Leeds City Council Transport SPD

Adopted

3rd February 2023

CONTENTS

TABLES

FIGURES

PART 1. INTRODUCTION

1.1 INTRODUCTION

OVERVIEW AND BACKGROUND

1 Leeds City Council has the ambition for Leeds to be the Best City in the UK and for Leeds City Council to be the Best Council. To achieve this the Best Council Plan aims to tackle poverty and reduce inequalities with the City's Inclusive Growth, Health and Wellbeing and Climate Emergency Strategies as key drivers.

2 In March 2019 the Council passed a motion to declare a Climate Emergency and called on government for funding and powers to make Leeds Carbon Neutral by 2030. To achieve the necessary carbon reduction this Council is serious about promoting sustainable transport and travel across Leeds and making new developments "sustainable" in the broadest possible meaning of the word. Measures to reduce reliance on fossil fuels and promote cleaner electric vehicle technology are included in this document.

3 Leeds City Council as Highway Authority for the Leeds District is committed to creating excellent new places for people to live, work and play which are designed to promote healthy active lifestyles. The purpose of this Transport Supplementary Planning Document (SPD) is to achieve this aim in practice.

4 The geographic scope of this Transport SPD is the entire Leeds Metropolitan District which includes the City Centre as well as the main urban area of Leeds, designated town centres and more rural communities.

5 This Transport SPD supplements the Local Plan documents and a document called Neighbourhoods for Living (NfL): Memorandum to 3rd edition 2015. It is essential that this Transport SPD is used in conjunction with NfL, and recommendations on the appropriate parts of that document to refer to are included in the relevant sections of this Transport SPD.

6 It draws upon national design guidance, where relevant, including DMRB, Manual for Streets (MfS) , and Manual for Streets 2 (MfS2). Together, these latter 2 documents are aimed at creating excellent new places for people to live, work and play. It is envisaged that these 2 documents will be replaced by a new MfS in 2022.

7 This Transport SPD supersedes a number of SPD's adopted as part of the Leeds Development Plan, which are listed below:

- Street Design Guide SPD, (August 2009);
- Parking SPD, (January 2016);
- Travel Plans SPD, (February 2015); and
- Public Transport Improvements and Developer Contributions, (August 2008).

8 The Transport SPD sets out guidance to be used by developers, design teams and others, and seeks to stimulate innovative designs that are appropriate for the context, character and location of a site and can be used safely by the travelling public. Designs will be encouraged to incorporate quality approved sustainable materials that are low carbon, visually attractive, require minimum maintenance, and are in keeping with the specific local character of the area.

9 The Transport SPD covers the design of the 'highway' in its broadest sense, namely the public space between private dwellings or plots which facilitates all public activity, including but not exclusively the circulation and storage of motorised traffic. To this end the Transport SPD encourages designers to consider 'streets', not just 'roads', and also all the other components that make up the public realm (e.g. signs, cabinets, lighting, landscape, etc.).

10 Achieving sustainable developments is crucial for the City Council to meet its social, economic and environment objectives. These relate to sustainability in its widest sense, not only transport accessibility, so that sustainable materials, drainage and other elements are equally important. Reference should therefore be made to the City Council documents "Sustainable Design and Construction SPD" and updated Sustainable Drainage in Leeds once available along with Leeds City Region Sustainable Drainage Systems Guidance and The SUDS Manual (C753)."

11 A street caters for the movement of pedestrians and cyclists, vehicular traffic, servicing and access arrangements as well as less dynamic functions such as occasional car parking and landscape features. Well-designed streets should accommodate all functions and purposes (including provision for utility services, street lighting and drainage), and their inter-relationship should be considered from the outset. However, the emphasis must be on "people movement" based on the following hierarchy of consideration, with the needs of disabled people, older people, and children to be considered for all modes.

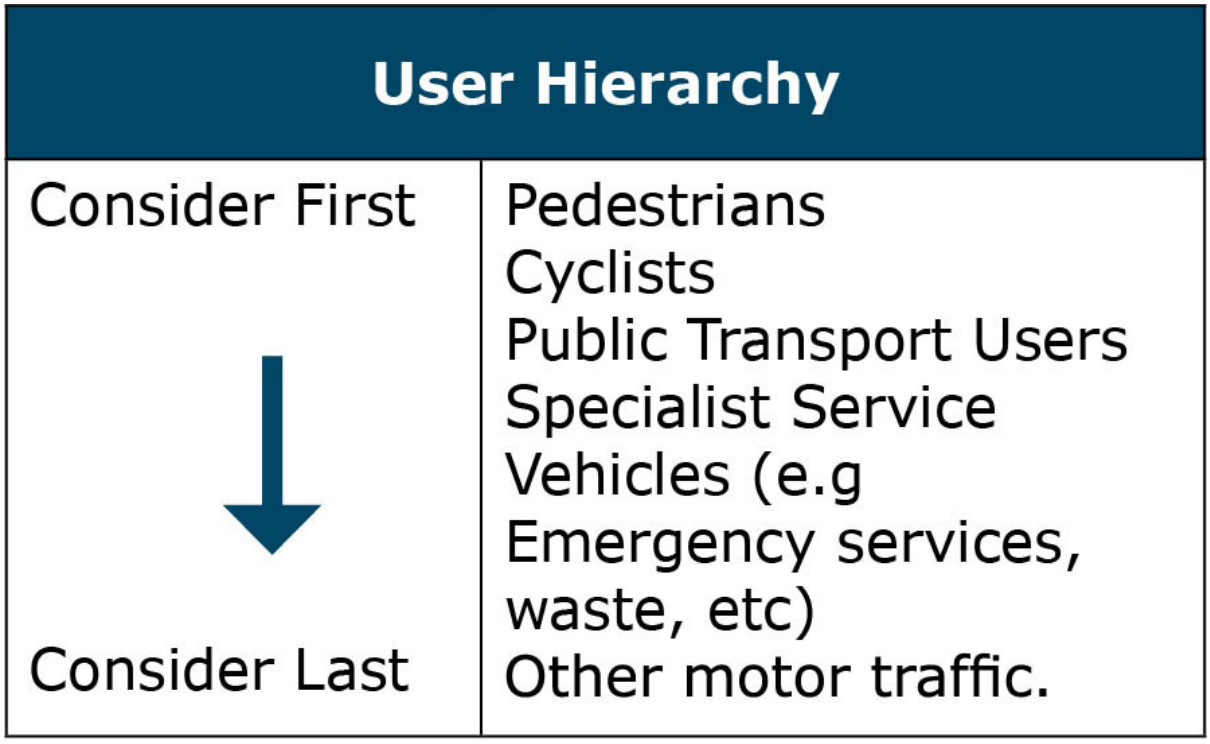


Figure 1: User Hierarchy Diagram

12 Changes to the Highway Code came into operation on 29th January 2022 including eight new rules and forty-nine updates. One of the changes made was to introduce a Hierarchy of Road Users which is in general alignment with this Hierarchy of Consideration. The main aim of the change is to promote safety whilst also supporting a healthy, sustainable and efficient transport system by ensuring that users most at risk in the event of a collision are at the top of the hierarchy.

13 Census data reveals that for Leeds residents who walk to work 70% walk less than 2km (for England it's 74%), while analysis of the annual Leeds travel to work survey reveals that the average person walking to work takes 24mins (under 2km at 80 m/s (3mph)) with 80% of walking commutes taking less than half an hour (2.4km at most).

14 New residential streets need to be designed to limit vehicle speed and all new residential streets must be supported by a 20mph speed limit, other than in exceptional cases. This approach also supports the Councils desire for 20mph zones across all residential areas in Leeds to promote the Council's Vision Zero road safety strategy and increase community cohesion by encouraging more walking and cycling hence supporting the Council's Health and Wellbeing and Climate Emergency Strategies

Figure 2: 20mph "Keep Us Safe" Sign

15 Within new residential areas, pedestrian movement should be convenient, lit, safe and pleasant. Good landscape treatment and pedestrian segregation from traffic routes should be included where possible. Direct routes should be provided to bus stops, local facilities, schools and adjacent neighbourhoods, in such a way that it is more convenient and attractive to walk than to drive to such destinations [NfL Principles 6 and 13].

16 Where pedestrian links are provided to create preferential routes, they should be as short as possible with good intervisibility between the ends, be well lit, and be overlooked or open to view [NfL Principle 44]. Bollards or similar should be used to prevent the abuse of pedestrian links by motorists (including motorcyclists and cyclists), whilst still maintaining access for pedestrians, including those in wheelchairs, mobility scooters and baby buggies.

17 Cycle routes in developments should meet the same basic criteria as pedestrian routes; namely convenience, safety, attractiveness, accessibility, comfort, and directness.

18 DfT route assessment tools can provide a consistent approach for assessing walking and cycling routes within and to/from developments. In addition, the Healthy Streets Design Check tool can be used to objectively measure existing streets and proposed designs for how healthy they are. The Council is promoting Active Travel Neighbourhoods (ATN) as means of encouraging walking and cycling in local areas. The principles of ATN's should be designed in to the layouts of new developments.

19 Cycle linkages between key areas within the development and around it should be designed into a scheme from the start, with particular attention to routes to schools, local facilities and adjacent neighbourhoods. The need for segregation and cycle design standards are contained in LTN 1/20.

20 Connectivity for cyclists and pedestrians should be maintained within estates, with cul-de-sacs being provided with well-lit and overlooked links for cyclists and pedestrians.

21 New infrastructure for cyclists should link to existing routes, as shown on the City Connect's interactive map.

22 Evaluating how cyclists are best provided for in a scheme should be addressed within the Design Statement, and is considered in detail in Local Transport Note (LTN 1/20). Also, where a development links to or is directly situated on a Cycle Superhighway route, local design standards should be adhered to.

23 Leeds City Council encourages the provision of green streets and green and blue infrastructure to improve air quality and health outcomes, enhance and support biodiversity, capture carbon and provide attractive developments that people want to live in.

24 The Transport SPD should be used for any residential street typically serving up to 700 dwellings, for mixed use developments, and for industrial/commercial schemes. Above this threshold early engagement with the City Council is encouraged to establish an appropriate set of design standards.

25 Car parking is one of the most difficult issues to deal with effectively within a development. Car parking needs to be considered as an integral part of the overall design of a scheme and street, and not considered as an "add-on" or a detailed issue to be left to the end of the design process. Anti-social parking (where cars are parked on or partially on the footway or on landscaped areas) should be designed out wherever possible, as it leads to neighbourhood tension and less safe street environments. The report 'Space to Park' contains useful guidance on how to create efficient parking layouts and more walkable streets without impacting on housing density.

26 Government policy on car parking is to manage unnecessary car usage by locating new housing in locations which are accessible by public transport, and to have access to local facilities on foot and by bicycle. These measures can encourage a greater number of trips to be made sustainably, however, appropriate levels of car parking still

need to be accommodated whilst not dominating the street scene or dictating the overall layout.

27 The City Council's Connecting Leeds Transport Strategy vision is for Leeds to be a city where you don't need a car. Developments will therefore need to demonstrate how they are supporting reduced car dependency. Car parking provision should be limited, taking into account expected car ownership, the need to cater for visitors and to suit the nature and location of the development. The City Council will seek to ensure car parking provision is at an appropriate level, taking into account both the potential impact on the surrounding area, and the availability of other transport modes and facilities in the vicinity [NfL Principle 73]. Large expanses of uninterrupted hard surfacing should be avoided. This can be achieved by subdividing planting bays with soft landscaping treatment and with variations in materials. Segregated pedestrian routes should also be considered for safety reasons for orientation on large scale carparks.

28 NfL sets out five further principles to be taken into account in the design of car parking areas:

- Ensure car parking is usable, safe and secure [76];
- Avoid car parking dominating street scenes [77];
- Use discreet and innovative solutions for car parking [78];
- Ensure parked cars are unobtrusive [79]; and
- Set car parking behind the front of the dwellings [80].

29 The Town and Local Centres of Leeds, as defined by the Core Strategy are all reliant to a lesser or greater extent on a supply of public parking. The traditional role of a Local Centre is changing, with a greater emphasis on the leisure and service offer such as cafes, restaurants, hairdressers etc. Following the Covid-19 pandemic it is yet to be seen whether this trend continues as more people are working from home and using more local facilities. The trend towards home working is expected to remain to some extent once a new normal is established. With additional emphasis on staying local, the emphasis on designing walkable neighbourhoods is increased and again this is likely to reduce demand for car parking going forwards.

30 In a town centre, parking must attempt to meet the demand from commuters, workers, shoppers and other visitors and it is rarely acceptable or feasible to make car parks exclusive for a single group.

31 Out of town retail centres and supermarkets do not generally charge for parking, which is perceived as an advantage they hold over the City Centre and Town and District Centres where parking is charged. With a move towards less reliance on the private car and more incentive to travel actively, out of town developments must demonstrate better design for sustainable transport modes and consider charging models or other parking controls going forward.

32 Section 55 of the Road Traffic Regulation Act 1984 restricts expenditure of surplus parking income to making good any charges against an authority's general fund, provision and maintenance of off-street parking, highway improvements and public transport schemes. This has been updated by section 95 of the Traffic Management Act 2004 to allow local environmental schemes to be added to the list of permissible uses for parking surpluses. As parking income forms part of the Council's base budget, the loss of this income stream due to Developer works requires lost spaces to be replaced or funds/contributions provided towards parking, transport or revenue improvements. This contribution is calculated, as 5 years income per space lost.

33 Designers will be expected to demonstrate with supporting information how their scheme complies with the principles set out in this Transport SPD, NfL and National Guidance, to achieve the overall aims of the documents, together with the City Council's wider aspirations for quality environments.

STRUCTURE OF THE DOCUMENT

34 This Transport SPD is set out in five parts:

Part 1.

The introduction provides an overview and background to the document, outlining the relevant legislative framework, national, regional and local policies and practices, key objectives, and approach to development proposals.

Part 2.

'Street Design Guidance' contains relevant criteria with Chapter 1 defining road standards; Chapter 2.2 the 'Street Types', and Chapters 2.3 to 2.13 detailed technical design guidance followed by Appendices:

A, 'Street Design Specification, incorporating: 'Materials and Construction', 'Adoption Procedures', 'Structural Procedures', 'Drainage Procedures' and 'Street Lighting Procedures'.

B, 'Standard Construction Details and Drawings'.

C, the distributor roads and strategic routes within the Leeds district.

Part 3.

'Parking' covers the City Council's requirements for parking provision for residents, visitors and other callers.

Part 4.

'Travel Plans' sets out City Council's requirements for travel plans and identifies when they are required in support of a planning application. It is also intended for use by existing organisations who wish to facilitate more sustainable journeys to, from and around their sites/buildings

Part 5.

'Cumulative Impact Policy' sets out the methodology to calculate Developer payments towards cumulative impact mitigation at off-site congested junctions. Mitigation may be in the form of sustainable travel schemes to offset car-based trips or congestion relief in some instances.

1.2 LEGISLATION AND POLICY

PLANNING POLICY CONTEXT

35 The policy context for land use planning in the UK is set at national level by the 2019 National Planning Policy Framework (NPPF) and at local and district level by the Leeds Local Plan comprising of; the Core Strategy, saved policies of the 2006 Unitary Development Plan Review (UDP), the 2013 Natural Resources and Waste Plan, the 2017 Aire Valley Leeds Area Action Plan (AVLAAP), the 2019 Leeds Site Allocations Plan (SAP), and any made Neighbourhood Plan.

36 The 2017 West Yorkshire Transport Strategy (WYTS) informs local planning policy and provides the transport context at the regional level for the district.

37 The 2016 Strategic Economic Plan (SEP) details how the Local Enterprise Partnership and West Yorkshire Combined Authority will work with businesses, the public sector and voluntary and community organisations to develop the economy.

38 The Leeds Inclusive Growth Strategy (2018) sets out the economic aims of the City forming a manifesto for economic growth in Leeds.

NATIONAL LEGISLATION AND POLICY

NATIONAL PLANNING POLICY FRAMEWORK

39 The latest National Planning Policy Framework was published on 20 July 2021 and sets out the Government's planning policies for England and how these are expected to be applied.

40 The NPPF promotes sustainable development through three objectives (paragraph 8):

- "An economic objective – to help build a strong, responsive and competitive economy, by ensuring that sufficient land of the right types is available in the right places and at the right time to support growth, innovation and improved productivity; and by identifying and coordinating the provision of infrastructure;
- A social objective – to support strong, vibrant and healthy communities, by ensuring that a sufficient number and range of homes can be provided to meet the needs of present and future generations; and by fostering well-designed, beautiful and safe places, with accessible services and open spaces that reflect current and future needs and support communities' health, social and cultural well-being; and
- An environmental objective – to protect and enhance our natural, built and historic environment; including making effective use of land, improving biodiversity, using

natural resources prudently, minimising waste and pollution, and mitigating and adapting to climate change, including moving to a low carbon economy."

41 Chapter 9 of the NPPF details promoting sustainable transport. Paragraph 104 states "Transport issues should be considered from the earliest stages of plan-making and development proposals, so that:

a the potential impacts of development on transport networks can be addressed;
b opportunities from existing or proposed transport infrastructure, and changing transport technology and usage, are realised – for example in relation to the scale, location or density of development that can be accommodated;
c opportunities to promote walking, cycling and public transport use are identified and pursued;
d the environmental impacts of traffic and transport infrastructure can be identified, assessed and taken into account – including appropriate opportunities for avoiding and mitigating any adverse effects, and for net environmental gains; and
e patterns of movement, streets, parking and other transport considerations are integral to the design of schemes, and contribute to making high quality places."

42 The framework sets out the following guidance regarding parking standards (paragraph 107):

"If setting local parking standards for residential and non-residential development, policies should take into account:

- The accessibility of the development;
- The type, mix and use of development;
- The availability of and opportunities for public transport;
- Local car ownership levels; and
- The need to ensure an adequate provision of spaces for charging plug-in and other ultra-low emission vehicles."

43 The NPPF also contains a theme of safeguarding and improving the vitality of town centres. With regard to parking in town centres the document states (paragraph 108):

44 "Local authorities should seek to improve the quality of parking so that it is convenient, safe and secure, alongside measures to promote accessibility for pedestrians and cyclists."

45 The framework states, at paragraph 113, the following regarding travel plans:

> "All developments that will generate significant amounts of movements should be required to provide a travel plan, and the application should be supported by a transport statement or transport assessment so that the likely impacts of the proposal can be assessed."

DEPARTMENT FOR TRANSPORT CIRCULAR 02/2013 – THE STRATEGIC ROAD NETWORK AND THE DELIVERY OF SUSTAINABLE DEVELOPMENT

46 The DfT's Circular 2/2013 – Strategic Road Network and the Delivery of Sustainable Development sets out how National Highways (formerly Highways England) will work in partnership with regional and local planning and transport authorities, public transport providers and developers to participate in all stages of the planning process to produce sound and deliverable strategies to ensure that developments are, in transport terms, as sustainable as possible. This includes 'impact minimisation through realistic travel plans.' The document reflects the importance of travel planning to National Highways in limiting the impact of new development on their network.

47 The document identifies that development proposals are likely to be acceptable if they can be accommodated within the available highway capacity of the Strategic Road Network or they do not increase demand for use of a section that is already operating over capacity, in respect of proposed mitigation measures to increase capacity.

CYCLING AND WALKING INVESTMENT STRATEGY

48 The Government's first Cycling and Walking Investment Strategy (CWIS 1) was published on the 21 April 2017,nd aims 'to make cycling and walking the natural choices for shorter journeys, or as part of a longer journey.' To achieve this, the Government wants 'more people to have access to safe, attractive routes for cycling and walking by 2040.' The Strategy outlines the benefits of cycling and walking for congestion, physical and mental health, productivity, local economies and accessibility for the disabled. The Strategy also seeks to encourage more children to cycle or walk to school. Key to the Strategy is delivering better, safer streets where people of all ages feel they can cycle and walk without risk of harm.

49 Since it was produced, the Government have significantly expanded the ambition and funding of the government's cycling and walking programme, launching the Gear change: a bold vision for cycling and walking white paper in summer 2020, and announcing in March 2021 its intention to publish a second CWIS.

LOCAL CYCLING AND WALKING INFRASTRUCTURE PLANS

50 Local Cycling and Walking Infrastructure Plans (LCWIPs), as set out in the Government's Cycling and Walking Investment Strategy, are a new, strategic approach to identifying cycling and walking improvements required at the local level. They enable a long-term approach to developing local cycling and walking networks, ideally over a 10-year period, and form a vital part of the Government's strategy to increase the number of trips made on foot or by cycle.

51 The key outputs of LCWIPs are:

- A network plan for walking and cycling which identifies preferred routes and core zones for further development.
- A prioritised programme of infrastructure improvements for future investment.
- A report which sets out the underlying analysis carried out and provides a narrative which supports the identified improvements and network.

52 By taking a strategic approach to improving conditions for cycling and walking, LCWIPs will assist Local Authorities (LAs) to:

- Identify cycling and walking infrastructure improvements for future investment in the short, medium and long term.
- Ensure that consideration is given to cycling and walking within both local planning and transport policies and strategies.
- Make the case for future funding for walking and cycling infrastructure.

EQUALITY ACT

53 The Equality Act 2010 introduced a Public Sector Equality Duty, which came into force on 5 April 2011. The Duty requires public bodies to play their part in making society fairer by tackling discrimination and providing equality of opportunity for all. Authorities need to consider how different people are likely to be affected by new scheme proposals, and due regard should be given to the effect they might have on those protected by the Duty.

54 The Equality Act 2010 ('the Act') provides the legal framework that aims to protect people with protected characteristics from discrimination, as defined below:

- Age - referring to a person belonging to a particular age, or a range of ages;
- Disability;
- Gender reassignment - the process of transitioning from one gender to another;
- Marriage and civil partnership;

- Pregnancy and maternity;
- Race;
- Religion and belief;
- Sex; and
- Sexual orientation.

EDUCATION ACT 1996

55 The Education Act 1996 section 508A places a statutory duty upon local authorities to promote sustainable travel to and from school. The associated guidance "recognises the important role that travel plans can play in raising awareness of young people and staff about the consequences of their transport choices and the benefits of choosing sustainable alternatives.

CIL AND SECTION 106 OBLIGATIONS

56 The CIL Regulations 2010 require that Section 106 obligations comply with three key tests. In order to be lawful a Section 106 must be:

- Necessary to make the development acceptable in planning terms;
- Directly related to the development; and
- Fairly and reasonably related in scale and kind to the development.

NATIONAL GUIDANCE DOCUMENTS

NATIONAL PLANNING PRACTICE GUIDANCE

57 The National Planning Practice Guidance (NPPG) web-based resource was published on 29 November 2016 by the Department for Communities and Local Government (DCLG) has been the subject of frequent updates, with the most recent coming in June 2021. This resource collates relevant planning practice guidance, providing links between the NPPF and relevant legislation.

58 The NPPG provides further clarity on the travel plan requirements set out in the NPPF and supports the more detailed principles set out in the 2009 Good Practice Guidelines. The guidance sets out the importance of travel planning and the positive contributions to sustainable travel; lessening traffic generation; reducing carbon emissions; creating accessible, connected communities; improving health outcomes and quality of life; improving road safety; and reducing the need for new development to increase road capacity or provide new roads.

59 The NPPG sets out that 'planning should actively manage patterns of growth to make the fullest possible use of public transport, walking and cycling, and focus significant development in locations which are or can be made sustainable' (DCLG 2014).

60 A travel plan is typically a package of practical measures aimed at addressing the transport needs of a specific development or organisation. The NPPG defines a travel plan as:

> "Travel Plans are long-term management strategies for integrating proposals for sustainable travel into the planning process. They are based on evidence of the anticipated transport impacts of development and set measures to promote and encourage sustainable travel (such as promoting walking and cycling)."

MANUAL FOR STREETS

61 Manual for Streets was published on the 29 March 2007 and is a guide to how to design, construct, adopt and maintain new and existing residential streets.

MANUAL FOR STREETS 2

62 Manual for Streets 2 was published on the 29 September 2010 and is a companion guide to Manual for Streets, where it extends its practices beyond residential streets to encompass both urban and rural situations. Manual for Streets 2 fills the gap in design advice that lies between Manual for Streets and the design standards for trunk roads as set out in the Design Manual for Roads and Bridges.

BETTER PLANNING, BETTER TRANSPORT, BETTER PLACES

63 Better Planning, Better Transport, Better Places was published by the Chartered Institute of Highways and Transportation in August 2019 and is a guide to provide practical advice for everyone involved in the planning process and to inform any new national planning guidance from the government. The objective of this document is to set out how the transport planning process can support the delivery and scale of economic and housing growth required by the government while delivering more sustainable transport and planning outcomes for people and places.

BUSES IN URBAN DEVELOPMENTS

64 Buses in Urban Developments was published by the Chartered Institute of Highways and Transportation in January 2018 and is a guide which focuses on the configuration of new developments, residential or otherwise, to enable bus services to play a major role in connecting developments to the places people need to go.

INCLUSIVE MOBILITY GUIDANCE

65 Updated Inclusive Mobility Guidance was published on the 10 January 2022 and is a guide to best practice on improving access to public transport and creating a barrier-free pedestrian environment. The document highlights that Inclusive design is about making places everyone can use and is everyone's responsibility.

THE INCLUSIVE TRANSPORT STRATEGY

66 The Inclusive Transport Strategy was published on the 18 October 2018 and sets out the Government's plans to make our transport system more inclusive, and to make travel easier for disabled people.

67 Additional guidance on accessibility related matters can be found in Leeds City Council's Accessibility SPD (2016).

REGIONAL POLICY

West Yorkshire Mayor West Yorkshire Mayor

68 The election of the Mayor has been made possible through a devolution deal, which was agreed by West Yorkshire's five council leaders and the Government in March 2020 and became law in January 2021. The first West Yorkshire Mayor was elected in May 2021. The Mayor of West Yorkshire is the directly elected chair of the West Yorkshire Combined Authority, which brings together local councils and businesses to build a strong, successful economy. The Mayor also has a transport portfolio including to draw up a local transport plan and implement bus service enhancements.

West Yorkshire Transport Strategy 2040

69 The West Yorkshire Transport Strategy (WYTS) was adopted by West Yorkshire Combined Authority (CA) on the 3 August 2017. The strategic vision of the WYTS is to ensure that:

70 "Travel around West Yorkshire in 2040 will be easy and reliable, using a modern, well-connected transport network that enhances business success and people's lives."

71 WYTS forms the latest Local Transport Plan for the region and aims to provide a framework to deliver a world-class, modern, integrated transport system, through the following key objectives:

- Put in place the right transport conditions;
- Build on the region's strengths and tackling our underlying weaknesses;

- Grow the economy in an inclusive way; and
- Meet the demand for travel in a sustainable way.

72 Parking policies have a role to play in the delivery of the WYTS objectives along with delivering the Strategic Economic Plan, notably these parking policies seek to reduce emissions, minimise congestion, increase the use of sustainable modes of travel and support access to services, facilities and employment.

Connectivity Infrastructure Plan 2021

73 West Yorkshire Combined Authority has published its Connectivity Infrastructure Plan which includes a separate Mass Transit Vision. It sets outs the changes required to achieve the West Yorkshire net zero carbon target of 2038. This includes an increase in distance travelled by walking (+79%), cycling (+2,125%), bus (+52%) and rail (+58%) alongside a 27% reduction in distance travelled by car. The plan includes tube map style proposal of communities where there is greatest potential for intervention.

West Yorkshire Bus Strategy 2040 and Bus Service Improvement Plan

74 The West Yorkshire Bus Strategy 2040 sets out a vision for buses, “To create a modern, integrated and innovative bus system, which puts customers first and contributes to the delivery of the economic, environmental and quality of life ambitions as set out in the Strategic Economic Plan and the West Yorkshire Transport Strategy”. One of seven coordinated policies is to provide an inclusive and accessible bus system. A second policy is to provide a modern, coherent and integrated bus service which includes better interchange between bus, rail and other modes and providing bus services to new housing and employment developments.

75 In March 2021, Central Government published a National Bus Strategy which sets out their vision to dramatically improve bus services in England, reversing the shift in journeys away from public transport as a result from Covid-19 and encourage passengers back to bus. This included a requirement for the development of a Bus Service Improvement Plan (BSIP) for West Yorkshire.

76 The BSIP builds on the bus strategy and sets out the following key initiatives:

- An enhanced and more cohesive bus network – which takes people where they need to go, when they need to go.
- Clear and simple fares – to make paying for bus travel more affordable, easier, convenient and flexible.

- Improved, more inclusive customer service and support – so passengers have the tools to travel with confidence and the help they need if their journey does not go to plan.
- Priority for buses on our road – so journeys by bus are quicker, with less time spent stuck in traffic, and are a viable alternative to the private car.
- More green and better vehicles – to improve the onboard experience and make bus the sustainable choice for travel in West Yorkshire.

Strategic Economic Plan

77 The 2016 Strategic Economic Plan (SEP) details how the Local Enterprise Partnership and West Yorkshire Combined Authority will work with businesses, the public sector and voluntary and community organisations to develop the economy. The SEP covers the 20-year period from 2016 to 2036.

78 The SEP will achieve good growth through investing in four strategic priorities:

- Priority 1 - Growing Business;
- Priority 2 - Skilled People, better jobs;
- Priority 3 - Clean Energy and environmental Resilience; and
- Priority 4 - Infrastructure for Growth.

79 The SEP identifies improvements in transport connectivity cutting across all four of its strategic priorities, with particular emphasis on Priority 4, where the SEP sets out the requirements for an integrated, accessible transport system, including investment in transport infrastructure and services, to support growth and regeneration of prioritised areas within the city region.

Leeds City Region

80 The key focus of the Leeds City Region is economic growth, benefiting residents and businesses alike. Transport is at the heart of this process and clearly there is a key role for Transport Policy, to help encourage sustainable economic growth throughout the City. Availability of parking can be critical for workers, clients and customers of a range of business sectors. The appropriate management of parking also goes some way towards creating an urban environment which enhances quality of life and is attractive for living and visiting.

LOCAL POLICY

Leeds Local Plan

81 The Local Plan takes the form of a portfolio of documents which comprise Development Plan Documents (DPDs) and made Neighbourhood Development Plans which, together with Supplementary Planning Documents (SPDs) make up the Development Plan for Leeds.

Saved Unitary Development Plan policies (2006)

82 The UDP was adopted in 2001 and reviewed in 2006, some policies remain saved and form part of the Leeds Local Plan.

Leeds Core Strategy

83 The adopted Leeds Core Strategy (September 2019) is the overarching document in the Local Plan setting out the Council's vision for the future development of Leeds to 2028 and provides broad policies to shape development.

84 The principal theme of the transport chapter of the Core Strategy is 'a well-connected district', based on the delivery of an accessible and integrated transport system to support communities and economic competitiveness. The Core Strategy aims to increase the use of sustainable forms of transport by facilitating the delivery of infrastructure, the use of demand management and to ensure new development takes place in locations that are or will be accessible by a choice of means of transport, including walking, cycling, and public transport.

85 Policy T2 (i) of the Core Strategy states:

> In locations where development is otherwise considered acceptable new infrastructure may be required on/off site to ensure that there is adequate provision for access from the highway network, by public transport and for cyclists, pedestrians and people with impaired mobility, which will not create or materially add to problems of safety, environment or efficiency on the highway network.

86 This Transport SPD provides design guidance to support delivery of this Core Strategy Policy objective.

87 Policy T2 of the Core Strategy also states:

(ii) Developer contributions may be required for, or towards, improvements to the off site highway and the strategic road network, and to pedestrian, cycle and

public transport provision. These will be secured where appropriate through Section 106 Agreements and/or the Community Infrastructure Levy, and by planning conditions,

(iii) Significant trip generating uses will need to provide Transport Assessments/ Transport Statements in accordance with national guidance.

88 In addition, the Core Strategy states, in relation to the Councils parking policy that Leeds City Council will seek to ensure that there is adequate provision of parking across the City for shoppers and visitors to support the vitality of the City and Town Centres and limit commuter parking in areas of high public transport accessibility, as well as the wider transport strategy objectives for Leeds. Detailed parking standards to achieve the Policy objectives are outlined in this Transport SPD and replace the Parking SPD (2016) parking standards.

89 The following parts of Policy T1 Transport Management of the Core Strategy relate to parking:

(i) Parking policies controlling the use and supply of car parking across the city:

a) To ensure adequate parking for shoppers and visitors to support the health and vitality of the city and town centres.

b) Delivering strategic park and ride for the city which supports the City Centre vision and provides greater traveller choice.

c) To support wider transport strategy objectives for sustainable travel and to minimise congestion during peak periods.

d) Limiting the supply of commuter parking in areas of high public transport accessibility, such as the City Centre.

90 In line with the Core Strategy, City Centre parking is based on management of both supply and demand.

91 To achieve policy T1 the following policy components and supporting initiatives are to be used:

- *Management of on-street spaces in the City Centre will continue primarily as a source of short stay parking but with flexibility to be altered to medium stay to support the economic vitality of different areas of the City Centre;*
- *Continued support for new short and medium stay parking in the City Centre, which would be primarily used by shoppers and visitors;*

- *Priority for on-street space given to disabled, cycle, motorcycle and car club parking along with local servicing requirements and public transport needs;*
- *Leeds City Council will actively pursue the implementation of a number of bus-based Park and Ride sites at the outer ring road and close to the motorways, to create extra capacity for parking with reduced congestion impacts. Rail based Park and Ride will also be supported and actively pursued (Policy T16 of the Revised UDP is a 'saved policy' and still relevant to the provision of Park and Ride facilities within Leeds);*
- *Future demand for commuter travel to the City Centre will be catered for by a mix of travel choices. For car-based commuting, the options will be: Private Non-Residential (PNR) parking, existing public car parks and Park and Ride. Remaining demand for travel will be catered for by walking/cycling, and bus for shorter journeys and increases in rail capacity for longer distance commuters. Proposals in the Core Strategy for additional City Centre living will also have a significant effect on reducing the commuting demand; and*
- *Promotion of a range of supporting measures aiming to make best use of the currently available parking and offer viable transport choices for accessing the City Centre.*

92 Policy T1 refers to: Limiting the supply of commuter parking in areas of high public transport accessibility, such as the City Centre. The policy set out within this SPD interprets this by defining a maximum amount of PNR parking at new City Centre developments alongside controlling public off street commuter parking to current levels. This is summarised below:

- *The continued use of maximum car parking guidelines for new developments in the City Centre to encourage modal shift and sustainable travel to work;*
- *It is not proposed to make provision for any significant net increase in permanent public commuter car parking in the City Centre;*
- *The principle of no new parking of any type within the Public Transport Box (as previously set out in UDP Policy T28) will be continued; and*
- *Commuter parking on cleared development sites will not be allowable within the Core. Non- Commuter parking will be considered within the Core while temporary permissions for commuter parking will be considered within the Fringe. Policy LPP3 contains full details.*

93 Policy T17 of the Revised UDP, also a 'saved policy', identifies specific sites for consideration for Park and Ride. These are identified within the Core Strategy within the key diagram and Map 9 – key elements of Leeds transport strategy.

94 Part (v) of Policy T2 of the Core Strategy states:

- *"Parking provision will be required for cars, motorcycles and cycles in accordance with current guidelines."*

95 Spatial Policy 11 part (xi) sets out a series of transport priorities including 'Provision for people with impaired mobility to improve accessibility.' The parking hierarchy, at Chapter 1, in Part 3, places disabled parking at the top and the provision of such facilities should always be a priority.

96 The district's parking policies are a strategic measure which form part of the Connecting Leeds Transport Strategy for Leeds.

97 The Core Strategy also recognises that development management also provides an opportunity to seek to modify travel demands and habits. This can be through a requirement for travel plan measures to be identified at the planning application stage and secured via planning condition or planning obligations.

98 The Core Strategy therefore includes the following policies:

POLICY T1: TRANSPORT MANAGEMENT

To complement the provision of new infrastructure and Proposal 11 of the Local Transport Plan the Council will support the following management priorities:

(ii) Sustainable travel proposals including travel planning measures for employers and schools. Further details are provided in the Travel Plan SPD [now Part 4] and the Sustainable Education Travel Strategy.

POLICY T2: ACCESSIBILITY REQUIREMENTS AND NEW DEVELOPMENT

New development should be located in accessible locations that are adequately served by existing or programmed highways, by public transport and with safe and secure access for pedestrians, cyclists and people with impaired mobility.

(iv) Travel plans will be required to accompany planning applications in accordance with the Travel Plan thresholds [see Part 4].

99 The supplementary advice contained in this document elaborates on the policy requirement relating to travel plans included in the adopted Leeds Core Strategy, namely Policy T2 (iv).

100 Core Strategy Policy EN8 “Electric Vehicle Charging Infrastructure requires provision for electric vehicle charging infrastructure.

101 All applications for new development which include provision of parking spaces will be required to meet the minimum standard of provision of electric vehicle charging points. This requires:

i) *Residential: 1 charging point per parking space and 1 charging point per 10 visitor spaces*
ii) *Office/Retail/Industrial/Education: charging points for 10% of parking spaces ensuring that electricity infrastructure is sufficient to enable further points to be added at a later stage.*
iii) *Motorway Service Stations: charging points for 10% of parking spaces ensuring that electricity infrastructure is sufficient to enable further points to be added at a later stage*
iv) *Petrol Filling Stations: provision of fast charge facilities.*

102 The Core Strategy also includes transport-related policies for the City Centre. Specifically, Policy CC3 “Improving Connectivity Between the City Centre and Neighbouring Communities reads:

> “To help provide and improve routes connecting the City Centre with adjoining neighbourhoods and improve connections within the City Centre in order to improve access to jobs and services, to encourage greater usage and make walking and cycling easier, safer and more attractive, new development will be expected:
>
> i) to make contributions (and contributions through the Community Infrastructure Levy once introduced),
> ii) if proposals are located in the line of or adjacent to a new route or a route planned for improvement, to make appropriate route enhancements or appropriate off-site contributions.”

103 Finally, the Core Strategy also includes important policy on planning obligations and developer contributions in order to secure important transport infrastructure (inter alia). Policy ID2 reads:

> "Section 106 planning obligations will be required as part of a planning permission where this is necessary, directly related to the development, and reasonably related in scale and kind in order to make a specific development acceptable and where a planning condition would not be effective. In order to provide the necessary infrastructure and facilities to support the growth of Leeds and the proposals and Policies in the Core Strategy, developer contributions will be sought through Section 106 planning obligations and the Community Infrastructure Levy as appropriate."

Leeds Natural Resources and Waste Plan

104 The adopted Natural Resources and Waste Development Plan (January 2013 (2015 for Minerals Transport)) document is part of the Local Plan for Leeds. The plan sets out where land is needed to enable us to manage resources like minerals, energy, waste and water over the next 15 years. It also identifies actions which will help us use our natural resources in a more efficient way.

105 The spatial vision sets out where the Council wants Leeds to get to in the long term:

> "For Leeds to be a distinctive, competitive, inclusive and successful City, for the benefit of its communities, now and in the future." (paragraph 2.18)

106 To make this vision more specific to the aims and topics of the Natural Resources and Waste Development Plan and in response to consultation, this has been expanded so the four main principles and strategic objectives underpin all the policies of the Natural Resources and Waste Development Plan, notably strategic objectives are relevant to this Transport SPD:

107 An efficient use of natural resources:

- Protect and increase the amount of tree cover.

108 A low carbon economy:

- Promote sustainable movement of freight including minerals.
- Make better use of the water and rail transportation networks.
- Support the co-location of natural resource activities to minimise transportation impacts.

109 The Air Quality Management Policy AIR 1 is also relevant:

- Air 1 "The Management of Air Quality Through Development". All applications for major development will be required to incorporate low emission measures to

ensure that the overall impact of proposals on air quality (including unpleasant odours) is mitigated

Aire Valley Leeds Area Action Plan

110 Aire Valley Leeds (AVL) is a major regeneration area covering 1,300 hectares of land to the south east of Leeds City Centre incorporating over 400 hectares of development land. The AVLAAP was adopted by the Council in 2017 to provide a spatial planning framework for the area which includes plan wide policies, area plans and site-specific allocations and designations.

111 The AVLAAP now forms part of the Development Plan and will be used in determining planning applications within the Plan boundary area alongside the Leeds Core Strategy and Natural Resources and Waste Local Plan and the remaining UDP 'saved' policies.

112 Policy AVL12, entitled 'Strategic Transport Infrastructure Improvements in AVL', sets out appropriate proposed transport infrastructure improvements in AVL and covers the following; Highway Network, Public Transport, Cycle Routes, Pedestrian Routes and Safer Streets. Planning decisions will have full regard to the policies and proposals within the AVLAAP, and therefore, developers should ensure that, where appropriate, and directly related to the development, proposals on identified sites, allocations and other sites will be required to provide or contribute towards provision of the identified improvements.

The Leeds Site Allocations Plan

113 The Site Allocations Plan (SAP) was adopted by Leeds City Council on 10 July 2019, which identifies sites to ensure that sufficient land housing, employment, retail and greenspace to 2023 (housing) and 2028 is available in appropriate locations to meet the growth targets set out in the Core Strategy. Following a challenge and a High Court decision all former greenbelt sites (37 in total) were remitted back to the Secretary of State and the Planning Inspectorate for further examination. The SAP identifies site requirements for allocated sites relating to highways and transportation matters. Other matters may also arise and require addressing as part of the Transport Assessment process.

Other relevant Leeds City Council policy documents

Connecting Leeds Transport Strategy

114 The Connecting Leeds Transport Strategy was shaped by a large-scale consultation exercise which was initiated in 2015 – the 'Transport Conversation'. Over subsequent years continuous consultation and engagement with stakeholders throughout the district to establish the transport issues that most concerned communities. The Connecting Leeds Transport Strategy emphasises the importance of transport for economic growth, outlines the existing situation and identifies the key transport challenges for the future. It is aligned with the Leeds Health and Wellbeing and Inclusive Growth Strategies and the net zero carbon ambition for the district. It aims to make Leeds a city in which you do not need a car, and this is also the case for all new developments across Leeds. The strategy was adopted by Leeds City Council's Executive Board in October 2021. The strategy has set out the following targets:

- A reduction in mileage travelled by 30%- approximately 900milescar miles per annum
- A vision zero approach to road safety with zero people killed or seriously injured on the roads by 2040.
- Net- zero climate ambition by 2030
- Mode split
    - Walking – increase by 33%
    - Cycling – increase by 400%
    - Bus – increase by 130%
    - Rail – increase by 100%
    - Car – decrease by 30%

115 The targets are set district wide but new development should aim to support the progression towards these targets.

116 The strategy details 6 big moves, which set out how the Council proposes to achieve its vision, objectives and targets:

- Decarbonising Transport
- Creating healthier streets, spaces and communities
- Transform the city centre
- Enhance public transport
- New mobility solutions

- Deliver a mass transit network

117 In relation to Creating healthier streets, spaces and communities, emphasis on good design will be key, the approach will follow the 3 guiding principles as shown in Figure 3. Assessment and delivery of 20 minute neighbourhoods alongside implementation of the Core Strategy Accessibility Standards will be essential to help meet this and other CLTS objectives for developments.

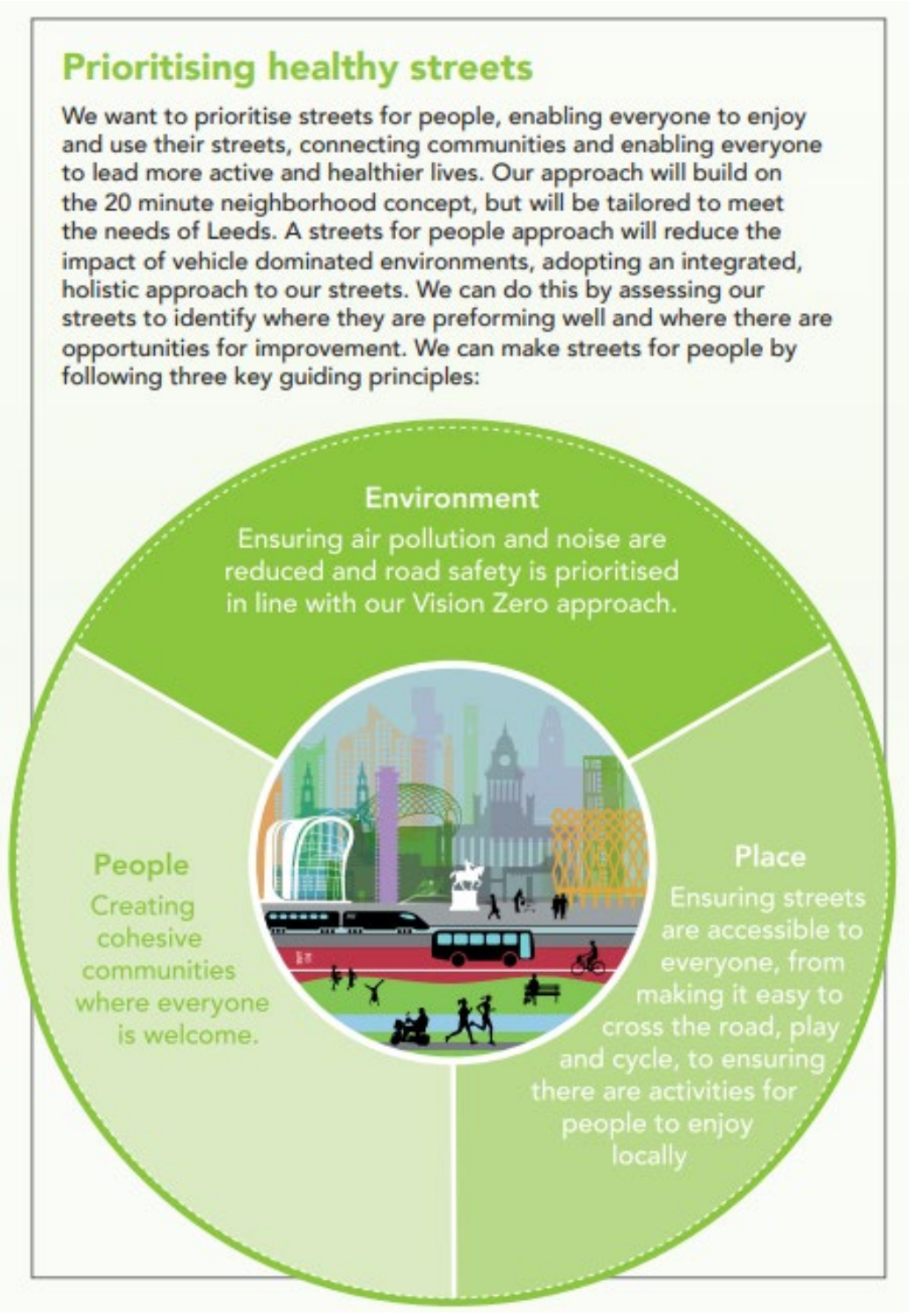


Figure 3: 20 Minute Neighbourhood

Leeds Inclusive Growth Strategy

118 The Leeds Inclusive Growth Strategy was published in 2018 and sets out how Leeds will realise inclusive growth in the next five years to 2023, the opportunities for economic growth in Leeds and how these will be exploited.

119 The strategy focuses on seven distinct sector priorities to drive future growth:

- Health and medical;
- Financial and business services;
- Low carbon manufacturing;
- Creative, cultural and digital;
- Retail and leisure;
- Housing and construction; and
- Social enterprise and the third sector.

Leeds Cycling Starts Here Strategy

120 The Leeds Cycling Starts Here Strategy, published in June 2017, was developed by Leeds City Council and a range of key transport and cycling stakeholders. The Strategy has three distinctive aims:

- Make cycling a natural everyday choice;
- Improve safety, convenience for cycling and health and wellbeing across the city; and
- Improve environmental sustainability, better air quality and reduce pollution of all types.

121 The Strategy seeks to 'Build a great city for cycling' by making the city centre and district centres cycle-friendly and embedding cycling in the planning, highway renewal and urban design process.

Leeds Vision Zero Road Safety Strategy 2040

- The Leeds Vision Zero Road Safety Strategy 2040, adopted 2022, identifies a vision where no one will be killed or suffer most serious injury on roads in Leeds.
- The Strategy incorporates a 'Safe System' approach to road safety and moves away from traditional approaches which assume that humans can be faultless road-users. Instead, it takes the view that all of those involved in planning, building, maintaining, managing, enforcing, or using the road must accept responsibility for road safety (not just road users), and act on this in an integrated and holistic way.

- Along with the adoption of a ‘safe system’ approach the five key areas of focus or ‘pillars’ are:
    - Safer Behaviours
    - Safer Roads
    - Safer Speed
    - Safer Vehicles and
    - Post collision response.

Leeds Health and Wellbeing Strategy

122 The Leeds Health and Wellbeing Strategy (2016) is a strategy to put in place the best conditions in Leeds for people to live fulfilling lives. This strategy outlines a number of key priorities how Leeds will achieve this, specifically:

- Priority 2 - An Age Friendly City where people age well;
- Priority 4 - Housing and the environment enables all people of Leeds to be healthy, social and active; and
- Priority 6 - Get more people, more physically active, more often.

Leeds City Centre Vision

123 Leeds City Centre Vision outlines a vision for Leeds to be the best city in the UK by 2030, working to tackle; climate change, responding to the global recession and anticipating changes to the local population. This focuses on the city being: fair, open and welcoming; a prosperous and sustainable economy; and successful communities.

124 The vision for the city centre was refreshed in 2018 and incorporates seven aspirations:

- A welcoming city centre, which is distinctive;
- A cultural city centre with a national and international reputation for diverse culture;
- A quality environment, which has a positive impact on health and wellbeing;
- A well-connected city centre, which aids inclusive growth, equality and connects communities;
- A legible, accessible and walkable city centre;
- A liveable and compassionate city centre; and
- A business-friendly city centre.

125 It is these key local policies that Part 2 (Street Design Guidance) is designed to amplify.

KEY OBJECTIVES

126 In making good places, it is vital that highways and transportation matters are considered at the same time as other aspects of the design of the development. A co-ordinated approach to design should therefore, meet the following key objectives and the Design Statement for any scheme should demonstrate how these objectives have been met by:

1. Promoting healthy lifestyles and sustainable travel;
2. Delivering **high quality developments** that relate the site to its particular neighbourhood [NfL Principle 1];
3. **Designing streets as accessible spaces for everyone**, whatever their ability, whilst still accommodating all necessary types of street users [NfL Principles 27 and 29];
4. **Linking the development into the external network** of facilities [NfL Principles 5 and 14];
5. **Identifying intrinsic landscape characteristics** of the site and its setting, and retain/enhance existing features e.g. trees [NfL Principle 55];
6. Provide safe, convenient, direct and **easy access to everyday facilities** on foot and cycle [NfL Principle 13];
7. **Maximising choice** for people to be able to make journeys by non-car modes [NfL Principle 19];
8. Provide **convenient and secure cycle parking** [NfL Principle 75];
9. **Regulating vehicle speeds** to the appropriate design speed for the street [NfL Principle 34];
10. Providing **car parking areas that are usable, safe and secure**, and can be managed efficiently without dominating the street scene [NfL Principles 76 and 77], and use design to reduce as far as possible the opportunities for anti-social parking;
11. Use of simple, appropriate, well-detailed **high-quality materials** that form a cohesive family of components requiring minimal, economical maintenance [NfL Principles 35 and 37];
12. **Avoiding the potential for "bad neighbour" problems** by considering how developments will be used by residents and their visitors;
13. **Designing for community safety** [NfL Principle 43];

14. **Providing safe, convenient, direct and easy access to public transport stops** [NfL Principle 13];
15. Designing layouts that are buildable and easily maintainable e.g. in relation to re-surfacing, cleansing, preventing litter traps, etc. [NfL Principle 37].; and
16. New development should promote carbon reduction and climate resilience.

GENERAL APPROACH

127 One of the key objectives set out above is the use of simple, appropriate, sustainable, well detailed, high quality materials that form a cohesive family of components. The selected materials should assist in the making of high quality places and need to reflect the existing character of an area. Specific instances (e.g. Conservation Areas, in the vicinity of Listed Buildings, or other areas of the historic environment) will sometimes need specific materials not acceptable elsewhere.

128 In general terms the main objective is to ‘keep it simple’. A good street scene acts as an attractive backdrop to the built form of a development.

129 All materials should combine to form a cohesive palette, with tones and textures that reflect or complement those used in the built development and the local area. There should be no need for a wide range of materials as areas tend to have just one or two different functions within them, while the built form and planting should add the visual interest to a space.

130 The future maintenance of materials should be considered, with the number of different materials used being minimised. On larger sites, where several developers may be present, this will require a co-ordinated approach, especially at the interface between different elements of the site. The City Council will have an approved palette of materials to simplify the future maintenance of any adopted or area to be adopted, these approved materials should be used wherever possible.

PREPARING DEVELOPMENT PROPOSALS

131 The preparation of successful high-quality development proposals requires the design team and Council Officers to work together and to involve the wider community. This multidisciplinary approach needs to involve Architects, Planners, Engineers, Urban Designers, Landscape Architects and other stakeholders.

132 The design process set out in NfL should be followed, i.e. analysis – concept – scheme – detail.

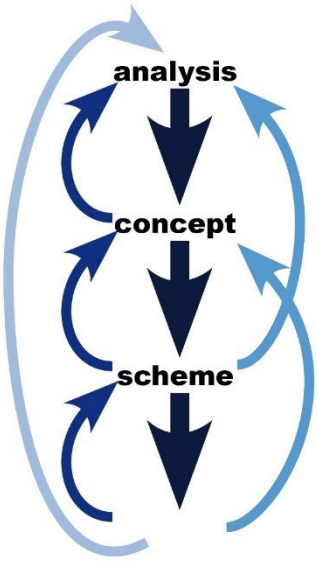


Figure 4: Analysis – Concept – Scheme

133 Designers and developers are advised to have pre-application discussions with Local Authority Officers at an early stage in the design process, in accordance with the Council's published Pre-application Engagement, paragraphs 39 to 46 of the NPPF and the Council's "Statement of Community Involvement".

134 The guidance set out in this document is intended to assist in the design of development layouts that provide safe movement for all street users of all ages, including pedestrians , cyclists, users of public transport, cars, lorries, and others. Therefore, designers should select and assemble appropriate design elements to:

- Provide street layouts which do not allow vehicles to dominate. This includes reducing the speed and volume of traffic on residential streets and designing out potential for 'anti-social parking' – where cars are parked on the footway or on landscaping;

- Create an environment that is safe for all street users and in which people are encouraged to walk, cycle, and use public transport, and feel safe doing so;
- Help create quality public realm that encourages both adults and children to spend time outdoors; and
- Adopt the Councils and West Yorkshire Combined Authority's 'Green Streets' principles.

135 Leeds City Council can exercise a degree of flexibility in some areas of street design. However, where a design or feature is proposed that does not strictly accord with design guidance, advice, or other parameters in this document, the applicant shall be required to provide adequate justification, for consideration by the City Council. Nevertheless, there are a number of absolute requirements that the Council can apply no flexibility to, such as those relating to highway safety.

136 The application will only be considered acceptable if it fulfils all the following requirements:

- Does not result in adverse or differential effects on selected groups, primarily disabled people (mobility impaired, blind and partially sighted, hearing impaired) children, and older people;
- Does not diminish the convenience and suitability of facilities for pedestrians, cyclists and public transport users;
- Meets Core Strategy Accessibility Standards;
- Does not diminish the sustainability of the design under any of the sustainability aspects highlighted in this document;
- It complies with Core Strategy Policy T2(i) (namely that Development "will not create or materially add to problems of safety, environment or efficiency on the highway network");
- Does not lead to a reduction in quality of public realm, or the durability of infrastructure;
- Does not lead to a deterioration in any other sustainability consideration; and
- Does not result in a lower standard of road safety.

137 There is a principle of 'no trade-offs' in assessing applications. That is, a positive contribution on one factor cannot be traded-off against a negative effect elsewhere. Applications which increase sustainability or the design's user-friendliness for selected groups of people, without detriment to others, will be viewed positively.

138 Local Authorities are obliged under Crime and Disorder Act 1998 to consider the crime and disorder implications of all planning applications. Crime prevention through environmental design (CPTED) is a concept that focuses on designing out crime by developing an understanding of the factors that are likely to contribute to a higher incidence of crime within a community. The built environment can have both a positive and negative impact upon criminal activities and is a crucial factor to how safe and secure people feel within their community. However, planning out crime can only work if it is part of a wider strategy incorporating other measures such as regeneration, community involvement and town centre management.

139 As connectivity is a major consideration, the police liaison officer should be consulted on connections and layouts (especially in areas of existing crime and anti-social behaviour) to ensure that pressure is not put on the Highway Authority to close through routes once the development is occupied.

140 Development proposals should be accompanied by various supporting documentation as required by Leeds City Council's Planning Service. Certain highway and transport reports will / may be required as follows:

- **Design and Access Statement** - This will set out the main place making, design and sustainability elements of the scheme, and should demonstrate how it complies with the objectives and requirements of this guide and NfL. Areas to be offered for adoption should be clearly identified. Such a Design Statement will be required for all developments, although clearly a smaller scheme will require a briefer statement than a large development.
- **Transport Assessment** - Developments over 80 dwellings (or equivalent impact) will normally require the preparation of a full Transport Assessment (TA). The scope of the TA should be agreed in advance with the Local Authority, and should assess both traffic impact and transport sustainability, including an assessment of how well a scheme addresses the needs of pedestrians of all ages and abilities, cyclists and non-motorised users and fits with the requirements of Vision Zero and Healthy Streets agendas.
- **Transport Statement** - Developments of between 50 and 80 dwellings (or equivalent) will normally require an abbreviated form of a TA, addressing certain limited issues which are relevant to the particular scheme. The scope of the Transport Statement should be agreed in advance with the Local Authority and should cover accessibility as well as impact.

- **Safety Audit** - A suitably trained auditor shall undertake an independent Stage One and/or Two Safety Audit following the requirements of GG119. These look at highway works from the perspective of the end user, and specifically aim to identify any safety issues that may need to be addressed. The timing and need for a Safety Audit should be discussed with the Local Authority at an early stage and the brief for the audit agreed. The normal expectation is that the principle of any highway works is accepted prior to undertaking a safety audit. Any Safety Audit and exception report / designer's response will need to be accepted by Leeds City Council prior to planning permission being granted. Importantly Safety Audits are not a substitute for and do not take priority or have authority over the Highway Authorities assessment of proposals, they are a supplementary process aimed at removing safety issues that may not have already been identified.
- **Travel Plan** - Certain developments, as identified by the City Council, will require the provision of a Travel Plan, to specify the measures that will be taken to encourage the use of sustainable and lower carbon modes of transport. Any Travel Plan will need to be approved prior to planning permission being granted. Guidance on the preparation of Travel Plans is contained in Part 4.

PART 2. STREET DESIGN GUIDANCE

2.1 DESIGN GUIDANCE

OVERVIEW

141 Leeds City Council as Highway Authority for the Leeds District is committed to creating excellent new places for people to live, work and play and the purpose of this Part is to achieve this aim in practice.

142 This Street Design Guidance applies to the following situations:

- Residential streets serving up to approximately 700 dwellings;
- Industrial or commercial developments serving up to 20 hectares of industrial land;
- Mixed use schemes generating up to approximately 455 two-way peak hour movements, which is the traffic flow likely to be generated by a development of 700 dwellings; and
- Private (non-adopted) streets or drives.

143 The following guidance is a key element to delivering high quality residential and mixed development environments in Leeds and should be used in the context of other national and local planning or design guidance. This Part aims to reflect the approach to design as set out in the 2007 Manual for Streets (MfS) and 2010 Manual for Streets 2 (MfS2), and provides specific local guidance to supplement existing national guidance. However, any road that is intended to serve more than 700 dwellings should be discussed with the City Council, and may need to be designed in accordance with the "Design Manual for Roads and Bridges" (published by the Department for Transport), as it is, in effect, not a residential street. However, the principles of the design guidance set out in this SPD will still be applicable, as the function of the street should still be a key consideration in the design process.

144 All new housing layouts should be designed to maximise health and wellbeing in the design and layout. This should incorporate "Green Street" principles by encouraging integration of new street trees wherever possible on all street types and particularly on Type 1 streets, combined with segregated pedestrian and cycle routes on direct routes to local facilities and to form necessary linkages.

145 With regards to Shared Space, MfS 2 states, in para 2.9.4, that "the aim of reducing the definition of areas for pedestrians and vehicles is to indicate that the street is meant to be shared equally by all users of the highway". Designated routes should not be regarded as footways which have full height kerbs and therefore fully segregate vehicles from other street users, it is important that the space does not simply appear

a road without footways. Pedestrians can safely share the whole street with vehicles, however, the designated pedestrian routes are available for more vulnerable pedestrians, e.g. older people, disabled people and children. For further guidance refer to the CIHT research document, entitled "Creating Better Streets: Inclusive and Accessible Place" which was published in 2018 and examines 'pedestrian priority streets'.

146 The City Council supports the principle of Home Zones, and would welcome discussions with Developers who are interested in including a Home Zone within their development. Proposals for Home Zones will need to take account of the latest associated national guidance, which is currently the DfT's "The Quiet Lanes and Home Zones (England) Regulations" published in August 2006, and should be in accordance with "Home Zones, Design Guidelines" published by the Institute of Highway Incorporated Engineers.

147 Home Zones may consist of shared spaces or level surfaces, indirect traffic routes, areas of planting, and features to encourage the use of the street. "Gateways" and regulatory signing will be needed to mark the limits of the area. In designing Home Zones full consideration of the needs of disabled people should be taken into account. The recommendations included in "Designing for Disabled people in Home Zones", (JMU Access Partnership 2007) should be followed to ensure that the needs of disabled people are properly considered. Visually contrasting materials are required to identify the pedestrian route. Consideration should be given to wayfinding at each side of, and the start and end of, the pedestrian route.

148 The statutory process for the designation of a Home Zone and the making of the associated use and speed orders requires that there is consultation with local groups, and in particular the residents of the area. While this does not present a problem with Home Zones in existing streets, there is an apparent difficulty with new build developments in that streets are normally well on the way to being built when residents begin to move in.

149 It is therefore required that an information pack is given to all purchasers, setting out general information on Home Zones, together with the key proposals for the site (including a draft wording of the use and speed orders) explaining the way in which the streets will be managed and maintained.

150 Purchasers should then be asked to sign this document, stating that they have understood and agree in principle with the Home Zone proposals. Once the streets are open to the public, Leeds City Council will carry out the formal consultation process to enable the Home Zone to be designated and the Orders made at the Developer's expense.

151 Design guidance and other information on Home Zones, including links to related websites, is available through the Institution of Highway Incorporated Engineers at www.theihe.org.

152 Industrial developments will by their nature be more intensively focused towards vehicular movements than residential areas, given the volume and type of traffic expected to use these streets. It will still be required to assess likely needs of other street users and every situation will still be assessed on its own merits. Particular consideration will be required regarding HGV/cyclist interaction. Direct, safe and convenient pedestrian routes should be provided to public transport stops.

153 The speed of vehicles is the key factor in improving road safety and minimising future potential collisions. There is a significant lowering of the severity of collisions involving pedestrians and other vulnerable road users when the speed of the vehicle involved is less than 20mph. For this reason, all Local Residential Streets (Type 2) should be designed to be self-enforcing to keep speeds below 20mph, Shared Space Streets (Type 3), Level Surface Streets (Type 4) below 15mph, and Home Zones (Type 5) below 10mph. Connector Streets (Type 1) should be designed to control speeds to 25mph or 20mph, depending on the circumstances. 20mph speed limits and signing shall be funded through the adoption process as part of new developments.

154 The lowest point of any adoptable carriageway should be 600mm above the 1 in 100-year river flood level. If there are justifiable reasons why this level may not be achievable in any particular circumstance, this matter must be discussed with the City Council.

DEFINITIONS AND STANDARDS (OF ROADS)

155 Priority Roads: are roads which are higher in the road hierarchy than a road which joins onto it. Example: In a situation where a Minor Access Road joins a Major Access Road the latter is the Priority Road, however, if a Major Access Road joins a Connector Street the Connector Street is the Priority Road etc.

156 External Distributor Road: form the primary network for the town/city as a whole and all long-distance traffic is channelled onto such roads.

157 Connector Streets: are roads which carry local traffic around settlements and often connect local residential streets to the external distributor road.

158 Local Residential Streets: are those roads that link groups of dwellings and their associated parking areas to connector streets.

159 Carriageway: are those parts of access roads which are intended primarily for use by vehicles.

160 Level Surfaces: are paved areas which are intended for use by both pedestrians and vehicles.

161 Shared Space: a street or place accessible to both pedestrians and vehicles that is designed to enable pedestrians to move more freely by reducing traffic management features that tend to encourage users of vehicles to assume priority.

162 Footway: are those parts of access roads which are intended for use by pedestrians and which are generally parallel with the carriageways.

163 Footpath: are those pedestrian routes which are located away from carriageways and not associated with routes for motor vehicles.

164 Designated Pedestrian Routes: are safe areas for pedestrians segregated from vehicle areas

165 Cycle Tracks: are routes which are intended for use by cyclists, with or without rights of way for pedestrians.

166 Cycle Lanes: are one-way lanes marked on the carriageway and reserved for use by cyclists.

167 Public Rights of Way: comprise of footpaths, bridleways and byways and provide the key to exploring much of the countryside of Leeds, whether it be for active pursuits such as walking, cycling or horse-riding, or more leisurely strolls.

168 Emergency Access Routes: are a right of way provided to a building for the use of emergency service personnel and vehicles, and provided to protect the building and its occupants.

2.2 STREET TYPES

STREET HIERARCHY

169 Streets need to accommodate various types of movement in a convenient and safe manner. The needs of pedestrians, cyclists and users of public transport who are of all ages and abilities should be prioritised. . The design of the street needs to be appropriate for its function and may vary along its length. Streets should also be designed so that they form an attractive environment, responding to their context by forming a natural hierarchy that is clear and legible to all users who share the same space.

170 This hierarchy should provide an understandable transition from the external distributor roads where movement function may be greater, to residential streets where the place function is more dominant..

171 Linked streets are encouraged to allow greater connectivity and accessibility by foot, for wheelchair users or mobility scooters and by cycle, and to avoid layouts based on long culs-de-sac [NfL Principles 16 and 17]. However, care is needed to avoid through traffic using a street as a “rat run” [NfL Principle 15 and 23]. Appropriate measures will be required to minimise the domination of the street by traffic and layouts should support the principles of Active Travel Neighbourhoods.

172 Short culs-de-sac can be popular with residents as they limit the level of traffic movement and provide opportunities for play and other street activities. Ongoing connections for pedestrians and cyclists should be provided where culs-de-sac form part of the development layout.

173 The adoptable residential street types are set out below:

Table 2-1: Adoptable Residential Street Types

Street Type 1	Connector Street	Up to 700 dwellings
Street Type 2	Local Residential Street	Up to 200 dwellings
Street Type 3	Shared Space Street	Type 3 streets should have traffic flows of no more than 100 two-way vehicular movements per hour (peak)
Street Type 4	Level Surface Street	Up to 10 dwellings
Street Type 5	Home Zone	Home Zone streets should have traffic flows of no more than 100 two-way vehicular movements in the weekday evening peak hour.

[Note: This street type numbering system is not intended to match the current "Roads and Street Works Act" (RASWA) category numbers or any Maintenance Hierarchy].

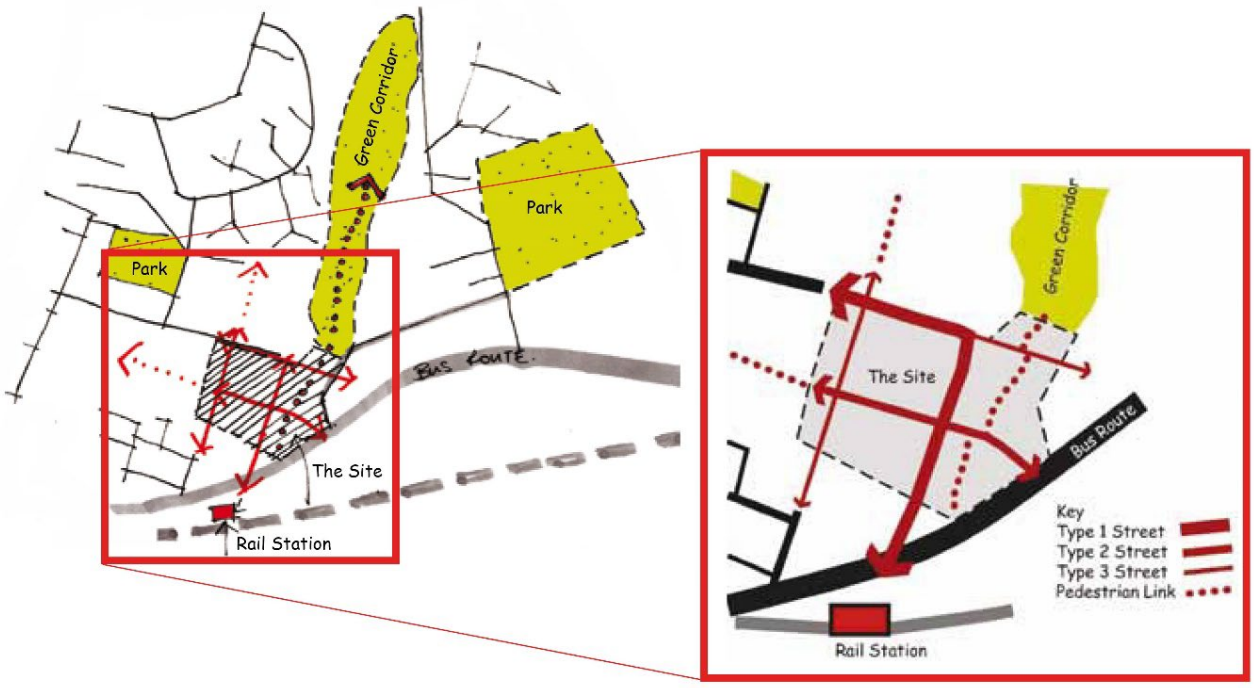


Figure 5: Street Hierarchy Example

174 Where there is the possibility that a street will serve further properties in the future, for instance, where there is an adjacent allocated site (which is to be accessed through

the first site) then the streets should be designed to the appropriate standard, or be capable of being altered in the future. No “ransom strip” or other gap should be left between the adopted highway and the site boundary to provide a durable and ‘future proof’ street layout.

175 The tables below take the number of dwellings served from a street as a starting point. The subsequent choice of design elements should reflect the wider function of the street using an assessment of both the Place and Movement requirements.

CONNECTOR STREETS – TYPE 1

176 These are the main streets that provide structure for new residential development and connect it to the surrounding urban fabric and highway network.

177 Connector Streets can serve between approximately 200 and 700 dwellings and provide a transition between the surrounding major roads and the more pedestrian dominated Local Residential Streets (Type 2). They provide the primary vehicular access to the area, and link with other street types within the new development to form the backbone of a permeable network of streets for pedestrians and cyclists. It is likely that this street type would carry bus traffic through any new development.

Table 2-2: Type 1 - Connector Streets

Number of Dwellings	Up to 700
Number of Vehicular Access Points	50 to 300 dwellings: at least two preferred. Over 300 dwellings: at least two must be provided. An emergency access does not constitute a secondary point of access.
Design Speed	20mph
Carriageway Width	Up to 300 dwellings: a minimum of 5.5m. Over 300 dwellings: 6.0m increasing to 6.75m if a bus route. Width is dependent on; types of traffic, percentage of large vehicles, plus other design considerations, with widening on bends or elsewhere where necessary. On-street parking should be accommodated in widened areas that are designed into the street layout.
Footway Width	2.0m absolute minimum (on each side of road) to increase to 3.0m or more in areas of identifiably higher levels of pedestrian activity (adjacent to schools, shops, bus stops, railway stations, etc.) Segregated provision for cyclists should be provided on Type 1 Streets (see Table *2-16* for further details).
Verge Width	Minimum 1.0m width on streets over 300 dwellings. Verges should be a minimum of $10m^2$ Minimum 3.0m width x 6.0m long if supporting trees.
Maximum length between speed restraint features	60m or 100m dependent on design speed.
Minimum forward visibilities	Light Vehicles: 25m (20mph) or 33m (25mph) dependent on design speed. HGV and Buses: 27m (20mph) or 36m (25mph) dependent on design speed.
Minimum centreline radius	35m
Direct Vehicular Access	Acceptable if it can be demonstrated that it would not cause a highway problem. Normally only allowed if vehicles do not need to reverse into the carriageway, with off-street turning space available clear of other parked vehicles.

- For vertical design requirements see Chapter 4 “Vertical Alignment” in Part 2.
- For junction requirements see Chapter 5 “Junctions and Visibility” in Part 2.
- For material and construction requirements see Appendix A, Chapter 1 “Materials and Construction”.
- For drainage requirements see Appendix A, Chapter 4 “Drainage”.
- For additional requirements refer to the “Contents” or “Index” Pages.

178 For Connector Streets serving developments of between 50 and 300 dwellings, at least two points of vehicular access are preferred to maximise accessibility, connectivity, efficient operation in emergencies and maintenance with culs-de-sac discouraged. Where more than one access is not possible due to unavoidable site constraints, a single vehicular access may be accepted providing the internal network forms a loop, with the shortest possible connection between this loop and the point of access. In such circumstances the carriageway should be 7.3m wide up to the point of the loop.

179 For Connector Streets serving over 300 dwellings, a verge or hard margin between the footway and carriageway should be provided to increase separation between vehicles and pedestrians. Tree and shrub planting in this zone will increase perception of this separation, contributing to air quality, and should result in a "Green Street" environment. Proposed planting should be taken into account in any safety audit.

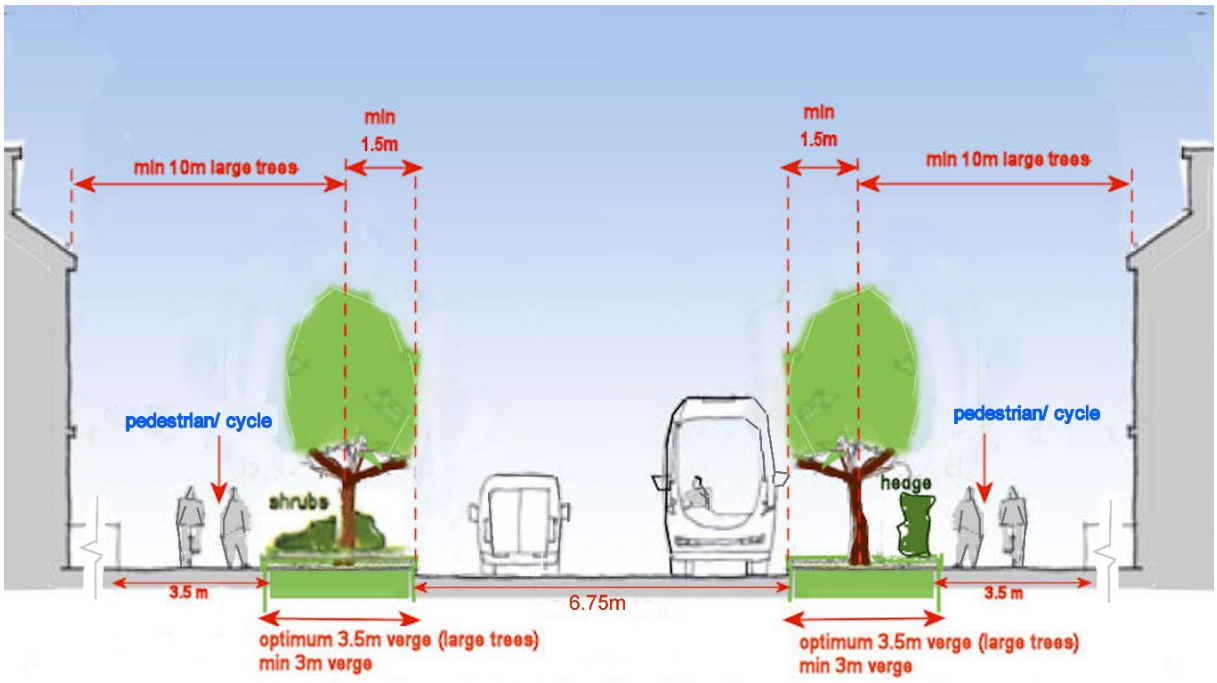


Figure 6: Cross Section of a Connector Street

180 This example shows a double-sided avenue with 3.0m-4.0m wide verges for tree planting with segregated pedestrian / cycle paths on each side. Facing dwellings set back sufficiently to avoid conflict with trees when mature in accordance with Leeds City Council Guidance (Guideline Distances from Development to Trees 2012). An element of shrub and hedging shall also be included. Reflect best practice on emerging research on the contribution of vegetation to air quality.

181 Offset dimension (both sides) from tree stem to building edge shall be a minimum of 10.0m to accommodate large, long-term species such as Lime and London Plane. There is however a 20% tolerance along the length of the connector street for a lower offset dimension of a minimum of 6.0m where smaller species can be accommodated, such as birch, cherries and mountain ash.

Figure 7: Type 1 Connector Street Grimes Dyke Example

LOCAL RESIDENTIAL STREETS – TYPE 2

182 These are general streets within residential areas which carry a wide range of movement types and provide the main setting for new homes, allowing direct access to individual dwellings.

183 These streets can serve up to 200 dwellings and may provide access directly onto the existing external network, or onto a Connector Street (Type 1). These streets may have tighter geometry and the potential for on-street parking, when designed into the street layout::

Table 2-3: Type 2 - Local Residential Streets

Number of dwellings	Up to 200
Number of vehicular access points	Up to 50 dwellings: Single access point acceptable. Where the single point of access is over a bridge, the minimum carriageway width must be 8.4m. 50 to 200 dwellings: At least two accesses preferred. Long culs-de-sac should be avoided where possible. If absolutely necessary, they should have a maximum length of 200m. Cul-de sacs should be linked by well-overlooked pedestrian routes to maximise connectivity. Turning facilities should be provided if the cul-de-sac is longer than 45m or the alignment is not straight, and if the length is greater than 100m then additional turning facilities will be required. An emergency access does not constitute a secondary point of access.
Design Speed	20mph
Carriageway Width	Minimum of 5.5m (widening possible to respond to built form and public spaces and if on-street car parking, turning from accesses, or a bus route is to be accommodated) plus widening on bends or elsewhere where necessary.
Footway width	2.0m minimum on each side of road subject to levels and type of pedestrian usage. If shared with cyclists, the criteria outlined in Table *2-16* should be followed.
Maximum length between speed restraint features	60m
Minimum forward visibilities	25m Visibilities significantly above this level should be avoided to deter excess speeds.
Minimum centreline radius	20m or based on vehicle tracking requirements
Direct vehicular access	Allowed

- For vertical design requirements see Chapter 4 “Vertical Alignment” in Part 2.
- For junction requirements see Chapter 5 “Junctions and Visibility” in Part 2.
- For material and construction requirements see Appendix A, Chapter 1 “Materials and Construction”.
- For drainage requirements see Appendix A, Chapter 4 “Drainage”.
- For additional requirements refer to the “Contents” or “Index” Pages.

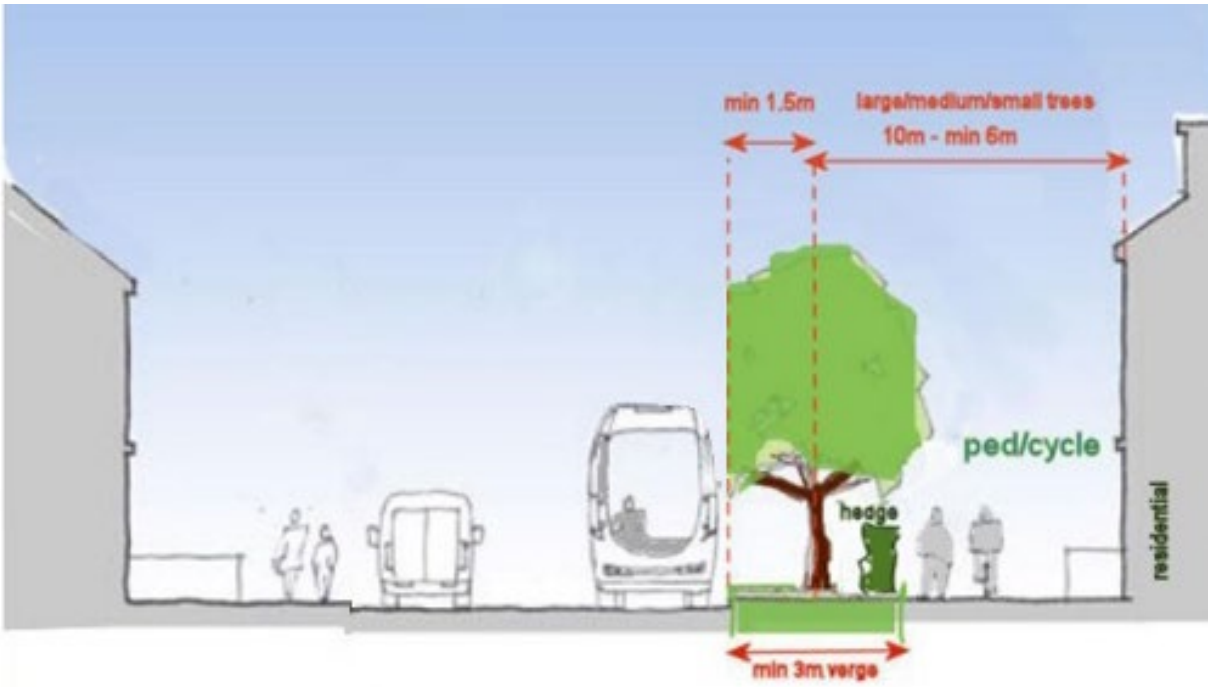


Figure 8: Cross Section of a Local Residential Street

184 One sided avenue effect with minimum 3.0m wide verges for tree planting with segregated pedestrian / cycle paths. Facing dwellings set back sufficiently to avoid conflict with trees when mature in accordance with Leeds City Council guidance (Guideline Distances from Development to Trees 2012). Offset dimension from tree stem to building edge shall be a minimum of 10.0m to accommodate large, long term species such as Lime and London Plane. There is, however, a 60% tolerance along the length for a lower offset dimension of a minimum of 6.0m where smaller species can be accommodated, such as birch, cherries and mountain ash.

Figure 9: Type 2 Local Residential Street Grimes Dyke Example

SHARED SPACE STREET – TYPE 3

185 This street type can be used on streets serving up to 100 two-way vehicular movements per hour (peak). It has shared spaces with designated pedestrian routes with very low vehicle speeds which should be self-enforcing through good design [NfL Principle 33].

186 Designated pedestrian routes of 2.0m minimum width should be provided on both sides of the street but occasionally would be acceptable on one side only subject to discussion and agreement with Leeds City Council. These routes should be designed in such a way that parking is not possible on them, and adequately provide way-finding methods which are suitable for blind and partially sighted people. Therefore, it is required that the surface materials for these streets are chosen to delineate the functions of the different parts of the highway. The routes should be provided in a contrasting coloured material and a 30mm kerb upstand with flush crossing points.

Table 2-4: Type 3 - Shared Space Streets (To be used on cul-de-sacs or secondary accesses only)

Number of dwellings	Type 3 streets should have traffic flows of no more than 100 two-way vehicular movements per hour (peak).
Number of vehicular access points	Up to 50 dwellings: Single access point acceptable. Where the single point of access is over a bridge, the minimum carriageway width must be 8.4m. 50 to 200 dwellings: Preferably two points of access. Long culs-de-sac which are not linked by well-overlooked pedestrian routes should be avoided where possible. If necessary, they should have a maximum length of 200m. Turning facilities should be provided if the cul-de-sac is longer than 45m or the alignment is not straight, and if the length is greater than 100m then additional turning facilities will be required.
Design speed	15mph
Highway width	Variable, but with a minimum overall adopted corridor width of 8.1m. On-street parking should be designed into the street layout.
Notional Carriageway width	Minimum of 5.5m (but may need widening to respond to built form and public spaces and turning from accesses, plus widening on bends or elsewhere where necessary.
Pedestrian route	2.0m minimum designated route usually on both sides of road. If only one route is accepted then a 0.6m margin should be provided on the other side.

Maximum length between speed restraint features	40m
Minimum forward visibilities	23m Visibilities significantly above this level should be avoided to deter excess speed.
Minimum centreline radius	14m or based on vehicle tracking requirements
Direct Vehicular access	Allowed

- For vertical design requirements see Chapter 4 “Vertical Alignment” in Part 2.
- For junction requirements see Chapter 5 “Junctions and Visibility” in Part 2.
- For material and construction requirements see Appendix A, Chapter 1 “Materials and Construction”.
- For drainage requirements see Appendix A, Chapter 4 “Drainage”.
- For additional requirements refer to the “Contents” or “Index” Pages.

Figure 10: Type 3 Shared Space Street

LEVEL SURFACE STREET – TYPE 4

187 Level Surface Streets Type 4 can serve up to 10 dwellings in a cul-de-sac. These have level surfaces with very low vehicle speeds, which should be self-enforcing through good design. They provide access for small groups of homes either in courtyard form or short streets up to 100m in length and expected to cater for higher levels of pedestrian and cyclist activity. Footways are not required, and therefore, the needs of different groups of people need to be considered, including disabled people, children and older people. Car parking must be given careful consideration. The surface materials of these streets chosen to delineate the functions of the different parts of the highway.

Figure 11: Type 4 Level Surface Street Millennium Village Example

Table 2-5: Type 4 - Level Surface Street

Number of dwellings	Limited to 10 in a cul-de-sac with a maximum length of 100m. Turning facilities required for lengths over 45m.
Number of vehicular access points	Single access point only. Where the single point of access is over a bridge, the minimum carriageway width must be 8.4m.
Design speed	15mph
Highway width	Variable, but with a minimum overall adopted corridor width of 6.7m. Minimum carriageway width to be 3.3m at pinch points subject to alternative provisions for pedestrians. 1.8m wide service strip to be provided within the carriageway. 0.6m minimum margin to be provided to both sides of the carriageway.
Footway width	The need for designated routes needs to be discussed with the Council.
Maximum length between speed restraint features	40m
Minimum forward visibilities	23m Visibilities significantly above this level should be avoided to deter excess speed.
Minimum centreline radius	14m or based on vehicle tracking requirements
Direct vehicular access	Allowed

- For vertical design requirements see Chapter 4 “Vertical Alignment” in Part 2.
- For junction requirements see Chapter 5 “Junctions and Visibility” in Part 2.
- For material and construction requirements see Appendix A, Chapter 1 “Materials and Construction”.
- For drainage requirements see Appendix A, Chapter 4 “Drainage”.
- For additional requirements refer to the “Contents” or “Index” Pages.

HOME ZONES – TYPE 5

188 Home Zones are residential streets in which the road space can be shared between drivers of motor vehicles and other road users, with the wider needs of residents (including people who walk and cycle, the elderly and children) in mind. The aim is to change the way that streets are used and to improve the quality of life in residential streets by making them places for people not just for traffic. Changes to the layout of street should emphasise this change of use, so that motorists understand and accept that they should give informal priority to other road users.

189 Motorists should feel that they have left the highway and have entered an area where they can expect to find people who are using the whole of the street. In essence the Home Zone should make motorists feel they are guests in a pedestrian environment and should drive accordingly. Designs that limit vehicular access into these spaces will be supported.

190 Home Zones may consist of shared spaces or level surfaces, indirect traffic routes, areas of planting, and features to encourage the use of the street. “Gateways” and regulatory signing will be needed to mark the limits of the area. In designing Home Zones full consideration of the needs of disabled people should be taken into account. The recommendations included in “Designing for Disabled People in Home Zones”, (JMU Access Partnership 2007) should be followed to ensure that the needs of disabled people are properly considered. Designated pedestrian routes through the Home Zone of 2.0m minimum width should be provided which should be provided using a 30mm kerb upstand with flush crossing points and tactile paving where required. Visually contrasting materials are required to identify the pedestrian route. Consideration should be given to way finding at each side of, and the start and end of, the pedestrian route.

191 Design guidance and other information on Home Zones, including links to related websites, is available through the Institution of Highway Incorporated Engineers at www.ihie.org.uk and www.homezones.org.uk.

192 Procedural guidance is set out within the Department for Transport’s Circular 02/2006 “The Quiet Lanes and Home Zones (England) Regulations 2006”. Home Zones shall be used only where traffic flows are no more than about 100 weekday PM peak hour vehicle movements, so the number of dwellings will vary with the location and nature of the development.

193 The statutory process for the designation of a Home Zone and the making of the associated use and speed orders requires that there is consultation with local groups, and in particular the residents of the area. While this does not present a problem with Home Zones in existing streets, there is an apparent difficulty with new build developments in that streets are normally well on the way to being built when residents begin to move in.

194 It is therefore required that an information pack is given to all purchasers, setting out general information on Home Zones, together with the key proposals for the site (including a draft wording of the use and speed orders) explaining the way in which the streets will be managed and maintained.

195 Purchasers will then be asked to sign this document, stating that they have understood and agree in principle with the Home Zone proposals. Once the streets are open to the public, Leeds City Council will carry out the formal consultation process to enable the Home Zone to be designated and the Orders made at the Developer's expense.

196 Streets designed to Home Zone standards will only be accepted if Home Zone designation is proposed and is realistically achievable.

Figure 12: Type 5 Home Zones Millennium Village Example

Table 2-6: Type 5 - Home Zones

Number of dwellings	Home Zone streets should have traffic flows of no more than 100 two-way vehicular movements in the weekday PM peak hour. The maximum number of dwellings will therefore depend on the nature and location of the development.
Design Speed	10mph
Maximum length between speed restraint features	30m
Minimum forward visibilities	23m Visibilities significantly above this level should be avoided to deter excess speeds.

- For vertical design requirements see Chapter 4 “Vertical Alignment” in Part 2.
- For junction requirements see Chapter 5 “Junctions and Visibility” in Part 2.
- For material and construction requirements see Appendix A, Chapter 1 “Materials and Construction”.
- For drainage requirements see Appendix A, Chapter 4 “Drainage”.
- For additional requirements refer to the “Contents” or “Index” Pages.
- For all other design requirements refer to the IHE Design Guidelines and discuss specific circumstances with the City Council.

PRIVATE (NON-ADOPTED) STREETS OR DRIVES

197 Any development serving more than 5 dwellings (or an existing Private Street or Drive which does or will serve more than 5 dwellings after completion of the development) should be designed to adoptable standards and offered for adoption. The Local Authority will not normally adopt developments of 5 dwellings or less of any type.

198 Developments of over 5 houses, or apartments schemes with appropriate layouts may be considered to be acceptable to be served by private shared driveways under certain specific conditions which are summarised below:

- The developer must agree with the Local Authority at an early date the acceptability of the principle of the roads remaining private;
- The developer must provide details of the long-term maintenance for the highway infrastructure – this will need to be secured via a Section 106 agreement which will be a local land charge on the development;
- The developer must provide details of how the entrance to the private development is to be defined on site;
- The developer must provide details of the information pack to be provided to the purchaser as part of the sale contract explaining the status of the road and the long-term maintenance implications; and
- The highway infrastructure must be designed and constructed to adoptable standards in all respects with the exception of the specific agreed reasons as to why the roads are to remain private.

199 Whilst Private Streets or Drives can allow the introduction of a different standard of materials, lighting, etc., than may be acceptable with an adopted street, the following potential implications should be taken into account:

- Access Rights;
- Future maintenance liabilities;
- Public liabilities;
- Street cleansing;
- Drainage;
- Public lighting would not be installed;
- The Local Authority would have no obligations/maintenance responsibility; and
- The Police would have no powers to remove obstructions.

200 A Private Drive serving 5 houses or less should have a minimum width of 3.3m, with the first 10m having a minimum width of 4.8m if access is taken from either a Type 1 Connector Street, Type 2 Local Residential Street or a more major route to allow two-way passing (subject to tracking). No footway or service margin is required, with services being located within the driveway. The horizontal alignment and any need for passing places are based on practical requirements and vehicle tracking where necessary. The requirements for a refuse vehicle to be able to get within 25m of all drive-ends or communal storage locations and for a fire tender to get within 45m of all front doors need to be considered, and on-site turning facilities provided where necessary.

201 Private Drives must incorporate adequate visitor car parking provision in addition to private curtilage parking, plus pedestrian and cycle linkages to ensure permeability.

INDUSTRIAL DEVELOPMENTS

202 Industrial roads are categorised as Major or Minor, with the same layout standards being applicable in each case. The difference is the likely number of Large Goods Vehicles and therefore the construction details vary. Where a Minor Industrial Road is intended to serve a mainly office development (with a very low number of Large Goods Vehicles) there may be flexibility to vary certain requirements e.g. radii and turning facilities.

203 Minor Industrial Roads may serve industrial or commercial developments of up to 8 hectares (or an industrial building with a gross floor area of 40,000m^2), and direct frontage access to individual premises is allowed.

204 Major Industrial Roads may serve industrial or commercial developments of up to 20 hectares. Above this level roads should be designed in accordance with the Design Manual for Roads and Bridges. Commercial vehicles in residential areas are obviously undesirable, and for this reason the design of a large-scale industrial estate should try to produce a layout which is self-contained and which segregates industrial from local/residential traffic. It should, however, be acknowledged that pedestrian and cycle movements are likely to be just as numerous on industrial estate roads as people travel to their place of work, and must be accommodated accordingly.

205 Small scale direct individual access is not to be encouraged on Major Industrial Roads, and a proper hierarchy should be used within an estate so that this form of access is taken from a Minor Industrial Road.

Table 2-7: Industrial Roads

Design speed	25mph
Carriageway width	Minimum of 7.3m unless few Large Goods Vehicles likely with widening possibly needed on bends or elsewhere or to accommodate right turning at junctions
Footway width	2.0m minimum on each side of road or 3.5m minimum if shared with cyclists. Segregated provision for cyclists should be provided on major industrial roads in large developments
Maximum length between speed restraint features	120m
Minimum forward visibilities	33m absolute minimum
Minimum centreline radius	35m

- For vertical design requirements see Chapter 4 “Vertical Alignment” in Part 2.
- For junction requirements see Chapter 5 “Junctions and Visibility” in Part 2.
- For material and construction requirements see Appendix A, Chapter 1 “Materials and Construction”.
- For drainage requirements see Appendix A, Chapter 4 “Drainage”.
- For additional requirements refer to the “Contents” or “Index” Pages.

Figure 13: Industrial Road Thorpe Park Example

206 Some developments propose the formation of small groups of industrial units designed for occupation by businesses employing 1 to 2 members of staff.

207 The function of these units is to provide a purpose-made “industrial nursery” for businesses, from which a small company can grow and become established. Once this purpose is fulfilled it is expected that larger premises will be needed by the company, and on relocation of the business, the nursery unit may then be re-let.

208 It is usual for the industrial units to be up to approximately 150m² in floor area, and generally of a system-built construction, sited around a central turning area. Each unit has its own forecourt which acts as both an unloading/loading area and as a casual car parking space. Where additional staff car parking is required this is normally provided in a communal area, conveniently located adjacent to the turning head. In order for this Industrial “Courtyard” to properly function a minimum of two staff car parking spaces must be provided to each unit.

209 The shared turning head shall be a minimum of 20m x 20m to enable either a 10.0m rigid or 16.5m articulated vehicle to turn clear of the unit forecourts.

210 For industrial roads/developments, turning heads need to accommodate all sizes of vehicles. Some possible layouts are shown below:

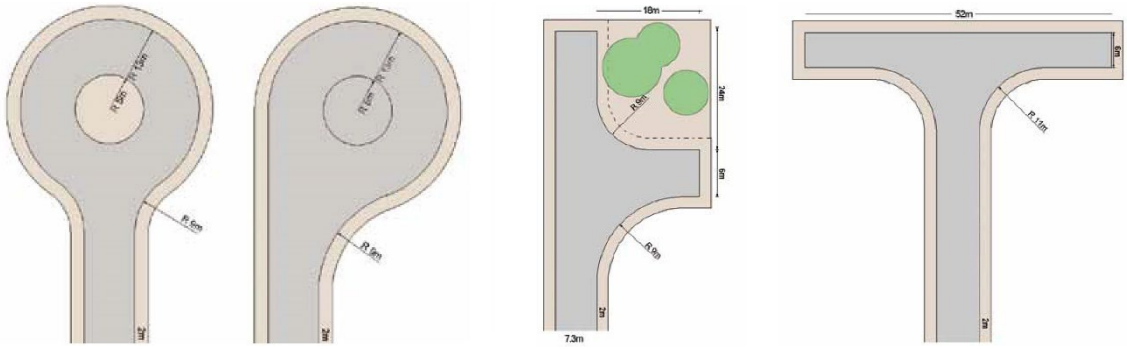


Figure 14: Possible Turning Head Layouts

211 All of the turning head arrangements shown here are indicative only and should not be used as the only solutions – these turning areas are important in the adequate functioning of an area but their design must be balanced against other requirements such as environmental amenity. Wherever possible they should be incorporated within ‘spaces’, not constructed purely as turning heads provided that turning can take place, clear of any parked vehicles.

212 Each unit shall have a forecourt of minimum depth 7.0m, and a 600mm overhang strip shall be provided around the extent of the adoptable or private industrial road. Where units of a greater floor area are proposed, forecourt depths must be increased to accommodate the associated larger vehicles expected to visit the development. The table below indicates the Unit Floor Area to Forecourt Depth requirement.

Table 2-8: Unit Floor Area to Forecourt Depth Requirements

FLOOR AREA INDUSTRIAL UNIT (m^2)	FORECOURT DEPTH (m)
Up to 50	7
51 to 150	10
150 and above	15

217 Where a definite pedestrian movement is created either from the existing highway into the site, or within the courtyard (from say communal car park toilet block to units) a separate footway system shall be provided.

218 Private areas such as car parking bays and forecourts shall be properly laid out drained and hard surfaced in all cases. Various materials are considered acceptable as a running surface (see Appendix A, Chapter 1), however, loose materials such as hard core, crushed stone or gravel have practical disadvantages, and therefore, will not be accepted.

219 The provision of security gates to an industrial courtyard is not permitted in the case where an adoptable public highway is proposed but may be permissible in the case of a private courtyard. Where gates are proposed they must be set back a minimum of 15m from the highway boundary (back of footway) to allow commercial vehicles to draw off the highway.

220 Large numbers of industrial units sited around private courts can give rise to practical working difficulties and possible neighbour conflict over which there is no statutory control. Except, therefore, in the case of small numbers of industrial units or managed developments, an adoptable highway system should be used in preference to a private court.

MIXED USE SCHEMES

221 In principle, mixed use schemes will be encouraged, and where a mixed-use scheme has been accepted by the Local Authority as being appropriate, care will need to be taken in the design of such schemes, where there is the potential for a greater degree of pedestrian-vehicular conflict than usual. This may require additional speed restraints or other measures to ensure the safety of vulnerable road users, then Part 2, Chapter 6 "Speed Restraint", should be referred to for design guidance.

222 Type 1 Connector Streets can be designed to accommodate a mix of residential and commercial traffic where necessary. The carriageway widths and other standards will be partly dependent on the percentage of larger vehicles which are expected.Such a Street Type will be appropriate where the peak hour traffic flow is not expected to exceed that which could be generated by 700 dwellings (i.e. in the order of 455 two-way peak hour vehicle movements). Above this level the Design Manual for Roads and Bridges should be used, although this should be discussed with the City Council. The point at which a mixed-use scheme should be designed as an Industrial Road should also be discussed with the City Council.

223 For mixed use schemes (i.e. residential and commercial served from the same access) highway and street design standards need to be sufficiently flexible to accept such access streets for adoption.

2.3 CARRIAGEWAY WIDTHS

224 The ease, and hence the speed, with which vehicles may move along carriageways depends in part upon the tolerances available either between vehicles or between vehicles and kerbs. On the external highway network where ease of traffic flow is of high priority and where drivers can proceed at speeds of above 40mph, carriageway widths need to be in accordance with the recommendations given in the Design Manual for Roads and Bridges.

225 On residential streets, where traffic flows are light and where journeys are starting or ending, drivers may be expected to accept smaller tolerances consistent with the aim of restraining vehicle speeds and encouraging careful driving.

226 Whether or not smaller tolerances will cause unacceptable delay, reduce safety, or result in damage to footways and verges, will depend upon the types and volumes of traffic, the design of the carriageway surrounds and the distances over which drivers

have to proceed. Such factors may vary considerably within a layout. The tolerances provided by various carriageway widths are set out below.

227 A 5.5m width allows all vehicles to pass each other at low speed. Given the infrequency of large vehicles on residential streets, this width will normally be the maximum required to cope with residential traffic, for up to 300 dwellings. Below 5.5m the carriageway will be too narrow for the free movement of large service vehicles such as pantechnicons. Where such vehicles are allowed access passing places may be required. The carriageway width required between passing places will then depend upon the combinations of vehicle types expected; the frequency with which vehicles may meet each other and the delay which may be caused to traffic movement. These factors may be expected to vary with traffic types and volumes.

228 A Private Drive serving 5 dwellings or less should have a minimum width of 3.3m, with the first 10m having a minimum width of 5.5m if access is taken from either a Type 1 Connector Street, Type 2 Local Residential Street or a more major route to allow two-way passing (subject to tracking). No footway or service margin is required, with services being located within the driveway. Private drives of this width do not cater for on-street parking or manoeuvring from private access points. It is suggested that 3.3m be regarded as the minimum width between passing places on a private road.

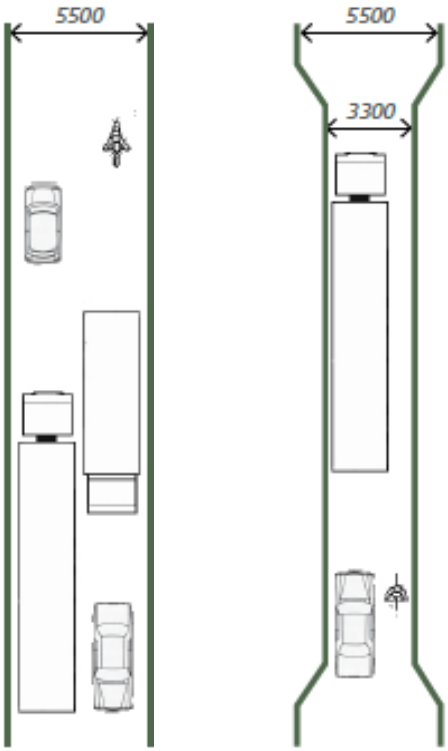


Figure 15: Minimum Carriageway Widths (various locations)

229 Generally, carriageway widening is normally needed on bends which turn through more than 10 degrees. However, the need for widening may vary according to the amount of traffic on the road and may also be influenced by the amount of forward visibility provided between passing places on each side of the bend. On very lightly trafficked roads, the chances of two large service vehicles needing to pass on the bend must be sufficiently remote to make widening unnecessary. Similarly, where adequate forward visibility is provided between oncoming vehicles it will be possible for large vehicles to wait until the bend is clear and to use part of the opposite lane when turning.

230 Where carriageway incorporates a bridge, subway, underpass and/or culvert, a standard single carriageway should have a clear minimum width of 7.3m (kerb to kerb) regardless of road type, which gives a standard lane width of 3.65m (Refer to DMRB CD 127).

2.4 VERTICAL ALIGNMENT

231 Wherever possible streets should follow the topography of the site to avoid an unnatural appearance, however there will be occasions when this is not possible for safety or design reasons. The introduction of cuttings or embankments in such circumstances must be well integrated into the local topography, with any retaining structures relating to the overall development scheme palette of materials. Cuttings and embankments battered back to a stable angle and landscaped are normally preferable to the introduction of retaining structures.

232 The desirable maximum carriageway longitudinal section gradient for all adoptable Street Types is 1 in 20 (5%). If this is not achievable then the specific circumstances should be discussed with the City Council.

233 The gradient of the non-priority route on the approach to a junction should be a preferred gradient of 1 in 40 (2.5%) for the initial 10m length with an absolute maximum of 1 in 25 (4%).

234 Where carriageway gradient exceeds 1 in 20 (5%) then special consideration needs to be given to providing separate pedestrian routes at an acceptable gradient.

235 The minimum general gradient for adequate drainage is normally 1 in 100 (1.0%) but between 1 in 100 (1.0%) and 1 in 150 (0.67%) channel blocks are required. This relaxation is not appropriate for either Type 3 Shared Surface Streets or Type 4 Level

Surface Street. The minimum gradient on a block paved carriageway is 1 in 120 (0.83%).

236 The preferred carriageway crossfall is 1 in 40 (2.5%) although where there is sufficient design justification (e.g. to minimise impact on adjacent trees) this can be increased to an absolute maximum of 1 in 25 (4%). On super elevated carriageways crossfalls of 1 in 40 (2.5%) from the high side to the centreline, and 1 in 25 (4%) from the centreline to the low side, should be provided to reduce the visual impact of the crossfalls, unless an alternative acceptable solution is proposed.

237 Where a change of gradient occurs, vertical curves will be required at sags (Valleys) and crests (Summits) for driving comfort, and at crests to provide adequate forward visibility.

238 The maximum gradient of drives to individual garages is 1 in 12.5 (8%).

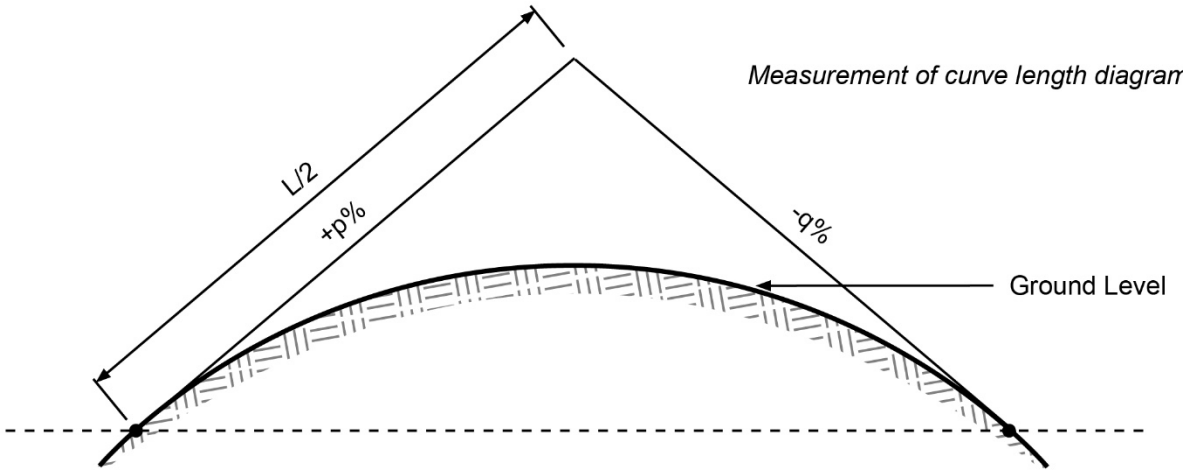


Figure 16: Measurement of Curve Length Diagram

239 The required length of the curve is calculated using the formula L=KA (see diagram above), where L is the length of the curve (in metres), A is the algebraic difference in gradients (expressed as a percentage), and K is taken from the following table:

Table 2-9: Minimum 'K' Value for each Street Type

STREET TYPE	DESIGN SPEED (MPH)	MINIMUM K VALUE	MINIMUM CURVE LENGTH
Type 1	25	6.5	30m
Type 2	20	3	20m
Type 3	15	2	20m
Type 4	15	2	20m
Type 5	10	1	15m

240 The recommended slope for car park ramps is as given in IStructE Design Recommendations for Multi-storey and Underground Car Parks.

VERTICAL CLEARANCES

241 Bridges and highway structures shall be designed, constructed, and maintained to provide a minimum standard headroom above the paved width, verges and central reserve in accordance with Table 4.1 and Table 4.3 of DMRB CD 127 Cross-sections and headrooms. A minimal vertical clearance of 4.2m will be allowed for Type 3 streets where access is via an archway. Further advice on vertical clearance is included in the Design Manual for Roads and Bridges CD 127 "Cross Sections and Headrooms".

2.5 JUNCTIONS AND VISIBILITY

PRINCIPLES

242 The geometry of new junctions either onto the existing external highway network or within the development itself must take into account pedestrian and cycle movements as well as the type of traffic on the minor route, and also the existing or likely future traffic flows and speeds on the major route.

243 The number of new accesses, junctions, and private means of access will be restricted in the vicinity of sites which generate high pedestrian flows (e.g. schools) and those which are considered acceptable should not involve reversing manoeuvres onto or off the street.

244 Junctions should be limited in size to reduce vehicle turning speeds and minimise crossing distances for pedestrians, subject to safe vehicle tracking. Pedestrian refuges should be provided where more than 2 traffic lanes need to be crossed.

245 General principles:

- Junctions should be avoided near the crest of a street, or on a bend; and
- The minor route should normally meet the major route at right angles, although the minor route may deviate by up to 10 degrees where it will not adversely affect vehicle swept paths.

246 For speed limits of 30mph or less, visibilities set out Table 2-10 will apply in the following circumstances:

- Within new residential developments.
- At, the access junction onto external highway network, where the major route meets all of the following in the vicinity of the junction:
    - It is within a built-up area.
    - The eighty-fifth percentile speed is 37mph or less.
    - The place function of the street is more important than the movement function, for Primary Distributer Roads and Strategic Routes, where movement is especially important, see map at Appendix B

247 The question of whether a particular location is “built up” will need to be discussed with the City Council, but in general terms it relates to an area where there is development on at least one side of the road or street, with accesses, junctions and other features which will influence driver behaviour. The definition of “primary distributor road” and

"strategic route" is based on the City Council's maintenance hierarchy, with the routes currently classified being set out in Appendix B.

248 In all other circumstances the visibility guidelines set out in Table 2-11 or 2.12 should be utilised for priority junctions unless otherwise agreed by the City Council. For non-priority and other junctions, the design guidance will be as set out in the Design Manual for Roads and Bridges.

MEASUREMENT OF SPLAYS

249 The distance back along the minor arm from which visibility is measured is known as the X distance. It is generally measured back from the 'give way' line or an imaginary 'give way' line if no such markings are provided. This distance is measured along the centreline of the minor arm for simplicity, but in some circumstances, it will be more appropriate to measure it from the actual position of the driver, e.g. where there is a wide splitter island on the minor arm.

250 The Y distance represents the distance that a driver who is about to exit from the minor arm can see to his left and right along the entire width of the carriageway. It is measured along the nearside kerb line of the main arm, despite the wheel track of a vehicle being a distance from the kerb line. The measurement is taken from the point where this line intersects the centreline of the minor arm unless there is a splitter island in the minor arm.

251 When the main alignment is curved and the minor arm joins on the outside of a bend, another check is necessary to make sure that an approaching vehicle on the main arm is visible over the whole of the Y distance. This is done by drawing an additional sight line which meets the kerb line at a tangent.

252 Some circumstances make it unlikely that vehicles approaching from the left on the main arm will cross the centreline of the main arm and opposing flows may be physically segregated at that point. If so, the visibility splay to the left can be measured to the centre line of the main arm.

253 In some circumstances offside obstructions may reduce the envelope of visibility to an unacceptable level. The impact of obstacles needs to be fully considered, such as trees and street lighting columns, should be assessed in terms of their impact on the overall envelope of visibility. In general, occasional obstacles to visibility that are not large enough to fully obscure a whole vehicle or a pedestrian, including; a child, wheelchair user or mobility scooter, will not have a significant impact on road safety.

254 Checking visibility in the vertical plane is carried out to ensure that views in the horizontal plane are not compromised by obstructions such as the crest of a hill, or a bridge at a dip in the road ahead. It also takes into account the variation in driver eye height and the height range of obstructions. Eye height is assumed to range from 1.05m (for car drivers) to 2.0m (for lorry drivers). Drivers need to be able to see obstructions 2.0m high down to a point 600mm above the carriageway. The latter dimension is used to ensure small children can be seen.

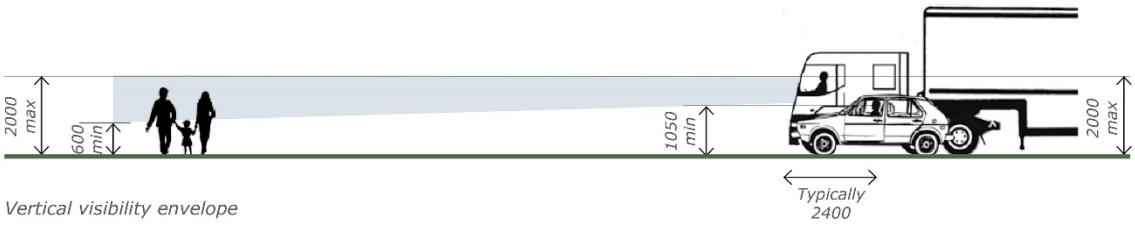


Figure 17: Vertical Visibility Envelope

255 The result of applying the X and Y distances, along with the vertical plane is to provide an envelope of visibility that enables the whole of the carriageway to be seen by the driver.

256 The measurement of X and Y distances is shown on the diagrams below. All land within visibility splays is expected to be adopted to ensure long term provision and to guarantee its maintenance.

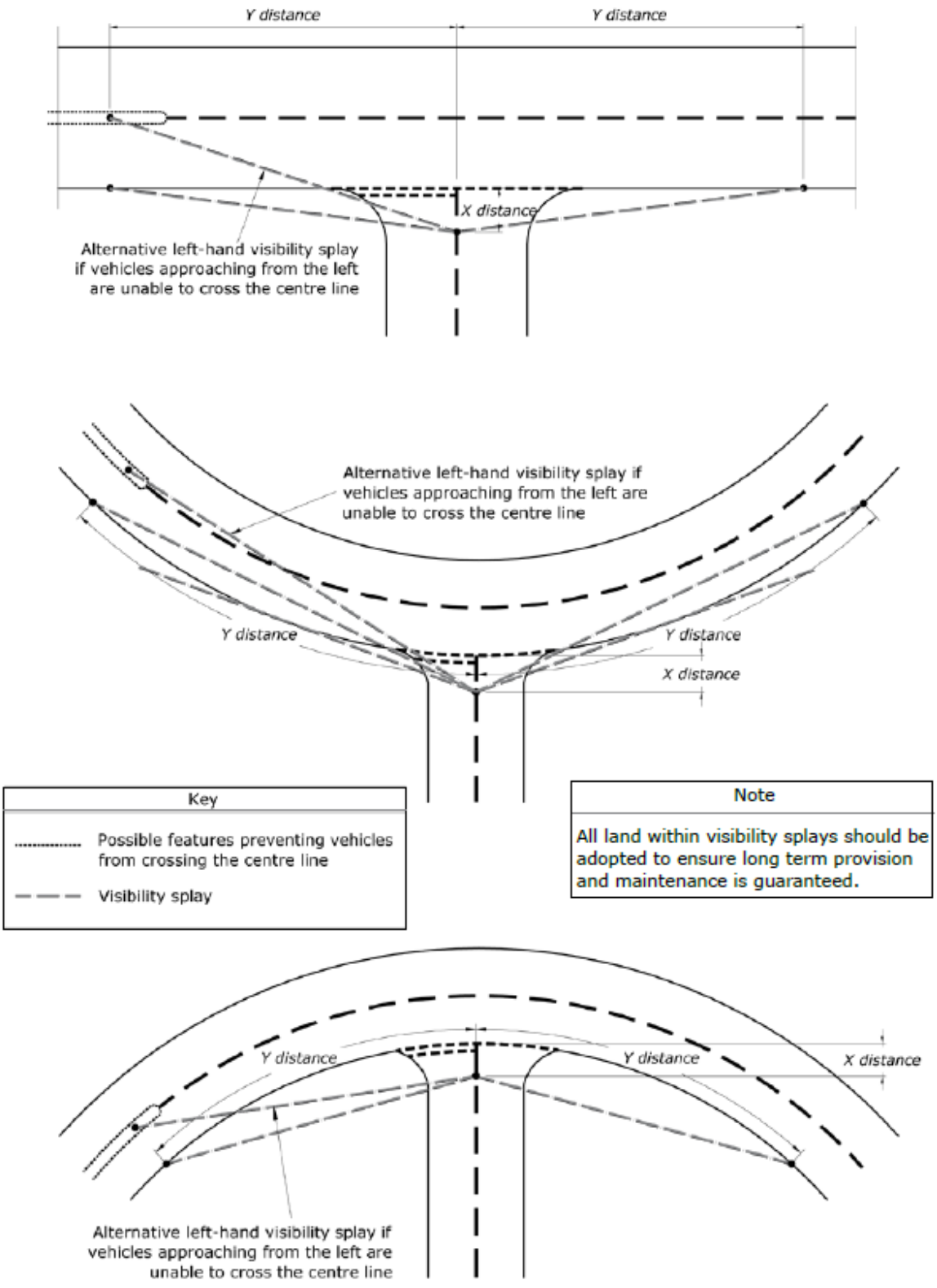


Figure 18: Diagrams Displaying the Different Measurement of Splays

X Distance

257 An X distance of 2.4m should normally be used in most built-up situations, as this represents a reasonable maximum distance between the front of the car and the driver's eye. Using an X distance more than 2.4m is not generally required in built-up

areas. Longer X distances enable drivers to look for gaps as they approach the junction. This increases junction capacity for the minor arm, and so may be justified in some circumstances, but it also increases the possibility that drivers on the minor approach will fail to take account of other road users, particularly pedestrians and cyclists. Longer X distances may also result in more shunt collisions on the minor arm. TRL Report No. 184 found that collision risk increased with greater minor-road sight distances. However, an X distance of 4.5m will only be considered and required, where there is likely to be either a capacity issue or for the safe egress of larger and longer vehicles.

258 A minimum of 2.0m may be considered in some very lightly-trafficked and slow-speed situations, but using this value will mean that the front of some vehicles will protrude slightly into the running carriageway of the major arm and is therefore normally only considered for individual dwellings off lower order roads. Account must be taken of the ability of drivers and cyclists to see this overhang from a reasonable distance, and to manoeuvre around it without undue difficulty.

Y Distance

259 The Y distance should accord with the table below. For intermediate speeds, the next highest speed appearing in the table should be utilised or be derived / calculated from the MfS formula as measured eighty-fifth percentile speeds.

Table 2-10: Visibilities Derived From "Manual for Streets"

KPH	16	24	32	40	48	60
MPH	10	15	20	25	30	37
"Y" DISTANCE (M)	23*	23*	25	33	43	59

**Below 20m shorter SSDs themselves will not achieve low vehicle speeds: speed reducing features will be needed. 23m represents a 20m SSD plus bonnet length allowance.*

260 For accesses onto the external highway network which do not meet the criteria set out in paragraph 246, the following Y-distances should be utilised:

Table 2-11: If Speeds Known

MAJOR ROUTE SPEED (KPH)	120	100	85	70	60	50	40	30
MAJOR ROUTE SPEED (MPH)	75.0	62.5	53.1	43.8	37.5	31.3	25.0	18.8
"Y" DISTANCE (M)	295	215	160	120	90	70	45	33

Table 2-12: If Speeds Unknown

SPEED LIMIT (MPH)	70	60	50	40	30	20
"Y" DISTANCE (M)	295	215	160	120	90	45

Notes:

a) Table 2-11 should be used where the actual eighty-fifth percentile speed of vehicles is known.

b) If speeds are unknown, then the speed limit in Table 2-12 should be used.

c) Where it can be shown that vehicle speeds will be contained to either 30mph or 20mph, the respective major road 'y' distance can be amended to 60m and 33m respectively.

d) Relaxations may be considered if the full recommended standards are not achievable.

e) Traffic calming measures or a reduction in the speed limit would not normally be considered to be appropriate, if proposed solely to achieve the necessary visibility splays.

261 Where a cycle track joins a carriageway, an appropriate x-distance must be provided, with a desirable minimum of 4.5m, absolute minimum 2.4m.

262 For visibility splay guidance relating to pedestrian/vehicle conflict at driveways see paragraph 352 and Figure 37.

JUNCTION LAYOUTS

263 Recommended radii and visibilities are as follows:

Table 2-13: Recommended Radii and Visibilities

PRIORITY ROUTE	**NON-PRIORITY ROUTE**	**RADIUS [SEE NOTE (A)]**	**X-DISTANCE [SEE NOTE (B)]**	**Y-DISTANCE [SEE NOTE (C)]**
EXTERNAL ROAD NETWORK	Type 1	10m	2.4m or 4.5m	See note (c)
	Type 2	10m	2.4m or 4.5m	See note (c)
	Type 3	See para 264		
TYPE 1	Type 1	6m	2.4m	33m (or 25m)
	Type 2	6m	2.4m	33m (or 25m)
	Type 3	See para 264	2.4m	33m (or 25m)
TYPE 2	Type 2	6m	2.4m	25m
	Type 3	See para 264	2.4m	25m
TYPE 3	Type 3	See para 264	2.4m	23m
	Type 4	See para 264	2.4m	23m
	Type 5	See para 264	2.4m	23m
TYPE 4	Type 3	See para 264	2.4m	23m
	Type 4	See para 264	2.4m	23m
	Type 5	See para 264	2.4m	23m
TYPE 5	Type 5	Dependent on tracking	2.4m	23m
EXTERNAL ROAD NETWORK	Major Industrial Road	15m	4.5m or 2.4m	See note (c)
	Minor Industrial Road	15m	4.5m or 2.4m	See note (c)
MAJOR INDUSTRIAL ROAD	Major Industrial Road	15m	2.4m	33m
	Minor Industrial Road	10m	2.4m	33m
MINOR INDUSTRIAL ROAD	Minor Industrial Road	10m	2.4m	33m

264 Notes:

(a) Radii are typical values but are subject to variation depending on route types and widths. The 15m Industrial radii can be reduced if the development comprises mainly offices. As a principle, radii should be minimised to assist pedestrians, and should be checked using vehicle tracking. Copenhagen style crossings that prioritise pedestrians and cyclists on the major route will be encouraged.

(b) The x-distance will depend on the level of development proposed. An x-distance of 4.5m will only be required where either capacity is an issue or the safe egress for larger and longer vehicles. Consideration should also be given to the impact of the x-distance on the built form.

(c) The y-distance is dependent on measured eighty-fifth percentile speeds if they are available. If not, then the existing speed limit or the design speed of the road should be used. Any reductions in the normal y-distance will only be considered if appropriate speed restraint measures are proposed, they form part of a wider scheme, and are considered to be appropriate. Reference should be made to the Table 2-10, Table 2-11 and Table 2-12 for appropriate visibilities at different speeds.

(d) Junctions layouts to accommodate cycle routes should accord with LTN1/20.

265 The junction into a Type 3, 4 and 5 street can be any of the arrangements shown below. Option A should be used where there is a need to get vehicles off the priority route where the speed limit is 30mph or above as quickly as possible and may have a verge. Option A should also be used for the change to a Type 3, 4 and 5 street along a stretch of road. Other options that prioritise pedestrian and cycle movement will be considered but must include a ramped level change between the external network, Type 1 or 2 streets and the Type 3, 4 and 5 streets. Such pedestrian routes and footways should be a bituminous surface.

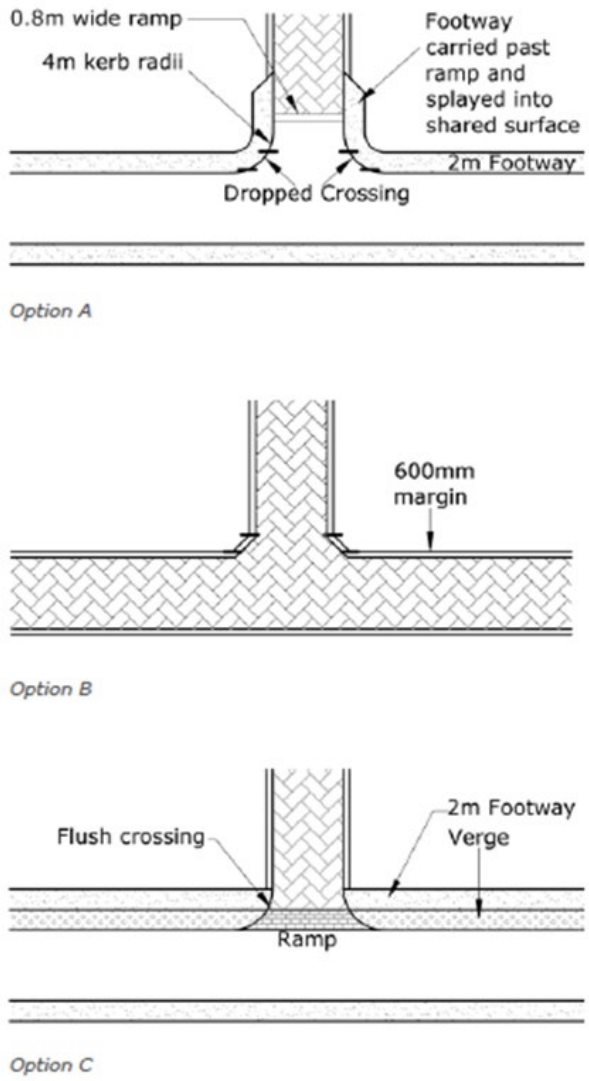


Figure 19: Junctions into a Type 4 Level Surface Street

266 The junction of a Private Drive onto a Type 1, 2, 3, 4 or 5 Street should be formed using a dropped crossing. On higher standard routes 4.0m minimum radii should be provided. Where access is taken from a Type 1 and 2 Street or a higher standard route, the initial 10m section of Private Drive should be 4.8m wide minimum.

267 An adoptable visibility zone should be provided for drivers turning left into a minor route, to enable them to view potential hazards. The required visibility radii, tangential to the kerb, for different junction angles and kerb radii, are as follows:

Table 2-14: Visibility Radius for each Kerb Radius

JUNCTION DEFLECTION (DEGREES)	**VISIBILITY RADIUS FOR EACH KERB RADIUS**		
	4m	6m	10m
80	10m	11m	19m
90	9m	10m	19m
100	8m	9m	19m

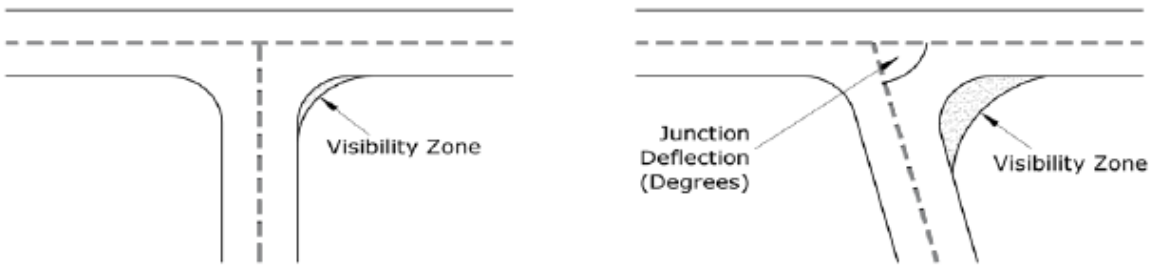


Figure 20: Visibility Zones

MEASUREMENTS OF FORWARD VISIBILITY (ALL STREET TYPES)

268 Forward visibility should be measured in accordance with the following diagram:

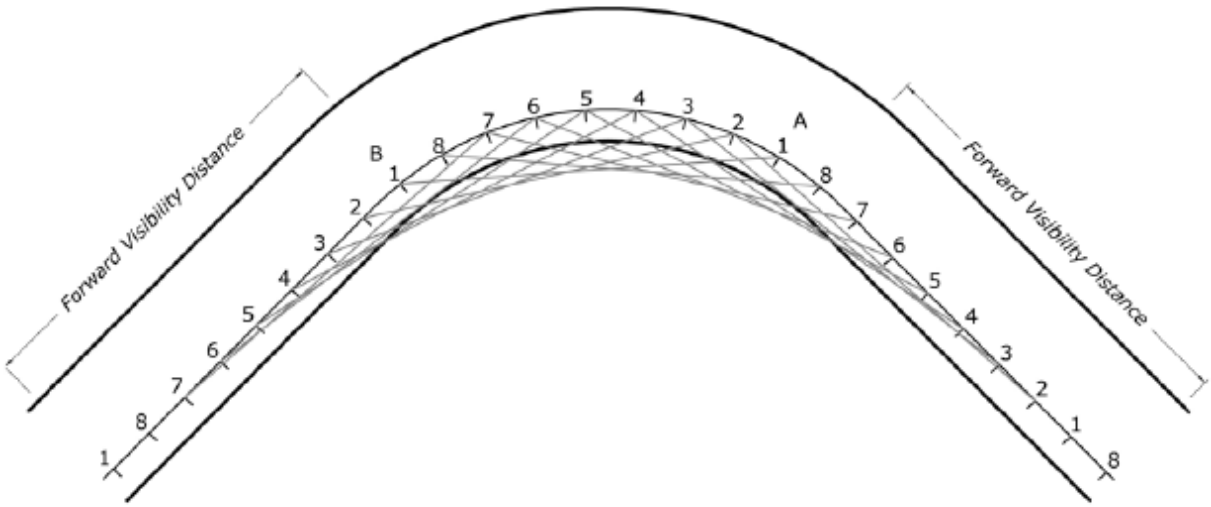


Figure 21: Measuring Forward Visibility Envelope

269 To construct a forward visibility envelope:

1) A line should be drawn parallel to the inside kerb, in the centre of the nearside lane, to represent the path of the vehicle;
2) The required forward visibility distance for the appropriate Street Type should be identified and measured back along the vehicle path from tangent point A;
3) The forward visibility distance should then be divided into equal increments of approximately 3.0m, and the increment points numbered in sequence;
4) The same forward visibility distance should then be repeated around the curve, finishing at a full forward visibility distance beyond tangent point B; and
5) The area to be kept clear of obstructions to visibility should then be constructed by joining points of the same number together (i.e. 1 to, 2 to, etc.).

270 The distance between the driver and the front of the vehicle is typically up to 2.4m which is a significant proportion of shorter stopping distances. Therefore, the recommended forward visibility distances include a 2.4m allowance for this factor.

JUNCTION SPACING

271 Minimum spacings between side streets are as follows:

Table 2-15: Minimum Junction Spacings

PRIORITY ROUTE	**DESIGN SPEED OR SPEED LIMIT (mph)**	**MINIMUM JUNCTION SPACINGS**	
		CONSECUTIVE	STAGGERED*
EXTERNAL NETWORK	40mph Speed Limit 30mph Speed Limit	90m 60m	45m 30m
TYPE 1	25mph Design Speed	45m	22.5m
TYPE 2	20mph Design Speed	33m	0m
TYPE 3	15mph Design Speed	To suit circumstances	0m
TYPE 4	15mph Design Speed	To suit circumstances	0m
TYPE 5	10mph Design Speed	To suit circumstances	0m
MAJOR INDUSTRIAL ROAD	30mph Speed Limit	60m	30m
MINOR INDUSTRIAL ROAD	30mph Speed Limit	60m	30m

**Notes:*

a) Right / left staggered junctions are preferred, as they generate fewer conflicting movements.

b) Priority crossroads will be allowed on Type 2, 3, 4 and 5 streets.

c) Raised plateaux are an acceptable feature at a crossroads.

2.6 SPEED RESTRAINTS

OVERVIEW

272 To ensure that the design speeds identified for each type of street are not exceeded, it is necessary to design speed restraint measures into the development. If these are required, these should be designed from the beginning of the process, and not introduced as an afterthought. For speed restraint on bus routes the preference from the bus operators is for horizontal rather than vertical deflection.

273 A driver's perception of a safe speed is also materially affected by the spacing, form and proximity of the buildings served by the street, plus the surface materials used and the effective use of hard and soft landscape elements. Wherever possible 'natural' speed reducing features, which respond to the built form and layout of a development, should be used to prevent the traffic infrastructure dominating the visual appearance of the street. Closing speeds need to be taken into account in locations where the carriageway is not wide enough to accommodate two-way passing of vehicles.

274 For all the following speed restraint features on new layouts it is not intended to sign the features. Therefore, over-engineered layouts requiring excessive signage will not be accepted on new developments.

275 A mini-roundabout will not be accepted as a speed restraint measure.

276 The design of speed restraint features requires consultation with emergency and public transport services. The Designer proposing the features should carry out this consultation and provide consultation responses with the application.

277 Although not exhaustive, typical examples of speed restraint measures which may be considered appropriate are set out below. Forward visibilities should not be so excessive as to encourage high vehicle speeds. Speed restraint features should also fit in with the design concept.

CHANGES IN HORIZONTAL ALIGNMENT

i. **Speed Control Bend**s – These are applicable on all Street Types. These should be a specific and obvious speed restraint feature, with the bend being tighter than the normal recommended minimum centreline radius for the street type, down to an absolute minimum centreline radius of 7.5m. The full forward visibility for the appropriate design speed should still be provided. The deflection angle should be greater than 60°. It must be demonstrated through vehicle tracking that a designated vehicle (e.g. Fire Appliance or refuse vehicle) can utilise the street with the tracking speed to be 5mph below the normal design speed for the street, and due account must be taken of reverse curves.

ii. **Carriageway Narrowing** – Carriageways can be narrowed over short lengths for a Type 2 Local Residential Street, Type 3 Shared Space Street, Type 4 Level Surface Street or Type 5 Home Zone to a minimum of 3.3m between kerbs with appropriate forward visibility. They should take account of servicing and parking requirements and could include a cycle by-pass. Road narrowing's are most effective when they relate to a shift in the building line or a change in tree planting along the street. A design must show how vehicles are to be prevented from overriding landscaped areas or impacting on trees.

VERTICAL DISPLACEMENT MEASURES

i. **Junction Speed Tables** – These are applicable on Type 2 Local Residential Streets. They can be constructed in materials that differ from the main carriageway, and wherever possible should be aligned with pedestrian desire lines to accommodate a pedestrian crossing area, to create a more 'natural' and logical feel to the traffic system. Upstands or abrupt changes in gradient must not be provided, to avoid creating a risk or discomfort to cyclists. If necessary, bollards can be installed and the footway increased to 2.4m wide to protect pedestrians and prevent parking on the footway. However, the provision of bollards should be minimised to essential locations for pedestrian safety only.. The maximum height of a speed table should be to the top of the kerb, subject to a constructed maximum of 100mm, a maximum length of 6m, with a preferred ramp gradient:

   a. On Type 2 streets of 1 in 15 (6.7%).
   b. On a bus route of 1 in 18 (5.5%).

Figure 22: Junction Speed Table Grimes Dyke Example

ii. **Ramps** – These form the standard feature at the entrance to Type 3 Shared Space Streets, and Type 4 Level Surface Street. They can be combined with a change in material to emphasise the shift in priority towards pedestrians. Type 3 and 4 streets have a preferred entrance ramp gradient of 1 in 12 (8.3%).

Figure 23: Ramps Example Grimes Dyke

iii. **Speed Cushions** – Generally in the order of 1.7m to 1.9m wide, speed cushions allow the front and rear wheels of HGVs, buses and larger emergency vehicles to straddle the raised area. Cars cross the cushions with at least one wheel of each axle on the cushion whilst allowing cyclists to pass unhindered. Some high-sided vehicles may be caused to tilt, so street furniture, including lighting, must be set to the rear of the footway. Connections to private driveways must be avoided within the area occupied by a speed cushion. Parking controls may be needed in conjunction with cushions to ensure that large vehicles are not prevented from straddling the cushions by parked vehicles. Cushions must not be used on roads with a speed limit greater than 30mph and must only be used on roads that are lit, in accordance with The Highways (Road Humps) Regulations 1999. Typical designs for speed cushion schemes are given in Traffic Advisory Leaflet 1/98.

COMPLEMENTARY MEASURES

278 Other measures can be combined with formal speed restraint measures to assist in encouraging reduced vehicle speeds as part of a comprehensive series of measures, including:

- Gateways – To provide visual cues to drivers that these are entering an area where reduced speeds are expected, i.e. on the entry to Street Types 2, 3, 4 and 5, and there is a greater likelihood of encountering vulnerable street users. Physical features can be enhanced by landscape elements such as tree planting to visually narrow the gap, and the use of different materials;
- Vertical elements such as trees, bollards and street furniture where appropriate to the landscape scheme and local context;
- Contrasting textured surfacing. The materials used should be carefully considered to respond to the built context of the scheme and to be effectively maintained in the future;
- No white lining in certain circumstances; and
- Use of central landscaped islands, (but not those interfering with pedestrian desire lines).

2.7 PROVISION FOR SERVICING

OVERVIEW

279 Access requirements for service vehicles are necessary and may be subject to vehicle tracking to ensure that service vehicles can manoeuvre along the layout of the street, and past any likely locations for on-street parking. The requirements for emergency vehicles, street cleansing and gully cleaning should also be considered.

280 The vehicle path is the width required for vehicle movement within the overall street width, given the nature of vehicles likely to utilise the street.

EMERGENCY SERVICES

281 Adequate access for emergency vehicles must be provided, and consultation by the Applicant / Developer with the emergency services is recommended for all schemes.

282 Wherever possible developments should be designed so that there is no requirement for “emergency vehicle only” links. These are difficult to enforce if there is no physical barrier, and if there is a physical barrier, it can cause delays for emergency vehicles.

283 Fire tenders must be able to reach a point no further than 45m from all doors on the ground floor of any residential building. Turning facilities should be provided if the cul-de-sac is longer than 20m.

284 It would be necessary for any such route to be designed for full highway loading if it incorporates a bridge or highway structure. For fire appliances, fire engines Group 1 and 2 should be considered as defined in DMRB CS 454. Group 1 includes 2-axle fire engines up to a gross vehicle weight of up to 17 tonnes, a maximum axle load of up to 100kN, and an axle spacing of between 3.5m and 5.8m. Group 2 includes 2-axle fire engines up to a gross vehicle weight of up to 8.5 tonnes, and a maximum axle load of up to 50kN, and a minimum axle spacing of 3.5m. The axle spacing should be selected from the range of values to give the most onerous effect. Where an assessment of the load effects for specific fire engines is required, the axle weights and spacings should be sought from West Yorkshire Fire and Rescue Service.

REFUSE COLLECTION

285 Building regulations Part H state that containers should be within 25m of the waste collection point. Therefore, designs need to enable refuse vehicles to get to within 25m of all drive-ends or communal bin storage locations. However, where significant gradients exist, heavy bins can be difficult to control, and a shorter distance is more

appropriate. Therefore, bin storage locations shall be clearly identified for all dwellings, with easy, level access from their storage location to the collection location. Bins should not block pedestrian routes on bin collection days. The increasing need for additional bin storage areas to accommodate larger bins or additional recycling bins shall be taken into account. Leeds City Council is also exploring the feasibility of centralised waste disposal systems which would negate the need for individual bins and bin storage. The Applicant / Developer should engage in early discussions with the local refuse collection operator to see which system is most appropriate. Private roads or developments must adhere to the same principle of collection method as provided to other residents within the District.

Figure 24: Centralised Waste Disposal Example at Trumpington, Cambridgeshire

286 The dimensions of the largest refuse vehicle currently used by the City Council are as follows:

- Width = 2.5m
- Length = 11.5m
- Turning Circle (wall to wall) = 18.6m

287 Refuse vehicle tracking shall be undertaken at a design speed of 15mph on Street Types 1 and 2, or 10mph on other Street Types using the most appropriate design vehicle within the AutoTrack database.

288 Turning space is necessary to avoid the need for long reversing manoeuvres. A range of typical turning space dimensions are shown below, although alternative solutions

may be acceptable if demonstrated to be workable using vehicle tracking. Landscaping around turning heads can be used to capture pollutants and enhance health and wellbeing and biodiversity net gain. The potential implications of vehicle overhang shall be considered within any non-standard layout. The diagrams below show the areas required for vehicle manoeuvring, plus examples of possible treatment to minimise the visual impact of the turning head.

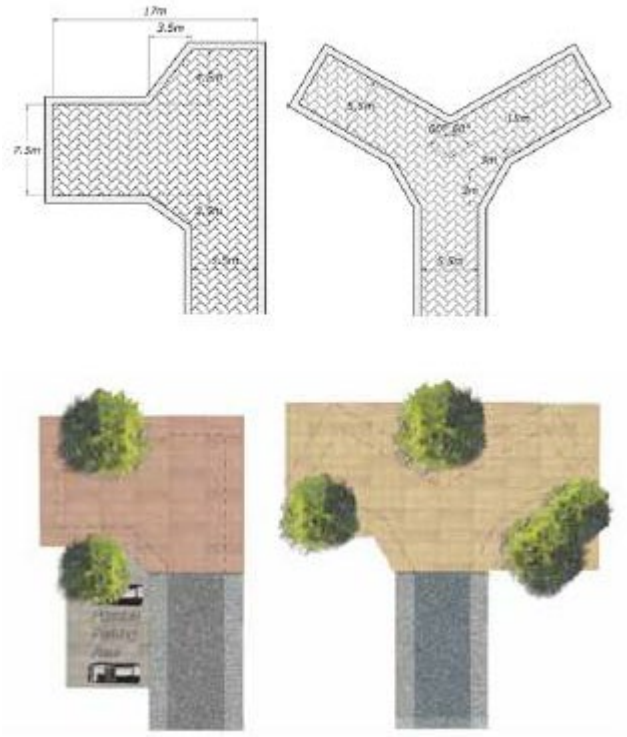


Figure 25: Standard Refuse Collection Vehicle Turning Heads

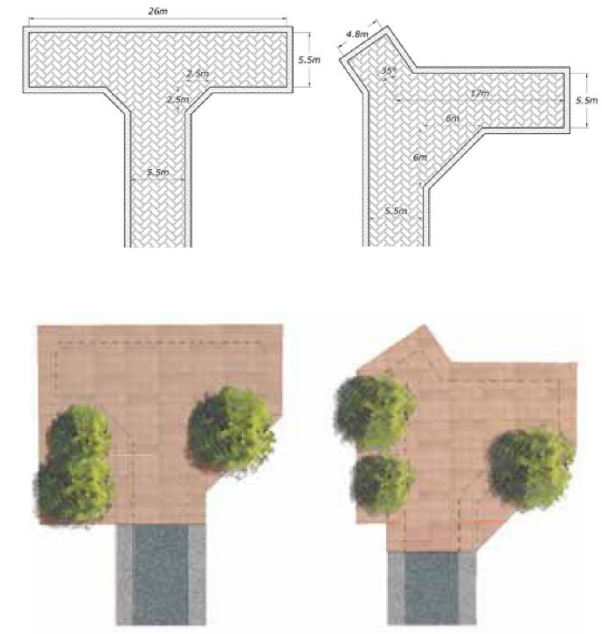


Figure 26: Alternative Refuse Collection Vehicle Turning Heads

289 For Type 3, 4, 5 and Private Streets which are less than 45m long, and serves less than 10 dwellings, it may be possible for the refuse vehicle to reverse under supervision from Type 1 or 2 street into the shared area. Where such arrangements are considered acceptable, the turning space at the end of the Type 3, 4, 5 and Private Streets may be reduced to that required by a private car only. Typical designs are shown below, although alternatives are possible if proved to work using vehicle tracking.

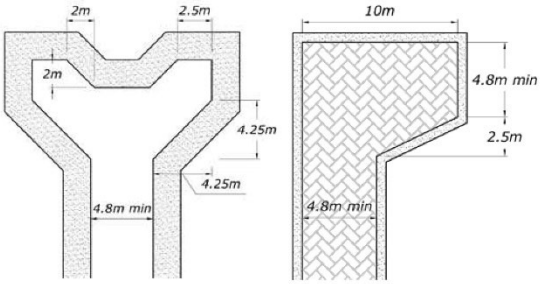


Figure 27: Alternative Car Turning Heads

290 There will also be the occasional need for larger service vehicles to be accommodated, including delivery vehicles and furniture vans. These have different turning requirements, and whilst the design does not need to allow for regular use, the potential for these vehicles needs to be considered, and accommodated where necessary.

2.8 PEDESTRIAN MOVEMENTS

MINIMUM WIDTHS

291 Minimum footway and footpath width is 2.0m. Footways are to be provided to either side of the carriageway. Although in certain situations one footway may be acceptable, at such locations sufficient land needs to be dedicated as adopted verge, if there is a reasonable likelihood of a footway being needed at any time in the future. Alternatively, a minimum grass verge of 1.0m width or minimum hard margin of 0.6m is required. The minimum footway width is 3.0m in areas of identifiably higher levels of pedestrian activity, such as adjacent to schools, shops, bus stops, etc. Greater widths may be required at specific points, e.g. around bus shelters and where shared with cyclists.

CROSSING POINTS

292 Dropped kerbs, or a raised plateau, and tactile paving as appropriate should be provided at all junctions and particular pedestrian desire lines, including connections to external footpaths.Copenhagen style crossings of side roads are encouraged

293 In some locations pedestrian guard railing is required for safety reasons to protect pedestrians and guide them to the appropriate crossing point, although wherever possible unnecessary “street clutter” should be avoided. The presumption is not to use pedestrian guard railing unless required due to risk assessment outcomes.

294 Where a pedestrian refuge is provided, the dropped kerbs should be aligned with the refuge. A minimum refuge width of 1.8m should be provided in pedestrian only locations and with a minimum refuge width of 2.5m provided to cater for cyclists.

295 Where dropped kerbs are provided across the minor route within a major/minor junction they can lay within the corner radius for junctions with radii of 4.0m or 6.0m. Radii should be minimised to assist pedestrians, however, for junctions with radii of 10m or 15m, they should be positioned further from the major route to reduce crossing distances. Ensuring adequate visibility is maintained for low levels of development, dropped crossings are preferable to the provision of kerb radii to give priority to pedestrians, ensuring appropriate construction for use by service vehicles.

296 Pedestrian crossing points can be delineated by raised plateaux, but they should not be designed to give pedestrians a false sense of security.

Figure 28: Pedestrian Route Grimes Dyke Example

Gradients and Crossfalls

297 The desirable maximum longitudinal section gradient of adoptable footways or footpaths is 1 in 20 (5%). Where site constraints prevent this, further discussion is necessary.

298 All footways and footpaths should have a crossfall of 1 in 40 (2.5%) towards the channel. Care needs to be taken to ensure crossfall gradients at dropped crossings do not significantly exceed 1 in 40 by careful design as gradients significantly over this cause difficulties for those with a mobility impairment, wheelchairs, prams and mobility scooters.

Vertical Clearance

299 A general vertical clearance of 2.6m should be provided, with an absolute minimum of 2.1m beneath signs. Within 450mm of the carriageway edge the full carriageway clearance requirement as set out in paragraph 241 will apply.

Steps

300 Where flights of steps are included in a footpath, provision should be made for a complementary ramped route (see paragraphs 361-364). If a ramp cannot be accommodated within the space available, then the design of the steps should take account of a person assisting a disabled person in a wheelchair and mobility scooters.

301 Steps shall have a constant rise of a preferred height between 150mm minimum and 180mm. Open risers are not allowed. Treads should be 300mm wide (minimum 250mm), non-slip and marked with a non-slip edging at the head of each flight. The dimensions must be such that the product of Tread plus twice the riser is between 550 and 600mm. Nosing's should be splayed or rounded to a radius of at least 15mm. There should be a minimum of 3 steps in a flight and a maximum of 12, with resting places between successive flights.

302 Handrails must be provided, should be smooth and continuous where there is more than one flight of steps and should be terminated no less than 300mm past the end of the flight and 'closed' to the stair wall. Handrails should be set at a height of between 900mm and 1000mm above the tread of each step and should be round in section, between 39 – 50mm in diameter and with a 50mm, preferably 75mm, gap to the wall. Handrails should be provided on both sides, where the width between handrails should be not less than 1000mm apart and a maximum of 2000mm apart.

303 Non- slip corduroy paving should be provided at the top and bottom of steps.

304 For further guidance on the design of Steps, please read:

- Inclusive Design Information Sheet (IDIS) No.4, entitled ‘Steps’.

2.9 CYCLE MOVEMENTS

MINIMUM WIDTHS

305 Cycle lanes on the carriageway can be appropriate on less busy roads with lower speed limits, but do not provide any physical protection from motor vehicles and so do not adequately meet the needs of most people. In quiet residential streets, most people will be comfortable cycling on the carriageway even though they will be passed by the occasional car moving at low speeds. Provision should be in accordance with LTN1/20.

306 Cycle lanes should be 2.0m wide on busy roads, or where traffic is travelling more than 40 mph, with appropriate segregation where possible. A minimum width of 1.5m may be acceptable on existing roads with a 30mph limit, where 2.0m should be the minimum provision on all new roads. Dimensions for cycle tracks and lanes is shown in Table 2-16. Segregated provision should be provided on new Type 1 streets.

307 While good quality off carriageway routes may be favoured, shared unsegregated use of a path alongside the carriageway by cyclists and pedestrians is a last choice option. Where this is proposed the minimum width is 3.0m.

308 If the pedestrian and cycle routes are parallel but segregated, the minimum widths are 2.0m for each route. This is applicable for one-way cycling only. Additional width is required for vertical edges/features in accordance with LTN1/20.

309 The following table summarises the minimum width recommendations for pedestrians and cyclists.

Table 2-16: Cycle Lane and Track Widths

Cycle Route Type	Direction	Peak Hour Cycle Flow*	Desirable Minimum Width** (m)	Absolute Minimum at Constraints (m)
Protected space for cycling (including light segregation, stepped cycle track, kerbed cycle track)	one way	<200	2.0	1.5
		200-800	2.2	2.0
		>800	2.5	2.0
	two way	<300	3.0	2.0
		>300-1000	3.0	2.5
		>1000	4.0	3.0
Cycle Lane	one way	All – cyclists able to use carriageway to overtake	2.0	1.5

*(Either one way or two way depending on cycle route type)

**based on a saturation flow of 1 cyclist per second per metre of space. For user comfort a lower density is generally desirable.

Figure 29: Cycleway Queen Street Example

Figure 30: Part of the Cycle Superhighway in Leeds

JUNCTIONS AND CROSSINGS

310 There must be appropriate provision in accordance with LTN 1/20.

ACCESS MEASURES

311 Where off-road cycle tracks are installed away from the carriageway, access measures such as staggered barriers or bollards should be used to prevent access by

cars or motorbikes. These measures should only be installed if abuse is likely or there is a safety requirement.

312 The opening should be a minimum of 1.4m as long as there is no overlap in the barrier. This will allow a visual barrier for all and although a motorcycle can still get through it becomes a slow manoeuvre making it less desirable and preventing it from becoming a gateway route. This also allows the area to be policed see figure below for an example layout on a 3.0m two-way cycle track. Kirkstall Forge, to the west of Leeds is a good example of where such a feature has been provided (although less overlap was required).

Figure 31: 3.0m Two-way Cycle Track with Barrier Layout

2.10 PUBLIC TRANSPORT

313 Public transport serves an important role in delivering the Connecting Leeds Transport Strategy by enabling people to choose not to own a car or a second car. It is also essential for those who do not have access to private transport due to cost, disability, age or other reason.

WHAT CONSTITUTES AN ADEQUATE PUBLIC TRANSPORT SERVICE

314 Policy T2 makes it clear that new development should normally be capable of being adequately served by public transport, and Policy T2 expands this requirement by providing an additional four criteria to be addressed when assessing the acceptability of public transport accessibility to a new development. These three criteria set out below constitute the matters which the Local Planning Authority consider are the essential or necessary measures required to be satisfied for a development with a significant travel impact to proceed.

(i) Measures to Link the Site to Public Transport:

> "the footpath system to bus stops and stations must be regarded as part of the public transport system, and designed to be as direct, safe and easy to use as possible. Bus stops must be positioned where they are safe and efficient for the operator and buildings should be positioned so that their entrances are at least as near the bus stop or station as they are to the car park" (IHT 1999)

315 For many of the locations in the Leeds urban area which meet the Core Strategy accessibility guidance Policy T2, the basic requirement for a pedestrian link to the public transport network can be met by providing a direct convenient and attractive footpath from the principal entry points of the development to the adjacent public transport entry point (bus stop or station). Research has indicated that this pedestrian link and time taken to walk to the public transport entry point from the development and any waiting time is an integral part of the public transport journey and ideally:

- The maximum walking distance from any dwelling to a bus stop should not exceed 400m and preferably be no more than 300m.
- The maximum walking distance from any dwelling to a rail stop (if applicable) should not exceed 800m.
- Footpaths to stops or stations should be as direct and convenient as possible, and at least as direct and convenient as the pedestrian link to the car parking (IHT 1999).

316 This requirement will normally be regarded as an essential part of the basic access provision to a development, and as such should be included in the application site and designed as an integral part of the site layout. It will normally be provided at the

Developer's expense and not be the subject of a requirement for a developer contribution.

317 It is accepted, however, that these pedestrian links cannot always be included wholly within the application site and may include third party land. In these circumstances a site-specific solution would have to be negotiated, but the basic requirement for a convenient pedestrian link would still stand. Normally this could still be achieved by making use of the public footway.

(ii) Measures to improve the public transport entry point:

> "the design of a development must cater for all the parts of the journey which complement the ride on the bus. This means short walks to bus stops and stations, direct and convenient footpaths, safe and protected places to wait for buses or trains and good information about services. These have a major effect on the attractiveness of public transport" (IHT 1999)

318 The public transport entry point to the development (the bus or rail station, the interchange point or the bus stop) should be conveniently located and provide the appropriate level of safety, comfort, convenience and information to maintain the overall quality of the public transport journey. There will be a presumption that this entry point should provide the following minimum requirements:

- A shelter with seating (to provide protection from the elements);
- Real time information; and
- Raised kerbs (to comply with access requirements).

319 In certain circumstances there may not be sufficient space to provide new shelters or existing provision may be adequate. However, these exceptions do not alter the basic requirement that wherever possible, these improvements should be provided.

320 In addition, wherever possible, all major developments comprising jobs, shopping, leisure, health and education facilities will be required to provide innovative and enhanced public transport waiting facilities integral with the development, to encourage increased use of public transport to and from the site (e.g. ''bus lounges'' combined with the principal entrance/ reception/ lobby areas, providing public transport waiting and information facilities, including real time displays indicating the availability of services).

321 All measures relating to the public transport entry point will be regarded as an integral part of the basic access provision and as such shall normally be provided as part of the development.

(iii) Measures to support service improvements, where required, to achieve appropriate levels of accessibility:

322 For the purposes of this requirement the minimum level of accessibility will be based on Core Strategy accessibility guidance Policy T2.

323 Where sites are proposed for development in locations where public transport accessibility is currently not considered to be acceptable, the developer (in consultation with West Yorkshire Combined Authority) will be expected to establish and directly fund the measures required to make the site accessible. On the assumption these sites are otherwise acceptable in overall planning terms these measures would normally involve new or diverted bus infrastructure/ services, (including where appropriate pump priming of services) the provision of which will be met by the development. Where new bus infrastructure is required, the applicant/ developer will need to engage with West Yorkshire Combined Authority to ensure that the suitable location can be agreed, and necessary consultation undertaken.

CHANGES OF USE, EXTENSIONS AND REFURBISHMENT

324 The requirements for developer contributions and improvements to contributions to public transport will apply to all new development which have a significant travel impact, irrespective of whether the development comprises a change of use, an extension or a refurbishment. It is accepted that existing sites subject to applications for changes of use and refurbishment will already have a travel impact on the highway and public transport networks, and this impact will need to be considered in negotiating the appropriate level of contribution for the new development. However, in the first instance, the same thresholds will apply to change of use and refurbishment applications as apply to new development schemes, when determining whether a contribution will be required and when initially calculating the level of contribution. An allowance will, however, be made in appropriate circumstances for trips generated by the existing use. As far as applications for extensions are concerned, the thresholds for determining whether a contribution will be required and the calculation methodology for the level of contribution will only apply to the extension floorspace and not to the whole development.

Figure 32: Connecting Leeds

2.11 LANDSCAPE / GREEN INFRASTRUCTURE

CONSIDERATIONS WITHIN THE HIGHWAY

325 Landscaped areas are important and should be considered at the early analysis and concept stages of the design process, as set out in Leeds City Council NfL.

326 Landscape provision within the highway boundary, including roundabouts, should be integral to its conceptual and detailed design, and be consistent with the wider development and the surrounding landscape context. The form and character of streets within a development will fundamentally influence the surrounding character in much the same way as the architecture and open spaces and are an integral part of the place-making process.

327 There is a compelling case for trees on the highway. Trees can help road users to recognise the spatial geometry of carriageway edges. Tree-lined streets also create a “parallax effect” which helps motorists to better gauge their speed. The use of vegetation, particularly trees, is featured as one of the three main types of approaches to traffic calming in the US Department of Transportation Federal Highway Authority’s Design Guide. The guide observes that “trees, when located on both sides of the street, create a sense of enclosure that discourages drivers from speeding”. Tim Pharoah’s 1991 Devon County Council Traffic Calming Guidelines conveys a similar message.

328 Reference: http://www.tdag.org.uk/trees-in-hard-landscapes.html

329 Research: https://depts.washington.edu/hhwb/Thm_SafeStreets.html

330 The needs of vehicular traffic are not the only consideration in Highway infrastructure. The aesthetics/attractiveness of the highway can encourage greater use by pedestrians and cyclists. Trees and vegetation can also have a measurable effect on improving air quality. This ties in with Leeds City Council's vision for Health and Well-being and tackling the Climate Emergency and the Council's and West Yorkshire Combined Authority's "Green Streets" agenda.

331 The quality and variance of hard landscape materials (such as surfacing, kerbing, paving, walls, bollards, railings, etc.) combined with carefully selected soft landscape elements (including trees, hedges, shrubs and grass) will help to add character to a development and turn the street types outlined in this guide into recognisable places and liveable spaces. The planting scheme must seek to provide the largest possible tree species to provide the greatest environmental benefits.

332 The accumulation of hard surfaced areas can have visual consequences which cause harm to the character and amenity of the locality. In order to encourage greater use, the aesthetics/attractiveness of the street to pedestrians and cyclists is a critical consideration. Below is a list of some considerations:

- Contrasting surfaces, textures and colours can add visual relief;
- Landscape buffers separating functions that contain soft natural elements such as grass, shrubs, hedges and trees will also contribute to reducing/breaking up bleak expanses of hard surfacing;
- These buffers can additionally create more attractive routes segregated from vehicular traffic with added health benefits (improving air quality etc.);
- The presence of street trees is found to be a significant positive factor in the level of physical activities undertaken such as walking and cycling (Forsyth et al, 2008; Larsen et al., 2009; Lee, 2007); and
- Consideration also needs to be given to the detracting accumulation of signage/lighting clutter. Signage / lighting should be reduced to a minimum and "doubled up/multiuse poles" where practicable.

333 Consideration should be given to layout and height of planting to ensure pedestrians and cyclists can see and be seen and no personal security issues are created. Within the street corridor, trees can aid recognition of spatial geometry of carriageway edges

and reduce its overall apparent width. Limited planting of new trees may take place within visibility splays, but only where this would not significantly compromise forward visibility. Some limited retention of existing trees or new tree planting may also be possible within visibility splays, providing the trees are predicted to have a slender trunk girth when mature, and their numbers do not have a significant cumulative impact on visibility from a stationary vehicle position.

334 Good design begins with the retention of existing valuable landscape features in any scheme. This may include trees, shrubs and hedgerows. Established trees can give immediate effect and maturity to any scheme as well as providing better integration into the scheme's setting. Mature trees in particular are irreplaceable in that it would take generations to truly replace them in terms of their visual and carbon sequestration effects.

335 As well as contributing to improved air quality Green Infrastructure (GI) can make a contribution to climate change and bio-diversity. Trees have a number of benefits including removing carbon from the atmosphere and storing it as well as providing cooling in summer temperatures and intercept rainfall to reduce flood risk. Hedgerows and wildflower verges can provide bio-diversity habitats.

336 Retained existing trees for inclusion in the highway adoption must be subject to a tree survey carried out in accordance with BS 5837 (2012) "Trees in Relation to Design, Demolition and Construction – Recommendations". The standard provides guidance on how to safely incorporate trees into development and minimise harm. The National Joint Utilities Group (NJUG) Guidelines (NJUG Volume 4-2007) may also apply for the Planning and the Installation of Utility Apparatus in proximity to trees.

337 The trees may require remediation/ maintenance work and this must be carried out to the satisfaction of the City Council's arboriculture advisers. The Highways Act 1980 requires that trees and other vegetation do not obstruct the passage of users. The Highways Authority requires a minimum clearance over any part of a footpath of 2.6m and over any part of a road of 5.3m.

338 Within visibility splays and forward visibility envelopes, ground cover shrub planting up to a maximum potential growth height of 0.6m is acceptable as an alternative to grass subject to the relative height difference between the landscape area and the adjacent carriageway. The City Council will adopt all visibility splays required for the safe functioning of the highway. New tree and shrub areas must be planted in prepared

tree pits and top soiled areas to dimensions and specifications set by the City Council (refer to Leeds City Council Guidance on Urban Tree Planting), this may include the provision of underground architecture to ensure the required/appropriate soil volumes are achieved.

Figure 33: Landscaped Area Moortown Example

339 The example below is for a double-sided avenue with 3.0m-3.5m wide verges for large species tree planting combined with pedestrian / cycleway on each side. This will allow for a balanced sustainable visual effect with multi layered benefits. This arrangement allows for:

- A safe distance offset from the road kerb line to tree position;
- Mature tree canopy sizes;
- Maintaining a gap between the tree canopy and the building façade to allow for light penetration into rooms and for future maintenance of the building; and
- Sufficient soil volume within the verge to sustain the tree.

340 This distance is based on Leeds City Council Guidelines (Guideline Distances of Development to Trees). The treatment of the verges may not only include grass but also trees, shrubs or hedging. Shrub and hedge type planting (lower level) could better make a positive contribution to air quality as emerging research suggests. Children are closer to vehicle exhaust and higher pollution concentration. Green Infrastructure,

such as hedges, can be used as a barrier to increase the pathway between pollution source and receptor, which increases mixing and reduces pollutant concentration. Care must be taken when proposing planting so as not to obstruct forward visibility or sightline requirements but equally the planting can be used to slow traffic.

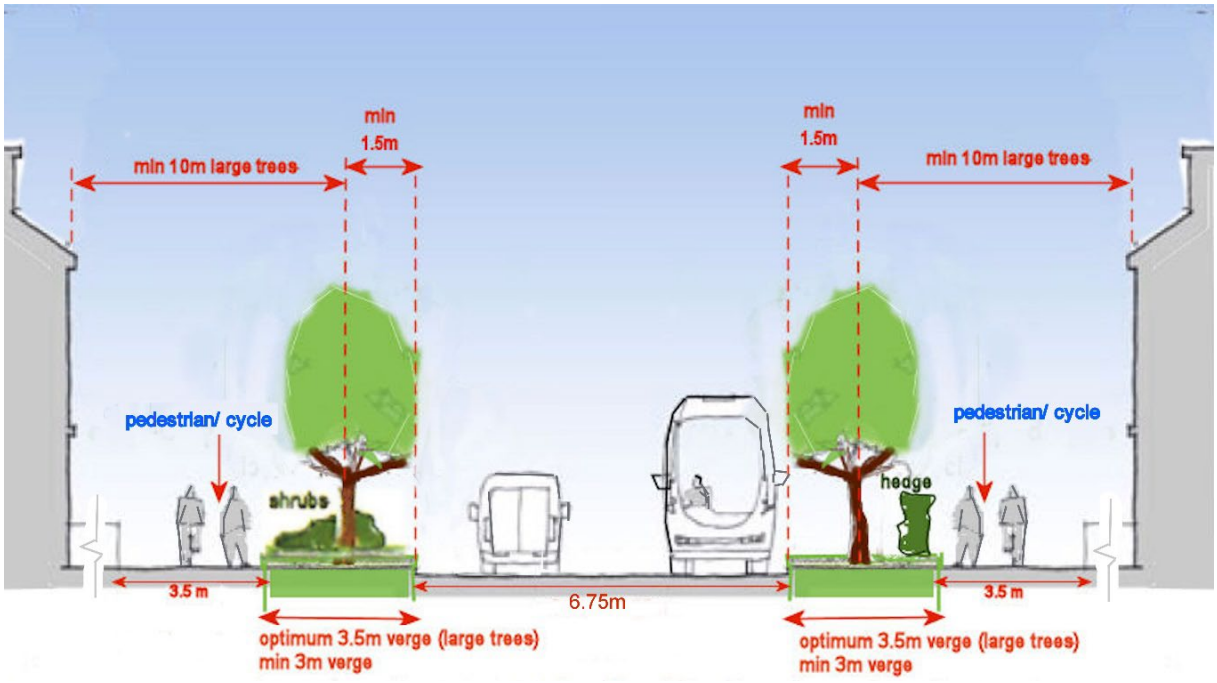


Figure 34: Example Cross Section of a Connector Street

VERGES

341 For ease of maintenance, grass verges should be at least 1.0m wide and 10m^2 and shrub areas at least 2.0m wide and 10m^2. Where tree planting is proposed verges must be at least 3.0m wide and 6.0m long to ensure sustainable soil volume and to avoid any future conflict with kerbs, surfacing etc. All grass verges adjacent to the highway, particularly for Street Types 1 and 2, should include a hard-paved mowing strip. The mowing strip is 600mm and this should be provided where possible. Any tapering verge ends narrower than 1.0m wide should be squared off and hard paved. Any grassed area less than 10m^2 should be avoided, as it would be difficult to maintain. Early liaison with the Highways Adoptions team is advised on all landscape aspects. In particular where there is an interface between street lighting and proposed tree planting. Commuted sums will apply to landscape proposals.

342 Grass should not be used where vehicles or pedestrians are likely to overrun. In such areas the design should be amended, for example; to include bollards to prevent overrunning, or hard surfacing introduced for the relevant section.

343 Grass areas adjacent to vertical structures should be provided with a flush hard paved mowing strip at least 200mm wide.

344 A "licence to cultivate" under Section 142 of the Highways Act (1980) can be arranged, which entitles an adjoining owner to maintain the highway verge, although this does not remove the "Statutory Undertakers" rights, or the Highway Authority's liability.

HEALTH AND WELLBEING

345 It is important to consider the aesthetics of any route and the level of amenity. Pleasant walking/ cycling routes encourage better use and helps to fulfil Leeds City Council's Health and Wellbeing and Climate Emergency agendas and the Council's and West Yorkshire Combined Authority's "Green Streets" agenda. Good landscape treatment can greatly contribute to physical and mental wellbeing. For more information on tree planting please refer to Leeds City Council: guidance Urban Tree Planting:

http://www.leeds.gov.uk/planningcouncil/conservation-protection-and-heritage/landscape-planning-and-developmentPages/Landscape-Planning-and-Development.aspx

346 Developments should respect and enhance, where possible, the character and appearance of existing (and new) walking and cycling routes that may exist alongside.

347 Where design factors allow, landscape side or median beds of 3.0m wide are the optimum width to allow for sustainable tree planting. This treatment will break up the mass of hard surfacing and create a buffer to the vehicular traffic. Compelling evidence is emerging on the contribution of plants to improving air quality. These are summarised in the publication Health Benefits of Street Trees – the Research Agency of the Forestry commission 2011.

348 The above document focuses on the role of street trees in moderating the climate and environment of urban areas, the following benefits are considered in the document:

- Reducing air pollution;
- Providing an environment conducive to physical activities;
- Reducing stress and improving mental health;
- Masking noise levels;
- Cooling air in summer by giving shade (including associated savings to the National Health Service (NHS) from avoided heat stroke);
- Reducing ultraviolet radiation through shading (including associated savings to the NHS from avoided skin cancer);

- Reducing wind speeds in winter thereby reducing heat loss from buildings; and
- Carbon capture.
- It should however be noted that tree planting will not be an appropriate mitigation for unsafe wind levels caused by new Development.

2.12 GARAGES AND DRIVEWAYS

REQUIREMENTS

349 Domestic garages have a number of different uses and are not a reliable source for the car parking provision for a development. If garages are to be designed to be available for car parking then they should meet the following guidance:

- They are accessible by a private car – this usually requires a forecourt depth of 7.3m where they are in courtyard situations and where drive access alignments are straight enough to accommodate access by a medium sized car;
- They have minimum internal dimensions of 6.0m x 3.0m, to accommodate the additional storage of bicycles and other items;
- Garage door openings should have a minimum clear width of 2.6m if designed to be available for car parking; and
- Double garages should have minimum internal dimensions of 6.0m x 6.0m, with minimum door width of 4.2m.

350 Even where these requirements are met a garage will not count as sole parking provision, as a lot of people will never make use of a garage for car parking. Fewer still will use a garage for short-term parking and only use a garage for overnight storage. Garages will be counted towards cycle parking subject to them being of acceptable size (see above).

351 Driveways should be at least 3.0m wide, or 3.3m if the drive provides the main pedestrian access to the dwelling. Where a double garage is considered, the driveway should have a minimum width of 6.0m. For a standard ‘up and over’ door, the face of the garage should be 5.6m minimum from the back of the footway (Street Types 1 or 2) or from the edge of the shared space (Street Types 3). In exceptional circumstances this can be reduced to 5.0m where the garage door type is controlled by a planning condition. Driveways shall preferably be sufficiently long for either 1 or 2 cars, but not an intermediate length which would lead to overhanging of the footway or shared surface.

Figure 35: Private Parking Horsforth Example

Figure 36: Private Parking Seacroft Example

352 2.0m x 2.0m pedestrian sight lines should be provided where the drive meets the back of the footway on Street Types 1 and 2, 2.0m x 23m on Shared Space Street (Type 3), Level Surface Street (Type 4), and Home Zones (Type 5). There should be no physical obstructions or planting within these areas, that have the potential to grow above 0.6m high. The areas should also be easy to maintain to avoid future obstructions. See Figure 37.

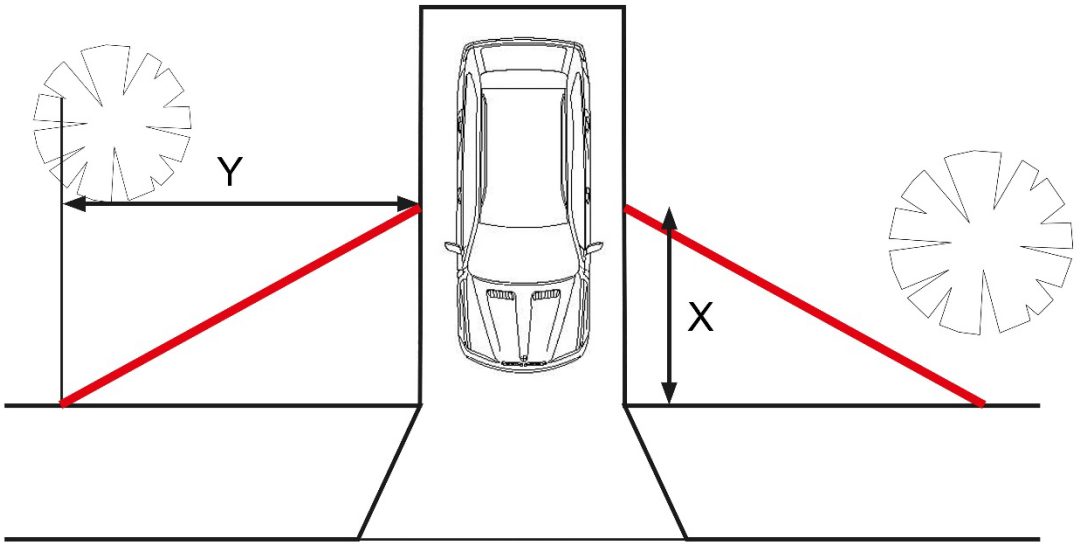


Figure 37: Pedestrian Sight Line from Driveway Diagram

353 An up and over garage door must not project over the highway when opened and should roll upwards or sideways and be set 1.5m back from the highway.

354 Any gates should be set at least 5.0m back from the adopted highway boundary back of footway and open inwards or slide.

2.13 DESIGNING FOR DISABLED PEOPLE

PRINCIPLES

355 The City Council's NfL document requires developers to design streets and spaces to provide good access and clarity for disabled people [NfL Principle 29]. It also seeks to ensure that routes are accessible to all and are not obstructed. Reference should be made to Inclusive mobility: making transport accessible for passengers and pedestrians - GOV.UK (www.gov.uk) .

356 This Street Design Guidance considers the needs of disabled people within all elements of the design guidance, so that their requirements are incorporated from the start of the process, rather than added as an afterthought. Part 3 of this Transport SPD considers the need of disabled people and parking.

357 In the UK, 1 in 5 people have a disability; this could be visual, hearing, motor or cognitive (affecting memory and thinking). Accessibility is about making sure your service can be used by as many people as possible. Thinking about this from the beginning will help you:

- Make sure that nobody is excluded; and
- Find out earlier if any parts of your service are not accessible – problems usually cost less to fix if you find them early.

358 Potential obstacles to be aware of include steps, steep gradients, crossfalls, narrow passages or footways, bins left out for collection, badly located street furniture, uneven surfaces, excessively smooth surfaces, parking indiscriminately and poor attention to construction details. Changes of gradients at bends (especially at side street crossings) need to be carefully designed out to prevent tipping over of wheelchairs and mobility scooters. Shared surface streets do form a specific concern for blind and partially sighted people who perceive them to be unsafe. Way-finding is a specific concern as is indiscriminate parking causing obstructions. These issues should be properly considered in the choice of whether a shared surface street is appropriate in any particular circumstance.

359 A 2.0m minimum footway width accommodates the needs of disabled users.

360 Leeds City Council has an Accessibility SPD (2016) which gives guidance on designing for disabled people in relation to development sites.

RAMPS

361 Ramps into individual buildings must not be located within the adopted footway, however regrading of the footway can be considered on a site by site basis if options within the building are not available, and where this would not impact adversely on the users of the highway.

Figure 38: Disabled Access Ramp Example

362 Pedestrian ramps should have a desirable gradient of less than 1:20 (5%), which should be regarded as the norm. Gradients must not exceed 1 in 12 (8%) and if this gradient is utilised then it should not be for a greater length than 2.0m. Should this not be achievable, the specific circumstances should be discussed with the City Council.

363 The maximum length of a ramp shall not exceed 6.0m unless provision is made for a level landing of preferred length 2.0m (with or without an adjacent resting platform). Slopes of between 1 in 12 and 1 in 20 needs at least a handrail down one side. Stepped ramps should be avoided.

364 Ramps should be preferably 2000mm wide (minimum 1800mm) to permit wheelchairs to pass. The minimum width over short lengths can be 1200mm. Handrails should be set 1000mm above the ramps.

TACTILE PAVING

365 Tactile paving to assist blind and partially sighted people should be utilised in accordance with national guidance which can be found in Inclusive mobility: using tactile paving surfaces - GOV.UK (www.gov.uk) (DfT 2021). Guidance on the use of tactile paving or other suitable and approved materials is given in Appendix A and at all times the use of simple, appropriate, well-detailed, high quality materials should be a key objective.

CROSSING PROVISION

366 Appropriate tactile paving and level access to all crossings is required, by either dropped kerb or raised crossing. Provision of dropped kerbs should be provided every 100m along a road. New signalised crossings should provide pedestrian detection and priority and tactile cones as standard

DISABLED ACCESS FOR CYCLISTS

367 Shared use schemes are often implemented to improve conditions for cyclists, but it is essential that they are designed to consider the needs of everyone expected to use the facility. Poorly designed schemes, and schemes where the available width is insufficient to comfortably accommodate the expected flows of pedestrians and cyclists, are likely to reduce the amenity value of the route.

368 Disabled people and older people can be particularly affected by shared use routes. Ultimately, however, it will depend on the quality of the design. Consideration of their various needs is an important part of the design of shared use, and the duties under the Equality Act 2010 are particularly relevant. Under the Equality Act (2010) authorities are required to remove barriers for disabled people, including disabled cyclists, where possible. All access barriers must comply with the Equality Act 2010 regulations.

PART 3. PARKING

3.1 BACKGROUND

PARKING HIERARCHY

369 A parking hierarchy defines the prioritisation of different types of parking that on many occasions will be competing for the same limited space on or off the highway.

370 The hierarchy of parking types are set out below, with the level of consideration being higher towards the top of the list. These act as a framework for decisions to be made, however it is accepted that local circumstances may require the hierarchy to be adapted to suit.

- Disabled parking;
- Cycle parking;
- Motorcycle and car club parking;
- Park and Ride;
- Local business essential car parking/servicing need;
- Local resident car parking;
- Short stay shopper/visitor car parking; and
- Commuter car parking.

371 In many situations, it may be possible for two parking types to share the same space harmoniously, for example residents parking and short stay visitor parking. This will be encouraged where appropriate, in order to make best use of the available road space available.

DEFINITIONS

372 Throughout this Part parking will be referred to in a number of ways, definitions are provided below for clarity.

373 Short stay parking is defined as less than 2 hours, while medium stay parking is between 2 and 5 hours in length. This primarily caters for shoppers and visitors to a destination.

374 Commuter parking is defined as over 5 hours. In general, this type of parking is associated with peak period travel, due to the typical working day of 9am to 5pm.

375 Public parking is that which is available for any member of the public to use on a first come first served basis, however it may be charged for and could be run by either the Council or a private operator. Some Council parking of this type has a restriction on

the length of stay, while others allow parking of any duration. Public parking can be found both on and off-street, with all on-street parking managed by the Council.

376 Off-street public parking is typically either ‘at grade’, meaning it is at ground level only, or multi-storey, with multiple floors of parking.

377 Private Non-Residential (PNR) parking is associated with a specific development, such as an office, and as such is only available for employees or visitors to that development. Customer parking is also considered to be a form of PNR, as it is generally for the exclusive use of users/workers of the shop, office etc which it is associated with.

378 Residential parking is a mix of on-street and off-street, the type of parking depending upon the nature of properties. In terraced streets the parking will be predominantly on-street, while in other areas it will be off-street. While the Council does not have a duty to provide on-street parking, in some residential areas, it may prioritise this through resident permit schemes.

379 Other forms of parking are less well defined, for example hospital and train station car parks could be used by any member of the public, however on the whole they are only used by visitors to the destination due to parking services etc. Contract parking exists in other places, in which parking places are let to specified users, usually over a long term.

APPLICATION OF PARKING GUIDELINES WITHIN THE CITY CENTRE

380 In applying the parking guidelines, the City Centre has been divided into Public Transport Box, Core and Fringe zones.

381 The boundaries for the Public Transport Box, Core and Fringe zones are presented in Chapter 7 in this Part. The Core and Fringe zone boundaries have been informed by a consideration of the accessibility of the City Centre from Leeds Rail Station, based on surveyed distances and adjusted to reflect logical boundaries such as roads and site boundaries.

382 The on-street parking provision within the Core zone (including Public Transport Box) is generally restricted to uses such as pay & display, disabled, limited waiting, coach parking, cycle and motorcycle parking etc. Thus, parking controls are already found within this area and the continuation of these will be supported in order to mirror the strictest parking guidelines applicable within the Core zone.

383 In the Fringe zone, on-street restrictions should aim to control on-street commuter parking, particularly where it proves to be a problem.

384 Development proposed within the Fringe zone, should have its impact upon on-street parking considered. If it is felt likely that a detrimental level of on-street parking will occur as a result of the development, once occupied, planning obligations should be used to ensure that the developer pays for any future TROs that are required to control on-street parking. The area for potential TRO implementation should include the 800m buffer as shown in Chapter 7 in this Part.

APPLICATION OF PARKING GUIDELINES OUTSIDE THE CITY CENTRE

385 To deliver the Connecting Leeds Transport Strategy, a modal shift away from car use is required. The guidelines outside the core and fringe are generally expressed as an expected level of parking rather than a maximum, however, in accessible locations reduced parking levels will be supported subject to suitable parking controls on street.

386 The business use classes do not include a guideline for business parks, as this is contrary to Core Strategy policy SP8. In order to allow for the completion of existing allocated sites at Thorpe Park and Leeds Valley Park the previous UDP guidelines still apply.

387 Whilst the guidelines for general car parking vary by location, the minimum guidelines that relate to disabled, bicycle and motorcycle parking do not vary by geographic location.

SUPPORTING POLICY

388 LPP1: Secure cycle parking, reflecting the Guidelines contained in Section 3.5 will be required in association with new developments.

389 LPP2: Secure motorcycle parking, reflecting the Guidelines contained in Section 3.4 will be required in association with new developments.

390 LPP3: Proposals for car parking on vacant or cleared sites will be considered as follows:

- *Public Transport Box:*

  There will be a presumption against any new permanent or temporary car parking within the public transport box.

- *Core and Fringe Car Parking Policy Area:*

There will be a presumption against the use of vacant or cleared sites for commuter parking. Non- commuter parking will generally be acceptable; A planning condition will be applied precluding opening of the car park between the hours of 06:30 and 09:30 hours each morning and restricting any parking that takes place before 13:00 hours to a maximum stay of 5 hours.

- *Areas Outside the Fringe - Use for Commuter Parking will only be supported on a temporary basis. Proposals (including renewal of temporary permissions) will be judged on their merits taking account of:*

    A. *Accessibility of the immediate area by public transport;*
    B. *Impacts on highway efficiency, congestion levels, air quality and road safety;*
    C. *Progress in the delivery of new public transport capacity and infrastructure;*
    D. *Impacts on the viability of public transport, including initiatives such as public park and ride;*
    E. *Visual appearance, biodiversity, and contribution to other temporary uses; and*
    F. *Impacts on the implementation of Travel Plans.*

391 LPP4: Car parking associated with new developments will be required to follow the guidelines contained in 3.2.

392 LPP5: Disabled car parking will be required within new developments, following the guidelines contained in 3.2.

3.2 CAR PARKING

ON-STREET

Introduction

393 On-street parking is managed by the Parking Services section of Leeds City Council. Details of the way in which parking is managed in Leeds can be found on the Leeds City Council website.

394 The strategic level of management of on-street parking is described in the following sections. On-street parking gives drivers the greatest level of access to destinations, due to the close proximity of the highway to shops and services. As such the

management of these spaces is more complex and flexible in order to reflect the higher relative value of these parking spaces.

395 Priority for on-street space will be given in line with the parking hierarchy set out at paragraph 370, subject to site specific needs and constraints.

396 Residential streets need to be wide enough to accommodate unallocated on-street parking and widening may be required to accommodate this. The design should be self-enforcing so that bad neighbour tension is not created. Individual parking bays shall be avoided where possible as they become ‘owned’ by residents. On-street parking in communal bays can reduce the need for parking courts, which are often unpopular. These should be designed with footway pavement buildouts and tree planting visually separating the parking area from the main carriageway.

397 On-street parking needs to be accommodated in such a way as not to obstruct or make access to private drives too difficult. Similarly, on-street parking should not be allowed so close to a residential window or main door so as to be oppressive, block access or light or intimidate the occupier. Where on-street visitor parking cannot be accommodated then visitor parking needs to be provided off-street.

398 The appearance of parking areas (both in the street and in parking courts) should be enhanced by the provision of shrub and tree planting, with consideration given to the angle of viewing, to reduce the visual impact of the vehicles. The detailed design and specification should avoid compromising personal safety or facilitating car crime.

Figure 39: On-Street Parking Millennium Village Example

Duration of Stay

399 In order to manage on-street car parking spaces, the primary tool will be the restriction of the duration of stay. The balance of short, medium and commuter parking needed on-street will be determined based on local destinations and their relative turnover of visitors.

400 City Centre on-street spaces have different restrictions depending on their location, with the City Centre divided into several zones. Those in the most central area are currently restricted to short or medium stay use, with a 2-hour maximum stay on weekdays and 5-hour maximum stay on Saturdays. Sunday parking is also subject to a simple charging regime for stays of under or over 4 hours. Pay and Display spaces outside the central zone allow for commuter parking.

401 If Pay and Display spaces in the central zone are not well used, it will be permissible for the length of stay to be increased to medium stay. Medium stay parking prices on-street should be more expensive than those at nearby off-street car parks, to reflect the premium of using an on-street space that could otherwise be used by a greater number of short stay users. The primary purpose of the central zone on-street Pay and Display should remain as a short stay parking resource for visitors to nearby destinations.

Charging Policy

402 Currently, charging for use of on-street spaces occurs within the City Centre between the hours of 8am and 10pm on Monday to Saturday and 10am to 10pm on Sunday. Charging will also be considered as a management tool where it is felt that this would encourage turnover of parking, e.g. in other areas of Leeds District.

403 Charging for on-street spaces has been proven to have a positive effect on a centre, as it increases the level of parking availability and hence reduces the time spent searching for a parking space. Charging for parking after 6pm is intended to have a positive effect on the night time economy by freeing up on-street spaces near to bars, cafés and restaurants. The same principle of increasing parking availability for visitors applies to Sunday, which is increasingly becoming a key day for City Centre retail and leisure.

404 On-street parking charges should continue to be reviewed on a regular basis to ensure that charges are more responsive to changes in demand.

Parking Controls and Traffic Regulation Orders

405 On-street controls of parking are necessary in order to legally manage the road space under Leeds City Council's responsibility. A TRO is the legal tool which is used to control parking with measures such as double yellow lines, pay and display bays etc. TROs cannot be implemented without justification such as safety issues, highway efficiency and congestion, local amenity and strategic transport policy reasons.

406 On-street controls complement other parking measures. For example, the restriction of parking for new developments is of little use as a demand management tool if nearby on-street parking is not controlled. New resident permit parking zones and other parking restrictions will be funded through development as a parking demand management tool where LCC traffic management criteria are met.

OFF-STREET

Leeds City Council Car Parks

407 Leeds City Council operates a number of off-street car parks within the City Centre. In the City Centre, the use of off-street car parks is charged for as a way of managing demand for parking and peak period car use. Charging for parking also provides an income stream for the Council and makes best use of the Council's assets.

408 Leeds City Council also manages a number of car parks in the town centres around the district. The current management of these car parks is usually without charge. The permissible length of stay varies between no restriction and a short maximum stay, e.g. 2 hours. Where the efficiency of a car park is affected by a lack of available spaces, charging or other demand management measures may be considered in town centres as an effective management tool.

409 The Council's car parks will be managed in a way that aims to increase the efficiency of the car parks and helps to maintain the vitality of the City Centre and Town Centres, in accordance with the NPPF 'so that it is convenient, safe and secure'. They should also contribute to the transport objectives of the documents described in Part 1.

Charging Policy

410 In order to help control congestion and reflect the available highway capacity on routes into and through the City Centre, the Council will aim to ensure that the overall weighted average price of commuter car parking is greater than public transport fares. However, the Council should review each car park on a site by site basis.

411 Parking prices for short and medium stay parking in the City Centre and all parking in the town centres will be maintained at a price which reflects demand and makes the car park work as efficiently as possible.

412 Car parking charges are reviewed on an annual basis in accordance with the Council's fees and charges policy. Unlike private operators, the Council's objective is not to maximise revenue, rather it aims to use pricing as a tool to manage traffic flows in the city and to maintain the vitality of the City Centre. The Council sets prices taking into account a number of factors including:

- The Council's overall policy objectives;
- Levels of demand, determined on a street by street basis and with reference to the off-street occupancy surveys;
- Budget expectations as determined by the Council's annual budget strategy;
- Levels of actual and forecast income;
- Prices of surrounding car parks in the area; and
- Public transport fares.

413 As of Spring 2018, less than 19% of the City Centre off-street parking was under the control of the Council, therefore the prices charged by Leeds City Council have a limited influence on the pricing of privately-operated car parks. Generally, the advertised price of the privately-run car parks are greater than those in the Council car parks.

414 Income from car parking activities is ring fenced to expenditure on improving transport infrastructure, including Park and Ride schemes.

Private Non-Residential Parking

415 Around 60% of parking spaces in the City Centre are defined as private non-residential. Leeds City Council acts to control the level of parking associated with new developments via the parking guidelines. However, developments that currently exist have a variety of levels of parking with some at higher levels of provision than would be permissible under current guidelines.

416 The reduction of current demand for parking will be tackled via the continued promotion of travel planning, as described in Section 3.6 and Part 4.

New Permanent Public Car Parks

417 The provision of new permanent car parks not associated with specific development will be viewed differently depending upon location. The various scenarios are described below.

418 Within the City Centre Public Transport Box there is a presumption against new permanent car parking of any kind (whether associated with development or not).

419 Within the City Centre Core and Fringe parking areas there is a presumption that the re-provision of existing public commuter car parking between and within the Public Transport Box, Core and Fringe is acceptable providing that no net increase in public parking occurs. This does not apply to cleared site car parks situated on development sites (see below). A modest increase in permanent public commuter car parking above this, but not exceeding 500 spaces over the Local Development Plan period, may be permitted in certain circumstances.

420 New short and medium stay public car parks may be accepted if they are shown to support the vitality of the City Centre as a visitor and retail attraction. Planning conditions on opening times, length of stay and pricing will be required in order to ensure that these car parks do not create adverse demand for peak period travel into the City Centre. Proposals relating to car parking for Leeds Railway Station will be considered on their own merits in the context of promoting rail Park and Ride and future High-Speed rail connections.

421 The provision of a strategic car park within Holbeck Urban Village or the South Bank[1], which caters for both commuters and short stay uses, would be permissible where it is not feasible to provide the appropriate level of Private Non- Residential (PNR) parking within individual sites. In this situation, PNR parking from a number of developments could be aggregated into one multi-storey car park provided that it accords with the parking guidelines.

422 Within designated town centres, the provision of new off-street public car parking will be encouraged to meet excess demand, provided that changes to the management of existing car parks and measures to reduce unnecessary parking demand are investigated first. It should be noted that the provision of new car parks is expensive and therefore the budget constraints of the Council would need to be taken into account with any proposal.

1 Areas as defined by Holbeck Urban Village SPD and South Bank Statement

423 Outside these areas there is a general presumption against new permanent parking not associated with development, however individual cases will be considered on their merits taking into account Climate Emergency, travel planning initiatives; road safety and local amenity issues and comparisons against the guidelines set out in this Section.

424 The provision of new parking related to Park and Ride sites is covered separately later in this Part. In line with the Climate Emergency,solar panels should be incorporated into car parks. Solar car parks should be comply with Building research establishment 2016 guidance

Parking within the Public Transport Box

425 Within the City Centre Public Transport Box[2], there are significant levels of public and PNR parking. The need for access to these car parks creates a conflict with the generally pedestrianised City Centre and requires cars to cross the Public Transport Box, conflicting with bus traffic.

426 Within the City Centre Public Transport Box there is a presumption against new permanent car parking of any kind (whether associated with development or not).

427 If at any time, current off-street parking within the Public Transport Box is proposed to be redeveloped, there will be a presumption against its replacement. If necessary, replacement parking should be located outside the Public Transport Box, this would allow the enhancement of the City Centre environment through expansion of the pedestrianised zone.

Temporary use of Cleared Development Sites for Parking

428 In the past some vacant sites that were earmarked for development, particularly to the south of the City Centre, were used for unauthorised commuter car parking.

429 In 2010, enforcement action was taken against a number of unauthorised commuter car parks. The outcome of this action prompted a policy review. Given that expected public transport infrastructure improvements had not been delivered, the City Council adopted an informal policy to temporarily regularise a limited number of commuter car parking spaces from 2012 for a period of 5 years.

[2] The Public Transport Box is defined as the area within and including The Headrow, Vicar Lane, Boar Lane and Park Row.

430 A review of the temporary permissions took place which assessed the public transport provision at the end of 2017. A managed reduction of these temporary spaces has occurred with no sites remaining.

431 Policy T1 of the Core Strategy outlines the need to limit the supply of commuter car parking in areas of high public transport accessibility, such as the City Centre. The continuation of a policy which limits the amount of commuter parking on cleared sites is necessary in order to minimise congestion during peak periods and support sustainable travel. Policy LPP3 gives the details regarding cleared site parking.

432 Due to their temporary nature, any sites approved under LPP3 would not be expected to provide spaces for car club vehicles or electric charging points as outlined in this Chapter.

PARK AND RIDE

Context

433 The Council approach for Public Park and Ride is set out below, driven by its identification as a spatial priority in Spatial Policy 11 of the Core Strategy, as well as T1(b).

434 The anticipated growth in demand for travel to Leeds City Centre presents a range of challenges. If a significant proportion of this growth is anticipated to be accommodated by the use of private cars then there are issues with both physical access to the City Centre and the availability of parking spaces.

435 An alternative to the provision of additional highway and parking capacity in the City Centre is the creation of a range of Public Park and Ride locations around the urban area of Leeds. The primary market for such provision is expected to be those travelling to the City Centre from locations outside the urban area of Leeds and outside Leeds District.

436 Further provision of both rail and bus based Public Park and Ride provision is anticipated in order to accommodate future demand and is already a proven success at the Elland Road, Stourton and Temple Green sites. In this context bus-based park and ride is taken to include rapid transit.

Characteristics of Public Park and Ride sites

437 The highly desirable characteristics of a successful Public Park and Ride facility for Leeds City Centre are considered to be:[3]

- High visibility site with easy highway access from a main radial route;
- Reliable high-quality bus service with at least a 15-minute frequency, but aiming for a high frequency service enabling users to turn up and use the service without an undue waiting time, (with service operating an 'extended working day' enabling car to be 'recovered' at any reasonable time in case of users' change of plans during the day);
- Journey times competitive with the car;
- Good 'fit' with City Centre trip-ends;
- Significant degree of parking control in town/ City Centre with a combination of constrained supply for long-stay parking, relatively high price, and little free peripheral car parking within walking distance of the centre, combined with good enforcement of regulations/payments;
- Secure environment for car parking with minimal risk of vehicle damage vandalism or theft;
- Attractive pricing for Park and Ride that provides money saving for most single car commuters who currently use public car parking in town/ City Centre;
- Effective marketing based on local market research supported by good publicity; and
- Commitment to support the scheme long-term.

438 The desirable characteristics are:

- Location at intersection of radial and orbital routes to draw in traffic from more than one radial;
- Well-designed car park layout that provides adequate surfacing, marking out and drainage;
- Short access times between car parking and bus stop;
- Segregation between car and bus access/egress points;
- Complementary adjacent/shared land-uses – such as retail/leisure, to promote joint use, combined trip purpose use and reverse flows;
- Adequate capacity to cope with demand at all times of day at the busiest period of the year;

[3] Steer Davies Gleave (2007), STOURTON BUS-BASED PARK & RIDE STUDY. Final Report. March 2007. Transport Policy, City Development, 2 Rossington Street, LEEDS, LS2 8HD

- Attractive bus service incorporating new high specification vehicles;
- Good customer care;
- Traffic priority on the route into the centre leading to peak journey times shorter than car journeys with no (or very few) intermediate stops en route;
- Good penetration of central area with limited stops;
- Some form of premium service on board – for instance refreshments/ newspapers;
- Good passenger facilities at both ends of the route incorporating: comfortable waiting and information facilities at Park and Ride site (preferably with time to next departure prominently displayed);
- Facilities, such as sales kiosk, toilets, change giving;
- Staff presence to answer passenger queries, exercise operational control and generally raise passenger confidence;
- Attractive pricing structure with combined ticketing for both parking and journey elements;
- Attractive off-peak rates to encourage shopper use;
- Multi-journey and season tickets at attractive rates (10% + discounts) to encourage loyalty; and
- Electric vehicle charging points.

439 In order to progress a park and ride site in the short term, not all the characteristics above may be achievable. In the long term the highly desirable characteristics should be a minimum.

GUIDELINES FOR ALLOCATION OF GENERAL PARKING SPACES

440 Outside the Core and Fringe areas of the City Centre, the guidelines define typical levels of parking, allowing for flexibility dependant on the individual location, expected levels of car ownership, public transport accessibility, walking catchment, and specific end user. Significant reductions from these levels of parking will be accepted where it can be demonstrated that there will be no detrimental impact within the development and/or on surroundings streets.

441 Within the Core and Fringe, the guidelines are stated as the maximum that would be permissible. Accordingly, there is no expectation that a minimum level of spaces should be provided, as long as it can be demonstrated that this would not result in detrimental problems on the local highway or for disabled users or residents of the development.

442 The retail class is differentiated by size of development. There are two size thresholds which are consistent with the floor area thresholds used in Part 4 for determining whether a Travel Plan is required.

443 For food retail, the guidelines differentiate parking guidelines based on external gross floor area. The lowest size below 250m^2 is expected to cover “corner shop” type developments and the middle range of 250m^2 to 800m^2 to cover the newer “metro” style food stores; the above 800m^2 range is for traditional supermarkets and standalone retail outlets.

444 The allocation of the level of parking between the various thresholds is cumulative, for example a retail development within the Core of 1000m^2 (external Gross Floor Area) would be allowed 11 spaces: 1 for the first 250m^2, 8 for the next 250m^2 to 800m^2 and 2 for the remaining 200m^2. Also, where necessary at the end of any calculations the number of parking spaces should be rounded up to the nearest whole number.

445 A parking guideline has been defined for call centre type operations in order to reflect their need for greater levels of parking. This guideline will apply where a new development is explicitly marketed and operated as a call centre facility within the general business use class Planning conditions may be applied to prevent the use reverting from call centre use to generic office use without a reduction in parking to reflect the maximum provision associated with generic offices. It is recognised that greater on-site car parking can often create undesirable landscapes, therefore, call centre sites should firstly apply robust travel planning before committing a greater area to parking.

446 An expected parking guideline has been defined for Houses in Multiple Occupancy (HMO). Student accommodation outside the Core also has an expected parking guideline. The expectation is that student residences in the Core zone will contain no residential parking provision, except for disabled spaces and some provision for start / end of term pick up.

447 Where flats are being created as a result of change of use or redevelopment of HMOs in Headingley and Hyde Park, the expected amount of car parking may be relaxed subject to optimising opportunity for off-street parking in redevelopment schemes and avoiding creation of highway safety problems in all cases. This is to help further the strategic aim of reducing the concentration of HMOs in the area.

CAR PARKING GUIDELINES

448 For all use classes the level of car parking calculated in accordance with Table 3-17 will be inclusive of Disabled car parking and Electric Vehicle Charging Point spaces, except where the minimum levels Disabled car parking in Table 3-18 are relevant.

449 For residential institutions which includes 'hospitals', the number of parking spaces in Table 3-17 is in relation to the total bed spaces, including treatment rooms.

450 For general residential car parking is based upon the spaces being allocated to individual dwellings. Where unallocated spaces are proposed reduced levels of car parking maybe possible provided it can be demonstrated that there would be no detrimental impact on surroundings streets

451 Parking guidelines for several medical uses refer to provision based on the number of staff at the establishment. However, it is intended that this provision would not be used solely for staff but for the establishment as a whole and allocated/controlled within the context of any car park management / Travel Plan.

452 For school parking guidelines, the guidelines are not expected to be a strict maximum, and the parking provision for each school site will be assessed individually based on its own merits in conjunction with the Travel Plan.

453 School sites will need to consider a parent drop off and pick up point within the school grounds along with a range of other traffic management measures. Car parking should, where possible, be provided outside the school grounds away from the main pedestrian entrance with a safe walking route from the car park drop to the school entrance.

454 Car parks to accommodate parent drop off should be appropriately designed to ensure the safety of children at all times and may need to be submitted with a supporting safety audit. Designs will need to incorporate paved walkways/holding areas for children to safely walk to school and should avoid reversing vehicle/pedestrian conflict if possible.

455 Car parks should not be built at the expense of sustainable forms of travel and should only be installed in conjunction with adequate cycle storage for staff, visitors and cycle/scooter storage for pupils, as well as appropriate pedestrian facilities. Safety considerations also need to be fully assessed.

456 For mixed use type developments, the requirement is that the maximum (or expected) car parking provision should be calculated independently for each element of the development and the total for the entire development should be the sum of these figures. However, where there exists the possibility of spaces being used flexibly, particularly for residential and workplace uses on the same site, some consideration should be given to adopting a lower total to reflect this possibility.

457 For food and drink uses outside the Core and Fringe but within or adjacent to town or local centres, significantly reduced levels of car parking maybe possible provided it can be demonstrated that there would be no detrimental impact on surroundings streets.

458 For restaurant and takeaway food uses, provision for food/delivery vehicles to customers' needs to be made, additional to other parking requirements.

Table 3-17: Car Parking Guidelines

Use	Instance	Unit	Core (Maximum Spaces)			Fringe (Maximum Spaces)			Elsewhere (Expected)		
	External Gross Floor Area (GFA) Size Thresholds		Below 250m^2	250m^2 To 800m^2	Above 800m^2	Below 250m^2	250m^2 To 800m^2	Above 800m^2	Below 250m^2	250m^2 To 800m^2	Above 800m^2
Shops	Food	GFA m^2	1 Space	1:70	1:100	1:30	1:35	1:14	1:25	1:15	1:14
	Non-Food	GFA m^2	1 Space	1:70	1:100	1:30	1:45	1:25	1:25	1:25	1:25
Financial and Professional Services		GFA m^2	1 Space			1:30			1:10		
Restaurants, Cafés and Drinking Establishments	Customer Area Only	GFA m^2	1:30			1:15			1:10		
Hot Food Takeaways		GFA m^2	On its own merit			On its own merit			On its own merit		
Business	Offices	GFA m^2	1:175			1:100			1:33		
	Call Centres	GFA m^2	1:120			1:70			1:22		
	Light Industry	GFA m^2	1:680			1:388			1:66		
General Industrial		GFA m^2	1:680			1:388			1:66		
Storage or distribution		GFA m^2	1:680			1:388			1:80		
Hotels		Bedrooms	1:3			2:3			1:1		
	Hospitals	Beds	3:2			3:2			3:2		

Table 3-17: Car Parking Guidelines

Use	Instance	Unit	Core (Maximum Spaces)	Fringe (Maximum Spaces)	Elsewhere (Expected)
Residential Institutions	Care Homes	Residents	1:3	1:3	1:3
Secure Residential Institution			Individual applications considered on their merits		
Purpose Built Student Housing	Students	Bedrooms	No spaces except disabled and drop off provision	1:8 (plus staff and visitors)	1:8 (plus staff and visitors)
Dwelling houses	Student	Bedrooms	No spaces except disabled and drop off provision	1:8	1:8
	Residents	Studio	0.5:1 Visitor Parking is not normally appropriate	0.5:1 Visitor Parking 1:5 dwellings	1:1 Visitor Parking 1:5 dwellings
		1 Bedroom			1:1 Visitor Parking 1:5 dwellings
		2 Bedroom			1:1 - 1.5:1 Visitor Parking 1:5 dwellings
		3 - 4 Bedroom			2:1 Visitor Parking 1:5 dwellings
		5+ Bedroom			On merit Visitor Parking 1:5 dwellings

Table 3-17: Car Parking Guidelines

Use	Instance	Unit	Core (Maximum Spaces)	Fringe (Maximum Spaces)	Elsewhere (Expected)
HMOs	Students	Bedrooms	No spaces except disabled and drop off provision	1:8	1:8
	Other			1:2	1:2
Non-Residential Institutions	Schools	Staff (FTE)	1:1	1:1	1:1
	Higher/ Further Education	Staff (FTE)	1:2	1:2	1:2
	Medical Services	Staff (FTE)	1:1	1:1	1:1
		Consulting/ Treatment rooms	3:1	3:1	3:1
	Museums/Public Galleries	GFA m^2	1:700	1:200	1:60
	Other	GFA m^2	On its own merit	On its own merit	On its own merit
Assembly and Leisure	Cinema	Seats	1:10	1:10	1:5
	Stadia/Arenas	Seats	1:15	1:15	1:15
	Leisure Centres/Bowling Alleys	GFA m^2	1:50	1:50	1:22
	Other	GFA m^2	Individual applications considered on their merits		
Sui Generis	Individual applications considered on their merits				

The spaces indicated above are intended to be a starting point, actual provision can be greater or less depending on location and other considerations.

DISABLED CAR PARKING

459 The number of accessible car parking spaces for disabled people for a development should be in accordance with the guidance below.

460 The size of car parking spaces for disabled people in private parking areas should be in accordance with Building Regulation requirements. Disabled spaces will not normally be marked out on the public highway.

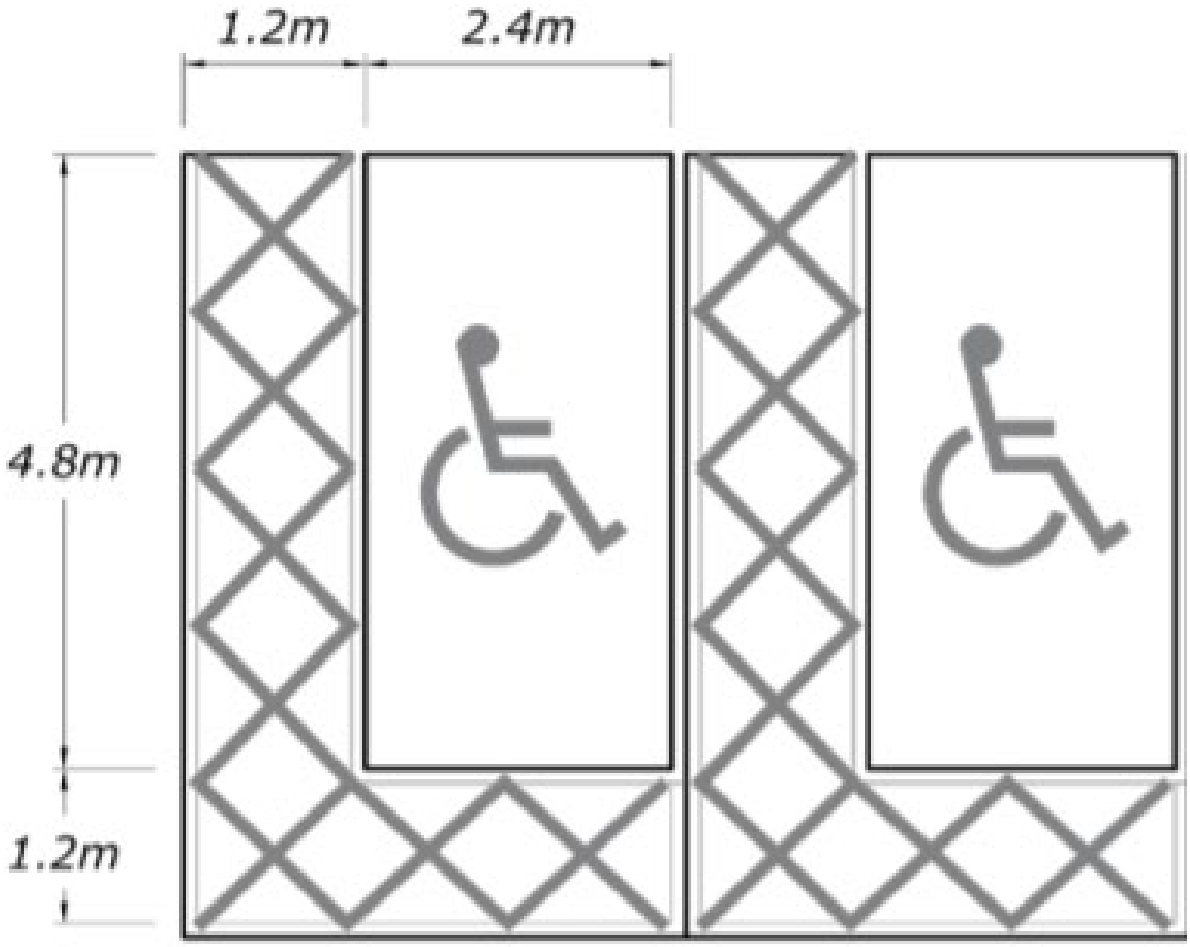


Figure 40: Disabled Parking Bay Dimensions

461 Enlarged car parking spaces should be 3.6m wide and 6.0m long in accordance with BS 8300-1:2018.

462 Where accessible car parking spaces for disabled people are proposed, consideration must be given to their convenient location and the provision of either dropped kerbs or a ramp to gain access to the adjacent footway.

GUIDELINES FOR MINIMUM ALLOCATION OF DISABLED PARKING SPACES

463 The guidelines specified here are based on those recommended in BS 8300-1:2018 (British Standards, 2018). This bases the minimum level of disabled parking on three requirements. The first requirement is that, when known, one space should be provided for each disabled employee. The second is that an additional fixed percentage (5% or 6%) of the actual provision should be designated spaces and thirdly that an additional fixed percentage (4% or 5%) of the actual provision should be enlarged spaces.. For sport leisure uses BS 8300-1:2018 refers to Sport England guidance.

464 For leisure uses where there is multiple provision within the same building or complex, the minimum amount of disabled parking will be summed across all uses.

465 Table 3-18 contains the minimum guidelines for provision of disabled parking. The calculated number of spaces should always be rounded up. The provision should be taken from the general parking provision rather than in addition.

NUMBER AND TYPES OF SPACE REQUIRED

Table 3-18: Disabled Parking Guidelines

INSTANCE	UNIT	DESIGNATED SPACES	ENLARGED SPACES
Shopping, recreation and leisure	Actual parking provision	6% + 1 per disabled employee	4%
Workplaces	Actual parking provision	5% + 1 per disabled employee	5%
Flats	Actual parking provision or number of flats (whichever is greater)	5% or minimum 2	5%
Student Flats	No. of units[4]	10%	5%
Religious Buildings and Crematoria	Actual parking provision	The greater of 2 spaces or 6%	4%
Clubhouse/pavilion Full-size synthetic pitch Multi-use games area Fitness suit Gymnastics Hall	Actual parking provision	The greater of 2 spaces or 6%	None
Indoor Bowls	Actual parking provision	The greater of 2 spaces or 8%	None
Outdoor Bowls	Actual parking provision	The greater of 4 spaces or 6%	None
Four court sports hall Indoor Cricket Tennis Table tennis Athletics 20m swimming pool	Actual parking provision	The greater of 4 spaces or 8%	None
Six court sports hall	Actual parking provision	The greater of 6 spaces or 8%	None
Nine court sports hall or larger 25m swimming pool 50m swimming pool	Actual parking provision	The greater of 8 spaces or 8%	None
Other	Actual parking provision	Individual applications considered on their merits.	
Railway and Other Public Car Parks[5]	Actual parking provision	5% + 1 per disabled employee	5%

[4] In the case of a student hall of residence where bed spaces are not grouped in to 'cluster flats' the assumption should be that 5 bed spaces equates to one flat

[5] For bus-based park and ride car parks, the initial quantity of disabled parking may be lower than that shown

466 The access, size and layout of the spaces should conform to those specified in BS 8300-1:2018 sections 7.5 (Access to, and location of, designated off-street parking spaces), 7.6 (Design and layout of designated off-street parking spaces) and where appropriate 7.7 (Multi-storey car parks).

467 Consideration should be given to safe storage and charging point locations for mobility scooters when designing Retirement/ Sheltered Housing Developments.

468 In city centre locations or areas with limited car parking residential development should still provide for disabled car parking.

CAR CLUB AND CAR SHARE

469 Currently 80% of cars travelling into Leeds City Centre in the morning peak period contain only one occupant. With increased levels of car sharing there is a potential reduction on the need for parking spaces as well as a reduction in congestion on the highway network.

470 The use of car club vehicles can potentially mean that car ownership and parking in residential locations can be reduced, with a commensurate reduction in the need for parking at an employment location.

471 Support from Leeds City Council for the further uptake of car sharing and use of car clubs will be in the following form:

- Recommended levels of car share and car club spaces for new developments, marked up and allocated for staff that car share;
- Continued provision of on-street spaces for Leeds City Council Car Club Provider;
- Promotion of car sharing through provision of High Occupancy Vehicle Lanes; and
- Continued provision and promotion of the Car Share Website wycarshare.com.

472 Leeds's car club seeks to reduce car ownership especially in the City Centre, by allowing member's access to a car when they want one. Car clubs provide easy and affordable access to a vehicle 24/7. Just book, drive and return the car. Cars are located in reserved parking spaces throughout the City Centre and with an expanding list in the surrounding area.

473 Car club bays will be located in accessible areas, where possible, to ensure the provision of disabled parking spaces remains unaffected.

474 Car club provisions should be considered for residential, student and business uses. For these developments the level of permanent provision will be considered on a site-

by site basis and these forms of provision should be actively considered in the planning application.

475 The provision of car parking spaces for car club vehicles will need to be in a visible location within the development and be accessible to the public 24 hours a day. To accommodate this space in the City Centre the developer may be required to pay for the conversion of and loss of income from pay and display bays. Part 4 of this document, “Section 106 Agreement Example Definitions and Clauses”, gives further details on the definitions/ clauses associated with car clubs. On-street car club parking provision should normally provide a minimum of 2 parking bays at each location to allow for ease of expansion as demand increases. Cycle parking is also provided at each site to improve mode integration.

476 The recommendations are not expected to be applied for sites where only a small number of parking spaces are to be delivered. Development types outside the broad categories in below will be examined on their individual merits.

Table 3-19: Recommended Provision of Car Club and Car Share

TYPE OF PROVISION	RECOMMENDATION
Parking spaces for Car Club vehicles	To be considered on a site-by-site basis.
Parking spaces reserved for Car Sharing	1 in 20 spaces (preferential spaces to be as close to the building entrance as possible.)

TAXI PROVISION

477 Taxi/ Private Hire Vehicle provision is particularly important at public transport interchanges and other sites such as hotels, hospitals and health facilities, major visitor destinations, large food and retail developments and large residential blocks including students. The facility should be located as close as possible to the building’s main entrance/ exit and include a shelter if feasible. Consideration of these facilities will form part of the development’s Transport Assessment/Travel Plan. In recent years Uber has seen a large increase in market share. The Uber business model of mainly on demand trips booked via an app does bring with it a requirement to consider increased pick up and drop off opportunities, which can be limited in the city centre.

COMMUNAL PARKING AREAS

478 If communal parking areas are to provide a convenient alternative to on-street parking they must be safe and attractive. Parking areas, particularly rear courtyards, must include sufficient levels of overlooking to ensure they do not become oppressive and unsafe environments. They must also be small enough to retain a courtyard feel and not become large, unattractive ‘car parks’. They must also incorporate a convenient pedestrian link to the properties served. Materials, lighting and landscape features within communal parking areas are also important within the overall design.

Figure 41: Communal Parking Millennium Village Example

479 The treatment of communal parking areas will need to respond to local context and should be considered at the outset. A rear parking court within a relaxed village environment may be publicly accessible and provide a safe and attractive courtyard space whereas the same arrangement within a central urban location may create safety issues and a gated communal area may be more appropriate. It is unlikely that a large number of spaces in one area would provide an appropriate solution.

480 On-street parking should wherever possible be incorporated into the layout of the development as attractive squares and communal spaces, fronted by development. Again, the size and treatment of these spaces will be important and must respond to the type and context of a development.

481 For parallel parking which is contiguous with the carriageway, parking bays should be 6.0m long and 2.4m wide. End bays also require a 45-degree splay. Where there is no footway, a 1.0m wide paved margin should be provided to allow pedestrian access .

482 For parking which is at right angles to and contiguous with the carriageway, parking bays should be minimum 4.8m long and 2.4m wide. There should be clear 6.0m width in front of the bays to allow vehicles to manoeuvre. Where vehicles may potentially overhang an adjacent footway, then an additional footway width should be provided.

483 Communal car parking within parking courts should include 4.8m by 2.4m spaces and have an aisle width of at least 6.0m, a space adjacent to a vertical boundary should be an additional 0.3m wide. A 3.0m reversing area is desirable at the end of the aisle, with an absolute minimum of 1.0m. For residential developments larger spaces (e.g 5m long) or 0.3m buffers should be considered between each parking space. For spaces accommodating EV charging points the spaces should be a minimum of 2.6m wide.

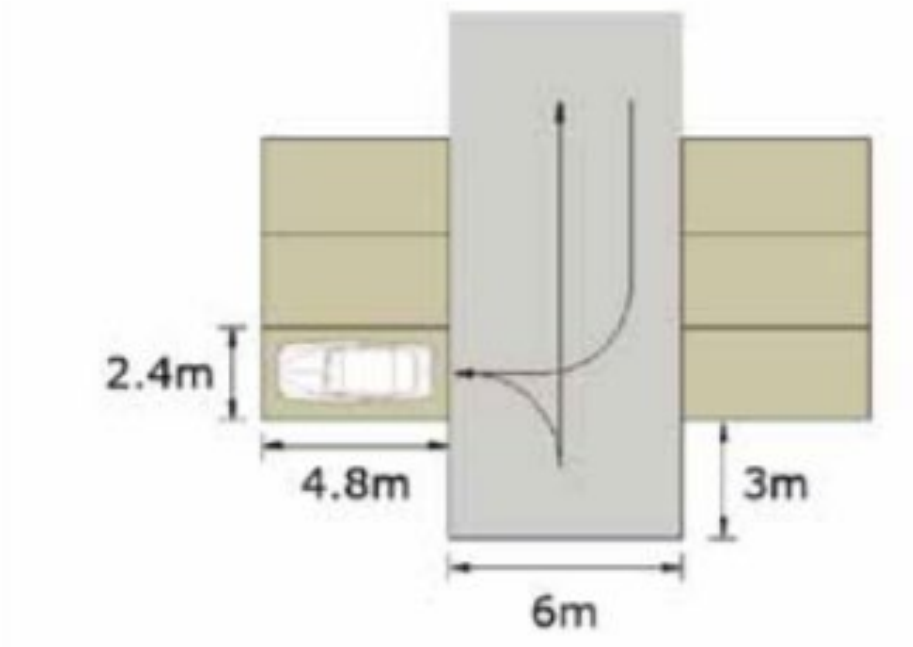


Figure 42: Car Parking Aisle Dimensions

484 Angled parking arrangements and other layouts will be considered but it will need to be demonstrated (by vehicle tracking) that they are operationally practical.

485 It is possible to be able to denote car parking spaces with contrasting materials for the edges or the whole of the space. This is particularly useful where it is preferable to avoid the use of white lining.

CAR FREE DEVELOPMENT

486 Residential developments which discourage the ownership of cars in locations within Central Areas and Controlled Parking Zones (CPZ's) are encouraged [NfL Principle 25].

487 Residential developments will need to demonstrate that proposed low levels of parking will meet the needs of the development.. Whilst a level of on-street parking may be acceptable it depends on the nature of the street and the ability of that street to accommodate on-street parking without causing issues of road safety i.e. obstruct crossing points, pavement parking, restrict visibility, cause unacceptable delay or introduce reversing manoeuvres or bad neighbour/amenity issues. It is likely that even in car free developments that some provision for disabled and visitor car parking will be required. Parking permits may be required.

488 Such developments should consider the possibility of promoting Car Clubs and providing Car Club spaces and free trial membership and usage for residents should be offered within the development. Consult the Influencing Travel Behaviour team for details. Leeds has had a city-wide car club operational since 2004, so that developers do not have to develop a car club scheme themselves.

489 Car Free Developments will only be considered if they are genuinely "car-free" and legally controlled.

3.3 ELECTRIC VEHICLE CHARGING POINTS

INTRODUCTION

490 The Council promotes the use of ultra-low emission vehicles due to their carbon reduction and air quality benefits. A shift towards cleaner mobility is necessary to create a healthier city and respond to the Climate Emergency. The Core Strategy policy SP11 (viii) supports 'the development of infrastructure for new low carbon technologies', and the Core Strategy Policy EN8 requires provision for electric vehicle charging infrastructure.

491 All new development should ensure that the electricity infrastructure is sufficient to enable supply to be provided for the required number of charge points.

NUMBER OF CHARGE POINTS

492 The required number and recommended standard of Electric Vehicle Charge Points (EVCP) to accord with EN8 is shown in Table 3.20, with recommended number and standards for other use classes shown in Table 3.21.

Table 3-20: Required Number and Recommended Standard of Electric Vehicle Charge Points

USE CLASS	32AMP CHARGE POINTS	RAPID CHARGE (MINIMUM 50KW)
Residential	1 per parking space and 1 per 10 visitor spaces	-
Office / Retail / Industrial / Education	Charging points for 10% of parking spaces ensuring that electricity infrastructure is sufficient to enable further points to be added at a later stage subject to projected demand	
Petrol Filling Stations		2 minimum
Motorway Service Stations	Charging points for 10% of parking spaces ensuring that electricity infrastructure is sufficient to enable further points to be added at a later stage subject to projected demand	For each 50 parking spaces one rapid must be provided

Table 3-21: Recommended Number and Standard of Electric Vehicle Charging Points

USE CLASS	32AMP CHARGE POINTS	RAPID CHARGE (MINIMUM 50KW)
Hotel, Health and Gyms	1 per 10 parking spaces ensure electricity infrastructure is sufficient to add more 1 per 10 additional ducted bays	-
Public Car Parks / Sui Generis	1 per 10 parking spaces ensure electricity infrastructure is sufficient to add more 1 per 10 additional ducted bays	For short stay uses. every 50 parking spaces should have a rapid charge point
Drive through restaurants		2

493 Sites with ducted bays must provide an annual report on the demand for additional EVCP's either through a car park management plan or a Travel Plan. When additional demand is present, the site owner must provide additional EVCP's to the ducted bays.

OFF-STREET LAYOUT

494 Layouts should meet the following requirements:

- EV Bays should be a minimum of 2.6m wide;
- EVCPs must be protected from collision and should be positioned to avoid becoming an obstruction or trip hazard;
- EVCP and cable enabled points must be shown on the layout plan.
- Minimum of one charge point, or 5% of EVCPs, whichever is greater should be accessible to disabled motorists;
- EVCP bays should be signed and marked for Electric Vehicle Charging Only; and
- Rapid EVCPs may be limited to 1 hour stay and include an overstay tariff via the Back-Office system.

Figure 43: EVCP's Example

495 Suggested layout showing an accessible bay is shown in Figure 44.

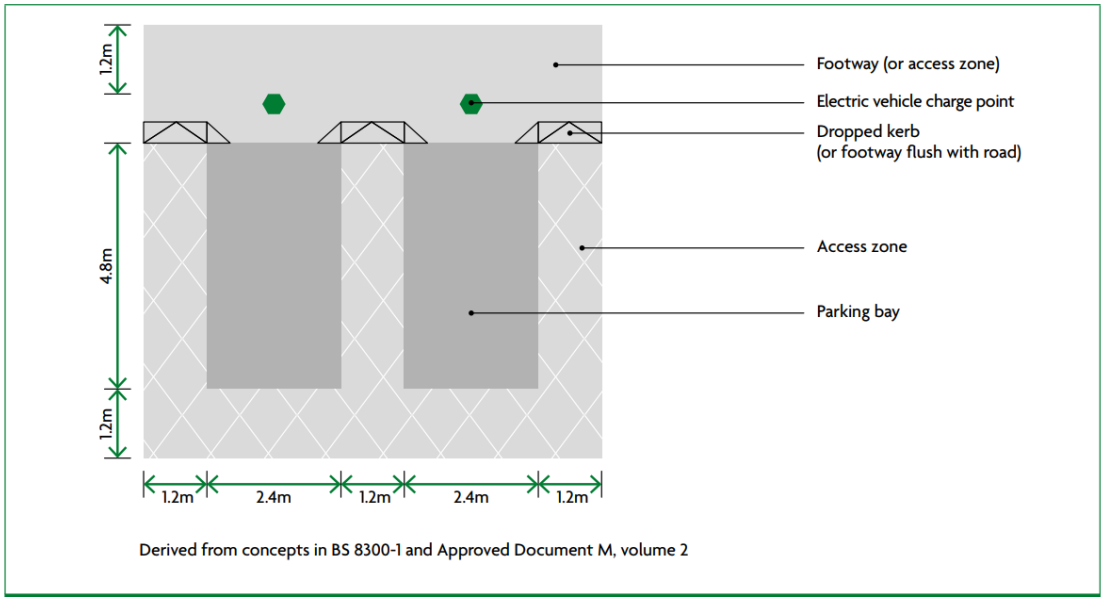


Figure 44: Suggested Accessible Charge Point Layout

ON-STREET PROVISION

496 A minimum of 2m footway width should be maintained, with no trailing cables across the footway which could obstruct wheelchairs, mobility scooters, those with limited vision and pushchairs.

497 Charging units can be positioned on build-outs between/at end of parking bays

498 Charging units must be positioned so that when in use, the risk of cables presenting a trip hazard to pedestrian is minimised

499 Charge units must be set back 500mm from the kerb edge

500 Vehicle impact protection may be required for charging units

501 Parking bays to be clearly marked as for EVC with TROs if applicable

THE MINIMUM SPECIFICATION

- EVCP to be 7kW with Type 2 connections, Mode 3 (on a dedicated circuit);
- The charging pillar or wall socket should be located where it can be accessed from the parking bay, without the charging cable or pillar causing a trip hazard or obstruction;
- Public EVCP's should be publicised on https://www.national-charge-point-registry.uk/ and should accord with the Alternative Fuels Infrastructure Regulations 2017;
- The Electric Vehicles (Smart Charge Points) Regulations 2021
- Equipment installation should be in accordance with the latest 'IET Code of Practice for Electric Vehicle Charging Equipment'.
- Building Regs Part S
- Accessible charging – Specification PAS 1899:2022

Figure 45: Type 2, 7kW AC Connector

LOAD BALANCING

502 A load balancing system should be used for long or medium stay car parks.

503 Residential charge points must individually be able to charge at 32amp, however an electrical supply of 16 amps per space is acceptable when a load balancing system is installed.

3.4 MOTORCYCLE PARKING

INTRODUCTION

504 Secure powered two-wheeler (PTW) parking is a key element for the promotion and continued uptake of this mode as a more sustainable alternative to single occupancy car use.

505 Motorcycles take up less road space than cars and can filter through stationary or slow-moving traffic, as well as generally emitting less CO_2. An increase in the provision of parking facilities will help those choosing to motorcycle as an alternative mode of transport. The Council will promote the provision of PTW parking in places where demand exists or is expected in future.

506 Motorcycles can be extremely valuable vehicles that are prone to theft. They can be readily lifted into another vehicle, and hence may be subject to organised theft. Security should be one of the foremost considerations for those providing parking facilities for motorcycles.

507 Specific guidelines on the number of motorcycle parking spaces that should be provided with new developments are shown in Table 3-22.

DESIGN

508 A recommended guide for the acceptable guideline of motorcycle parking is produced by the Institute of Incorporated Engineers. Chapter 5 of 'Guidelines for Motorcycling' deals specifically with motorcycle parking. On-street parking bays should be designed so that the motorcycle's back wheel is facing the footway kerb and the front wheel facing the carriageway. This not only saves on space but also allows motorcycles to be parked against the camber of the carriageway reducing the chance of the motorcycle toppling over. An individual motorcycle parking bay should ideally measure 2.8m x 1.3m to accommodate all sizes of motorcycles. Locking facilities are either raised or ground level. With ground level provision the anchor point remains below the

surface, often concealed by a hinged steel plate set flush with the road surface. The plate is raised by the user, allowing a loop to be lifted up and the user's own lock passed through, with raised provision a horizontal bar is provided at a height of approximately 40-60cm. This style is generally provided at the edge of the carriageway and again requires the user to use their own lock, however they are not permitted in public locations. Locking facilities, either raised or ground level, should not represent a trip hazard to pedestrians.

509 If a development is large enough, the motorcycle parking area should be able to hold a minimum of 6 motorcycles. Given that motorcycles are prone to theft, riders are more confident parking in larger motorcycle parking areas. This would not be achieved if the parking bays were smaller and dispersed across a number of locations. Other vehicles should not be able to easily pull up alongside the motorcycle parking, and ideally, the parking should be overlooked and/or covered by monitored CCTV.

GUIDELINES FOR MINIMUM ALLOCATION OF MOTORCYCLE PARKING SPACES

510 Table 3-22 contains the minimum standards with associated comments for motorcycle parking. These do not differentiate by short and long stay durations. The guidelines set out apply for developments which exceed the size thresholds set out in Table 4.26.

511 Given the joint considerations on access and security, thought should be given to integrating both bicycle and motorcycle parking at the same location or within the same structure. It should be emphasised that this should not be a justification for reducing the minimum requirement of either type of parking but to allow more flexibility and convenience of provision. However, the location of the parking should not be comprised as a result.

512 For residential developments with allocated car parking there is no separate requirement for motorcycle parking all be it additional security measures should be considered.

NUMBER AND TYPE OF SPACE REQUIRED

513 **Table 3-22** outlines the minimum number of spaces required.

Table 3-22: Motorcycle Parking Provision

Use	Instances	Threshold (External GFA unless otherwise stated)	Unit	Requirement	
				Ratio	Comment
Food Retail/ Non Food Retail		800m^2/1500m^2	GFA – m^2	1:1000	Minimum of 1 space
Financial/ Professional Services		2500m^2	GFA – m^2	1:1000	Minimum of 1 space
Restaurants and Cafés		2500m^2	GFA – m^2	1:200	
Public Houses/ Wines Bars		N/A	GFA – m^2	Individual applications considered on their merits	
Hot Food Takeaway		N/A	GFA – m^2	Individual applications considered on their merits	
Business	Offices	1,500m^2	GFA – m^2	1:1000	
	Light Industry	2,500m^2	GFA – m^2	1:1000	
General Industry		4,000m^2	GFA – m^2	1:1000	
Warehouse/ Storage		5000m^2	GFA – m^2	1:5000	
Hotels		100 Bedrooms	Bedrooms	1:40	
Residential Institutions	Hospitals	50 Beds	Beds	1:50	
	Nursing Homes / Extra Care / Retirement	75 Beds	Residents	1:20	
	Residential Educational Facilities and other residential institutions	150 Students / Residents	N/A	Individual applications considered on their merits	

Table 3-22: Motorcycle Parking Provision

Use	Instances	Threshold (External GFA unless otherwise stated)	Unit	Requirement	
				Ratio	Comment
Private Residential	Flats (unallocated)	50 Dwellings	Dwellings	1:10	
	Houses/ Bungalows	50 Dwellings	Dwellings	Own Merits	
	Student	150 Dwellings	Students	1:10	
	Retired/ Sheltered	On its own merit	On its own merit	On its own merit	
HMO		50 beds	Bedrooms	Individual applications considered on their merits	
Non-Residential	Primary Schools	500m^2	Staff	1:20	
	Secondary Schools	500m^2	Staff	1:20	
	Higher/ Further Education	500m^2	Staff Students	1:20 1:200	
	Medical Services	1,000m^2	Staff	1:20	
	Museums/ Public Galleries	1,000m^2	Staff	1:20	
	Other	N/A	GFA – m^2	Individual applications considered on their merits	
Leisure	Cinemas/ Theatres/ Arenas	1,500m^2	Seats	1:200	
	Leisure Centres/ Bowling Alleys / Gyms	1,500m^2	GFA – m^2	1:2000	
	Other	1,500m^2	GFA – m^2	1:2000	

3.5 CYCLE PARKING

INTRODUCTION

514 The Council has an ambition to introduce a public bike share scheme for the city and work continues on developing appropriate proposals. Developers should discuss with the Council the potential for being part of or adding to the bike share as part of their development/ Travel Plan measures.

515 Developers and planners should seek greater provision than the minimum wherever possible, particularly in locations where trips by cycle could grow substantially. The quantity and quality of cycle parking is likely to become an ever more important factor in attracting potential buyers, occupiers and customers.

516 Cycle parking should be:

- **Fit for purpose**: Meet identified current and future demand, with an appropriate balance of short-stay and long-stay provision, and accommodating all types of cycle;
- **Secure**: Stands in secure private or indoor spaces, or in well-lit, visible places that have high levels of natural surveillance; and
- **Well-located**: Convenient, accessible, as close as possible to entrances/destinations, and preferably sheltered.

GENERAL DESIGN CONSIDERATIONS

517 Drawings submitted for a planning application must clearly show the location, design and layout of the cycle parking provision. Table 3-25 provides information on the number of cycle parking spaces required for developments.

518 Planning and design of cycle parking needs to take into account the different types and sizes of cycle that exists, for example, including:

- Hand cycles;
- Upright and recumbent tricycles;
- Tandems; and
- Solo cycles with adaptations to suit the rider's specific needs (this section provides further details and dimensions).

519 This is important for ensuring that any cycle user with a physical, sensory or cognitive impairment can enjoy access to good quality cycle parking. An inclusive approach to cycle parking is recommended and includes:

- Step-free access, which may require provision of shallow ramps or lifts large enough to carry all types of cycle;
- Signing to accessible facilities at locations where the type of cycle parking is difficult or impossible for all to use; and
- Making available spaces for larger models and, potentially, reserving allocated spaces for disabled cyclists.

520 Cycle parking should support any type of bicycle without damaging it – both when the cycle is parked and if it is accidentally knocked.

521 It should be possible to secure both the frame and front wheel to the stand.

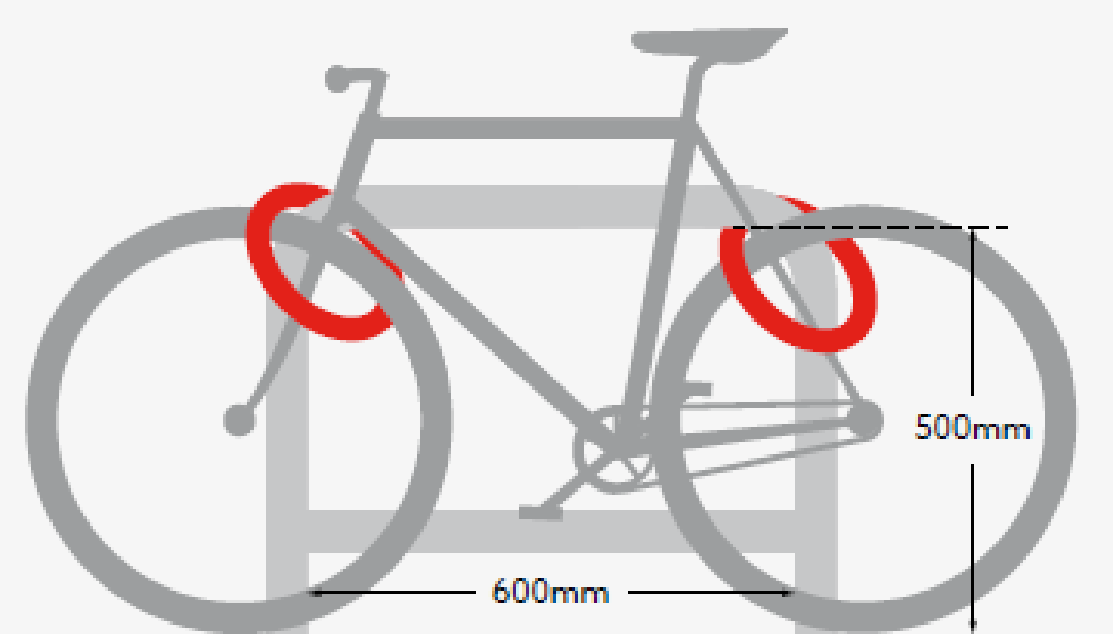


Figure 46: Recommended Double Locking Practice

Table 3-23: Cycle Parking Dimensions

	REQUIRED
Bay width (length of cycle parked on a stand)	2.0m
Access aisle width (if larger cycles are accommodated on end of bay)	2.5m
Access aisle width (if larger cycles need to use the aisle)	4.0m
Width needed for access aisle + bay on one side	4.5m – 6.0m
Width needed for access aisle + bay on both sides	7.0m – 8.0m
Spacing between stands	1.0m minimum 1.2m preferred

522 A recommended minimum access way width of 3.0m should be allowed for bicycles to be pushed to storage areas, to allow cyclists to pass one another.

523 Cycle storage must not be included within a bin storage area and should not have to be accessed via waste storage areas.

524 Users need to feel both that their cycle will be safe where it is parked, and that they will be safe accessing and using the parking.

525 Cycle parking should be clearly signed.

526 Under no circumstances are butterfly-type stands acceptable.

Short Stay

527 Short stay cycle parking must be provided for visitors or shoppers. If on-street, they can be located on build-outs or aligned with other footway street furniture such as bins, benches, sign posts etc. They should:

- Be located as close to the building entrance as possible (and, where possible, no more than 50m distance);
- Be in a location that people feel safe using at all times of the day – visible, accessible and well lit;
- Not obstruct pedestrian access;
- Be covered by natural surveillance and/or CCTV;
- Consist of Sheffield Stands, which must be positioned to ensure there is adequate clearance from any walls/structures and adjacent stands;
- Have no obstructions such as steps between cycle route and cycle parking;
- Covered for weather protection in larger developments (over the Travel Plan threshold); and
- Allow for cargo bike spaces at the ends of cycle ranks.

Long Stay

528 For communal provision, at least 30% of cycle parking should be Sheffield type stands. 5% of the cycle parking should be Sheffield stands at 1.2m spacing for Access bikes and cargo bikes. 2-tiered racking can form up to 70% of provision where space is constrained. Semi Vertical storage is not a recommended form of cycle storage. Vertical stands are only acceptable in exceptional circumstances in refurbishment works with space constraints; these must be agreed through discussion. See “Acceptable Stand Types” for details of required specification of each type of stand.

529 Long stay cycle parking should:

- Be fully enclosed, weather proofed and secure;
- Be well illuminated and overlooked. CCTV may be necessary as a deterrent to vandalism or theft;
- Be located either within the curtilage of the application site, as close to the main entrance of the building, or within the building itself. Internal communal cycle stores should be fitted with a secure door set and be provided with secure cycle stands with two-point locking;
- Afford level access and must be located at ground floor level unless there is a lift large enough to accommodate cycles. Where existing buildings are being extended or have a change of use and a suitable lift is not feasible then basement storage may be considered acceptable providing there is sufficient room to accommodate a straight wheeling ramp, push ramp or runnel;
- Allow for cargo bikes and access bike spaces; and
- For houses, cycle storage within a garage is acceptable if the internal dimensions of the garage are at least 3.0m by 6.0m. If not in a garage, cycle parking should be within a covered, lockable enclosure, with either direct access to rear storage, or within the house frontage. Shed storage in rear gardens will only be acceptable if the sheds are secure and accessed directly from the highway without carrying the bike through the house.

Schools

530 Good quality cycle parking facilities in schools play an important role in influencing the travel choices of young people. The right provision will depend on the age group of the children, and the range in sizes of cycles to be parked. Storage should also consider the parking needs of staff and parents of carers accompanying children on cycles and of other visitors.

531 In schools all cycle parking should be Sheffield stands. (Children unable to lift bikes etc., but also allows other uses – scooters etc.) and follow the below guidelines:

- Long stay staff and pupil storage should be separate from each other. This should be in the form of lockable compounds.
- Cycle storage should occupy a prominent position within the footprint of the facility.
- Easily accessible to entrances, but should not be located in car parks, and must have safe and segregated access from motorised traffic.
- Public Buildings

- Such sites often have a number of entrances and exits. Cycle parking, therefore, needs to be carefully planned in clusters, convenient for users, and located near to the entrances and exits that have higher levels of natural surveillance and footfall.
- However, areas should be avoided where conflict is likely with motorised vehicle access to and from car parks or drop-off points.
- At sites where access may be permitted for 24 hours or beyond the normal working day, particular consideration is required of lighting and levels of surveillance after dark, and how safe the user feels accessing the parking.

ACCEPTABLE STAND TYPES

Sheffield Stands

532 These should:

- Be constructed from minimum 50mm diameter steel tubing either black polyurethane (plastic) coated or stainless steel and only in locations where this is in contrast to prevailing landscape to avoid hazard to people with impaired vision. Both versions must have bands in contrasting colours i.e. reflective white / yellow on black or black on stainless steel.
- Incorporate a tapping rail where they are a possible obstruction to pedestrians and have appropriate signage in accordance with TSRGD on the outer stands.
- Measure between 0.7m to 0.8m long and 0.75m high.
- Be set in Concrete ST2 of at least 0.3m deep x 0.3m wide, for individual external stands.
- Have minimum spacing of 1m between stands. 5% of total number of spaces should have 1.2m spacing for Access and Cargo bikes.
- Have 0.55m minimum clearance on all sides. 1.0m clearance to kerbs. 600mm from end of stand to any wall.
- Leave a minimum of 2.0m width for pedestrians on external footways/walkways once bikes are parked (=2.55m from end of stand).

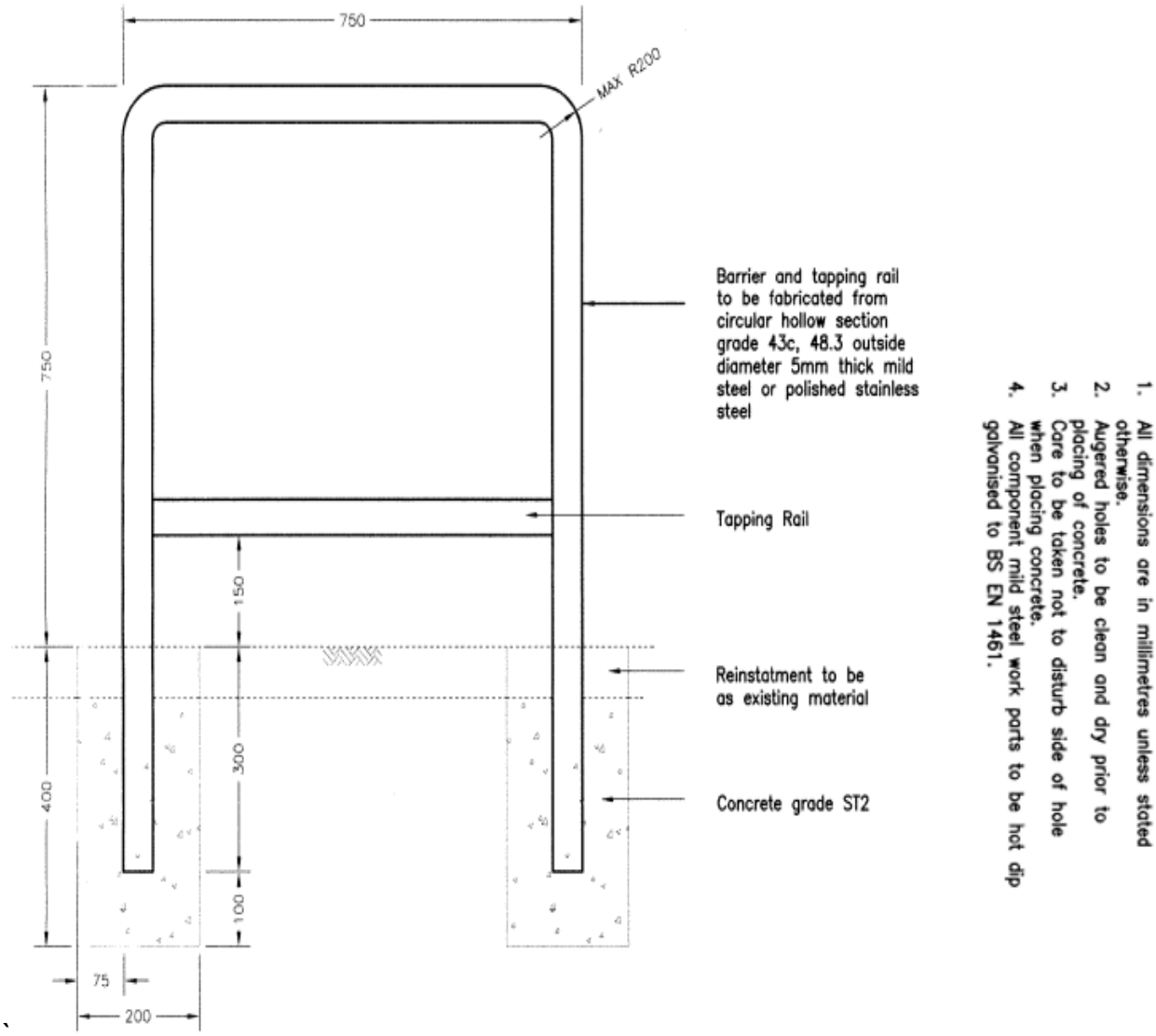


Figure 47: Sheffield Stand Example

Two Tier cycle parking

533 Two Tier parking incorporating gas struts is acceptable for a proportion of the storage but is not suitable for all. The top rack must lower almost to the ground. 2-point locking is required.

534 Minimum height requirement is 2.75m.

535 2.5m minimum aisle width to lower ramp and recover bike. Horizontal spacing should be 0.35m minimum with alternate one up one down arrangement to allow handlebars to overlap.

536 Two tier parking requires regular maintenance due to the moving parts.

537 Best provided where instructions for use can be given as apparent effort needed to raise bikes may discourage some potential users.

Figure 48: Two-Tier Cycle Parking

Vertical

538 Vertical storage options are not supported unless in extreme circumstances and only way to provide secure locking.

Lockers

539 Recommended for additional security where other forms of covered storage are not possible. May be used in upright form where space is limited. Can be ‘double-ended’ to make best use of space but minimum of 2.0m needed in front of doors to allow for comfortable insertion/removal of bikes. Useful for siting in ‘dead’ space in car parks. Requires key management regime: best assigned to single user but difficult to monitor levels of use unless contents can be inspected.

Electronic Control of Cycle Parking

540 Recommended where very high levels of security are required for both compound and bike locking. Suitable for use in managed central cycle parking unit where users come from a large number of organisations on the same site. Electronic control also allows for highly detailed monitoring of patterns of use.

Cycle Repair Facilities

541 Where over 40 cycle stands are provided, a “floor or wall mounted public bike pump” should be provided.

542 Where over 80 cycle stands are provided, a “public bike pump” and repair tools/tool station should be provided.

Shower and Locker Provision

543 Showers must be provided for developments over the threshold below.

Table 3-24: Threshold for Shower by Gross Floor Area (m^2)

LAND USE	THRESHOLD FOR SHOWER BY GROSS FLOOR AREA (m^2)
Food Retail	800+
Non-Food Retail	1500+
Financial & Professional Services	2500+
Business (office)	1500+
Business (light industry and research	2500+
General Industrial	4000+
Storage or Distribution	5000+
Others (Sui Generis)*	On their merits (to be discussed with Leeds City Council Development Department)

562 One women’s shower and one men’s shower should be provided in each development over the threshold above. For sites with more than 20 long stay cycle parking spaces, an additional two showers for every additional 20 long stay cycle spaces.

563 Clothes lockers should be provided for a minimum 10% of staff.

Electric Bikes

564 Twin 13amp sockets should be provided for every 20 long stay cycle spaces.

Number and Type of Space Required

565 **Table 3-25** outlines the minimum number of spaces required.

Table 3-25: Cycle Parking Provision

Use	Instance	Unit for Cycle Parking Ratio	Short-Stay/ Visitor Parking Ratio	Long-Stay Ratio
All	Parking for adapted cycles for disabled people	%	5% of total capacity co-located with disabled car parking	
Food Retail/ Non Food Retail, Public Houses/ Wines Bars, Hot Food Takeaway, Restaurants and Cafés	Small (<200m^2)	GFA - m^2	1 per 100m^2	1 per 100m^2
	Medium (200 – 1000m^2)	GFA – m^2	1 per 200m^2	1 per 200m^2
	Large (>1000m^2)	GFA – m^2	1 per 250m^2 (cap of 20*)	1 per 500m^2
Financial/ Professional Services		GFA – m^2	1 per 250m^2 (cap of 10*)	1 per 200m^2
Business	Offices	GFA – m^2	1 per 1000m^2	1 per 150m^2
	Light Industry	GFA – m^2	1 per 500m^2	1 per 200m^2
General Industry		GFA – m^2	1 per 500m^2	1 per 300m^2
Warehouse/ Storage		GFA – m^2	1 per 1000m^2	1 per 500m^2
Hotels		Bedroom	1 per 50 bedrooms	1 per 8 bedrooms
Residential Institutions	Hospitals and nursing homes	Beds / employees	1 per 20 beds	1 per 5 employees
	Residential Educational Facilities and other residential institutions	N/A	Each case to be considered on its merits	

Use	Instance	Unit for Cycle Parking Ratio	Short-Stay/ Visitor Parking Ratio	Long-Stay Ratio
Private Residential	Flats (If unallocated cycle parking, a reduction would be considered)	Dwellings	1 per 10 dwellings (cap of 40)	1 per dwelling
	Houses / Bungalows	Dwellings / bedrooms	1 per 40 dwellings	1 per bedroom
	Student (If unallocated cycle parking, a reduction would be considered)	Bedrooms	1 per 15 bedrooms (cap of 20)	1 per 5 bedrooms
	Retired/ Sheltered	Unit/bedrooms	1 per 10 units	1 per 5 bedrooms
HMO		Bedrooms	-	1 per bedroom
Non-Residential	Primary and Secondary Schools	Pupils	1 per 50 pupils	1 per 10 pupils
		Staff	-	1 per 20 staff
	Higher/ Further Education	Undergraduate students/ staff & postgraduate students	1 per 10 undergraduate students	1 per 10 staff and postgraduate students
	Medical Services	Employees	1 per 10 employees	1 per 5 employees
	Museums/ Public Galleries	GFA – m^2 / employees	1 per $50m^2$	1 per 5 employees
	Other	N/A	Each case to be considered on its merits	

Use	Instance	Unit for Cycle Parking Ratio	Short-Stay/ Visitor Parking Ratio	Long-Stay Ratio
Leisure	Leisure Centres/ Bowling Alleys, other	GFA – m^2 / employees	1 per 50m^2	1 per 5 employees
	Cinemas/ Theatres/ Arenas	Seats / employees	1:10 seats	1 per 5 employees
Public Transport Interchange	Standard stop	N/A	Each case to be considered on its merits	
	Major Interchange	Daily users	1 per 200 daily users	-
Other		N/A	Each case to be considered on its merits	

3.6 COMPLEMENTARY FORMS OF TRANSPORT INTERVENTION

INTRODUCTION

566 In order for the parking policies described previously to be effective, other complementary forms of transport intervention are necessary, they are described below.

TRAVEL PLANS

567 The use of Travel Plans as a way of promoting sustainable travel will be continued in line with Part 4. Travel Plans both support and are supported by the parking guidelines for new developments set out in the previous sections and the recommendations on parking for bicycles, car club, car share PTW and electric vehicle charge points.

568 There is also a link to the need for on-street parking controls, with a well-executed Travel Plan possibly mitigating the need for such measures. Conversely, on-street controls may be needed in order for a Travel Plan to perform well against its targets.

SIGNING/INFORMATION/MAPS

569 Signing to the City Centre car parks will be reviewed regularly to ensure signing is legible, consistent and up to date. Only permanent car parks will be signed from the highway. Signs required for new car parks will be funded by the applicant.

570 Information on car parking is contained on the Leedstravelinfo website. Up to date details on pricing in Leeds City Council on and off-street spaces will be published on the Council website.

571 Dynamic signing for City Centre car parks is provided in a number of locations. This alerts drivers to the number of vacant spaces available and suggests alternative parking locations if a car park is full. Any new permanent City Centre car parks will be required to link to dynamic signing.

INFORMATION COLLECTION AND MONITORING

572 Data collection is important in order to give an evidence base for creating car parking policy and strategy. Data collection also provides a tool for monitoring the effect of strategy changes over time.

573 At present, data on car park capacity and usage include:

- Occupancy surveys of key car parks in the City Centre every six months;
- Inventories of all City Centre car parking spaces (last carried out in 2007); and
- Monitoring of City Centre private car parking charges at least every six months.

574 The six-monthly spot checks on car park occupancy will be continued. The inventory of all spaces will be repeated, dependent on funding, and updated every 5 years. It will be extended to include pricing information in addition to capacity and usage data.

575 Parking Services will continue to monitor car parking charges in the privately-operated car parks in the City Centre. This will provide evidence for the alteration of Leeds City Council car parking charges, and also give justification for changes in usage of Council car parks.

576 A review of the policy included in this guide will be undertaken as appropriate, utilising the parking monitoring information, along with more generalised transport data. A review may also be necessary to ensure consistency with changes in national and local transport and land use planning policy.

577 Monitoring of the use of cycle, motorcycle, electric vehicle charge points and car club parking will be undertaken on an ad hoc basis as well as being incorporated into the City Centre inventory. Developers will be required to monitor the use of cycle and motorcycle parking as part of the travel planning process.

578 The production of an annual report is a requirement of the Traffic Management Act 2004. The report details the enforcement activities of the city including statistical and financial information. The report will set out the Council's performance on parking enforcement and demonstrate how the parking policy and enforcement is achieving its objectives.

3.7 PARKING AREAS- DETAILED MAPS

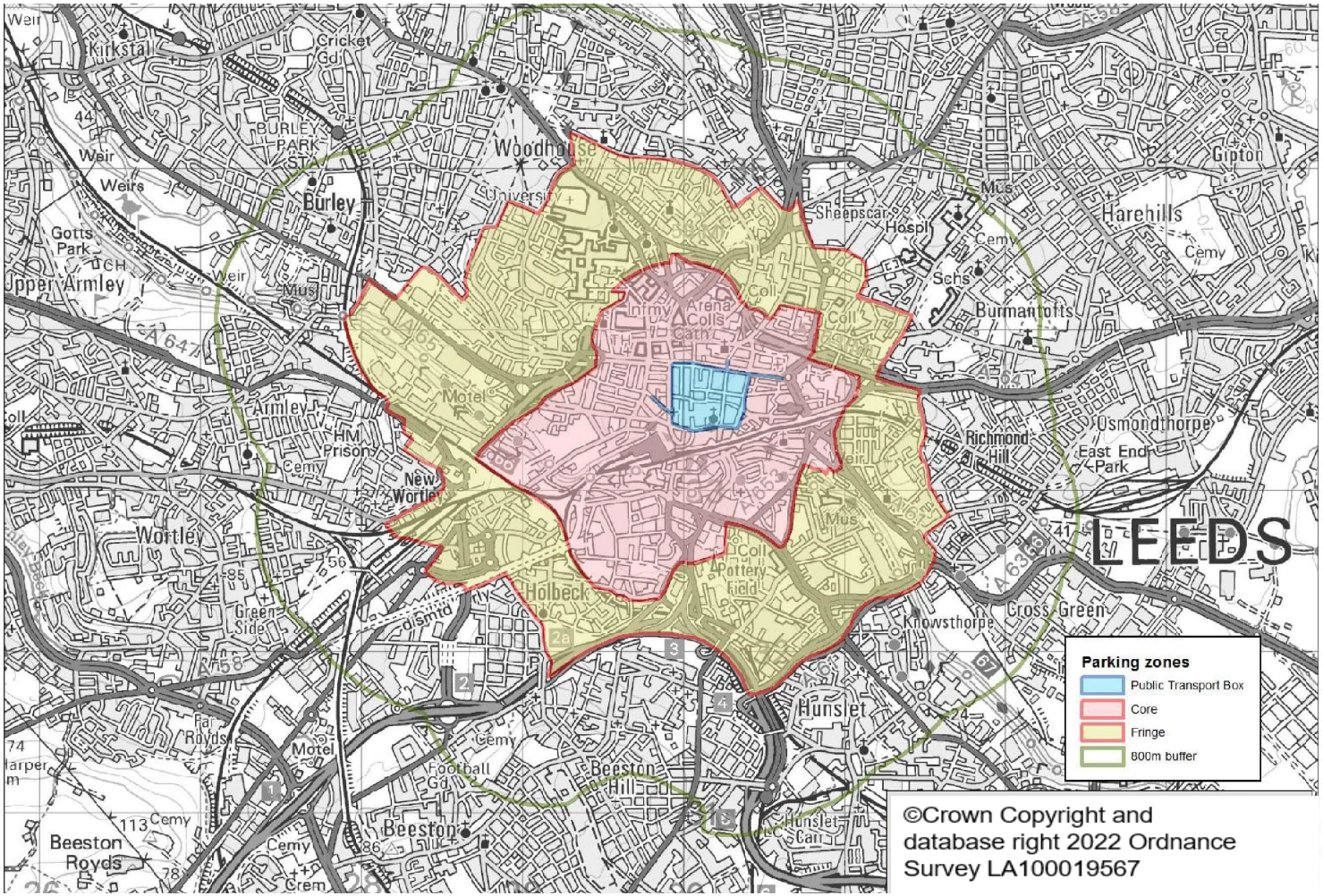


Figure 49: Core and Fringe Parking Zones with Public Transport Box and 800m Buffer

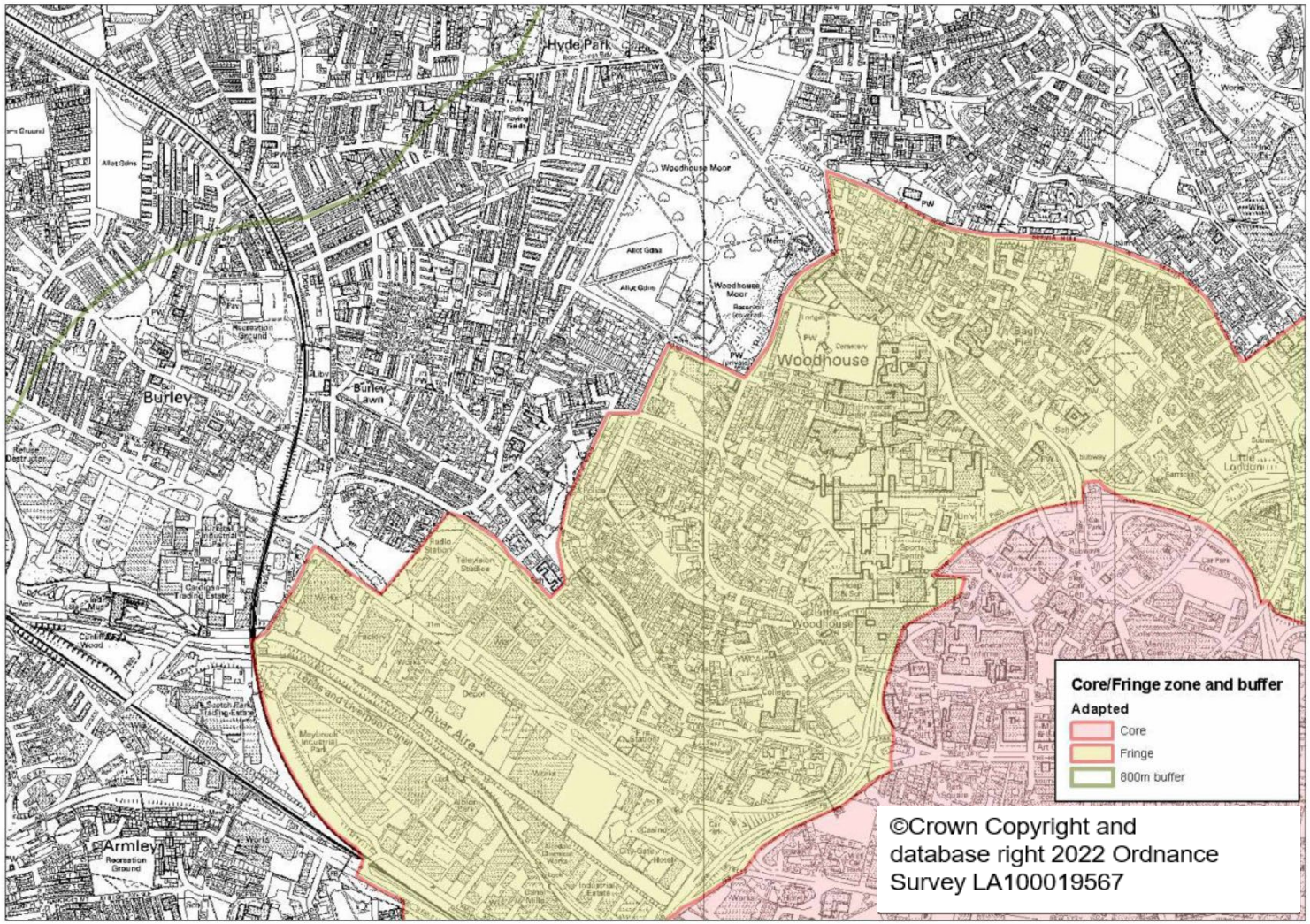


Figure 50: Core and Fringe Parking Zones with Public Transport Box and 800m Buffer (North West)

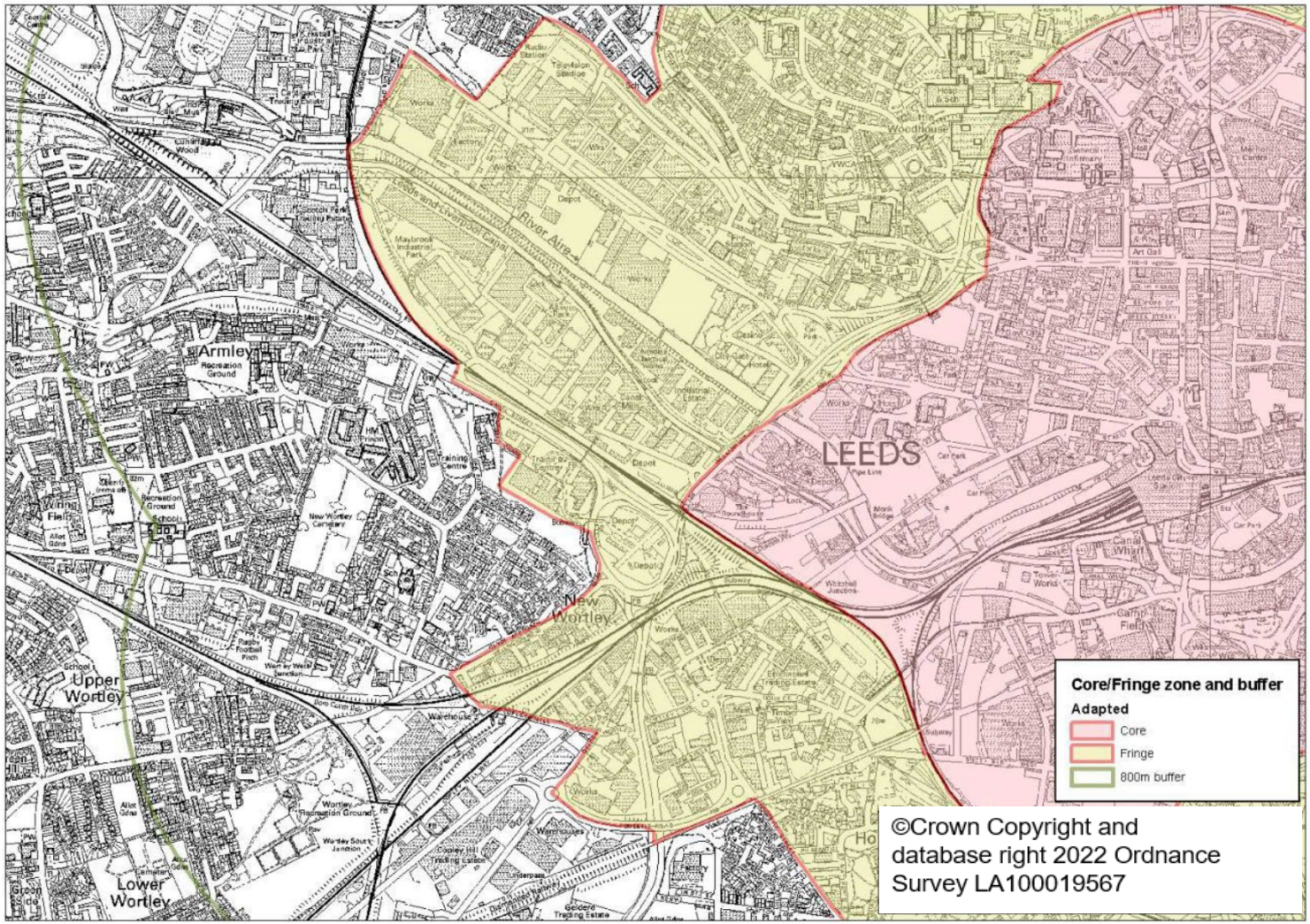


Figure 51: Core and Fringe Parking Zones with Public Transport Box and 800m Buffer (West)

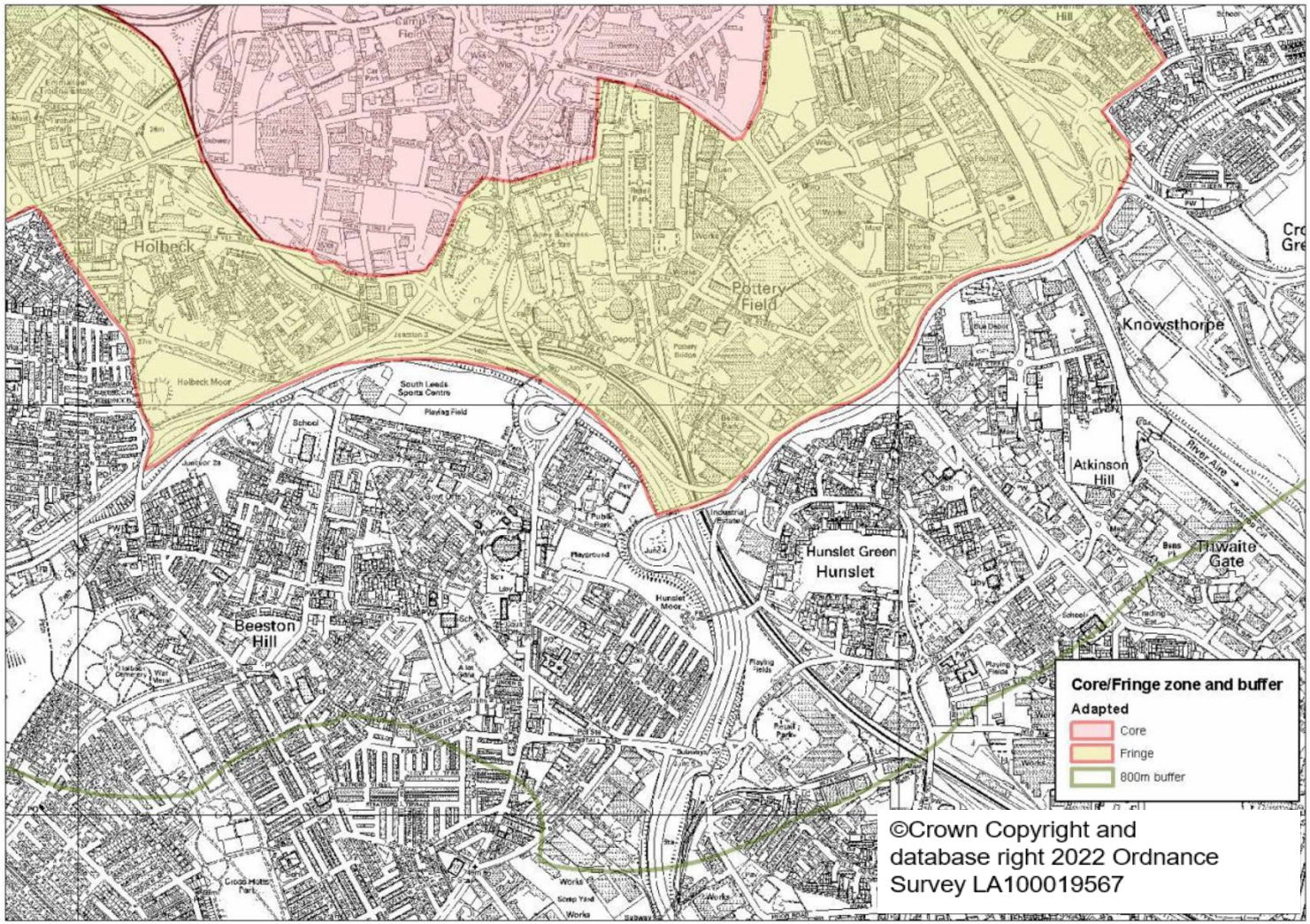


Figure 52: Core and Fringe Parking Zones with Public Transport Box and 800m Buffer (South)

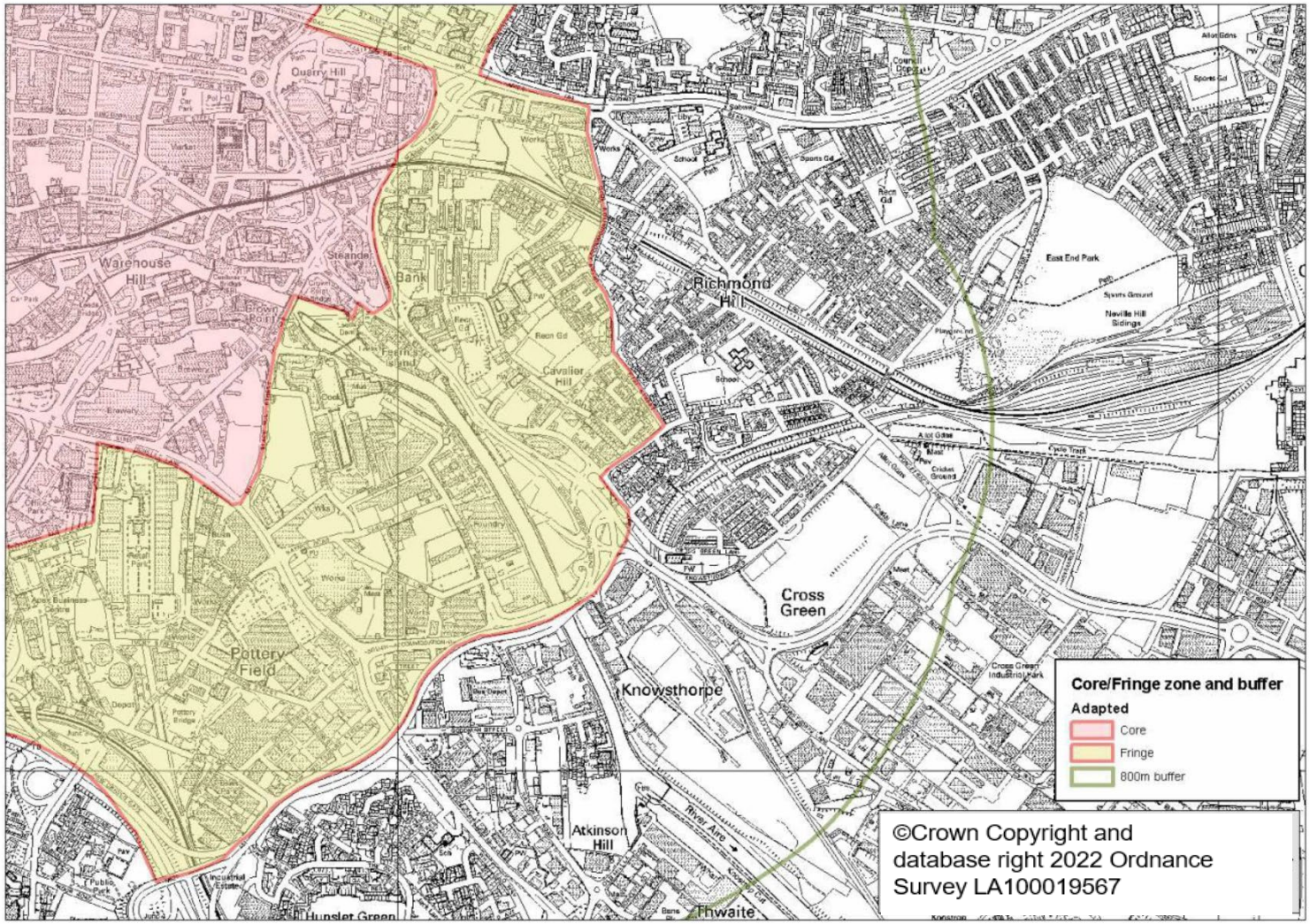


Figure 53: Core and Fringe Parking Zones with Public Transport Box and 800m Buffer (South East)

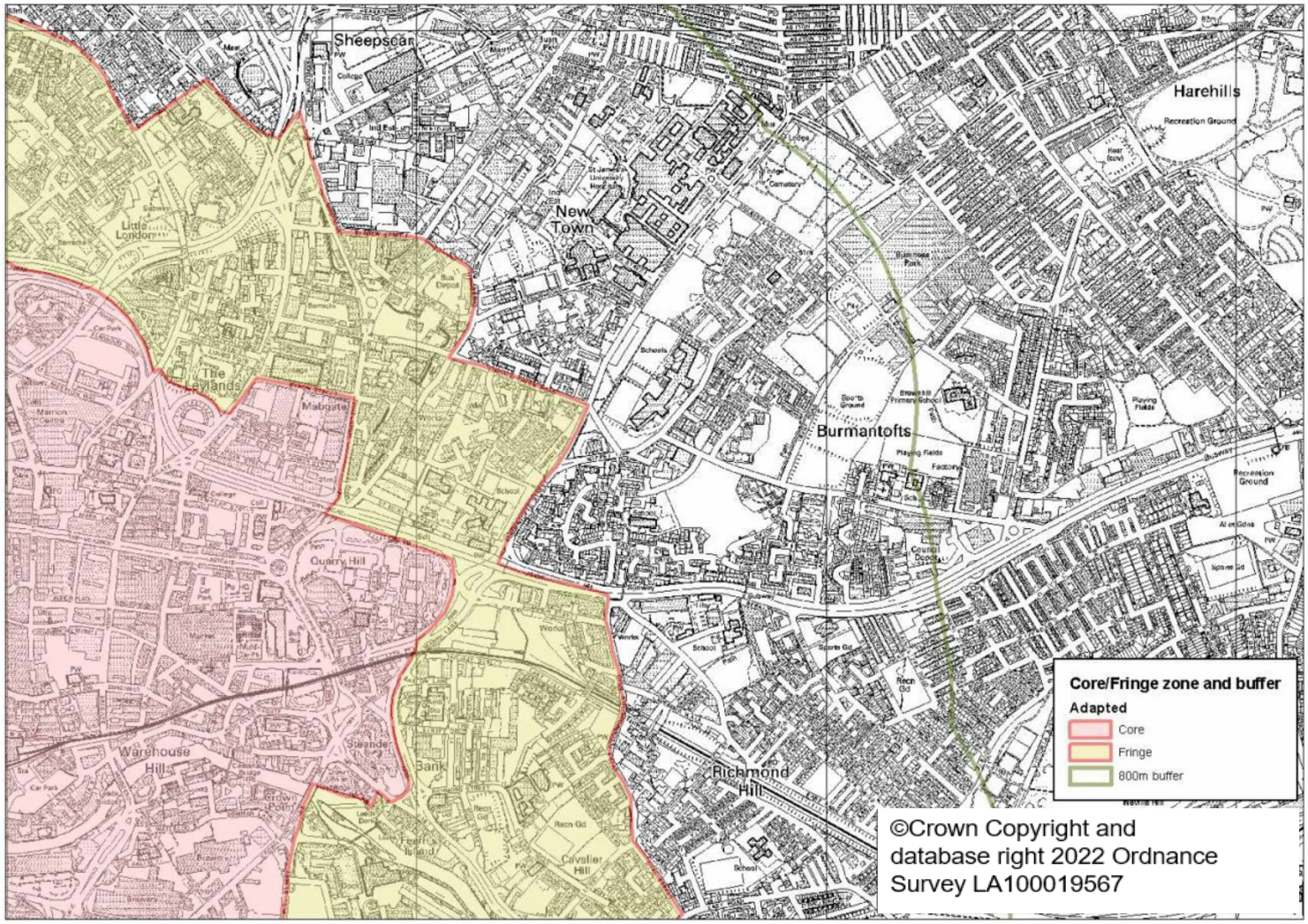


Figure 54: Core and Fringe Parking Zones with Public Transport Box and 800m Buffer (East)

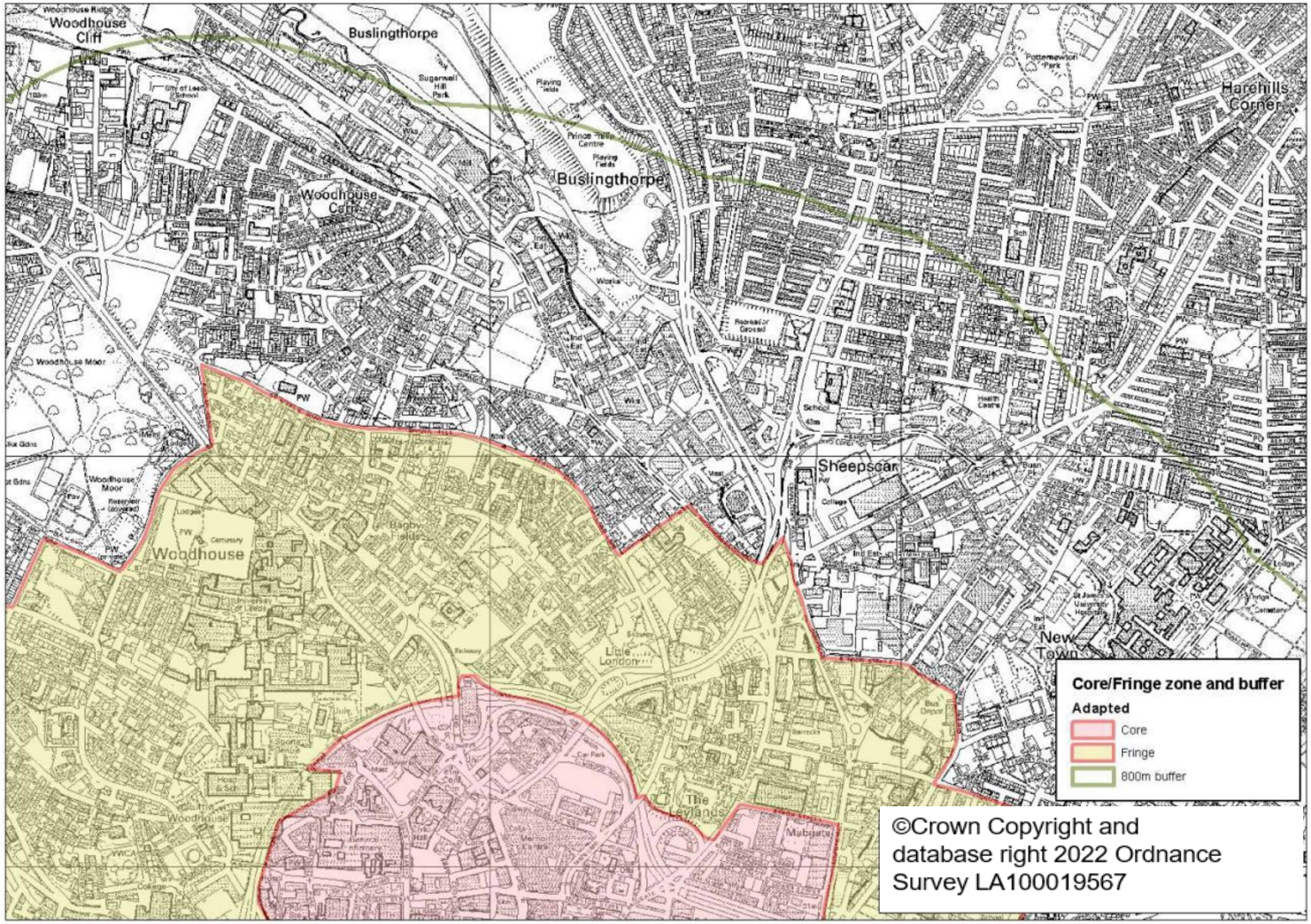


Figure 55: Core and Fringe Parking Zones with Public Transport Box and 800m Buffer (North)

PART 4. TRAVEL PLANS

4.1 WHAT IS A TRAVEL PLAN AND WHY ARE THEY REQUIRED?

WHAT IS A TRAVEL PLAN?

579 A Travel Plan is "A long-term management strategy for an organisation or site that seeks to deliver sustainable transport objectives and is regularly reviewed" (p73 NPPF, DfT 2021).

580 Travel plans can be used to address the transport needs of all types of new and existing development which have a significant transport impact.

581 A Travel Plan is a package of measures that facilitate and encourage more sustainable means of transport to a development. Travel Plans should consider all the journeys that may be made to and from a site by anyone who may have a need to visit or stay there.

WHY IS A TRAVEL PLAN REQUIRED?

582 Travel Plans are required to meet the requirements of Leeds Core Strategy Policy T1 and T2, Connecting Leeds Transport Strategy and address the Climate Emergency

583 The purpose of a Travel Plan is to inform all end users of a development about the full range of sustainable travel options available, promote the benefits of travelling sustainably and encourage sustainable travel choices.

584 Travel Plans are implemented to help mitigate any negative transport impacts generated by organisations, including new developments, on the transport network and the environment (including but not limited to, congestion, air pollution, collision/injury etc).

4.2 WHEN IS A TRAVEL PLAN REQUIRED?

CONTEXT

585 A Travel Plan is required for "(a)all developments that will generate significant amounts of movement …. and the application should be supported by a transport statement or transport assessment so that the likely impacts of the proposal can be assessed" (p32 NPPF, DfT 2021).

TRAVEL PLAN THRESHOLDS

586 For new development and changes of use a Travel Plan is required in line with the thresholds outlined in **Table 4-26**. If there is any doubt as to whether a Travel Plan is required, then the Leeds City Council Influencing Travel Behaviour (ITB) team should be contacted at the pre-application stage.

Table 4-26: Indicative Thresholds for a Travel Plan Being Required by Use Class (New Development and Change of Use**)**

DESCRIPTOR	DESCRIPTION	THRESHOLD	UNIT
Class B: General Industrial, Storage or Distribution			
General Industrial	Use for industrial process other than one falling within class E (excluding incineration purposes, chemical treatment or landfill or hazardous waste)	4000	GFA** m^2
Storage or Distribution	Storage or distribution centres, including open air storage (warehouses, distribution centres and repositories).	5000	GFA m^2
Class C: Residential			
Hotels	Hotels, boarding houses and guest houses where no significant element of care is provided.	100	bedrooms
Residential Institutions	Hospitals.	50	beds
	Boarding schools, residential colleges and training centres.	150	students
	Extra care and retirement Homes	75	beds
Secure Residential Institutions	Use for a provision of secure residential accommodation, including use as a prison, young offenders institution, detention centre, secure training centre, custody centre, short term holding centre, secure hospital, secure local authority accommodation or use as a military barracks	150	Residents
Student accommodation	Purpose built or converted accommodation specifically, for students.	150	units/flats
Dwelling Houses	Dwellings for individuals, families or not more than six people; living together as a single household (excluding students).	50	units

Table 4-26: Indicative Thresholds for a Travel Plan Being Required by Use Class (New Development and Change of Use)

DESCRIPTOR	DESCRIPTION	THRESHOLD	UNIT
Houses in Multiple Occupation	Small, shared houses occupied by between three and six unrelated individuals, as their only or main residence, who share basic amenities such as a kitchen or bathroom.	50	units
Class E: Commercial, Business and Service			
Food Retail	Display or retail sale of food goods, other than hot food (food superstores, supermarkets, convenience food stores)	800	GFA m^2
Non-Food Retail	Display or retail sale of non-food goods	1500	GFA m^2
Restaurants and Cafés	Sale of food and drink for consumption (mostly) on the premises (restaurants and cafes).	2500	GFA m^2
Financial and Professional Services	(i) Financial services (e.g. banks, building societies and bureau de change); (ii) Professional services (e.g. estate agents, employment agencies, not health or medical services); (iii) Other appropriate services in a commercial, business or service locality.	2500	GFA m^2
Indoor sport	Indoor sport, recreation or fitness (not involving motorised vehicles or firearms or use as a swimming pool or skating rink)	1500	GFA m^2
Medical or Health	Provision of medical or health services (except the use of premises attached to the residence of the consultant or practitioner)	1000	GFA m^2
Creche, Nursery	Creche, day nursery or day centre (not including a residential use)	1000	GFA m^2
Business / Offices	(i) Offices to carry out any operational or administrative functions	1500	GFA m^2
Business / R and D	(ii) Research and development of products or processes (laboratories, studios, light industry).	2500	GFA m^2
Commercial/ Business	(iii) Industrial processes	4000	GFA m^2

Table 4-26: Indicative Thresholds for a Travel Plan Being Required by Use Class (New Development and Change of Use**)**

DESCRIPTOR	DESCRIPTION	THRESHOLD	UNIT
Learning and Non-Residential Institutions			
Learning	Provision of education (schools, colleges, higher education and further education establishments).	See Education Establishment Section 4.5	
Non-residential Institutions*	Display of works of art (not for sale/hire), museums, public libraries, public halls, , law courts	1000	GFA m^2
Non-residential Institutions*	public worship or religious gathering	Not normally required – exceptional circumstances only	
Local Community	Shops (mostly) selling essential goods, including food where the shop's premises do not exceed 280 square metres and there is no other such facility within 1000 metres.	Not required	
	Halls or meeting places for the principal use of the local community	1000	GFA m^2
	Areas or places for outdoor sport or recreation Indoor or outdoor swimming or skating	1500 or on merit	GFA m^2
	Indoor or outdoor swimming pools or skating rinks	1500 or on merit	GFA m^2
Sui generis			
Leisure*	Cinemas, Concert and Live Music Venues, Bingo, Casino	1500	GFA m^2
Others*	Stadia, retail warehouse clubs, theatres, hostels.	On merit	
Uses where a TP is not usually required	Drinking establishments, hot food takeaways, amusement arcades, launderettes, fuel stations, taxi businesses, hiring, selling and/or displaying motor vehicles, travel and ticket agencies, hairdressers, funeral directors, hire shops, dry cleaners, self-storage facilities, builders' yards, garden centres, nightclubs, gymnasiums, public car parks.		

* Consideration will be given to the level of all trips generated as well as the specific use proposed. Please contact the Leeds City Council Influencing Travel Behaviour team at the pre-application stage for further advice.

** Gross Floor Area

587 Applications from existing organisations seeking to increase car parking capacities without linked development will be required to show that an effective Travel Plan is in place, is being fully implemented and other options to facilitate sustainable travel modes have been implemented.

588 It should be noted that **Table 4-26** sets out indicative thresholds. The Local Planning Authority will assess applications on their own merits which may result in cases where sites smaller than these thresholds require a Travel Plan or vice versa. Applicants should assume, however, that where a threshold is exceeded a Travel Plan will be required.

589 Unless otherwise agreed by the Local Planning Authority, a Travel Plan must be submitted and agreed at the outline planning stage (not at reserved matters) and will therefore ordinarily be submitted with the main application documents. Failure to do so may result in the non-validation of the application until one is submitted.

590 For development close to or generating trips on the Strategic Road Network (SRN), National Highways will be a consultee and may have separate requirements in relation to the Travel Plan.

591 Travel Plans generate many benefits to organisations, communities and individuals and are therefore encouraged for all developments on a voluntary basis regardless of these thresholds.

OTHER CIRCUMSTANCES WHERE A TRAVEL PLAN MAY BE REQUIRED

Extensions and development below the indicative thresholds

592 Proposals for extensions will require the submission of a Travel Plan when any of the following circumstances apply:

- The scale of the extension exceeds the thresholds in **Table 4-26**;
- The aggregate size of the existing premises and extension together exceed the thresholds in **Table 4-26** and the extension gross floor area (GFA) is more than 20% of the existing GFA (this 20% does not apply to schools – see below and **Section 4-5**); and
- Where a Travel Plan would help address a particular local traffic problem associated with a planning application, which might otherwise have to be refused on local traffic grounds.

593 Where it can clearly be demonstrated that an extension would not result in an increase or potential increase in person trips (e.g. an extension built solely to house machinery), then a Travel Plan will not be required. This must be agreed with the LPA prior to the submission of the application.

594 Extensions to schools that facilitate an increase in the number of pupils and/or staff and/or where the building will be used for activities out of school hours, an updated Travel Plan will be required (See Section 4-5 below).

Mixed Use Sites

595 Several small developments or different use types on one site may individually fall below the thresholds set out in **Table 4-26.** However, the cumulative impact of the combined development may trigger the need for a Travel Plan. The requirement for a Travel Plan should be discussed at the pre-application stage.

Universities, Colleges and Educational Establishments

596 All further and higher educational establishments are expected to have a Travel Plan in place. It is accepted that institutions may have a Transport or Sustainability Strategy but applications for new development must still be accompanied by a Travel Plan explaining how targets will be met and measures implemented at the application site (See **Section 4.5** for further detail).

Leeds City Council Corporate Travel Plan

597 As part of Leeds City Council's own Corporate Travel Plan, the promoters of developments where Council staff will be employed should contact the Influencing Travel Behaviour (ITB) (including Leeds City Council or its partners). The Travel Plan requirements set out in this Transport SPD, including review fees, apply.

4.3 PREPARING A TRAVEL PLAN

CONTEXT

598 All Travel Plans must contain as much detail as possible when they are submitted with a planning application following the checklist included in this section as **Table 4-28**.

599 The lack of known or named end users or occupiers does not prevent the preparation of a Travel Plan that meets the standards set out in this SPD.

600 For large mixed-use developments, with multiple occupiers and/or where the split of land use class and end users are not known; a Travel Plan which meets the requirements set out in the checklist, setting site-wide targets and outlining measures will still be required.

601 The thresholds for a Travel Plan being required are generally the same as for Transport Assessments. Travel Plans must be cognisant of the submitted Transport Assessment (or Transport Statement) for a development including in particular, the likely trip generation and any mitigations identified (especially for public transport and active modes).

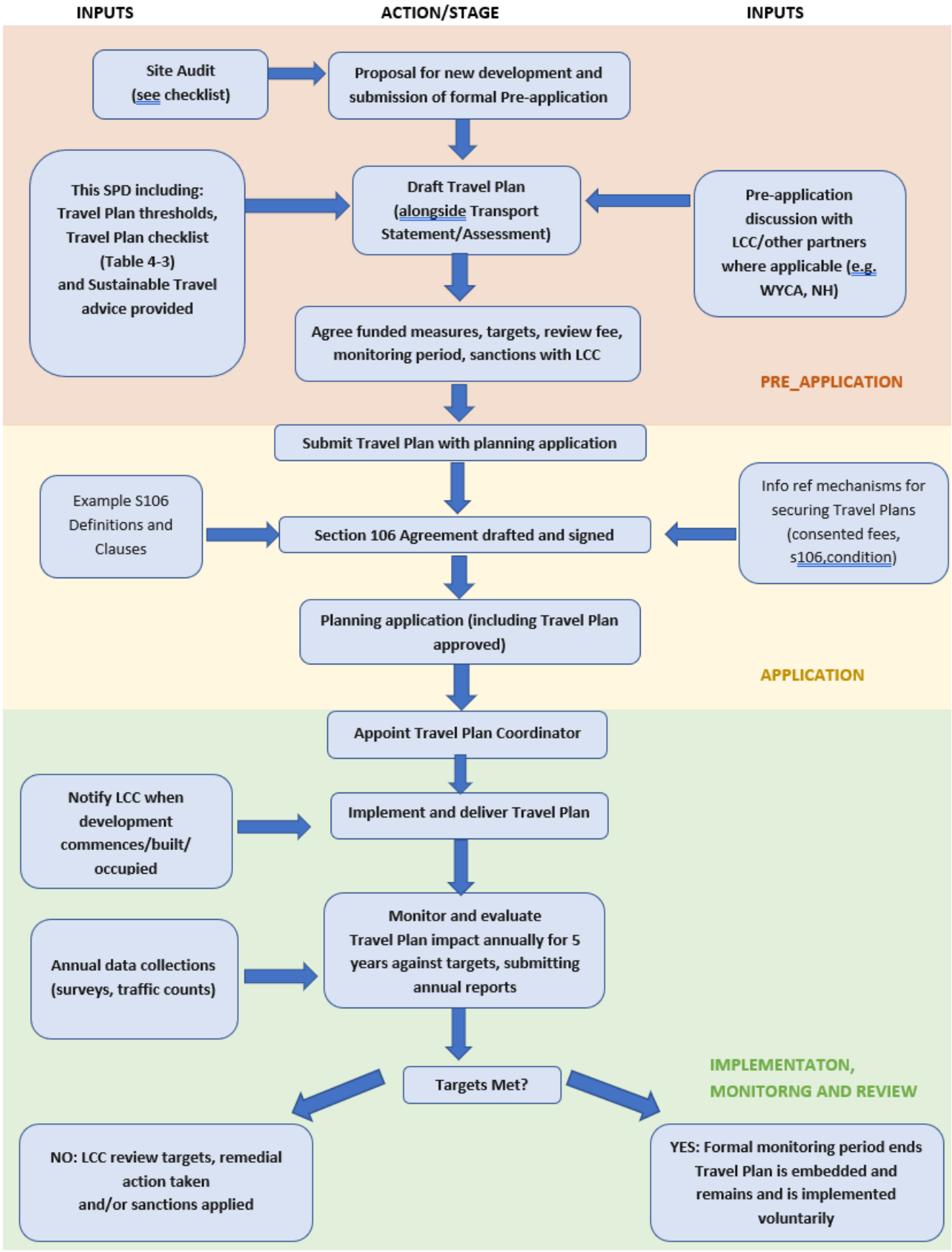
602 Transport Assessments/Transport Statements and Travel Plans must be submitted as separate documents.

TRAVEL PLAN STAGES

603 Applicants and their advisers should use the LPAs formal pre-application process to contact the Influencing Travel Behaviour (ITB) team prior to finalising a Travel Plan for submission.

604 The recommended stages in preparing a Travel Plan are set out in **Figure 56**.

Figure 56: Travel Plan Stages



4.4 CONTENTS OF A TRAVEL PLAN

CONTEXT

605 Whilst Travel Plans need to be tailored to meet the needs of a particular site and its occupiers, all Travel Plans must include some essential components both to be successful and to be approved by LCC. This section sets out the essential components and provides a checklist which offers further explanation.

Table 4-27: Essential Components of a Travel Plan

TRAVEL PLAN SECTION	
Background	Provide a brief summary of the development proposals, site location and any relevant planning history.
Aims And Objectives	Set out the overall aims of the Travel Plan and more specific objectives that will ensure the overarching aim is achieved.
Site Audit and Accessibility Review	Assess the current level of accessibility by all travel modes to the site.
Travel Plan Management and Responsibilities	Set out how the Travel Plan will be delivered including roles, responsibilities and funding/budget.
Targets, Monitoring and Review	Specify, using SMART targets how the impact of the Travel Plan and progress towards achieving its aim and objectives will be measured. Set out how the Travel Plan will be monitored and what happens if targets are not met.
Travel Plan Measures and Action Plan	The proposed Travel Plan measures should set out what improvements will be made to the existing provision for each sustainable travel mode. An action plan should make it clear who is responsible, what the timescales are and where possible indicative costs for the delivery of each measure.
Securing the Travel Plan	State how the Travel Plan will be secured and confirm any financial planning contributions that will be required.

TRAVEL PLAN CHECKLIST

606 Applicants and/or their representatives are advised to use this checklist when preparing Travel Plans to ensure that the specified, essential components have been considered and included in Travel Plans submitted to the Council.

607 In turn, when reviewing submitted Travel Plans the Council will use this checklist to highlight any components that may be missing. Travel plans submitted without the information outlined in this checklist will not be approved.

Table 4-28: Travel Plan Checklist

TRAVEL PLAN SECTION	✔ / x
BACKGROUND	
Provide a brief summary of the development proposals, site location and any relevant planning history. Include: • Specify the quantum of development using the units of measurement set out in **Table 4-26** about Travel Plan thresholds i.e. gross floor area (GFA), no. of beds, no. dwellings, no. of employees/visitors etc). • Provide information about any previous uses if applicable and any linked Travel Plans (i.e. being implemented by the wider organisation, site or nearby) • Lengthy descriptions of National, regional and local policy documents are not required.	
AIMS AND OBJECTIVES	
Set out the overall aims of the Travel Plan and more specific objectives that will ensure the overarching aim is achieved. The plan should aim to**:** • Minimise any potential negative impacts the development could have on the local transport network and environment. • Maximise the proportion of person trips generated by the development made by sustainable travel modes. • Minimise the proportion of person trips generated by the development made as single occupancy vehicles. Objectives may include but not be limited to: • Ensure end users of the development are fully informed about all of their sustainable travel options for all types of journeys made to and from the development. • Encourage end users of the site to trial and choose more sustainable modes of travel. • Rationalise and reduce delivery movements and car parking. • Reduce the need to travel. • Reduce the need for car parking.	
SITE AUDIT and ACCESSIBILITY REVIEW	
Assess the current level of accessibility by all travel modes to the site. • Survey site characteristics (including access arrangements for all modes). A detailed description, site layout drawing, location plans and photographs are required.	

• Provide detailed information, highlighting any constraints or gaps in provision for:
  o Walking and cycling routes and infrastructure.
  o Public transport provision.
  o Shared vehicle platforms (car sharing, clubs, bike sharing).
  o Electric vehicle charging infrastructure.
  o Local amenities nearby that will reduce the need to travel by car.	

TRAVEL PLAN MANAGEMENT AND RESPONSIBILITIES	
Set out how the Travel Plan will be delivered, including roles, responsibilities and funding/budget. • Record who the key role holders will be and divisions of responsibility. • Provide contact details for the Travel Plan Co-ordinator (or the person responsible for appointing them). • Larger and/or mixed-use developments must have one site-wide Travel Plan Co-ordinator who will be the main point of contact with the ITB team. A representative in each organisation should be nominated to support the TPC in delivering the Travel Plan at their respective organisation. • The TPC must be in post prior to initial occupation of the development site. • TPCs must contact ITB when appointed at travel.planning@leeds.gov.uk • Set out how the Travel Plan measures will be funded (including the organisation providing the funds, estimated annual budget required etc.) • Commit the Travel Plan Co-ordinator and occupying organisations to join the West Yorkshire Travel Plan Network (WYTPN). • A commitment must be made to include an obligation to deliver the Travel Plan in any subsequently made sales/lease agreements relating to the site.	
TARGETS, MONITORING AND REVIEW	
Specify, using SMART targets how the impact of the Travel Plan and progress towards achieving its aim and objectives will be measured. • This section must link back to the Transport Assessment (TA) or Transport Statement (TS) prepared for the development application. • The estimated peak hour person trip rates and peak hour trip generation (agreed with Transport Development Services) must be stated in the Travel Plan. **Target Setting:** • Targets must be SMART (specific, measurable, achievable, realistic, time-bound). • Targets must be set using the best data available at the time. If the organisation/building is existing this should be recent travel surveys results of employees/residents/end users. If this is not available other options include Census travel to work data, data from an industry recognised, traffic survey database such as TRICs or other data source if agreed with the ITB team. • A target to increase non-motorised user and public transport trips must be set	

- A target to reduce the proportion of single occupancy vehicles travelling to the development site must be set (a 10-20% reduction in lone car driving over a period of three to five years is considered achievable).
- A target to reduce the number of vehicle trips must be set (a 10-20% reduction in vehicle trips over a period of three to five years is considered achievable).
- Clear progress towards achieving targets must be evidenced within 3 years of initial occupation of the development and once targets have been achieved must be maintained or reduced further.
- The agreed targets must not be omitted or amended without prior consultation and agreement with the ITB team of LCC.

Monitoring Regime:

- A methodology and schedule for conducting baseline (if required) and annual monitoring must be provided.
- Annual Surveys and monitoring reports should be produced using LCC's preferred monitoring tool and templates.
- A commitment must be made to undertake annual monitoring within three months of initial occupation and annually thereafter for a minimum of five years post full occupation.
- Detail what data will be collected, by who and how.
- Travel surveys/traffic counts will be required for all development sites, additional traffic counts may be required if survey response rates are low (<50%).
- A minimum response rate for surveys must be set and actions to be undertaken if it is not met i.e. survey incentives, traffic counts.
- Utilisation (counts/beat surveys) of bicycle, motorcycle and car parking will be required.
- Surveys must be conducted at the same time each year in neutral months to ensure that they are representative and comparable.
- A commitment must be made to provide annual monitoring reports and survey date to the Influencing Travel Behaviour (ITB) team within three months of surveys being undertaken.
- Monitoring reports must provide:
    - Summary information about the measures delivered to date.
    - The take-up / utilisation of measures and facilities.
    - Survey results and progress made against the agreed targets.
    - An action plan for the following year.

LCC Travel Plan Review Fee:

- Include the agreed Travel Plan Review Fee (to cover the costs of LCC reviewing the Travel Plan, see paragraph 631), who it will be paid by and that it will be paid prior to occupation.

Failure to Meet Targets

- All Travel Plans must set out the actions that will be taken if targets are not being achieved e.g. increase promotion, budgets etc.
- Commit to agreed mediation measures, financial penalties or sanctions which will be imposed if the Travel Plan is not implemented or the targets are not met (see paragraph 638).

TRAVEL PLAN MEASURES	
The proposed Travel Plan measures should set out for each sustainable travel mode what improvements will be made to the existing provision. The Travel Plan measures must be tailored to the needs of the development site/organisation(s) and clearly link to the aim, objectives and targets set out in the Travel Plan. • **Measures must be set out in an action plan detailing what will be delivered, when and who is responsible.** • The location of any proposed sustainable travel measures/infrastructure should be clearly marked on plans of the new development and the surrounding area (e.g. walking/cycling routes, public transport, waterways, cycle parking, EV charging points/bays, car sharing bays, shower and changing facilities etc.) • A more detailed (but not exhaustive) list of recommended Travel Plan measures with links to the latest information is available on request or will be provided online and should feed into each Travel Plan **Travel Advice and Information** • Provide all users of the site with travel information using media appropriate to the target audience ○ (e.g. reception information boards, travel guides (print or digital), travel info/how to get here web pages, real-time information displays, wayfinding information for nearby amenities and transport hubs in walking and cycling times etc.) • Personal journey planning. • Promotion of online journey planners for all modes. • Public transport ticketing information and offers. • Promotion of local and national sustainable travel and road safety campaigns **Active Modes (Walking and Cycling)** • Cycle parking for all users of the site i.e. short and long stay (refer to the Parking Standards provided for quantity and standard required). • Changing facilities, showers, lockers and drying facilities. • Cycle to Work scheme (salary sacrifice access to bicycles). • Cycle and walking journey planning web links • Facilities to support basic bike maintenance on site (from a simple pump, spares and tools box to a fix-it station stand/public air pump). • Cycle skills and bike maintenance training for site users. • Regular ‘Dr Bike’ maintenance service for site users. • Promotion of national and local road safety, cycling and walking campaigns and events. **Public Transport** • Identify any gaps in public transport provision and routes that could be enhanced or introduced to serve the site. Subsidy of bus services and any requirement for new bus stops is covered in the Preparing Development Proposals and Public Transport sections. • Free taster tickets to trial buses.	

- Implement schemes to help any staff access discounted tickets/passes and spread the cost of public transport tickets (e.g. Corporate MCards and those relevant to the bus and rail operators serving the development).
- Offer interest free loans to staff wishing to purchase season tickets (MCards and those relevant to the bus and rail operators serving the site).

Smarter Driving (Car sharing, Car Clubs, Low Emission and Electric vehicles)
Car Sharing

- Ride matching services (wycarshare.com or other)
- Priority car parking on site
- Emergency ride home

Car Club

- In agreement with LCC, specify the number of dedicated car club bays the development will provide and show on a site layout plan.
- Dedicated car club bays will need to be reserved for the sole use of Leeds City Council's preferred supplier(s), provided at ground floor level, accessible 24/7 to car club members.
- Car club bays should include electric vehicle charging points and adjacent cycle stands (Sheffield) wherever possible. The charging points should be selected in consultation with the City Council and their selected car club operator. They should be dedicated to the car club operator at the dedicated bay and be covered by a suitable maintenance and repair agreement to ensure car club operations are high quality and reliable.
- Provide users of the site (staff, residents etc) free trial membership and drive time credit to trial the use of the car club.
- The developer contributions required to fund free trial membership and usage of a Car Club by the end users of a development site are calculated on a site-by-site basis:
    - For employment uses, the contribution will be based on the location, type and size of the development
    - For residential uses, the car club contribution is a suitable (decided site-by-site) proportion of the Residential Travel Plan Fund (see RTPF information later in this checklist). The proportion will depend on the availability of other sustainable travel options in the vicinity of the site;

Electric Vehicles

- Guidance and standards for Electric Vehicle Charging Points (EVCP) is provided in **Section 3-3**
- The location of any on-site and nearby EV charging points should be promoted to users of the development.
- Provide site users with opportunities to trial Electric Vehicles (bicycles, cargo bikes, vans and cars).

Car Parking

- Refer to the Parking Standards for the quantum and quality of bicycle, motorcycle and car parking required.
- A car park management should explain
    - how car parking will be accommodated within the development site.

○ how spaces will be allocated. ○ how priority will be given to car sharers. ○ how Electric Vehicle Charging will be provided for.	
SECURING THE TRAVEL PLAN	
State how the Travel Plan will be secured and any financial contributions required. The preferred method for securing all Travel Plans is via a Section 106 Agreement. Section 106 Agreements will include: • Funded Measures e.g. RTPF, Car Club bays and promotion • Travel Plan Review Fee • Travel Plan implementation and monitoring obligations • Financial penalties and remediation measures	
USE CLASS AND SITE-SPECIFIC REQUIREMENTS	
EMPLOYMENT SITES **Business Travel** • Commit to a business travel policy that includes a travel mode hierarchy with active modes at the top and preferred to lone driving in private grey fleet vehicles at the bottom and discouraged. • Pool bikes. • Pool public transport passes. • E-Cargo bikes. • Reduce grey fleet mileage. • Membership and use of car clubs/carshare schemes. **Site Relocation/Migration** • A survey of existing and intended employee travel habits must be included and used to inform what the most effective measures will be. • Commit to promoting sustainable travel options and Travel Plan measures well in advance of the relocation. **RESIDENTIAL SITES** • Residential TPCs must be in post before the development is first marketed and remain in post until five years post full occupation. • Sustainable travel information should be provided on the sales/marketing website for the development. • Issue sustainable travel information to all new residents. **Residential Travel Plan Fund (RTPF)** • All residential sites above the Travel Plan threshold must commit to the provision of a Residential Travel Plan Fund (RTPF). • The RTPF is a site-specific contribution per dwelling. • It is currently calculated as the cost of a bus only annual Residential MCard per dwelling, with a 50% discount city centre and fringe locations. The methodology for calculating this fund will be subject to annual review.	

- The RTPF is provided by the applicant for the provision of Travel Plan measures that support residents in making sustainable travel choices.
- It is to support journeys regularly made to/from the development by residents (e.g. to work or education) within the West Yorkshire boundary (or within 15 miles of the Leeds boundary). Although it is not intended to support longer distance journeys, reasonable requests that fall outside this criteria will be considered.
- The RTPF will be paid as a Section 106 contribution to LCC but will be managed, delivered and audited by the appointed TPC.
- The TPC will
    - Develop the offer (align with resident demand, negotiate with providers/operators and promote to residents).
    - Propose and agree with LCC the schedule for using the RTPF.
    - Include utilisation data and spend to date in the annual Travel Plan monitoring report submitted to LCC.
    - Agree with LCC reallocation of unspent funds.
- The RTPF can be used to fund the following:
    - Public transport ticketing.
- Car Club trial and usage, support and marketing.
- Cycle purchase schemes (vouchers).
- Car sharing/walking cycle measures/promotion and/or further infrastructure enhancements.
    - Personalised travel planning.
    - Any other reasonable measures/infrastructure appropriate to the development which promote sustainable travel choices.
- There will be no payback if the money is not spent within the monitoring period of the travel plan. Any unspent funds will be allocated by the Council towards sustainable travel infrastructure or projects which benefit the development
- Any free trial membership and usage of a car club is included in the RTPF fund but can be specified separately in the Section 106 Agreement. The initial offer should be for an either/or measure although this can be reviewed once the fund has been operational.

Link to School Travel Plans

- Links to nearby school Travel Plans.
- Work with nearby school Travel Plan co-ordinators to identify mutually beneficial measures e.g. walking buses, walking and cycling routes to school, school bus provisions etc.

STUDENT RESIDENCES

- Set out the arrangements for start and end of term, semester and academic year pick up/drop off dates/periods to minimise demand and congestion on the local highway network i.e. staggered arrivals and car parking arrangements.

SCHOOLS

See **Section 4-5.**

4.5 TRAVEL PLANS FOR EDUCATION ESTABLISHMENTS (EARLY YEARS, SCHOOLS, FURTHER AND HIGHER EDUCATION INSTITUTIONS)

608 The general principles for preparing Travel Plans set out in Section 4.1 to 4.4 also apply to education establishments. There are, though, a number of unique requirements that must be considered.

- Everyone who may be affected by the Travel Plan (pupils, parents, staff, governors, local community etc.) must play a major role in developing it.
- The head teacher and/or chair of governors must approve the Travel Plan.
- The education establishment must implement and monitor the Travel Plan.
- The Travel Plan should be in the School Improvement Plan (SIP).
- A Travel Plan cannot be included within an overarching masterplan. It must be a separate document.

PRE-APPLICATION SITE AUDIT

609 Before an education establishment is built, rebuilt or expanded, Leeds City Council will assess the site to identify infrastructure for sustainable travel.

610 You should address our findings in your application.

THRESHOLDS

All Non-Residential Education Establishments, Higher and FE Colleges

611 Education establishments must submit a full (new or updated) Travel Plan as part of their planning application where:

- The floor space will be expanded by more than 50m^2; and/or
- The maximum number of pupil places the school can accommodate is exceeded.

New-build and Rebuilt Education Establishments

612 A Travel Plan is still required and targets will need to be set using the best data available. It is accepted that travel data for the particular institution will not exist yet. Data from an existing representative education establishment should be used as a proxy. This data is available from the Leeds Data Mill. Contact Leeds City Council to agree this.

613 Confirm the first date of occupation with Leeds City Council and submit an updated Travel Plan within six months.

Nurseries and Children's Centres

614 You must submit a Travel Plan as part of your planning application if

- There are more than 50 child places;
- You want to expand floor space by more than 50m^2; and/or
- The maximum number of children the nursery/centre can accommodate is exceeded.

Boarding Schools, Residential Training Centres etc.

615 You do not need a formal Travel Plan, but you may find it useful to create a voluntary one – for staff travel, for example.

Multi-establishment Sites

616 Education establishments with multiple sites should create an overarching Travel Plan.

TRAVEL PLAN AND MONITORING REPORT FORMATS

617 Travel Plans should be developed using either:

- The approved Leeds City Council template; or
- The template in our preferred monitoring provider e.g. Modeshift STARS

618 The Travel Plan should be monitored using Leeds City Council's preferred online monitoring provider.

Surveys

- Pupils/ students
    - Every year, Leeds City Council conducts a Mode of Travel survey to track how pupils / students usually travel to school. All schools required to provide a Travel Plan must participate and use the data to monitor mode-share targets for students.
- Staff
    - All schools required to provide a Travel Plan must participate in the annual Leeds City Council Travel to Work survey; and use the data to monitor mode-share targets for staff.

Monitoring

619 Each year, educational establishments must submit:

- Annual Monitoring Reports.
- Mode of Travel Data.

620 Leeds City Council will confirm the monitoring date with the Travel Plan Coordinator (usually March).

4.6 APPROVAL, SECURING AND REVIEW OF TRAVEL PLANS BY LEEDS CITY COUNCIL

APPROVAL OF TRAVEL PLANS

621 All Travel Plans submitted to Leeds City Council (LCC) will be reviewed and require approval by the Influencing Travel Behaviour (ITB) Team. Involvement of the ITB team at the earliest opportunity, ideally at pre-application stage is encouraged.

622 All Travel Plans will be reviewed against the Checklist provided as Table 4-28.

SECURING TRAVEL PLANS

623 The vast majority of Travel Plans (the measures and targets contained therein) will be secured by means of a Section 106 legal agreement between the applicant/developer and the Council.

624 Wherever targets are applied, one-off or ongoing financial contributions are required, commitments involving third parties (e.g. West Yorkshire Combined Authority (WYCA) or sanctions are determined a Section 106 Legal Agreement (or unilateral undertaking) will be required.

625 On rare occasions it may be appropriate to secure the implementation of the Travel Plan by means of condition.

626 Obligations to deliver the Travel Plan will pass on to all occupiers through sales/lease agreements and the relevant Section 106 agreement – this does not apply to individual residential units within a development. These obligations should be set out in the Travel Plan.

627 Illustrative planning obligations and conditions within a local context are provided in **Section 4.7.**

628 The planning obligations should set out in clear terms:

- The overall aim and objectives to be achieved by the Travel Plan.
- The Travel Plan targets.
- The measures to be implemented the process, if not already set out in the Travel Plan.
- The Travel Plan monitoring regime (mechanisms and duration)
- Any penalties/sanctions to be applied should monitoring not be submitted or targets are not met and how they will be applied.
- Any procedure for the variation of measures or targets.

629 The person(s) or organisation that will be responsible for the management of the Travel Plan (the Travel Plan Co-ordinator).

TRAVEL PLAN REVIEW FEE

630 The Influencing Travel Behaviour (ITB) Team of LCC is responsible for evaluating the effectiveness of all development related Travel Plans. The Council charge a fee for this review service.

631 In 2022/23 the Travel Plan Review Fee is £675 per annum for up to 100 employees or 100 residential units then increasing at the rate of £1.35 per employee or residential unit to a maximum of £5,402.44 per annum. This review fee has and will continue to be subject to an annual increase in April each year to reflect inflation. To date this has been approximately 3% each year.

632 The fee shall be paid up front prior to implementation of the Travel Plan to cover a period of five years (a minimum of £3,377 and maximum of £27,012 at 2022/23 fees). The monitoring fee for all developments is based on 5 years. However, the monitoring period will be agreed in the Travel Plan and will need to cover 5 years post full occupation.

633 The Travel Plan review fee is used by the Council to provide the following services:

- Enable the Council to work with appointed Travel Plan Co-ordinators, supporting the delivery of Travel Plans, providing advice and information.
- It contributes towards the management, procurement and maintenance of the Council's preferred Travel Plan monitoring database, tools and financial management systems.

- To review and approve submitted annual monitoring reports ensuring compliance with Planning obligations and Travel Plan targets.
- It enables the Council to evaluate the wider impact of Travel Planning across the Leeds City Council area and its contribution to the Connecting Leeds Transport Strategy.

FAILURE TO MONITOR

634 Annual monitoring reports must include the results of all travel surveys, traffic count data, a summary of measures/initiatives delivered in-year, summary of financial spend and an action plan for the coming year.

635 The Council will aim to work positively with developer/occupiers to support monitoring and implementation of Travel Plans. However, where monitoring reports are not provided as required, this will be referred to Planning Enforcement for appropriate action. .

636 If the developer/occupier fails to provide the monitoring report required in accordance with the Travel Plan due to reasons outside the developer's control this provision will not apply, provide that within 14 days of the date on which the report was due to be submitted, the developer notifies the Council in writing of the reason, and the Council notifies the developer in writing that it accepts the reason, and the monitoring report is provided to the Council within the next 12 months.

637 Should the developer fail to provide the monitoring report for a continuous period of 11 months from the date when the report should have been submitted then the Council may undertake its own surveys and monitoring of the implementation of the Travel Plan and recover reasonable costs from the developer.

FAILURE TO DELIVER TRAVEL PLAN AND/OR MEET TARGETS: REMEDIAL ACTION AND SANCTIONS

638 As well as specifying the agreed measures and targets the Section 106 Agreement will set out any sanctions put in place to ensure that any failure to deliver the agreed actions/measures and/or targets can be remedied. These sanctions should not be regarded as a penalty but as means of addressing the travel impact of the scheme to the benefit of all parties.

639 Sanctions can take a number of forms:

- Further marketing and other 'soft' measures;

- Payments to the local authority (or use of a Bond deposited with the Authority) to implement previously agreed measures to help meet the targets set out in the Travel Plan;
- specified works that are expected to remedy the failure to achieve agreed outcomes e.g. reduction of car parking spaces;
- Specified payment to the local authority (or use of a Bond deposited with the Authority) to meet the cost of taking action to achieve the agreed outcome e.g. the implementation of a car parking zone around the development.
- Payments to the local authority (or use of a Bond deposited with the Authority) to carry out surveys and monitoring of the Travel Plan
- A specified change in the way the development site is used / phased in order to achieve previously agreed outcomes e.g. the prevention of occupation / construction of part of the development until a specified element of the Travel Plan has been implemented as agreed;

640 Any financial sanction will be specified as an amount within the s106 or a formula provided based on the monitoring and targets – i.e. the higher the level over the agreed targets the higher the remedial fee.

641 Any such financial sanction must be spent on measures to facilitate sustainable travel to and from the development site. In order to be monitored and enforced, sanctions will be clearly set out in the Travel Plan and associated s106.

642 It is not intended that such sanctions would be open ended financial risks or run in perpetuity, but rather be linked to an agreed set of remedial measures or a formula based approach with defined monitoring and review periods (typically five to 10 years or linked to build out).

FAILURE TO REACH AGREEMENT ON A TRAVEL PLAN

643 The weight to be given to a Travel Plan in a planning decision will be influenced by the extent to which it materially affects the acceptability of the development proposed and the degree to which it can be legally secured. If the transport issues for a particular development are such that if they are not addressed by the Transport Assessment or Travel Plan, the proposal could aggravate existing congestion or public transport capacity problems, resulting in severe impacts, the application should be considered for refusal on the grounds set out below.

644 The proposal has failed to provide the required commitments and measures in its submitted Travel Plan which are considered necessary to address the issues identified in the Transport Assessment (or Statement), such that existing traffic congestion and public transport service and capacity problems in the vicinity of the site will be aggravated resulting in severe impacts and the sustainability requirements of the NPPF and the policy requirement of Core Strategy policy T2 will not be met.

4.7 SECTION 106 AGREEMENT EXAMPLE DEFINITIONS AND CLAUSES

645 Note: the terms Owner/Developer/Occupier are used interchangeably in the following Section, with the correct term to be used as appropriate to specific developments.

646 The definitions and clauses listed below are by no means an exhaustive list, and each development, Travel Plan and Section 106 will be assessed on its own merits with site specific definitions and clauses likely to be required. This Section is intended to provide the basic minimum requirements for agreements relating to Travel Plans and provide the starting point for further obligations.

General Travel Plan

- Definitions:

647 Annual Travel Plan Review: means a report to be submitted by the Owner to the Council

648 which shall include inter alia:

- Details of the actions taken by the Owners within the previous 12 months to comply with the Approved Travel Plan.
- A statement(s) as to whether the recommendations in the Approved Travel Plan have been complied with and the targets set out in the Approved Travel Plan have been achieved.
- Details of the measures to be taken to remedy any failure to comply with the recommendations or meet the targets.
- Plan of actions to be undertaken in the next 12 months, stating who will deliver the action and by when.

649 Approved Travel Plan: means the Travel Plan annexed at the Appendix to this Agreement entitled [] and dated [ ].

650 Monitoring: means a survey of employees/residents/users using traffic counters and/or a questionnaire in a form approved by the Council with the objective of ascertaining the volume of peak-hour trips and modes of transport used by the employees/residents/users for key journeys generated by the development on a particular day (or any other alternative method of achieving that objective approved in writing by the Council).

651 Monitoring period: means the period of [ ] years beginning on the occupation date.

652 Residential Travel Plan Fund: means a site-specific contribution of £xxx (equivalent to the prevailing cost of a bus-only MCard) per dwelling towards a Residential Travel Plan Fund for the provision of Travel Plan measures for the dwellings on the development and/or other sustainable travel measures/infrastructure to encourage the use of sustainable travel modes by the residents of the dwellings, as set out in the approved Travel Plan (appended).

653 Travel Plan Review Fee: means the sum of [£] being the Owner's contribution towards the costs incurred or to be incurred by the Council in reviewing the delivery and continuance of the Approved Travel Plan.

654 Travel Plan Co-ordinator: means the person appointed by the Developer and/or Owner as detailed in the Travel Plan who shall be responsible for securing the implementation of the Travel Plan and the day-to-day management of the steps identified in the Travel Plan to be taken to achieve the targets.

Clauses:

655 To use reasonable endeavours to implement and thereafter comply with the terms of the Travel Plan appended to this agreement at all times during the period when the development is first advertised and marketed for sale and then subsequently occupied in accordance with the Planning Permission.

656 To comply with the terms of the Approved Travel Plan (or any variation thereof as may be agreed between the parties hereafter) at all times at which the development is occupied.

657 Not to occupy or allow or permit the Development to be commenced / occupied until the Travel Plan Review Fee has been paid to the Council.

658 Prior to the occupation/commencement of the development/each phase the Owner/Developer shall appoint the (site wide) Travel Plan Co-ordinator and notify the Council in writing of the name, address, telephone number and email address of the person appointed.

659 To monitor and review all actions taken by the Owner to comply with the Travel Plan and to submit an Annual Travel Plan Monitoring Report to the Council on the first anniversary of the occupation of the Development and annually thereafter for the period specified in the Travel Plan [ ] years.

660 The Travel Plan Review Fee and Residential Travel Plan Fund contribution will be paid prior to the commencement of development, with no payback if the money is not spent within the monitoring period of the travel plan Any unspent funds will be allocated by the Council towards sustainable travel infrastructure or projects which benefit the development.

661 Example definitions / clauses – this section is intended to provide examples of clauses used within Leeds and the Good Practice Guidance. By their nature, many Travel Plans and associated s106 clauses will be site specific and will require tailored obligations.

Car Club

Definitions

662 The Approved Car Club Provider means the holder of the West Yorkshire Combined Authority Car Club Contract (covering the Leeds District).

Owner's Covenants

663 Prior to commencement of development to submit to the Chief Planning Officer details of the name of and correspondence with the Council's approved and Accredited Car Club provider indicating the intention of the Owner to establish a Car Club at the Property including a proposed establishment date for approval and not to commence development until the Accredited Car Club Provider for the Development has been approved by the Chief Planning Officer and appointed to provide a Car Club at the Property

664 Not to Occupy or permit the Occupation of any part of the Development until

- The car club parking space[s] at XXX, (and adjacent Sheffield cycle stands) shown edged green on Plan XXX, attached, has been clearly marked out on the Property

[or on the public highway in accordance with the TRO with the words “Car Club” used solely for the purpose of parking and storing a vehicle belonging to the Approved Car Club Provider and used by members of the Car Club and the Owner further undertakes thereafter not to permit or allow the said car parking space to be used for any purpose other than for the parking and storage of the vehicle provided by the Approved Car Club Provider and used by the members of the Car Club.

665 The Approved Car Club Provider parking space (and adjacent Sheffield cycle stands) shown on the plan appended to the approved Travel Plan will be made available to the Approved Car Club Provider prior to initial occupation of the development. The space will need to be lined and signed and protected for sole use by Approved Car Club Provider.

666 Upon Commencement of Development to pay the Car Club Contribution of £ (pounds) to cover the provision of the car club.

Modal Split / Trip generation

Definitions

667 **Modal Shift:** means an increase in the proportion of persons travelling to and from the site using more sustainable modes of transport (where walking, cycling, powered two wheelers, public transport or multi-occupied vehicles are more sustainable than driving a car alone).

668 **Travel Plan Targets:** mean the Baseline Trips/Targets contained in paragraph [ ] of the approved Travel Plan.

669 **Modal Split Target:** means the percentage of staff/resident/student/visitor vehicle trips to and from the Development made by users as the single occupant of a vehicle (SOV) during a [defined period], being xx% in the first year of occupation, and decreasing by xx percentage points to xx% within x years and maintained for the remainder of the monitoring period.

670 **Peak Time Target:** means the two-way person/vehicle trip generation (or equivalent person/vehicle trip rate) specified in the Transport Statement / Transport Assessment being [ ] person trips/vehicle trips in the AM Peak and xx person trips/vehicle trips in the PM Peak.

671 **Traffic Report:** means a report prepared by an independent transport consultant and agreed by the Council setting out the results obtained from the surveys of vehicles and employees entering and leaving the Land and identifying the number of vehicles, if any, which during the course of the survey exceeded the Peak Time Target and/or the Modal Split Target.

672 Prior to the commencement of development, the Owner will submit to the Council for approval a marketing plan which will be designed to deliver increased usage and improve the percentage of trips to the development by sustainable modes in accordance with detailed measures in the Travel Plan and shall implement the approved marketing plan in accordance with the provisions thereof.

Residential Travel Plan Fund

673 The Owner shall make available the Residential Travel Plan Fund for expenditure by the Travel Plan Co-ordinator. A record of expenditure shall be kept and reported in the Annual Travel Plan Monitoring Report.

Other Measures

Definitions

- **Car Parking Scheme**

674 Means a scheme to be submitted by the Owner to the Council for approval for:-

- The provision of public car parking within the Development which actively promotes short stay parking and actively discourages long stay parking at the Development such scheme to include details of:-
    - Signing and lining of the car parking spaces
    - Tariff controls

675 and an implementation programme for the timing of the provision of the public car parking; and

- The control of the use and provision of car parking within the multi storey car park to be provided within Phase 3 of the Development or car parking elsewhere in the Development for use by residents and staff of the Development to ensure that the provision of car parking does not exceed the maximum guideline figures and to set out what steps the Owner will take to prevent these guideline figures from being exceeded.

Clauses

676 No earlier than 12 or later than 18 months after the occupation of the Development and annually thereafter for a period of 4 years, to instruct an independent transport consultant to undertake a survey of the means of travel by all employees/residents/students/ customers patients/visitors to and from the Land.

677 The car parking spaces to be provided for employees and visitors to the development shall be confined to areas specifically designated for such purpose. Allocation of car parking spaces to any [use class] tenant of the development whether occupying the whole or part of any building shall be restricted to a car parking ratio such that the car parking ratio across the whole of the site does not exceed (1:30m^2) GFA.

Mitigation / Remedial measures

678 **Travel Plan Bond:** means the sum of [£] index linked to be paid by the Owner to the Council to mitigate the impact of the Development should the Travel Plan targets or monitoring requirements not be met.

679 **Travel Plan Sanction:** means the sum of [£] index linked being a cost towards sustainable travel measures to be identified by the Council (taking into account all reasonable representations made by the Owner) as being necessary to mitigate the impact on the highway network in the vicinity of the Land of the Owners failure to meet the Peak Time Target.

680 Means the sum calculated by reference to the number of single occupancy vehicle trips which exceed the Modal Split Target as follows below:

- No sanction for up to xx SOV trips.
- £xx for xx to xx SOV trips.
- £xx for xx to xx SOV trips.

681 Being a contribution towards travel and transport measures to be identified by the Council (taking into account all reasonable representations made by the Owner) as being necessary to mitigate the impact on the highway network in the vicinity of the Land of the Leasehold Owner's failure to meet the Modal Split Target and which such sums the Council may (in consultation with the Leasehold Owner but at the Council's sole discretion) allocate towards measures which may be included in the Travel Plan following an Annual Travel Plan Review;

682 **Traffic Management Monitoring:** means the annual monitoring for a period of [ ] years after the substantial occupation of the development of on street parking in the area as defined in the appended plan.

683 If the Annual Monitoring Report demonstrates that the Travel Plan Targets have not been met:

- The Council, , will utilise such proportion of the Travel Plan Bond as is necessary to mitigate the impact of the Development to enable the Travel Plan Targets to be met; and
- The Owner shall within 3 months of submission of the Annual Monitoring Report submit to the Council and implement an action plan setting out the measures to be taken by the Owner to meet the Travel Plan Targets until the next Annual Monitoring Report submission date.

684 Should the Owner fail to submit the Annual Monitoring Report, the Council shall at its discretion utilise the Travel Plan Bond to mitigate the impact of the Development upon the transport network within the vicinity of the Land.

685 If the Annual Monitoring Report demonstrates that the Travel Plan Targets have been exceeded the Owner will implement the remedial measures as set out in Clause [ ].

686 **Traffic Management Scheme:** means the provision of measures to restrict development related parking in the vicinity of the site.

687 Parking survey and controlled parking zones – see DCLG / DfT Good Practice Guidelines: Delivering Travel Plans through the Planning Process (2009) Appendix C.

688 No development shall commence on any part of Phase 2 of the site (as defined in this agreement) unless the preceding 3-month average of the recorded weekday morning peak period arrivals between 08.00 and 09.00 (as measured and provided to the Local Planning Authority in accordance with this agreement) is less than or equal to [ ] single vehicle occupancy trips for the development.

689 The Owner shall, if so required by the Council, secure that the results of each monitoring are verified by an independent Auditor within two calendar months of the monitoring taking place by methods that accord with the reasonable requirements of the Council.

690 The Owner undertakes to use all reasonable, measures and best endeavours to achieve an annual survey response rate of [ ]%.

691 For the avoidance of doubt the Owner is responsible for the costs of monitoring and auditing and any remuneration and expenses payable to the Travel Plan Co-ordinator and the Auditor.

PART 5. HIGHWAYS CUMULATIVE IMPACT

5.1 BACKGROUND TO CURRENT POSITION

692 Cumulative impacts in the highway arise when a series of developments occur in proximity to specific corridors at different times and mitigation schemes are not delivered because in isolation each development is too small to fund them (or trigger a requirement to fund improvements). This results in cumulative build-up of additional traffic and increasing road congestion. The Core Strategy identifies this as an issue and states in paragraph 6.30:

> "Developer contributions will also be expected to take a role in the funding and delivery of any required new infrastructure as a result of the cumulative impact of the high level of growth proposed for Leeds. Therefore, planning obligations will be used to secure matters including education provision, green space and public realm, and transport provision such as highway improvements, cycle routes, and public transport improvements. Contributions for a very wide range of aspects which are impacted as a result of new development could be sought, although the Council will bear in mind that schemes need to be viable. Residential developments will be required to provide affordable housing provision as outlined in Policy H5, and this will continue to be undertaken through a Section 106 Agreement."

With Core Strategy Policy ID2, Planning Obligations and Developer Contributions set out as follows:

> "Section 106 planning obligations will be required as part of a planning permission where this is necessary, directly related to the development, and reasonably related in scale and kind in order to make a specific development acceptable and where a planning condition would not be effective. In order to provide the necessary infrastructure and facilities to support the growth of Leeds and the proposals and Policies in the Core Strategy, developer contributions will be sought through Section 106 planning obligations and the Community Infrastructure Levy as appropriate."

693 Mitigation schemes can mitigate increased demand by increasing traffic capacity or other user mode capacity or a combination of both. In city centre schemes and schemes on radial routes into Leeds it would be expected to prioritise non-motorised users.

5.2 SITE ALLOCATIONS PLAN

694 In relation to the SAP there are 60 sites that have been identified as adding to one or more locations a cumulative or direct impact leading to worsening congestion. Of the 51 sites with a cumulative impact, 24 affects one junction, 18 two junctions and 9 affects 3 or more. 45 of the 51 sites are residential allocations (including mixed use), totalling 11,179 dwellings. The remaining 6 sites are employment sites (3 office and 3 general employment).

695 These sites represent much of the largest allocated housing and employment sites.

696 The Transport Background Paper[6] identified the methodology used to identify these sites which included:

a) Identifying locations in Leeds where congested junctions were becoming more congested by at least 30 seconds (in the weekday peak hour averaged across the whole school year) and mitigation was likely to be required; and
b) Identifying developments that put 10 or more peak hour trips through the sites identified in a).

697 Due to their scale some sites have a potentially greater cumulative impact across the wider network than others (for example the airport employment site EG3). In these cases, comprehensive transport studies are required and the cumulative impact threshold has not been comprehensively applied.

698 Across the Leeds main road network, the effect of the SAP in the absence of mitigation has been modelled as on average increasing peak hour radial journey times by 25% in the morning peak and 28% in the evening peak[7].

699 However, this forecast level of journey time increase is likely to be an underestimate for many radial routes. Recent monitoring of journey times shows that between 2009-10 and 2015-16 average inbound journey times in Leeds have risen by 18% in the AM peak hour; while outbound journey times have risen by 17%. An element of this growth is likely to be the 'bounce back' from the economic downturn together with falling fuel prices resulting in increased traffic. Over the period under consideration around 12,000 additional dwellings were completed in Leeds.

6 CDI-35 Infrastructure Background Paper Updated Submission Draft, May 2017 Appendix 3

7 CD1-35 Appendix 3: Transport Background Paper Figures 13 and 14.

700 Although, many significant transport schemes[8] are being promoted across Leeds through the West Yorkshire Plus Transport Fund (WYPTF) these will only address a proportion of the locations identified as being likely to require mitigation. Further funding from the WYPTF is available through the Corridor Improvement Programme (CIP) and through the Leeds Public Transport Investment Programme (LPTIP), however, there is a limit to the level of funding available with the former covering interventions across the whole of West Yorkshire and LPTIP being restricted to public transport schemes. It is therefore key that additional sources of funding are identified to enable a greater number of mitigation schemes to be progressed to address growth due to development.

701 As highlighted above, the Core Strategy refers to the expectation that funding due to cumulative impacts will be sought towards mitigation schemes and this is also referred to in the Infrastructure Background Paper (CD1-35 para 2.19) with specific reference to CIP interventions.

5.3 PROPOSED APPROACH

702 A number of different approaches have been considered to facilitate funding from developments to support mitigation schemes due to cumulative impacts.

703 The traditional Transport Assessment methodology, based on identifying the impact of additional traffic due to a specific development, is regarded as being inadequate to address the issue of cumulative impacts. At best this only results in improvements towards junctions adjacent to the developments.

704 The Community Infrastructure Levy (CIL) does not have any relationship between the location of the development and the need for mitigation. Secondly, interventions funded through CIL are prevented from also being funded through Section 106 obligations, which limits the funding opportunities and restricts flexibility. Lastly, as identified in the Infrastructure Background Paper there is a presumption that CIL will in the main be used to support public transport, walking and cycling schemes.

705 To ensure that the cumulative impact contributions meet the three legal tests for Section 106 contributions it is essential that the payments are necessary to make the

8 See CD1-35 Infrastructure Background Paper – Chapter 2 Physical Infrastructure Revised 2018

development acceptable in planning terms; directly related to the development; and fairly and reasonably related in scale and kind to the development.

706 Therefore, whilst a roof tax style levy would have been simpler to administer it has not been considered to meet the Section 106 tests so an alternative methodology is adopted as follows:

i) Where a development yields 10 or more peak hour trips through a congested junction as identified in the SAP infrastructure background paper and below (and does not warrant funding direct mitigation in its own right) then a proportion of the cost of appropriate mitigation will be sought.

ii) The total number of additional trips modelled through the junction (using the Leeds Transport Model (LTM), averaged between the peak hours) for the SAP period (including any background growth) will be taken as required to fund the total cost of mitigation required.

iii) The proportion of trips from the development (averaged between the peak hours) of the total number of additional trips (as in ii) will be used to establish the proportion of the total cost of the mitigation works.

iv) Individual developments may have to contribute to more than one cumulative impact scheme if they meet the criteria above on multiple congested junctions.

v) Example: If a development of 150 dwellings puts 50 peak hour trips through a congested junction which is modelled to have an additional 200 trips through it for all SAP allocations (and background growth) then that development will be expected to fund 50/200 x 100 = 25% of the total cost of required mitigation.

vi) In terms of mitigation costs the Council has some high-level estimates of mitigation costs for some of the congested junctions but more detailed work will be required at the time of any pre-application submission by the Applicant to agree required mitigation and cost.

vii) Any windfall or saved sites which do not have planning permission or submit a new planning application would also be required to pay the contribution where a development meets the conditions above.

viii) Any site requirement for a direct impact which demonstrates through a Transport Assessment process that the direct mitigation is not required will instead be expected to fund a cumulative impact at that junction following the process outlined above.

Table 5-27: Site Allocation Plan (SAP) Sites

SITE REF	CUMULATIVE IMPACTS JUNCTIONS	DIRECT IMPACTS JUNCTIONS	GRAND TOTAL	DWELLINGS/ Ha/m^2	CUMULATIVE IMPACT DWELLINGS
EG2-19	1	4	5	26.8 Ha	
EG2-21	1		1	3.7 Ha	
EG2-23		2	2	29.04 Ha	
EG2-24		1	1	36.23 Ha	
EG2-27	1		1	3.43 Ha	
EG2-36		1	1	0.82 Ha	
EO2-2	3	1	4	20,370m^2	
EO2-6	2	2	4	22,300m^2	
EO2-9	1		1	6,000m^2	
HG2-1	2		2	160	160
HG2-112		1	1	113	113
HG2-113	2		2	310	310
HG2-120	1		1	450	450
HG2-125	1		1	79	79
HG2-136		1	1	279	279
HG2-137	3		3	111	111
HG2-143	1	1	2	250	250
HG2-146	1		1	85	85
HG2-149		2	2	542	542
HG2-150	1	1	2	223	223
HG2-157	2		2	63	63

Table 5-27: Site Allocation Plan (SAP) Sites

SITE REF	CUMULATIVE IMPACTS JUNCTIONS	DIRECT IMPACTS JUNCTIONS	GRAND TOTAL	DWELLINGS/ Ha/m²	CUMULATIVE IMPACT DWELLINGS
HG2-158	1	1	2	100	100
HG2-165	3		3	57	57
HG2-167	2	1	3	207	207
HG2-168	2		2	108	108
HG2-169	2	1	3	262	262
HG2-17	2		2	376	376
HG2-174	1		1	83	83
HG2-18	1		1	104	104
HG2-180	2		2	339	339
HG2-194	1		1	86	86
HG2-195	1		1	179	179
HG2-204	1		1	60	60
HG2-205	1		1	75	75
HG2-226		1	1	1100	1100
HG2-235	4		4	240	240
HG2-36	1	2	3	302	302
HG2-38	1		1	68	68
HG2-4	1		1	80	80
HG2-43	2		2	134	134
HG2-63	2		2	196	196
HG2-65	2		2	89	89

Table 5-27: Site Allocation Plan (SAP) Sites

SITE REF	CUMULATIVE IMPACTS JUNCTIONS	DIRECT IMPACTS JUNCTIONS	GRAND TOTAL	DWELLINGS/ Ha/m^2	CUMULATIVE IMPACT DWELLINGS
HG2-66	2		2	60	60
HG2-67	1		1	100	100
HG2-69	3		3	206	206
HG2-73	3		3	283	283
HG2-77	1		1	64	64
HG2-9	2		2	102	102
HG2-99	1		1	189	189
MX2-10	2		2	325/5000m^2	325
MX2-11		1	1	122/2.5 Ha	122
MX2-19	3	1	4	209/13245m^2	209
MX2-32	3		3	288/20790m^2	288
MX2-37	1	2	3	470/4.3 Ha	470
MX2-38	2		2	150/10 Ha	150
MX2-20	2		2	63/5000m^2	63
MX2-35	2		2	1000/3.1 Ha	1000
MX2-36	1		1	30/3000m^2	30
MX2-4		1	1	55/7000m^2	55
MX2-9	4	2	6	553/4100m^2	553
GRAND TOTAL	**89**	**30**	**119**	**11,179 Dwellings**	**11,179 Dwellings**

Table 5-28: Site Requirements Register by Junction

LOCATION	SITE REQUIREMENTS	DIRECT IMPACT SITES	CUMULATIVE IMPACT SITES
A61/Alwoodley Lane	Direct contributions (1 site)	HG2-36	
A61/A6120 Moortown	Direct contributions (1 site)	HG2-36	
A61/Street Lane	Cumulative contributions (1 site)		HG2-36
A61/Potternewton Lane	No sites identified		
A6120/Shadwell Lane	No sites identified		
A6120/Roundhay Park Lane	No sites identified		
A58/A6120	No sites identified		
Roundhay Road/Oakwood Lane (Oakwood Clock)	No sites identified		
A58/Harehills Lane (Forde Green)	No sites identified		
A58 Barrack Road/Chapeltown Road	No sites identified		
A58 Clay Pitt Lane/Meanwood Road	Cumulative contributions (1 site)		HG2-99
A6120/Coal Road/Ramshead App	No sites identified		
A64/Scholes Lane	No sites identified		
A64/A6120	No sites identified		
A64/Cross Gates Road	No sites identified		
A64/B6159 Halton Dial	No sites identified		
A64/Gipton Approach	No sites identified		
A64/Burmantofts Street, Woodpecker junction	Cumulative contribution (1 site)		MX2-37
Barwick Road/A6210	No sites identified		

Table 5-28: Site Requirements Register by Junction

LOCATION	SITE REQUIREMENTS	DIRECT IMPACT SITES	CUMULATIVE IMPACT SITES
Austhorpe Road/A6210	Not sites identified		
M1 Jn 46/A63 Colton	Direct contributions (3 sites)	EG2-27, MX2-38, HG2-120	
M1 Jn 47/A642 Garforth	Cumulative contributions (1 site)		HG2-125
A63/A642 Old George Rbt	Cumulative contributions (1 site)		HG2-235
A63/B6137 Lidgett Lane	Cumulative contributions (1 site)		HG2-235
A63/B6137 Leeds Road	Cumulative contributions (1 site)		HG2-235
A63/Ninelands Lane	Cumulative contributions (1 site)		HG2-235
B6159/Chapel Street Halton	No sites identified		
M1 Junction 45/A63 East Leeds Link Road	None – due to delivery of planned scheme, (though East Leeds Impact Study identified further improvements required)		
A656/B6137 Longdike Lane	No sites identified		
A642/Bullerthorpe Lane	Cumulative contributions (1 site)		HG2-180
A639/B6481 Pontefract Road	No sites identified		
A61/A654 Leadwell Lane	Cumulative contributions (2 sites)		HG2-165, EG2-21
A61/Sharp Lane	Cumulative contributions (1 site)		HG2-165
A61/Wood Lane	Cumulative contributions (2 sites)		HG2-165, HG2-174
M1 Junction 41/A650	No sites identified		
M1 Junction 42/M62 Junction 29 Lofthouse	No sites identified		
A650/Common Lane	Direct contributions (1 site) cumulative (2 sites)	HG2-169	HG2-167, HG2-168
A650/Thorpe Lane	Direct contributions (1 site)	HG2-167	

Table 5-28: Site Requirements Register by Junction

LOCATION	SITE REQUIREMENTS	DIRECT IMPACT SITES	CUMULATIVE IMPACT SITES
M62 Junction 28/A653 Tingley	Direct contributions (1 site) cumulative (4 sites)	EG2-19	HG2-158, HG2-167, HG2-168, HG2-169
A653/Ring Road Middleton (Tommy Wass)	No sites identified		
A650/A6039 Rein Road	Direct contributions (1 site) cumulative (3 sites)	HG2-158	HG2-157, HG2-169, EG2-19
A650/A643 Bruntcliffe Lane	Cumulative contributions (1 site)		HG2-157
A643/A6110	Direct contributions (3 sites)	HG2-149, HG2-150, EG2-19	
A643/ Wesley Street	No sites identified		
A643/M621 Junction 2	Cumulative contributions (4 sites)		EO2-6, MX2-9, MX2-19, EO2-2
A6110/M621 Junction 1	Direct contributions (1 site) cumulative (2 sites)	HG2-149	HG2-137, HG2-150
M62 Junction 26/A62 Gildersome	Direct contributions (1 site) cumulative (1 site)	EG2-23	HG2-143
A62/Asquith Avenue	Direct contributions (1 sites) cumulative (1 sites)	EG2-23	HG2-146
A6110/A62 Gelderd Road, Wheatsheaf	Cumulative contributions (1 site)		HG2-137
A58/B6135 Drighlington	Direct contributions (1 site)	HG2-143	
A6110/A58 Whitehall Road, Ringways	Direct contributions (1 site) cumulative (1 site)	HG2-136	HG2-137
A58 Domestic Road/Domestic Street	No sites identified		
A6110/Branch Road	No sites identified		
A6110/Tong Road	Cumulative contributions (1 site)		HG2-77
A647/B6154 Thornbury Barracks	None – due to delivery of 2015 scheme		
A647/A6120 Dawson's Corner	Cumulative contributions (7 sites)		HG2-63, HG2-65, HG2-66, HG2-67, HG2-69, HG2-73, HG2-204

Table 5-28: Site Requirements Register by Junction

LOCATION	SITE REQUIREMENTS	DIRECT IMPACT SITES	CUMULATIVE IMPACT SITES
A647/B6155 Richardshaw Lane	No sites identified		
A647/Armley Ridge Road	No sites identified		
A647/Ledgard Way	No sites identified		
A647/A643/A58 Armley Gyratory	Direct contributions (5 sites) cumulative (5 sites)	MX2-11, EO2-2, EO2-6, HG2-112, EG2-36	MX2-9, MX2-10, MX2-19, HG2-113, MX2-20
A657/A6120 Rodley	Cumulative contributions (1 site)		HG2-43
A658/Micklefield Lane	No sites identified		
A658/Bayton Lane	Cumulative contributions (1 site)		HG2-9
A6038/B6153 Park Road Guiseley	Cumulative contribution (1 site)		HG2-4
A65/Oxford Road	Cumulative contributions (1 site)		HG2-1
A65/A6120 'Horsforth Roundabout'	Cumulative contributions (3 sites)		HG2-1, HG2-9, HG2-43
B6157 Bridge Road/Wyther Lane/Broad Lane junctions	No sites identified		
A65/Kirkstall Lane/Savins Mill Lane	Direct contribution (1 site)	MX2-4	
A65/Willow Road	Direct contribution (1 site)	MX2-9	
Willow Road/Burley Road	Cumulative contributions (1 site)		MX2-9
A65/A58 Inner Ring Road	Direct contributions (3 sites) cumulative (4 sites)	MX2-9, MX2-19, EO2-6	HG2-113, EO2-2, MX2-10, MX2-20
A6120/Low Lane	No sites identified		
East of Otley Relief Road	To be delivered through East of Otley housing site (UDP requirement)	MX1-26	
A660/A658 Dyneley Arms	No sites identified		

Table 5-28: Site Requirements Register by Junction

LOCATION	SITE REQUIREMENTS	DIRECT IMPACT SITES	CUMULATIVE IMPACT SITES
A660/A6120 Lawnswood	Cumulative contributions (2 sites).		HG2-17, HG2-18
A660/St Anne's Lane/Shaw Lane	No sites identified		
A660/North Lane	No sites identified		
A660/Hyde Park Road	No sites identified		
A6120/Westwood Lane	Cumulative contributions (1 site)		HG2-38
A6120/King Lane	Cumulative contributions (1 site)		HG2-17
King Lane/Stonegate Road	No sites identified		

Table 5-29: Other Site Requirements

LOCATION	SITE REQUIREMENTS	DIRECT IMPACT SITES	CUMULATIVE IMPACT SITES
A6110 Junctions	Cumulative contributions (1 site)		HG2-205
Leeds City Centre Package	Cumulative contributions (3 sites)		MX2-32, EO2-9, MX2-35
Holbeck Urban Village traffic management, streetscape and pedestrian improvements	Cumulative contributions (5 sites)		HG2-194, HG2-195, MX2-32, MX2-35, MX2-36
Beckett St-Burmantofts St corridor	Direct Impact (1 site)	MX2-37	
A64/Torre Road/Lupton Ave	Direct Impact (1 site)	MX2-37	
A1(M) Junction 46, Wetherby	Direct Impact (1 site)	HG2-226	
M621 Junction 2	Cumulative contributions (4 sites)		MX2-9, EO2-6, EO2-2, MX2-19
M62 Junction 30, Rothwell	Cumulative contributions (1 site)		HG2-180
Thornbury Gyratory, Bradford	Cumulative contributions (5 sites)		HG2-63, HG2-65, HG2-66, HG2-69, HG2-73
Cutler Heights Lane, Bradford	Cumulative contributions (2 sites)		HG2-69, HG2-73
A653/White Rose Rbt	Direct Impact (1 site)	EG2-19	
A653/B6123 Wide Lane	Direct Impact (1 site)	EG2-19	
M621 Junction 3	Cumulative contributions (1 site)		MX2-32

APPENDIX A. STREET DESIGN SPECIFICATION

A.1 MATERIALS AND CONSTRUCTION

SPECIFICATION

707 Unless stated otherwise, all highway works shall be in accordance with the current editions of:

- The City Council's Specification for Highway Works;
- The "Specification for Highway Works" (SHW), published by The Stationery Office Ltd as Volume 1 of the Highways Agency' (now National Highways) Manual of Contract Documents for Highway Works;
- The "Notes for Guidance on the Specification for Highway Works" (SHW), published by The Stationery Office Ltd as Volume 2 of the Highways Agency' (now National Highways) Manual of Contract Documents for Highway Works; and
- DMRB CD 225 "Design for new pavement foundations".

708 Where the City Council's Specification varies from those contained in SHW, the requirements of the City Council will apply.

709 All Works shall comply with the requirements of the City Council Standard Detail Drawings. Copies of the Standard Details are subject to review and are available on request from S38@leeds.gov.uk

710 Where proposals contain details not covered by the Standard Detail Drawings, scheme specific drawings shall be developed and submitted to the City Council's Section 38 Team.

711 In line with the Climate Emergency that the Council has declared, low carbon materials should be used in new developments.

CARRIAGEWAYS

Design Criteria

712 The design of trafficked pavements must take account of the prevailing site ground conditions and likely traffic loads during the life of the development. Designs meeting the following requirements will normally be acceptable. At sites where particularly, poor ground conditions are encountered or where it is anticipated that there will be a particularly high frequency of commercial vehicle or abnormal load movements, further

analysis in accordance with the "Design Manual for Roads and Bridges" will be required to demonstrate integrity of the design.

Design Traffic Loading

713 For the purpose of this guide, design traffic shall be based upon the street categories set out in Part 2.

Ground Conditions

714 An intrusive ground investigation is required. The ground investigation shall determine the ground conditions throughout the extent of the proposed highway scheme at minimum 25m centres and shall provide adequate coverage of the proposed highway. The subgrade strength within the proposed highway must be determined in accordance with CD 225 at a minimum 5 locations of in-situ California Bearing Ratio (CBR) testing. The co-ordinates and levels of CBR tests must be recorded and provided in the result sheets.

715 An assessment of the existing subgrade expressed as a %CBR is necessary in order to determine the correct pavement foundation. The subgrade shall be characterised in accordance with CD 225.

716 The Design CBR value for the subgrade shall be supported by appropriate laboratory and/or in situ tests, carried out in accordance with British Standard BS 1377. If the Design CBR value is less than 2.5%, ground improvement and/or special construction is required (see table: Permanent Foundation Design).

717 Non-engineered made ground soils are an unsuitable subgrade and shall not be permitted to be left untreated beneath the adoptable Highway. Non-engineered made ground soils shall be excavated and replaced with engineered fill. If full depth excavation and replacement is impractical, ground improvement and/or special construction will be required.

718 Any made ground soils (including engineered fill) proposed to be retained beneath the adoptable Highway shall be adequately characterised in terms of their physical and chemical properties. This is required to demonstrate compliance with SHW and to ensure contaminated soils do not present a risk to future site users and to the City Council.

Foundation

719 A granular foundation comprising sub-base or a combination of sub-base and a capping layer shall be provided in accordance with the table below.

Table A-30: Pavement Foundation Design

CBR %	Capping (mm)	+	Sub-base (mm)		Sub-base (mm)
Less than 2.5	Ground improvements/ special construction required				
2.5	250	+	350		475
3	250	+	325	OR	450
4	225	+	275		375
5-10	200	+	250		325
10-15	175		175		250
Greater than 15	150	+	150		200

720 It may be necessary to vary the foundation design to accommodate significant changes in sub-grade properties across the site. However, the foundation design should not vary frequently along the road. On sites where, numerous changes in sub-grade properties are encountered, a design based upon the lowest CBR value will often provide the most satisfactory solution.

721 Where a CBR value between those in the above table is obtained (either through testing or with reference to **Table A-30**) the lower value in the above table shall be used for the purpose of design.

722 No material within 450mm of the finished road surface shall be frost susceptible.

723 Materials used in capping layers shall be in compliance with the Specification for Highway Works **Table A.30** (and any additional requirements of the City Council). The materials shall be sampled in the frequency stated in the Specification and tested to demonstrate that it has an in-situ CBR value of 15% (or equivalent test result). The Developer should provide confirmation that the tested materials comply with the required Specification.

724 Sub-base shall be Type 1 in accordance with the "Specification for Highways Works".

Pavement Design

725 A range of acceptable surfacing materials for use in pavement construction are set out below, although the list is not exhaustive. Other alternatives will be considered on an individual basis, especially in Conservation Areas or near to Listed Buildings, however, where possible, Dense Bitumen Macadam should always be a first option. Where alternative surfacing materials are proposed, the developer must obtain written consent from the City Council for the use of the material and must provide the City Council with technical justification that the material meets the relevant design criteria.

726 The use of permeable blocked paving will be considered for smaller areas of paving where the drainage requirements of the product can be met.

Table A-31: Acceptable Materials for Surface to Carriageways

ACCEPTABLE MATERIALS FOR SURFACE TO CARRIAGEWAYS
Hot Rolled Asphalt 30% with surface applied coated chippings
Dense Bitumen Macadam

Table A-32: Acceptable Materials for Surface to Shared Surfaces

ACCEPTABLE MATERIALS FOR SURFACE TO SHARED SURFACES
Standard 80mm concrete-block paving surface course
‘Tegula’ or similar approved concrete-block paving surface course

727 The Developer will be required to pay a commuted sum for the future maintenance of elements within the new adopted highway generally in accordance with guidance issued by the DfT. Where alternative materials are proposed and accepted in writing by the Director of Development, the Developer will be required to pay an enhanced commuted sum for the additional future maintenance costs incurred by the City Council.

728 The following are approved alternative surface materials for carriageways and Shared Surfaces, which will attract an enhanced commuted sum payment:

Table A-33: Alternative Materials for Surface to Carriageways

ALTERNATIVE MATERIALS FOR SURFACE TO CARRIAGEWAYS
Standard surface course materials using a coloured blinder and coloured aggregate or chippings
Hot Rolled Asphalt (HIGH Stone Content)

Table A-34: Alternative Materials for Surface to Shared Surfaces

ALTERNATIVE MATERIALS FOR SURFACE TO SHARED SURFACES
Yorkstone setts

729 The City Council's acceptance of any alternative material will be subject to the material meeting appropriate requirements of quality, durability, maintainability, and sustainability and, in the interests of safety, being compliant with the specification, particularly in respect of polished stone value (PSV) and aggregate abrasion (AAV). Further guidance on the City Council's requirements for Skidding Resistance (SCRIM) is provided in Supplementary Guidance, "Highway Infrastructure Asset Management Plan 2016-2021", a copy of which is available for download from the City Council's website (www.leeds.gov.uk).

730 Example designs for the bound pavement layers are detailed in the table below, which shows the minimum design thickness for a variety of alternative materials for the various street types within the scope of this guide. The pavement construction for any street types or roads not included in the table shall be subject to site-specific designs in accordance with the DMRB.

Table A-35: Pavement Construction

Street Type	Base Course (mm)	Binder Course (mm)	Surface Course (mm)
1	DBM 100	DBM 60	HRA (50mm thick)
2	DBM 80	DBM 60	DBM 40 (10mm nominal size) HRA (50mm thick) – where bus route
3	DBM 145	Sand 50	Concrete Block Pavers (80mm thick)
4	DBM 145	Sand 50	Concrete Block Pavers (80mm thick)
Industrial Road	DBM 150	DBM 60	HRA (50mm thick)

Key; HRA – Hot Rolled Asphalt (30% with surface applied coated chippings), DBM – Dense Bitumen Macadam

731 Where alternative surfacing materials are proposed, appropriate construction depths will need to be provided.

732 The value of commuted sums will be determined by the City Council on a site-specific basis. The sum will be calculated and details provided to the Developer in advance of entering into the appropriate agreement (e.g. Section 38 or 278) with the City Council.

DRAINAGE

733 For details of drainage construction requirements see A.4 of this Appendix.

734 All non-highway drainage should be adopted by Yorkshire Water under a Section 104 of the Water Industry Act 1991 agreement or alternatively, where agreed with the Highway Authority, covered by a Section 150 agreement under the Highways Act.

FOOTWAYS, KERBS AND CROSSINGS

735 Footways and crossings shall be provided and laid out in accordance with the requirements in Chapter 2 of this Appendix.

736 A range of acceptable materials that the City Council might consider acceptable in the appropriate circumstances is included in the table below. The alternatives listed and others approved will be considered on an individual basis, especially in Conservation Areas or near to listed buildings.

Table A-36: Acceptable Materials for Footways, Kerbs, and Crossings

ACCEPTABLE MATERIALS FOR FOOTWAYS, KERBS, AND CROSSINGS
Concrete flags or small unit paving
Pre-cast concrete kerbing, channelling and edging products meeting the appropriate British and European Standards having a textured or exposed aggregate finish
Dense Bitumen Macadam

Table A-37: *Alternative Materials for Footway, Kerbs, and Crossings

*ALTERNATIVE MATERIALS FOR FOOTWAY, KERBS, AND CROSSINGS
Standard surface course materials using a coloured binder and coloured aggregate or chippings
Standard 80mm concrete-block paving surface course
'Tegula' or similar approved concrete-block paving surface course
Yorkstone Flags or small unit paving

737 *The alternative materials will require additional commuted sum payments.

738 Example footway construction depths are shown below:

Table A-38: Footway Construction – includes changes made to Technical standards which will be included in revised appendix 11/1

TYPE	SUB BASE	BINDER COURSE / BASE	SURFACE COURSE
Pedestrian and Cycle only Footway or Footpath (FW1)	100mm Type 1 (>= 2.5% CBR)	50mm (20mm nominal size) AC 20 dense bin 40/60	20mm (6mm size) AC 6 dense surf 70/100 or AC 6 dense surf 100/150
Light Vehicle footways and Cycleways (residential Vehicular Footway Crossing) (FW2)	225mm Type 1(or 300mm for more than one property?) (>= 2.5% CBR)	50mm (20mm nominal size) AC 20 dense bin 40/60	20mm (6mm nominal size) AC 6 dense surf 70/100 or AC 6 dense surf 100/150
Heavy Vehicle footways and Cycleways (incl Vehicular Footway Crossing) (FW3)	320mm Type 1 (2.5% >= CBR <= 4%)	90mm (32mm nominal size) DBM AC 32 dense base 40/60	25mm (6mm nominal size) DBM AC 6 dense surf 70/100 or AC 6 dense surf 100/150

Notes

739 Construction ref FW1 is only to be used where the footway is physically separated from the carriageway, i.e. there is a barrier or other permanent obstruction such that vehicular traffic cannot mount the footway/cycleway or there is a verge of width 3.0m or greater.

740 Construction ref FW2 is only to be used at domestic crossings i.e. to private driveways, where occasional access by delivery vehicles is likely, for cycleways/footways that are not there is no physically separated from the carriageway and are adjacent to residential roads. Where occasional overrun by HGV's (as might occur 2 or 3 times per year by delivery vehicles, or where cumulative vehicular loading over the design life is less than 0.5msa.

741 Construction ref FW3 is to be used where the footway adjacent to, but not physically separated from the carriageway in areas where deliveries take or are likely to take place, where there is uncertainty about the frequency of HGV overrun.

742 Where vehicular footway crossings are to be provided or in locations where vehicles are able to overrun the footway, the footway construction shall be strengthened to accommodate the additional load imposed by vehicular traffic.

743 Footway crossing shall not be used for service accesses to commercial properties, industrial accesses, or where particularly heavy vehicles are anticipated. In these circumstances, more formal access junctions shall be provided and the pavement construction shall meet the same requirements as the adjacent carriageway.

744 In certain circumstances the use of alternative materials to those set out in the above table may be permitted. Where additional alternative materials are proposed and accepted in writing by the City Council, the Developer may be required to pay an enhanced commuted sum for the additional future maintenance costs incurred by the City Council.

745 The City Council's acceptance of any alternative material will be subject to the material meeting the appropriate requirements for quality, durability, maintainability, and sustainability.

746 Kerbs shall normally be provided alongside all running carriageway (Types 1 and 2) to provide an edge restraint to the carriageway construction, prevent vehicles overriding the footway, and facilitate the management of drainage flows.

747 Where kerbs are laid alongside the running carriageway they shall be laid with an up-stand of 100mm (except in shared surface streets). At bus stops this should be increased to 125mm, and West Yorkshire Combined Authority should be consulted for any additional requirements.

748 Drop Kerbs shall be used at pedestrian and vehicular crossing points. They should be constructed flush on the high side and with a 6mm check on the low side with the carriageway at pedestrian crossing points and with a 25mm check at vehicular crossings, and shall be constructed in accordance with the Standard Detail Drawings.

749 Pre-cast concrete channel blocks shall be installed in the road channel adjacent to the kerb wherever the longitudinal gradient along the road channel is between 1 in 100 and 1 in 150. The channels shall be laid in accordance with the Standard Detail Drawings.

750 Tactile paving to assist blind and partially sighted people should be utilised in accordance with national guidance which can be found in 'Guidance on the use of Tactile Paving Surfaces' by DETR 1998 (2007). See 'Interim changes to the guidance on the use of tactile paving surfaces' by DfT 2015 for improvements in the original guidance.

751 The value of commuted sums will be determined by the City Council on a site-specific basis. The sum will be calculated and details provided to the Developer in advance of entering into the appropriate agreement (e.g. Section 38 or 278) with the City Council.

CONSERVATION AREAS

752 Traditional paving materials, where they still exist, contribute to the character of a conservation area. Therefore, in carrying out maintenance, or the provision of new streets, within these areas it is necessary that traditional materials are used. These materials are likely to be made of stone, although alternative new materials such as tegula blocks, conservation kerbs and tarmac dressed with a suitable local aggregate may also be acceptable.

753 Street furniture should also be of appropriate materials in keeping with the surrounding area. Advice from the City Council should be sought prior to designing or implementing any works.

A.2 ADOPTION PROCEDURES

ADOPTION POLICY

754 It is the policy of Leeds City Council to adopt (as Highway maintainable at public expense) streets and associated areas of new developments that serve;

- Residential developments comprising more than 5 dwellings; and
- Multiple building, multiple occupation, industrial and commercial developments (i.e. developments occupied by more than one company).

755 The layout of the street or other area to be offered for adoption must comply with the adoptable layouts and standards referred to in this guide and the requirements stated below.

756 In exceptional cases, areas not meeting the above criteria may be considered for adoption on a site by site basis.

REQUIREMENTS FOR ADOPTION

757 Works in accordance with this guide will normally be adopted by Agreement under Section 38 of the Highways Act. This requires the Developer to enter into a Legal Agreement with the Highway Authority (i.e. Leeds City Council). In certain circumstances adoption arrangements may be made under alternative agreements, but these circumstances tend to be exceptional. Such alternative agreements are outside the scope of this guide.

758 In order to enter into a Section 38 Agreement, the Developer shall: -

- Obtain Full Planning Permission for the development, including approval of any reserved matters relating to the works to be offered for adoption;
- Prove title to the land that will, within the Agreement, be dedicated as Public Highway;
- Provide approved details of all easements that may be necessary for the development within the areas to be adopted as highway;
- Provide evidence of the right or consent to discharge surface water from the proposed highway to an existing public sewer, proposed public sewer (see below), watercourse or to ground (SUDS);
- Provide a bond;

- Pay an administration and inspection fee;
- Pay a legal fee; and
- Pay a commuted sum (if applicable).

DETAILS TO BE PROVIDED BY THE DEVELOPER

759 The Developer shall, prior to entering into the adoption agreement, submit to the City Council a fully completed Section 38 application form, advance design checking fees and all information reasonably requested, including but not limited to:

Geometry and Layout

760 A coloured plan or plans (max A1 sized) at a scale of not less than 1:500 indicating the limit of the proposed area of highway to be offered for adoption, showing a north point, plus existing and proposed street names;

761 Plans (max A1 sized) at a scale of not less than 1:500 indicating the position and layout of all carriageways, footways, footpaths, cycle paths, trees/verges/landscaped areas, service strips, visibility splays, traffic calming features, foul and surface water drainage (including gully positions), parking bays or lay-bys, vehicular crossings, retaining walls or structures, embankments or cuttings, street lighting, special features, traffic signs and road markings;

762 A plan or plans showing the position relative to the proposed highway of proposed dwellings and other buildings, private accesses, car parking areas and service yards; The plans must also show how the proposed highway links with the surrounding areas, public rights of way, bridleways, cycle routes etc.

763 A plan or plans showing the layout of alternative specification materials that will be subject to special approval and may necessitate the payment of a commuted sum, this must include but not be limited to the materials country / place of origin/ manufacturer/ suppliers/ stocklists information, availability, PSV/ SFC properties/ values of the materials; and

764 Longitudinal sections along the line of the proposed carriageways (normally drawn to 1 to 10 vertical exaggeration). The sections shall show the existing ground levels, the proposed centreline and channel levels, horizontal alignment detail and vertical alignment details including gradients and vertical curves. Where appropriate the longitudinal sections shall also show the profile of foul and surface water drains, including the positions of manholes, pipe sizes and gradients.

Construction Details

765 Typical cross section drawings showing the relative position and construction of carriageways, footways and verges including details of kerbing and edging (including material type, USRV, PSV, AAV, PSRV / SFC value in wet conditions). Actual cross section drawings may be required for any site-specific non-standard detail. References shall be made to the Specification and Standard Detail Drawings as appropriate; and

766 Typical detail drawings showing the construction of any kerbing, channelling, edging, drainage components and chambers not covered by the details contained in the Standard Detail Drawings.

Ground Conditions

- A geotechnical report, including details of all required site-specific test results or remediation at the proposed formation level and below. The report should also confirm if the ground water table is located within 600mm of the proposed formation level.

Drainage

767 Any drains constructed for the sole purpose of discharging surface water run- off from the adopted highway areas will be adopted as highway assets and will become maintainable at public expense by Leeds City Council. Drainage grates for surface water drains should be marked to clearly indicate when the waters drain to river to encourage responsible behaviours.

768 Any sewer located within the adopted highway but which, in addition to the discharge of run-off from the highway, accepts storm water discharges from areas outside the adopted highway (e.g. roof drainage or surface run-off from private plots) shall not be adopted under the highway adoption Agreement. Such sewers must be approved and adopted by the Water Authority (Yorkshire Water) by means of an Agreement under Section 104 of the Water Industry Act 1991. Consent to discharge highway run-off into sewers adopted under a Section 104 Agreement must be obtained from the Water Authority.

769 All non-highway drainage should be adopted by Yorkshire Water under Section 104 of the Water Industry Act 1991 or alternatively, where agreed with the Highway Authority, covered by a Section 150 agreement under the Highways Act

770 In certain circumstances it may be permissible for highway run-off to discharge to Soakaways, provided consent has been obtained from the Lead Local Flood Authority or the Environment Agency. Adoptable soakaways must be in publicly maintained highway land, not within 5.0m of the carriageway or footway construction or any structure. Percolation tests to BRE 365 will be required to demonstrate that the soakaway proposals can accommodate the appropriate level of run-off without affecting the highway, properties or surrounding land. An adoptable Highway soakaway cannot incorporate surface water discharge from areas outside of the highway boundary, separate provision must be made for these drained areas.

771 The Section 38 agreement drawings must include:

- Details of existing and proposed surface and foul water drainage, including the layout of proposed highway gullies or other mean of intercepting run-off;
- Calculations of surface water run-off together with hydraulic calculations or simulation modelling to demonstrate the satisfactory operation of any carrier drains to be adopted by the highway authority;
- Chamber schedules for all manholes and/or catchpits forming part of the highway drainage system; and
- Details of all easements and discharge consents.

Landscape

- Details of all landscape proposals proposed for adoption and/or landscaped areas within 2.0m of the adoptable highway boundary including planting layouts, specifications and maintenance proposals.

Other Features (Structures)

- Specialist information relating to the requirements of any bridges, culverts, headwalls, retaining walls or other highway structures. The details shall be provided on separate drawings together with the appropriate applications “Approval in Principle” applications and associated calculations. See Chapter 3 of this Appendix for further details.

Safety Audit

- Safety Audits are generally not required for residential developments designed strictly in accordance with this guide, although any departures from the guide or new connections/junctions onto the existing highway network may require an Audit. The

Developer will be advised at the planning stage if an Audit is required. If required, the audit shall comprise a Stage 1/2 Road Safety Audit carried out in accordance with GG119 of the Design Manual for Roads and Bridges. The safety audit report shall be submitted for approval together with a formal Exception Report prepared by the designers. The Exception Report shall set out the proposals for dealing with any matters raised by the Audit Report.

772 Where a layout contains features not explicitly covered by this design guide, the details above shall be included within the Design and Access Statement to assist the City Council in making a technical assessment of the proposals. The Design and Access Statement shall include the following: -

- Detail of the design speed (or speeds) used in the design;
- Justification of the visibility standards that have been applied to the design;
- Special maintenance requirements;
- The layout of service corridors and the practicalities of maintenance;
- On-street parking arrangements;
- Access arrangements; and
- Addressing special needs (implications for people with disabilities).

TRAFFIC SIGNS, ROAD MARKINGS, STUDS AND TRAFFIC SIGNALS

Overview

773 All proposals for adoptable streets shall incorporate traffic signs and road marking arrangements only where necessary. These shall be as prescribed by the current Traffic Sign Regulations and General Directions (TSRGD) 2016, the Zebra, Pelican and Puffin Pedestrian Crossings Regulations and General Directions 1997 (Statutory Instrument 1997 No.2400) plus the following specific guidance.

774 The developer is responsible for the cost of providing all road markings and traffic signs for the new streets together with any additional or amendments to existing signs and markings located in the surrounding streets, made necessary by the new street. Occasionally, this may involve signage located some distance from the development, (e.g. for routeing HGVs etc.).

775 Where required, at the site access to developments, road markings and signs should be provided in accordance with TSRGD.

776 The design and location of signage and street furniture should aim to minimise visual clutter.

777 Developers wishing to erect signs directing construction traffic or potential purchasers to a site must contact the City Council for permission to erect approved signs. Signs which have not been approved will be removed.

Street Nameplates and Dwelling Number

778 Street name plates will be provided by the City Council, with the cost to be notified to the Developer as a separate item to the other road signs.

779 Any street name plates on private drives or 'non-adopted' roads should clearly state that drive is 'private' or the road 'non-adopted'.

Traffic Regulation Orders

780 Where a development requires changes to an existing Traffic Regulation Order (TRO)/Speed Limit Order (SLO) or a new Order is required, the Developer shall pay all associated costs, including all staff, consultation and legal costs. TROs are subject to statutory procedures and consultations. This can be a very lengthy process and a successful outcome is not guaranteed. The Developer must therefore obtain advice on the likely timescale and take this into consideration when establishing a programme for development.

781 Where TRO/SLOs are critical to the Development, they should be completed and sealed prior to the first occupation.

Traffic Signs

782 Details of individual traffic signs, including their posts and foundations must be provided and must comply with regulations and our standard construction details and drawings.

Changes to original road layout

783 Signs to diagram 7014 of the TSRGD must be provided using the appropriate permitted variant on all approaches to a permanent alteration to the original road layout as soon as it is brought into use. These signs must be maintained for three months and removed after that time.

Electricity supply to illuminated traffic signs

784 Certain illuminated signs will interact with highway infrastructure and therefore the electricity will be served by a highway authority private supply. The effects on existing

tree root systems and locations earmarked for new planting need to be considered in the layout of signs and electrical feeds as these can be damaging to existing trees and put unnecessary constraints on future planting.

785 The location of all signs and bollards that need illumination should be shown within the layout plan, which means that we can identify the requirements for the electrical supply and feedback into the proposals.

786 Further information and requirements are outlined in Appendix A, Chapter 5 ‘Street Lighting Procedures’.

Road Markings

787 Road markings must be provided in accordance with the Traffic Signs Manual Chapter 5 and the TSRGD. In addition, drawings that are submitted must provide the location, colour and type of permanent road marking. Further technical requirements are outlined in our standard construction details and drawings.

Road Studs

788 Road studs must be provided in accordance with the Traffic Signs Manual Chapter 5 and, in particularly diagrams 1055.1 and 1055.2 of the TSRGD demonstrate that stainless steel non-reflective road studs must be provided at non-motorised user crossings to form marks. In addition, drawings that are submitted must provide the locations and positions of road studs. Further technical requirements are outlined in our standard construction details and drawings.

Traffic Signal Equipment

789 The detailed road layout drawings that have been submitted to the City Council will help us design, supply and install the traffic signals within the highway works, although there is a cost associated with this work.

790 Furthermore, an additional commuted sum is required to contribute towards the future maintenance of the traffic-signal equipment.

UTILITIES’ SERVICES

791 Early in the planning process consideration should be given to the location and installation of utility apparatus in the highway both above and below ground, particularly where surface areas are shared. Where the proposal is for a shared-surface layout without a separate service margin, or where a development layout is not explicitly

covered by this guidance, early discussions should be held with utility providers and details of proposed locations for utility equipment submitted to Leeds City Council for approval. In assessing the proposed layout, the City Council will consider the suitability of the layout, in terms of safety and accessibility.

792 With Type 3 Shared Space Streets, a service strip of 1.8m should be provided within the carriageway on the opposite side to any highway drainage provision, 1.0m clear of the nearest public sewer and 0.3m from the kerb race.

793 Any separate service margin should be at least 2.0m wide, in line with NJUG Volume 1. And any utility equipment that is above ground, for example, cabinets, boxes, pillars and pedestals should be sited so that it:

- Does not constitute a danger to the public or to staff working on it;
- Does not obstruct a driver's view, for example, by sitting it in visibility splays;
- Does not obstruct pedestrians, wheelchair users, prams, pushchairs, etc. At least 1.2m clearance, increased to 2.0m in areas of high pedestrian flows (500 pedestrians an hour), shall be provided;
- Is not located within 5.0m of any other street furniture that would create a double obstruction to pedestrians. Any item within 5.0m must be in line;
- Does not enable illegal access to adjacent premises or property (e.g. locating cabinets adjacent to high boundary walls, where the apparatus could be used to climb over the wall);
- Does not restrict the outlook from the window of a house, intrude into areas of open-plan front gardens or disrupt the line of low boundary walls;
- Does not spoil the view of a listed building;
- Does not result in 'visual clutter' by being in an inappropriate place; or
- Does not indiscriminately create wide sterile easements within verges or Public Greenspace (i.e. grassed areas maintained by the City Council).

794 All Utility excavations should be backfilled with Type 1 class material to the underside of the road construction.

795 All apparatus above the ground should:

- Be positioned so there is enough access for the equipment and the surrounding highway to be maintained and cleaned;
- Not be located within any tactile paving (in the case of surface covers);

- Allow space for associated jointing chambers;
- Allow for future surfacing work, for example by allowing for spare cable if the boxes are raised in future;
- Meet the licence requirements for listed buildings and conservation areas; Special consideration to cabinet design in conservation areas is required; and
- Incorporate anti-graffiti coating measures.
- Note: Street Lighting is normally column mounted in areas not overrun by vehicles. Street lighting can be wall mounted so long as the appropriate agreements are provided.

796 Where equipment is to be located in a proposed adoptable highway, cabinets and other apparatus shall be located in the verge where possible, with a hard margin to assist grass cutting without the need for strimming. Cabinets shall be located with at least 1.0m clearance between the cabinet and the edge of the carriageway in rural areas and 1.5m in urban areas. Access doors should always open to the footway. If there is no verge, cabinets and other apparatus shall be located at the back of footway and keep:

- Minimum distance of 1.0m between the edge of an open access door and the edge of the carriageway where pedestrian flows are low; or
- A minimum distance of 2.0m between the edge of an open access door and the edge of the carriageway where pedestrian flows are heavy (500 pedestrians an hour at any time).

797 Consideration may be given to adopting any additional small areas outside the natural highway footprint so that above-ground apparatus can be located in accordance with the above requirements. If, however, the above requirements cannot be met within clearly defined adoptable areas, the apparatus should be located outside the adoptable highway, which may necessitate an easement to allow utility providers access for future maintenance.

798 Utility apparatus below ground shall be positioned in accordance with the requirements of NJUG Volume 1. This should avoid impact on tree root zones by their judicious location and by special methods of working where this is unavoidable, in accordance with NJUG Volume 4 and BS 5837:2012 “Trees in Relation to Design, Demolition and Construction – Recommendations”. All utility excavations should be backfilled with Type 1 class material. Recommended apparatus locations are as follows:

Table A-39: Underground Services to be Laid

Utility	**Recommended Minimum Depths**	
	Footway/Verge	Carriageway
Electricity High Voltage	450-1200mm	750-1200mm
Electricity Low Voltage	450mm	600mm
Gas	600mm footway 750mm verge	750mm
Water non-Potable & Grey Water	600-750mm	600-750mm
Water – Firefighting	600-750mm	600-750mm
Oil / Fuel pipelines	900mm All work within 3.0m of oil fuel pipelines must receive prior approval	900mm All work within 3.0m of oil fuel pipelines must receive prior approval
Sewerage	Variable	Variable
Telecoms	250-350mm	450-600mm
Water	750mm	750mm minimum
Water pipes for special purposes (e.g. contaminated ground)	750mm	750mm minimum

799 Surface mounted access chambers shall be located to:

- Minimise disruption to pedestrians and provide adequate access for installing and maintaining equipment, and recovery operations;
- Avoid areas of expensive paving as far as possible (e.g. tactile paving);
- Avoid locations where 2-wheeled vehicles may be turning or braking;
- Avoid other utility providers' equipment;
- Avoid locations which compromise paving surface treatment design;
- Allow mechanical equipment to be used during construction and installation, maintenance and recovery operations at the site;
- Make sure the type and construction of underground boxes allows for raising the level of covers and frames as part of maintenance operations; and
- Avoid potential archaeological features, including foundations to listed buildings.

800 Where access covers are located within block paved or flagged footway surfaces recessed covers should be used and the paving pattern continued through the cover. However, where vehicles can overrun covers (i.e. shared surfaces or overrunning of footway) they shall be cast iron instead.

PLANTED AREAS

801 Conflicts with services (such as drainage runs/tanks, water supply electrical supply etc.) in a scheme often results in the elimination of trees and landscape features late in a scheme due to the lack of co-ordination. In order to avoid these disappointing scenarios, details of service routes (existing and proposed) must be provided up front in tandem with the details of landscape proposals.

802 To minimise future conflict with utilities in new developments, the creation of a common utility enclosure with the necessary provisions for safely including both mains services and ducting should be a prerequisite.

803 Constructing a common utility enclosure may be too costly in existing situations. In terms of new build and in order to reduce the uncoordinated spatial chaos of individual trenches, the NJUG recommends the use of shared trenches.

804 The British Standard, BS 5837 (2012) "Trees in relation to design demolition and construction – Recommendations", provides guidance in Table A.1 on minimum distances between tree planting and various structures including services. For example, trees with a predicted stem diameter of 30mm – 600mm (taken at 1.5m above ground

level) should be planted 1.5m away from services less than 1.0m deep or 1.0m away from services greater than 1.0m deep.

805 For more information, refer to paragraphs 2.1.1 and 3.1.4 of NJUG's publication volume 4 – NJUG Guidelines for the Planning, Installation and Maintenance of Utility Apparatus in Proximity to Trees.

806 Use root-intrusion resistant pipe technology whenever possible, particularly in green field developments near planted areas especially where trees are present.

APPROVAL OF DESIGN AND SPECIFICATION

807 On receipt of the following initial application the City Council will assess the proposals and prepare estimated costs for the provision of street lighting, signing and lining designs and any TRO/SLO as necessary:

808 The City Council will not consider elements of the scheme design/proposals in isolation and will only issue to the Developer (or his agents) written approval of the design and specification to the proposed works when: -

- All detailed design checks have been successfully completed;
- Any further or amended details, as agreed during the checking process, have been provided and agreed by the City Council;
- Any necessary safety audits have been approved and any actions necessitated by the matters raised by the safety audits agreed and, where appropriate, implemented;
- All Site Investigation / Geotechnical matters affecting the proposed highway, especially those below formation level have been agreed with the Council;
- All adoptable landscape proposals or those within 2.0m of the proposed highway have been accepted; and
- All matters relating to the Drainage or Structural Procedures section of this Guide have been addressed or accepted.

ADOPTION AGREEMENT (SECTION 38)

809 A draft Section 38 Agreement will be prepared following the issue of Approval of the proposed works to be adopted.

810 Leeds City Council utilise a standard form of Section 38 Agreement. The content of the Agreement will only be varied in exceptional circumstances. Details of any commuted sums will be included.

811 The Developer is required to supply certain information, which will be used in the preparation of the draft Agreement. The details that the Developer is required to provide are listed below: -

- Name and address of the Developer;
- Name and address of the Solicitor acting for the developer;
- Name and address of any Bondsman;
- Proof of ownership of the land to be dedicated as highway; Any further landowner(s) will need to be party of the Agreement;
- Proof of the Developer's intention, where appropriate, to enter into a Section 104 Agreement; and
- Details of any deeds of easements.

812 Additionally, the Developer shall provide the City Council with four paper copies and one electronic pdf copy of the detailed drawings for incorporation into the Section 38 Agreement. The coloured Section 38 agreement plans shall be based on the approved layout and must be coloured as follows: -

- Site Boundary (to include S38/278 works) - **Red** (AutoCAD Pen 1)
- Macadam Carriageways - **Grey** (AutoCAD Pen 251)
- Macadam Vehicle Crossings (Over Footpath) - **Grey** (AutoCAD Pen 251)
- Macadam Footpaths/Footways/Cycleways/Margins - **Yellow** (AutoCAD Pen 50)
- Traffic Calming Features (on Macadam surface) - **Light Grey** (AutoCAD Pen 253)
- Block Paved Roads - **Brown** (AutoCAD Pen 35)
- Block Paved Hard Margins and Footways - **Orange** (AutoCAD Pen 30)
- Block Paved Traffic Calming Features (Ramps/Tables) - **Brown** (AutoCAD Pen 35)
- Non-Block Paved Traffic Calming Features (Ramps/Tables) – **Brown** hatch (AutoCAD Pen 35)
- Adoptable Verges - **Green** (AutoCAD Pen 3)
- Highway adoptable drainage - **Blue** (AutoCAD Pen 5)
- Highway adoptable gullies and connections - **Blue** (AutoCAD Pen 5)
- Pedestrian crossing - **Black Outline** (AutoCAD Pen 7)
- Drainage easements Highways - **Blue Hatch** (AutoCAD Pen 5)
- Drainage easements Yorkshire Water - **Black Hatch** (AutoCAD Pen 7)
- Highway Structures / retaining walls - **Black** (AutoCAD Pen 9)
- Special Surfacing/Feature/Bollards/Kerbs - **Purple** (AutoCAD Pen 200)

- Adoptable Leeds City Council Street Lighting Columns - **Red** (AutoCAD Pen 1)
- Yorkshire Water information - **Light Grey** (AutoCAD Pen 253)
- Section 278 Works - **Grey** Hatching (over colours as above)

813 The Developer must provide either a Cash Bond or a Surety to protect the City Council from any unforeseen financial loss associated with the proposed works. Once the scheme is approved the City Council will calculate the cost of the Bond /Surety requirements based on an estimate of the cost of constructing all the Works and associated administration costs as detailed on the approved drawings. The surety shall be in the form of an approved bond provider which must be acting completely independently of the developer with an auditable financial background/history in this field.

TIMESCALE

814 The timescale for obtaining approval and progressing a draft agreement(s) will be determined by a number of factors, not least the scale and complexity of the individual project. The Council will endeavour to deal with all applications in a timely manner. However, if the Developer has specific constraints on his programme, he must discuss these with the City Council at the start of the design process. The developers intended build programme of works will also determine if a phasing plan is necessary and, if so, the number of Agreements required.

COSTS AND FEES

815 The City Council should be contacted to ascertain the current scale of costs and fees, covering street lighting design, legal costs administration and inspection fees, any commuted sums, plus any TRO/SLO or other relevant statutory costs.

CONSTRUCTION, INSPECTION AND CERTIFICATION

816 Construction of the works shall not commence until: -

- The City Council has granted approval of the design and specification of the Works;
- Details of the Section 38 Agreement have been agreed and the Agreement has been signed by all parties and the surety is in place;
- All the necessary fees and commuted sums associated with the Agreement, technical checks and Works inspections have been paid; and

- The City Council have given approval to the Developer's Contractor and any Sub-Contractors (See below).

817 The Developer shall provide the City Council with written notice a minimum of five weeks in advance of his intention to commence construction work.

818 The Contractor and any Sub-Contractors shall have the relevant experience and capabilities to undertake the works. Where the City Council have no previous knowledge of a particular Contractor, the Contractor, prior to approval by the City Council, will be required to provide satisfactory references and also examples of similar work that they have successfully completed to the satisfaction of another Highway Authority.

Construction of the Works

819 The Developer shall remain responsible for the works on site and the day to day supervision.

820 Any works carried out in advance of the completion of the adoption Agreement are done so entirely at the developer's risk. The City Council reserves the right not to adopt any works carried out in advance of the completion of the adoption agreement or not witnessed being constructed at the time by the Highways Inspector.

821 Representatives of the City Council will inspect the works at regular intervals to ensure that they are being constructed in accordance with the approved drawings. For this purpose, the City Council representatives must be given free access to the works in progress. The Developer must inform the City Council's Inspector of the various stages of construction, giving reasonable notice, so that the Inspector has the opportunity to view the Works.

822 It is the Developers responsibility to complete the works in a timely manner. Where appropriate a specific timescale for completing the works will be stated in the Section 38 Agreement.

823 No works can be undertaken on the existing adopted highway network until the adoption agreement and appropriate highway licences have been completed. Developers must pay particular attention to this matter as the City Council will not allow the permanent access into the development site to be formed until these have been obtained. Until the Section 38 agreement has been completed any development works must be taken off a temporary access. The permanent vehicle access into the development, or any other works affecting the existing highway, are not permitted until a Section 171 highway

licence has been obtained. This may be obtained prior to the issue of the Section 38 Agreement at the discretion of Leeds City Council where a cash bond of 25% of the total Section 38 bond is paid and entered concurrently with the Section 38 Application..

Certification of the Works

824 A Part 1 Certificate of Completion of the Works allowing occupation of the properties shall be issued when the City Council is satisfied with: -

- All highway drainage.
- Sub formation earthworks having been accepted by our Geotechnical Engineers.
- All other drainage contained within the Street.
- All kerb foundations and where appropriate, kerbs including lowering at vehicle crossings, pedestrian crossings, sub-base and basecourse surfacing to all pedestrian ways linking to the existing adopted highway network.
- Carriageway sub-base, road base, vehicle crossings and any supporting structures to the same.
- Carriageway basecourse surfacing and all vehicle crossings where appropriate.
- Demarcation of sight lines and clearance of vision splays.
- Operational street lighting.
- Temporary street name plates.
- Installation of all Statutory Undertakers equipment and apparatus.
- On the issue of the Part 1 Certificate of Completion, the City Council shall reduce the Bond to 50% of the original amount.

825 A Part 2 Certificate of Completion of the Works shall be issued when the City Council is satisfied with/that: -

- All outstanding works not completed as part of the Part 1 Works have been undertaken.
- The development is complete.
- Carriageway surface course and footway surface course including (where appropriate) speed restraint measures.
- Vision splays and service strips.
- Street Lighting installed, commissioned and adopted by Leeds City Council.
- Street name plates.
- Road markings and traffic signs.

- All off-site Section 278 works.
- Removal of any loose material within 2.0m of the highway.
- Any Structural AIP Approvals or Certification.
- Yorkshire Water Provisional Section 104 agreement Certificate and Plan for all drainage within the highway.
- Adopted Landscaping (including verges/trees) – Passed by Leeds City Council Landscaping Team.
- As-built drawings and any other information as stated in the latest available version of the Section 38 guidance notes.
- All remedial works have been carried out to areas of existing highway deemed to have been damaged by the developer contractors during the construction phase.
- Where applicable provision of winter grit bins which are to be restocked as and when necessary.
- A Stage 3 Road Safety Audit has been undertaken (if required).
- Payment for all estimated fees/charges associated with Leeds City Council promoting any necessary Speed Limit and/or Traffic Regulation Order(s), including provision of all associated signage and lining.
- Completion of any Easement, Wayleave, Stopping Up, Dedication or any other matter which may affect the ability of the Highway Authority to adopt the Street.
- Any materials testing certificates or accreditation.
- All other works described in the Specification and shown in the Drawings.
- On the issue of the Part 2 Certificate of Completion, the City Council shall reduce the Bond to 25% of the original amount.
- Maintenance of the works shall remain the responsibility of the Developer for a minimum period of 12 months commencing from the date of the Part 2 Certificate of Completion (unless an alternative period is agreed).

826 A Final Certificate of Completion and Adoption shall be issued when: -

- All outstanding works not completed as part of the Part 2 Works.
- Completion of all Default works.
- Yorkshire Water Final Section 104 agreement Certificate and Plan for all drainage within the highway.
- Completion of all works associated with the introduction of any necessary Speed Limit and/or Traffic Regulation Order(s).

- Confirmation that any claims or compensation events associated with the construction works have been resolved to the satisfaction of all parties.
- A Stage 4 Road Safety Audit.
- Adoption drawings and any other information as stated in the latest available version of the s38 guidance notes.
- Any further Structural AIP Approvals or Certification as required.
- Any adoptable landscaped areas (Grass, planting or trees) are approved.
- Gully cleaning and proving – evidence required to show this has been completed.

827 The City Council will, on issue of the Final Certificate of Completion and Adoption, give notice to the Developer in writing that the Bond may be cancelled, and inform the Surety. Any remaining Cash bond will be returned to the developer within 28 days.

FURTHER INFORMATION

If any further information or guidance on highway adoption issues is required, please contact the Council:

Leeds City Council
Section 38 Team
Merrion House
110 Merrion Centre
Leeds LS2 8ET
s38@leeds.gov.uk
Tel: 0113 3787303

A.3 STRUCTURAL PROCEDURES

GENERAL SCOPE

828 These guidelines are for the use of Developers (and their Design Consultants) intending to submit proposals for structures associated with the Highway, affecting the Highway or in the vicinity of the Highway. They may be used by any other persons seeking to construct private works for which the approval of the Highway Authority is required by statute.

829 These procedures shall apply when the Developer wishes the Highway Authority to adopt the structure under Sections 38 and 278 of the Highways Act 1980. The procedures shall also apply if adoption is not required but the design needs the consent of the Highway Authority under Section 167 of the Highways Act 1980.

830 Subject to any exclusions expressly stated in this guidance, technical approval (TA) procedures shall be applied to all proposals, including third party proposals and private developments, that are:

- within the highway boundary;
- outside the highway boundary, where the structures are to be adopted by the Highway Authority;
- outside the highway boundary where works can affect the highway or highway structure; and,
- outside the highway boundary where works can affect the safety of the highway user.

831 It is a requirement that Technical Approval procedures must be followed for the design and construction of all new or modified highway structures in accordance with the DMRB CG 300, except where modified by Leeds City Council as the Highway Authority.

832 The Design Manual for Roads and Bridges can be found here: http://www.standardsforhighways.co.uk/ha/standards/dmrb/index.htm

833 The Technical Approval Authority (TAA) shall be the Bridges Manager of Leeds City Council.

834 The contact details for further information or guidance on structural issues is given in Paragraph 147 above. The City Council will, on issue of the Final Certificate of Completion and Adoption, give notice to the Developer in writing that the Bond may be cancelled, and inform the Surety. Any remaining Cash bond will be returned to the developer within 28 days.of this Chapter.

DEFINITION OF A HIGHWAY STRUCTURE

835 The definition of a highway structure for the purpose of these guidelines shall be:

- Any structure built in, under, or over the highway where a clear span or internal diameter greater than 0.9m. This includes bridges, footbridges, subway, underpass, pipe bridges, culverts, pipes, tunnels, chambers, cellars, shafts, soakaways, access chambers, storm water balancing tanks, sign gantries, traffic signal mast arms, high mast lighting columns, and mine shaft caps (this is not intended to be an exhaustive list, refer also to DMRB CG 300);
- Earth retaining structures such as retaining walls, burr walls, headwalls, basements and cellars etc. built in or adjacent to the highway, or otherwise possibly affecting the

stability or safety of the highway with an effective retained height greater than 1.5m – i.e. the level of the fill at the back of the structure above the finished ground level in front of the structure, is greater than 1.5m at any cross-section (this is not intended to be an exhaustive list, refer also to DMRB CG 300); and,

- In the particular case of walls supporting land above the highway (Section 167 of the Highways Act 1980), and which are within 3.66m (4 yards) of the highway boundary, then an effective height greater than 1.37m (4 feet 6 ins) shall be used for the purpose of these guidelines (see Figure 1).

836 The definition of a 'highway' includes the carriageway, footway or verges adjacent to the structure which are maintainable at public expense, or for which the Developer is seeking adoption under Section 38 or 278 of the Highways Act 1980.

ADOPTION POLICY

837 The Highway Authority will only consider adopting the structures which either carry the highway or support it. Any structure spanning over the highway will not be adopted unless the structure itself carries a highway, or forms an integral part of the highway, such as a footbridge or traffic sign gantry.

838 All structures built in the highway or built wholly or partly within 3.66m (4 yards) of the highway boundary, or which otherwise may structurally affect the highway or its support, whether adopted or not, will be subject to these guidelines.

839 Where a structure is to be adopted by the Highway Authority this will be specifically written into the Section 30, 38 or 278 Agreement together with an agreed commuted sum figure for future maintenance which the Developer is to pay to the Highway Authority.

840 For new highway structures, a 5.0m horizontal easement strip adjacent to the structure is required for maintenance/reconstruction purposes.

841 Walls (including toes) supporting private land adjacent to the highway will not be adopted and such walls must be totally founded on private land.

842 The Highway Authority will only adopt walls constructed to support the highway if an embankment is not practicable.

843 The Highway Authority will not accept plastic tanks or pipes under the highway, as they are not covered by an applicable document within the Design Manual for Roads and

Bridges and there is no provision within the Specification for Highway Works for pipes greater than 900mm diameter (excluded from section 2500).

844 The Highway Authority will not accept the use of gabions to retain the adopted highway.

845 Where a structure is not to be adopted, a Maintenance Agreement will be required.

846 Structures will not be adopted if these procedures have not been followed.

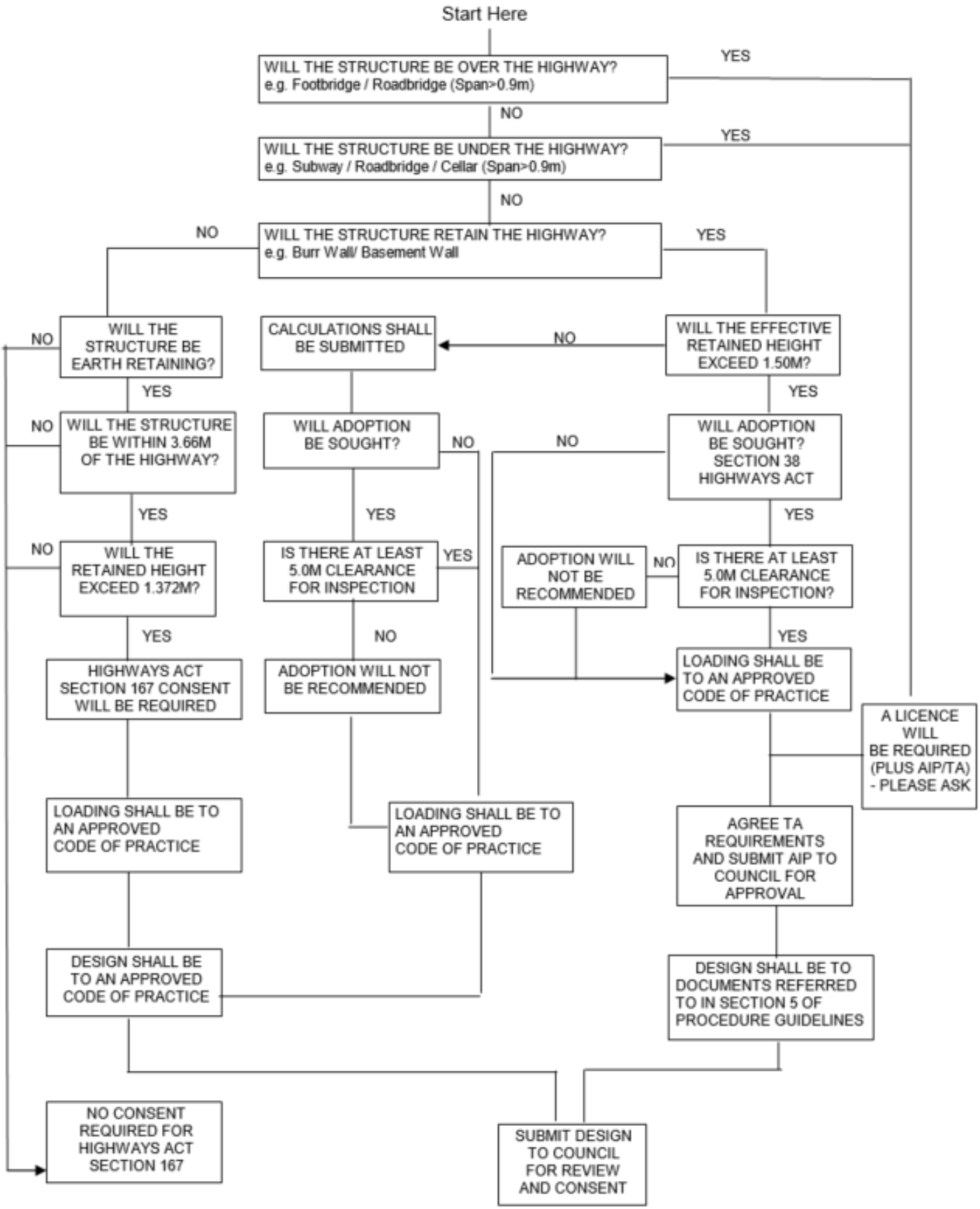


Figure 56: Structures affecting the Highway for which Consent is Required

PROCEDURE

847 The following information shall be provided to the TAA at the appropriate stages:

Stage 1 – Preliminary Design

- Submission of an Approval in Principle (including Cat 0 structures) for approval by the TAA. The proposals shall be placed in one of four categories: 0, 1, 2 or 3, according to the criteria described in Sections 3 to 6 of DMRB CG 300. The category boundaries are not rigid and the category of each proposal is decided on its merits, having regard to potential consequences of failure, design complexity and whole life costs.
- The category shall be proposed by the Designer and details submit of the proposal submitted to the TAA for agreement. The Designer may undertake an initial screening process with the TAA to obtain an early agreement on the category.
- Generally submissions comprise a completed AIP, a location plan, a general arrangement drawing, relevant parts of the geotechnical investigation report, documents relating to consultation and any other relevant information or reports. The AIP shall be based on the relevant sections of the model AIP's provided in Appendix A or Appendix B of DMRB CG 300.
- This submission will include, but not be limited to, the following information:
- Location plan showing structure and extents of adopted highway.
- Site plan with appropriate cross-sections and long-sections.
- Site Investigation Report.
- General Arrangement drawing of the proposed structure with extents of adopted highway and a clear delineation of the extent of the structure which is to be the subject of the technical approval.
- Detailed design parameters to be used in the structural analysis.
- Details of the proposed design loadings.
- Suitability of the design method(s) and/or computer program(s) to be employed.
- Details of other forms of construction considered with reasons for rejection and cost estimates.
- The appearance of the structure, including standards of finish proposed.
- Sustainability, environmental impact, durability, buildability.
- Maintenance and operational issues in terms of whole life costs in design options and choice of materials.
- Documents relating to consultation and any other relevant information or reports.

Stage 2 – Design

- Checked detailed structural design calculations, including justification of assumptions and input data.
- Design and Check Certificates with signatures. The certificates shall be based on Appendix I of DMRB CG 300. For temporary works, Appendix K or Appendix L of DMRB CG 300 shall be used.
- Checked construction drawings and bar bending schedules.
- Specification Clauses and Appendices.

Stage 3 – Post Construction

848 Construction Compliance Certificate. The certificates shall be based on Appendix N of DMRB CG 300.

- The public shall not be permitted to use a structure or have access to places where their safety would depend on the integrity of that structure until the TAA has accepted the Construction Compliance Certificate. The TAA may agree an interim certificate to allow highways to be opened while the information for the final certificate is being prepared.

849 Completed Health and Safety File.

- As-built record drawings, operational and maintenance manuals and records for the completed structures (Refer to DMRB CG 302))
- In accordance with DMRB CG 300, Developers (or their Design Consultants) should consult the TAA at the earliest opportunity and submit outline proposals to enable these proposals to be placed in one of four categories, depending upon factors such as design complexity, potential consequences of failure and whole life costs.

850 An Approval in Principle (AIP) form is required for all categories. The AIP must be agreed by the TAA before any design work commences. Any design work carried out before the AIP is agreed by the TAA will be at the Developer's risk. The approval process will be dependent on the quality and complexity of the documentation submitted, therefore it is not possible to give a fixed timescale for the approval process however it would be prudent to allow 6 to 8 weeks for this at the planning stage although these timescales may be exceeded.

851 On completion of the design, the Developer shall submit Design and Check Certificates for acceptance by the TAA at least four weeks before construction is programmed to

commence. The Developer must also submit copies of the other information listed in Stage 2 above, for the Council's approval. Calculations and drawings will be reviewed but not checked by the TAA.

852 The Council reserves the right not to adopt a structural solution that is considered unsuitable even though it may be judged as structurally adequate. The Council will take a long-term view of whole-life maintenance liability, and if a proposal is expected to generate an unreasonable maintenance cost, then a more appropriate solution may be required.

DESIGN

853 All highway structures shall be designed in accordance with the relevant Eurocodes, Published Documents, British Standards, Codes of Practice and the Design Manual for Roads and Bridges. The use of withdrawn or superseded codes of practice and standards will not be permitted.

854 For walls with effective retained heights of less than 1.50m, the Developer shall submit calculations and drawings for review and approval.

855 For walls with effective retained heights greater than 1.50m, the Developer shall also allow for an unplanned excavation depth of 10% of the total retained height up to a maximum of 0.5m, in front of the wall, in accordance with BS 8002:2015 which provides recommendations for design and construction of earth retaining structures in accordance with Eurocode 7. This value shall be reviewed for each design.

856 Where the retaining wall has a toe, the depth of fill material above the top surface of the toe, (i.e. on the side of the wall not retaining fill material) shall be at least 450mm.

857 All walls which retain the highway shall be provided with a parapet wall or parapet/safety fence capable of withstanding wind and pedestrian/vehicle impact loads. Walls which retain private land which are accessible to the public, with effective retained height equal to or greater than 1.50m, shall be provided with a suitable parapet/protective fence capable of withstanding wind and pedestrian loading.

858 Highway retaining walls shall have a parapet complying with DMRB CD 377, but not less than 1100mm high above the adjacent finished ground level.

859 The requirement for the provision or omission of a parapet or vehicle restraint system (VRS) in the vicinity of a hazard shall be supported by a risk assessment carried out in accordance with the following document which is available as a free document:

Provision of Road Restraint Systems on Local Authority Roads

860 Reinforced brickwork will not be accepted for walls intended to retain the adopted highway.

861 In calculating the Factors of Safety for earth retaining structures in accordance with BS 8002:2015 and Eurocode 7 use should not be made of the passive resistance of ground in front of the toe or any downstand: where this ground may be disturbed by future excavation (e.g. service trenches); or where the ground in front of the wall is sloping away at 1 in 3 or steeper; or where the ground in front of the wall would give rise to an unacceptable movement in generating the assumed resistance.

Surcharge Loading for the Design of Retaining Walls

862 Walls Retaining the Highway

- All walls retaining the highway shall be designed using the appropriate earth pressures plus the surcharge loading i.e.
- EITHER
  Loading in accordance with BS EN 1991-2:2003 and the associated National Annex dispersed through fill as described in PD 6694-1:2011
- OR
  Loading in accordance with BS EN 1991-2:2003 using an equivalent uniformly distributed load, in accordance with Table 7 of BS 8002:2015

863 Walls Retaining a Footpath

- Walls retaining only a footpath shall be designed using the appropriate earth pressures plus a surcharge of 5.00 KN/m^2

864 Walls requiring Section 167 Consent

- Walls that do not retain the highway but require consent in accordance with Section 167 of the Highway Act shall be designed for the appropriate earth pressures plus a nominal surcharge of at least 10 KN/m^2 or loading from vehicles as in a) or nearby structures whichever is greater.

865 General

- Nominal surcharges shall be multiplied by the appropriate partial safety factors when considering the capacity of structural elements.
- A higher surcharge loading may be required by the Highway Authority if heavier vehicle loading is likely immediately behind the wall.
- The design parameters for the wall shall be determined from the site investigation report.
- The assumed design parameters for imported materials to backfill the retaining wall shall form the specification for those materials.
- The global stability design of the structure shall be carried out using ‘active’ earth pressures (see PD 6694).
- The design of each element of the structure shall be carried out using ‘at-rest’ earth pressures (see PD 6694).
- Any constraint, or sequence of construction assumed at the design stage shall be shown on the contract drawings.

SPECIFICATION

866 The Specification of materials and workmanship shall be in accordance with the “Specification for Highway Works” including any additional or substitute Highway Authority clauses or Appendices.

867 Reinforced concrete structures shall have a minimum strength class of C32/40.

868 Concrete cover to reinforcement shall be in accordance with BS EN 1992-1-1, BS EN 206 and BS 8500-1:2015 (Complementary British Standard to BS EN 206) and the Specification for Highway Works Volume 1 Series 1700 Structural Concrete and Volume 2 Series NG1700 Structural Concrete.

869 Buried faces of reinforced concrete shall be treated with two coats of tar or bituminous waterproofing.

870 Bricks used for facing walls shall be frost resistant.

871 Unless the design allows for hydrostatic pressure, all retaining walls shall be provided with a positive back of wall drainage system with all necessary pipes, catchpits and connections. In addition, weep pipes shall be installed so as to discharge only in the event of a blockage in the positive drainage system.

CONSTRUCTION

872 Construction of the structure shall not commence until the final drawings have been reviewed and the design certificates signed by the Highway Authority.

873 Prior to any materials being incorporated into the works, the Developer shall supply product samples and Specification details to the Council, for approval.

874 Routine sampling of materials will be arranged by, and paid for, by the Developer to ensure that the materials meet the Specification. Delivery tickets of all materials supplied shall be retained for inspection and copies shall be provided to the Council.

875 Proprietary manufactured structures and products shall be subject to the full TA procedures, with the exception of those that comply with the requirements of the Construction Products Regulations (CPR). Proprietary manufactured structures and products shall be used for their intended purpose. TA procedures shall apply where unintended use is proposed for CE marked structures or products (Further information is given in 3.12(6) and Appendix P of DMRB CG 300).

876 Any appointed representative of the Council shall be allowed access to the site and works and to all workshops and places where work is being prepared or from where materials, manufacturers' articles and machinery are being obtained for the works. The Developer shall afford every facility for and every assistance in obtaining the right to such access.

877 The Developer shall afford full opportunity to the Council's representative to examine any work which is about to be covered up or put out of view and to examine any foundation before permanent work is placed on it. The Developer shall give reasonable notice (minimum 72 hours) whenever such work or foundations are ready or about to be ready for examination and the Council's representative will attend without unreasonable delay unless it is considered unnecessary and the Developer is advised accordingly.

878 The Developer shall compile 'As-Built' record drawings and a Maintenance Manual for each structure during the construction phase. These shall be forwarded to the Council, together with the completed Construction Compliance Certificate and Health and Safety File upon completion of the Works.

FURTHER REQUIREMENTS FOR DEVELOPMENTS ADJACENT TO HIGHWAY STRUCTURES

Application

879 These requirements apply to all proposed development adjacent to highway structures owned and maintained by the Bridges Section of Leeds City Council, whether it is promoted by a private developer or Leeds City Council.

Background

880 Leeds City Council Bridges Section is responsible for the inspection and maintenance of all highway structures, as defined in Chapter 3 of the DMRB CG 300 Technical approval of highway structures. .

881 Inspections of highway structures are carried out regularly to determine their condition and identify any maintenance work required.

882 Access is required for these inspections as well as maintenance work identified. In the longer-term structures may have to be strengthened or refurbished and eventually have to be demolished and rebuilt at the end of their working life, also requiring access.

883 In recent years there has been increased pressure to minimise the width of easements required to facilitate inspection and maintenance of highway structures to maximise proposed developments. There has also been increased pressure to incorporate planting within easements.

884 Reduced easements and poorly planned or inappropriate planting within an easement severely compromise the ability to inspect our highway structures and carry out essential work. They can affect the way that work has to be carried out, including increased traffic management and disruption, increased risk to Leeds City Council employees, private contractors and the public and increased cost. Anyone who is considering building a structure close to the highway must adhere to this Section.

885 Historically the width of easement required has been dealt with on an individual structure basis. Whilst each structure will be unique and have specific engineering constraints and requirements this note sets out the minimum width of easement required and the reasons for this.

Easement width required and basis

886 The minimum width of easement required for all developments adjacent to a highway structure owned and maintained by Leeds City Council is 5.0m, as measured from the closest point of any exposed face on the development side.

887 Easements required for privately owned structures and services should be discussed and agreed with the relevant owner.

888 The width of 5.0m is based on the width required to enable unrestricted access for an inspection platform/vehicle and adequate working room to carry out inspections and maintenance work safely. It also enables these activities to be carried out without undue additional costs or constraints into the materials or methods that can be used.

889 This is consistent with the requirements of the DMRB CD 350 – The design of highway structures. The fundamental principle is that structures can be effectively inspected and maintained and that provisions for access should be made at the design stage for access for cleaning and maintenance. In terms of existing structures, it is equally important, if not more so because of in-service deterioration, to have an adequate easement for unrestricted access.

890 The minimum easement width of 5.0m is consistent with the requirements of statutory undertakers and Highways Development Control sections of other local authorities in terms of easements for drainage apparatus.

Additional Considerations and Requirements

891 No part of any development should overhang the easement strip, without prior agreement with Leeds City Council Bridges Department.

892 Trees, shrubs, street furniture (cycle racks, planters, seats etc.) shall only be placed in the easement strip following prior consultation with Leeds City Council Bridges Department. Wherever possible, this consultation will take place prior to the submission of a planning application, but always upon receipt of details and before determination of an application. Details of the agreed proposals should be approved as part of the planning application.

893 Developments should not surcharge existing retaining structures.

894 Foundations for new buildings shall not detrimentally affect existing highway structures.

895 Finished ground levels at the back of Leeds City Council retaining walls and bridge abutments shall be approved by Leeds City Council Bridges Department Section.

896 The developer will provide Leeds City Council Bridges Department with sufficient structural details of the development to agree in principle that the proposals are acceptable prior to determination of the planning application.

897 Consideration needs to be given to the choice and future availability of material used in easement strips. It may not be possible to replace expensive and difficult to source materials on a like-for-like basis if they have to be removed for maintenance work.

898 Leeds City Council Bridges Department will not be liable for carrying out any remedial works to make good features of any element in the easement strip other than the original finishing materials (subject to availability and cost).

899 The submission of specific structural requirements in terms of suitable excavation and/or piling methods and support systems for Leeds City Council highway structures should be conditioned on planning consents. The information submitted to discharge these conditions shall be discussed and agreed with Leeds City Council Bridges Department. Where works may affect a Leeds City Council owned highway structure, a Section 38, 278 and or Party Wall Act Agreement may be required with a private developer to ensure the council has sufficient control of the works.

900 A copy of pertinent planning conditions or any signed legal agreement between Leeds City Council and the developer should be forwarded to Leeds City Council Bridges Department.

Further Information

901 If any further questions relating to these Structural Procedures Guidelines, please use the official highways reporting service,

902 https://my.leeds.gov.uk/Pages/Form%20Pages/GeneralHighwaysProblemReport.aspx.

903 Developers are strongly advised to submit proposals at the earliest opportunity to avoid delays later.

A.4 DRAINAGE PROCEDURES

GENERAL

904 Relevant Drainage Authority (RDA) shall where applicable mean the Lead Local Flood Authority, The Highway Authority, Yorkshire Water, The Environment Agency, The Internal Land Drainage Authority, Canal and Rivers Trust or Private Riparian owner of any drainage system

905 Normally, the highway drainage on all new developments shall be connected to a new drainage system that will be adopted by the water authority (Yorkshire Water) and shall be subject to a Section 104 agreement under the Water Industry Act 1991. Evidence of this agreement must be made available to the City Council before entering into a Section 38 agreement for adoption of the highway. The roads shall not be adopted until Yorkshire Water has issued a Vesting Certificate for the drainage system or, where discharge to the drain is limited to highway run-off only, it is to be adopted as a highway drain.

906 There may be occasions when the highway drainage will be connected to an existing public sewerage system. In that case the Developer will be required to provide evidence of consent from the appropriate authority to discharge drainage flow to the sewer. Similarly, written evidence must be provided of the right to discharge water from a highway drain into any receiving ditch or watercourse with no liability on the City Council. Consent to discharge into a ditch or watercourse would normally be granted by the Lead Local Flood Authority .

907 All highway drains (including soakaways) are to be located within land that is to be adopted as Highway. Only in exceptional circumstances will it be permissible for them to be located in private land and then it will require an easement agreement. This should be in place before, or be a condition of, the Section 38 Agreement.

908 Where a piped system discharges into an existing ditch or watercourse, the pipe invert (bottom of the inside of the pipe) must not be lower than the level of the average flow in the ditch or watercourse and it should always be at least 150mm above the ditch or watercourse invert. The end of the pipe shall be orientated so that it discharges at an angle less than 60 degrees to the direction of flow in the ditch or watercourse. The end of the pipe must have a headwall and apron which supports the bank above and adjacent to the pipe and prevents any scouring underneath the pipe. In addition, appropriate measures shall be incorporated to protect the banks of the ditch or watercourse from

scouring. It will also be necessary to comply with the requirements of the RDA. A flap must be provided at the outfall to prevent the intrusion of vermin or flood water.

909 Oil/Petrol interceptors or suitable alternative upstream water quality measures as set out within The SUDS manual (C753), shall be incorporated into the new drainage system as required by the RDA and prior to a highway drain discharging into a soakaway or into a watercourse.

910 If the proposed new drain is to outfall into an existing highway drain, the Developer shall provide details to prove the capacity and condition of the existing drain prior to any approval being granted for the connection. A CCTV survey of the existing drain may be required and any improvement works found necessary shall be undertaken at the Developer's expense.

911 Drainage of other non-adopted areas or land drainage into an existing or adoptable highway drain shall not be accepted.

912 Where private non-adoptable roads and other surfaces fall towards the adoptable highway, measures must be put in place to prevent surface water run-off from reaching the highway boundary and entering the highway drainage system.

913 All non-highway drainage within the proposed public highway must be adopted by the Water Authority, Yorkshire Water in accordance with Section 104 of The Water Industry Act 1991.

LAND DRAINAGE

914 Where there is or is likely to be run-off from landscaped areas, open spaces and adjoining land, appropriate arrangements shall be made for land drainage. This can include providing intercepting drains and ditches with satisfactory outfalls.

915 Drainage of any existing or proposed land drainage into an existing or adoptable highway drain shall not be accepted.

EXISTING DRAINAGE SYSTEMS

916 Appropriate measures shall be put in place to deal with any existing drainage systems within the development site, including any land drains, ditches, watercourses, outfalls from adjacent land or drainage systems, to the satisfaction of the RDA and the owner of the systems. Consent of the Lead Local Flood Authority or the Local Internal Drainage

Board for any works within 8m of an existing watercourse in accordance with the Flood and Water Management Act 2010 must also be obtained.

SUSTAINABLE URBAN DRAINAGE SYSTEMS

917 Sustainable Urban Drainage Techniques (SUDS) should be actively considered for all new development and where not provided justification for utilising alternative non SUDS measures should be submitted for approval. The City Council's requirements for the use of SUDS will be in accordance with The SUDS Manual (C753) and National SuDS Non Statutory Technical Standards. Further guidance will be provided in updated Supplementary Guidance Sustainable Drainage in Leeds and associated guidance notes once available.

918 Where SUDS are proposed for highway drainage, discussions with all relevant parties must be entered into at an early stage (in advance of any planning application) to agree ownership and responsibility for the facility. The design of the SUDS facility must include adequate provision for future maintenance of the system.

919 The Developer will be required to pay commuted sums for the future maintenance of SUDS and other non-standard drain elements, including above and below ground flow attenuation systems and pollution control devices that are adopted as highway. Details of the sums payable will be calculated on a site-specific basis. Failure to satisfy sufficient design requirements and future financial commitments for maintenance will result in the road not being adopted.

PLANTED AREAS

920 Where possible, some surface water run-off can be directed into Rooting Zones. This helps keep the growing media within them charged with moisture and can help ventilate soil. Surfaces must be set to falls so that run-off will drain positively to a gully if infiltration fails.

PLANTED AREAS AND SUDS

921 Rooting Zones may be used as part of sustainable urban drainage best practice management systems; including for water quality treatment of surface water run-off from pavements. Tree pits can help reduce flow rates from a site by facilitating infiltration and/ or by providing attenuation storage. Further guidance is contained in Chapter 19 of The SUDS Manual (C753) 2015.

HIGHWAY SOAKAWAYS

Specification:

922 Where a system of SUDS incorporates the use of soakaways for disposal of highway run-off, the soakaways shall be designed in accordance with the requirements of CIRIA C753. Where relevant, guidance is also taken from CIRIA Report C156, Infiltration Drainage – Manual of Good Practice (CIRIA C156). Where the City Council's specification varies from those contained in CIRIA C753 or CIRIA C156, the requirements of the City Council shall apply.

923 The City Council will consider all types of infiltration drainage for adoption including both ground and sub-surface infiltration systems. The term 'soakaway' is used to describe any infiltration drainage system.

Soakaway Testing:

924 Soakaway testing to BRE 365 should be carried out in advance of design and construction.

925 Soakaway tests are required in the specific location(s) of the proposed soakaway(s) and at an elevation appropriate for the anticipated construction; i.e. below the proposed invert level of the drain discharging to the soakaway.

926 Permeability (falling head) tests in boreholes shall not be used for soakaway design.

927 Soakaway testing and calculation of the soil infiltration rate should be in accordance with BRE365.

928 Soakaway tests shall not use less than $0.5m^3$ of water. For soakaways draining areas greater than $100m^2$, at least $1m^3$ of water shall be used for soakaway tests.

Soakaway Design:

929 Soakaway design shall be in accordance with CIRIA C753. The design method stated in CIRIA C156 may be employed. The factor of safety for the design of soakaways draining roads should be 10.

930 A rainfall ratio of 0.33 is considered appropriate for the Leeds area.

931 The soakaway design must consider the impact of climate change; a 40% increase in rainfall should be assumed.

Groundwater:

932 The groundwater level(s) shall be established to ensure the full storage capacity of the soakaway is available at all times. It is recommended that 1.0m of unsaturated soil is present beneath the invert/base of the soakaway. Seasonal fluctuations in groundwater level shall be taken into account.

Siting of Soakaways:

933 Soakaways shall not be constructed beneath the Highway, or within 5.0m, of the adoptable width except in exceptional circumstances and then the developer must obtain written consent from the City Council prior to construction. Greater distances may be required for sloping sites.

934 Soakaways shall not be constructed within 5.0m of an existing or proposed structure. Greater distances may be required for sloping sites.

935 A 5.0m easement is required on all sides including the aerial extent of the soakaway to allow future maintenance. Greater distances may be required for sloping sites.

936 No development shall take place within this easement and the area shall remain accessible to the City Council at all times.

937 There shall be at least 5.0m of undisturbed ground between adjacent soakaways to avoid interaction. Greater distances may be required for sloping sites.

938 Generally, soakaways should not be constructed on steeply sloping sites.

Soakaway Construction:

939 At least two inspection access points shall be provided for each individual soakaway.

940 Inflows shall be fitted with sediment traps and, where appropriate, oil separators.

941 Oil separators shall be incorporated where the soakaway is located within an Environment Agency groundwater source protection zone. Oil separators will require an additional commuted sum for adoption to allow for maintenance.

Permeable Pavements:

942 Infiltration blanket systems (e.g. permeable pavements) shall only be used where ground conditions are appropriate and the developer must obtain written consent from the Highway Authority prior to construction. Permeable pavements will require an additional

commuted sum for adoption to allow for assessment and construction supervision and maintenance.

Geotechnical Constraints:

943 Geotechnical issues shall be adequately addressed, particularly loss of bearing capacity of adjacent soils and possible erosion due to seepage.

944 Soakaways shall not be constructed over shallow mine workings or within the influencing distance of mine entries.

945 Soakaways shall not be constructed within made ground except in exceptional circumstances and the developer must obtain written consent from the City Council prior to construction.

Soakaways and Trees:

946 Where within influencing distance of proposed trees, or adjacent to root protection zones of existing trees, root barriers should be incorporated within the soakaway construction to avoid infestation.

Supervision:

947 If the soakaway is constructed without supervision by the City Council, a validation report shall be submitted by the developer to demonstrate the construction is free from defects.

948 The design, together with details of the associated soakaway tests shall be submitted to the City Council for their approval.

THE HYDRAULIC DESIGN OF ADOPTABLE HIGHWAY DRAINS

949 The hydraulic design of adoptable piped highway drains must meet the requirements of the current edition of DMRB CG 501 Design of Highway Drainage Systems

950 Hydraulic calculations using the specified method of calculation and format shall be submitted for approval of the Highway Authority together with design drawings showing the layout of the proposed drains. The layout drawing shall be annotated to enable easy cross reference with the calculations. Output from an approved computer programme using the specified method and parameters shall be acceptable.

HYDRAULIC DESIGN – PROTECTION AGAINST FLOODING

951 The design of the new highway drainage system must be designed to meet the requirements of the current edition of DMRB CG 501 Design of Highway Drainage Systems

952 The new highway drainage system should be designed not to flood any part of the highway or site in a 1 in 100 plus 40% allowance for climate change storm event.

953 The design should also show the line and extent of flow paths and the potential effects of flooding if storms are greater than those allowed for by the design.

MINIMUM PIPE SIZE

954 The minimum pipe diameter for adoptable highway drains, other than gully connections, is 225mm. The minimum size for a road gully connection is 150mm.

USE OF COMBINED KERB AND DRAINAGE SYSTEMS

955 The use of combined kerb/drainage systems will not normally be accepted for new development.

956 Consideration may be given to the use of a system of combined kerb/drainage to overcome a site-specific difficulty. Where a system of combined kerb/drainage is proposed, full details of the system, including hydraulic calculations specifications and outfall details must be submitted to the City Council for approval in advance.

957 If a combined kerb/drainage system is approved by the City Council for a site, the Developer shall pay a commuted sum to cover the additional cost of future maintenance of the system. The sum will be calculated by the City Council on a site-specific basis.

APPROVING DRAINAGE STRUCTURES

958 Any drainage item meeting the following criteria will be classified as a highway structure and shall be subject to the specific requirements that apply to highway structures:

- Drain, piped or box culvert, sewer or drainage structure that has a clear span or internal diameter of greater than 900mm; and
- Headwall greater than 1.5m retained height.

CATCHPITS AND MANHOLES

959 Unless otherwise specified, you must use catchpits and not manholes on adoptable highway drainage systems. SUDS structures (typically over-sized chambers and cover slabs which are greater than 1050mm in diameter), even if they are to be adopted by the relevant water company, must still be designed to the relevant standards for retention within the highway (British Standard 5400). You will need to demonstrate to us that this has been achieved.

960 A catchpit (an access chamber, with sump, on a drainage system) shall be provided immediately prior to the outfall where there is any discharge into an existing ditch or watercourse.

961 On all drainage runs with a pipe diameter of 900mm or less, a catchpits shall be provided at:

- Every change of alignment or gradient;
- The head of all main pipelines;
- Every junction of pipelines except for single gulley connections; every change in pipe diameters; and
- A maximum spacing of 90m.

CATCHPIT AND MANHOLE POSITIONS

962 Catchpits or manholes shall normally be located within the verge, and not the carriageway, on all classified roads and other roads with a higher status than a residential access street or industrial access road. The outside of catchpits and manholes should be at least 500mm from the face of the kerb or the edge of the carriageway. Any catchpits or manholes within a carriageway must be located so that they can be accessed for maintenance operations while providing the necessary safety zones and without preventing traffic from passing. This will generally mean that they should not be sited at or near the centre of the carriageway or within a width restriction. Access requirements should also be considered where it is necessary to locate catchpits or manholes within junction islands or roundabouts. Where manhole covers have to be located within the carriageway, they should be positioned such that they are outside the normal / expected wheel tracks of vehicles, do not cause problems to 2 wheeled vehicles and must have an anti-slip finish.

POSITIONING AND ALIGNMENT OF HIGHWAY DRAINS AND STORM AND FOUL SEWERS

963 Highway drains must be laid:

- In straight lengths;
- To straight grades between manholes; and
- Within the carriageway or verge.

964 Under normal circumstances drains and associated chambers will not be permitted in footways as this space is required for other utility apparatus.

GULLIES

965 All gullies should be trapped street gullies in accordance with the requirements of the City Council's Standard Details. The maximum length of gulley connection should not be more than 15m. It will not normally be acceptable to connect one gulley connection directly into another.

966 The spacing of gullies shall be a maximum in accordance with the table below.

Table A-40: Gully Spacing Requirements

GULLY SPACING

Road Surface Material	Bituminous Surfacing	Concrete Block Paving
Maximum Permitted Drained Area Per Gully (m)	200	150

967 When calculating the areas drained, allowances must be made for all footways, footpaths, paved areas and verges that fall towards the carriageway.

968 The design of the system shall be in accordance with the DMRB CG 501 Design of Highway Drainage Systems

969 In addition, the layout of gullies shall take into consideration the folioing requirements: -

- Gullies must not be spaced more than 40m apart, irrespective of the areas drained, except at summits where the first gully should not be more than 12m from the high point.
- Double gullies shall be provided at sag points and low points and each must have its individual connection to the main sewer or highway drain.

- Gullies shall be sited immediately upstream of the tangent point at road junctions so that surface water in the channel does not flow across the junction. Care should be taken to avoid ponding near the mid-point of radius kerbs.
- Where a road is super-elevated, a gully sited just before the point where the adverse camber is removed to prevent water in the upstream channel flowing across the carriageway.
- Care should be taken to avoid ponding in the transition length, when the longitudinal gradient is flat or where there are traffic islands, central reserves or traffic-calming measures.
- In footpaths, footways and cycleways separated from carriageways, gullies or channels connected to the highway drainage system shall be provided where surface water would otherwise discharge onto adjacent property or cause flooding of footpaths, footways or carriageways.
- Gullies shall not be sited within pedestrian crossing points or within the area of a vehicular crossing. Where possible, they shall be located directly upstream of the crossing point.
- Gullies shall not be located where traffic would be prevented from passing while they are being emptied, for example within a carriageway width restriction.
- Gullies should not be located within parking bays or other locations which would make them difficult to empty or be otherwise maintained.
- The layout of gullies shall be shown on the design drawings submitted in support of an application for Works under a Section 38 or Section 278 Agreement.

PROVIDING SUB-SOIL DRAINAGE

970 A system of sub-soil drainage to a suitable agreed outfall shall be provided where: -

- The winter height of the water table is within 600mm of formation level; or
- The sub-soil is unstable because of being waterlogged; or
- There is a likelihood of water running from or out of adjacent ground; or
- Springs, land drains or watercourses are present; or
- The finished road is below existing ground level, regardless of the water table; or
- The sub-grade is likely to be altered due to groundwater.

BACKFILLING TRENCHES

971 Unless otherwise agreed, backfill up to formation level to all drainage, utility and other trenches in the carriageway and the vehicular accesses to industrial and commercial premises shall be type 1 granular sub-base material.

A.5 STREET LIGHTING PROCEDURES

ADOPTION (ACCRUAL) OF STREET LIGHTING AND ILLUMINATED APPARATUS

972 Street Lighting services within the City of Leeds are provided through a private finance initiative (PFI) by Tay Valley Lighting (Leeds) Limited. (TVL) on behalf of Leeds City Council. It is a condition of this continuing agreement that an illuminated apparatus which is intended to be maintained by TVL must have been designed and installed to their satisfaction.

973 Without exception, all apparatus which is intended to be adopted, hereafter referred to as Accrued Apparatus, into the scope of the PFI, must be compliant with the Development Standard Specification (DSS). A copy of the latest version of the DSS cab be obtained from TVL's Operating Sub-Contractor, Southern Electric Contracting (SEC), at the following address:

Tay Valley Lighting (Leeds) Limited

Astley Lane Industrial Estate

Swillington

Leeds

LS26 8XT

974 Within the PFI agreement the flexibility exits for Developers to select to either produce their own street lighting design or the utilise SEC's design service. In the event that you elect to undertake your own lighting design, these designs will have to be subjected to a design check by SEC.

975 Similarly, Developers may choose to undertake to install the apparatus or alternatively elect to use SEC's installation service, in the event that the installation works are not carried out by SEC then all works must be subjected to an installation check.

976 Further details of each of the various options are set out below and representative costs can be obtained from the City Council. The cost of the installation service will require a specific quotation to be provided.

977 Design Service: If a Developer requires proposed Accrued Apparatus to be designed, Leeds City Council shall notify SEC in writing providing details of the Proposed Development. Upon receipt of the development details a design will be produced by SEC within 25 working days or such longer period as may be agreed.

978 The costs of the design service payable by the Developer will be in accordance with the appropriate costs as detailed in Appendix A. Having prepared the design on behalf of the Developer, it will automatically follow that the Developer will not be eligible to pay the Design Check Fee and the works are assumed to be fully compliant with the Development Standard Specification.

979 Design Check: If a Developer undertakes the design of proposed Accrued Apparatus in respect of its proposed development, TVL will be entitled to undertake a review of the design in order to confirm whether or not the design complies with the DSS. Such review shall be completely by TVL within 15 working days or such longer period as may be agreed.

980 The cost of the design check payable by the Developer will be in accordance with the appropriate costs. When in the reasonable opinion of SEC the design fails to meet the DSS the Developer must undertake further work so as to bring the design up to the requirements of the DSS. Further Design Checks will be undertaken until such time as SEC believes the design to meet the DSS or until the Council confirms that the proposed Apparatus will not be accrued.

981 Installation Service: If a Developer requires proposed Accrued to be supplied and installed and connected, Leeds City Council shall notify SEC in writing providing details of the proposed Development. SEC shall undertake the supply and installation and connection of the proposed Accrued Apparatus within 8 weeks from the date of Leeds City Council’s notice or such longer period as may be agreed.

982 The costs of the supply, installation and connection of the proposed Accrued Apparatus, payable by the Developer, will be as detailed in the SEC quotation provided prior to the commencement of the works. Having installed the apparatus on behalf of the Developer, it will automatically follow that the Developer will not be eligible to pay the Installation

Check Fee and the works are assumed to be fully compliant with the DSS and will immediately be accrued into the scope of the PFI.

983 Installation Check: If a Developer undertakes the supply, installation and connection of proposed Accrued Apparatus in respect of its proposed Development, SEC will be entitled to undertake a review of the supply, installation and connection undertaken in order to confirm whether or not the installation and connection complies with the DSS. Such review shall be completed by SEC within 25 working days or such longer period as may be agreed.

984 The cost of the installation check payable by the Developer will be in accordance with the appropriate costs. When in the reasonable opinion of SEC the supply, installation or connection fails to meet the DSS the Developer must undertake all necessary further work so as to bring the supply, installation and connection up to the requirements of the DSS.

985 Further installation checks will be undertaken, up to a maximum of 2, until such time as SEC believes the supply, installation or connection to meet the DSS. In the event that following the 2nd installation check remedial works remain outstanding; Leeds City Council may elect to instruct SEC to undertake all necessary remedial works after which time the apparatus will be immediately accrued into the scope of the PFI and the Developer will be recharged in full the actual cost of the remedial works undertaken or the Council may confirm that the proposed Apparatus will not be accrued.

986 With effect from the date of confirmation received by Leeds City Council from SEC that the Apparatus meets or exceeds the DSS, the apparatus becomes accrued in to the scope of the PFI project and all commuted sums will become payable.

987 You are requested to indicate your preference with regards to the above options, you must select one either the design service or design check and one of either the installation service or installation check. Once your preferences are known I will be in a position to provide you with the appropriate documentation.

988 In certain rural or other situations, it may be necessary to provide alternative Street Lighting details (e.g. sensitive column designs in Conservation Areas, lights on buildings rather than columns in unlit villages, etc). These situations should be discussed further with the Local Authority.

TREES

989 The design of new planting adjacent to roads must consider sight line requirements, lighting schemes, CCTV, underground and overhead service routes and avoidance of physical obstruction or damage with due consideration for future growth and periodic maintenance requirements.

990 Segregated footways/cycleways can have implications for street lighting. The greater the offset distance from the roadside the greater the reduction in the effectiveness of the street lights in illuminating the route. Also, the presence of tree canopies can reduce street lighting effectiveness. Every case is unique so early dialogue with the Leeds City Council Street Lighting Department is strongly encouraged.

991 Designers must be aware that a layout may necessitate an undesirable dual lighting system. One for the highway and one for the offset footpath / cycleway. Apart from the obvious cost implications this will lead to greater visual clutter and is best avoided in most cases by integrating tree positions carefully around lighting columns.

992 The City Council's Street Lighting PFI Output Specification requires that footways whose edge adjacent to the road is more than 3.0m from the kerb edge shall be treated as "footpaths" which implies a separate lighting system. In standard adoptable roadside situations with linear verges there is no need to exceed 3.0m verge width and so dual lighting system can be avoided when tree positions are carefully integrated.

993 The planting scheme must seek to provide the largest possible tree species for the greatest benefits. The 3.0m width is adequate for most types of tree planting in terms of adequate soil volumes and the avoidance of potential conflict to kerbs/paving. Refer to Leeds City Council guidance for further information on planting requirements generally.

APPENDIX B. DISTRIBUTOR ROADS AND STRATEGIC ROUTES WITHIN THE LEEDS DISTRICT
ONLINE MAP

GLOSSARY

CIL	Community Infrastructure Levy
CoMoUK	Collaborative Mobility UK
DCLG	Department of Communities and Local Government
DETR	Department of the Environment, Transport and the Regions
DfT	Department for Transport
EIA	Education and Inspections Act (2006)
NH	National Highways
LLFA	Lead Local Flood Authority
LA	Local Authority
LDF	Local Development Framework
LPA	Local Planning Authority
LTP	Local Transport Plan
Metro	Bus and rail
PFI	Private Finance Initiative
S106	Section 106 Legal Agreements (under 1990 Town and Country Planning Act)
SPD	Supplementary Planning Document
TA	Transport Assessment
TP	Travel Plan
TPC	Travel Plan Coordinator
TS	Transport Statement
TRICS	Trip Rate Information Computer System
UDP	Unitary Development Plan
WYTS	West Yorkshire Transport Strategy
WYCA	West Yorkshire Combined Authority

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