Cardiff
Local Transport Plan

2015 - 2020

City of Cardiff Council Local Transport Plan 2015 - 2020

1.0   Introduction

1.1   Plan Coverage and Period

1.1.1   The Transport Act 2000 (amended by the Transport (Wales) Act 2006) required transport plans to be produced by each of Wales' four regional transport consortia. The plans contained five year transport delivery programmes to be kept under review. Cardiff was formerly one of the ten constituent Local Authorities of the South East Wales Transport Alliance (Sewta), the regional transport body which produced the Regional Transport Plan (RTP, 2010 – 2015). The regional transport consortia were dissolved in March 2014 which also marked the end of the Sewta RTP five year transport delivery programme. Welsh Government (WG) recently published guidance requiring all local authorities in Wales to produce a LTP for submission in January 2015. In accordance with this guidance, LTPs will replace RTPs. However, WG has indicated that LTPs should update the schemes and priorities identified in the RTP five year programmes.

1.1.2   This LTP identifies the key transport issues relevant to Cardiff, the high level interventions needed to address these and the specific priorities for the local authority to deliver in the plan period (the LTP Five Year Programme 2015 – 2020). The Plan also outlines the Council's medium and longer term aspirations up to 2030. The LTP will be the primary reference for bids for annual capital funding from the Welsh Government for transport infrastructure. The proposed programme outlined in the LTP includes walking and cycling infrastructure, bus network and junction improvements, Cardiff Capital Region Metro schemes, 20mph limits and road safety schemes.

1.1.3   The LTP reflects the requirements of the Active Travel (Wales) Act 2013 which places a duty on local authorities in Wales to continuously improve facilities and routes for pedestrians and cyclists, together with preparing maps identifying current and potential future routes.

1.2   Transport in the Cardiff Capital Region

1.2.1   The Cardiff Capital Region (see Local Transport Plan Diagram 1.2 below) comprises a population of over 1.4 million which is expected to continue to grow significantly over the coming decades. Cardiff is the largest urban centre in the region providing 26% of its population and 33% of the region's jobs. In keeping with other City Regions, regional employment growth is likely to be strongest in Cardiff as the largest urban centre and the capital city of Wales. However, other key regional settlements will continue to play an important role as employment locations.

1.2.2   In spite of its apparent good fortune in recent years, Cardiff's competitive position has progressively worsened over time in comparison with the UK's

'Core Cities'[1] such as Manchester, Bristol, and Nottingham, declining from 110% of the national average GVA per capita in 2001 to 102% in 2011. This is consistent with the growing disparity between the economic performance of South East Wales and that of other UK regions.

1.2.3 The 'Core Cities' and their wider urban areas jointly contribute an estimated 27% of UK GDP, compared with London's contribution of 22.5% of UK GDP[2]. Significantly, their regeneration and growth has been underpinned by a city regional approach to transport planning which has enabled the development of extensive, modern rapid transit networks providing fast and reliable connectivity between the centres of each city and their satellite settlements. This highlights the importance of transport infrastructure investment to economic growth.

1.2.4 The establishment of the Cardiff Capital Region in March 2014 provides the opportunity to replicate the success of cities in England by developing the transport connectivity which the City of Cardiff needs to prosper and to drive the economy of the wider South East Wales region.

1.2.5 Achieving this will require interventions which address Cardiff's major transport challenges:

Network Pressure & Congestion: the region's transport network is already under pressure; nearly 77,900[3] people commute into Cardiff from areas outside the city each day (37% of Cardiff's workforce). 80% of this number travel into the city by car whilst the private car is the dominant mode of transport for trips to work within the city - in 2011 57% of Cardiff residents commuted by car. These movements create congestion on the highway network that increases journey times and reduces journey time reliability.

Future Growth pressures: The Cardiff Capital Region is forecast to grow significantly over the next 25 years, with the largest forecast increase in Cardiff itself from a current population of 348,000 to 430,000 by 2036, an increase of almost a quarter. The Cardiff Deposit LDP allocates land for around 30,000 new homes and 40,000 jobs in Cardiff between 2013 and 2026. Along with the projected increase in employment, it is estimated this expansion will result in a 32% net increase in traffic and a 20% increase in the numbers of people commuting to work. In order to accommodate these growth pressures, transport interventions that support sustainable connectivity between Cardiff and the City Region will need to be given priority.

1.2.6 Investment in the regional transport network, particularly the public transport system, will have a key role to play in supporting projected growth and boosting the competitiveness of the regional economy by:

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[1] A partnership of the UK's principal cities outside London. Their membership includes the cities of Birmingham, Bristol, Glasgow, Leeds, Liverpool, Manchester, Newcastle, Nottingham and Sheffield. Together, they are economically the largest areas outside of London in England and Scotland.

[2] Interim Report to Core Cities Group, July 2011
[3] Labour Force Survey, 2011

- providing new transport capacity;
- improving intra-regional connectivity between key settlements and Cardiff;
- expanding the effective labour market catchment for businesses, enabling firms to recruit from a wider skills base;
- increasing access to a wider range of job opportunities by increasing the reach of public transport;
- increasing the productive capacity of the local economy by increasing connectivity and reducing journey times;
- expanding access to markets for companies;
- facilitating the growth of business clusters in the larger cities (for instance around the designated Enterprise Zones and development sites), helping to stimulate competition and innovation.

1.2.7 These challenges cannot be addressed by the City of Cardiff in isolation. Indeed, as many of the pressures on the city's network are generated by settlements outside Cardiff, it is essential that developments and transport interventions beyond the city's administrative boundary support the city's demand management and modal shift objectives by maximizing the opportunity to travel by sustainable modes. Ensuring this complementary approach is vital in order to meet the priorities set out by the Welsh Government for targeted investment: supporting economic growth, reducing economic inactivity, tackling poverty and encouraging safer, healthier and sustainable travel.

1.2.8 Within this context, the following interventions will be prioritised:
- Schemes which support and complement the delivery of the Cardiff Capital Region Metro
- Bus corridor developments which improve journey times and journey time reliability
- Passenger facilities which are attractive, convenient and comfortable for users
- Schemes which facilitate easy interchange between transport modes and services
- Development of active travel networks to increase walking and cycling for local journeys
- Schemes which reduce road casualties and make travel by active modes easier, safer and more attractive.
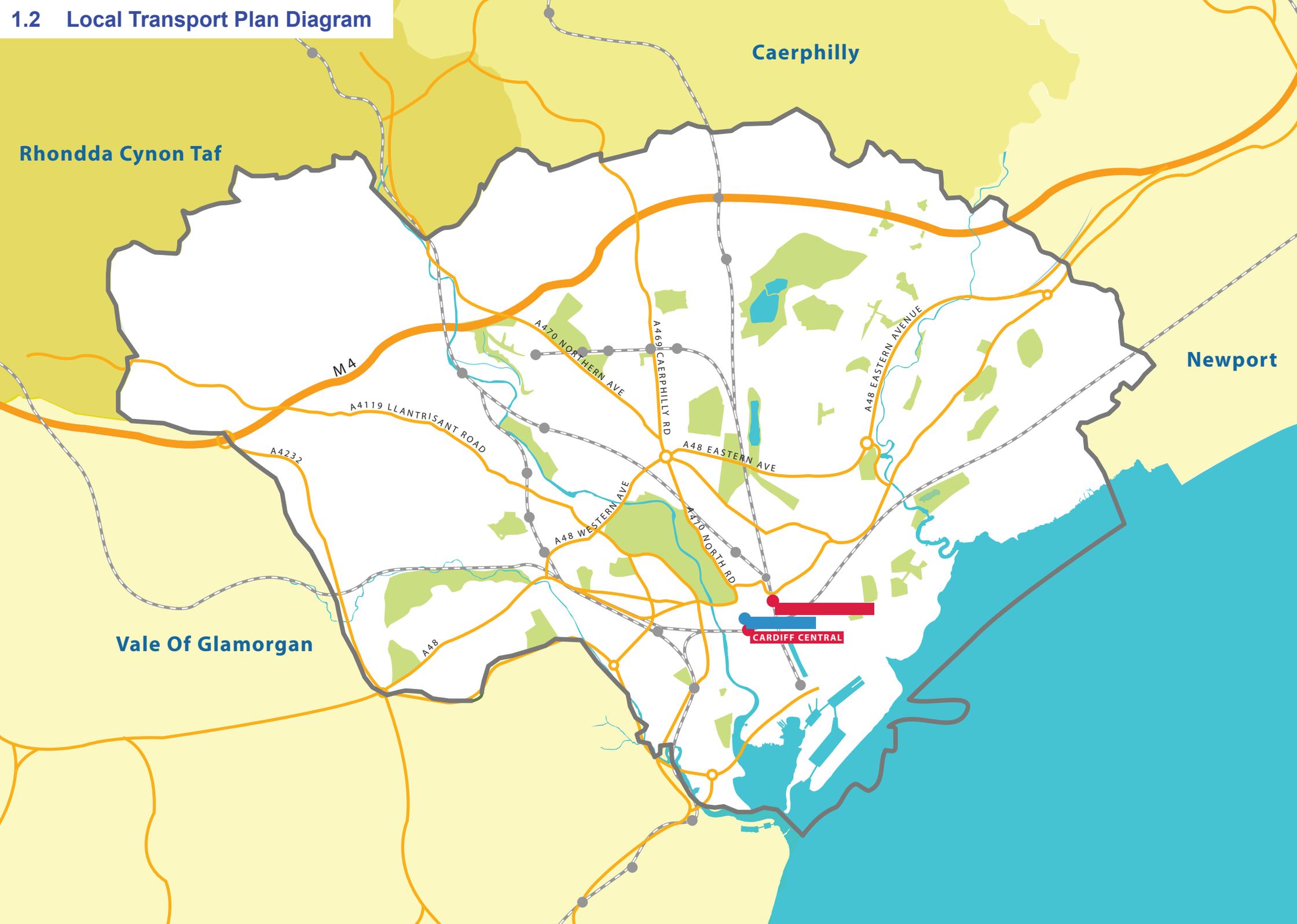
Caerphilly

Rhondda Cynon Taf

Newport

Vale Of Glamorgan

M4

A4119 LLANTRISANT ROAD

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A470 NORTHERN AVE

A469 CAERPHILLY RD

A48 EASTERN AVENUE

A48 EASTERN AVE

A48 WESTERN AVE

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CARDIFF CENTRAL

1.3   Links to Welsh Government Priorities

1.3.1 The LTP programme of schemes will deliver major enhancements to the city's sustainable transport infrastructure which will strongly support Welsh Government priorities by helping to:
- improve connectivity between the City of Cardiff and the Cardiff Capital Region;
- support development of the Cardiff Enterprise Zone;
- increase sustainable access to jobs and services across all parts of the city including disadvantaged areas; and
- make new settlements brought forward through the Local Development Plan fully accessible by sustainable travel.

1.3.2 It will also support delivery of the City of Cardiff Council's strategic priorities which closely align with Welsh Government's strategic agenda.

1.3.3 Council's Corporate Plan (2014 – 2017): sets out three priorities:
- Economic development as the engine for growth and jobs
- Education and skills for people of all ages to fulfil their potential and be well prepared for employment in the Cardiff economy and beyond
- Supporting vulnerable adults, children and young people in times of austerity.

1.3.4 **Local Development Plan 2006 to 2026 (Deposit Plan 2013):** sets out the goal to meet future needs and improve access to jobs and services by ensuring sustainable transportation solutions are available which will ensure that 50% of all trips on the transport network are made by sustainable modes.

1.3.5 In addition, as part of Cardiff's commitment to the Welsh Government's Climate Change Strategy to reduce greenhouse gas emissions by 3% annually, a citywide per capita CO_2 reduction target of 26% by 2020 has been set. Citywide partnerships are being established with local businesses and organisations to deliver this. As set out in 'One Planet Cardiff' (CCC 2013), promoting greater use of sustainable modes of transport has a critical role to play in achieving this target.

1.4   Review of Regional Transport Plan and Studies

1.4.1 This Section sets out the regional context framing the LTP.

1.4.2 **South East Wales Regional Transport Plan (2010):** developed by the former regional transport consortium for south east Wales (South East Wales Transport Alliance - Sewta). The Sewta Regional Transport Plan (RTP) set out the transport priorities for this region. The vision was for 'A modern, accessible, integrated and sustainable transport system for South East Wales which increases opportunity, promotes prosperity for all and protects the environment; where walking, cycling, public transport, and sustainable freight provide real travel alternatives'.

1.4.3 Achieving sustainable accessibility was a central aim of the plan. One of the

wider goals of the plan was to: "Promote social inclusion and equality, by providing a transport system that is safe, accessible, and affordable to all sections of the community". Key objectives of the plan included:

- To improve access for all to employment opportunities, services, healthcare, education, tourism and leisure facilities;
- To reduce traffic growth, traffic congestion and to make better use of the existing road system;
- To improve the quality, efficiency and reliability of the transport system;
- To improve connectivity by sustainable transport between South-East Wales and the rest of Wales, the UK and Europe;
- To ensure developments in South East Wales are accessible by sustainable transport; and
- To make sustainable transport and travel planning an integral component of regeneration schemes.

1.4.4 Sewta was dissolved in March 2014 and the current RTP 5 year programme ends in March 2015. However, the vision and objectives of the Sewta RTP are broadly consistent with the strategic transport priorities of Welsh Government and Cardiff Council. Therefore, the RTP remains relevant as the strategic basis of the Cardiff LTP and the LTP 5 year programme, which seeks delivery of many of the schemes which featured in the RTP 5 year programme.

1.4.5 **Sewta Bus and Community Transport Regional Network Strategy (2014):** sets the objectives, outputs and priorities to identify and address the barriers that currently restrict bus and community transport use and to improve the efficiency of the network. The strategy outlines seven objectives, which also reflect the overarching objectives of the Sewta RTP, including:

- To provide and promote safe, attractive and accessible bus and community transport links to key regional centres and destinations
- To maximise opportunities to maintain and stimulate passenger growth
- To improve the quality and efficiency of bus and community transport services
- To ensure buses and community transport play their full role within the Cardiff Capital Region Metro Proposals.

The strategy sets out a number of actions pertinent to Cardiff and its role regionally, for example, supporting bus priority measures, improving interchange facilities and providing bus based park and ride facilities which are fully integrated with the main public transport network. As a sub-strategy of the RTP, this strategy also aligns with the transport priorities of Welsh Government and Cardiff Council and forms part of the strategic basis of the public transport interventions featured in this LTP.

1.4.6 **South East Wales Integrated Transport Task Force Report (2013):** considering the potential future public transport network and its relationship to economic growth, job creation and social inclusion for south east Wales as a region. The report outlines the need for public transport connectivity between key settlements and employment centres, including the Cardiff Central Enterprise Zone, and proposing that new routes and new services be

established to improve accessibility for people and employers. The report sets out a prioritised programme of schemes which includes the development of a bus rapid transit corridor linking to the Cardiff Central Enterprise Zone. The key Cardiff schemes highlighted in the report are included in the LTP 5 year and longer term delivery programme.

1.5   Review of Policies and Other Plans

1.5.1 **Local Development Plan (City of Cardiff Council [CCC] Deposit Plan 2013):** The Local Development Plan (LDP) provides the strategy and policy framework for the development and conservation of Cardiff for the 20 year period from 2006 to 2026. It will be used by Cardiff Council to guide and control development, providing the local policy basis by which planning applications will be determined in future years.

1.5.2 The LDP strategy is comprised of six key elements, including:

- **Growing to meet future needs:** delivering 40,000 new jobs and 41,100 dwellings over the plan period, responding to Cardiff's role as economic driver of the city-region and delivering Wales Spatial Plan objectives, the Council's overall vision and the LDP objectives.
- **Sustainable transportation solutions:** responding to the challenges associated with new development by setting out an approach aimed at minimising car travel, maximising access by sustainable transportation and improving connectivity between Cardiff and the wider region. The Plan sets out a strategy to achieve this by making the best use of the current network, managing demand and reducing it where possible and widening travel choices. The aim is to secure a modal split of 50% car and 50% non-car modes.
- **Bringing forward new infrastructure:** the Plan sets out an approach which requires the timely provision of new infrastructure including community facilities, transportation and other services.

1.5.3 The LDP sets out a number of key transport issues facing the city, including:

- **Improving access to jobs and services:** 30% of households in Cardiff do not have access to a car. People can't always travel with ease where they want, when they want, how they want and at a price they can afford. Accessibility can be a particular problem for less mobile people with special travel needs, such as young people, older people, and people with disabilities or with young children.
- **Safer roads:** despite a reduction in casualties, road traffic continues to pose a risk to the safety of pedestrians and cyclists and it discourages people from cutting their car use in favour of walking and cycling.
- **Better air quality:** road traffic is a major source of pollution that harms both air quality and people's health, in addition to being a major contributor to climate change.
- **Health problems due to car dependent lifestyles:** reducing car dependency and enabling short trips to be made by walking and cycling can

help more people undertake regular exercise and avoid the serious health problems which arise from sedentary behaviour.

1.5.4 In addition to the above transport issues, the projected 32% net increase in traffic as a result of the LDP growth has implications for Cardiff's network and the journeys undertaken on it, such as a decrease in average journey speeds and a concomitant increase in journey times of approximately 41% or 7 minutes (average).

1.5.5 As such, the LDP sets out that it must be ensured that **50% of all trips on the transport network** are made by sustainable modes (achieving this proportion is necessary to accommodate the additional vehicular trips on the highway network which will be generated by new development).

1.5.6 Schemes included in the LTP programme will complement transport infrastructure provided in conjunction with developments brought forward through the LDP. The LTP will make an important contribution to the delivery of the LDP.

1.5.7 **Cardiff Strategic Cycle Network Plan (CCC 2011):** The Plan defines a strategic network of core cycle routes (known as Enfys) and a 5 year programme for their delivery. The Plan is accompanied by a Cycle Design Guide based on good practice which sets out standards for the design and delivery of all cycling infrastructure including measures provided as part of highway schemes. The LTP 5 year programme includes schemes which will substantially complete the Enfys Network identified in the 2011 Strategic Cycle Network Plan. Further extensions to the Enfys network will be identified and designed when the Council produces its Integrated Network Maps to meet the requirements of the Active Travel (Wales) Act 2013. Schemes to develop these routes will feature in future 5 year programmes between 2020 - 2030.

1.5.8 **Walkable Neighbourhood Programme (CCC 2013):** The Walkable Neighbourhood Programme (WNP) provides for a programme of interventions for improving the walkability of key local areas in Cardiff. Priority schemes within the LTP five-year programme will focus on walking networks connecting to the Council's neighbourhood service hubs and have been prioritised to coincide with the development of these. Future priorities for walking interventions will be determined through the process for developing Cardiff's Integrated Network Map through the Active Travel (Wales) Act 2013.

1.5.9 **A Cardiff Capital Region Metro Study (2013):** The Metro Study sets out a strategic regional plan for developing the Metro, which is "a turn up and go integrated transport network that will connect over 70% of the population of the Cardiff City Region, developed in a way that enables and/or enhances developments at strategic sites, maximises economic benefits & facilitates regeneration." The Cardiff North West Corridor is identified as the highest priority of the project, encompassing new routes and stations to facilitate the medium term expansion of Cardiff, from Cardiff Bay to Rhondda Cynon Taf via Creigiau and a link to Taff's Well to support redevelopment and help alleviate congestion on the A470.

1.5.10 **Cardiff Capital Region (2014):** In March 2014, Welsh Government announced its intention to designate South East Wales as the Cardiff Capital Region, a city region centred on Cardiff. A City Region Board has been established, which includes members from local authorities and the private and education sectors. The Welsh Government's LTP Guidance requires local authorities to consult the Board on their LTPs. Cardiff's LTP has been sent to the Cardiff Capital Region Board for comment.

1.5.11 **Draft Planning (Wales) Bill and Positive Planning Consultation:** Changes to the planning process recommended by Welsh Government through this Bill include the introduction of a tier of strategic plan making. Strategic Development Plans (SDPs) would include the strategic elements of LDPs, such as housing, employment, transport, gypsy and traveller provision, minerals and waste, with an SDP required for the Cardiff City Region area. It is proposed that LDPs in this area will be required to be aligned with the relevant SDP and would have a narrower focus than under the current system.

1.5.12 **One Planet City (CCC 2013):** One Planet City sets out how Cardiff will respond positively to retain a strong economy, protect and optimise the use of the environment and reduce resource consumption in the face of challenges such as climate change and rising energy prices and insecurity. Actions are outlined which encourage and enable sustainable and active travel choices and to make the modal shift away from car based transport.

1.5.13 **Cardiff Corporate Plan 2014 - 2017 (CCC 2014):** CCC's Corporate Plan states that a world class city will be created within the Local Development Plan timescale (by 2026) through the delivery of appropriate infrastructure and transport. It identifies key projects as:

- Providing a new strategic public transport corridor including a Tram Train connection between Cardiff Bay via the City Centre to North West Cardiff into Rhondda Cynon Taf
- New Bus Rapid Transit links and extended bus networks to support major Greenfield site development sites in North East Cardiff (in Deposit LDP)
- Investigating the potential for a Rapid Transit route and new interchanges east of Cardiff
- Investigating potential Rapid Transit connections between Cardiff Central and key settlements in the Vale of Glamorgan including Cardiff Airport
- Continuing to develop and deliver active travel projects (cycling and walking) across the city.

1.5.14 **Cardiff Health, Social Care and Well Being Operational Plan 2011 – 2014:** This three year plan describes the strategic vision and direction for the Council and the local health board and builds on progress already made to effect health improvements and reduce health inequalities. It aims to ensure that residents of Cardiff are able to enjoy a healthy, active and long life, with prompt access to appropriate health and social care services when needed. It states that Cardiff will focus on "Healthy urban planning and healthy transport will be promoted in order to create an environment that supports healthy lifestyles."

2.0   Issues, Opportunities and Interventions

2.1.1   Cardiff experiences most of the transport issues identified in the Welsh Government's LTP Guidance (June 2014). The table below sets out the issues identified in the Guidance which are most relevant to the city. (Ref 1 - 14). It also identifies a number of additional issues which are of particular significance and relevance to the city and its future development (Ref 15 – 24).

2.1.2   Cardiff's Core Transport Strategy seeks to tackle these issues through a number of strategic high level interventions which prioritise the improvements outlined below.

2.1.3   Developing the strategic public transport network including:
- development of rapid transit routes e.g. City Centre - Cardiff Bay and North West Corridor (City Centre extending through North West Cardiff with potential connections to Rhondda Cynon Taff area)
- strategic bus corridor development and bus priority measures
- expansion of the city's bus network – new routes, additional services and interchange facilities
- development of a multi-modal transport hub at Cardiff Central in conjunction with re-development of Central Square
- enhanced public transport access and interchange in the Cardiff Enterprise Zone.

2.1.4   Developing the active travel network including:
- developing and expanding the strategic cycle network (Enfys)
- measures to make neighbourhoods walkable
- speed management measures including 20mph limits.

2.1.5   Positively managing the highway network to support sustainable travel including:
- bus priority and gating at key junctions to reduce bus journey times and improve journey time reliability
- junction and crossing improvements to reduce severance and encourage active travel.

2.1.6   The role which these High Level Interventions have in addressing the key transport issues are shown in the table below. The range of schemes through which these interventions will be delivered are also listed and further information, including delivery timescale and costs, can be found in Section 3, Plan Period to 2015 – 2020.

Ref	Evidence	What is the Issue?	What do we want to achieve? (Outcome)	How do we intend to achieve this? (High Level Intervention)	Action Required (Schemes)
1	Bus network maps and timetable information	Existing and planned out of centre employment sites may be poorly served by public transport	Improved access to jobs	• Development of rapid transit routes • Strategic bus corridor development • Expansion of the city's bus network development of a multi-modal transport hub at Cardiff Central • Enhanced public transport access and interchange - Cardiff Enterprise Zone. • Developing the Active Travel Network • Positively managing the highway network to support sustainable travel.	• Walkable Neighbourhoods Programme • Cardiff Strategic Cycle Network (Enfys) programme • Bus programme - Strategic Bus Network • Cardiff Capital Region Metro programme • Interchanges programme – rail station access improvements • Park and Ride programme • Highway programme - Strategic Junction Improvements • Highway programme – Strategic Highway Improvements • Road Safety programme.
2	Bus timetable information	Lack of evening and weekend bus provision - leads to difficulties in accessing employment opportunities and reliance	Improved access to jobs Modal shift to bus	• Development of rapid transit routes • Strategic bus corridor development • Expansion of the city bus network • Development of a multi-modal transport hub at Cardiff Central • Enhanced public transport	• Walkable Neighbourhoods Programme • Cardiff Strategic Cycle Network (Enfys) programme • Bus programme - Strategic Bus Network • Cardiff Capital Region Metro programme • Interchanges programme – rail station access improvements

Ref	Evidence	What is the Issue?	What do we want to achieve? (Outcome)	How do we intend to achieve this? (High Level Intervention)	Action Required (Schemes)
		on private car		• access and interchange - Cardiff Enterprise Zone. • Developing the Active Travel Network • Positively managing the highway network to support sustainable travel.	• Park and Ride programme • Road Safety programme.
3	Bus network information and timetable data	Bus access to existing and emerging employment sites requires interchange and multiple operator trips making journeys more complex and less attractive	Improved access to jobs Easy to use public transport services Integrated ticketing	• Development of rapid transit routes • Strategic bus corridor development • Expansion of the city bus network • Development of a multi-modal transport hub at Cardiff Central • Enhanced public transport access and interchange - Cardiff Enterprise Zone. • Developing the Active Travel Network • Positively managing the highway network to support sustainable travel	• Walkable Neighbourhoods Programme • Cardiff Strategic Cycle Network (Enfys) programme • Bus programme - Strategic Bus Network • Cardiff Capital Region Metro programme • Interchanges programme – rail station access improvements • Park and Ride programme • Highway programme - Strategic Junction Improvements • Highway programme – Strategic Highway Improvements • Road Safety programme.

Ref	Evidence	What is the Issue?	What do we want to achieve? (Outcome)	How do we intend to achieve this? (High Level Intervention)	Action Required (Schemes)
4	Multiple Index of Deprivation Car ownership data Access to health services by public transport often poor	People without access to a car may be excluded from accessing some job and leisure opportunities	Bus services that enable communities to access employment / services Maximise potential to use bus and/or rail to access key employment and other sites Improved non car travel opportunities between communities and healthcare sites	• Development of rapid transit routes • Strategic bus corridor development • Expansion of the city bus network • Development of a multi-modal transport hub at Cardiff Central • Enhanced public transport access and interchange - Cardiff Enterprise Zone. • Developing the Active Travel Network • Positively managing the highway network to support sustainable travel	• Walkable Neighbourhoods Programme • Cardiff Strategic Cycle Network (Enfys) programme • Bus programme - Strategic Bus Network • Cardiff Capital Region Metro programme • Interchanges programme – rail station access improvements • Park and Ride programme • Highway programme - Strategic Junction Improvements • Highway programme – Strategic Highway Improvements • Road Safety programme.

Ref	Evidence	What is the Issue?	What do we want to achieve? (Outcome)	How do we intend to achieve this? (High Level Intervention)	Action Required (Schemes)
5	Census data - population density Mode share data	Dispersed settlement patterns have implications for accessibility and access to key services, consequently there is a greater dependence on the private car	Improved access to jobs and services by sustainable and active travel.	• Development of rapid transit routes • Strategic bus corridor development • Expansion of the city bus network • Development of a multi-modal transport hub at Cardiff Central • Enhanced public transport access and interchange - Cardiff Enterprise Zone. • Developing the Active Travel Network • Positively managing the highway network to support sustainable travel	• Walkable Neighbourhoods Programme • Cardiff Strategic Cycle Network (Enfys) programme • Bus programme - Strategic Bus Network • Cardiff Capital Region Metro programme • Interchanges programme – rail station access improvements • Park and Ride programme • Highway programme - Strategic Junction Improvements • Highway programme – Strategic Highway Improvements • Road Safety programme.
6	NHS consolidation Rail and bus network plans and timetable	Changes in locations of key services such as health are likely to increase car travel and may isolate some	Improved access to jobs and services by sustainable and active travel.	• Development of rapid transit routes • Strategic bus corridor development • Expansion of the city bus network • Development of a multi-modal transport hub at Cardiff Central	• Walkable Neighbourhoods Programme • Cardiff Strategic Cycle Network (Enfys) programme • Bus programme - Strategic Bus Network • Cardiff Capital Region Metro programme • Interchanges programme – rail

Ref	Evidence	What is the Issue?	What do we want to achieve? (Outcome)	How do we intend to achieve this? (High Level Intervention)	Action Required (Schemes)
	information	communities		- Enhanced public transport access and interchange - Cardiff Enterprise Zone - Developing the Active Travel Network - Positively managing the highway network to support sustainable travel.	- station access improvements - Park and Ride programme - Highway programme - Strategic Junction Improvements - Highway programme – Strategic Highway Improvements - Road Safety programme.
7	Rail and bus network plans, timetable and fare information	Lack of available affordable transport for some communities. Need to tackle the problems many people encounter in accessing work, education and healthcare	Affordable access to jobs, services and education	- Development of rapid transit routes - Strategic bus corridor development - Expansion of the city bus network - Development of a multi-modal transport hub at Cardiff Central - Enhanced public transport access and interchange - Cardiff Enterprise Zone - Developing the Active Travel Network - Positively managing the highway network to support sustainable travel	- Walkable Neighbourhoods Programme - Cardiff Strategic Cycle Network (Enfys) programme - Bus programme - Strategic Bus Network - Cardiff Capital Region Metro programme - Interchanges programme – rail station access improvements - Park and Ride programme - Highway programme - Strategic Junction Improvements - Highway programme – Strategic Highway Improvements - Road Safety programme.

Ref	Evidence	What is the Issue?	What do we want to achieve? (Outcome)	How do we intend to achieve this? (High Level Intervention)	Action Required (Schemes)
8	Travel to work data	A high proportion of commuter trips are less than 5km and could potentially be undertaken by active travel modes	Improved access by active travel modes	• Developing the Active Travel Network • Positively managing the highway network to support sustainable travel.	• Walkable Neighbourhoods Programme • Cardiff Strategic Cycle Network (Enfys) programme • Bus programme - Strategic Bus Network • Cardiff Capital Region Metro programme • Interchanges programme – rail station access improvements • Park and Ride programme • Highway programme - Strategic Junction Improvements • Highway programme – Strategic Highway Improvements • Road Safety programme.
10	Journeys to work predominantly focused on main towns	Opportunities to increase mode share of public transport and active travel	Increased opportunities to access employment in town centres by public transport and active travel.	• Development of rapid transit routes • Strategic bus corridor development • Expansion of the city bus network • Development of a multi-modal transport hub at Cardiff Central • Enhanced public transport access and interchange -	• Walkable Neighbourhoods Programme • Cardiff Strategic Cycle Network (Enfys) programme • Bus programme - Strategic Bus Network • Cardiff Capital Region Metro programme • Interchanges programme – rail station access improvements • Park and Ride programme

Ref	Evidence	What is the Issue?	What do we want to achieve? (Outcome)	How do we intend to achieve this? (High Level Intervention)	Action Required (Schemes)
				Cardiff Enterprise Zone • Developing the Active Travel Network • Positively managing the highway network to support sustainable travel.	• Highway programme - Strategic Junction Improvements • Highway programme – Strategic Highway Improvements • Road Safety programme.
11	Employment growth areas not aligned with housing growth areas	Increased need to travel and for longer distance to access job opportunities	Good public transport links to employment growth areas	• Development of rapid transit routes • Strategic bus corridor development • Expansion of the city bus network • Development of a multi-modal transport hub at Cardiff Central • Enhanced public transport access and interchange - Cardiff Enterprise Zone • Developing the Active Travel Network • Positively managing the highway network to support sustainable travel.	• Walkable Neighbourhoods Programme • Cardiff Strategic Cycle Network (Enfys) programme • Bus programme - Strategic Bus Network • Cardiff Capital Region Metro programme • Interchanges programme – rail station access improvements • Park and Ride programme • Highway programme - Strategic Junction Improvements • Highway programme – Strategic Highway Improvements • Road Safety programme.

Ref	Evidence	What is the Issue?	What do we want to achieve? (Outcome)	How do we intend to achieve this? (High Level Intervention)	Action Required (Schemes)
12	High proportion of journeys are made by car Strategic highway network is congested Existing and anticipated high levels of travel across the Wales - England border for commuting, tourism etc.	Increased congestion on strategic road network, increased journey times and reduced journey time reliability for the movement of people and goods	Reduced congestion, greater resilience on strategic road network Reduced congestion, improved journey time reliability, greater network resilience Improved potential for travel by non car modes for commuting and other purposes	• Development of rapid transit routes • Strategic bus corridor development • Expansion of the city bus network • Development of a multi-modal transport hub at Cardiff Central • Enhanced public transport access and interchange - Cardiff Enterprise Zone • Developing the Active Travel Network • Positively managing the highway network to support sustainable travel.	• Walkable Neighbourhoods Programme • Cardiff Strategic Cycle Network (Enfys) programme • Bus programme - Strategic Bus Network • Cardiff Capital Region Metro programme • Interchanges programme – rail station improvements • Park and Ride programme • Highway programme - Strategic Junction Improvements • Highway programme – Strategic Highway Improvements • Road Safety programme.

Ref	Evidence	What is the Issue?	What do we want to achieve? (Outcome)	How do we intend to achieve this? (High Level Intervention)	Action Required (Schemes)
14	Feedback from user groups	Lack of accessible and seamless ticketing hinders encouragement of modal shift and limits travel horizons, particularly for more deprived communities.	Seamless journeys and integrated ticketing	- Development of rapid transit routes - Strategic bus corridor development - Expansion of the city bus network - Development of a multi-modal transport hub at Cardiff Central - Positively managing the highway network to support sustainable travel - Enhanced public transport access and interchange - Cardiff Enterprise Zone Developing the Active Travel Network.	- Bus programme - Strategic Bus Network - Cardiff Capital Region Metro programme - Interchanges programme – rail station access improvements - Park and Ride programme.
15	Stats Wales 2012	The need for Safer Roads	Reduction in casualties by distance travelled	- Better Passenger Facilities - Public Transport Access & Interchange - Strategic Cycle Network - Development of rapid transit routes - Strategic bus corridor development - Expansion of the city bus network	- Walkable Neighbourhoods Programme - Cardiff Strategic Cycle Network (Enfys) programme - Bus programme - Strategic Bus Network - Cardiff Capital Region Metro programme - Interchanges programme – rail station access improvements

Ref	Evidence	What is the Issue?	What do we want to achieve? (Outcome)	How do we intend to achieve this? (High Level Intervention)	Action Required (Schemes)
				• Developing the Active Travel Network • Positively managing the highway network to support sustainable travel.	• Park and Ride programme • Highway programme - Strategic Junction Improvements • Highway programme – Strategic Highway Improvements • Road Safety programme.
16	Department of Energy and Climate Change - Local and regional CO2 emissions estimates for 2005-2009	The need for Better Air Quality	Reduction in harmful emissions/ particles and associated improvement in air quality.	• Development of rapid transit routes • Strategic bus corridor development • Expansion of the city bus network • Developing the Active Travel Network • Positively managing the highway network to support sustainable travel.	• Walkable Neighbourhoods Programme • Cardiff Strategic Cycle Network (Enfys) programme • Bus programme - Strategic Bus Network • Cardiff Capital Region Metro programme • Interchanges programme – rail station access improvements • Park and Ride programme • Highway programme - Strategic Junction Improvements • Highway programme – Strategic Highway Improvements • Road Safety programme.

Ref	Evidence	What is the Issue?	What do we want to achieve? (Outcome)	How do we intend to achieve this? (High Level Intervention)	Action Required (Schemes)
17	Welsh Health Survey: Local Authority and Health Board Results 2009 and 2010	Addressing health problems due to car dependent lifestyles	Increased levels of physical activity	• Developing the Active Travel Network • Positively managing the highway network to support sustainable travel.	• Walkable Neighbourhoods Programme • Cardiff Strategic Cycle Network (Enfys) programme • Bus programme - Strategic Bus Network • Cardiff Capital Region Metro programme • Interchanges programme – rail station access improvements • Road Safety programme.
18	Mode share data Travel to work data	Pressures from inbound commuting	Modal shift to healthier and more sustainable forms of travel / Improved potential for travel by non car modes for commuting and other purposes	• Development of rapid transit routes • Strategic bus corridor development • Expansion of the city bus network • Development of a multi-modal transport hub at Cardiff Central • Enhanced public transport access and interchange - Cardiff Enterprise Zone • Developing the Active Travel Network • Positively managing the highway network to support	• Walkable Neighbourhoods Programme • Cardiff Strategic Cycle Network (Enfys) programme • Bus programme - Strategic Bus Network • Cardiff Capital Region Metro programme • Interchanges programme – rail station access improvements • Park and Ride programme • Highway programme - Strategic Junction Improvements • Road Safety programme.

Ref	Evidence	What is the Issue?	What do we want to achieve? (Outcome)	How do we intend to achieve this? (High Level Intervention)	Action Required (Schemes)
				sustainable travel.	
19	Anticipated levels of growth projected by the LDP	Impact of 40,000 additional jobs and 41,100 homes	Reduced congestion, improved journey time reliability, greater resilience on strategic road network Improved potential for travel by non car modes for commuting and other purposes	• Development of rapid transit routes • Strategic bus corridor development • Expansion of the city bus network • Development of a multi-modal transport hub at Cardiff Central • Enhanced public transport access and interchange - Cardiff Enterprise Zone. • Developing the Active Travel Network • Positively managing the highway network to support sustainable travel.	• Walkable Neighbourhoods Programme • Cardiff Strategic Cycle Network (Enfys) programme • Bus programme - Strategic Bus Network • Cardiff Capital Region Metro programme • Interchanges programme – rail station access improvements • Park and Ride programme • Highway programme - Strategic Junction Improvements • Highway programme – Strategic Highway Improvements • Road Safety programme.
20	Anticipated level of traffic increase based on the growth projected	Achieving 50:50 modal split in order to accommodate the projected 32% net	Modal shift to healthier and more sustainable forms of travel / Improved potential for travel by non car	• Development of rapid transit routes • Strategic bus corridor development • Expansion of the city bus network • Development of a multi-	• Walkable Neighbourhoods Programme • Cardiff Strategic Cycle Network (Enfys) programme • Bus programme - Strategic Bus Network • Cardiff Capital Region Metro

Ref	Evidence	What is the Issue?	What do we want to achieve? (Outcome)	How do we intend to achieve this? (High Level Intervention)	Action Required (Schemes)
	by the LDP	increase in traffic	modes for commuting and other purposes	modal transport hub at Cardiff Central • Enhanced public transport access and interchange - Cardiff Enterprise Zone • Developing the Active Travel Network • Positively managing the highway network to support sustainable travel.	programme • Interchanges programme – rail station access improvements • Park and Ride programme • Highway programme - Strategic Junction Improvements • Highway programme – Strategic Highway Improvements • Road Safety programme.
21	Mode share data Travel to work data	Achieving mode shift on LDP candidate sites	Reduced congestion, improved journey time reliability, greater resilience on strategic road network Improved potential for travel by non car modes for commuting and other purposes	• Development of rapid transit routes • Strategic bus corridor development • Expansion of the city bus network • Development of a multi-modal transport hub at Cardiff Central • Enhanced public transport access and interchange - Cardiff Enterprise Zone • Developing the Active Travel Network • Positively managing the highway network to support	• Walkable Neighbourhoods Programme • Cardiff Strategic Cycle Network (Enfys) programme • Bus programme - Strategic Bus Network • Cardiff Capital Region Metro programme • Interchanges programme – rail station access improvements • Park and Ride programme • Highway programme - Strategic Junction Improvements • Highway programme – Strategic Highway Improvements • Road Safety programme.

Ref	Evidence	What is the Issue?	What do we want to achieve? (Outcome)	How do we intend to achieve this? (High Level Intervention)	Action Required (Schemes)
				sustainable travel.	
22	Mode share data Travel to work data	LDP modelling and candidate site assessments have shown that all the major development sites will need to be supported by significant new transport infrastructure and improvements to existing transport facilities	Reduced congestion, improved journey time reliability, greater network resilience Improved potential for travel by non car modes for commuting and other purposes	• Development of rapid transit routes • Strategic bus corridor development • Expansion of the city bus network • Development of a multi-modal transport hub at Cardiff Central • Enhanced public transport access and interchange - Cardiff Enterprise Zone • Developing the Active Travel Network • Positively managing the highway network to support sustainable travel.	• Walkable Neighbourhoods Programme • Cardiff Strategic Cycle Network (Enfys) programme • Bus programme - Strategic Bus Network • Cardiff Capital Region Metro programme • Interchanges programme – rail station access improvements • Park and Ride programme • Highway programme - Strategic Junction Improvements • Highway programme – Strategic Highway Improvements • Road Safety programme.
23	High proportion of journeys are made by car Strategic	Cardiff's role as the key employment and service centre/trip destination of the city region and the	Improved local and regional connectivity and accessibility Reduced congestion,	• Development of rapid transit routes • Strategic bus corridor development • Expansion of the city bus network • Development of a multi-	• Walkable Neighbourhoods Programme • Cardiff Strategic Cycle Network (Enfys) programme • Bus programme - Strategic Bus Network • Cardiff Capital Region Metro

Ref	Evidence	What is the Issue?	What do we want to achieve? (Outcome)	How do we intend to achieve this? (High Level Intervention)	Action Required (Schemes)
	highway network is congested Existing and anticipated high levels of travel regionally across South East Wales for commuting, tourism etc.	associated transport issues with reference to connectivity and accessibility at both the regional and local levels	improved journey time reliability, greater network resilience Improved potential for travel by non car modes for commuting and other purposes	modal transport hub at Cardiff Central • Enhanced public transport access and interchange - Cardiff Enterprise Zone • Developing the Active Travel Network • Positively managing the highway network to support sustainable travel.	programme • Interchanges programme – rail station access improvements • Park and Ride programme • Highway programme - Strategic Junction Improvements • Highway programme – Strategic Highway Improvements • Road Safety programme.
24	Patronage data Feedback from user groups Timetables	Rising patronage resulting in over-loaded peak time trains into Cardiff Loaded trains can prevent peak time access at	Improved carrying capacity and providing scope for more services, potentially through Electrification, but also dependent on franchises.	• Development of rapid transit routes • Strategic bus corridor development • Expansion of the city bus network • Development of a multi-modal transport hub at Cardiff Central • Enhanced public transport access and interchange - Cardiff Enterprise Zone	• Walkable Neighbourhoods Programme • Cardiff Strategic Cycle Network (Enfys) programme • Bus programme - Strategic Bus Network • Cardiff Capital Region Metro programme • Interchanges programme – rail station access improvements • Park and Ride programme.

Ref	Evidence	What is the Issue?	What do we want to achieve? (Outcome)	How do we intend to achieve this? (High Level Intervention)	Action Required (Schemes)
		Cardiff stations e.g. Lisvane and Llanishen Outdated rolling stock Low frequency of services west of Cardiff and on City Line trains e.g. no Sunday services. Local Stations lack visibility and passenger facilities Poor interchange with buses	Improved passenger facilities and interchange with bus services.	• Developing the Active Travel Network • Positively managing the highway network to support sustainable travel.	

2.1.7 The following table sets out why the below issues (identified in the WG LTP Guidance) have not been included in the issues analysis.

Ref	Evidence	What is the Issue?	Why issue has not been included
9	Population decline in rural areas	Declining population can result in withdrawal of local services, reducing access to key services resulting in further depopulation.	Cardiff is a predominantly urban area, experiencing high levels of population growth.
13	Freight user groups	Provision for freight vehicles inadequate on a number of key strategic highway corridors.	Very few restrictions on access are in place in the local authority area. Appropriate facilities for freight are available within the urban area of Cardiff, including EuroFreight at Wentloog, rail to ports/steelworks and options for distribution where access is required.

3.0 Plan Period to 2015 – 2020

3.1 Introduction

3.1.1 The tables below outline the proposed schemes which have been identified for the plan period 2015 – 2020. Annual programmes of infrastructure schemes will include bids for external funding, scheme preparation and implementation, in conjunction with the Council's annual budget setting and subject to the approval of the Council's capital budgets. Delivery of schemes featured in the LTP will be subject to sufficient capital funding being available from external grant sources and from the Council's own capital budgets through the annual budget-setting process. Indicative funding sources are identified in the table.

3.1.2 The following packages are included.

3.1.3 **Walkable Neighbourhoods programme:** The Council is developing a Walkable Neighbourhoods programme which will include a series of interventions to improve conditions for pedestrians and make walking trips easier in local neighbourhoods. The initial focus will be District Centres and Neighbourhood hubs which form key trip attractors, with schemes including improved crossing facilities, footpath improvements, new routes and speed management measures. A methodology has been developed which provides a robust approach to identifying local areas for inclusion in the programme. The table below provides indicative phasing of the proposed schemes, initially across the local areas which have been identified through the application of the methodology, and in a second phase through their fit against the development of neighbourhood service hubs. Medium and longer term schemes (from 2020 onwards) will be identified in the course of further network planning which will be carried out to meet the Council's duty under the Active Travel (Wales) Act 2013.

3.1.4 **Cardiff Strategic Cycle Network (Enfys) programme:** The Council has established a rolling programme of proposed cycling schemes to construct the network identified in the Cardiff Strategic Cycle Network (Enfys) Plan. The short term schemes set out below are required to complete the Enfys Plan within the next five years. Section 4 sets out indicative annual investment which will be required to extend the Enfys network in the medium and longer term. Schemes to be delivered within the 2020 - 2030 timeframe will be identified through the preparation of Cardiff's Integrated Network Map as required under the Active Travel (Wales) Act 2013.

3.1.5 **Bus programme - Strategic Bus Network:** Expanding and improving the city's bus network is a central strand of the Council's transport strategy. Services on existing strategic corridors currently experience problems with delay and journey time reliability. Investments in junction improvements and measures to provide bus priority through bus lanes and gating are necessary to tackle these problems. The general radial nature of the existing local bus network limits opportunities for making orbital cross-city journeys and shorter trips between neighbourhoods and local trip attractors by bus. Addressing these problems requires investment in infrastructure to facilitate the introduction of new services

and local interchanges in order to extend the range of destinations which can be reached by bus and thus extend travel choices. The 5 year programme includes a range of proposed schemes to tackle problems on strategic corridors of the local bus network and facilitate a shift from car to bus travel for trips into Cardiff and local trips within the city. In addition to supporting bus services through infrastructure improvements, CCC will also continue to administer the All Wales Concessionary Fare scheme in line with WG Guidance and encourage pass take up among those eligible, as well as contributing to the rollout of the All Wales Entitlement Card. Actions arising from further work by Bus Policy Advisory Group (BPAG) will be implemented where appropriate. CCC will continue to facilitate the high profile use of Cardiff Bus Station by Traws Cymru services.

3.1.6 **Cardiff Capital Region Metro programme:** Key projects are outlined in the plans set out by Welsh Government for developing a Cardiff Capital Region Metro connecting the wider South East Wales region. The LTP 5 year programme includes the phased implementation of the proposed rapid transit link between Cardiff Bay and Cardiff Central (via Callaghan Square) and a rapid transit corridor in North West Cardiff to Pontyclun in Rhondda Cynon Taff.

3.1.7 **Improving access to local stations programme:** Cardiff has 18 local stations located across the Taff Vale, Rhymney and City/Coryton lines which serve a large residential catchment and provide access to the city centre and other key trip attractors. The LTP 5 year programme includes improvements to the environment around local rail stations which will facilitate access from the surrounding area and transfer to other modes. Proposed measures include signing, walking improvements and passenger information.

3.1.8 **Park and Ride programme:** Proposals for developing a park and ride facility at Junction 33 in line with the strategic site in this area which could intercept traffic on the A470, north of Cardiff.

3.1.9 **Highway programme - Strategic Junction Improvements and Strategic Highway Improvements:** These programmes include proposed improvements to junctions and highways in order to manage network resilience, improve access and road safety, and facilitate sustainable travel and development. CCC does not have any plans to de-trunk roads within the local authority area.

3.1.10 **Road Safety programme:** Infrastructure improvements to address specific, local road safety concerns focus on four main strands – measures around schools (School Safety Zones) such as enforcing parking restrictions outside schools, improving pedestrian infrastructure (Footway Safety Schemes), protecting pedestrians and cyclists (Vulnerable Road User Schemes) and General Road Safety Schemes. Proposed schemes are primarily developed in response to concerns raised by residents, Councillors and schools. This programme also includes Road Safety Education and Grant Revenue (e.g. Kerbcraft, cycle training) and the School Crossing Patrol Service.

3.1.11 These programmes represent the core of the Council's activities to improve the city's strategic transport network. However, in delivering the LTP and LDP, the

Council will continue to pursue opportunities to implement infrastructure improvements for other transport modes including facilities for freight, coach, water transport and port-related development as well as exploring initiatives to encourage use of low carbon fuels. The provision of new and improved interchanges / bus hubs is also subject to ongoing discussion. CCC will also continue to collaborate with key partners to promote the development of Cardiff Wales International Airport as the aviation gateway to the capital city of Wales and the Cardiff City Region.

3.1.12 CCC will continue to maintain and develop key partnerships with major employers, education institutions and healthcare providers. Work is ongoing with sites such University Hospital of Wales to identify potential improvements to transport services and facilities which will improve access.

3.1.13 CCC will also continue to secure travel plans through the planning process and partnership working with key stakeholders such as major employers, education institutions and the Welsh Government's Regional Travel Plan Coordinator.

3.2   Abbreviations used in schemes table

3.2.1 The following abbreviations are used in the table below and in Section 4:

CCC – City of Cardiff Council	RSP – Road Safety Programme
DC – Developer Contributions	RTP - Regional Transport Plan
GCF – General Capital Fund	SRiC - Safe Routes in Communities
LA – Local Authority	SSZ – School Safety Zone Programme
HP - Hubs Programme	S106 – Section 106
LTF – Local Transport Fund	WG – Welsh Government
NHRP - Neighbourhood Renewal Programme	WGM – Welsh Government Metro
NR – Network Rail	WGRS – Welsh Government Road Safety
RCT – Rhondda Cynon Taf	WRSF – Welsh Road Safety Framework
RS - Road Safety	WNP - Walkable Neighbourhoods Plan
RSG – Road Safety Grant	

3.3 Prioritisation process

3.3.1 WG's LTP Guidance requires the programme of infrastructure schemes to be prioritised. Cardiff's schemes have been prioritised through the following process.

1. Scoring of schemes against four strategic priorities

Each scheme has been scored against the strategic priorities outlined below. These priorities reflect and support WG's strategic priorities highlighted in the LTP guidance and the strategic transport priorities of CCC's LDP as expressed in its strategic and detailed transport policies. The complementarity of these priorities/policies is captured in the following table:

LTP PRIORITIES	WELSH GOVERNMENT PRIORITIES					LDP STRATEGIC TRANSPORT POLICIES							
	Economic Growth, Safeguard Jobs Focus On City Regions, Enterprise Zones, Local Growth Zones	Safe & Affordable Access To Employment Sites	Tackling Poverty; Improve Accessibility For Disadvantaged Communities	Encourage Safer, Healthier & Sustainable Travel	Delivery Of The Strategic Network	KP8 - Sustainable Transport	T1 Walking and Cycling	T2 Strategic Rapid Transit and Bus Corridors	T 3 Transport Interchanges	Policy T4 Regional Transport hub	T 5 Managing Transport Impacts	T6 Impact on Transport Networks and Services	T7 Strategic Transport Infrastructure
Supports Delivery Of Strategic Network	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Supports Active/ Sustainable Travel	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Supports LDP Or Metro Or Regional Transport	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Deliverability	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

Every proposed scheme was scored against each LTP priority using the following 4 point scale:

3   Good evidence of support for priority
2   Adequate evidence of support for priority
1   Poor evidence of support for priority
0   No evidence of support for priority.

2.   Ranking of schemes

The schemes were then ranked using a two-step process.

Step 1: Ranking in order of schemes' overall score against each LTP priority

This ranked all schemes in the order of their score resulting in those schemes with a higher overall score being ranked higher than the schemes with a lower overall score.

Step 2: Ranking in order of schemes' overall score plus timescale for delivery

This allowed schemes to be ranked through a combination of their overall score and the chronology of their delivery, allowing priorities for delivery to be determined where schemes had achieved identical scores. The highest scoring schemes scheduled for the earliest delivery are given a higher ranking (and higher priority) than schemes with the same overall score which will be delivered later.

3.4   Prioritised programme of schemes

Scheme Name	LA	Description	Source	Timescale	Local, Regional or National Significance	Cost £000s	Funding Source(s)	SUPPORTS DELIVERY OF STRATEGIC NETWORK	SUPPORTS ACTIVE/ SUSTAINABLE TRAVEL	SUPPORTS LDP OR METRO OR REGIONAL TRANSPORT	DELIVERABILITY	PRIORITY
A470 Corridor Phase 1 Coryton to Gabalfa	CCC	Bus Lane Improvements	LDP	2015/16	Regional	3,000	GCF/ LTF	3	3	3	3	12
Strategic Cycle Network Route 5 (Penarth Road Corridor) Phase 2	CCC	Provision of Toucan crossing at the junction of Penarth Road/Sloper Road	Enfys Plan	2015/16	Regional	150	GCF	3	3	3	2	11

Strategic Cycle Network Route 50 Strategic route between Wood Street and Leckwith Road	CCC	Phase 1 – traffic calming and improvements for pedestrians and cyclists.	Enfys Plan	2015/16	Regional	300	GCF/WGM/SRiC	3	3	3	2	11
North Cardiff Community Route (NCCR) Phase 4 Amber & Blue Routes	CCC	Develop signed route between A469 Thornhill Road and Coryton Interchange, Northern Avenue.	Enfys Plan	2015/16	Regional	84	GCF/WGM	3	3	3	2	11
Strategic Cycle Network Route 1 Junction of King George V Drive and Route 1 King George V Drive East	CCC	Provide cycle exemption to road closure	Enfys Plan	2015/16	Regional	3	GCF	3	3	3	2	11
Strategic Cycle Network Route 1 Junction of Heath Halt Road with Heath Park	CCC	Alter junction marking and minor works to make cycle route more legible	Enfys Plan	2015/16	Regional	4	GCF	3	3	3	2	11

Avenue												
A469 Corridor Phase 1 Gabalfa to Maes-y-coed Road	CCC	Multi-modal transport and road safety improvements	LDP	2015/16	Regional	2,000	GCF/ LTF	3	3	3	2	11
Improving access to local stations Danescourt, Waun-Gron Park and Fairwater	CCC	Improvements to access, signage and information at the station	RTP	2015/16	Local	30	GCF/LTF	2	3	3	3	11
Strategic Cycle Network Route 34 (Tyndall St/Schooner Way route)	CCC	Crossing and link at Sanquahar/Windsor Road Junction Scheme	Enfys Plan	2016/17	Regional	30	GCF/LTF	3	3	3	2	11
Improving access to local stations Radyr, Ty Glas and Birchgrove	CCC	Improvements to access, signage and information at the station	RTP	2016/17	Local	28	GCF/LTF	2	3	3	3	11

Improving access to local stations Heath High Level, Rhiwbina, Coryton and Whitchurch	CCC	Improvements to access, signage and information at the station	RTP	2017/18	Local	86	GCF/LTF	2	3	3	3	11
City Centre Hub Mill Lane	CCC	Provide contraflow or exemption to one way street and utilise wide raised signal-controlled crossing of St Mary Street	Enfys Plan	2018/19	Regional	54	GCF/LTF	3	3	3	2	11
Strategic Cycle Network Route 5 Penarth Road between Taff Bridge and Tresillian Terrace	CCC	Widen cycle lanes to 1.8m and provide ASLs at Tresillian Way junction	Enfys Plan	2018/19	Regional	13	GCF/LTF	3	3	3	2	11
Improving access to local stations Llanishen, Lisvane and Thornhill and Llandaff	CCC	Improvements to access, signage and information at the station	RTP	2018/19	Local	72	GCF/LTF	2	3	3	3	11
Improving access to local stations Grangetown & Cardiff Bay	CCC	Improvements to access, signage and information at the station	RTP	2019/20	Local	22	GCF/LTF	2	3	3	3	11

Strategic Cycle Network Route 6 (Cowbridge Road East & West)	CCC	New bridge over the river Ely	Enfys Plan	2015/16	Regional	420	GCF/LTF/ WGM	3	3	3	1	10
Eastern Bay Link Phase 1	CCC	New Link Road between Queensgate Roundabout and Ocean Way Roundabout	Wales Transport Strategy / LDP	2015/16	National/ Regional	TBC	WG	3	2	3	2	10
Strategic Cycle Network Route 6 South of Ely Bridge Roundabout, Cowbridge Road East	CCC	Toucan/Zebra crossing to provide connection for cyclists on to south bound carriageway	Enfys Plan	2016/17	Regional	100	WGM	3	3	3	1	10
Strategic Cycle Network Route 50 (Leckwith) Phase 2	CCC	Toucan crossing and associated works on Leckwith Road to provide link between Sloper Road/Jubilee Park and Lawrenny Avenue	Enfys Plan	2016/17	Regional	100	GCF	3	3	3	1	10
Strategic Cycle Network Route 34 Tyndall Street Schooner Way	CCC	Provide Toucan Crossings on each arm of Tyndall Street /Schooner Way junction, connection of traffic free links and speed management measures on Schooner Way	Enfys Plan	2016/17	Regional	360	GCF/LTF	3	3	3	1	10

Strategic Cycle Network Route 34 Tyndall Street Bute Dock County Hall Hemmingway Road	CCC	Off road cycle track link between existing Bute East Dock cycle track and Hemmingway Road cycle lane	Enfys Plan	2016/17	Regional	7	GCF/LTF	3	3	3	1	10
Strategic Cycle Network Route 34 Northern end of Bute East Dock cycle track	CCC	Convert footway to shared-use cycle track, provide direction signing and amend existing street furniture to reduce obstruction	Enfys Plan	2016/17	Regional	3	GCF/LTF	3	3	3	1	10
Strategic Cycle Network Routes 34/3 Signing Cardiff Bay Newport Road	CCC	Provide branded Enfys directional signing of Route 34 to link Route 3	Enfys Plan	2016/17	Regional	20	GCF/LTF	3	3	3	1	10
Strategic Cycle Network Route 3 Cycling Route Newport to Cardiff	CCC	Phase 1 on road and off road infrastructure to provide strategic link to east Cardiff and Newport	Enfys Plan	2016/17	Regional	170	GCF/LTF	3	3	3	1	10
City Centre Improvements	CCC	Bus Lanes, bus gates, bus priority schemes	LDP	2016/17 to 2018/19	Regional	5,000	GCF/ LTF/ DC	3	3	3	1	10

A470 Corridor Phase 2 Routes from Gabalfa/Heath Hospital to City Centre	CCC	Bus Lane Improvements	LDP	2016/17 to 2019/20	Regional	3,000	GCF/ LTF	3	3	3	1	10
City Centre Junction Improvements	CCC	Multi-modal transport and road safety improvements	LDP	2016/17 to 2019/20	Regional	15,000	GCF/ LTF	3	3	3	1	10
A469 Corridor Phase 2 North of Maes-y-coed Road	CCC	Multi-modal transport and road safety improvements	LDP	2016/17 to 2020/22	Regional	3,000	GCF/ LTF	3	3	3	1	10
Part-time bus lanes on Strategic Routes	CCC	Part time bus lanes during peak periods on the approach to junctions on strategic routes	LDP	2016/17 to 2025/26	Local/ Regional	2,000	GCF/ LTF/ DC	3	3	3	1	10
Strategic Cycle Network Route 3 Cycling Route Newport to Cardiff	CCC	Phase 2 on road and off road infrastructure to provide strategic link to east Cardiff and Newport	Enfys Plan	2017/18	Regional	170	GCF/LTF	3	3	3	1	10
Strategic Cycle Network Route 6	CCC	Install Cycle Lanes on Grand Avenue	Enfys Plan	2017/18	Regional	28	GCF/LTF	3	3	3	1	10

Strategic Cycle Network Route 6 Junction of Cowbridge Road West & Vincent Road	CCC	Introduce toucan crossing to link to Cowbridge Road cycle track	Enfys Plan	2017/18	Regional	162	GCF/LTF	3	3	3	1	10
Strategic Cycle Network Route 80 Excelsior Road between Western Avenue and link to Taff Trail	CCC	Improve off road cycle tracks + new Toucan Crossing across Excelsior Road to link Taff Trail to existing off road route	Enfys Plan	2017/18	Regional	162	GCF/LTF	3	3	3	1	10
Strategic Cycle Network Route 9 North Road eastern footway between Gabalfa underpass and St Georges Road	CCC	Relocate parking from footway to carriageway, resurface path, relocate street furniture, improve running surface	Enfys Plan	2017/18	Regional	93	GCF/LTF	3	3	3	1	10

Strategic Cycle Network Route 9 Pantbach Road, Rhiwbina	CCC	Provide cycle lanes with no centre line (including ASLs at Ty Wern Road)	Enfys Plan	2017/18	Regional	27	GCF/LTF	3	3	3	1	10
Strategic Cycle Network Route 9 Footbridge over Western Avenue within Gabalfa Interchange	CCC	Remove cyclists dismount signs. Potentially provide higher parapets	Enfys Plan	2017/18	Regional	34	GCF/LTF	3	3	3	1	10
Strategic Cycle Network Route 3 South western approach to junction of Newport Road and Rover Way	CCC	Widen existing cycle track at expense of ASL and provide toucan crossings; also improve visibility for pedestrians and cyclists crossing Rover Way	Enfys Plan	2017/18	Regional	114	GCF/LTF	3	3	3	1	10
Strategic Cycle Network Route 3 Newport Road corridor east of Rover Way	CCC	Widen existing shared use cycle track and improve levels / gradients.	Enfys Plan	2017/18	Regional	27	GCF/LTF	3	3	3	1	10

Strategic Cycle Network Route 3 Newport Road outside 'Carpet Right'	CCC	Relocate street furniture associated with bus stop	Enfys Plan	2017/18	Regional	7	GCF/LTF	3	3	3	1	10
Strategic Cycle Network Route 3 Newport Road bus stop outside no. 302	CCC	Relocate street furniture associated with bus stop	Enfys Plan	2017/18	Regional	5	GCF/LTF	3	3	3	1	10
New Road	CCC	Bus Lane and Cycle Improvements	LDP	2017/18	Local	400	GCF/ LTF/ DC	3	3	3	1	10
A48 Eastern Avenue	CCC	Bus Lane Improvements	LDP	2017/18	Regional	1,000	GCF/ LTF/ DC	3	3	3	1	10
Cardiff Bay Barrage link	CCC	The development of a bus priority link across Cardiff Barrage	LDP	2017/18	Regional	1,400	GCF/ LTF/ DC	3	3	3	1	10
North East Corridor	CCC	Bus Lane and Priority improvements	LDP	2017/18 to 2025/26	Regional	3,000	GCF/ LTF/ DC	3	3	3	1	10
North West Corridor/ Llantrisant Road	CCC	Bus Lane and Priority improvements (Phase 2)	LDP	2017/18 to 2025/26	Regional	5,000	GCF/ LTF/ DC	3	3	3	1	10
Strategic Cycle Network Route 6 Castle Street	CCC	Provide cycle lane full length eastbound, (cycles utilise bus lanes westbound)	Enfys Plan	2018/19	Regional	54	GCF/LTF	3	3	3	1	10

City Centre Hub Boulevard de Nantes and part of North Road linking to Castle Street	CCC	Provide cycle lanes to link up with bus lanes. Provide ASLs at junctions	Enfys Plan	2018/19	Regional	108	GCF/LTF	3	3	3	1	10
City Centre Hub	CCC	Pedestrian link between Mill Street and Tredegar Street - Permit cycling	Enfys Plan	2018/19	Regional	5	GCF/LTF	3	3	3	1	10
City Centre Hub Junction of Churchill Way and Bridge Street	CCC	Provide toucan crossings / cycle stage to signals	Enfys Plan	2018/19	Regional	54	GCF/LTF	3	3	3	1	10
City Centre Hub North Road between Queen Street and Greyfriars Road	CCC	Provide cycle track on east side	Enfys Plan	2018/19	Regional	30	GCF/LTF	3	3	3	1	10
City Centre Hub Custom House Street near Hope Street	CCC	Improve signing and visibility of cycle facility	Enfys Plan	2018/19	Regional	2	GCF/LTF	3	3	3	1	10
City Centre Hub Adam Street near University of South Wales	CCC	Westbound cycle lane	Enfys Plan	2018/19	Regional	21	GCF/LTF	3	3	3	1	10

City Centre Hub Adam Street under railway bridge	CCC	Provide cycle lanes in both directions	Enfys Plan	2018/19	Regional	21	GCF/LTF	3	3	3	1	10
Strategic Cycle Network Route 35 Junction of Central Link and Adam Street	CCC	Provide toucan crossing and associated cycle track links (potential diagonal crossing)	Enfys Plan	2018/19	Regional	189	GCF/LTF	3	3	3	1	10
Strategic Cycle Network Route 50 Tudor Street	CCC	Westbound approach to Clare Street junction	Enfys Plan	2018/19	Regional	41	GCF/LTF	3	3	3	1	10
City Centre Hub Tyndall Street between Central Link and Bute Street	CCC	Widen northern footway to 3m minimum and convert to shared use cycle track	Enfys Plan	2018/19	Regional	175	GCF/LTF	3	3	3	1	10
Strategic Cycle Network Route 50 Plaza in front of Cardiff Central railway station	CCC	Permit cycling and provide indicated East-West cycle route	Enfys Plan	2018/19	Regional	7	GCF/LTF/ S106	3	3	3	1	10

Strategic Cycle Network Route 50 Wood Street between station access and bridge over River Taff	CCC	Widen and convert southern footway to shared use	Enfys Plan	2018/19	Regional	21	GCF/LTF/ S106	3	3	3	1	10
Strategic Cycle Network Route 50 Wood Street	CCC	Wood Street junction with access to railway station – Advanced Stop Lines	Enfys Plan	2018/19	Regional	2	GCF/LTF/ S106	3	3	3	1	10
City Centre to Cardiff Bay	CCC	Phase 1 – conversion of existing single track to tram	Metro/ LDP	2019/20	National	15-17,000	WG, NR, CCC, DC	3	3	3	1	10
City Centre to Cardiff Bay	CCC	Phase 2 – twin track and link via Callaghan Square to Central Station	Metro/ LDP	2019/20	National	40-47,000	WG, NR, CCC, DC	3	3	3	1	10
City Centre to Cardiff Bay	CCC	Phase 3 – Remove Herbert Street bridge and realign tracks to be at grade	Metro/ LDP	2019/20	National	8-9,000	WG, NR, CCC, DC	3	3	3	1	10
Pontyclun to Cardiff	CCC / RCT	New rapid transit link to connect Pontyclun with Cardiff via strategic sites serving major new development.	Metro/ LDP	2019/20	National	150,000-250,000	WG, NR, CCC, RCT, DC	3	3	3	1	10
City Centre Hub Queen Street	CCC	Phase 1 Risk assessment & option generation, and possible streetworks to	Enfys Plan	2019/20	Regional	135	GCF/LTF	3	3	3	1	10

		facilitate introduction of cycling											
Strategic Cycle Network Route 1	CCC	Path through Cathays Cemetery between Allensbank Road and Fairoak Road to provide continuous link and permit cycling	Enfys Plan	2019/20	Regional	67	GCF/LTF	3	3	3	1	10
Strategic Cycle Network Route 1 Allensbank Road between Wedal Road and King George V Drive	CCC	Review waiting restrictions and provide traffic calming and ASLs at signal controlled junctions	Enfys Plan	2019/20	Regional	41	GCF/LTF	3	3	3	1	10
Strategic Cycle Network Route 1 Allensbank Road south of Wedal Road	CCC	Review waiting restrictions and provide traffic calming	Enfys Plan	2019/20	Regional	34	GCF/LTF	3	3	3	1	10
Strategic Cycle Network Newport Road corridor, Southern Way to Queen	CCC	Review of existing route to improve on-carriageway cycle facilities	Enfys Plan	2019/20	Regional	135	GCF/LTF	3	3	3	1	10

Street												
Strategic Cycle Network Route 6 Cowbridge Road East between Victoria Park Road West and the bridge carrying the City Line railway	CCC	Westbound improvements for on-road or off-road cycling	Enfys Plan	2019/20	Regional	13	GCF/LTF	3	3	3	1	10
Strategic Cycle Network Route 7 Llantrisant Road between Bridge Street and Danescourt Way	CCC	Provide cycle lanes and reduce build-out widths. Provide off road cycle track on one side	Enfys Plan	2019/20	Regional	189	GCF/LTF	3	3	3	1	10
Strategic Cycle Network Route 42 River Ely	CCC	New bridge over River Ely and associated path improvements either side	Enfys Plan	2019/20	Regional	540	GCF/LTF	3	3	3	1	10

Ely Roundabout (Cowbridge Road/Western Avenue)	CCC	Traffic gates/bus gates on the north and east approaches	LDP	2019/20	Regional	500	GCF/ LTF/ DC	3	3	3	1	10
Newport Road/ Fitzalan Pl/ West Grove	CCC	Multi-modal transport and road safety improvements	LDP	2016/17	Regional	900	GCF/ LTF/ DC	3	3	2	1	9
Park and Ride at Junction 33	CCC	1,000 space car park and interchange facilities to high quality public transport	LDP	2016/17 to 2025/26	National/ Regional	5,000	DC	3	2	3	1	9
Pentwyn Interchange	CCC	Signalisation of Gyratory	LDP	2019/20	Regional	1,300	GCF/ LTF/ DC	3	2	3	1	9
Pentwyn Link Interchange	CCC	Signalisation of Gyratory	LDP	2019/20	Regional	1,000	GCF/ LTF/ DC	3	2	3	1	9
Strategic Cycle Network Minor Network Improvements	CCC	Ongoing small scale quality improvements to existing routes	Enfys Plan	Annual	Regional	250	GCF/LTF	2	3	2	2	9
Llanedeyrn Interchange	CCC	Signalisation of Southern Arm	LDP	2019/20	Regional	860	GCF/ LTF	3	1	1	3	8
Junction 30 of M4 Motorway	CCC	Dedicated left turns and signal improvements	LDP	2019/20	Regional	2,200	GCF/ LTF/ DC	3	1	3	1	8
WNP Llanrumney, St Mellons and Ely & Caerau (Phase 1)	CCC	Improvements in pedestrian facilities and environment surrounding Hubs and Neighbourhood Centres.	WNP, HP, NHRP	2015/16	Local	494	GCF/LTF	1	3	1	2	7

WNP Splott, Grangetown and Llandaff North (Phase 1)	CCC	Improvements in pedestrian facilities and environment surrounding Hubs and Neighbourhood Centres.	WNP, HP, NHRP	2016/17	Local	510	GCF/LTF/ DC	1	3	1	2	7
WNP Llanishen and Pentwyn (Phase 1) and Llanrumney (Phase 2)	CCC	Improvements in pedestrian facilities and environment surrounding Hubs and Neighbourhood Centres.	WNP, HP, NHRP	2017/18	Local	499	GCF/LTF	1	3	1	2	7
WNP St. Mellons, Ely & Caerau and Splott (Phase 2)	CCC	Improvements in pedestrian facilities and environment surrounding Hubs and Neighbourhood Centres.	WNP, HP, NHRP	2018/19	Local	387	GCF/LTF	1	3	1	2	7
WNP Grangetown, Llanishen and Llandaff North (Phase 2)	CCC	Improvements in pedestrian facilities and environment surrounding Hubs and Neighbourhood Centres.	WNP, HP, NHRP	2019/20	Local	411	GCF/LTF/ DC	1	3	1	2	7
Road Safety Education	CCC	Provide road safety education and support revenue spending of the Road Safety Grant Revenue	RSP	Annual	Local	620	RSG	0	3	1	3	7
Road Safety Grant Revenue	CCC	Deliver Road Safety programme in accordance with the Road Safety Grant	WRSF	Annual	Local	865	RSG	0	3	1	3	7
School Crossing Patrol Service	CCC	Improve pedestrian safety when crossing the road on school trips	RSP	Annual	Local	1955	RSG	0	3	1	3	7

General Road Safety Schemes (115 schemes identified)	CCC	Schemes including Urban Safety Management, Pedestrian Crossing Facilities, Junction Improvements and Traffic Calming	RSP	Annual (Prioritised according to objective prioritisation tool)	Local	7,553	GCF/RSG	1	3	1	1	6
Vulnerable Road User Schemes (75 schemes identified)	CCC	Schemes including Pedestrian Crossing Facilities, Junction Improvements and Traffic Calming	RSP	Annual (Prioritised according to objective prioritisation tool)	Local	4,766	GCF/RSG	1	3	1	1	6
Footway Safety Schemes (31 schemes identified)	CCC	Improvements/upgrades to existing footways	RSP	Annual (Prioritised according to objective prioritisation tool)	Local	1,453	GCF/RSG	1	3	1	1	6
School Safety Zones (59 schools identified)	CCC	School Safety Zones to include Zebra crossing and traffic calming to reduce vehicle speeds to 20mph, junction improvements, parking restrictions and pedestrian infrastructure improvements	SSZ	Annual (Prioritised according to objective prioritisation tool)	Local	6,015	GCF/RSG	1	3	1	1	6

3.5 Programme costs overview 2015/2016 – 2019/2020

Programme	Cost (£000s)
Walkable Neighbourhood Programme	2,300
Enfys	5,000
Bus	30,000
Metro	320,000
Access to local stations	240
Park & Ride	5,000
Highway Junction Improvements	22,000
Highway Improvements	(To be confirmed by Welsh Government)
Road Safety	20,000
Road Safety – Revenue	3,400
Total	408,000 +

4.0 Medium and Longer Term Aspirations 2020 - 2030

4.1 Introduction

4.1.1 This section outlines Cardiff's medium and longer term aspirations from 2020 - 2030. These aspirations represent a natural progression of the transport network improvements which will be delivered through the five year programme to 2020 (set out in Section 3).

4.1.2 Strategic transport infrastructure delivery beyond 2020 will take place in the context of:

- Cardiff's Local Development Plan (LDP), including key infrastructure schemes featured in the LDP Infrastructure Plan (Background Technical Paper No.6: Infrastructure Plan). The Infrastructure Plan highlights the need for the Strategic Sites identified in the LDP to be properly integrated with transport infrastructure and sets out the key elements of transport infrastructure to be brought forward during the period of the LDP.

- Requirements for Active Travel (cycling and walking), Buses/Rapid Transit, Park and Ride, the Rail Network and the Road Network which are outlined in the Infrastructure Plan. The timescales for these works are closely linked with the delivery of the LDP. For example, the phasing of the strategic rapid transit corridor improvements and associated transport hubs will be informed by masterplanning work for the Deposit LDP Strategic Sites and the availability of funding. An Express / Core Bus network will be delivered through an ongoing rolling programme over the next 10 years. The early phases of work will be focused on providing priorities that serve the Deposit LDP Strategic Sites (which will be informed by detailed masterplanning work) and improved regional bus services.

4.2 Programmes 2020 - 2030

Scheme Name	Local Authority	Description	Source	Local, Regional or National Significance	Cost (£000s)	Funding Source(s)
Walkable Neighbourhoods Programme Schemes 2020 - 2030 including Phase 2 Pentwyn and Phase 3 Ely & Caerau, Splott, Grangetown, Llandaff North, Llanishen and Pentwyn	CCC	Improvements in pedestrian facilities and environment surrounding Hubs and Neighbourhood Centres. Onward development of Walkable Neighbourhoods Programme	Walkable Neighbourhoods Programme/ Active Travel Integrated Network Plan	Local	900 per annum x 10 years 2020 - 2030	GCF/LTF/ Transport Grant/SRiC/NHRP
Strategic Cycle Network 'Enfys 2' Network Extension 2020 - 2030	CCC	Annual Pre-delivery and scheme implementation programme	Enfys 2/Active Travel Integrated Network Plan	Regional	1000 per annum x 10 years 2020 - 2030	GCF/LTF/ SRiC/WG Road Safety/S106/ CIL
Strategic Cycle Network - Minor Network Improvements	CCC	Ongoing small scale quality improvements to existing routes	Enfys Plan	Regional	50 per annum x 10 years	GCF/LTF

Scheme Name	Local Authority	Description	Source	Local, Regional or National Significance	Cost (£000s)	Funding Source(s)
Strategic Cycle Network - City Centre Hub: Queen Street	CCC	Queen Street Risk assessment & option generation, and possible streetworks to facilitate introduction of cycling - Phase 2	Enfys Plan	Regional	135	GCF/LTF/SRiC/WGRS/S106/CIL
Bus programme – Strategic Bus Network	CCC	Annual Pre-delivery and scheme implementation programme	LDP/Metro	Regional	15,000	GCF/ LTF/ DC/ S106/CIL
Cardiff Capital Region Metro programme	CCC	Delivery in line with WG Strategic Metro programme	Metro	Regional	250,000	WG
Highway programme - Strategic Junction and Highway Improvements	CCC	Delivery in line with LDP infrastructure plan	LDP	Regional	18,000	GCF/ LTF/ DC

Scheme Name	Local Authority	Description	Source	Local, Regional or National Significance	Cost (£000s)	Funding Source(s)
Road Safety Schemes 2020 - 2030	CCC	Annual Pre-delivery and scheme implementation programme	Road Safety Programme	Local	4,000 per annum x 10 years	GCF/SRiC/WG Road Safety/S106/ CIL
Road Safety Education	CCC	Provide road safety education and support revenue spending of the Road Safety Grant Revenue	Road Safety Programme	Local	124 x 10 years	RSG
Road Safety Grant Revenue	CCC	Deliver Road Safety programme in accordance with the Road Safety Grant	Welsh Road Safety Framework	Local	173 x 10 years	RSG
School Crossing Patrol Service	CCC	Improve pedestrian safety when crossing the road on school trips	Road Safety Programme	Local	391 x 10 years	RSG

Scheme Name	Local Authority	Description	Source	Local, Regional or National Significance	Cost (£000s)	Funding Source(s)
Eastern Bay Link Phase 2	CCC	Improved road links between Ocean Way and the A48 Eastern Avenue	Wales Transport Strategy/ LDP	National/ Regional	TBC	WG/ DC

4.3   Programme costs overview 2020/21– 2029/2030

Programme	Cost (£000s)
Walkable Neighbourhood Programme	9,000
Enfys	11,000
Bus	15,000
Metro	250,000
Highway and Junction Improvements	18,000
Road Safety	40,000
Road Safety – Revenue	6,900
Eastern Bay Link	(TBC)
Total	350,000 +

5.0   Statutory Checks

5.1   Introduction

5.1.1   This section provides details of the Statutory Screening Check which has been undertaken for the Local Transport Plan (LTP). The Statutory Screening Check ensures that all City of Cardiff Council strategies, policies and activities comply with relevant statutory obligations and responsibilities, including the Equality Act (2010), the Sustainable Development Bill, Habitats Regulation Assessment and Strategic Environmental Assessment.

5.1.2   Sewta, the regional transport body for South East Wales which produced the Regional Transport Plan (RTP) was dissolved at the end of March 2014. The RTP five year programme runs up until the end of March 2015.

5.1.3   An extensive body of research was carried out to support the RTP and monitoring data is also available which provides an overview of current trends and projected future demands. This is further supported and updated by the research and modelling carried out in producing Cardiff's Local Development Plan (LDP). Data from the annual Ask Cardiff survey, as well as scheme based monitoring, also provides valuable information about, for example, where members of public would want to see transport spending prioritised and public satisfaction with different modes of travel. Detailed consultation is conducted for every scheme which is developed and implemented.

5.2   Equality Impact Assessment

5.2.1   An Equality Impact Assessment (EqIA) has been produced for the LTP.

5.2.2   An EqIA was carried out for the RTP. This has been referenced in developing the EqIA for the LTP.

5.2.3   An EqIA was carried out for the LDP in relation to public transport measures needed to support the delivery of the plan. This has been referenced in developing the EqIA for the LTP.

5.2.4   The EqIA indicates that although the LTP is designed to promote a balanced programme of investment and support for all modes of travel, elements within the programme of schemes it sets out could potentially have a differential impact, bringing both positive and negative impacts. It concludes that it is essential a separate EqIA be prepared for each scheme which is developed, and the implications considered before a decision is taken as to implementation. It also sets out a number of detailed actions related to the protected characteristics to be carried out during scheme development and implementation; for example, actions to promote accessibility improvements and personal safety.

5.3   Strategic Environmental Assessment

5.3.1   Strategic Environmental Assessments (SEA) are required by European

legislation to ensure environmental considerations are integrated into the preparation and adoption of plans and programmes. These requirements have been considered in the context of the LTP as follows.

5.3.2 The LTP includes a five year programme of transport investment comprising a combination of public transport, active travel, and highway network improvements. The LTP five year programme represents a continuation of the five year programme of schemes that has been delivered by the Council as part of the Sewta RTP. The schemes within the programme are consistent with the RTP objectives, policies and outcomes which have already been subject to SEA through the SEA for the RTP.

5.3.3 Similarly, the schemes featured in the LTP five year programme will support the delivery of the strategy for the future growth of Cardiff set out in the Cardiff Local Development Plan (2006 – 2026). The LDP strategic objectives, growth options and policies, including the suite of strategic and detailed transport policies, have all been subject to a sustainability appraisal and SEA.

5.3.4 In view of the consistency of the LTP with the RTP and LDP and the fact that these plans have both been subject to SEA, a new SEA for the LTP is not considered necessary.

5.4   Health Impact Assessment

5.4.1 Health Impact Assessments (HIA) are not a statutory check but are recommended by Welsh Government in several guidance documents, including Welsh Transport Appraisal Guidance (Weltag). A full HIA was carried out on the strategy, objectives, policies and intended outcomes of the LDP. As the LTP programme is consistent with the LDP and will support its delivery it is not considered necessary to carry out a separate process for the LTP.

5.5   Habitat Regulation Assessment

5.5.1 Habitat Regulation Assessments (HRA) are required by European legislation for plans and projects likely to have significant effects on European Natura 2000 and Ramsar Sites. The LDP strategic objectives, growth options and policies, including the suite of strategic and detailed transport policies, have all been subject to an HRA. Having reviewed the HRA requirements, a separate assessment has not been carried out for the LTP as the schemes featured in the LTP five year programme are being developed to support the delivery of strategy for the future growth of Cardiff as set out in the LDP. Therefore, an HRA for the LTP is not considered necessary.

5.6   Sustainable Development

5.6.1 An assessment has been carried out against the City of Cardiff Council's 7 Citizen focused Outcomes (for example, People in Cardiff are healthy, People in Cardiff have a clean, attractive and sustainable environment and Cardiff has a thriving and prosperous economy).

5.6.2 The assessment concluded that promoting active and sustainable forms of travel has a valuable contribution to make to all elements of sustainability in Cardiff – economic, social and environmental. For example:

- contributing to reducing carbon emissions and lowering levels of other harmful greenhouse gases
- promoting health and wellbeing by increasing levels of physical activity
- promoting safer environments by increasing levels of walking and cycling, providing higher levels of natural surveillance as well as encouraging community interactions
- reducing economic inactivity by providing access to a range of modes of travel
- enhancing competitiveness and supporting economic growth by facilitating the efficient movement of goods and people through lower journey times and increased journey time reliability.

6.0   Consultation

6.1   Overview

6.1.1 This Section sets out the consultation which has been undertaken to inform the City of Cardiff Council's (CCC) Local Transport Plan (LTP).

6.2   Existing Data

6.2.1 Sources of existing data, for example, the annual Ask Cardiff Survey and the 2014 Sewta (South East Wales Transport Alliance) Regional Travel Survey have been used to provide an overview of public opinion on where transport funding should be directed and levels of satisfaction with existing facilities (see 6.7 and 6.8).

6.3   Neighbouring Authorities

6.3.1 Extensive consultation has been carried out with neighbouring authorities on cross-boundary schemes and schemes with regional significance. Previously conducted through Sewta in relation to the Regional Transport Plan (RTP) programme, this dialogue is on-going and vital for the successful delivery of schemes. CCC officers and Cabinet Members have met with counterparts at the Vale of Glamorgan, Newport, and Rhondda Cynon Taf Councils in regard to cross-boundary strategic transport schemes and schemes with regional significance.

6.3.2 The development of Cardiff's Local Development Plan (LDP) has also involved consultation with neighbouring authorities to ensure that cross boundary issues for the Deposit Plan Strategy (including the transport elements of the Infrastructure Plan) are consistent with the development plans prepared by neighbouring authorities. In particular, the overall Strategy and level of growth proposed is considered to strike the right balance having regard to the evidence base and also taking account of Cardiff's wider regional responsibilities in adopting an approach that still allows other authorities to fulfil their objectives, and those set out in the Wales Spatial Plan. In order to assist the LDP in meeting the tests of soundness relating to cross boundary issues and compatibility with LDPs prepared by neighbouring authorities, a Working Group was set up in November 2011, made up of the 10 south east Wales LPAs and other participating organisations in the South East Wales Strategic Planning Group (SEWSPG). The South East Wales Economic Forum (SEWEF) and the South East Wales Transport Authority (Sewta) were also invited to participate. The purpose of the working group was to discuss the cross-boundary implications of the emerging issues involved in the preparation of the LDP.

6.4   City Region Board

6.4.1 In line with the WG LTP guidance, the LTP was sent to the City Region Board through the Welsh Government as part of the consultation process. Feedback from the City Region Board will be incorporated as appropriate when it is

received.

6.5   Local Transport Plan consultation

6.5.1   Consultation on the LTP was carried out with elected members through a Cabinet meeting, a full Council meeting and a Scrutiny Committee meeting.

6.5.2   Key public sector service areas have also been provided with the LTP as part of the consultation process including Planning, Education, Health, Economic Development and Housing.

6.6   Scheme consultation

6.6.1   Consultation with stakeholders (e.g. residents, Members and Council departments) on individual schemes is carried out at several stages during the inception and design process.

6.7   Ask Cardiff Survey

6.7.1   'Ask Cardiff' is an annual survey offering the public the opportunity to share their views on a wide range of CCC delivered services. Over 4,400 and 6,000 members of the public participated respectively in the 2012 and 2013 survey which covered topics including Transport, Waste and Budget Priorities.

6.7.2   The responses from the 2012 and 2013 Ask Cardiff Surveys to the question "What do you think are the main problems with travel and transport in Cardiff?" are provided in the table and chart 6.1 below. Congestion and the cost of parking were most commonly cited as problems in both years. The condition of the road network was the fourth most commonly cited problem in 2012 and the third in 2013. Illegal/inconsiderate parking moved up from eighth in 2012 to fourth in 2013.

6.7.3   The responses from the 2012 and 2013 Ask Cardiff Surveys to the question "What improvements would you like to see to transport in Cardiff, and what do you think Cardiff's priorities for future investment should be?" are discussed below.

6.7.4   In 2012, the most favoured improvements were an improved city centre transport interchange facility (44%), reduced congestion (43%) and tackling illegal and inconsiderate parking (40%). Reduced congestion (26%), cycling facilities (25%) and an improved city centre transport interchange facility (22%) were the most popular three priorities for investment.

6.7.5   In 2013, almost half (48.6%) of those responding wanted to see improvements to address congestion in Cardiff; this was also rated as the biggest priority for future investment, with 28.0% of respondents choosing this as one of their three options. Other areas highlighted for improvement were:

- Tackle illegal/inconsiderate parking (39.3%)

- Improved city centre transport interchange facility (39.2%)
- Cycling facilities and improved cycle routes (37.8%)
- Improved pedestrian facilities and walking routes (33.7%)

Other areas highlighted for investment were:
- Cycling facilities and improved cycle routes (25.4%)
- Tackle illegal/inconsiderate parking (19.2%)
- Improved city centre transport interchange facility (17.2%)
- Improved bus service frequency and reliability (16.1%).

Table 6.1 Problem Analysis, Ask Cardiff Survey results 2012 – 2013

Problem	Group	2012		2013	
Congestion	Road Network	1067	47%	1505	56%
Parking costs	Road Network	1039	46%	1376	51%
Condition of road network	Road Network	790	35%	1129	42%
Illegal/inconsiderate parking	Road Network	680	30%	932	35%
Parking availability	Road Network	758	34%	931	35%
Poor facilities for cycling	Cycling	647	29%	867	32%
Cost of public transport	Public Transport	768	34%	808	30%
Quality / cleanliness / accessibility / service on public transport	Public Transport	784	35%	813	30%
Frequency/availability of public transport	Public Transport	619	27%	638	24%
Bus station	Public Transport	802	36%	561	21%
Changes to city centre bus routes	Public Transport	447	20%	533	20%
Reliability of public transport	Public Transport	549	24%	432	16%
Any other (please specify)	Miscellaneous	338	15%	358	13%
Insufficient information about transport options	Information	254	11%	333	12%
No problems	Miscellaneous	53	2%	58	2%

Chart 6.1 Problem Analysis, Ask Cardiff Survey results 2012 – 2013
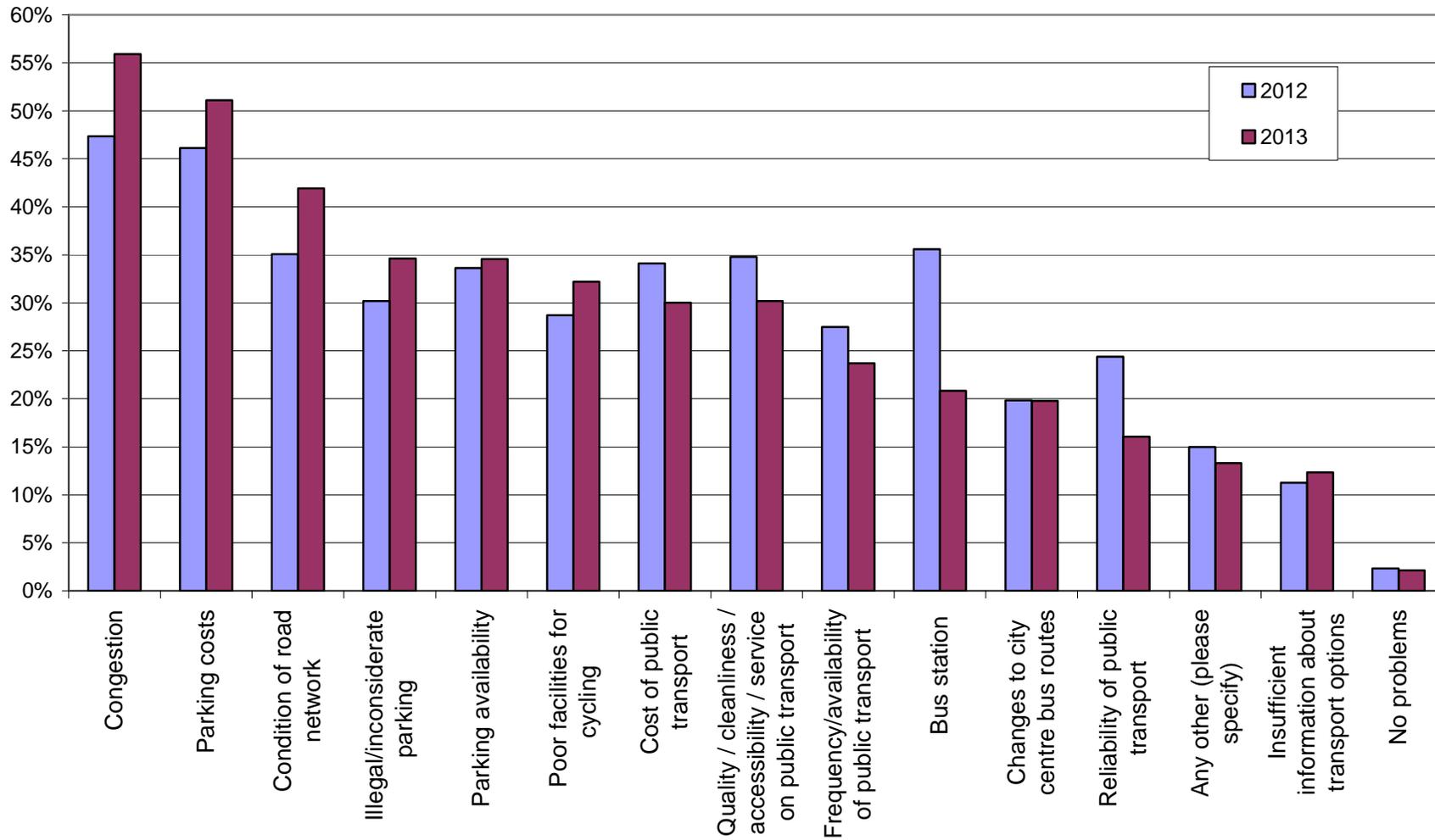
6.8 Sewta Regional Travel Survey

6.8.1 A baseline Regional Travel Survey was conducted by the former Sewta authorities in 2005. A follow up survey was then distributed in 2014 (primarily online, with some postal questionnaires sent out in Bridgend and Cardiff).

6.8.2 It should be noted that the 2014 survey received a lower response rate than the 2005 survey; a total of 1,869 responses to the survey which was less than three-quarters (73.7%) of the figure for 2005 when there were 2,537 responses. Over half of the responses were from Cardiff residents (56.1%). In addition, a socio-demographic analysis of the respondent profile indicates that some groups are slightly overrepresented – for example, women are slightly overrepresented as 57.9% of respondents were female and 42.1% were male. By comparison, figures from the Office of National Statistics' 2013 mid-year population estimates show that 51.0% of the population of South East Wales are female. Other groups are underrepresented – for example, those aged 16 to 24 and 65 plus and those identifying themselves as a disabled person and/or suffered from a limiting long term illness.

6.8.3 Respondents were asked to indicate where they thought more money should be spent on transport services by choosing up to five options from a list of twenty-nine possibilities. Regionally, the maintenance of roads (68.7%) and the maintenance of pavements (52.7%) were the most popular answers for all respondents in 2014. Off-road cycle paths was the next most popular, with 42%.

6.8.4 Just under three-quarters (72.4%) of respondents felt that the current level of spending on transport was appropriate; almost unchanged from the figure for 2005 of 73.1%. However, a greater proportion thought that expenditure should be increased (15.5% in 2014, compared with 8.2% in 2005). Around one in eight (12.1%) people believed that spending should be cut; down from almost one in five (18.4%) in 2005.

6.8.5 A pareto analysis has been carried out on the results to the question "Where do you think more money could be spent on transport services?", from respondents who live in Cardiff (see figure 6.3). The pareto technique suggests that some 80% of effects come from 20% of problems and indicates the major causes of a problem so that resources can be focused on the cause of issues with the most potential for improvement.

6.8.6 The pareto analysis below indicates that the main areas to be addressed are:
- Maintenance (roads and pavements)
- Improvements to bus services (e.g. frequency, punctuality)
- Integrated bus & train services (e.g. joint ticketing)
- Cycle paths & lanes (on-road and off-road)
- Road safety improvements (e.g. pedestrian crossings, speed reduction).

Table 6.2, Pareto analysis of Transport Spend, Regional Travel Survey 2014

Response	Number of responses	%age	Cumulative
Maintenance	1292	22%	22%
Improvements to bus services	1008	17%	39%
Integrated bus & train services	967	17%	56%
Cycle paths & lanes	711	12%	68%
Road safety improvements	624	11%	79%
Improvements to train services	586	10%	89%
More parking in town centres	213	4%	93%
New/wider roads	162	3%	96%
Park & ride services	135	2%	98%
Accessible services	87	2%	100%
Other	0	0%	100%
Total	5785	100%	100%

Chart 6.3, Pareto analysis of Transport Spend, Regional Travel Survey 2014

Pareto analysis of Cardiff Travel Survey data
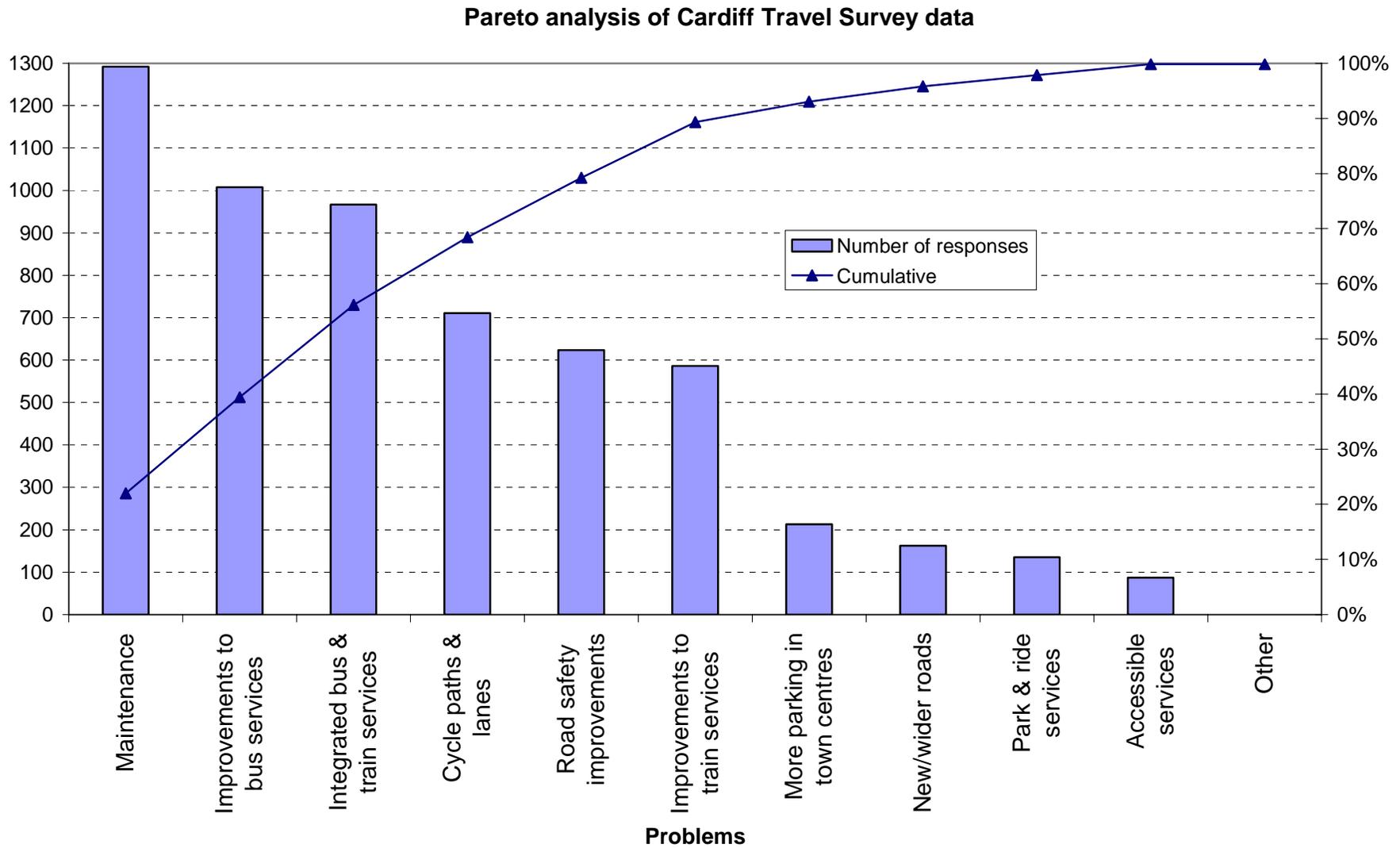
6.9   Problems and priorities

6.9.1   The Sewta and Ask Cardiff surveys provide an indication of public views on which transport measures should be prioritised and which problems need to be addressed. For example, it is clear from the Ask Cardiff survey that congestion is perceived as a major problem and a priority for investment in improvement. The impact of the projected LDP growth (a 32% net increase in traffic) on existing levels of congestion is reflected in the commitment within the LDP to ensure that 50% of all trips on the transport network are made by sustainable modes. The programme of schemes set out in both the five year programme (2015 – 2020) and medium-long programme (2020 – 2030) is intended to support this significant modal shift by providing safe, efficient and sustainable travel for all, and where public transport, walking and cycling providing real and desirable alternatives to car travel.

6.9.2   The condition of the road network is also a major concern for respondents of both the Ask Cardiff and Sewta surveys. CCC is currently developing a strategy for the longer term management of highway assets (e.g. carriageways, footways, cycleways and structures).

6.9.3   The survey responses indicate that improvements for cyclists are a clear public priority. The five year and medium-long term programme include a high level of investment in the Strategic Cycling Network.

6.9.4   Tackling illegal and inconsiderate parking is also a high priority that the Council is addressing through Civil Parking Enforcement, Moving Traffic Offences Enforcement, parking restrictions and park and ride.

7.0 Monitoring and Evaluation

7.1 Introduction

7.1.1 Monitoring and Evaluation plans have been developed for each programme, describing how each intervention and its impacts will be monitored.

7.1.2 Each Monitoring and Evaluation plan sets out the following:

- Need: the identified need that the intervention is intended to address
- Project description: a detailed description of the intervention
- Objectives: the objectives of the intervention
- Context: information surrounding the intervention
- Inputs: what resources were used to deliver the intervention
- Outputs: details of what was delivered
- Outcomes: the intended outcomes from the intervention
- Impact: details of the realised impacts of the scheme, whether they can be measured and if so, how
- Risks/lessons learnt: key risks that might affect the realisation of the proposed benefits, the mitigation of any adverse impacts and the risks to the recording of the anticipated impacts
- Timetable: for producing the evaluation report.

7.2 Walkable Neighbourhood Programme Monitoring and Evaluation plan

Scheme	Walkable Neighbourhood Schemes - LTP Evaluation and Monitoring
Need	Providing infrastructure and associated measures that will increase the numbers of people walking to access local services and facilities rather than travelling by car.
Project description	Delivery of a coordinated package of improvements to local walking environments in identified areas in Cardiff. WNP Schemes involve implementation of improved crossing facilities, quality of pavements, location of public transport facilities and implementation of security measures and are supported by partnership working. The schemes are phased to coincide with the delivery of other transport improvements, neighbourhood renewal schemes and the Council's programme of developing and installing local Hubs. Schemes will be delivered in phases which are related to walking distance/times from the Hubs.
Objectives	• Be based on a detailed understanding of travel patterns across Cardiff and in specific local areas • Be based on a detailed understanding of factors that prevent people walking as part of everyday journeys • Involve an audit of existing walking infrastructure • Focus on key walking trip attractors • Involve and engage with all key stakeholder groups including people that currently do not walk frequently

	• Be fully integrated with CCC's various transport, highways and neighbourhood renewal programmes and be part of a framework that ensures investment in walking infrastructure is strategic in nature, represents value for money and has maximum impact in terms of encouraging walking • Be fully integrated with actions to encourage active travel.
Context	Rising traffic levels, increased short trips by private car, increasing ownership of private cars, decreasing walk to school figures, difficulties in accessing local services and facilities and requirements under the Active Travel Act. **Baseline and 'Before' surveys** Surveys and consultations were undertaken to inform the development of Walkable Neighbourhoods schemes proposed. This provides: • A representation of existing 'before' walking patterns within the city • Specific consultation events obtaining walking information on residents within audited areas of initial implementation • Information on views and perceptions regarding walking. Additional pedestrian flow counts will be carried out at key locations within the implementation areas immediately prior to scheme implementation to provide baseline data for actual walking levels. Surveys will reflect the size of area affected by the schemes to be implemented, as well as the nature of the proposed measures. Data collection will be as follows: • Locations with the highest likely footfall routes within the areas, preferably with additional locations of pedestrian flow routes to ensure that a mix of route types are covered; • Survey locations will be determined by the nature of the measure to be implemented. For example, the locations of any proposed pedestrian crossings would represent the preferred survey location. • Surveys will cover the expected peak pedestrian flow periods, with surveys to cover 12 hour (daytime) or 24 hour periods if peak periods cannot be accurately estimated prior to surveying. • Surveys will be undertaken on neutral days during school term-times, with no other known local factors influencing walking levels; and • Surveys will obtain directional pedestrian flow data. 'After' surveys will be undertaken on an annual basis following a suitable period after implementation. These will be consistent with the 'before' surveys, to ensure that the results provide a direct comparison. Issues such as weather and lighting conditions will be taken into account and that these are as consistent as possible with before surveys. Where appropriate, 'after' questionnaire surveys will be undertaken to monitor the impact relating to views and perceptions of walking. This

	will be related to the initial consultation responses obtained during preparatory stages. Analysis of the impact on walking levels within the areas of implementation will evaluate the extent to which the implemented schemes have achieved the overall aim of increasing walking levels. To represent best value to CCC monitoring will be proportional to the level of investment in walking infrastructure facilities.
Inputs	• Cost of delivering the infrastructure improvements and partnership working with stakeholders • Before and after surveys.
Outputs	Schemes will include: crossing facilities; relocation of bus shelters and other street furniture; CCTV; widening of footways; improvement of footway quality; provision of new footways; dropped kerbs; tactile paving; off road links; local signage.
Outcomes	• Increased walking trips and interconnections with public transport on foot. • Increased numbers of children walking and cycling to school. • Decrease in the number of vehicles travelling and parking in the local area. • Decrease in the amount of antisocial behaviour. • Increased economic vibrancy of the local area.
Impact	• Increased walking trips and interconnections with public transport on foot - measured by footfall counts and through travel snapshot surveys at Council Hubs • Increased numbers of children walking and cycling to school - measured by Annual Travel Surveys • Decrease in the number of vehicles travelling and parking in the local area - measured by Traffic and Parking Counts • Decrease in the amount of antisocial behaviour - measured by Crime Statistics • Increased economic vibrancy of the wider local area - difficult to measure.
Risks	• Political (change of Council priorities) - align schemes to WG priorities and CCC wider principles which support specific priorities. • Funding (bidding processes, delay in notification of funding, lack of funding of complementary projects, shortfalls in any match funding) - ensure bids are reasonable, coordinated and timely. Ensure schemes can go ahead without complementary projects. Scope out other funding options. • Consultation outcomes (negative outcomes) - ensure benefits communicated well. • Delays in implementation (procurement, coordination with other projects, weather) - efficient project management; build in sufficient implementation timescales.
Timetable	The evaluation report will be undertaken at the first opportunity following the completion of data collection.

7.3 Cardiff Strategic Cycle Network programme Monitoring and Evaluation plan

Scheme	Development of Cardiff Strategic Cycle Network (Enfys)
Need	To provide a cohesive, safe and attractive network of cycle routes to facilitate local journeys by bicycle.
Project description	Development of infrastructure to provide continuous signed cycle routes and facilitate cycling on the highway network including the following: • On road cycle lanes and other measures to re-allocate road space to cyclists • Provision of segregated routes for cycling • Traffic calming • Filtered permeability measures • Toucan Crossings, Zebra Crossings • Junction modifications to facilitate cycle movements e.g. at signalised junctions • Cycle priority at junctions • Development and improvement of off-road routes including new traffic-free paths, path and footway widening, footway conversions etc.
Objectives	• To develop Cardiff Strategic Cycle Network (Enfys) - a cohesive, safe and attractive network of cycle routes to facilitate local journeys by bicycle. • To provide high quality routes and facilities which enable people to make daily journeys by bicycle. • To increase levels of cycling and the share of daily journeys made by bicycle.
Context	Rising traffic levels, increases in short trips by private car, increasing ownership of private cars, difficulties in accessing local services and facilities, complaints about the quality of cycling infrastructure and requirements under the Active Travel Act. **Cycle Flows** 1. Annual Cordon Counts – Annual 1 day (12hr) manual traffic surveys at: • River Taff screen line • Central Area/City Centre Cordon • Cardiff Bay Cordon. 2. Before and after manual surveys for parts of the cycle network affected by new schemes/improvements: • Key sections of main cycle route • Links to the main route • Junctions/crossings where improvements have been carried out.

	'After' surveys will be undertaken on an annual basis following a suitable period after implementation. These will be consistent with the 'before' surveys, to ensure that the results provide a direct comparison. Issues such as weather and lighting conditions will be taken into account and that these are as consistent as possible with before surveys.
	Where appropriate, 'after' questionnaire surveys will be undertaken to monitor the impact relating to views and perceptions of route users. This will be related to the initial consultation responses obtained during preparatory stages.
	Analysis of the impact on cycling levels within the areas of implementation will evaluate the extent to which the implemented schemes have achieved the overall aim of improving facilities and increasing cycling levels.
	To represent best value to CCC monitoring will be proportional to the level of investment in the infrastructure facilities*.
	3. Automated Route Counter data (on traffic free paths).
	Travel to Work Annual Ask Cardiff Survey - to monitor share of work strips made by bicycle
	User Feedback Qualitative feedback obtained through engagement with stakeholders including members of the Council's Cycling Liaison Working Group, Cardiff Cycling City, Cardiff Council Access Focus Group and general correspondence.
Inputs	• Cost of delivering the infrastructure improvements and partnership working with stakeholders. • Before and after surveys.
Outputs	Routes and facilities provided – description and lengths where appropriate of: • On highway measures – cycling specific infrastructure, e.g lanes, and other highway modifications to facilitate cycling, e.g. traffic calming, junction narrowing, speed management measures etc • Off highway measures • Crossings provided • Junction modifications • Signage • Other elements of schemes as relevant.
Outcomes	• Increases in the numbers of people making trips by bicycle. • Increases modal share of trips made by bicycle. • Increases levels of physical activity.
Impact	• Route usage increased – measured by cycle flow surveys and automatic counters

	• Reduction/removal of severance caused by busy roads/poorly-designed junctions by measures which make it possible and easier for cyclists to cross/make manoeuvres etc – measured by before and after site surveys at crossings/junctions • Improvements to quality and utility of routes and facilities – measured by site user questionnaire surveys, stakeholder feedback and correspondence.
Risks/ lessons learnt	• Political (change of CCC priorities) – align schemes to WG priorities and CCC wider principles which support specific priorities. • Funding (bidding processes delay in notification of funding, lack of funding of complementary projects, shortfalls in any match funding) – ensure bids are reasonable, coordinated and timely. Ensure schemes can go ahead without complementary projects. Scope out other funding options. • Consultation outcomes (negative outcomes) – ensure benefits communicated well. • Delays in implementation (procurement, coordination with other projects, weather) – efficient project management; build in sufficient implementation timescales.
Timetable	The evaluation report will be undertaken at the first opportunity following the completion of data collection.

7.4 Bus programme - Strategic Bus Network Monitoring and Evaluation plan

Scheme	Bus Scheme Improvements
Need	To provide a more efficient network and encourage sustainable travel.
Project description	The range of improvements include the following: • Bus lanes, bus gates and other bus priority improvements; • Changes to signal stages, phasing and lane configuration to improve efficiency and safety; • Removal of on-street parking on the approach to junctions; and • Improved access to bus interchange and bus stop facilities.
Objectives	• To provide safe, efficient and sustainable travel for all, and where public transport, walking and cycling provide real and desirable alternatives to car travel. • To ensure that a range of practical and attractive travel options are available for most trips. • To introduce a range of measures to reduce the demand for travel overall, and particularly by car, where appropriate. • To use a range of measures to make best use of the existing network.

Context	Rising traffic levels, increases in short trips by private car, increasing ownership of private cars, difficulties in accessing local services and facilities, queues, congestion and delays, complaints about the quality of walking and cycling infrastructure and requirements under the Active Travel Act. **Traffic Flows and Patronage Counts** 1. Morning and Evening Peak hour surveys 'After' surveys will be undertaken on an annual basis following a suitable period after implementation. These will be consistent with the 'before' surveys, to ensure that the results provide a direct comparison. Issues such as weather and lighting conditions will be taken into account and that these are as consistent as possible with before surveys. Where appropriate the survey period may be longer than 1 hour (e.g. patronage counts). It may also be appropriate to use automatic counting equipment particularly to identify variance. To represent best value to CCC monitoring will be proportional to the level of investment in the infrastructure facilities. 2. Cardiff Annual Patronage Surveys – Annual 1 day (12hr) manual patronage surveys at: • Central Area/City Centre Cordon • Cardiff Bay Cordon. **Queuing and Journey Times** Morning and Evening Peak hour surveys: Before and after surveys of vehicle queues and journey times will be compared to identify if the improvements have addressed identified congestion and delay. Where appropriate, bus journey time data from the real-time information system may help inform this assessment. Where appropriate the survey period may be longer than 1 hour. **Travel to Work** Annual Ask Cardiff Survey – to monitor share of work strips made by bus.
Inputs	• Detailed analysis • Cost of delivering the infrastructure improvements • Partnership working with stakeholders • Before and after surveys.
Outputs	Details of: • Provision of shared use paths, pedestrian crossings and Toucan Crossings; • Bus gates, bus lanes and other bus priority improvements; • Changes to signal stages, phasing and lane configuration to improve efficiency and safety; • Removal of on-street parking on the approach to junctions; and • Improved access to bus interchange and bus stop facilities.

Outcomes	• Increases modal share of trips made by sustainable modes; • Reduced journey times and reliability particularly for sustainable modes of travel; • Reduced queues, congestion and delays (particularly from mode shift).
Impact	• Route usage/modal shift – measured by count surveys and automatic counters; • Improvements to journey time and improved reliability – queue and/or journey time surveys; • Increased bus patronage – surveys.
Risks/ lessons learnt	• Political (change of CCC priorities) – align schemes to WG priorities and CCC wider principles which support specific priorities. • Funding (bidding processes delay in notification of funding, lack of funding of complementary projects, shortfalls in any match funding) – ensure bids are reasonable, coordinated and timely. Ensure schemes can go ahead without complementary projects. Scope out other funding options. • Consultation outcomes (negative outcomes) – ensure benefits communicated well. • Delays in implementation (procurement, coordination with other projects, weather) – efficient project management; build in sufficient implementation timescales.
Timetable	The evaluation report will be undertaken at the first opportunity following the completion of data collection.

7.5 Cardiff Capital Region Metro programme Monitoring and Evaluation plan

Scheme	Cardiff Capital Region Metro
Need	To provide a more efficient network and encourage sustainable travel for a dynamic, connected and liveable city region.
Project description	• Light rail link connecting the Queen Street and Central Stations to Cardiff Bay • New rapid transit link to connect Pontyclun with Cardiff via strategic sites serving major new development.
Objectives	• To provide safe, efficient and sustainable travel for all, and where public transport, walking and cycling provide real and desirable alternatives to car travel. • To ensure that a range of practical and attractive travel options are available for most trips. • To introduce a range of measures to reduce the demand for travel overall, and particularly by car, where appropriate. • To use a range of measures to make best use of the existing network.

Context	Rising traffic levels, increases in short trips by private car, increasing ownership of private cars, difficulties in accessing local services and facilities, queues, congestion and delays, complaints about the quality of walking and cycling infrastructure and requirements under the Active Travel Act. **Traffic Flows and Patronage Counts** 1. Morning and Evening Peak hour surveys 'After' surveys will be undertaken on an annual basis following a suitable period after implementation. These will be consistent with the 'before' surveys, to ensure that the results provide a direct comparison. Issues such as weather and lighting conditions will be taken into account and that these are as consistent as possible with before surveys. Where appropriate the survey period may be longer than 1 hour (e.g. patronage counts). It may also be appropriate to use automatic counting equipment particularly to identify variance. To represent best value to CCC monitoring will be proportional to the level of investment in the infrastructure facilities. 2. Cardiff Annual Cordon Counts – Annual 1 day (12hr) manual traffic surveys at: • River Taff screen line • Central Area/City Centre Cordon • Cardiff Bay Cordon • County Cordon. 3. Department for Transport Annual AADF Traffic Counts for major roads across the region 4. Cardiff Annual Rail Patronage Surveys – Annual 1 day (12hr) boarding + alighting at each of Cardiff's rail stations 5. ORR Annual Rail Station Usage, for every station across the region **Queuing and Journey Times** Morning and Evening Peak hour surveys: Before and after surveys of vehicle queues and journey times will be compared to identify if the improvements have addressed identified congestion and delay. Where appropriate, bus journey time data from the real-time information system may help inform this assessment. Where appropriate the survey period may be longer than 1 hour.
Inputs	Detailed analysis, cost of delivering the infrastructure improvements and partnership working with stakeholders. Before and after surveys.
Outputs	• Phased provision of tram and improvements to strategic cycling and bus routes.

Outcomes	• Increases modal share of trips made by sustainable modes; • Reduced journey times and reliability particularly for sustainable modes of travel; • Reduced queues, congestion and delays (particularly from mode shift).
Impact	• Route usage/modal shift – measured by count surveys and automatic counters; • Improvements to journey time and improved reliability – queue and/or journey time surveys.
Risks/ lessons learnt	• Political (change of Council priorities) – align schemes to WG priorities and CC wider principles which support specific priorities. • Funding (bidding processes delay in notification of funding, lack of funding of complementary projects, shortfalls in any match funding) – ensure bids are reasonable, coordinated and timely. Ensure schemes can go ahead without complementary projects. Scope out other funding options. • Consultation outcomes (negative outcomes) – ensure benefits communicated well. • Delays in implementation (procurement, coordination with other projects, weather) – efficient project management; build in sufficient implementation timescales.
Timetable	The evaluation report will be undertaken at the first opportunity following the completion of data collection.

7.6 Improving Access to Local Stations programme - Monitoring and Evaluation plan

Scheme	Local Rail Station Interchange Improvements
Need	To enhance accessibility of local station facilities by walking, cycling and interconnecting links with public transport.
Project description	Improvements to station access and signage, focusing on: • Signage – immediate and locality. Maps of local area. • Walking environment • Routes • Visibility of station.
Objectives	• To provide safe, efficient and sustainable travel for all, and where public transport, walking and cycling provide real and desirable alternatives to car travel. • To ensure that a range of practical and attractive travel options are available for most trips. • To introduce a range of measures to reduce the demand for travel overall, and particularly by car, where appropriate. • To use a range of measures to make best use of the existing network. • To identify opportunities to improve interchange facilities to overcome existing barriers to multi-modal journeys. • To implement improvements or interventions to facilitate integration

	between all modes of transport for local residents.
Context	Rising traffic levels, increases in short trips by private car, increasing ownership of private cars, difficulties in accessing local services and facilities, queues, congestion and delays, complaints about the quality of walking and cycling infrastructure and requirements under the Active Travel Act. **Patronage Counts** 1. Cardiff Annual Rail Patronage Surveys – Annual 1 day (12hr) boarding+alighting at each of Cardiff's rail stations 2. ORR Annual Rail Station Usage, for every station across the region Travel to Work: Annual Ask Cardiff Survey – to monitor share of work strips made by rail.
Inputs	• Detailed analysis • Cost of delivering the infrastructure improvements • Partnership working with stakeholders • Before and after surveys.
Outputs	Schemes will include the following: • Signage – immediate and locality • Maps of local area. • Walking environment improvements • Information provision facilities and type of information, signposting to alternative modes. • Improvement to the visibility of stations.
Outcomes	• Improved usage of stations and increases in passenger numbers from local stations, contributing to reducing car travel within Cardiff.
Impact	• Enhanced the passenger experience – qualitative surveys • Greater number of people integrating sustainable transport modes to complete journeys – travel surveys and cycle counts • Greater number of considering multimodal journeys made by sustainable transport options – travel surveys at stations • Increased passenger numbers alighting at local stations – passenger counts and ticket sales.
Risks/ lessons learnt	• Political (change of Council priorities) – align schemes to WG priorities and CC wider principles which support specific priorities. • Funding (bidding processes delay in notification of funding, lack of funding of complementary projects, shortfalls in any match funding) – ensure bids are reasonable, coordinated and timely. Ensure schemes can go ahead without complementary projects. Scope out other funding options. • Consultation outcomes (negative outcomes) – ensure benefits communicated well. • Delays in implementation (procurement, coordination with other projects, weather) – efficient project management; build in sufficient implementation timescales.

Timetable	The evaluation report will be undertaken at the first opportunity following the completion of data collection.

7.7   Park and Ride programme Monitoring and Evaluation plan

Scheme	Park & Ride Improvements
Need	To provide a more efficient network and encourage sustainable travel.
Project description	To include the following facilities to support a Park and Ride site at Junction 33: • Bus lanes, bus gates and other bus priority improvements; • Rapid Transit route improvements; • Changes to signal stages, phasing and lane configuration to improve efficiency and safety; • Removal of on-street parking on the approach to junctions; • Parking on the periphery of Cardiff to intercept traffic; and • Improved access to interchange and bus stop facilities.
Objectives	• To provide safe, efficient and sustainable travel for all, and where public transport, walking and cycling provide real and desirable alternatives to car travel. • To ensure that a range of practical and attractive travel options are available for most trips. • To introduce a range of measures to reduce the demand for travel overall, and particularly by car, where appropriate. • To use a range of measures to make best use of the existing network.
Context	Rising traffic levels, increases in short trips by private car, increasing ownership of private cars, difficulties in accessing local services and facilities, queues, congestion and delays, complaints about the quality of walking and cycling infrastructure and requirements under the Active Travel Act. **Traffic Flows, Patronage Counts and User Surveys** 1. Morning and Evening Peak hour surveys 'After' surveys will be undertaken on an annual basis following a suitable period after implementation. These will be consistent with the 'before' surveys, to ensure that the results provide a direct comparison. Issues such as weather and lighting conditions will be taken into account and that these are as consistent as possible with before surveys. Where appropriate the survey period may be longer than 1 hour (e.g. patronage counts). It may also be appropriate to use automatic counting equipment particularly to identify variance. To represent best value to CCC monitoring will be proportional to the level of investment in the infrastructure facilities. Parking use and occupancy after implementation would be surveyed to identify the demand for the park and ride facility. Supplementary user surveys

may also be collected to identify market and demand related information.

2.   Cardiff Annual Rail Park & Ride Surveys – Maximum Utilisation 1 day

3.   Cardiff East Park & Survey – Average Daily Utilisation

Queuing and Journey Times
Morning and Evening Peak hour surveys: Before and after surveys of vehicle queues and journey times will be compared at appropriate locations to identify if the improvements have addressed identified congestion and delay. Where appropriate, bus journey time data from the real-time information system may help inform this assessment. Where appropriate the survey period may be longer than 1 hour.

Inputs	- Detailed analysis - Cost of delivering the infrastructure improvements and partnership working with stakeholders. - Before and after surveys.
Outputs	Details of: - Bus lanes, bus gates and other bus priority improvements; - Rapid Transit route improvements; - Changes to signal stages, phasing and lane configuration to improve efficiency and safety; - Removal of on-street parking on the approach to junctions; - Parking on the periphery of Cardiff to intercept traffic; and - Improved access to interchange and bus stop facilities.
Outcomes	- Increases modal share of trips made by park and ride; - Reduced journey times and improved reliability; - Reduced traffic demand in the relevant corridors.
Impact	- Route usage/modal shift – measured by count surveys and automatic counters; - Improvements to journey time and reliability – queue and/or journey time surveys; and - Effectiveness of intercepting traffic – parking and occupancy counts and user surveys.

Risks/ lessons learnt	• Political (change of CCC priorities) – align schemes to WG priorities and CCC wider principles which support specific priorities. • Funding (bidding processes delay in notification of funding, lack of funding of complementary projects, shortfalls in any match funding) – ensure bids are reasonable, coordinated and timely. Ensure schemes can go ahead without complementary projects. Scope out other funding options. • Consultation outcomes (negative outcomes) – ensure benefits communicated well. • Delays in implementation (procurement, coordination with other projects, weather) – efficient project management; build in sufficient implementation timescales.
Timetable	The evaluation report will be undertaken at the first opportunity following the completion of data collection.

7.8   Strategic Junction Improvements Monitoring and Evaluation plan

Scheme	Strategic Junction Improvements
Need	To provide a more efficient network, improve road safety and encourage sustainable travel.
Project description	The range of junction improvements include the following: • On road cycle lanes and other measures to re-allocate road space to cyclists; • Provision of shared use paths, pedestrian crossings and Toucan Crossings; • Bus priority improvements; • Changes to signal stages, phasing and lane configuration to improve efficiency and safety; • Removal of on-street parking on the approach to junctions.
Objectives	• To provide safe, efficient and sustainable travel for all, and where public transport, walking and cycling provide real and desirable alternatives to car travel. • To ensure that a range of practical and attractive travel options are available for most trips. • To introduce a range of measures to reduce the demand for travel overall, and particularly by car, where appropriate. • To use a range of measures to make best use of the existing network.
Context	Rising traffic levels, increases in short trips by private car, increasing ownership of private cars, difficulties in accessing local services and facilities, queues, congestion and delays, complaints about the quality of walking and cycling infrastructure and requirements under the Active Travel Act.

	Traffic Flows, Cycle and Pedestrian Counts
	1. Morning and Evening Peak hour surveys: 'After' surveys will be undertaken on an annual basis following a suitable period after implementation. These will be consistent with the 'before' surveys, to ensure that the results provide a direct comparison. Issues such as weather and lighting conditions will be taken into account and that these are as consistent as possible with before surveys. Where appropriate the survey period may be longer than 1 hour. Surveys are typically undertaken manually due to the complex nature of turning movements at junctions. It may also be appropriate to use automatic counting equipment on the approach roads particularly to identify variance. Analysis of the impact on walking and cycling within the areas of implementation will evaluate the extent to which the implemented schemes have achieved the overall aim of improving facilities and increasing walking and cycling levels. To represent best value to CCC monitoring will be proportional to the level of investment in the infrastructure facilities.
	2. Cardiff Annual Cordon Counts – Annual 1 day (12hr) manual traffic surveys [as above] at:
	- River Taff screen line - Central Area/City Centre Cordon - Cardiff Bay Cordon - County Cordon
	3. Department for Transport Annual AADF Traffic Counts for major roads across the region [as above].
	Queuing and Journey Times: Morning and Evening Peak hour surveys: Before and after surveys of vehicle queues and journey times will be compared to identify if the improvements have addressed identified congestion and delay. Where appropriate, bus journey time data from the real-time information system may help inform this assessment. Where appropriate the survey period may be longer than 1 hour.
	Road Safety Analysis: Analysis of before and after road accident and casualty data will be carried out on an annual basis. The availability of Stats 19 data typically lags by 6 months. Therefore, the first representative dataset is typically 18 months after the improvements. The data will be analysed to assess whether identified road safety improvements have been addressed and if any further work may be required based on the collision record patterns and contributing factors reported. It typically takes 3 to 5 years before any significant patterns emerge in the data.
Inputs	- Detailed analysis - Cost of delivering the infrastructure improvements and partnership working with stakeholders - Before and after surveys.

Outputs	Details of: - On road cycle lanes and other measures to re-allocate road space to cyclists; - Provision of shared use paths, pedestrian crossings and Toucan Crossings; - Bus priority improvements; - Changes to signal stages, phasing and lane configuration to improve efficiency and safety; - Removal of on-street parking on the approach to junctions.
Outcomes	- Increases in the numbers of walking and cycling; - Increases modal share of trips made by sustainable modes; - Increases levels of physical activity; - Reduced journey times and improved reliability particularly for sustainable modes of travel; - Reduced queues, congestion and delays (particularly from mode shift); - Improved road safety.
Impact	- Route usage/modal shift – measured by count surveys and automatic counters; - Improvements to journey time and reliability – queue and/or journey time surveys; - Reduction/removal of severance caused by busy roads/poorly-designed junctions by measures which make it possible and easier for cyclists to cross/make manoeuvres etc – measured by before and after site surveys at crossings/junctions; and - Road safety – road accident and casualty records.
Risks/ lessons learnt	- Political (change of CCC priorities) – align schemes to WG priorities and CCC wider principles which support specific priorities. - Funding (bidding processes delay in notification of funding, lack of funding of complementary projects, shortfalls in any match funding) – ensure bids are reasonable, coordinated and timely. Ensure schemes can go ahead without complementary projects. Scope out other funding options. - Consultation outcomes (negative outcomes) – ensure benefits communicated well. - Delays in implementation (procurement, coordination with other projects, weather) – efficient project management; build in sufficient implementation timescales.
Timetable	The evaluation report will be undertaken at the first opportunity following the completion of data collection.

7.9   Strategic Highway Improvements Monitoring and Evaluation plan

Scheme	Strategic Highway Improvements
Need	To provide a more efficient network, improve road safety and

	encourage sustainable travel.
Project description	Strategic Highway Improvements include the following: • New link roads; • New footways, shared paths and off-road cycle paths; • New pedestrian crossings if appropriate; • Bus priority improvements if appropriate; • Changes to signal stages, phasing and lane configuration to improve efficiency and safety.
Objectives	• To support economic growth and safeguard jobs across Wales with a particular focus on the City Regions, Enterprise Zones and local growth zones. • To provide safe, efficient and sustainable travel for all, and where public transport, walking and cycling provide real and desirable alternatives to car travel. • To ensure that a range of practical and attractive travel options are available for most trips. • To introduce a range of measures to reduce the demand for travel overall, and particularly by car, where appropriate. • To use a range of measures to make best use of the existing network.
Context	Opportunities for increased investment and jobs, rising traffic levels, increases in short trips by private car, increasing ownership of private cars, difficulties in accessing local services and facilities, queues, congestion and delays, complaints about the quality of walking and cycling infrastructure and requirements under the Active Travel Act. **Traffic Flows, Cycle and Pedestrian Counts** 1. Morning and Evening Peak hour surveys: 'After' surveys will be undertaken on an annual basis following a suitable period after implementation. These will be consistent with the 'before' surveys, to ensure that the results provide a direct comparison. Issues such as weather and lighting conditions will be taken into account and that these are as consistent as possible with before surveys. Where appropriate the survey period may be longer than 1 hour. The surveys are typically undertaken manually due to the complex nature of turning movements at junctions. It may also be appropriate to use automatic counting equipment on the approach roads particularly to identify variance. Analysis of the impact on walking and cycling within the areas of implementation will evaluate the extent to which the implemented schemes have achieved the overall aim of improving facilities and increasing walking and cycling levels. To represent best value to CCC monitoring will be proportional to the level of investment in the infrastructure facilities. The surveys may need to be undertaken over a wide area to identify any significant changes in trip redistribution. 2. Cardiff Annual Cordon Counts – Annual 1 day (12hr) manual traffic surveys at [as above]:

	• River Taff screen line • Central Area/City Centre Cordon • Cardiff Bay Cordon • County Cordon. 3. Department for Transport Annual AADF Traffic Counts for major roads across the region [as above]. **Queuing and Journey Times** Morning and Evening Peak hour surveys: Before and after surveys of vehicle queues and journey times will be compared to identify if the improvements have addressed identified congestion and delay. Where appropriate, bus journey time data from the real-time information system may help inform this assessment. Where appropriate the survey period may be longer than 1 hour. **Road Safety Analysis** Analysis of before and after road accident and casualty data will be carried out on an annual basis. The availability of Stats 19 data typically lags by 6 months. Therefore, the first representative dataset is typically 18 months after the improvements. The data will be analysed to assess whether identified road safety improvements have been addressed and if any further work may be required based on the collision record patterns and contributing factors reported. It typically takes 3 to 5 years before any significant patterns emerge in the data.
Inputs	• Detailed analysis • Cost of delivering the infrastructure improvements and partnership working with stakeholders • Before and after surveys.
Outputs	Details of: • New link roads; • New footways, shared paths and off-road cycle paths; • New pedestrian crossings if appropriate; • Bus priority improvements if appropriate; • Changes to signal stages, phasing and lane configuration to improve efficiency and safety.
Outcomes	• Improved access to jobs; • Increases in the numbers of walking and cycling; • Increases modal share of trips made by sustainable modes; • Reduced journey times and improved reliability particularly for sustainable modes of travel; • Reduced queues, congestion and delays (particularly from mode shift); • Improved road safety.
Impact	• Jobs – employment survey data; • Route usage/modal shift – measured by count surveys and automatic counters; • Improvements to journey time and reliability – queue and/or

	journey time surveys;
	• Reduction/removal of severance caused by busy roads/poorly-designed junctions by measures which make it possible and easier for cyclists to cross/make manoeuvres etc – measured by before and after site surveys at crossings/junctions; and
	• Road safety – road accident and casualty records.
Risks/ lessons learnt	• Political (change of CCC priorities) – align schemes to WG priorities and CCC wider principles which support specific priorities.
	• Funding (bidding processes delay in notification of funding, lack of funding of complementary projects, shortfalls in any match funding) – ensure bids are reasonable, coordinated and timely. Ensure schemes can go ahead without complementary projects. Scope out other funding options.
	• Consultation outcomes (negative outcomes) – ensure benefits communicated well.
	• Delays in implementation (procurement, coordination with other projects, weather) – efficient project management; build in sufficient implementation timescales.
Timetable	The evaluation report will be undertaken at the first opportunity following the completion of data collection.

7.10   Road Safety programme Monitoring and Evaluation plans

Scheme	School Safety Zones
Need	To encourage children and parents to travel to and from schools using sustainable forms of transport and to improve road safety outside schools particularly for children walking and cycling.

Project description	Schemes to include the following: • The creation of a zone outside the school gates within which parking is prohibited (or limited) and traffic speeds reduced (usually 20mph); • The zone will usually include a gateway at each end and safe pedestrian crossing facilities; • On road cycle lanes and other measures to re-allocate road space to cyclists; • Provision of shared use paths, pedestrian crossings and Toucan Crossings; • Removal of on-street parking on the approach to junctions.
Objectives	• To provide a safe and convenient access to and from the school for children and parents using sustainable modes of transport.
Context	Rising traffic levels, increases in short trips by private car, increasing ownership of private cars, difficulties in accessing local services and facilities, queues, congestion and delays, complaints about the quality of walking and cycling infrastructure and requirements under the Active Travel Act. STATS19 Crash Data, to include: • KSI Casualties • Child KSI Casualties • Slight Casualties per 100vkm • Pedestrian KSI Casualties • Cyclist KSI Casualties.
Inputs	• Detailed analysis • Cost of delivering the infrastructure improvements and partnership working with stakeholders. • Before and after surveys.
Outputs	• On road cycle lanes and other measures to re-allocate road space to cyclists; • Provision of shared use paths, pedestrian crossings and Toucan Crossings; • Bus priority improvements; • Changes to signal stages, phasing and lane configuration to improve efficiency and safety; • Removal of on-street parking on the approach to junctions.
Outcomes	• Increases in the numbers of walking and cycling; • Increases modal share of trips made by sustainable modes; • Increases levels of physical activity; • Reduced journey times and improved reliability particularly for sustainable modes of travel; • Reduced queues, congestion and delays (particularly from mode shift); • Improved road safety.

Impact	• Modal shift to sustainable modes of transport – Counts in schools; • Reduced parking in vicinity of school – parking surveys; • Improved Road safety – road accident and casualty records – Police injury collision records: • Improved quality of environment outside the school – qualitative surveys in school.
Risks/ lessons learnt	• Political (change of CCC priorities) – align schemes to WG priorities and CCC wider principles which support specific priorities. • Funding (bidding processes delay in notification of funding, lack of funding of complementary projects, shortfalls in any match funding) – ensure bids are reasonable, coordinated and timely. Ensure schemes can go ahead without complementary projects. Scope out other funding options. • Consultation outcomes (negative outcomes) – ensure benefits communicated well. • Delays in implementation (procurement, coordination with other projects, weather, unforeseen ground conditions) – efficient project management; build in sufficient implementation timescales.
Timetable	The evaluation report will be undertaken at the first opportunity following the completion of data collection. It is likely to be in line with the Road Safety Audits which will be carried out 1 and 3 years after completion of the work.

Scheme	Footway Safety Schemes
Need	To provide improved and safer footway links particularly within busy community areas.
Project description	The improvements will include footways (alongside carriageways) and footpaths (linking areas and footways). These facilities are provided at locations where pedestrians do not have safe and convenient links to facilities such as schools, shops, community areas and public transport (bus stops and railway stations). Particular consideration is given to areas where vehicle and pedestrian flows are high.
Objectives	To provide safe and convenient routes for pedestrians.
Context	Rising traffic levels, increases in short trips by private car, increasing ownership of private cars, difficulties in accessing local services and facilities, queues, congestion and delays, complaints about the quality of walking and cycling infrastructure and requirements under the Active Travel Act.
Inputs	• Detailed analysis • Cost of delivering the infrastructure improvements and partnership working with stakeholders. • Before and after surveys.
Outputs	To provide safe and convenient routes for pedestrians.
Outcomes	Increased pedestrian flows.
Impact	Pedestrian counts.

Risks/ lessons learnt:	• Political (change of CCC priorities) – align schemes to WG priorities and CCC wider principles which support specific priorities. • Funding (bidding processes delay in notification of funding, lack of funding of complementary projects, shortfalls in any match funding) – ensure bids are reasonable, coordinated and timely. Ensure schemes can go ahead without complementary projects. Scope out other funding options. • Consultation outcomes (negative outcomes) – ensure benefits communicated well. • Delays in implementation (procurement, coordination with other projects, weather and unforeseen ground conditions) – efficient project management; build in sufficient implementation timescales.
Timetable	The evaluation report will be undertaken at the first opportunity following the completion of data collection.

Scheme	Vulnerable Road User Schemes
Need	To provide safer and more convenient routes for vulnerable road users such as pedestrians (particularly children, elderly and disabled) and cyclists to encourage a shift to more sustainable modes of transport.
Project description	The range of road safety improvements include the following: • Controlled pedestrian crossings (Zebra, Pelican and Toucan crossings) • Un-controlled crossing locations. These will usually be in the form of dropped kerbs or tabled crossings and will often be in the form of a tabled junction. • 20mph zones and traffic calmed areas. These areas will include gateway features entering the area, speed ramps, junction buildouts and footway widening (road narrowing).
Objectives	• To reduce traffic speeds; • Give greater priority to sustainable modes of transport;
Context	Rising traffic levels, increases in short trips by private car, increasing ownership of private cars, difficulties in accessing local services and facilities, queues, congestion and delays, complaints about the quality of walking and cycling infrastructure and requirements under the Active Travel Act.
Inputs	• Detailed analysis • Cost of delivering the infrastructure improvements and partnership working with stakeholders. • Before and after surveys.
Outputs	• Reduced traffic speeds; • Greater priority to sustainable modes of transport.
Outcomes	• Increased pedestrian and cyclist flows, increased use of public transport and reduced traffic flows; • Improved injury collision history, particularly with respect to vulnerable road users.

Impact	• Pedestrian and cyclist flows, use of public transport and traffic flows will be measured by count surveys and automatic counters. • Improved injury collision history, particularly with respect to vulnerable road users - Police injury collision records.
Risks/ lessons learnt	• Political (change of CCC priorities) – align schemes to WG priorities and CCC wider principles which support specific priorities. • Funding (bidding processes delay in notification of funding, lack of funding of complementary projects, shortfalls in any match funding) – ensure bids are reasonable, coordinated and timely. Ensure schemes can go ahead without complementary projects. Scope out other funding options. • Consultation outcomes (negative outcomes) – ensure benefits communicated well. • Delays in implementation (procurement, coordination with other projects, weather) – efficient project management; build in sufficient implementation timescales.
Timetable	The evaluation report will be undertaken at the first opportunity following the completion of data collection.

Scheme	General Road Safety Schemes
Need	To improve road safety for all road users.
Project description	The range of road safety improvements include the following: • Junction improvements • Traffic Calming • Improved road signing and road markings
Objectives	• To reduce traffic speeds • Improve visibility • Improve awareness of hazards
Context	The Road Traffic Act imposes a Statutory duty on local Authorities to investigate road accidents and in the light of those investigations to take measures to prevent them. These measures include both engineering and education.
Inputs	• Detailed analysis • Cost of delivering the infrastructure improvements and partnership working with stakeholders. • Before and after surveys.
Outputs	• Reduced traffic speeds; • Improved injury collision record
Outcomes	• Improved road safety for all road users.
Impact	• Traffic speeds will be measured by speed surveys and automatic recorders; • Improved injury collision history for all users of the highway - Police injury collision records.

Risks/ lessons learnt	• Political (change of CCC priorities) – align schemes to WG priorities and CCC wider principles which support specific priorities. • Funding (bidding processes delay in notification of funding, lack of funding of complementary projects, shortfalls in any match funding) – ensure bids are reasonable, coordinated and timely. Ensure schemes can go ahead without complementary projects. Scope out other funding options. • Consultation outcomes (negative outcomes) – ensure benefits communicated well. • Delays in implementation (procurement, coordination with other projects, weather and unforeseen ground conditions) – efficient project management; build in sufficient implementation timescales.
Timetable	The evaluation report will be undertaken at the first opportunity following the completion of data collection. It is likely to be in line with the Road Safety Audits which will be carried out 1 and 3 years after completion of the work.