

# Perth Greater CBD Transport Plan



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# Introduction



Perth central city: a better place to live, visit, work, study and invest

Easy access and mobility are two vital pillars of a well-functioning capital city.

The Perth Greater CBD Transport Plan is a strategy that outlines a series of initiatives and investments that will help residents, workers and visitors move around our city centre. On a broader scale, the State Government is currently embarking on an unprecedented investment in transport infrastructure that will significantly improve access to and from the Perth central business district (CBD) from the broader metropolitan area. This investment - including METRONET, major road upgrades and a record expansion of the wider metropolitan area's cycling network – focuses on connecting suburbs across the metropolitan area. By contrast, the Perth Greater CBD Transport Plan will focus on how people get around once they get to the city - a strategy for transport within the CBD itself.

In recent times, Perth has been on a transformational journey to make the central city a better place to live, visit, work, study and invest. An increased residential population, greater diversity in eateries, the rise of the small bar scene and a steady stream of events have brought more activity and vibrancy to the city. Meanwhile, new destinations in and around the greater CBD, such as Yagan Square, the Perth Cultural Centre, Perth Children's Hospital, Optus Stadium, RAC Arena and Elizabeth Quay have created further opportunities for CBD enhancement. Further ongoing projects like the East Perth Power Station redevelopment and the Subi East revitalisation of the former Subiaco Oval and Princess Margaret Hospital sites will also add to this momentum.

While urban regeneration and cultural improvements have continued, the transport network has not always kept pace. As our population continues to grow there will be greater demands for movement options between places of work, rest and recreation. This presents a challenge for local and State governments to decide how to accommodate increasing travel demands within a finite city centre. A further challenge includes responding to transport trends arising from the COVID-19 pandemic, which has impacted both visitor numbers and patronage on public transport services. Meanwhile, there has been a much greater take up of transport options like walking and bike riding as people sought to maintain physical distancing.

Planning for appropriate transport infrastructure will allow the city to grow and develop and will act as an incentive for people to choose to live or operate a business in the city. As well as considering user needs, it will be important to also consider how this infrastructure integrates with existing city infrastructure and the broader transport network.

Identified key drivers which are likely to continue to influence and shape the transport needs of the city, both now and into the future, include:

#### **Residential population growth**



To strengthen the commercial, entertainment, cultural and civic functions of the city, the City of Perth aspires to see the number of residents living in the city grow to 90,000 people by 2050.

# Continued investment in transport infrastructure



The State Government is continuing to implement METRONET and the Transforming Perth's Freeways initiative, creating benefits and opportunities for the central city.

#### Climate change



Continue to support approaches for a more sustainable, liveable and healthy city centre and respond to the impacts of climate change.

#### **Technology**



The city and its transport network will need to be responsive to new technology and changing forms of urban mobility as well as changing work, shopping and living patterns.

#### **Aging population**



Catering to an aging population requires adequate provision of infrastructure and support services, as well as destinations that are accessible for all ages and abilities.

The Perth Greater CBD Transport Plan will look to respond to these drivers, as well as continue to support city development and land use aspirations by identifying the necessary infrastructure, programs or services required to get the Perth Greater CBD moving and growing again and capitalising on the opportunities to further enhance the future of our capital city.

To achieve this, the Plan is being progressed and delivered in two phases:

#### Phase One:

A list of transport priorities that fall within the Perth Parking Management Area (PPMA) to guide implementation over a five-year time period. The Perth Parking Licensing Account will be a key funding source considered.

#### Phase Two:

The final Perth Greater CBD Transport Plan outlining the vision, objectives and outcomes for the city centre as well as identifying those initiatives that fall outside the PPMA and a list of transport priorities for implementation within a 10-year horizon.

This report details the first phase of the Plan, outlining a series of integrated and complementary initiatives, strategies and activities for the PPMA that will improve access to, from and within the city centre. It is to a large extent a live document and is subject to change as the Department of Transport and the City of Perth endeavour to implement these transport priorities over the next five years in collaboration with stakeholders such as the Public Transport Authority, Main Roads Western Australia and the City of Vincent. This is in recognition that transport planning is not a discrete task and will need to continue to adapt as the city develops and as travel behaviours and economic conditions change.

The transport priorities outlined in this report demonstrate where there is agreement between the relevant stakeholders on initiatives for potential implementation over the next five years; subject to funding. All spending from the Perth Parking Licensing Account is subject to approval as part of annual State Government budget processes. This will require budget submissions and business cases to be prepared for all new initiatives on a year to year basis. Phase One of the Plan will guide this process.



The CAT bus service is a popular component of the CBD's transport network

# **Perth Greater CBD Transport Plan**

#### **Background**

Late in 2018, the Department of Transport, in collaboration with the City of Perth and Transport Portfolio partners, the Public Transport Authority and Main Roads Western Australia, started developing the Perth Greater CBD Transport Plan to guide the transport future of Perth's city centre for the next decade.

The Perth Greater CBD refers to the area shown in Figure 1 below and includes the neighbourhoods of Crawley, Nedlands, West Perth, East Perth, Northbridge, Claisebrook and the central Perth CBD.

In developing the Plan, the Department of Transport, the City of Perth and other key stakeholders set out to identify a series of initiatives, projects and programs that will contribute towards **creating a safe, connected and vibrant city centre** over the next 10 years. While the geographical focus of the Plan is as outlined in Figure 1 below, a key objective is to ensure the flow-on impacts on the wider metropolitan area are considered when determining the priorities and initiatives within this Plan.

Once completed, the Plan will provide a framework for State and local governments, key stakeholders and the community to work collaboratively together, guiding investment into the future and outlining further investigative tasks required to support development of the city's transport network.

# West Perth Claisebrook Central Perth Crawley-Nedlands

Figure 1: Map of the Perth Greater CBD

#### Consultation

The development of the Plan has been informed by robust stakeholder and community consultation. Key stakeholders across local and State Government, industry bodies, local businesses, residents, disability access and inclusion groups and the WA community have been involved in shaping the direction and outcomes of this Plan.

A Coordination Working Group and an External Reference Group were established in 2018 to support the development of the Plan. These groups meet at key milestones throughout the Plan's development and outlined the key areas of focus and scope for the Plan.



Members from the working and external reference group participating in a walking and bike riding workshop in 2019

# CBD Transport Coordination Working Group

The working group was formed to guide the development of the Plan and includes members from:

- » The Transport Portfolio (Department of Transport, Main Roads Western Australia and the Public Transport Authority)
- » City of Perth
- » City of Vincent
- » Department of Planning, Lands and Heritage
- » Department of Local Government, Sports and Cultural Industries
- » Development WA (formerly Metropolitan Redevelopment Authority)
- » METRONET.

# **CBD Transport External Reference Group**

The external reference group is chaired by Mr John Carey MLA and provides an advisory role. It includes representation from:

- » The Transport Portfolio
- » City of Perth
- » Committee for Perth
- » Property Council of Australia
- » WestCycle
- » RAC
- » Australian Institute of Traffic Planning and Management
- » Planning Institute of Australia
- » Activate Perth
- » University of Western Australia
- » QEII Medical Centre
- » BusWA
- » Freight and Logistics Council of WA.

Workshops have also been held with various stakeholder groups to inform transport challenges and opportunities.

Workshops to inform the identification of key issues and challenges were:

- » Inner city local government workshop attended by representatives from City of Perth, City of Vincent, City of South Perth, City of Subiaco, City of Nedlands, Town of Victoria Park, Town of Cambridge (December 2018).
- » Walking and bike riding workshop attended by members of the working group, external reference group and project team (February 2019).
- » Accessibility workshop held with the City of Perth Access and Inclusion Advisory Group (September 2019).

An online survey and mapping activity (see Figure 2 below) took place between August and September 2019 and attracted more than 1,000

responses from the community and interested stakeholders. This engagement activity sought to better understand how the city's current transport network is used and help identify the opportunities and current challenges experienced while travelling to, from and around the Greater CBD. This was accompanied by social media promotions and invitations to various stakeholder and community groups to have their say.

Input from business owners and operators was captured through a series of focus groups which discussed the transport network and its impacts on business, and explored emerging issues.

All feedback received from these workshops, focus groups and the first public comment period was collated to determine major themes and used to guide the identification of transport priorities for the Perth Greater CBD.

Consultation and engagement with key stakeholders and the community will continue through the development of Phase Two of the Plan.



Figure 2: Online mapping exercise identifying community and stakeholder issues and opportunities in 2019

#### Problem identification and root causes

A core element of the Plan's development focused on identifying key transport issues the city faces and their underlying root causes. The consultation outlined previously was central to capturing and identifying the transport problems identified for the Perth Greater CBD. The 10 transport problems identified below fall under the broader challenges of either:

# Competing priority of modes is impacting on safety, connectivity and vibrancy in the city

#### **Problem 1**



Lack of pedestrian priority in some parts of the city causes travel time delays, overcrowding, safety risks and reduced amenity for pedestrians.

#### **Problem 2**



Inadequate space, poor sightlines, different speed limits, and incorrect use of paths and shared spaces increases potential for conflict between pedestrians and bike riders.

#### **Problem 3**



High volumes of vehicle and bus traffic in the city impact on the quality of the public realm and reduce the safety of pedestrians and bike riders.

#### **Problem 4**



Crowded road networks during peak travel periods cause delays and unreliable journey times for vehicles and buses, increasing the cost of congestion and reducing bus patronage in the city.

#### Problem 5



High demand for access to finite kerbside space in the city's centre causes conflicts between the competing users and impacts economic productivity.

# Poor access, legibility and barriers are impacting on safety, connectivity and vibrancy in the city

#### **Problem 6**



Transport infrastructure and other physical barriers reduce connectivity between key destinations and the accessibility of public transport.

#### **Problem 7**



Limited wayfinding and legibility make it difficult to navigate around the city.

#### **Problem 8**



It can be difficult for people to understand their transit options in the city, limiting the use of public transport as an effective means of travel within the city.

#### **Problem 9**



Reduced activity, sub-standard lighting, crime and a lack of security staff make people feel unsafe when walking, bike riding or catching public transport in the city at night.

#### **Problem 10**



Lack of transport options to access some areas of the city is limiting economic benefits from further participation in cultural, education, health, retail, entertainment and tourism endeavours.

These problems and their root causes are challenges that the key stakeholders must consider when working together to achieve the strategic objectives of their respective agencies and organisations. These include:

- » the Transport portfolio's objective of connecting people and places by delivering integrated, safe and efficient transport solutions;
- » the City of Perth's strategic vision of a vibrant, connected and progressive city; and
- » the City of Perth's responsibilities under the City of Perth Act.

More detail on the identified problems and root causes can be found under Appendix 1.

# Root causes of problems facing the Perth Greater CBD

- » Historical land use, planning and transport decisions
- » Fragmented and complex governance arrangements
- Public and private parking availability and pricing in the Perth CBD
- » Strong reliance on private vehicles for transport in Perth
- » Inadequate funding for active transport infrastructure and services
- Changing retail patterns towardse-commerce and online shopping



Inadequate funding for active transport infrastructure and services is considered a root cause for issues facing the CBD

# Perth parking

# Perth Parking Management Act, Regulations and Policy

Perth parking refers to the suite of Western Australian Government's legislation, policy and regulations for parking in central Perth and the wide-ranging plan to reduce traffic congestion, increase pedestrian safety, free up short-term shopper parking and improve the transport system for those who travel to, from and within central Perth. The *Perth Parking Management Act* 1999 (the Act) and the associated Perth Parking Management Regulations 1999 (the Regulations) apply a parking levy (commonly known as the Perth Parking Levy) on non-residential parking bays within the Perth Parking Management Area (PPMA).

The Perth Parking Policy 2014 sets out the approach by the State Government, following consultation with the City of Perth and other responsible planning authorities, to the development and management of parking facilities that fall within the PPMA. The second reading speech on 26 November 1998, which formed the basis for the objectives of the Perth Parking Policy, states "the principal objectives of the Perth Parking Management Bill and Perth Parking Policy are to promote a balanced transport system to gain access to central Perth and to limit the growth of traffic congestion and deterioration of air quality in the central area."

Revenue raised by the Perth Parking Levy has been used to implement a range of initiatives to help to deliver a more balanced transport system in central Perth. As well as provision of the Free Transit Zone and Central Area Transit (CAT) bus system, license revenue has been used to fund:

- » extensions to bike lanes
- » improvements for pedestrians
- » implementation of bus priority lanes
- » an upgraded traffic management system
- » road modification works to improve bus efficiency
- » contributions to other significant transport infrastructure and initiatives such as the Perth Busport and the Northbridge bus layover.

#### **Balanced transport system**

A more balanced and sustainable transport system benefits all property owners either directly or indirectly by reducing the impact of congestion and by ensuring the central area remains accessible to all users.

The Perth Parking Policy seeks to create a balanced and sustainable transport system via the management of parking by:

- » ensuring the continued economic and social vitality of central Perth
- » improving accessibility to, from and within the central city for all
- » improving air quality and the physical environment of the central city
- » limiting the growth of the emission of noxious gases and particulate matter
- » reducing the impacts of vehicular traffic on urban form and amenity within central Porth
- » encouraging the efficient use of existing parking facilities within central Perth
- » providing a framework for the development of parking facilities within central Perth as part of a balanced movement system for the city
- » ensuring that metropolitan wide movement and access is not compromised
- » encouraging the location and design of off-street parking facilities so that they complement their surroundings and have minimal negative impact on the amenity of the surrounding area
- » encouraging the design and location of access points to off-street parking so that disruption to pedestrians and public transport is minimised.

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#### Perth Parking Management Area and Perth Parking Levy

The PPMA includes the suburbs of Perth, East Perth, West Perth and Northbridge, as shown in Figure 3 below. The PPMA falls predominantly within the jurisdiction of the City of Perth; however due to a local government boundary change, sections of the area to the north fall within the City of Vincent.

As per the Act, all non-residential parking bays in the PPMA are required to be licensed and, where applicable, must pay a license fee commonly known as the Perth Parking Levy. Prior to the 2020-21 financial year, this levy generated an annual income of approximately \$58 million and at the end of June 2020, the Perth Parking Licensing Account had a balance of \$131 million. It should be noted however that, with the onset of the COVID-19 pandemic and the associated economic impacts, future revenue generated by the levy could be significantly impacted.

Recurrent expenditure from the account is approximately \$20 million per annum. The services that are funded each year from the account include:



**Central Area Transit** (CAT) bus system



Free Transit Zone



Active traffic management to keep the Perth CBD moving.

The money raised through the Perth Parking Levy can only be spent within the PPMA on initiatives which give effect to the Perth Parking Policy. All spending from the Perth Parking Licensing Account is subject to approval as part of annual State Government budget processes.

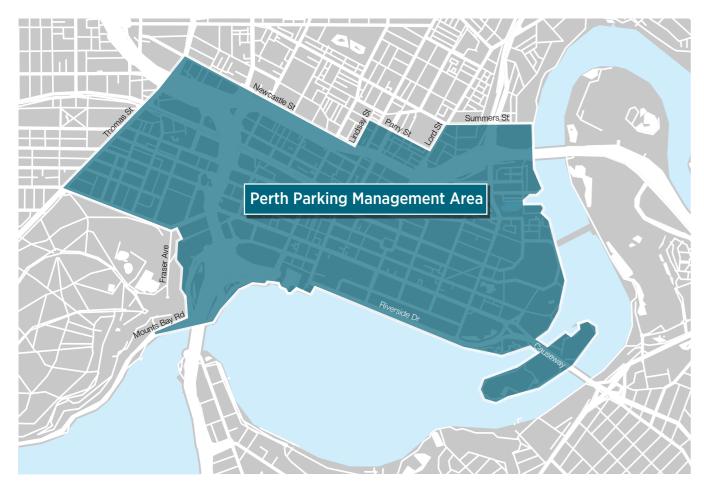


Figure 3: The Perth Parking Management Area

# **Phase One: Transport priorities for** the Perth Parking Management Area

Reason

With an understanding of the root causes and problems facing the Perth Greater CBD, potential solutions have been identified which could address these challenges. The first public comment period and stakeholder workshops generated a range of potential solutions, including changes in infrastructure, services, programs and policy, and the use of new technologies.

Further options were also identified in consultation between the Transport Portfolio and the City of Perth.

It is noted the inclusion of a light rail corridor is being considered for future stages of METRONET, which is a separate process to the Perth Greater CBD Transport Plan. While the State Government has made a submission to Infrastructure Australia for potential light rail corridors in Perth, its immediate priority is delivering stage one METRONET commitments.

To shortlist initiatives suitable for inclusion as part of Phase One, potential options were assessed against the criteria below:

#### Selection criterion

Initiative is within the boundary of the Perth Parking Management Area.

Perth Parking Fund revenue can only be spent within the Perth Parking Management Area. See page 12.

Initiative aligns with the objectives of the Perth Parking Policy.

Perth Parking Fund revenue needs to be reinvested in initiatives that promote a balanced transport system to gain access to central Perth and to limit the growth of traffic congestion. See

Initiative aligns with the vision of the Perth Greater CBD Transport Plan.

The initiatives need to contribute towards the realisation of the vision of a safe, connected and vibrant central city. See page 6.

Initiative addresses the problems, root causes or drivers identified through the development of the Perth Greater CBD Transport Plan.

There is a direct link between the initiative and the identified problems that are preventing the achievement of goals and objectives. See page 9.

Initiative has support from key stakeholders.

Key stakeholders including the City of Perth, Main Roads WA and the Public Transport Authority will need to accept preferred option/s and commit to its implementation.

There is capacity to implement the initiative within the next five years.

Phase One seeks to identify a five-year program of initiatives for implementation.

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More than 50 initiatives identified through the engagement and consultation activities met these selection criteria, so they were further categorised as being area wide or high, medium or low priority according to the extent that they met each criterion. The high priority initiatives are well-aligned with all the selection criteria and will be prioritised for implementation as part of Phase One. This does not exclude consideration of the area wide, medium or low priority initiatives should an opportunity present. Further options were identified during consultation that are not included in these lists due to falling outside of the PPMA. These will be further explored during Phase Two of the Plan.

#### **Priority initiatives**

The high priority initiatives are listed in Table 1 and the area wide initiatives are listed in Table 2.

Table 1 includes those initiatives that work towards solving identified problems in a specific location and will often lead to a physical outcome and/or new infrastructure in that location within the CBD. Table 2 shows those initiatives that cover all or a large part of the PPMA and consists of activities that may inform decisions or outcomes of future physical works (or directly influence initiatives listed in Table 1).

Initiatives in Table 1 and Table 2 are not listed in any particular priority order.

the Plan.												
Refer to	Initiative	Addresses problem/s										
	milialive	1	2	3	4	5	6	7	8	9	10	
Page 27	Causeway Bridge for people riding and walking											
Page 28	Improved safety and connectivity around RAC Arena											
Page 29	East-west bicycle route connecting Matagarup Bridge to Perth											
Page 30	Parallel Walks Conversion Program											
Page 31	Roe Street enhancement											
Page 32	William Street green corridor concept											
Page 33	City West Station: concept design											
Page 34	Causeway to Kings Park Road corridor concept											
Page 35	Clearway initiatives - Wellington Street (Lord Street to Plain Street)											
Page 36	Service delivery improvements for the mall superblock											
Page 37	Wellington Street corridor concept											
Page 38	Kings Park Road: shared path											
Page 39	North-south bicycle route connecting Langley Park to Royal Street activity centre											
Page 40	Milligan and Mount Street corridor concept											
Page 41	Mitchell Freeway Veloway											
Page 42	Hay Street Mall upgrade											
Page 43	Upgrade Perth Walklink Experience											
Page 44	Northbridge laneways upgrade											

Table 1: Location specific high priorities

Indicates the problem(s) the initiative will address

Refer to	Initiative	Addresses problem/s									
	initiative	1	2	3	4	5	6	7	8	9	10
Page 45	Bus stop accessibility upgrades and shelter replacement										
Page 46	Bike riding data and modelling										
Page 47	End of trip facilities framework										
Page 48	Free transit zone awareness raising and education program										
Page 49	Greenspaces, shade, and streetscape framework										
Page 50	Kerbside space prioritisation framework										
Page 51	Revise Perth Parking Policy's application to redevelopments										
Page 52	Passenger on/off counters on all buses operating within the Free Transit Zone										
Page 53	CBD strategic transport corridor framework										
Page 54	Travel demand management program post COVID-19										
Page 55	Lighting framework										
Page 56	Legibility and wayfinding framework										
Page 57	Explore system efficiencies from technology improvements										
Page 58	Accessibility audit										
Page 59	Pedestrian data and modelling										
Page 60	Reduce speed limits										
Page 61	Electric vehicle fleet: feasibility study										

Table 2: Perth Parking Management Area-wide initiatives

Appendix 2 (on page 26) contains further detailed information on the high priority and area wide initiatives.

Appendix 3 (on page 62) includes information on those initiatives rated as medium or low priority.



#### Challenges, risks and uncertainties

There are many challenges, risks and uncertainties inherent in all initiatives. One of the key challenges facing transport planning is how we can best make long-term investments in the transport system given the uncertainty of the future. These uncertainties include:



how transport needs, behaviours and expectations will change, particularly with technological and societal changes



the degree of land use and demographic certainty for an area or population



the degree to which transport investment will shape land use and societal outcomes



the government's capacity to commit the finances and other resources to both create and maintain services and infrastructure.

Short to medium-term challenges also relate to the government and community's response to the COVID-19 pandemic. We may see changes in work patterns, travel flows and travel choices. While physical distancing measures are in place, there may be more people working from home, staggered work hours, increased bike riding and private vehicle use, less public transport use, additional space allocated to pedestrians, and better management of kerbside activities needed.

For initiatives that are still at scoping and concept stage, challenges and risks will be explored as part of early development.

# Monitoring and evaluation

Each initiative was assessed to evaluate how well it would meet the selection criteria outlined on page 13.

A monitoring and evaluation framework will be developed to inform further evaluation as part of Phase Two of the Perth Greater CBD Transport Plan. This framework will set out the requirements for data collection, performance monitoring, efficiency and effectiveness assessments in line with Treasury requirements.

Efficiency assessment/s will evaluate whether the initiatives meet intended scope, time and budget requirements. These will require regular progress reports from the responsible agencies.

Effectiveness assessment/s will evaluate the impact of the Plan and each initiative according to the vision, objectives and outcomes that it set out to achieve. These assessments will include baseline data collection before initiatives are implemented and then performance monitoring post-implementation (in the short, medium and long-term as observable changes may not occur immediately). The agency responsible for each initiative will monitor performance and report on progress. The Perth Greater CBD Transport Plan Coordination Working Group will develop measures, targets, monitoring frequency, and the method of data collection, considering existing data sources as well as new collection methods such as manual and electronic counters, audits and user surveys.

Cost effectiveness assessments will follow the Australian Transport Assessment and Planning guidelines or an updated active transport cost-benefit assessment model.

# **Next steps**



Phase Two, the overall Perth Greater CBD Transport Plan will be progressed over the second half of 2020

A collaborative approach between the Transport Portfolio, the City of Perth and the City of Vincent (where relevant) will be essential to implement Phase One of the Perth Greater CBD Transport Plan.

The Department of Transport, in consultation with key stakeholders, will develop an implementation work program to help deliver and monitor the nominated initiatives over the next five years once an indication of funding commitment can be obtained. This work program will coordinate activities across the various responsible agencies and ensure initiatives are delivered on time and in an appropriate order. Importantly, it will also inform the State Government's investment plans going forward. All spending from the Perth Parking Licensing Account is subject to approval as part of annual State Government budget processes. This will require budget submissions or business cases to be prepared for all new initiatives on a year to year basis.

A strategic partnership between the Department of Transport and the City of Perth will be facilitated by an accompanying memorandum of understanding setting out roles and responsibilities for each respective agency.

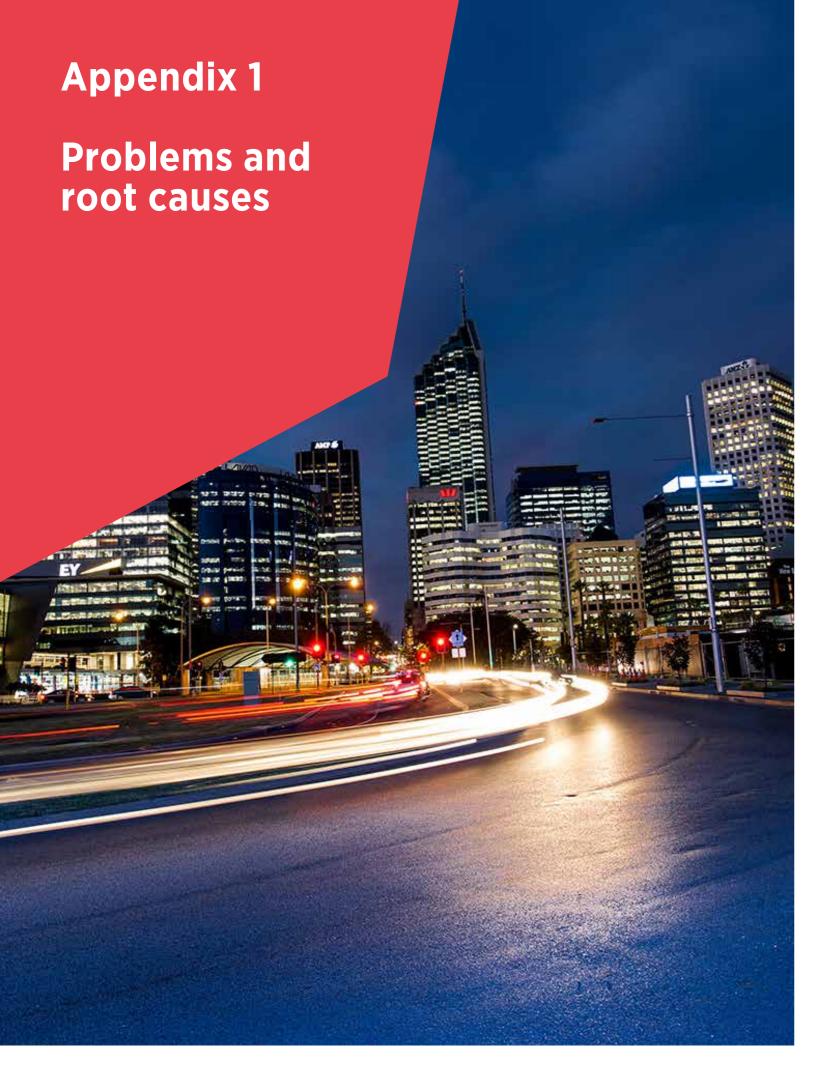
# Phase Two – Perth Greater CBD Transport

Phase Two, the overall Perth Greater CBD Transport Plan, will be progressed over the second half of 2020.

Building on and incorporating Phase One, the second phase will set out a 10-year vision for transport investment in the Perth Greater CBD area. It will provide the overarching framework for how the transport network should look in the future to support the continued growth and sustainable development of the Perth CBD and greater surrounds as a safe, connected and vibrant city centre. This will include identifying the short-term (one to five years) and longer-term priority initiatives for the area of the Perth Greater CBD beyond the Perth Parking Management Area (PPMA) boundaries, which are not identified under Phase One.

Further input will be sought from stakeholders and the community as the development of the Perth Greater CBD Transport Plan progresses.

As noted on page 16, a monitoring and evaluation framework will also be developed as part of Phase Two to evaluate the success of the Plan and the impact each initiative has in realising the overall objectives, outcomes and vision of the Plan. The monitoring and evaluation framework will include roles, responsibilities, timeframes and required resources to monitor ongoing performance and report on achievements. This will allow future funding to be allocated to the initiatives that demonstrate the greatest impact and value for money.



# **Problems**

Problems are the symptoms or consequences of root causes. Root causes are the fundamental reasons that problems occur or opportunities arise. Below is additional detail on the identified problems facing the Perth Greater CBD and the root causes behind them.

Problems 1-5: Competing priority of modes is impacting on safety, connectivity and vibrancy in the city.

#### **Problem 1**



Lack of pedestrian priority in some parts of the city causes travel time delays, overcrowding, safety risks and reduced amenity for pedestrians.

A lack of pedestrian priority in the city can cause issues such as:

- » Travel time delays and safety risks for pedestrians where there are long traffic signal cycles or a lack of pedestrian crossings, over and under passes.
- » Reduced amenity and comfort for pedestrians in areas where shade and weather protection are limited, or there is a lack of seating and rest areas.
- » Overcrowded environments and uneven footpaths and surfaces obstructing pedestrian flows and restricting movement, in particular for the elderly, people with young children or with disabilities.
- » Spending priority on vehicles modes over pedestrian initiatives, particularly given a lack of a 'walkable voice' to advocate for pedestrian improvements.

#### **Problem 2**

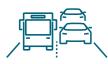


Inadequate space, poor sightlines, different speed limits, and incorrect use of paths and shared spaces increases potential for conflict between pedestrians and bike riders.

The risk of conflict between pedestrians and bike riders can be due to:

- » Inadequate space on shared paths and footpaths, and other areas that are shared between pedestrians and bike riders.
- » Poor sightlines and blind corners on shared paths.
- » The different speeds that pedestrians and bike riders travel while sharing the same space.
- » The limited means to enforce lower speeds for bike riders.
- » A lack of clarity and legibility of shared paths and dedicated bike lanes, which leads to the incorrect use of those paths.

#### **Problem 3**



High volumes of vehicle and bus traffic in the city impact on the quality of the public realm and reduce the safety of pedestrians and bike riders.

High vehicle traffic and bus volumes cause issues such as:

- » Increased air and noise pollution and reduced visual and environmental amenity.
- » Large number of red-light runners, crowded intersections and longer traffic signal cycles.
- » Increased risk of crashes involving pedestrians and vehicles and increasing costs of insurance claims lodged by pedestrians.
- » Crashes involving bike riders and vehicles, with the CBD being identified as Perth's main bike riding crash hotspot.

#### **Problem 4**



Crowded road networks during peak travel periods cause delays and unreliable journey times for vehicles and buses, increasing the cost of congestion and reducing bus patronage in the city.

Crowded road networks at peak hours have caused issues including:

- » Congestion and travel time delays due to queuing of vehicles and buses on the road. This may be in response to incidents on the freeway and trainlines, roadworks and road closures, and a lack of resilience of the traffic network. The queuing restricts access to parking assets, causes delays on CBD bus services (including CAT buses) and unreliable journey times for all road users. Travel time delays for buses are also the result of a lack of bus priority.
- » Increased congestion costs due to travel time delays and variability, public transport crowding, vehicle operating costs and air pollution.
- » Reliability and speed improvements are necessary to maximise patronage growth and mode shift to public transport and to achieve effectiveness of outlay on bus operations.

#### **Problem 5**



High demand for access to finite kerbside space in the city's centre causes conflicts between the competing users and impacts economic productivity.

There is a need for dynamic management of kerbside space given the many competing uses of kerbside space, which include:

- » Stationary uses of kerbside space such as car parking, bus stops, charter bus and coach parking, taxi ranks, on-demand parking bays and loading/unloading bays.
- » Movement functions of kerbside space such as bus and bike lanes, clearways, pedestrian crossovers and vehicle access.



Problems 6-10: Poor access, legibility and barriers are impacting on connectivity and vibrancy in the city.

#### **Problem 6**



Transport infrastructure and other physical barriers reduce connectivity between key destinations and the accessibility of public transport.

#### **Problem 7**



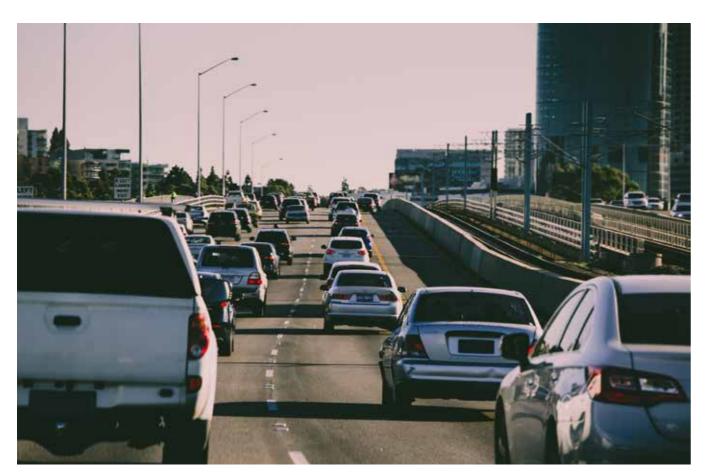
Limited wayfinding and legibility make it difficult to navigate around the city.

Connectivity between places can be impacted by:

- » Transport infrastructure barriers such as major roads, railway lines and intersections.
- » Physical barriers relating to universal access such as inconsistent kerb heights, uneven footpaths and surfaces, steep ramps and streets, missing pedestrian lanterns and audible devices and poor directional signage.
- » Fragmented bike riding infrastructure including gaps between bike paths, closed bike lanes, poor surface quality, and indirect routes for bike riders.

Navigating around the city can be difficult where there is:

- » Unclear routes and poor sight lines between destinations. This can occur when shared paths and dedicated bike lanes are not intuitive or 'self-explanatory', where there is inconsistent construction and design of shared paths, and on one-way streets in the city.
- » A lack of clarity and consistency in wayfinding and signage, particularly at key decision points. This is due, in part, to the lack of a wayfinding and legibility strategy or a coordinated pedestrian network.



#### **Problem 8**



It can be difficult for people to understand their transit options in the city, limiting the use of public transport as an effective means of travel within the city.

Some of the issues that prevent more public transport use in the city include:

- » A limited understanding of the boundaries and use of the Free Transit Zone (FTZ).
- » A lack of awareness of FTZ routes and stops compared to CAT bus routes.
- » Confusion from the high number of buses and bus routes in the city.

#### **Problem 9**



Reduced activity, substandard lighting, crime and a lack of security staff make people feel unsafe when walking, bike riding or catching public transport in the city at night.

People feel unsafe and avoid visiting areas at night where there is:

- » Inadequate lighting and limited activity, impacting on the vibrancy of an area.
- » Incidents of actual safety risks in the city, especially for people accessing public transport (e.g. train stations and bus stops).

#### **Problem 10**



Lack of transport options to access some areas of the city is limiting economic benefits from further participation in cultural, education, health, retail, entertainment and tourism endeayours.

The community, businesses and other stakeholders have identified some transport options to improve access to destinations (such as Elizabeth Quay, Kings Park, Matagarup Bridge and the Swan River), which include:

- » Additional transport options around stations where there is a lack of activity and low or medium density.
- » End of trip facilities, short-term bike parking and bike share schemes.
- » Space for Bus WA overnight layovers.

# **Root causes**

Identifying the root causes of the problems facing the Perth Greater CBD helps to better understand why issues are occurring and to develop possible solutions. The following six root causes explain some of the reasons behind the transport challenges faced within the Perth Greater CBD:

# Root cause 1: Historical land use, planning and transport decisions

Past development and decisions have impacted the city centre fabric we have today. The Greater Perth and Peel area has primarily developed as a low-density region, in part due to early planning strategies such as the Stephenson-Hepburn Plan (1955), which promoted a low-density growth framework and saw cars as the dominant form of transport at the time.

Some outcomes of these planning strategies include:

- » a CBD-centric public transport system, including the centralisation of major transport infrastructure (train stations and bus ports) within central Perth;
- » a concentration of freeways, major roads and railways near or through the central city;
- » a radial cycle network running parallel to the freeway, road or rail network; and
- » significant employment opportunities being concentrated in the central city.

Within the city, historical development patterns have created:

- » a city with long east-west movements as early development focused along the river frontage;
- » relatively narrow streets, some narrow footpaths and large city blocks; and
- » areas where freeway vehicle traffic, buses and large numbers of people all converge, such as near Elizabeth Quay.

# Root cause 2: Fragmented and complex governance arrangements

Perth, like other Australian capital cities, is characterised with multi-layered, complex and fragmented governance arrangements which can lead to:

- » over-prioritisation of all modes and complex plans trying to ensure all modes get ample opportunity within limited space; and
- » mode preference of different government departments making it difficult to agree and prioritise routes and space for bike riding, walking, public transport, on-demand transport, tourist coach services, freight vehicles, service vehicles and private vehicles.

# Root cause 3: Public and private parking availability and pricing in the Perth CBD

The availability and cost of parking can influence the choice to drive, which in turn can impact on city congestion and vibrancy. For example:

- » an oversupply of tenant parking in Perth can be an incentive to drive as this parking is mostly used by peak-hour commuters who don't directly pay for the parking space; and
- » there is limited incentive for parking providers to offer more short-term or on-street parking to better support local businesses and street activation due to little differentiation in the Perth Parking Levy paid for tenant, long-term or short-term parking.

# Root cause 4: Strong reliance on private vehicle for transport in Perth

Perth, like the rest of Australia, is highly cardependent. Reliance on private vehicles for transport, in part, is due to:

- » real cost of driving falling;
- » roads being a common property resource, so people are free to use them with little restriction;
- » fringe benefit tax, provision of fleet vehicles and/or free parking encouraging people to drive to work:
- » convenience of driving outweighs the impact it may have on others;
- » cost of driving and parking in the city not perceived to be high enough to encourage commuters to shift modes; and
- » cost of public transport often perceived to be too high (particularly for those traveling through multiple zones).

# Root cause 5: Inadequate funding for active transport infrastructure and services

Funding for walking and bike riding initiatives represents a very small fraction of overall funding for transport infrastructure and services. The United Nations recommends governments dedicate 20% of transport funding to non-motorised or active transport.

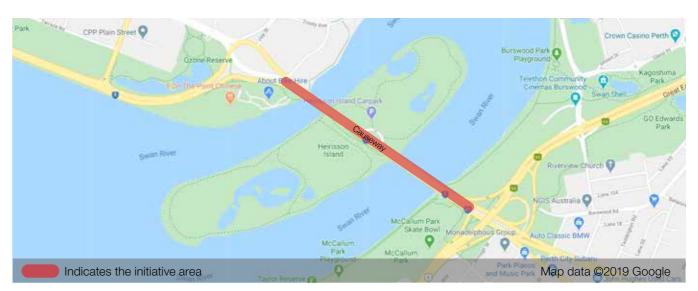
# Root cause 6: Changing retail patterns towards e-commerce and online shopping

For example, growth in online shopping and consumers choosing to have goods (and food) delivered to their home or workplace substantially increases the number of freight vehicles operating in and around the city centre. This additional freight delivery is adding to the demand for kerbside space.



# **High priority initiatives**

# Causeway Bridge for people riding and walking



#### Organisation/s responsible:

» Main Roads WA

#### Potential delivery year/s:

» Year 2

#### Status:

» Concept design

# Transport modes that benefit from the initiative:



Walk

Cycle

This initiative involves the design and construction of a new 'Greenway' bridge following the Causeway alignment. The Causeway Bridge is one of the busiest connections into the city. It provides an important traffic, walking and bike riding connection between the CBD and East Perth, Heirisson Island and south-eastern suburbs. The route also links two recreational shared paths on the river's north and south foreshores. The shared path along the Causeway is substandard, very narrow and the balustrading too low to provide protection from heavy traffic. An Auditor General's report identified the Causeway as the seventh-most-reported location for bike rider safety concerns.

Main Roads WA will design a standalone structure for pedestrians and bike riders alongside the current bridge.

#### **Problems addressed**

This upgraded walking and bike riding link will reduce conflicts between bike riders and pedestrians, encourage mode shift with improvements to walking and bike riding conditions, provide better connections and more transport options for people to access the CBD.

# Improved safety and connectivity around RAC Arena



#### Organisation/s responsible:

- » Department of Transport
- » VenuesWest

#### Potential delivery year/s:

Year 1

#### Status:

» Concept plan

# Transport modes that benefit from the initiative:



Walk

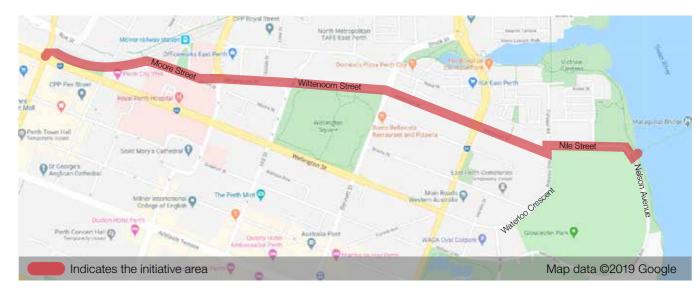
Cycle

In mid-April 2020, the bike path behind RAC Arena was opened but gates were installed to close the path during events. This next stage involves investigating measures to reduce speeds and reduce the risk of conflict between bike riders and pedestrians so the path can remain open during events to improve access to the area.

#### **Problems addressed**

This initiative will reduce the risk of conflict between pedestrians and bike riders during events at the Arena, improve the connectivity of existing bike infrastructure and the clarity of bike riding routes. It will also provide more transport options for people attending events at the Arena.

# **East-west bicycle route connecting Matagarup Bridge to Perth**



#### Organisation/s responsible:

- » Department of Transport
- » City of Perth

#### Potential delivery year/s:

» Years 3-5

#### Status:

» Concept design

# Transport modes that benefit from the initiative:



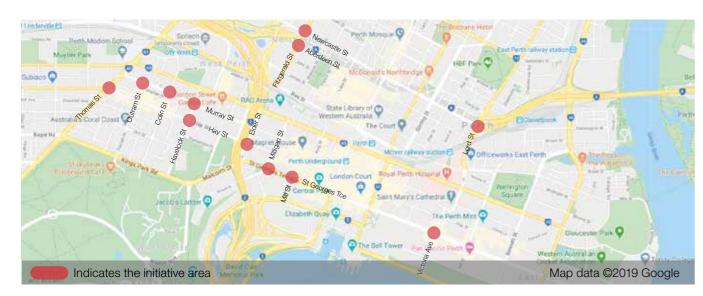
& Cycle

This initiative extends east-west for about 2.1 km, with bike lanes connecting Matagarup Bridge to central Perth. It runs along Nile and Wittenoom Streets, through Lord Street, along Moore Street and the southern side of the rail line to the Barrack Street Bridge. The initiative includes concept design, consultation, detailed design and construction of new, separated bike lanes. The Department of Transport and City of Perth will collaborate on the detailed design to address issues such as a rail crossing and a steep slope, and construction will be implemented in stages. Suitable treatments may include a bi-directional bike lane along the verge or a protected bi-directional bike lane with kerb protection.

#### **Problems addressed**

The provision of new separated bike lanes will reduce conflicts between bike riders and vehicles or pedestrians, encourage mode shift with more bike riding, improve bike network links that connect neighbourhoods, provide a clear route for bike riders and more transport options for people to access popular destinations.

# **Parallel Walks Conversion Program**



#### Organisation/s responsible:

» City of Perth

#### Potential delivery year/s:

» Years 1-4

#### Status:

» Ready to commence

#### Transport modes that benefit from the initiative:





Public Transport - Bus



Private, On-demand Vehicles

Freight and Delivery Vehicles

In collaboration with Main Roads WA, complete the parallel walks program initiated in 2013 by converting 12 intersections across central Perth so they have: walk / don't walk symbolic signal lanterns, audible push buttons facilities, tactile paving, a head start walk period for pedestrians and bike riders, upgraded traffic signal controller and electrical cabling, upgraded pedestrian and pram ramps, associated signs and pavement markings, traffic signal poles correctly aligned, LED traffic signal lanterns for better visual display, and flashing yellow caution lights.

#### **Problems addressed**

This initiative will reduce travel time delays for pedestrians, vehicles and buses, and reduce pedestrian overcrowding at intersections. It will also improve connections and safety for pedestrians with more consistent crossing arrangements, less confusion and less jaywalking. The audible push buttons, tactile paving, ramps and LED traffic signal lanterns will also reduce barriers for people with disabilities.

#### **Roe Street enhancement**



#### Organisation/s responsible:

» City of Perth

#### Potential delivery year/s:

» Years 1-2

#### Status:

» Detailed design

#### Transport modes that benefit from the initiative:



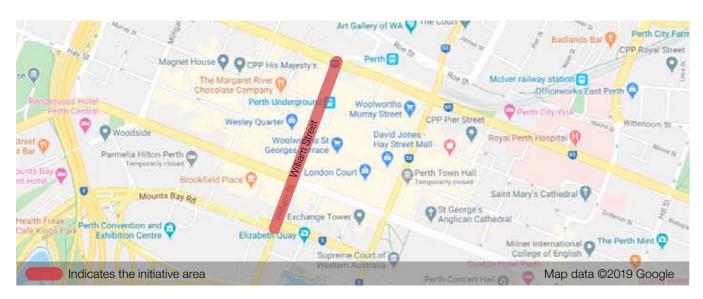
Cycle

This initiative will complement the Perth City Link development, reconnect the CBD with Northbridge and facilitate regeneration of the area. It includes road upgrades, wider footpaths, protected and separated uni-directional bike lanes, a narrower street corridor to reduce speed, new street trees, lighting, CCTV, paving and street furniture. Consideration will be taken of access points to existing and future developments along Roe Street. Detailed design has commenced. Construction could commence at the end of the first year.

#### **Problems addressed**

This initiative will provide more separated space and amenity for pedestrians and bike riders, reducing conflict between bike riders and vehicles or pedestrians. It should reduce vehicle volumes and speeds leading to improved safety and quality of the public realm. It will improve connectivity and transport options between Northbridge and the CBD, provide clearer sight lines, and improve perceptions of safety in the area at night.

# William Street green corridor concept



#### Organisation/s responsible:

- » Department of Transport
- » City of Perth

#### Potential delivery year/s:

» Years 2-4

#### Status:

» Project brief (pending completion of CBD Strategic Transport Corridor framework)

#### Transport modes that benefit from the initiative:



Walk



Cycle



Private, On-demand Vehicles



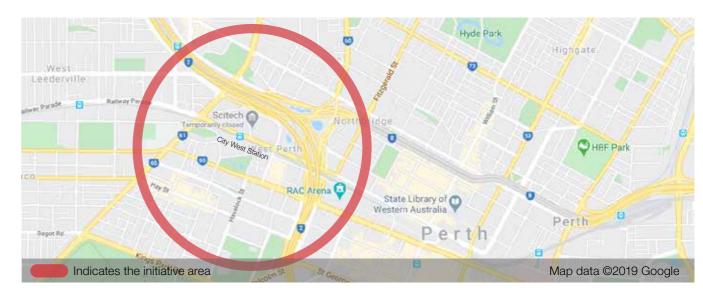
Freight and Delivery Vehicles

A green pedestrian linkage between Yagan Square and Elizabeth Quay along William Street would provide health, safety, social, economic and environmental benefits. This initiative will upgrade an important inner-city pedestrian corridor between key tourist destinations by creating a linier park with more alfresco dining and social opportunities, and an improved public realm that will support new business growth in the core of the city. To achieve these aspirations, the initiative will need to resolve mode priority and network connectivity issues, with due consideration of bus priority opportunities, movement and place principles, bike and vehicle access to underground carparks along William Street. As such the initiative will take guidance from the CBD Strategic Transport Corridor framework, as well as the Greenspaces, shade and streetscape framework. A concept design will be developed for consideration.

#### **Problems addressed**

This initiative will provide more green space, comfort and amenity for pedestrians and bike riders, and improve the quality of the public realm and safety by reducing traffic volumes and speeds along William Street. It will also improve connectivity and legibility between Yagan Square and Elizabeth Quay and reduce barriers for people with disabilities. By considering mode priority, it should also improve travel time reliability for vehicles and buses, and better manage kerbside space.

## **City West Station: concept design**



#### Organisation/s responsible:

- » Department of Transport
- » City of Perth

» Years 3-4

#### Status:

» Project brief

# initiative:



Walk

Cycle



Public Transport - Bus



Public Transport - Train

Potential delivery year/s:

Transport modes that benefit from the

# **Problems addressed**

This initiative will improve safety, connections, legibility and comfort in and around the station, and improve the quality of the public realm. It will improve connectivity and transport options to/ from City West Station, increase understanding of transit options in the area, reduce barriers for people with disabilities, and improve perceptions of safety in the area at night.

This initiative involves developing a concept

plan that responds to the need for improved

accessibility to/from City West Station and to

surrounding precinct. It will investigate and make

recommendations to improve safety, connections.

legibility and comfort in and around the station.

It will consider and incorporate works in the area

including changes to the freeway access ramps

station upgrades by the Public Transport Authority,

Sutherland Street bridge works, improved amenity

and wayfinding for pedestrians and bike riders

between the City of Vincent and the station,

and improved public transport links between

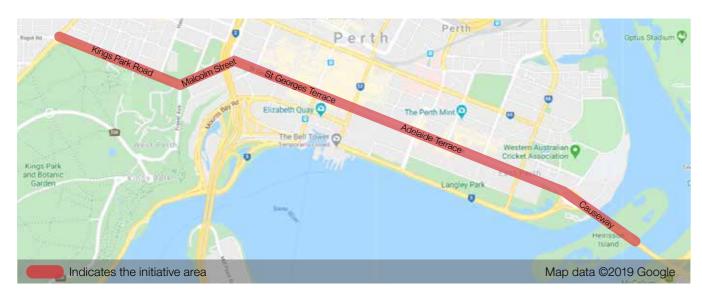
Leederville station and City West station.

(as part of Transforming Freeways phase 3),

support transit-oriented development in the

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# **Causeway to Kings Park Road corridor concept**



#### Organisation/s responsible:

- » Department of Transport
- » City of Perth

#### Potential delivery year/s:

» Years 2-4

#### Status:

» Project brief (pending completion of the CBD Strategic Transport Corridor framework)

#### Transport modes that benefit from the initiative:



Walk

Cycle



Public Transport - Bus



Private, On-demand Vehicles

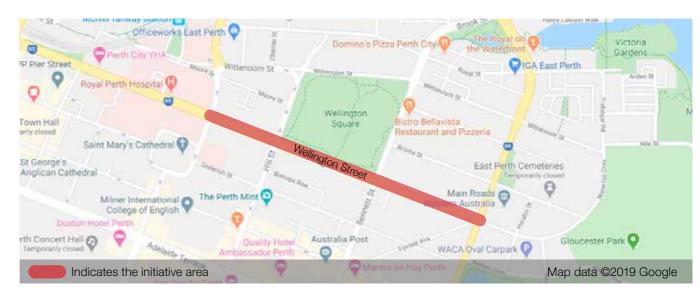
Freight and Delivery Vehicles

This east-west corridor runs from the Causeway along Adelaide Terrace, St Georges Terrace and Kings Park Road to Thomas Street. This corridor is the main spine of the greater CBD, serving as an entry statement and reflects the city's identity. This initiative is linked to the City Wildflower Entry Experience, linking Perth Airport, Burswood and Kings Park. Therefore it needs to consider urban design quality, pedestrian amenity and branding for the city, alongside transport modes. It provides a strategic opportunity to create an experiential entry along this central corridor. The initiative will take guidance from the CBD Strategic Transport Corridor framework to review the corridor, consider all transport modes, take account of amenity and design, and complete a concept design for consideration.

#### Problems addressed

This initiative will improve the quality of the public realm along the corridor, with better amenity for pedestrians and bike riders. It will also improve connectivity, legibility and transport options between the Causeway and Kings Park. By considering mode priority, movement and place, bus and vehicle access, and network connectivity issues, it should also improve travel time reliability for vehicles and buses, and better manage kerbside space.

# Clearway initiatives - Wellington Street (Lord Street to **Plain Street)**



#### Organisation/s responsible:

» City of Perth

#### Potential delivery year/s:

» Years 1-2

#### Status:

» Project brief

#### Transport modes that benefit from the initiative:



Walk



Public Transport - Bus



Private, On-demand Vehicles

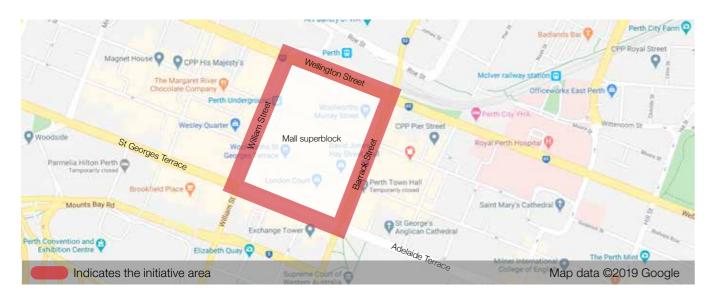
Freight and Delivery Vehicles

This initiative will introduce clearways on Wellington Street, between Lord Street and Plain Street, and peak period parking restrictions, especially during the morning peak period. A clearway is a section of road where stopping and parking is not allowed during the times shown on the clearway sign. Installing clearways on this section of Wellington Street will allow two lanes to be utilised during peak periods to help reduce congestion, improve journey times for drivers and bus users, improve safety by removing parked vehicles from the kerbside lane, reduce red light running potentially improving pedestrian safety, and improve the efficiency of intersections along the corridor.

#### **Problems addressed**

This initiative will improve travel time reliability for vehicles and buses, and reduce safety risks for pedestrians through a reduction in red-light runners.

# Service delivery improvements for the mall superblock



#### Organisation/s responsible:

- » Department of Transport
- » City of Perth

#### Potential delivery year/s:

» Year 2

#### Status:

» Project brief

#### Transport modes that benefit from the initiative:

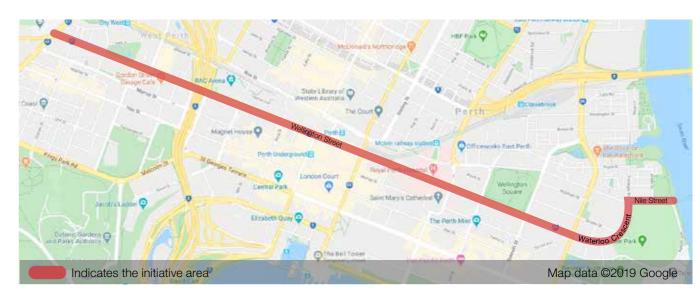
Freight and Delivery Vehicles

CBD businesses have expressed concerns about the location and lack of loading zones and parking space for freight and service delivery drivers. Delivery providers must compete for road and kerbside space, which is particularly limited near the city's shopping malls. This is adding to local congestion and delivery times. This initiative will investigate alternative service delivery options for the mall superblock, including tunnel and at-grade solutions, to future proof the retail core's future development. This will include feasibility and concept design investigations for the provision of a retail core (mall superblock) delivery tunnel.

#### **Problems addressed**

This initiative will improve the management of kerbside space, reduce traffic volumes around the mall superblock, and improve travel time reliability for freight and delivery vehicles. It also provides additional transport options for delivery drivers.

# **Wellington Street corridor concept**



#### Organisation/s responsible:

- » Department of Transport
- » City of Perth

#### Potential delivery year/s:

» Years 2-4

#### Status:

» Project brief (pending the completion of the CBD Strategic Transport corridor framework)

#### Transport modes that benefit from the initiative:



Walk

Cycle



Public Transport - Bus



Private, On-demand Vehicles

Freight and Delivery Vehicles

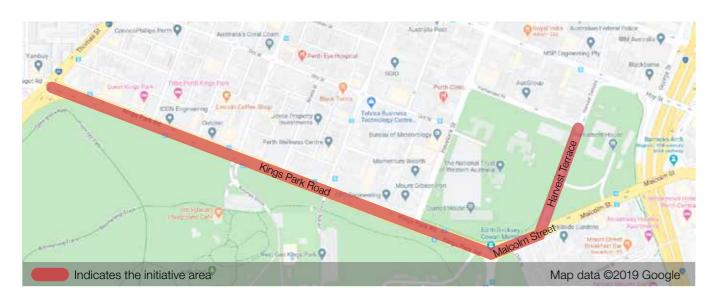
This east-west corridor runs from Matagarup Bridge along Nile Street, Waterloo Crescent and Wellington Street to Thomas Street. It links the river and East Perth to Perth Station and Bus Port, Perth City Link, the RAC Arena, freeway access, West Perth and Thomas Street. The corridor has a number of competing uses, transport modes and inadequate space, which create conflicts along the route. This initiative will take guidance from the CBD Strategic Transport Corridor framework to review the corridor, consider all transport modes, safety, amenity and design, strengthen the connections to this corridor, and complete a concept design for consideration.

#### **Problems addressed**

This initiative will provide adequate space to reduce the risk of conflict between pedestrians and bike riders. It will also increase understanding of transit options along the corridor, improve connectivity, legibility and transport options between key destinations along the corridor. By considering mode priority, movement and place, bus and vehicle access, and network connectivity issues, it should better manage kerbside space and improve travel time reliability for vehicles and buses.

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# Kings Park Road shared path



#### Organisation/s responsible:

» City of Perth

#### Potential delivery year/s:

» Years 1-2

#### Status:

» Update concept plan

#### Transport modes that benefit from the initiative:



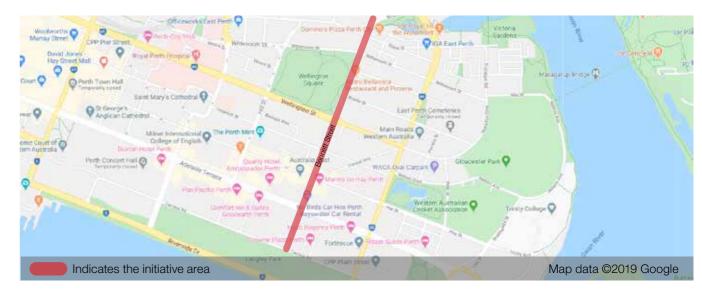
Cycle

The community has identified the need for dedicated bike lanes, wayfinding, improved safety and crossings over Kings Park Road. This initiative involves constructing an off-road shared path along the southern (park) side of Kings Park Road, between Thomas Street and Cliff Street. With collaboration from the Botanic Gardens and Parks Authority, the existing draft concept plan will be updated to provide priority to path users where a side/access road crosses the path and to emphasise the connection to the existing Harvest Terrace shared path over Malcolm St. On completion of the concept plan, detailed design and construction will commence.

#### **Problems addressed**

A new shared path will reduce conflicts between bike riders and vehicles or pedestrians, encourage mode shift with improvements to walking and bike riding, improve linkages that connect neighbourhoods, provide clearer routes for pedestrians and bike riders, and more transport options for people to access Kings Park and the CBD.

# North-south bicycle route connecting Langley Park to **Royal Street activity centre**



#### Organisation/s responsible:

» Department of Transport

#### Potential delivery year/s:

» Years 3-4

#### Status:

» Concept design

#### Transport modes that benefit from the initiative:

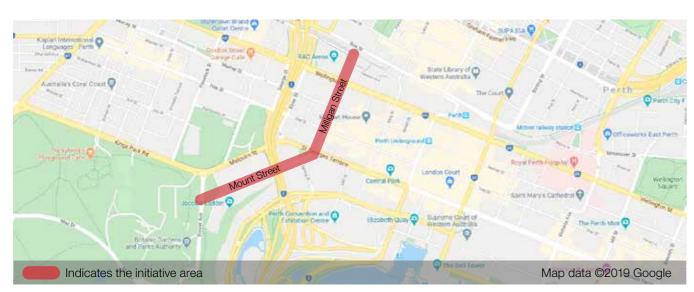


The community has identified a need for better bike riding connections through East Perth. This initiative involves the construction of a north-south bike riding route connecting Langley Park and the Royal Street activity centre. It was identified in the City of Perth Cycle Plan 2029 and the Department of Transport's Long-Term Cycle Network, and links to the City of Perth's Waterfront Master Plan. This initiative will explore protected bike lane options and involves concept development, consultation, detailed design and construction.

#### Problems addressed

New bike lanes will reduce conflicts between bike riders and vehicles or pedestrians, encourage mode shift with improvements to bike riding conditions, provide linkages, clearer bike riding routes and more north-south transport options in East Perth for people to access key destinations.

# Milligan and Mount Street corridor concept



#### Organisation/s responsible:

- » Department of Transport
- » City of Perth

#### Potential delivery year/s:

» Years 2-4

#### Status:

» Project brief (pending the completion of the CBD Strategic Transport Corridor framework)

#### Transport modes that benefit from the initiative:



Walk

Cycle



Public Transport - Bus



Private, On-demand Vehicles

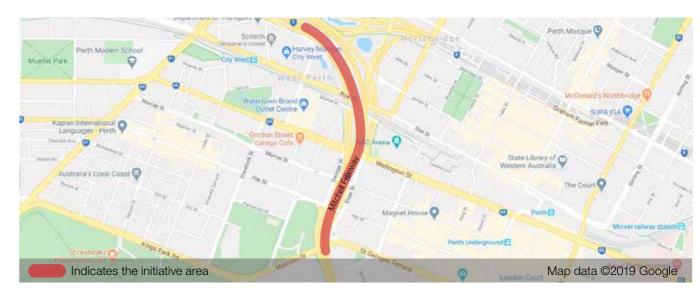
Freight and Delivery Vehicles

Milligan Street has high volumes of vehicle traffic, pedestrians and bike riders, on-street parking conflicts, no bus stops or bike lanes, and very constrained kerbside space which impacts safety, amenity and travel times. The community has also expressed concern about the safety of bike riders along Milligan Street, poor crossing priority for pedestrians, and the need for better wayfinding and connections between key destinations in the CBD and Kings Park, which includes this corridor. This initiative seeks to address these issues with a review of the corridor between the RAC Arena. along Milligan Street and Mount Street, over the freeway pedestrian bridge to Fraser Avenue in Kings Park. The initiative will take guidance from the CBD Strategic Transport Corridor framework and a concept design will be completed for consideration.

#### Problems addressed

By considering mode priority, movement and place, bus and vehicle access and network connectivity issues, this initiative should better manage road and kerbside space, and reduce traffic volumes to improve the public realm. If additional space is allocated to pedestrians and bike riders, the risk of conflict will be reduced and pedestrians and bike riders will see improved comfort and safety. The review will also consider improved connections, legibility and transport options between the CBD and Kings Park.

# Mitchell Freeway Veloway



#### Organisation/s responsible:

- » Department of Transport
- » Main Roads WA
- » City of Perth

#### Potential delivery year/s:

» Year 4

#### Status:

» Concept design

#### Transport modes that benefit from the initiative:



Walk

Cycle

This initiative will investigate the feasibility of a connected and grade separated principal shared path adjacent to and crossing Mitchell Freeway from Malcolm Street to Old Aberdeen Place. The Veloway is intended to be both a commuter bike riding route and a pedestrian access enabler into the Perth city centre. Completing this critical infrastructure will unify several radial routes that connect to the city. The Veloway concept design will identify opportunities to create public realm nodes along the route alignment and integrate with the adjoining mixed development precinct abutting either side of the freeway.

This is a large-scale initiative that has been proposed for funding consideration by Infrastructure Australia as part of the Perth City Deal. A State funding contribution could be contemplated from the Perth Parking Levy.

#### **Problems addressed**

The provision of a new grade-separated principal shared path (Veloway) will reduce conflicts between bike riders and vehicles or pedestrians, encourage mode shift with safer and more comfortable bike riding and walking conditions, improve walking and bike riding linkages that connect neighbourhoods and other shared paths, provide a clear route for pedestrians and bike riders, and more transport options for people to access the CBD and other popular destinations.

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# Hay Street Mall upgrade



#### Organisation/s responsible:

» City of Perth

#### Potential delivery year/s:

» Year 1

#### Status:

» Concept design

#### Transport modes that benefit from the initiative:



Walk

Freight and Delivery Vehicles

This initiative will develop a concept plan to upgrade Perth's main pedestrian mall and address pedestrian movement design, activation, amenity, shade, greening and safety. Upgrades to Hay Street Mall could include:

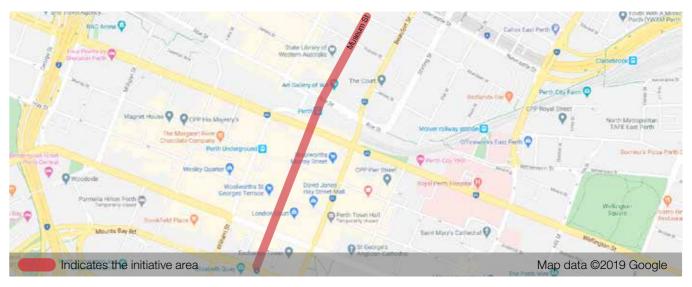
- » The reuse and upgrade of laneways to accommodate greater pedestrianisation and commercial activation
- » Improved infrastructure to enable more events and activation, particularly at night
- » New permanent and temporary artworks
- » New and more varied seating to encourage more activity
- » Improved lighting to enhance the Mall at night
- » Consolidation and removal of redundant features to reduce clutter
- » More trees to provide shade.

Retail delivery, emergency service and potential community bus services and routes need further investigation to facilitate the Mall upgrade works and increase activation.

#### **Problems addressed**

The initiative will improve the public realm and provide more space, amenity and safety for pedestrians. Additional lighting and activation will improve perceptions of safety at night. If retail delivery, emergency service and community bus services are implemented, these provide more transport options to access the area.

# **Upgrade Perth Walklink Experience**



#### Organisation/s responsible:

» City of Perth

#### Potential delivery year/s:

» Years 1-3

#### Status:

» Concept plan

#### Transport modes that benefit from the initiative:



Stakeholders have identified pedestrian permeability through and across the city as a key issue requiring more focus.

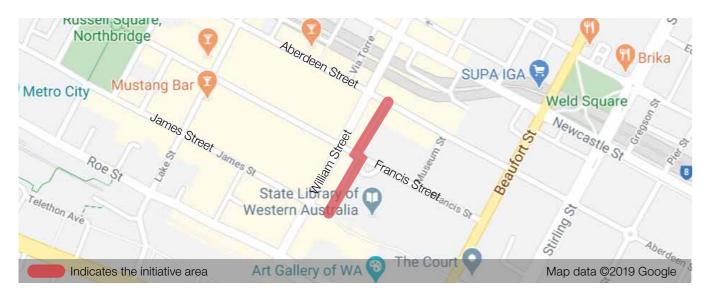
This initiative will create a single pedestrian walkway that improves amenity and activates the public realm, provides a comfortable walking experience, includes landscaping, entertainment and multi-functional design elements. It will link North Metropolitan TAFE, the Perth Cultural Centre, Perth Central Station, the Mall retail core, and ultimately Elizabeth Quay. The walkway is not intended to replicate a New York Highline-type design (elevated greenway).

Phase 1 of the Perth Walklink is being implemented as part of the Carillon and Myers Redevelopment initiatives. Phase 2 will be subject to the redevelopment of Citiplace, the Perth Cultural Centre redevelopment and green street upgrades on Francis and Museum Streets.

#### Problems addressed

An extended separated walk link will reduce travel time delays and improve amenity and comfort for pedestrians, reduce conflicts between pedestrians and bike riders or vehicles, improve pedestrian linkages that connect neighbourhoods, reduce barriers for people with disabilities, provide a clear route for pedestrians and more transport options for people to access popular destinations.

# Northbridge laneways upgrade



#### Organisation/s responsible:

» City of Perth

#### Potential delivery year/s:

» Year 1

#### Status:

» Concept plan

# Transport modes that benefit from the initiative:



Walk

This initiative will develop a strategy to support the activation and pedestrianisation of laneways that connect to the Perth Cultural Precinct. It will prepare and implement concept plans for the upgrade of the existing William Street rear laneways between James and Aberdeen Streets (abutting the Perth Cultural centre and TAFE) to commercialise and pedestrianise the laneway frontages. Commercialisation of the laneways is subject to the removal of existing waste compounds.

#### **Problems addressed**

This initiative will improve the quality of the public realm along the laneways, improve perceptions of safety at night, and increase transport options to access cultural, educational, retail, entertainment and tourism activities.

# **Area wide initiatives**

# Bus stop accessibility upgrades and shelter replacement



#### Organisation/s responsible:

- » Public Transport Authority
- » City of Perth

#### Potential delivery year/s:

» Years 1-3

#### Status:

» Ready to commence

# Transport modes that benefit from the initiative:



Walk

Cycle



Public Transport - Bus

The *Disability Discrimination Act 1992*, in association with the Disability Standards for Accessible Public Transport 2002, require all bus stops to be accessible to people with disabilities.

The City of Perth and the PTA have identified 52 locations where bus stop accessibility upgrades and replacement bus shelters should be progressed. For each bus stop, the initiative will involve:

- » Carrying out a survey and review, including analysing past passenger movements
- » Developing a detailed design
- » Removing existing bus shelters
- » Construction works and installation of the new shelters.

#### **Problems addressed**

This initiative will assist in removing barriers to the use and accessibility of the inner-city bus services, as well as remove impediments and improve amenity for pedestrians along city footpaths.

# Bike riding data and modelling



#### Organisation/s responsible:

» Department of Transport

#### Potential delivery year/s:

» Years 2-3

#### Status:

» Project brief

#### Transport modes that benefit from the initiative:



Monitoring bike riding activity in the city will assist in planning for infrastructure improvements and ensure it keeps pace with changes in travel and recreational bike rider behaviour.

This initiative will involve developing a system for the ongoing monitoring of bike riding activity, including:

- » Bike rider counts
- » Audits
- » Perception surveys.

Data collected will form an important input into the Department of Transport's strategic transport model to forecast future bike riding demands.

#### **Problems addressed**

Monitoring bike riding activity in the city will facilitate better informed decision making on bike riding infrastructure needs and help to resolve conflict with other modes and lead to safety, connectivity and legibility improvements for bike riders to, from and within the city.

# **End-of-trip facilities framework**



#### Organisation/s responsible:

» Department of Transport

#### Potential delivery year/s:

» Year 1

#### Status:

» Ready to commence

#### Transport modes that benefit from the initiative:



Walk

Cycle

End-of-trip facilities are recognised as a key factor that can influence a commuter's decision whether to ride a bike or not to their destination. Further, their provision has been seen to support increased bike riding trips to and from the city centre. Research undertaken by the Department of Transport in 2019 found around 13 per cent of the working city population that would like to ride a bike lacked access to uncrowded, good quality end-of-trip facilities.

This initiative will involve developing a clear framework to guide and support increased provision of end-of trip facilities in city developments, addressing:

- » The Department of Transport's advocacy role
- » Best practice guidelines
- » Review of policy standards
- » Active travel plans
- » Business grant scheme for existing buildings.

#### **Problems addressed**

Improving access to good quality end-of-trip facilities will support more people choosing to bike ride to and from the city, increasing transport options available.

# Free transit zone (FTZ) awareness raising and education program



#### Organisation/s responsible:

- » Department of Transport
- » Public Transport Authority

#### Potential delivery year/s:

» Years 1-2

#### Status:

» Project brief

#### Transport modes that benefit from the initiative:



Public Transport - Bus

Public Transport - Train

Revenue from the Perth Parking Levy funds free travel on all public transport services within the Perth Parking Management Area, reducing the need for cars in the CBD. Whilst the Perth CAT service is well known and understood (attributed to its strong branding and established routes), focus group research undertaken in 2018 revealed there is significant public uncertainty around the Free Transit Zone (FTZ) boundaries, applicable bus routes and in general, the rules around free travel.

This is a joint initiative between the Department of Transport and the Public Transport Authority and will see the development and implementation of a program, in consultation with the Cities of Perth and Vincent, to assist with awareness, understanding and use of the FTZ. This could include:

- » Development of maps
- » On-vehicle and external displays
- » On board announcements
- » Bus stop identification
- » Possible simplification of high-frequency non-CAT bus routes and corridors.

Note: This initiative could also form part of the travel demand management program (page 54).

#### Problems addressed

Raising awareness of the FTZ could assist people to make informed travel decisions and lead to better use of existing services for travel within the CBD.

# **Greenspaces, shade and streetscape framework**



#### Organisation/s responsible:

» City of Perth

#### Potential delivery year/s:

» Years 1-2

#### Status:

» Project brief

#### Transport modes that benefit from the initiative:



Walk



Cycle

Walkable streets and neighbourhoods have significant health, safety and economic benefits and are a key indicator of a city's vibrancy. There is strong community desire for improved pedestrian amenity, including more sheltered areas, shade and seating, as well as wanting a more ambitious tree planting program to dramatically increase canopy across the city. This is equally important to mitigate against the impacts of climate change.

This initiative will leverage work already undertaken by the City of Perth, with the key objective to develop a framework that guides:

- » More green spaces throughout the city
- » Creation of more sheltered and amenable areas for walking and relaxing in CBD
- » Development of street design principles (in particular for key pedestrian and bike riding routes and locations).

The framework will guide significant infrastructure or other agreed initiatives which will be required to incorporate the framework's recommendations within their design.

#### **Problems addressed**

This initiative will facilitate an improvement in overall amenity and comfort for pedestrians (and bike riders) through a gradual greening of the city.

# **Kerbside space prioritisation framework**



#### Organisation/s responsible:

- » Department of Transport
- » City of Perth

#### Potential delivery year/s:

» Years 2-3

#### Status:

» Project brief

#### Transport modes that benefit from the initiative:





Public Transport - Bus



Private, On-demand Vehicles

Freight and Delivery Vehicles

The growing demand and increasing competition for access to limited kerbside space in the city requires guidance on priority.

This initiative will develop a framework that responds to, and balances user needs with requirements for the future function and success of the CBD. The initiative will investigate capacities, demands, competing user needs, impact (both on safety and productivity) and present potential solutions for management and prioritisation.

#### Problems addressed

This initiative will help to manage demand for kerbside space with flow on benefits to vehicle traffic, reduced congestion and improved accessibility.

# **Revise Perth Parking Policy's application to** redevelopments



#### Organisation/s responsible:

» Department of Transport

#### Potential delivery year/s:

» Year 1

#### Status:

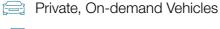
» Ready to commence

#### Transport modes that benefit from the initiative:





Cycle



Freight and Delivery Vehicles

The Perth Parking Policy sets the maximum amount of non-residential parking that may be provided on any lot within the boundaries of the Perth Parking Management Area.

Older buildings, predating the Perth Parking Policy, are likely to have been approved with higher parking allowances relevant to the time they were originally developed. There is concern the Perth Parking Policy's restrictions on maximum tenant allowances that apply to new development applications could be having an adverse impact on Perth CBD property owners' willingness to redevelop or modernise older office buildings.

This matter was subject to an independent panel review in 2019 and this initiative involves acting on the recommendations from that review.

The Perth Parking Policy will be reviewed to consider improvement to the process for allowing additional commercial tenant parking bays when not all existing parking bays in a redevelopment can be repurposed. Revisions will be developed in consultation with the City of Perth and involve discussions with the development industry.

#### **Problems addressed**

This initiative will continue to reflect the intent of the Perth Parking Policy. A revised process for considering redevelopments in the city will help to facilitate choice of transport options and consider the flow and volume of traffic on travel times and pedestrian and bike rider amenity.

# Passenger on/off counters on all buses operating within the Free Transit Zone (FTZ)



#### **Organisation/s responsible:**

» Public Transport Authority

#### Potential delivery year/s:

» Year 2

#### Status:

» Ready to commence

#### Transport modes that benefit from the initiative:



Public Transport - Bus

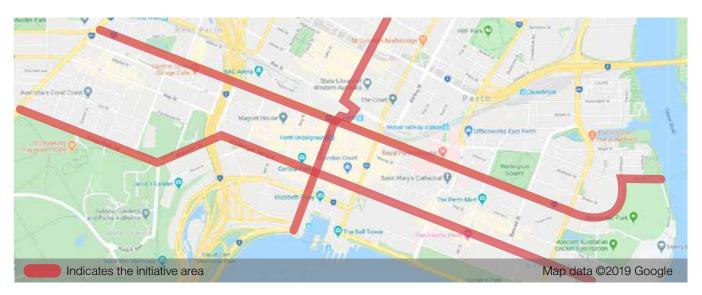
The area covered by the Perth Parking Management Area is also designated a free transit zone (FTZ), allowing anyone to hop on and off public transport services within the FTZ without having to pay a fare, or in the case of bus travel, tag on using a SmartRider card. While the FTZ makes it convenient to use the bus services to get around the city (including for tourists), it also makes monitoring patronage difficult.

To better understand usage and inform planning and decision making, this initiative will develop a system to allow ongoing monitoring of patronage for bus trips taken solely within the FTZ. This would be supported by installing passenger counters to record boarding and alighting passengers at each bus stop within the FTZ.

#### **Problems addressed**

This initiative will facilitate a better understanding of intra-FTZ trips made and help with the development of initiatives to further support transit options in the city.

# **CBD** strategic transport corridor framework



#### Organisation/s responsible:

- » Department of Transport
- » City of Perth

#### Potential delivery year/s:

» Years 1-2

#### Status:

» Project brief

#### Transport modes that benefit from the initiative:



Walk



Cycle



Private, On-demand Vehicles

Public Transport - Bus



Freight and Delivery Vehicles

There are key transport corridors within the CBD that serve as major thoroughfares for traffic, buses, bike riders and pedestrians. The competing demands for travel and access along these corridors by all modes results in congestion, network connectivity issues and poor bike riding and pedestrian environments.

This initiative will develop a strategic framework which seeks to resolve mode priority and network connectivity issues with due consideration to movement and place and potential bus priority for the key conflict corridors in the CBD of:

- » William Street, between Elizabeth Quay and Northbridge
- » Wellington Street corridor, between Thomas St and Matagarup Bridge
- » Causeway to Kings Park Road corridor
- » Milligan and Mount Street corridor

#### **Problems addressed**

This initiative, being a holistic study, will provide a framework to guide further initiatives under the Perth Greater CBD Transport Plan and work towards resolving issues around pedestrian priority, bike riding amenity, vehicle congestion, unreliable journey times, access to kerbside space, connectivity, wayfinding and feasible transit options.

Perth Greater CBD Transport Plan Phase One 53 52 Department of Transport

# **Travel demand management program post COVID-19**



#### Organisation/s responsible:

- » Department of Transport
- » City of Perth
- » Public Transport Authority

#### Potential delivery year/s:

» Years 1-2

#### Status:

» Project brief

#### Transport modes that benefit from the initiative:



Walk

Cycle



Public Transport - Bus



Public Transport - Train



Private, On-demand Vehicles

Freight and Delivery Vehicles

COVID-19 has been a major disruptor to people's daily routine and travel behaviour which has seen more flexible work arrangements, a reduction in public transport usage, higher private vehicle use, and a noticeable uptake in bike riding. It also offers an opportunity to change travel habits in terms of when, how, where and why people travel.

This initiative seeks to develop a travel demand management program to encourage people to get back on the bus, train, bike or footpath, and optimise the use of existing infrastructure and services after COVID-19 threats are over.

The travel demand management program could include a combination of initiatives such as an end of trip facilities grant program and free transit zone awareness raising.

#### **Problems addressed**

A travel demand management program would encourage people to choose public transport, bike riding and walking, resulting in less vehicle traffic and congestion and a better understanding and use of transport options.

# **Lighting framework**



#### Organisation/s responsible:

» City of Perth

#### Potential delivery year/s:

» Years 1-2

#### Status:

» Project brief

#### Transport modes that benefit from the initiative:



Walk

Cycle



Public Transport - Bus



Public Transport - Train



Public Transport - Ferry

People's perception of safety at night can have significant impacts on the economic and cultural life of the city. Improved lighting, along with increased night time activity and surveillance are key components to increasing this perception of safety.

This initiative will leverage work already undertaken by the City of Perth, with the key objective to develop an overarching framework to guide the implementation of priority lighting initiatives. These priority lighting initiatives will align with key transport outcomes, such as to address safety and amenity issues for pedestrians and bike riders.

The framework will guide significant infrastructure or other agreed initiatives which will be required to incorporate recommendations of the framework within their design.

#### **Problems addressed**

Consistent implementation of a lighting framework will help make people feel safe when walking, riding a bike or catching public transport in the city at night.

# Legibility and wayfinding framework



#### Organisation/s responsible:

» Department of Transport

#### Potential delivery year/s:

» Years 3-4

#### Status:

» Project brief

#### Transport modes that benefit from the initiative:



Walk

Cycle



Public Transport - Bus



Public Transport - Train

Public Transport - Ferry

Legible environments are easy to navigate on foot or by bike, with pathways that are intuitive, have good sight lines between destinations, and clarity and consistency in wayfinding and signage. The community wants the city centre to be easier to navigate and to help visitors locate key tourism destinations.

This initiative will see the development of a framework, in collaboration with the City of Perth, to guide legibility and consistent wayfinding design, especially along the key pedestrian and bike riding routes and locations:

- » Between the Stirling Precinct and William
- » Between Northbridge and Central Perth
- » To Kings Park
- » Between Central Perth and West Perth
- » Between Parliament and West Perth
- » Around the Riverside precinct.

The framework will be implemented either through specific identified legibility initiatives or facilitated through significant infrastructure or other agreed initiatives which will be required to incorporate recommendations of the framework within their design.

#### **Problems addressed**

Improved legibility and wayfinding will make it easier for people to navigate the city and understand their transport options.

# **Explore system efficiencies from technology** improvements



#### Organisation/s responsible:

- » Transport Portfolio
- » City of Perth

#### Potential delivery year/s:

» Years 3-4

#### Status:

» Project brief

#### Transport modes that benefit from the initiative:



Cycle



Public Transport - Bus



Public Transport - Train



Public Transport - Ferry



Private, On-demand Vehicles



Freight and Delivery Vehicles

Advances in technology, which have shown to be intuitive, informative and can work in real time, may help to enable and deliver transport system enhancements to improve the efficiency of movement and access around the city.

This initiative will initially undertake a shortterm investigation to identify how technological enhancements could be used to optimise access and connectivity in the city, including improved data collection. This may lead to a road-map for the development of a longer-term strategy and staged implementation.

#### **Problems addressed**

Technological solutions could assist with pedestrian priority initiatives, better control the flow of traffic and reduce congestion and lead to improved kerbside management.

Perth Greater CBD Transport Plan Phase One 57 56 Department of Transport

# **Accessibility audit**



#### Organisation/s responsible:

» Department of Transport

#### Potential delivery year/s:

» Year 3

#### Status:

» Project brief

# Transport modes that benefit from the initiative:



Walk



Public Transport - Bus



Public Transport - Train

Public Transport - Ferry

An inclusive and accessible city is essential for all to participate and contribute towards city life.

This initiative would see a comprehensive accessibility audit undertaken, in collaboration with the City of Perth and the Public Transport Authority, to identify barriers and impediments to the creation of a universal travel environment within the city. This would inform an action plan with recommended improvements to comply with the *Disability Discrimination Act 1992*.

Implementation could be through stand alone initiatives or see recommendations incorporated into the design of significant infrastructure or other agreed initiatives.

#### **Problems addressed**

This initiative will assist in removing barriers and impediments to allow movement around the city regardless of age or ability.

# Pedestrian data and modelling



#### Organisation/s responsible:

» Department of Transport

#### Potential delivery year/s:

» Years 2-3

#### Status:

» Project brief

# Transport modes that benefit from the initiative:



Walk

There is a lack of data on pedestrian movements and volumes despite walking being one of the most popular ways to get around the city centre. Monitoring pedestrian activity in the most densely populated pedestrian areas of Perth will lead to better-informed decision making, provide a better understanding of demand, assist in planning for infrastructure improvements and pedestrian priority measures.

This initiative will develop a system for the ongoing monitoring of pedestrian activity in the city and includes:

- » Pedestrian counts
- » Quality audits
- » Perception surveys.

From the data collected, a pedestrian model for high pedestrian use areas will be developed to forecast future pedestrian demands and to measure the impacts of various initiatives.

#### Problems addressed

Monitoring pedestrian activity in the city will facilitate better-informed decision-making around pedestrian infrastructure needs and priorities, help to resolve conflict with other modes, and lead to safety, connectivity and legibility improvements for people walking to, from and within the city.

# **Reduce speed limits**



#### Organisation/s responsible:

- » Department of Transport
- » Main Roads WA

#### Potential delivery year/s:

» Year 2

#### Status:

» Ready to commence

# Transport modes that benefit from the initiative:



Walk

Cycle

Slower speed environments are better for pedestrians and bike riders and bring significant safety benefits. Low or slow traffic environments result in more pedestrian activity creating economic benefits to local businesses.

This initiative would investigate areas across the Perth Parking Management Area where reduced speed limits are warranted (including areas of high pedestrian activity) and develop a strategy for staged implementation of suitable treatments.

Significant infrastructure or other agreed initiatives would be required to incorporate recommendations of the strategy as part of their design scope.

#### Problems addressed

This initiative would address pedestrian safety and priority concerns, as well as alleviate the impact traffic has on quality of the public realm.

# **Electric vehicle fleet: feasibility study**



#### Organisation/s responsible:

- » Department of Transport
- » Public Transport Authority
- » City of Perth

#### Potential delivery year/s:

» Years 4-5

#### Status:

» Project brief

# Transport modes that benefit from the initiative:



vvall

Public Transport - Bus

Continual improvements with the design and powering of electric vehicles creates the opportunity to transition vehicle fleets towards electric vehicles, reducing noise and vehicle emissions.

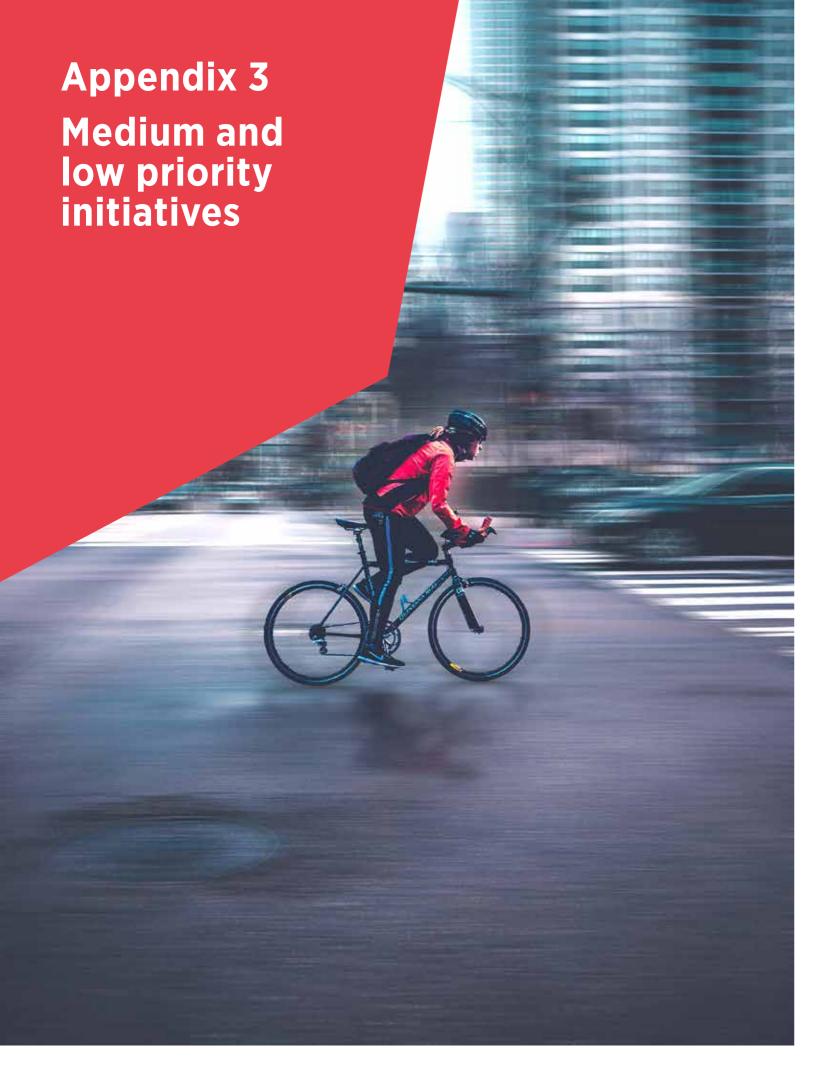
The State Government recently announced plans for an electric bus trial on the Joondalup CAT service. The Joonadalup CAT was considered ideal for a trial operation of electric buses given its five kilometre circuit.

This initiative would see a framework developed to support a transition towards an electric fleet and would specifically include a feasibility analysis on transitioning the Perth CAT bus fleet to electric buses, taking learnings from the Joondalup trial. The scope could also be expanded to explore the feasibility of an electric vehicle fleet for the City of Perth as well as mechanisms to encourage a similar transition for service vehicles operating within the city.

#### **Problems addressed**

This initiative could help reduce the impact vehicles have on air quality and public realm amenity.

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# **Medium priority initiatives**

# **Riverside Drive shared path** (minor improvements)

This initiative will create a transitional separated bike path to accommodate the noticeable increase in bike riding activity along the riverfront, reducing conflicts between pedestrians and bike riders between Point Fraser and Elizabeth Quay. It would form an early stage of the Perth City Riverfront Masterplan which responds to the need to improve connections between the city and the Swan River and maintain the primary purpose of the foreshore as a public, environmental and recreational asset.

#### Organisation/s responsible:

» City of Perth

#### Potential delivery year/s:

» Years 2-4

#### Status:

» Detailed design

#### Transport modes that benefit from the initiative:





#### Problems addressed:

Problem 2 Problem 3 Problem 6 Problem 7





# **West Perth Regeneration Precinct**

This initiative will undertake a strategic transport assessment of all modes to and around the West Perth Regeneration Precinct: the area bordered by Newcastle Street, Loftus Street and the Graham Farmer Freeway. The study will identify specific network connectivity issues with due consideration to movement and place, and the ways in which these can be improved. Focus will be placed on pedestrian and bike riding connectivity.

#### Organisation/s responsible:

- » Department of Transport
- » City of Vincent

#### Potential delivery year/s:

» Year 1

#### Status:

» Project brief

#### Transport modes that benefit from the initiative:





#### Problems addressed:



Perth Greater CBD Transport Plan Phase One 63 62 Department of Transport

# **Upgraded shared path** connecting Waterbank **Perth to Matagarup Bridge**

This initiative will install lighting and upgrade the existing shared path that connects the Causeway and Waterbank to Matagarup Bridge. The community and other stakeholders have highlighted safety and connectivity issues associated with the existing narrow path. This initiative will improve safety at night in the area, reduce conflicts between bike riders and pedestrians, encourage mode shift with safer and more comfortable bike riding and walking conditions, and provide more transport options for people to access popular tourist destinations.

#### Organisation/s responsible:

» City of Perth

#### Potential delivery year/s:

» Year 1

#### Status:

» Concept plan

#### Transport modes that benefit from the initiative:



Walk



Cycle

#### **Problems addressed:**

Problem 2 Problem 7 Problem 9

# **Wellington Street bike lane** upgrade

This initiative will convert the existing surface treatment from black asphalt to red asphalt to address legibility and safety concerns that have been expressed by the community. Red asphalt is ubiquitous with bike riding infrastructure around WA and is a form of passive wayfinding. Upgrading the surface of these lanes along with improving existing safety issues associated with the existing small kerbs will improve the legibility of the infrastructure.

#### Organisation/s responsible:

» City of Perth

#### Potential delivery year/s:

» Years 1-2

#### Status:

» Ready to commence

#### Transport modes that benefit from the initiative:





#### Problems addressed:

Problem 2 Problem 7





# **Hay Street East: Pedestrian Priority Zone**

This initiative will develop a Pedestrian Priority Zone (PPZ) along Hay Street East, between Irwin Street and Pier Street. It will provide more space and amenity for pedestrians, and less space for vehicles. Wider footpaths and new street furniture, including benches, will enhance the pedestrian environment. Bike parking, water fountains. enhanced lighting and additional tree planting will further improve the quality of the public realm.

#### Organisation/s responsible:

» City of Perth

#### Potential delivery year/s:

» Years 1-2

#### Status:

» Commenced

#### Transport modes that benefit from the initiative:



#### Problems addressed:









#### Mill Street intersection

This initiative includes intersection upgrades at both ends of Mill Street to enable buses travelling between St Georges Terrace and Elizabeth Quay Bus Station to operate via Mill Street (rather than William St). Note that for buses operating between William Street and Elizabeth Quay Bus Station, access via William Street will be maintained in both directions.

#### Organisation/s responsible:

» City of Perth

#### Potential delivery year/s:

» Year 1

#### Status:

» Ready to commence

#### Transport modes that benefit from the initiative:



Public Transport - Bus



Private, On-demand Vehicles



Freight and Delivery Vehicles

#### **Problems addressed:**





# **Thomas Street / Loftus Street strategic transport** corridor study

This initiative will develop future transport options for the Thomas Street/Loftus Street corridor (between Kings Park Road and Freeway North) that address congestion and barrier issues and improve accessibility and safety. It will investigate movement from all transport modes along the corridor, consider crossing issues over Thomas Street to reduce connectivity barriers between Perth and Subiaco, consider bus stop frequency and bus priority measures, and recommend options.

#### **Organisation/s responsible:**

- » Department of Transport
- » Department of Planning, Lands and Heritage
- » Main Roads WA

#### Potential delivery year/s:

» Years 1-2

#### Status:

» Project brief

#### Transport modes that benefit from the initiative:







Public Transport - Bus



Private, On-demand Vehicles



Freight and Delivery Vehicles

#### **Problems addressed:**









Problem 2 Problem 3 Problem 4 Problem 6 Problem 7









# **Spring Street bike lane**

This initiative will be delivered in stages. Stage 1 involves construction of a protected bike lane along the length of Spring Street, starting at Mounts Bay Road. It will provide an upgraded western entry experience for bike riders into the city and improve bike riding linkages that connect paths and neighbourhoods, provide a clearer route for bike riders, reduce conflicts between bike riders and vehicles or pedestrians, and more transport options to access popular destinations. These works will be staged to meet immediate need and coordinate with development of sites adjacent to Spring Street. The works contemplated here are a component of a broader strategy that will include linkages to Milligan and Mount Streets.

#### Organisation/s responsible:

» City of Perth

#### Potential delivery year/s:

» Years 1-2

#### Status:

» Detailed design

#### Transport modes that benefit from the initiative:





#### Problems addressed:

Problem 2 Problem 3 Problem 6 Problem 7 Problem 10

## Aberdeen Street bike lanes

This initiative involves the design and construction of bike lanes along Aberdeen Street to address gaps in the existing bike riding infrastructure and provide a continuous link between the two Principal Shared Paths (PSP) of Mitchell Freeway PSP at Fitzgerald Street and the Midland Line PSP (near McIver Station). Aberdeen Street provides a strategic connection through the north part of central Perth and improved bike lanes will provide access to Russell Square park, North Metropolitan TAFE campus, Perth Cultural Centre and the recently completed significant student accommodation developments nearby.

#### Organisation/s responsible:

» City of Perth

#### Potential delivery year/s:

» Years 4-5

#### Status:

» Concept design

#### Transport modes that benefit from the initiative:







#### Problems addressed:





# Riverfront walking and bike riding link

This initiative will provide separate walking and bike riding links that connect Point Fraser and Elizabeth Quay. It will follow a rationalisation of space along the river front to be informed by City of Perth's Riverfront Masterplan.

#### Organisation/s responsible:

» City of Perth

#### Potential delivery year/s:

» Years 3-4

#### Status:

» Concept plan

Walk

#### Transport modes that benefit from the initiative:





#### Problems addressed:



Problem 2 Problem 3 Problem 6 Problem 7 Problem 10

#### Colin Street bike lanes

This initiative will develop a concept plan for Colin Street in West Perth that responds to the competing needs for safe bike riding, kerbside parking and access to the Green CAT bus. The community and other key stakeholders have identified poor north-south connectivity for bike riders in West Perth. This route extends north-south for about 1km from the Fremantle Line Principle Shared Path to Kings Park Road. Through concept development, this initiative will investigate opportunities to create a safe, protected bike riding route.

#### Organisation/s responsible:

» City of Perth

#### Potential delivery year/s:

» Year 4

#### Status:

» Project brief

#### Transport modes that benefit from the initiative:



#### **Problems addressed:**





# North-south pedestrian corridors and connections study

This initiative will develop a network of pedestrian connections that encourage and improve activation of key city centre destinations, including Perth Cultural Centre, Perth City Link, Concert Hall, Elizabeth Quay, McIver Station and Hay St East. The initiative is linked to the City of Perth's Reconnect Perth.

#### Organisation/s responsible:

» City of Perth

#### Potential delivery year/s:

» Years 4-5

#### Status:

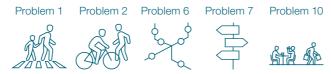
» Project brief

#### Transport modes that benefit from the initiative:





#### Problems addressed:



# **McIver Station and Royal Perth Hospital: access** study and concept design

This initiative will develop a concept plan that responds to the need for improved accessibility at McIver Station and to support transit oriented development in the surrounding precinct. The initiative includes the corridor that connects Wellington Street (near Pier Street) to the Wittenoom St bike riding corridor, and the space around Royal Perth Hospital sites. It will investigate and recommend actions that improve pedestrian connections and amenity (including connections to Northbridge), reduce the speed of bike riders around McIver Station, increase pedestrian crossings, improve safety, lighting and security. It will consider further land use change within the City of Vincent, including the removal of concrete batching plants.

#### Organisation/s responsible:

- » Department of Transport
- » Department of Planning, Lands and Heritage

#### Potential delivery year/s:

» Years 4-5

#### Status:

» Project brief

#### Transport modes that benefit from the initiative:



Cycle



Public Transport - Train

#### Problems addressed:



# Claisebrook Station: access study and concept design

This initiative will develop a concept plan that responds to the need for improved accessibility to and from Claisebrook Station. It will consider place-making, pedestrian, bike riding and bus connections between Claisebrook Station and Claisebrook Cove/East Perth, and between the Station and Northbridge.

#### Organisation/s responsible:

» Department of Transport

#### Potential delivery year/s:

» Years 4-5

#### Status:

» Project brief

#### Transport modes that benefit from the initiative:



Walk

Cycle

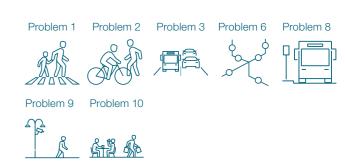


Public Transport - Bus



Public Transport - Train

#### Problems addressed:



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# Elizabeth Quay bike riding infrastructure

This initiative will scope, design and provide quality and connected bike riding infrastructure around Elizabeth Quay to address safety, conflict, legibility and connectivity concerns.

#### **Organisation/s responsible:**

- » Department of Transport
- » City of Perth

#### Potential delivery year/s:

» Year 4

#### Status:

» Concept plan

#### Transport modes that benefit from the initiative:



#### **Problems addressed:**











# CAT bus review and implementation

The Perth CAT bus service is frequently regarded as one of the best components of the CBD's transport network. A review was initiated to identify how the CAT bus service could be further enhanced to better serve Perth's nightlife sector and tourists. However, the recent COVID-19 pandemic has had an unprecedented impact on night time activities and tourism. Therefore, implementation of initial findings from the CAT bus review will be carefully considered and staged to respond to changes in the economic climate. This will be informed by monitoring CAT bus patronage and gathering origin-destination information about trips within the CBD.

#### Organisation/s responsible:

- » Department of Transport
- » Public Transport Authority

#### Potential delivery year/s:

» Years 3-5

#### Status:

» Monitoring patronage

#### Transport modes that benefit from the initiative:



Public Transport - Bus

#### Problems addressed:





# Low priority initiatives

## Hill Street two-way

This initiative will upgrade Hill Street, Wittenoom Street and Lord Street to introduce two-way traffic flow on Hill Street. It will improve pedestrian crossings at signalised intersections, provide onstreet bike lanes, improved lighting and remove slip

#### Organisation/s responsible:

» City of Perth

#### Potential delivery year/s:

» Years 1-2

#### Status:

» Concept plan

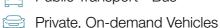
#### Transport modes that benefit from the initiative:





Cycle







Freight and Delivery Vehicles

#### Problems addressed:



# **Hay Street West two-way**

This initiative will convert Hay Street between Thomas and William Streets to two-way operation. It has close ties to the Parallel Walks Conversion Program, particularly to Hay Street west intersections. It may be implemented in stages and will depend on the status of Hay Street to the west of Thomas St (within the City of Subiaco).

#### Organisation/s responsible:

» City of Perth

#### Potential delivery year/s:

» Years 4-5

#### Status:

» Concept plan

#### Transport modes that benefit from the initiative:



Walk



Public Transport - Bus



Private, On-demand Vehicles



#### Problems addressed:

Problem 3 Problem 4 Problem 7





70 Department of Transport

# **Murray Street West two**way

This initiative will convert Murray Street between Thomas and Elder Streets to two-way operation. It has close ties to the Parallel Walks Conversion Program, particularly to Murray Street intersections. It will also consider the freeway interchange, bike riding interface and Thomas Street intersection.

#### Organisation/s responsible:

» City of Perth

#### Potential delivery year/s:

» Year 5

#### Status:

» Concept plan

#### Transport modes that benefit from the initiative:



Cycle



Public Transport - Bus



Private, On-demand Vehicles



Freight and Delivery Vehicles

#### Problems addressed:







# Victoria Square bike lanes

This initiative will investigate the feasibility of a two-way bike path, protected from traffic and with adequate space for pedestrians and bike riders.

#### Organisation/s responsible:

» City of Perth

#### Potential delivery year/s:

» Year 4

#### Status:

» Concept plan

#### Transport modes that benefit from the initiative:





#### **Problems addressed:**

Problem 2 Problem 3





