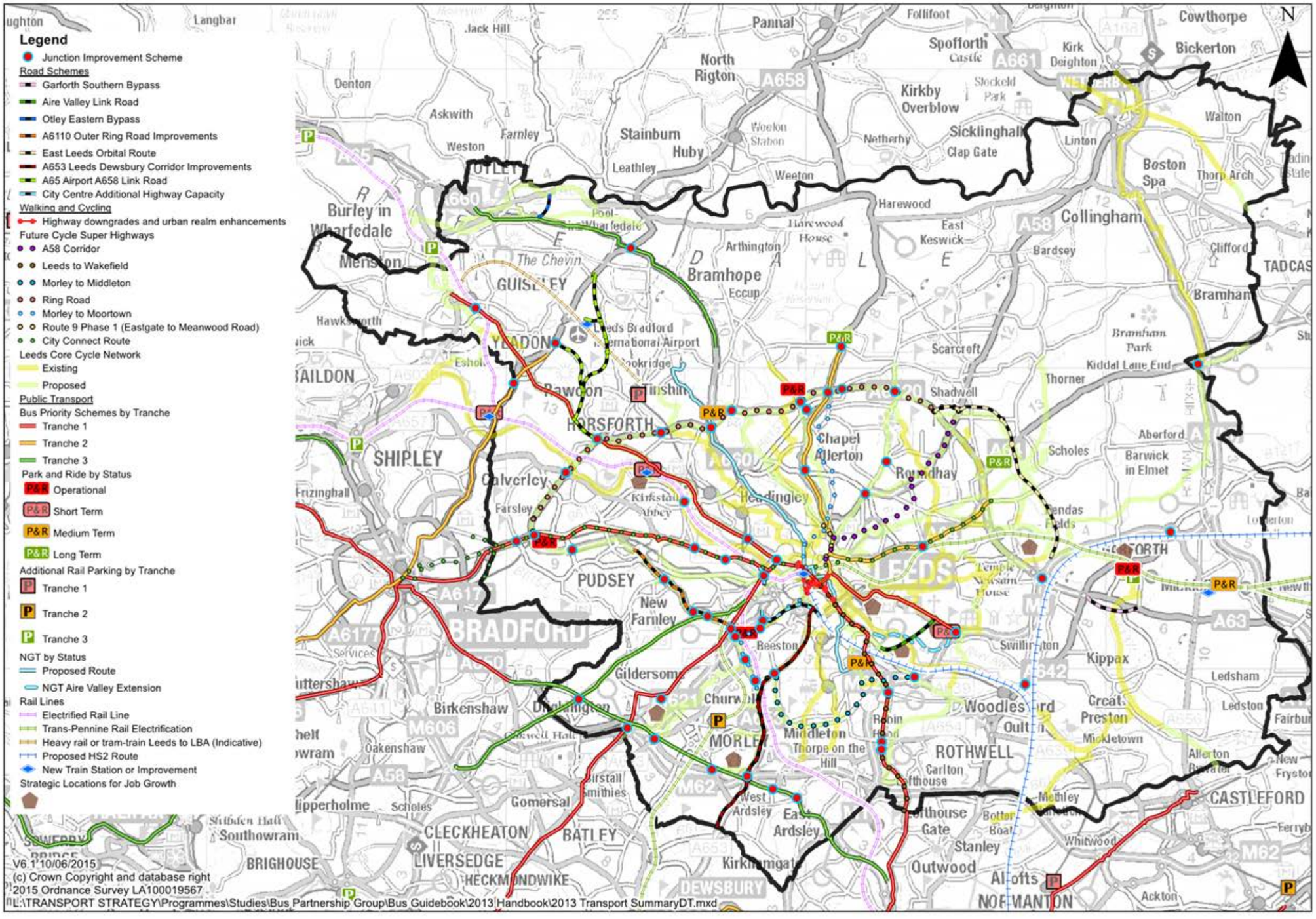
- Local Connectivity Plan – high quality local road and public transport connectivity is essential so that all parts of the city region can benefit from the core city to city improvements. For West Yorkshire and York, the focus is on the creation of a one network 'metro' style rail, bus and rapid transit network and a good quality strategic road network as reflected in the draft Single Transport Plan. This is particularly important for our polycentric mix of towns and cities in WY and York. The Government will look to support local connectivity improvements through future Growth Deals.

Additional Schemes Arising Directly from the Site Allocations

6.16 In order to inform the Plan site requirements the Leeds Transport Model (LTM) has been used to forecast future highway conditions in 2028. The model tests included all the residential and employment sites contained within the Site Allocations Plan. This has enabled the potential contribution of significant housing and employment sites to traffic growth and congestion at key junctions to be estimated. For the purposes of this exercise all residential development sites of 50 or more dwellings and significant employment sites have been assessed. In addition, locations where these is a cumulative impact have also been identified. This analysis has led to the identification of a number of transport interventions that are likely to be required during the Plan period. These mitigation measures are deemed to be key schemes to facilitate the delivery of the housing targets. Once feasibility studies have been completed for these junctions a clearer picture of the scale and cost of these interventions will be available. At this stage, however, it has not been possible to model the schemes and assess the cumulative impact on the wider network.

6.17 Figure 10 shows these identified interventions, together with other major transport schemes, the planned WYPTF schemes and those from Network Rail.

Figure 10 – Transport Interventions in Leeds



6.18 Model tests have been run containing the majority of the major interventions described in the previous sections, including NGT and a number of the WYPTF schemes (where sufficient information is available to define them in the model). Once feasibility work has been completed it is planned to run a full Do Something test to show the forecast impacts of the Plan and supporting transport investment.

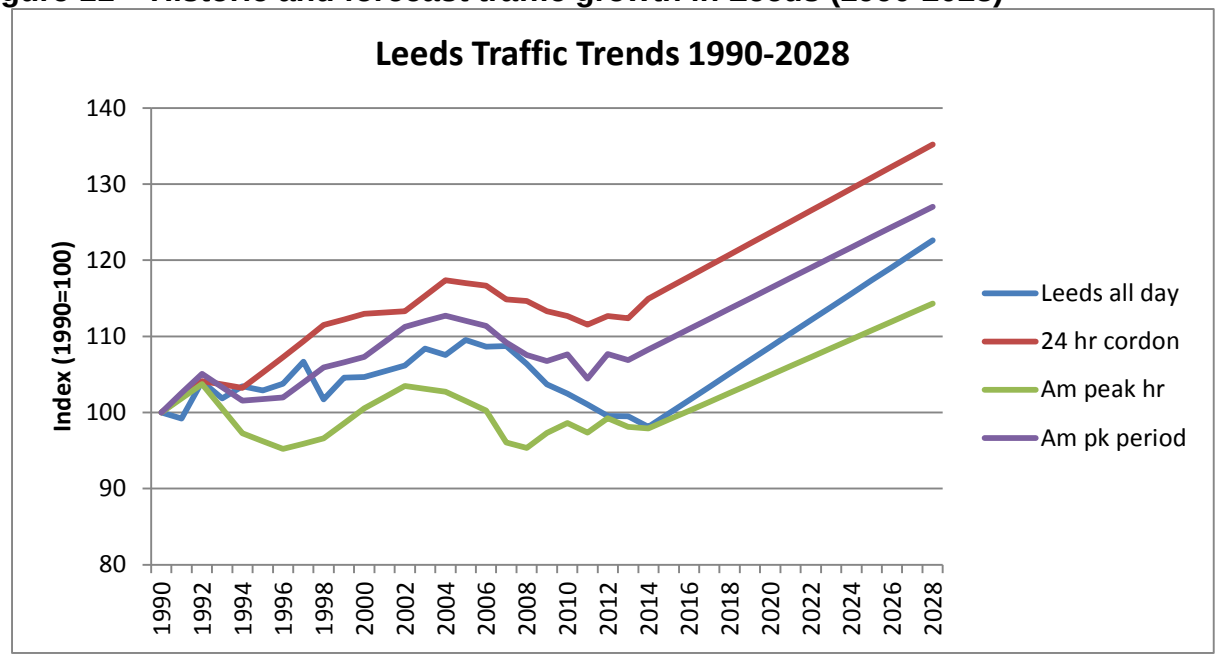
6.19 The model tests indicate that by 2028 all day traffic levels within Leeds will grow by around 23% from 2012 levels with traffic on radials approaching the City Centre increasing by 20%. Growth in the peak hours is forecast to be lower than this, with peak hour traffic forecast to rise by around 15% on the same radial routes. These are broadly in line with forecasts from the National Trip End Model (NTEM) which predicts a 25% increase in weekday car traffic in Leeds, however, it should be noted that the latter reflects a 22% increase in population, well above the 15% contained in the Core Strategy.

6.20 Historically, traffic growth forecasts at both a national and local level have tended to significantly over estimate growth. For example the NTEM suggests that weekday car traffic in Leeds rose by 24% between 2001-14, when in fact the Leeds Monitoring Cordon around the City Centre shows only a 2% increase since 2000 (data is not available for 2001) and data from DfT surveys covering A roads across the District shows a similar 2% growth between 2001-13. These forecasts therefore need to be viewed with some caution. It is considered that both the model and NTEM forecasts represent very much a worse case in terms of traffic growth, in particular with regards to radial peak hour traffic.

6.21 Figure 11 illustrates this, showing historic traffic from 1990-2014 and the forecast up to 2028. Although the impact of the economic downturn will have influenced traffic levels it is notable that the fall in Leeds commenced several years prior to 2008. It is also worth noting that the historic growth in all day traffic across the Leeds cordon has consistently exceeded the growth in peak period traffic.

6.22 Bearing in mind the past trends, it is considered that weekday traffic growth is likely to grow by at least the rate of population growth (15%) with the forecast of 23% from the Leeds Transport Model representing the upper limit. Peak traffic growth is likely to be less than this and within the main urban area significantly less.

Figure 11 – Historic and forecast traffic growth in Leeds (1990-2028)



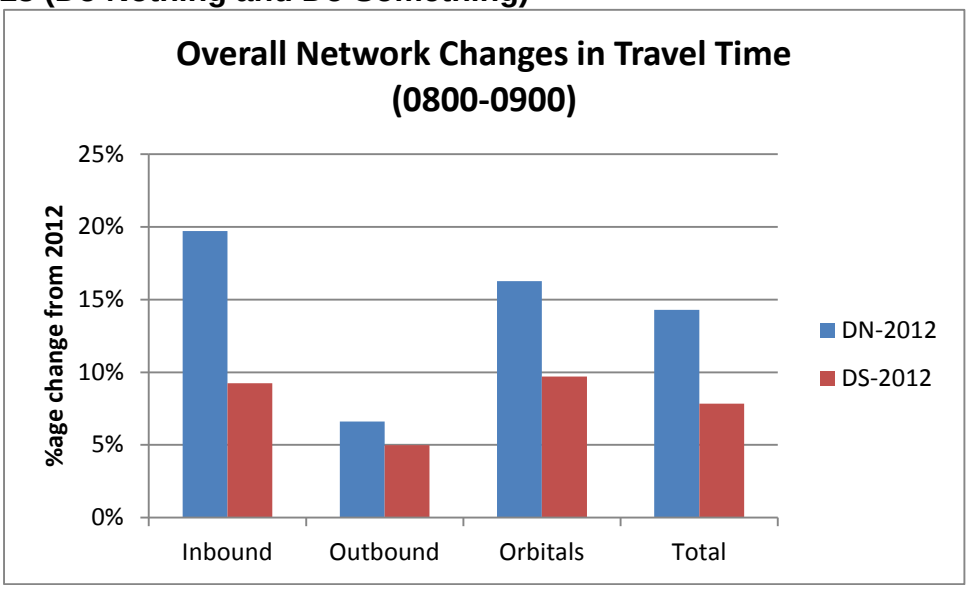
Sources: 24 hr cordon, am peak hr and am peak period – Leeds monitoring cordon (1990-2014); Leeds all day – Note 13 all sites (1990-2014)

6.24 Public transport trips to the City Centre are forecast in the Leeds Transport Model to increase by 27% while overall public transport use is forecast to rise by 23%, the same as vehicle traffic.

6.25 Peak journey times are forecast to increase by 2028, however, as Figures 11 and 12 demonstrate the WYPTF and other major scheme interventions, as well as schemes delivered since 2012, will have a significant impact on mitigating the impacts. The figures show the difference between a 2028 Do Nothing scenario where the network only includes schemes in place in 2012 and a 2028 Do Something scenario with the inclusion of planned interventions.

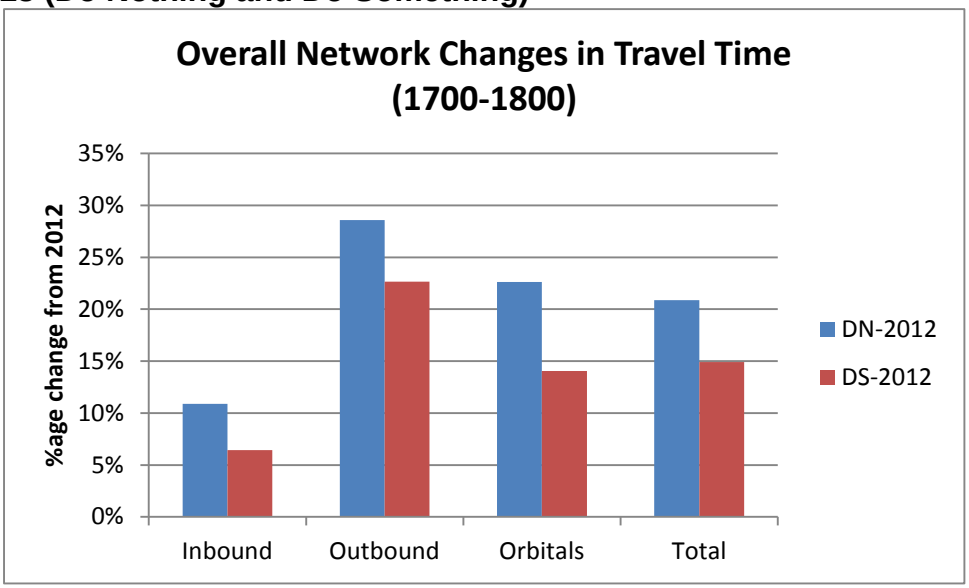
6.26 It should be noted that this analysis does not include the schemes identified during the modelling process, and that therefore the combined impact of all the proposed interventions will be greater. There will nevertheless remain additional congestion caused within Leeds that cannot be effectively mitigated against.

Figure 11 – Forecast changes in morning peak hour travel times between 2012 and 2028 (Do Nothing and Do Something)



Note: Network covers all main radial and orbital A and M roads. DN = 2028 Do Nothing (no changes from 2012); DS = 2028 Do Something (with planned interventions)

Figure 12 – Forecast changes in evening peak hour travel times between 2012 and 2028 (Do Nothing and Do Something)



Note: Network covers all main radial and orbital A and M roads. DN = 2028 Do Nothing (no changes from 2012); DS = 2028 Do Something (with planned interventions)

6.27 Table 2, below, lists junctions where congestion is forecast to worsen significantly by 2028 and interventions will be potentially required in addition to those already planned. It also includes a number of other junctions immediately adjacent to developments. A number of these schemes have been identified within the WYPTF and contributions will be required to support their delivery. Other junctions can be linked directly to specific developments while others experience cumulative impacts that are relatively modest from individual sites but in combination have a marked impact on congestion. Direct contributions have been identified where the site adds 5% to traffic on the affected approach to the junction; cumulative contributions where the site adds 10 vehicles or more.

6.28 The Site Requirements contains details of the locations where contributions towards improvements will be required from the Allocated sites. Sites previously included in the Unitary Development Plan (Identified sites) where development has not yet commenced and where planning permission has not been granted or has lapsed or new permissions are sought will also be expected to contribute towards these schemes in line with the requirements for adjacent Allocated sites.

6.29 Due to their scale some sites have a potentially greater cumulative impact across the wider network than others (for example East Leeds Extension, the East of Garforth site and Headley Hall). In these cases the cumulative impact threshold has not been comprehensively applied. With the former, the site forms part of the Identified sites and funding will be required towards East Leeds Orbital Route. In the case of Garforth and Headley, comprehensive transport studies will be required and these will need to consider both direct and cumulative impacts.

6.30 It should be noted that there are very likely to be some locations on this list where site constraints will preclude a comprehensive solution. Feasibility studies will be required to establish options. Some indication of the constraints is given in the status column. In addition, there are locations on this list where the junctions concerned effectively shelter adjacent downstream junctions from congestion. The implication of unlocking these bottlenecks will have to be reviewed as part of a corridor approach to prevent queues from simply being transferred to the next junction.

6.31 The locations are listed in a clockwise direction starting with the A61 Harrogate Road.

Table 2 – Identified Interventions

Location	Status	Site Requirements
A61/Alwoodley Lane	Top 70 hotspot – very constrained site	Direct contributions (1 site)
A61/A6120 Moortown	Top 70 hotspot – very constrained site. WYPTF scheme	Cumulative contributions (1 site)
A61/Potternewton Lane	Top 30 hotspot – constrained site	No sites identified
A6120/Shadwell Lane	Constrained site.	No sites identified
A6120/Roundhay Park Lane	Unconstrained site. WYPTF scheme	No sites identified
Roundhay Rd/Oakwood Lane (Oakwood Clock)	Top 30 hotspot – very constrained site	No sites identified
A58/Harehills Lane (Fforde Green)	Top 30 hotspot – very constrained site	No sites identified
A1 (M) Jn 45/A64		Contributions from Headley Hall site – subject to comprehensive transport study
A64/B6159 Halton Dial	Top 70 hotspot – very constrained site	Direct contributions (1 site) cumulative (1 site)
M1 Jn 46/A63 Colton	Highways England improvement associated with Thorpe Park and East Leeds Extension	Contributions from East of Garforth site – subject to comprehensive transport study. Cumulative contributions (2 other sites)
M1 Jn 47/A642 Garforth		Direct contributions from East of Garforth site – subject to comprehensive transport study. Cumulative contributions (5 sites)
A63 Garforth southern bypass	Top 70 hotspot – very constrained site (Lidgett La/A63)	Subject to comprehensive transport study for East of Garforth site
M1 Jn 45/A63 East Leeds Link Road	Highways England improvement scheme scheduled for 2017 start	None – due to delivery of planned scheme
A642/Bullerthorpe Lane	Top 70 hotspot – very constrained site	No sites identified
A61/A654 Leadwell Lane	Top 70 hotspot - constrained site	Cumulative Contributions (6 sites)
A61/Sharpe Lane	Top 70 hotspot - constrained site	Cumulative Contributions (5 sites)
A61/Wood Lane	Top 70 hotspot - unconstrained site	Direct contributions (1 site) cumulative (5 sites)
A650/Common Lane	Top 70 hotspot - constrained site	Cumulative Contributions (3 sites)
A650/Thorpe Lane	Top 70 hotspot – unconstrained site	Direct contributions (1 site)

Location	Status	Site Requirements
M62 Jn 28/A653 Tingley	Top 70 hotspot – constrained site. WYPTF A653 Corridor scheme	Direct contributions (1 site) cumulative (4 sites)
A653/Ring Road Middleton (Tommy Wass)	Top 30 hotspot – very constrained site. WYPTF A653 Corridor scheme	No sites identified
A650/A6039 Rein Rd	Top 70 hotspot – very constrained site	Cumulative Contributions (5 sites)
A650/A643 Bruntcliffe Lane	Top 30 hotspot – constrained site	Cumulative Contributions (2 sites)
A643/A6110	Top 70 hotspot – constrained site. Potential addition to WYPTF A6110 scheme	Direct contributions (1 site) cumulative (1 site)
A643/Wesley St	Constrained site.	No sites identified
A643/M621 Jn 2	WYPTF City Centre Package scheme	No sites identified
A6110/M621 Jn 1	Very constrained site. Potential addition to WYPTF A6110 scheme	No sites identified
M62 Jn 26/A62 Gildersome		Cumulative contributions (2 sites)
A62/Asquith Ave	Top 30 hotspot – constrained site	Cumulative contributions (5 sites)
A58/B6135 Drighlington	Very constrained site	Direct contributions (1 site)
A58 Domestic Rd/Domestic St	Very constrained site. Potential addition to WYPTF City Centre Package scheme	No sites identified
A6110/Branch Rd	Constrained site. Potential addition to WYPTF A6110 scheme	Cumulative contributions (4 sites)
A6110/Tong Rd	Constrained site. Potential addition to WYPTF A6110 scheme	Cumulative contributions (4 sites)
A647/B6154 Thornbury Barracks	Top 30 hotspot – very constrained site. Current pinch point scheme completed 2015	None – due to delivery of current scheme
A647/A6120 Dawson's Corner	Top 30 hotspot - constrained site. Potential WYPTF Leeds-Bradford Corridor scheme	Cumulative contributions (6 sites)
A647/B6155 Richardshaw Lane	Top 70 hotspot – very constrained site	No sites identified
A647/Armley Ridge Rd	Constrained site. Potential WYPTF Leeds-Bradford Corridor scheme	No sites identified
A647/Ledgard Way	Top 30 hotspot – very constrained site. Potential WYPTF Leeds-Bradford Corridor scheme	No sites identified

Location	Status	Site Requirements
A647/A643/A58 Armley Gyratory	Top 30 hotspot – very constrained site. WYPTF City Centre Package scheme	Direct contributions (4 sites) cumulative (3 sites)
A658/Micklefield Lane	Constrained site	Cumulative contributions (2 sites)
A658/Bayton Lane	Top 70 hotspot – constrained site. Affected by WYPTF A65-Airport-A658 Link Rd scheme	Cumulative contributions (3 sites)
A65/Oxford Rd	Top 70 hotspot – very constrained site	Cumulative contributions (1 site)
A65/A6120	Top 30 hotspot – very constrained site. Current signalisation scheme due for completion 2015	Direct contributions (2 sites) cumulative (9 sites)
B6157 Bridge Rd/Wyther La	Top 30 hotspot – very constrained site	No sites identified
A65/Willow Rd	Top 30 hotspot – very constrained site. A65 QBI completed 2012	Direct contribution (1 site)
A65/A58 Inner Ring Rd	Very constrained site. A65 QBI completed 2012	Direct contributions (2 sites) cumulative (3 sites)
A6120/Low Lane	Top 70 hotspot - constrained site	Cumulative contributions (2 sites)
East of Otley Relief Road	Top 30 hotspot – severely constrained site (A659/Kirkgate)	To be delivered through East of Otley housing site (UDP requirement)
A660/A658 Dyneley Arms	Top 30 hotspot – unconstrained site. Potential addition to WYPTF A65-Airport-A658 Link Rd scheme	No sites identified
A660 Corridor	Three top 30 and one top 70 hotspots. NGT trolley bus scheme awaiting outcome of public inquiry.	No sites identified
A6120/Weetwood Lane	Constrained site.	Cumulative contributions (2 sites)
A6120/King Lane	Top 70 hotspot - constrained site. WYPTF scheme	No sites identified

6.32 It is anticipated that contributions towards the implementation of these schemes will be required from site developers. In addition, it is proposed that schemes to deliver enhanced facilities for public transport, walking and cycling will be mainly, although not exclusively, funded through the Community Infrastructure Levy (CIL):

- Elland Rd park and ride expansion
- A61 Alwoodley park and ride
- A64 Grimes Dyke park and ride
- New Pudsey station car park expansion
- Morley Station car park expansion (WYPTF scheme)
- Horsforth Station car park expansion (WYPTF scheme)
- A61(N) Bus Corridor enhancements (WYPTF corridor scheme)

- A58 (N) Bus Corridor enhancements
- A64 Bus Corridor enhancements (WYPTF corridor scheme)
- A639 Bus Corridor enhancements (WYPTF corridor scheme)
- A61(S) Leeds – Wakefield Bus Corridor (WYPTF corridor scheme)
- A653 Leeds – Dewsbury Corridor (WYPTF scheme)
- A62 Bus Corridor enhancements (WYPTF corridor scheme)
- A58 Bus Corridor enhancements (WYPTF corridor scheme)
- A647 Leeds – Bradford Corridor (WYPTF corridor scheme)
- A65 Bus Corridor enhancements (WYPTF corridor scheme)
- A660 (Adel-Otley) Bus Corridor enhancements (WYPTF corridor scheme)
- Cycle Superhighway: Leeds – Shadwell
- Cycle Superhighway: Morley – Moortown
- Cycle Superhighway: Morley – Middleton
- Cycle Superhighway: Leeds – Wakefield
- Cycle Superhighway: Leeds Outer Ring Road Corridor
- Leeds Core Cycle Network

7 Conclusions

7.1 This report summarises the forecast impacts of the proposed developments in the Site Allocations Plan and Aire Valley Leeds Area Action Plan Publication Drafts on the transport network in Leeds.

7.2 The population of Leeds is forecast to increase by 15% between 2012-28 and alongside increased car ownership it is considered that this will result in an increase in traffic of between 15-23% across the District. Past trends, however, suggest that traffic growth has tended to be well below forecasts, particularly in the peak hours, and so these figures must be regarded as a worst case scenario.

7.3 Nevertheless a significant step change in transport investment is planned across the city and the wider city region to support the economic growth of Leeds, provide good alternatives to the private car and to reduce carbon emissions. Schemes prioritised in the West Yorkshire Plus Transport Fund, together with existing major transport schemes such as City Connect, Kirkstall Forge station and NGT, represent an investment of over £830M. On top of this Highways England and the rail industry are also investing in additional capacity on the strategic road and rail networks.

7.4 In addition to these projects, a number of further interventions have been identified to mitigate the forecast impacts of growth at key junctions across the Leeds highway network. It is expected that contributions will be obtained from developers towards the delivery of these interventions, alongside contributions towards schemes within the WYPTF.

7.5 As well as sites that have a direct impact upon specific junctions, sites have also been identified where the additional traffic generations are lower, but in combination with other sites have a cumulative impact at these junctions and along corridors. It is expected that contributions will also be obtained from these sites to support appropriate improvements.

7.6 It is proposed that support for public transport, walking and cycling schemes will mainly, but not exclusively, be sought through the Community Infrastructure Levy.

ANNEX 1

ANALYSIS OF CONGESTION HOTSPOTS IN LEEDS DISTRICT

CONGESTION HOTSPOTS IN LEEDS

Executive Summary

1. A comprehensive analysis of congested junctions across Leeds District has been undertaken. In total 96 junctions have been evaluated. The use of TrafficMaster data has enabled the average delay for each approach to be determined for seven time periods during an average term time weekday. The resulting outputs have enabled the junctions to be ranked on the basis of total delay.

Introduction

2. The Department for Transport (DfT) provide all local authorities with data on vehicle travel times that has been collected from vehicles with GPS devices. This information is currently supplied to the DfT by TrafficMaster and allows average journey times and speeds to be analysed by individual road and time of day.

3. Leeds City Council officers have undertaken a detailed analysis of radial and orbital routes in Leeds for the academic years 2009-10 and 2011-12 (weekdays excluding school holidays). This shows that the highest levels of peak congestion in 2011-12 occurred on the A61 N, M621 E, A62, A647, A65 (between Rawdon and the Inner Ring Road) and the A660.

4. As a follow up to this route analysis further work has been undertaken to quantify delays at individual junctions using the 2011-12 data. A total of 96 junctions across Leeds District have been analysed to determine average delays. These junctions were selected on the basis of officer knowledge supported by a review of the radial/orbital average speed plots and also online data from Google Traffic.

5. In the light of the analysis it is clear that a number of the 96 junctions only suffer from very marginal levels of congestion while others are severely congested. Total junction delays summed across all approaches during both the morning and evening peak hours range from 0.5 minutes to just under 23 minutes. It must be recognised that these figures represent an average over all term time weekdays and over full hours. Delays at the peak of the peak are likely to be much greater, however, this analysis does provide a robust evaluation of congestion on a comparable basis that allows future interventions to be targeted at locations with the greatest need.

6. Junctions within Leeds City Centre have not been included; the only exceptions being Domestic Rd/Domestic St and Woodhouse Lane/Clay Pit Lane. Junctions within this area will all be affected by the proposed WYPTF City Centre Package.

7. TrafficMaster data was utilised for weekdays during 2011-12 (September-July), excluding bank holidays and school holidays, and covering seven time periods:
    - A1 – 0700-0800
    - A2 – 0800-0900

- A3 – 0900-1000
- IP – 1000-1600
- P1 – 1600-1700
- P2 – 1700-1800
- P3 – 1800-1900

8. For each junction data was extracted for each approach going back as far as the previous significant junction – usually a roundabout or signals. This was subsequently reviewed to ensure that this didn't include any notable intermediate congestion points. The average distance covered per approach was just under one kilometre, although some were significantly shorter.

9. Once journey time had been extracted the level of 'congestion delay' was determined for each approach and time period. This approach was developed for the radial and orbital route analysis and is calculated by comparing travel times with daytime 'free-flow' times (determined from the minimum observed times for each highway segment between 7 a.m. and 7 p.m.). This provides a representative figure for uncongested travel and is considered more appropriate than using night-time or inter-peak data.

10. In order to rank the sites the congestion delay outputs were summed to obtain the total level of delay on all approaches to each junction during the morning and evening peak hours. In addition, the total level of daytime (0700-1900) delay was also calculated. Two rankings were therefore derived: a peak hour and a 12 hour figure. In many cases the results were similar, but for some sites there were notable differences with 8 sites changing by more than 20 places.

11. In order to obtain a single ranking therefore, the peak hour and 12 hour delay data was added together (so that the peak hours were counted twice to give more emphasis to these time periods) and the resulting rank calculated. It must be emphasised that this is effectively a presentational tool and that junctions with lower levels of delay but higher traffic volumes may merit interventions more than other sites, where for example all the delay relates to minor arms.

12. In addition to the overall combined ranking an examination was also made of the sites to determine whether there were junctions with perhaps one approach that suffers from excessive levels of delay while the others are relatively congestion free. A threshold of a 2 minute peak hour delay or an 8 minute daytime (12 hour) delay was utilised for this – these represent the top 10% of individual delays. This identified 14 junctions outside the top 30 with this level of delay on at least one approach.

Analysis Results

13. Table 1 lists the sites ranked within the top 30 (based on the combined ranking). Seven of the top 10 are also within the top 10 in both the peak and 12 hour rankings.

Table 1 – Leeds Top 30 Congestion Hotspots (2011-12)

Combined rank	Junction	Peak delay (mins)	12 hour delay (mins)	Peak rank	12 hour rank	Peak delays >2 mins	12 hr delays >8 mins
1	A6120 / A657 Rodley La	22.8	50.1	1	1	6	3
2	A647 / Ledgard Way	16.7	46.7	5	3	3	3
3	A660 / B6157 North La	13.4	48.5	8	2	2	2
4	Armley Gyratory	19.1	41.8	2	4	3	2
5	A6110 / A62 Gelderd Rd, Wheatsheaf	17.3	37.4	3	6	3	2
6	Burley Rd / Cardigan Rd	15.8	38.1	6	5	3	2
7	A6120 / A65 Rawdon Rd, Horsforth	16.7	33.6	4	8	3	2
8	A58 / Harehills Rd	8.4	36.5	17	7	2	2
9	A660 / B6157 Shaw La	12.8	29.7	9	11	2	2
10	Wetherby Rd / Princes Ave, Oakwood	12.8	29.7	10	12	2	1
11	A660 / Hyde Park Rd	7.1	32.4	25	9	1	1
12	B6157 Leeds & Bradford Rd / Wyther La	13.6	25.8	7	13	3	1
13	A659 / B6451 Clapgate, Otley	6.7	31.4	28	10	0	2
14	A58 / B6159 Harehills La, Fforde Green	8.3	25.7	18	14	1	1
15	A650 / A643 Bruntcliffe La, Morley	11.9	21.7	11	16	2	0
16	A6120 / A58 Wetherby Rd	11.5	20.3	12	21	2	1
17	A61 / B6159 Potternewton La	11.2	19.9	13	22	3	0
18	B6157 Kirkstall La / Morris La	7.8	21.6	20	17	1	1
19	M1 (J44) / A639 Leeds Rd, Rothwell	10.0	18.3	14	27	2	1
20	A6120 / A647, Dawsons Corner	7.0	20.7	27	19	0	1
21	Harrogate Rd / B6159 Harehills La	6.4	21.2	33	18	0	0
22	A653 / Ring Rd Beeston Park	6.6	20.6	30	20	1	0
23	A647 / B6154 Galloway La	9.3	17.8	15	29	3	0
24	A64 / B6159 Harehills La	4.9	22.0	47	15	0	2
25	B6157 Stonegate Rd / King La	8.0	18.6	19	26	1	1
26	A65 / Willow Rd	7.6	18.7	22	25	1	1
27	A61 / A659 (E), Harewood	7.4	18.8	23	24	1	1
28	A62 / B6126 Asquith Ave, Gildersome	8.5	16.8	16	33	2	0
29	A660 / A658, Dyneley Arms	7.1	17.7	26	30	0	0
30	Harrogate Rd / Street La	4.3	19.5	54	23	0	0

Note: Ranking based on total delay and takes no account of traffic levels. Combined ranking double counts peak hour delays to give more emphasis to these time periods.

14. Table 2 lists the sites ranked from 31 to 70. Four junctions fall outside the top 30 although they rank within it on the basis of either peak hour or 12 hour delays. This list contains all the remaining sites where peak or 12 hour delays exceed 2 and 8 minutes respectively on at least one approach. Figure 1 shows the locations of all the evaluated sites.

15. A number of the junctions in this evaluation have improvement schemes that are either currently being implemented or are planned. The vast majority, however, are constrained so that significant improvements would require third party land and or property demolition. Tables 3-5 provide comments for each site covering these points, with further detail being available in Appendix A.

Table 2 – Leeds Congestion Hotspots 31-70 (2011-12)

Combined rank	Junction	Peak delay (mins)	12 hour delay (mins)	Peak rank	12 hour rank	Peak delays >2 mins	12 hr delays >8 mins
31	A658 / Bayton La, Yeadon	6.2	17.2	34	32	0	0
32	A61 / Alwoodley La	6.1	16.7	35	34	0	0
33	A647 / Richardshaw La, Pudsey	5.3	17.4	41	31	0	0
34	A6120 / B6159 Selby Rd, Colton	7.6	13.8	21	43	0	0
35	B6155 Lidget Hill / B6154 Church La, Pudsey	3.1	18.2	66	28	0	0
36	Station Rd / Long Row, Horsforth	6.0	15.2	37	38	0	0
37	A63 / B6137 Lidgett La, Garforth	5.2	15.8	42	35	0	1
38	A650 / Common La, East Ardsley	5.3	15.6	40	36	0	0
39	A61 / Sharp La, Robin Hood	7.2	13.5	24	45	2	0
40	A6029 / A650 / B6127 Bridge St, Morley	6.6	13.8	31	42	1	0
41	A650 / Thorpe La, Tingley	5.7	14.5	39	41	0	0
42	A642 / B6137 Main St, Garforth	4.8	14.7	50	40	0	0
43	M621 (J7) / A61 / A639, Stourton	6.4	13.1	32	47	2	0
44	A65 / Oxford Rd, Guiseley	4.1	15.4	58	37	0	0
45	A6120 / A660 Otley Rd, Lawnswood	6.0	13.2	36	46	0	0
46	A6120 / Low La, Horsforth	6.6	12.5	29	50	1	0
47	A65 / B6153 Park Rd, Guiseley	4.1	14.8	57	39	0	0
48	A65 / Kirkstall La	4.9	13.7	45	44	0	0
49	A6120 / A61 Harrogate Rd, Moortown	5.9	11.8	38	52	1	0
50	A6120 / A64 York Rd	4.3	12.7	55	48	1	0
51	A61 / Wood La, Rothwell	5.2	11.7	43	53	1	0
52	M62 (J28) / A653 / A650, Tingley	4.9	11.9	48	51	0	0
53	A6120 / King La	4.9	11.4	46	54	0	0
54	A6120 / A64 Barwick Rd	5.1	10.8	44	58	0	0
55	Shadwell La / Wike Ridge La, Shadwell	3.1	12.6	68	49	0	0
56	A61 / A659 (W), Harewood	4.4	11.1	53	56	1	1
57	B6159 / Primrose La, Halton	4.1	11.2	56	55	1	0
58	A65 / A658 Green La, Rawdon	4.6	10.3	51	60	0	0
59	A6110 / A58 Whitehall Rd, Ringways	4.8	9.8	49	62	0	0
60	B6126 Brunswick St / B6127 Chapel Hill, Morley	3.1	11.1	67	57	0	0
61	A6110 / Millshaw Rd / White Rose (N)	3.9	10.3	59	61	0	0
62	B6157 North La / Cardigan Rd	3.3	10.4	65	59	0	0
63	A61 / Harrogate Rd	3.8	9.6	61	64	1	0
64	A639 / B6481 Pontefract Rd	3.4	9.7	64	63	0	0
65	A6110 / A643 Elland Rd (S)	4.4	8.1	52	73	1	0
66	A64 / B6159 Selby Rd, Halton Dial	3.4	9.0	63	66	0	0
67	A6038 / B6153 Park Rd, Guiseley	3.5	8.5	62	69	0	0
68	A61 / A654 Leadwell La, Robin Hood	3.0	9.0	69	67	0	0
69	A661 / Boston Rd / High St, Wetherby	2.2	9.4	81	65	0	0
70	A642 / Bullerthorpe La, Woodlesford	2.8	8.4	70	70	1	0

Note: Ranking based on total delay and takes no account of traffic levels. Combined ranking double counts peak hour delays to give more emphasis to these time periods.

Figure 1 – Leeds Congestion Hotspot Junctions (2011-12)

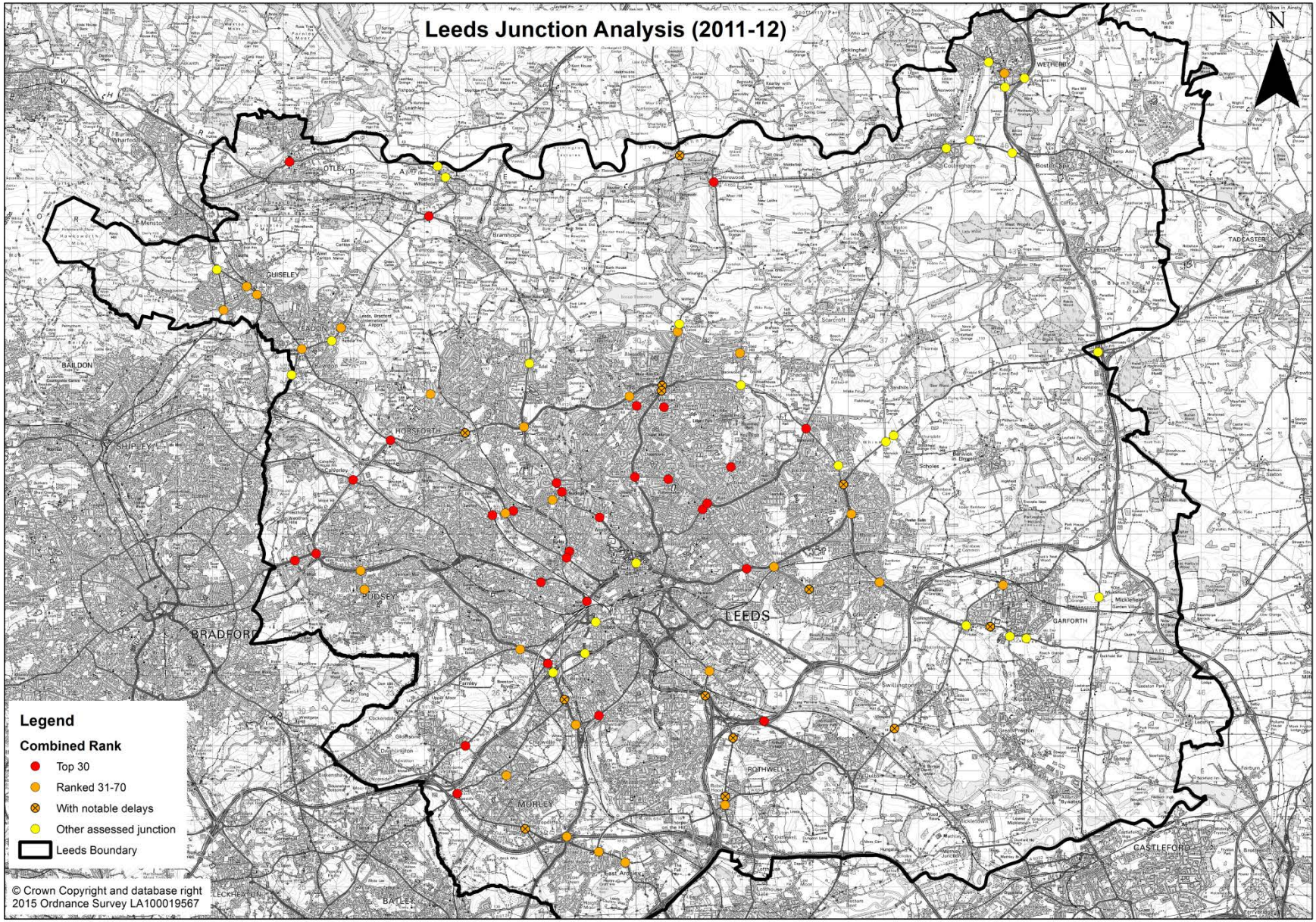


Table 3 – Interventions and Constraints (Sites 1-25)

Combined rank	Junction	Description	Schemes
1	A6120 / A657 Rodley Lane	Roundabout. Unconstrained site	Pinch Point signalisation (open 2015)
2	A647 / Ledgard Way	Signalled junction. Very constrained site	Leeds-Bd Corridor (WYPTF)
3	A660 / B6157 North Lane	Signalled junction. Severely constrained site	Traffic management with NGT gating
4	Armley Gyratory	Signalled gyratory. Very constrained site	City Centre Package (WYPTF)
5	A6110 / A62 Gelderd Rd, Wheatsheaf	Signalled junction. Very constrained site.	A6110 (WYPTF)
6	Burley Rd / Cardigan Rd	Signalled junction. OB bus lane. Very constrained site	
7	A6120 / A65 Rawdon Rd, Horsforth	Roundabout. Very constrained site	Signalisation (open 2015)
8	A58 / Harehills Rd	Signalled junction. OB bus lane. Severely constrained site	
9	A660 / B6157 Shaw Lane	Signalled junction. IB bus lane. Very constrained site	NGT (open 2020)
10	Wetherby Rd / Princes Ave, Oakwood	Signalled junction. Very constrained site	
11	A660 / Hyde Park Rd	Signalled junction. OB bus lane. Severely constrained site	NGT (open 2020)
12	B6157 Leeds & Bradford Rd / Wyther Lane	Signalled junction. Very constrained site	Small impt linked to a devt
13	A659 / B6451 Clapgate, Otley	Signalled junction. Severely constrained site	Otley Relief Rd
14	A58 / B6159 Harehills Lane, Fforde Green	Signalled junction. IB HOV Lane. Very constrained site	
15	A650 / A643 Bruntcliffe Lane, Morley	Signalled junction. Constrained site	MOVA
16	A6120 / A58 Wetherby Rd	Roundabout. Unconstrained site	ELOR (WYPTF)
17	A61 / B6159 Potternewton Lane	Roundabout. IB/OB guideways. Constrained site	
18	B6157 Kirkstall La / Morris Lane	Signalled junction. Constrained site	Scheme linked to adjacent development

19	M1 (J44) / A639 Leeds Rd, Rothwell	Roundabout. Unconstrained site	HE Pinch Point signalisation (open 2015)
20	A6120 / A647, Dawsons Corner	Signalled gyratory. Constrained site	
21	Harrogate Rd / B6159 Harehills Lane	Signalled junction. Very constrained site	
22	A653 / Ring Rd Beeston Park	Signalled junction. Very constrained site. Improved 2011	
23	A647 / B6154 Galloway Lane	Roundabout. Very constrained site.	Pinch Point signalisation (open 2015)
24	A64 / B6159 Harehills Lane	Signalled junction. IB bus la & OB guideway. Very constrained site	
25	B6157 Stonegate Rd / King Lane	Roundabout. Constrained site.	ELOR/ORR improvement (WYPTF)

Table 4 – Interventions and Constraints (Sites 26-50)

Combined rank	Junction	Description	Schemes
26	A65 / Willow Rd	Signalled junction. OB bus lane. Very constrained site. QBC 2012	
27	A61 / A659 (E), Harewood	Signalled junction. Very constrained site	
28	A62 / B6126 Asquith Ave, Gildersome	Signalled junction. Constrained site	
29	A660 / A658, Dyneley Arms	Signalled junction. Unconstrained site	Feasibility study ongoing
30	Harrogate Rd / Street Lane	Signalled junction. Very constrained site	MOVA scheme?
31	A658 / Bayton Lane, Yeadon	Signalled junction. Constrained site	LBIA Link Rd (WYPTF)
32	A61 / Alwoodley Lane	Signalled junction. Very constrained site	
33	A647 / Richardshaw Lane, Pudsey	Signalled junction. Very constrained site.	
34	A6120 / B6159 Selby Rd, Colton	Roundabout. Constrained site.	ELOR (WYPTF)
35	B6155 Lidget Hill / B6154 Church La, Pudsey	Signalled junction. Severely constrained site	
36	Station Rd / Long Row, Horsforth	Roundabout. Very constrained site	

37	A63 / B6137 Lidgett Lane, Garforth	Signalled junction. Very constrained site	Possible bypass linked to housing site
38	A650 / Common Lane, East Ardsley	Signalled junction. Constrained site	
39	A61 / Sharp Lane, Robin Hood	Signalled junction. Constrained site	
40	A6029 / A650 / B6127 Bridge St, Morley	Signalled gyratory. Very constrained site	
41	A650 / Thorpe Lane, Tingley	Signalled junction. Unconstrained site	
42	A642 / B6137 Main St, Garforth	Signalled junction. Very constrained site	Minor improvement scheme
43	M621 (J7) / A61 / A639, Stourton	Roundabout. Partly signalled. Constrained site.	NGT (open 2020). SB off slip widening (HE)
44	A65 / Oxford Rd, Guiseley	Signalled junction. Severely constrained site	Addition of pedestrian phase
45	A6120 / A660 Otley Rd, Lawnswood	Roundabout. Constrained site.	NGT signalisation (open 2020)
46	A6120 / Low Lane, Horsforth	Roundabout. Constrained site	
47	A65 / B6153 Park Rd, Guiseley	Signalled gyratory. Very constrained site	
48	A65 / Kirkstall Lane	Signalled junction. OB bus lane. Very constrained site. QBC 2012	
49	A6120 / A61 Harrogate Rd, Moortown	Roundabout. Constrained site.	ELOR/ORR improvement (WYPTF)
50	A6120 / A64 York Rd	Roundabout. Constrained site.	ELOR (WYPTF)

Table 5 – Interventions and Constraints (Sites 51-70)

Combined rank	Junction	Description	Schemes
51	A61 / Wood Lane, Rothwell	Signalled junction. Unconstrained site	OB bus lane
52	M62 (J28) / A653 / A650, Tingley	Signalled gyratory. Constrained site	HE scheme
53	A6120 / King Lane	Roundabout. Part signals. Constrained site.	ELOR/ORR improvement (WYPTF)
54	A6120 / A64 Barwick Rd	Roundabout Constrained site.	ELOR (WYPTF)
55	Shadwell La / Wike Ridge La, Shadwell	Signalled junction. Very constrained site	
56	A61 / A659 (W), Harewood	Priority junction. Unconstrained site	

57	B6159 / Primrose Lane, Halton	Signalled junction. OB bus lane. Very constrained site	
58	A65 / A658 Green Lane, Rawdon	Roundabout. Constrained site.	
59	A6110 / A58 Whitehall Rd, Ringways	Roundabout. Constrained site	A6110 (WYPTF)
60	B6126 Brunswick St / B6127 Chapel Hill, Morley	Signalled junction. Severely constrained site	
61	A6110 / Millshaw Rd / White Rose (N)	Roundabout. Constrained site.	
62	B6157 North Lane / Cardigan Rd	Signalled junction. Severely constrained site	
63	A61 / Harrogate Rd	Roundabout. Very constrained site	
64	A639 / B6481 Pontefract Rd	Signalled junction. Constrained site	
65	A6110 / A643 Elland Rd (S)	Roundabout. Constrained site.	A6110 (WYPTF)
66	A64 / B6159 Selby Rd, Halton Dial	Signalled junction. IB & OB guideways. Very constrained site	
67	A6038 / B6153 Park Rd, Guiseley	Priority junction. Constrained site.	
68	A61 / A654 Leadwell Lane, Robin Hood	Signalled junction. Constrained site	
69	A661 / Boston Rd / High St, Wetherby	Mini roundabout. Very constrained site	
70	A642 / Bullerthorpe Lane, Woodlesford	Priority junction. Very constrained site	

Definitions

This Annex attempts to classify congestion hotspots based on how constrained they may be by their location in terms of potential for unlocking capacity through widening, enlarging or relocating the junction. By nature, these definitions are subjective, but the following give an indication of the criteria considered.

Unconstrained:-

- There appears to be undeveloped land available (whether highway or otherwise) on most or all approaches to allow additional lanes to be added or the junction repositioned or enlarged.

Constrained:-

- There is retail or civic activity around the junction, high pedestrian flows and/or loading requirements, which could affect the potential for improvement.
- There is non-highway land adjacent to the junction and approaches which could be utilised, but the effect of the land take on the property is likely to be undesirable, e.g. removes car parking, landscape buffers etc.

Very constrained:

- There are buildings or engineering/ environmental constraints which make it quite uncertain whether an improvement is deliverable. Land take will be required.
- The junction has buildings in proximity to the junction or approaches, but they are set back and/or appear to be of lower intrinsic value to the function and quality of the local area, and hence there could be a medium to term long prospect of redevelopment (leading to a potential improvement line).

Severely constrained:

- The junction is surrounded by buildings which are an integral part of the character or function of the area and which presently seem very unlikely to be demolished.
- The junction in very close proximity to one or more structures or topographical features, such as railway lines, rivers or environmental features which would appear to prevent substantial modification to the junction.

Junction Assessment

1) A6120 / A657 Rodley Lane (roundabout)
Unconstrained. Although there is development to the south and east of the junction, there is enough room to realign Rodley Lane (west arm) and the Ring Road (north) arm to provide a 'staggered' junction arrangement.

2) A647 / Ledgard Way (signalled junction)
Very constrained. The north and east arms have some prospect for widening, although the latter would have a greater impact and may ultimately not be deliverable without demolition. The south arm is tightly constrained between property whilst the west arm has softer constraints (bowls club lawn and off-street car parking). There are pedestrian facilities, and pedestrian demand, which will constrain improvements.

3) A660 / B6157 North Lane (signalled junction)
Severely constrained. At the heart of the thriving Headingley Centre, with very high pedestrian footfalls and buildings at or close to the back of footway. Ideally footways would be wider, and better cycle facilities provided, meaning that there is already significant pressure on accommodating non-motorised users in the event that more space did become available.

4) Armley Gyratory (signalled gyratory)
Very constrained. Presence of railway viaducts to the north and southeast, and major gas plant within the gyratory mean that this otherwise large site has design limitations. The relocation of gas facilities would however help release opportunities. There is also some open space to the west, but the junction with the B6154 could constrain if this can be effectively used. The B6154 alignment, status etc could be reviewed.

5) A6110 / A62 Gelderd Road, Wheatsheaf (signalled junction)
Very constrained. There is some heavy electrical plant (substation?) to the southwest, which limits potential improvement lines to the adjacent M621 junction. New buildings to the east, including car showrooms on the northeast corner, limit the amount of widening which can be provided. To the west of the junction are low density industrial buildings with a degree of set back from the highway, which could offer some junction improvement potential. The proximity of the M621 junction 1 is an operational constraint which further constrains workable schemes.

6) Burley Road / Cardigan Road (signalled junction)
Very constrained. Although there is open space to the southeast, the railway bridge to the west and residential properties fronting the north arm effectively limit any potential improvement as they result in single lane approaches and exits on the west and north arms. Significant demolition or detrimental acquisition of private land would be required on the north arm. The small property on the southwest corner could potentially provide some scope for capacity improvements.

7) A6120 / A65 Rawdon Road, Horsforth (roundabout)
Very constrained. Although there is open space to the west, the skewed geometry of the approach roads and the location of housing and a petrol filling station on the A65 south arm limits the scope for enhancement.

8) A58 / Harehills Road (signalled junction)
Severely constrained. At the heart of a busy local centre with high pedestrian flows, demand for loading and retail premises on all corners of the junction. The only prospect for widening appears to be land take of private forecourts on the northwest side of the A58, but this will have impacts on the amenity of the area and on the properties concerned. All other locations are severely constrained by properties at or close to the highway boundary.

9) A660 / B6157 Shaw Lane (signalled junction)
Very constrained. High pedestrian and cycle flows. The NGT scheme is planning a capacity improvement to the junction through minor localised widening to accommodate pedestrian crossing islands on the side roads. A more substantial scheme would impact on the existing service access road for the shops on the northwest side, remove mature trees which are a key part of the streetscape, acquire front garden and could require demolition of retail property.

10) Wetherby Road / Princes Avenue, Oakwood (signalled junction)
Very constrained. Although, in theory, there is scope for widening on the northwestern (Princes Avenue) and northeastern (Wetherby Road) approaches, the impact on mature trees and good quality open space is likely to make any improvement line challenging to justify and difficult to deliver. The bustling local centre on Roundhay Road has high pedestrian demands, kerbside parking and loading and street activity and would make any further carriageway widening improbable, especially given that there are already three lanes at the stop line and the Gledhow Lane junction interferes with eastbound flow on Roundhay Road. Oakwood Lane is very constrained, with side turnings and premises on each side of the road.

11) A660 / Hyde Park Road (signalled junction)
Severely constrained. The junction is surrounded on three corners by retail premises, with generally narrow footways and moderately high pedestrian demands. Given the high cycle flows and lack of cycle lanes through the junction, it is already considered to be sub-optimal. The junction of Victoria Road to the northwest can impact on traffic progression through the junction. The NGT scheme is proposing to improve the junction by banning turns and accommodating these using the adjacent junctions. This scheme should release capacity and enable a shorter cycle time and it also signalises Victoria Road. Any further enhancement for capacity does not seem likely.

12) B6157 Leeds & Bradford Road / Wyther Lane (signalled junction)
Very constrained. The junction is on a bridge straddling twin track railway lines and the River Aire which effectively prevents any widening on all three approaches. Wyther Lane is restricted to one lane each way unless some land is acquired and property demolished from the premises to the east of the Wyther Lane / Broad Lane junction. East of the River Aire there is scope to widen to the south side but this will impact on a tree belt between the road and playing fields. In the long term, capacity improvement is not out of the question, but there are significant obstacles requiring a significant investment.

13) A659 / B6451 Clapgate, Otley (signalled junction)
Severely constrained. The junction is surrounded by retail premises in the heart of Otley, with high pedestrian flows and narrow footways. Clapgate itself also has near right-angle bends in it, reducing the effective ability of the road to deliver higher flows through a signal junction. There is no scope for further capacity enhancement through road widening.

14) A58 / B6159 Harehills Lane, Fforde Green (signalled junction)
Very constrained. Adjacent to A58 / Harehills Road (number 8 above), this junction also has retail premises on all four corners of the junction. Some widening may be possible through the acquisition of private forecourts. Some widening on Haehills Lane (south) could be possible through land acquisition, but this will affect off-street parking for businesses and is not an easy option.

15) A650 / A643 Bruntcliffe Lane, Morley (signalled junction)
Constrained. The three houses on the northwest corner could present a significant obstacle to enlarging the junction, but on each arm there appears to be some scope for widening either within the highway or by taking private land (typically car parking), but with no further demolition. There may be an opportunity to protect an improvement line at this junction.

16) A6120 / A58 Wetherby Road (roundabout)
Unconstrained. Although there is no room to widen on the A58 (North) arm without acquiring private gardens, with an impact on trees, there is scope to realign the whole junction southwestwards, and scope to widen and realign the other three approaches.

17) A61 / B6159 Potternewton Lane (roundabout)
Constrained. Potternewton Lane to the west cannot be widened without acquiring gardens. Widening on Scott Hall Road (north arm) may require removal of the guided busway and an impact on mature trees lining the street. To the east and south there is scope for widening into the open space.

18) B6157 Kirkstall Lane / Morris Lane (signalled junction)
Constrained. Widening opportunities exist on the eastern side of Morris Lane at and south of the junction and on the southern side of Kirkstall Lane west of the junction, through land acquisition. However, widening opportunities are limited on the other two arms – the eastern arm possibly allowing a short flare although the impact on the houses north of the road could be too significant. These limitations mean that it appears unlikely, upon initial inspection, that a step-change improvement in capacity could be realised without acquiring property, unless pedestrian crossing islands can be accommodated to replace the 'all-red' stage with walk-with-traffic.

19) M1 (J44) / A639 Leeds Rd, Rothwell (roundabout)
Unconstrained. Although the Motorway and overbridge are a constraint, there appears to be enough open land around the junction to the north and south to facilitate capacity improvements over and above the Pinch Point signalisation scheme recently implemented by the Highways Agency.

20) A6120 / A647, Dawsons Corner (signalled roundabout)
Constrained. There is open space to the southwest – where the dominant flow movements are – and some scope for acquiring land each side of the Ring Road. However, to the south there is the Bradford railway line which restricts widening on the northbound approach, plus property on the northwest and southeast corner.

21) Harrogate Road / B6159 Harehills Lane (signalled junction)

Very constrained. Although there are few properties hard up against the footway, the prospect for widening is limited as the buildings are in relatively close proximity to the highway on all arms except for Harehills Lane, and the impact of land take on the settings of the properties would appear to be significant. The junction operation is likely to be constrained by the adjacent junctions, meaning that the likelihood of significant operational gains is low.

22) A653 / Ring Road Beeston Park "Tommy Wass" (signalled junction)
Very constrained. The junction was upgraded in 2011. Opportunities for further capacity enhancements appear limited given the location of the Tommy Wass public house right on the corner and requirement for private forecourts and gardens to achieve any improvement line.

23) A647 / B6154 Galloway Lane "Thornbury Barracks" (roundabout)
Very constrained. Signalisation scheme on site. Housing on three sides, front gardens would be required for any widening on the approaches or enlargement of the roundabout. An improvement scheme would be more likely with redevelopment of the Barracks site fronting the roundabout.

24) A64 / B6159 Harehills Lane (signalled junction)
Very constrained. The junction already has banned turns and additional lanes on the approaches, and further improvement looks difficult to accommodate because of buildings on the southeast side of the junction. There is already a two-lane left turn out of Harehills Lane.

25) B6157 Stonegate Road / King Lane (roundabout)
Constrained. The King Lane (north) approach has scope for significant widening, but the junction configuration to the south and east constrains options, as it is effectively a 5 arm junction. Residential and church properties and mature trees surround the junction, meaning that, environmentally, the footprint of any junction improvement scheme is likely to be restricted.

26) A65 / Willow Road (signalled junction)
Very constrained. Although there is some open space to the north/east of the junction, effective alignments are constrained by the Harrogate Line viaduct across the A65 immediately to the west and properties had up against the sides of Viaduct Road to the south. The latter constraints could in the medium to long term be overcome if redevelopment takes place.

27) A61 / A659 (E), Harewood (Signalled junction)
Very constrained. The junction is surrounded by the old boundary walls to Harewood House and high quality residential boundaries of mature hedges and trees, at the current main entrance to Harewood House. Land take from gardens would be required to enhance the junction and it does not appear to be possible without a significant detrimental effect on the locality and residents.

28) A62 / B6126 Asquith Avenue, Gildersome (signalled junction)
Constrained. There is undeveloped land or commercial car parking which could be utilised to widen three of the four approaches, whilst the fourth approach (Branch End) is restricted particularly by a few terraced properties on the southwestern side.

29) A660 / A658, "Dyneley Arms" (signalled junctions)
Unconstrained. There is open space to the east and south which could be used to realign the A658, if widening is unacceptable on the A660 west arm south of the Dyneley Arms, because of the mature trees present.

30) Harrogate Road / Street Lane (signalled junction)
Very constrained. The junction is surrounded by retail and residential property, with reasonably high pedestrian flows and servicing requirements. In theory some widening of the approaches could be possible with land take from forecourts and front gardens, but in practice this seems unlikely to be tenable.

31) A658 / Bayton Lane, Yeadon (signalled junction)
Constrained. The A658 south arm is constrained away from the junction by property on each side of the road, although widening at the junction entry may be practical (with private land take). On the remaining three arms, some road widening may be possible using private land (car parking, front gardens) with an impact on a row of mature trees on the A658 (north) arm.

32) A61 / Alwoodley Lane (signalled junction)
Very constrained. The A61(N) arm is flanked closely by property which makes any widening impossible without significant acquisition and demolition. The remaining arms can only be widened by encroaching into private gardens, with a significant impact on established boundaries including hedges and mature trees. The eastern arm looks tight for space which is also likely to impact on potential improvement schemes.

33) A647 / Richardshaw Lane, Pudsey (signalled junction)
Very constrained. The junction is already grade separated. Properties on the south and north side of the junction, coupled with the width of the A647 overbridge, mean that the scope for improvement is limited.

34) A6120 / B6159 Selby Rd, Colton (roundabout)
Constrained. Although there is scope to widen both arms of the A6120 without property demolition, the two minor arms of B6159 Selby Road and Colton Lane – coupled with the property on the western corner – make significant capacity increases challenging (though not impossible). Widening of the eastern arm of the A6120 is likely to impact on mature trees in the bank of trees on the south side. It may be possible to reduce capacity of the minor arms and give it to the major arms (the B6159 was the A63 but has not been provided for by the East Leeds Link Road).

35) B6155 Lidget Hill / B6154 Church Lane, Pudsey (signalled junction)
Severely constrained. Significant property surrounds the junction, close to the trafficked highway, on three corners, restricting any potential improvement to redevelopment of the western corner and the potential to realign the highway to create a staggered junction. It is in the middle of a retail area with moderately high footfall.

36) Station Road / Long Row, Horsforth (roundabout)
Very constrained. A five arm roundabout in a suburban area with retail activity. Enlargement of the roundabout is restricted by adjacent buildings. The most likely

opportunity for enhancing capacity could come from closing the two minor arms (St Margaret's Road and Brownberrie Avenue) and possibly signalising it.

37) A63 / B6137 Lidgett Lane, Garforth (signalled junction)
Very constrained. There appears to be some scope for widening the A63 on the public highway, but the presence of property right on the northeast corner and south side opposite it effectively make it unlikely without acquiring residential property.

38) A650 / Common Lane, East Ardsley (signalled junction)
Constrained. On the A650, there is scope for widening on both approaches, whilst on the western minor arm there is scope for a slight realignment and widening at the mouth to accommodate a pedestrian crossing island, using green space. However, the Country Baskets mill building and housing mean that there is no prospect of any widening or realignment on the northern minor arm. There are retail premises to the south with off-street parking and road widening could impact on these, making a substantial improvement scheme challenging.

39) A61 / Sharp Lane, Robin Hood (signalled junction)
Constrained. It appears possible to widen on all approaches without property demolition, although to do so will require land outside the highway boundary and (depending on the design) could affect mature trees, the edge of some allotments and on-street parking. There is a war memorial on the southwest corner which will need to be considered and it is too early to say whether this would be adversely affected.

40) A6029 / A650 / B6127 Bridge Street, Morley (signalled gyratory)
Very constrained. Surrounded by property on all sides, although some of the buildings are set back. There is a potential improvement line if the property to the north of the A650 is redeveloped, notably to get a better two lane approach on the B6127 (north) arm.

41) A650 / Thorpe Lane, Tingley (signalled junction)
Unconstrained. Although there is housing on the south side, the north side is open fields, with scope for enlarging the junction. The staggered side road Smithy Lane could also possibly be widened through land acquisition from the adjacent Primary School.

42) A642 / B6137 Main St, Garforth (signalled junction)
Very constrained. There is an opportunity to realign the A642 west of the junction and Barrowby Lane (north arm) to create a staggered junction, which could release capacity. However, the B6137 Main Street is tightly constrained between buildings, as is the eastern arm of the A642. These latter constraints will constrain the overall benefit of a significant junction improvement.

43) M621 (J7) / A61 / A639, Stourton (part-signalised roundabout-style junction)
Constrained. Although there is open space around most of the roundabout, there are constraints created by the adjacent railway, the freight terminal access location and the retaining wall on the northbound on-slip. In addition, the M621 overbridges themselves create a constraint which would be very expensive to replace or modify. The NGT scheme is proposing amendments to the junction which will accommodate extra traffic.

44) A65 / Oxford Road, Guiseley (signalled junction)

Severely constrained. There are properties close to the road on all corners of the junction in this local centre. Upon initial inspection there appears to be no realistic prospect for any enlargement of the junction.

45) A6120 / A660 Otley Road, Lawnswood (roundabout)
Constrained. The NGT scheme is proposing to upgrade the junction by signalising it and amending the geometry. Any further enlargement of the junction is constrained on the northwest former by housing, but enlargement on the remaining corners may be possible with land take, noting impact on mature trees and school grounds.

46) A6120 / Low Lane, Horsforth (roundabout)
Constrained. The junction is loosely surrounded by development, but the A6120 can be widened on its approaches. A larger roundabout may be unrealistic without property acquisition and demolition, but a signalled junction may be practical with land take on the east sides of both minor arms.

47) A65 / B6153 Park Rd, Guiseley (signalled gyratory)
Very constrained. Skew railway line passes underneath the junction and there are properties around the junction which constrain potential improvement lines.

48) A65 / Kirkstall Lane (signalled junction)
Very constrained. Property is very close or abuts three approaches to the junction, whilst the fourth (eastern) arm is on a gradient. The operation is restricted by the adjacent signals gaining access to Morrisons.

49) A6120 / A61 Harrogate Rd, Moortown (roundabout)
Constrained. There is a churchyard on the northeastern corner and the Scott Hall Road / Harrogate Road junction is in close proximity. There are significant banks of mature trees and retail premises on the south arm close to the highway. There is scope for some highway widening.

50) A6120 / A64 York Rd (roundabout)
Constrained. The York Road / North Parkway is close, and the two junctions' interaction will constrain capacity improvements. There are properties around the junction, although set back, meaning that improvement could be possible. The ELOR scheme wil remove traffic from the junction.

51) A61 / Wood Lane, Rothwell (signalled junction)
Unconstrained. There are open fields to the west and south of the junction, meaning realignment and widening of both the A61 and Wood Lane is possible.

52) M62 (J28) / A653 / A650, Tingley (signalled gyratory)
Constrained. Housing and development to the south of the junction constrains any widening or realignment of the A653 and A650 approaches and to some extent the A650 also. Any scheme which affects the motorway overbridges will also jeopardise feasibility.

53) A6120 / King Lane (roundabout, part-signalled)
Constrained. Housing and development to the south and west, places side road accesses, places some constraints on any improvement scheme, although there is some open space to the north/east.

54) A6120 / A64 Barwick Road (roundabout)
Constrained. Although there is open space which could be used for a widening scheme, the housing and other development on Barwick Road and immediately south/east of the junction constrains potential alignment improvements. The ELOR scheme will remove traffic from this junction.

55) Shadwell Lane / Wike Ridge Lane, Shadwell (signalled junction)
Very constrained. Surrounded by housing and some retail, any enhancement to this junction looks like it would have a significant effect on surrounding property.

56) A61 / A659 (W), Harewood (priority junction)
Unconstrained. Although there is a house immediately south of the junction, the remainder of the frontage is open farmland and there is scope for realignment and widening. There is a potential issue with the alignment of the A61, which is 'bendy' here, which could increase scheme costs and impacts.

57) B6159 / Primrose Lane, Halton (signalled junction)
Very constrained. There is development on all corners of the junction which prohibits a whole-scale upgrade, although some widening may be possible without building demolition through use of Lidl car parking and private land. The Selby Road east arm, however, can only be widened a short way because of the retail centre / buildings.

58) A65 / A658 Green Lane, Rawdon (roundabout)
Constrained. There is scope for widening and/or reconfiguring the junction, the main constraint seems to be a church building on the eastern corner. Land take would likely be required.

59) A6110 / A58 Whitehall Road, Ringways (roundabout)
Constrained. There is very little scope for widening without land take, but there are opportunities to enhance the junction through using car parking and other land around the junction.

60) B6126 Brunswick St / B6127 Chapel Hill, Morley (signalled junction)
Severely constrained. The junction is surrounded by buildings against the back of footway and the highway alignment and topography further make future (long term) prospects very limited.

61) A6110 / Millshaw Rd / White Rose (N) (roundabout)
Constrained. This five arm roundabout is constrained by houses to the east, topography and (to a lesser extent) office development to the west.

62) B6157 North Lane / Cardigan Road (signalled junction)
Severely constrained. On the edge of the Headingley retail area and adjacent to Headingley Stadium, this junction is surrounded by property close to the back of footway and there would appear to be no prospect of any increase in highway footprint.

63) A61 / Harrogate Road (roundabout)

Very constrained. The junction is surrounded by houses and is in close proximity to the A6120 / A61 junction, with retail businesses between the two junction. Whilst there may be some options to explore, the scope for junction enlargement or road widening is limited.

64) A639 / B6481 Pontefract Road (signalled junction)
Constrained. There could be some opportunities for acquiring adjacent land to enlarge the junction, with no demolition.

65) A6110 / A643 Elland Road (S) (roundabout)
Constrained. Although there is scope for widening and enlarging the junction, the alignment of the A643 is at a skew angle which will limit widening options.

66) A64 / B6159 Selby Road, "Halton Dial" (signalled junction)
Very constrained. The railway line and bridge immediately to the south is already a restriction on junction performance and operation, whilst the busier western arm of the A64 is flanked by housing, where some loss of bus lane or on-street parking would be required to facilitate any more traffic lanes.

67) A6038 / B6153 Park Road, Guiseley (priority junction)
Constrained. There is farmland to the south/southwest which could be used to turn the crossroads into a staggered junction to increase capacity. The width of the eastern (minor) and northern (major) arms look difficult to widen without impact on mature trees and private land.

68) A61 / A654 Leadwell Lane, Robin Hood (signalled junction)
Constrained. The Old Halfway House is right on the eastern corner of the junction. The western arm has property close to both sides. The northern arm could possibly be widened within the highway boundary, but widening of the southern arm will have an impact on adjacent properties (though without needing demolition).

69) A661 / Boston Rd / High St, Wetherby (mini-roundabout)
Very constrained. Immediately adjacent to the River Wharfe bridge, this four arm mini-roundabout is within Wetherby's busy retail area and near areas of high pedestrian flow. Although there is only property on one side immediately next to the back o footway, the location of property in the vicinity (plus the river) restricts any potential for enlargement of the junction.

70) A642 / Bullerthorpe Lane, Woodlesford
Very constrained. The location of property around the junction and its placement next to the bridge over the River Aire means that the site is very constrained and forming multiple lanes on the A642 seems undeliverable. An extra lane on the minor arm could be achievable subject to visibility issues.