



Integrated Transport Strategy

2021

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Executive Summary

Introduction

The City of Greater Geraldton has reviewed and updated its Integrated Transport Strategy (ITS) 2018-2028 to establish a strategic direction to guide transport planning decision making within Council over the next five years.

It identifies a range of actions that Council can implement to make the City a better place and overcome some of the challenges facing the City of Greater Geraldton.



Purpose

The purpose of this Strategy is not only to effectively integrate different modes of transport and land use, but also to do so across the different spheres of government, non-government organisations and the private sector. This will require support from areas such as freight, recreation, tourism and environment as well as the more recognised avenues of transport funding.

Integrated planning allows the City to resource near-term projects, and to plan for the long-distant future. The holistic understanding of the requirements and interactions between different transport modes and the land-use fabric of the City means that proposals can be considered in terms of their impacts on all transport modes, rather than considering just one isolated group.

Transport infrastructure and the systems that support them are critical in shaping our city, providing residents, employees and visitors with access, mobility and opportunity. Historically, this infrastructure has been dominated by the needs of the private car, but over time this has proven to be economically, environmentally and socially unsustainable. Diversification of transport opportunities to include high quality public transport, walking and cycling environments creates physical infrastructure that better supports the needs of the community.

An integrated transport strategy defines a direction for change across a wide variety of land use and transportation components. The City's large and diverse geographic area makes for an extra degree of complexity, as the solutions suitable in one area may be completely inappropriate in another. This Strategy is intended to support the City of Greater Geraldton as it grows into a place with a population of over 100,000 residents; the hub of the Mid-West Region.

The City of Greater Geraldton will continue to develop the local roads network and walking/cycling

environments, and will advocate for the City in areas such as public transport and freight networks. Balancing these modes and maintaining safety and amenity for the community is a challenge with limited funds. This Integrated Transport Strategy is intended to strengthen the City's Asset Management Plans, Workforce Plan and Long-Term Financial Plan (LTFP) by ensuring the City's resources are best deployed towards achieving the community's vision.

The City has developed a strategic approach to asset management and developed asset management plans based on the total life cycle of assets. All projects in the Capital Works Priority List will be considered in the context of the total cost of ownership, life cycle costing, maintainability and financial sustainability.

Effective capital works planning prioritises those projects which offer wide community benefit or targets areas of high risk. However, they may require significant resources or time to accomplish. Those projects which address medium- and long- term priorities will be included in the Capital Works Priority List, but the timeframe for delivery of these projects may change subject to future investigation.

The intention of the ITS is to provide a 'blueprint' for capital and operational prioritised investment into transport infrastructure, taking a holistic approach that considers all modes of transport for the future of the city. The City currently has transport assets valued in excess of half a billion dollars and limited access to discretionary capital funds in the future. The ITS will assist in guiding future expenditure on integrated transport assets, on a priority basis, and will effectively communicate the City's priorities to both internal and external stakeholders.

This ITS has been written using guidance from the Guidelines for Preparation of Integrated Transport Plans 2012 (Western Australian Planning Commission), as well as by the specific requirements of CGG.

This update to the ITS considers all aspects of trip-making, including the availability, convenience and amenity of travel options and the end-of-trip facilities at destinations, such as parking provisions, cycle parking and lockers/showers at workplaces. In line with this, the physical scope of the ITS includes not only road reserves, but also railway reserves, car parks, and shared paths.

Goals and Strategic Objectives

Each goal is supported by a number of strategic directions and actions and explored further within the main document. Collectively, the goals, strategic directions and actions contribute to Council's vision for transport as expressed in the Geraldton 2031 Strategic Community Plan:

"The City of Greater Geraldton represents a prosperous, diverse, vibrant and sustainable community and sets out long term strategies designed to strengthen and build on Greater Geraldton's unique assets".

This strategy identifies transport inputs to achieve the strategies developed in the Geraldton 2031 Strategic Community Plan.

The responsibility for the provision of transport planning in Greater Geraldton is shared between Council and the State government. The shared responsibility for transport means that in delivering the ITS Council has direct responsibility for some transport actions and policies, whilst in other instances it contains advocacy actions for issues beyond Council's jurisdiction. Council's influencing role in delivering such actions will require advocating to a number of State government agencies for improvements to the transport system within the municipality over the lifespan of the ITS.

1 Key Issues and Opportunities

Key Issues

The City of Greater Geraldton is the service centre of Western Australia's Mid-West region, located 424km north of Perth. It lies between the spectacular western coastline and the vast inland area to the east, which includes the townsites of Mullewa, Pinar and Nunierra.

Geraldton has a Mediterranean climate, an ideal climate for cycling and walking trips, either for recreation or for transport.

Geraldton Local Government covers an area of 12,626 square kilometres, with a current population of approximately 40,000 people. It is a thriving and sustainable regional city and is fast becoming a significant centre known internationally for its liveability; science, mining and trade industries; food production; and renewable energy. Population predictions forecast the City may grow to more than 100,000 people over the next 50+ years.

Geraldton is at the heart of an extensive transport network that includes Primary Distributor roads that project far beyond the Mid-West region. The rate base to pay for asset renewal is limited by the extensive land area and low population density of the region.

The primary transport mode in Geraldton is private vehicle, with limited infrastructure to support the growing demand for sustainable travel, including public transport and cycling. The vast distances within the region, combined with high-volume resource sector and seasonal freight movements create range of complicated travel requirements for the community. Balancing these modes and maintaining safety and amenity for the community is a challenge with limited funds. w

These issues, among others, prompted the development of the 2015 Integrated Transport Strategy (ITS), while recent changes to the economic environment have resulted in a need to undertake this updated 2021 ITS. This document is designed to provide a coherent strategy to address these competing needs, with consideration for the interplay and trade-offs between them.

1.1 Regional Area

Geraldton is the regional capital of the Mid-West region. As a regional city, Geraldton lacks the population to self-fund large-scale infrastructure projects. Localised improvements are therefore the most viable for the immediate future, such as improvements to specific intersections or specific mid-block links.

These improvements increase the liveability of Geraldton and facilitate population growth, which makes more significant long-term projects viable, including projects that require significant up-front investment prior to receiving financial return.

1.2 Dispersed Urban Growth

Due to Geraldton's regional location, land remains easily obtainable, without the high cost that impacts urban areas. This means that near-term development can be expected to radiate outwards from the Geraldton City Centre, rather than being provided as higher density. The Residential Development Strategy identifies a range of proposed future land use and development sites across the Greater Geraldton region.

A key issue of such a dispersed growth pattern is that it is more difficult to provide financially viable public transport due to the larger service catchment.

1.3 Vulnerability to Fuel Prices

The current dependence on the private car as the means of transport can make many residents financially vulnerable to fluctuations in vehicle maintenance costs, including fuel prices. This is a further reason, besides the environmental benefits, for improving provision of non-car modes of transport.

1.4 Service Levels

There is a gap between the services currently provided by the City, and the service which the City can afford to provide. The significant growth in assets in recent years is due to two amalgamations (2007 and 2011) and asset handover from new developments (commercial and residential).

As a result, the City has undertaken a review process for City infrastructure, to determine an appropriate and effective level of service eg car parking provision, dual use paths, etc.

1.5 Limited Funding/Affordability

The various transport networks in the City have been constructed in an often ad-hoc manner, creating management and maintenance issues for these assets. In addition, due to the expansive land area and low population density across much of the region, the rate base for asset investment and renewal is limited.

Therefore, access to external funding is needed to ensure the available rates revenue is used for transport infrastructure which achieves the most cost-effective outcome.

Often this means large-scale improvements to transport networks must be postponed until funding can be obtained.

1.6 Aged Infrastructure

The City currently has a significant transport asset base, much of which is approaching the end of its useful life. As a result, the City has identified a need to focus on asset renewal. This ITS will assist in the process by guiding investment into “new” or growth / upgraded infrastructure needs.

Opportunities and Benefits of the ITS

1.7 Maximising Efficiencies

A key opportunity of the ITS is to provide more integrated and efficient infrastructure and services. The ITS will coordinate improvement schemes, ensuring they are considered in conjunction with each other and with the overall strategy for the network.

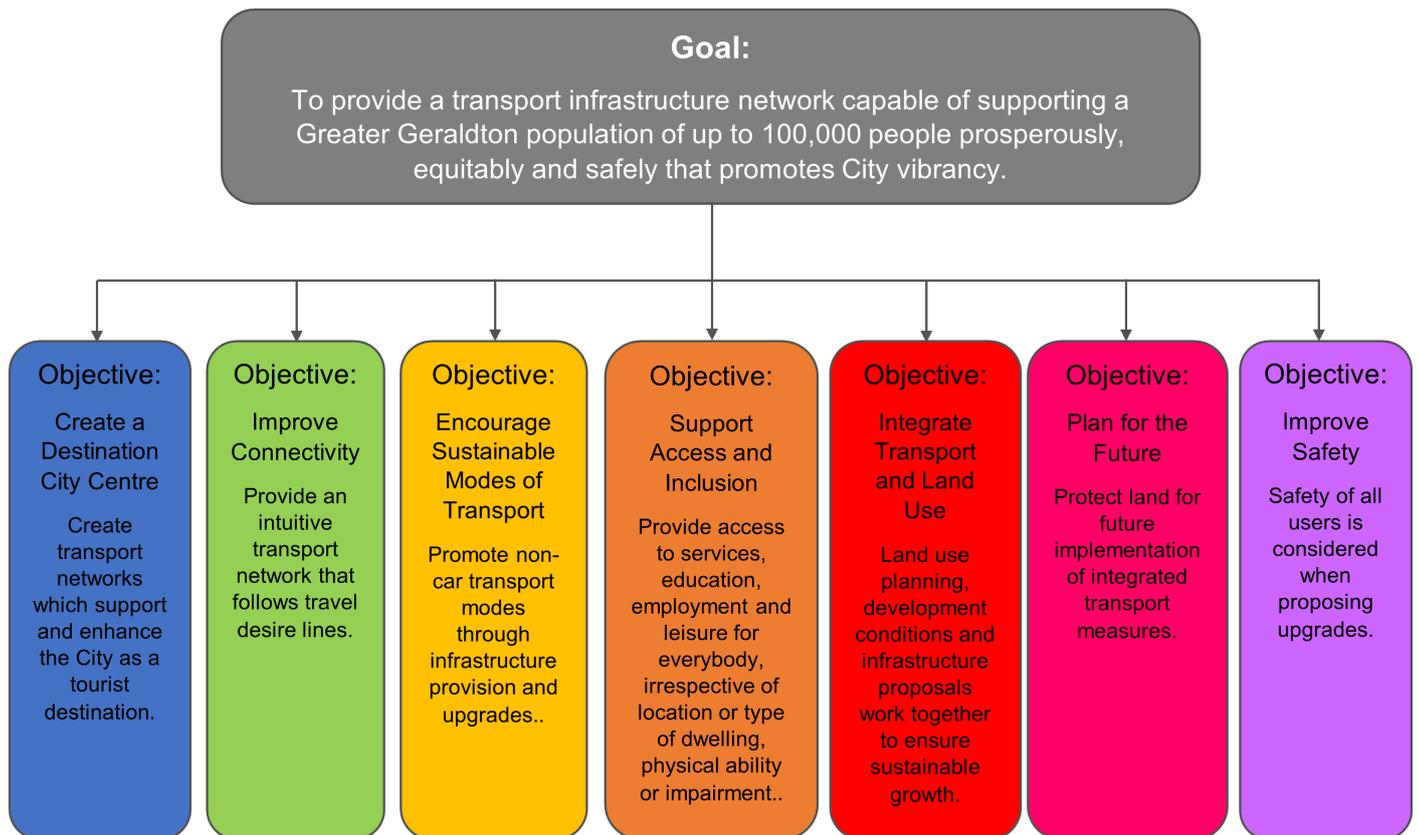
One example of this is the filling in of gaps in the pedestrian and cycle route networks, where small investments in additional path construction can create convenient long-distance paths.

1.8 Transparency

Internal and external stakeholders will be provided with clarity and certainty regarding future priorities.



2 Strategic Framework



3 Scope

The responsibility for the provision of transport planning in Greater Geraldton is shared between Council and the State government. The shared responsibility for transport means that in delivering the ITS Council has direct responsibility for some transport actions and policies, whilst in other instances it contains advocacy actions for issues beyond Council's jurisdiction.

Council manages the local road network, the pedestrian network and most of the bicycle network within the municipality. The ITS provides the overarching approach to managing these aspects of the transport system, with further detailed direction provided in specific Council transport strategies, such as the Geraldton 2050 Cycling Strategy and the International Charter for Walking.

The City works closely with Main Roads WA (MRWA) as the state network interfaces with the local road network in Geraldton and Mullewa. State controlled roads are: Brand Highway, North West Coastal Highway, John Willcock Link, Geraldton Mt Magnet Road, Moonyoonooka Yuna Road, Mullewa Wubin Road and Edward Road.

MRWA is responsible for several proposed major upgrade projects within the City, most notably:

- Dongara to Northampton Road Coastal Route via Arthur Street and Moonyoonooka-Yuna Road. This was MRWA's highest priority at the time of printing. The route services over dimensioned vehicles, thereby removing them from Brand and North West Coastal Highways.

- North-South Highway, Brand Highway to NWCH via Webberton Road. This is the City's highest priority for Main Roads to implement, particularly north of the Southern Transport Corridor in the Utaarra and Webberton areas, where a number of land parcels have limited accessibility. This has been indicated to MRWA via a Council-endorsed policy statement.

MRWA is also responsible for the approval of any changes to signalised intersections on City roads. MRWA also has jurisdiction over regulatory signage, regulatory line marking, new traffic signals and heavy vehicle operations.

The coordination and delivery of public transport services are managed by the Public Transport Authority.

Council's influencing role in delivering the ITS will require advocating to a number of State government agencies for improvements to the transport system within the municipality.

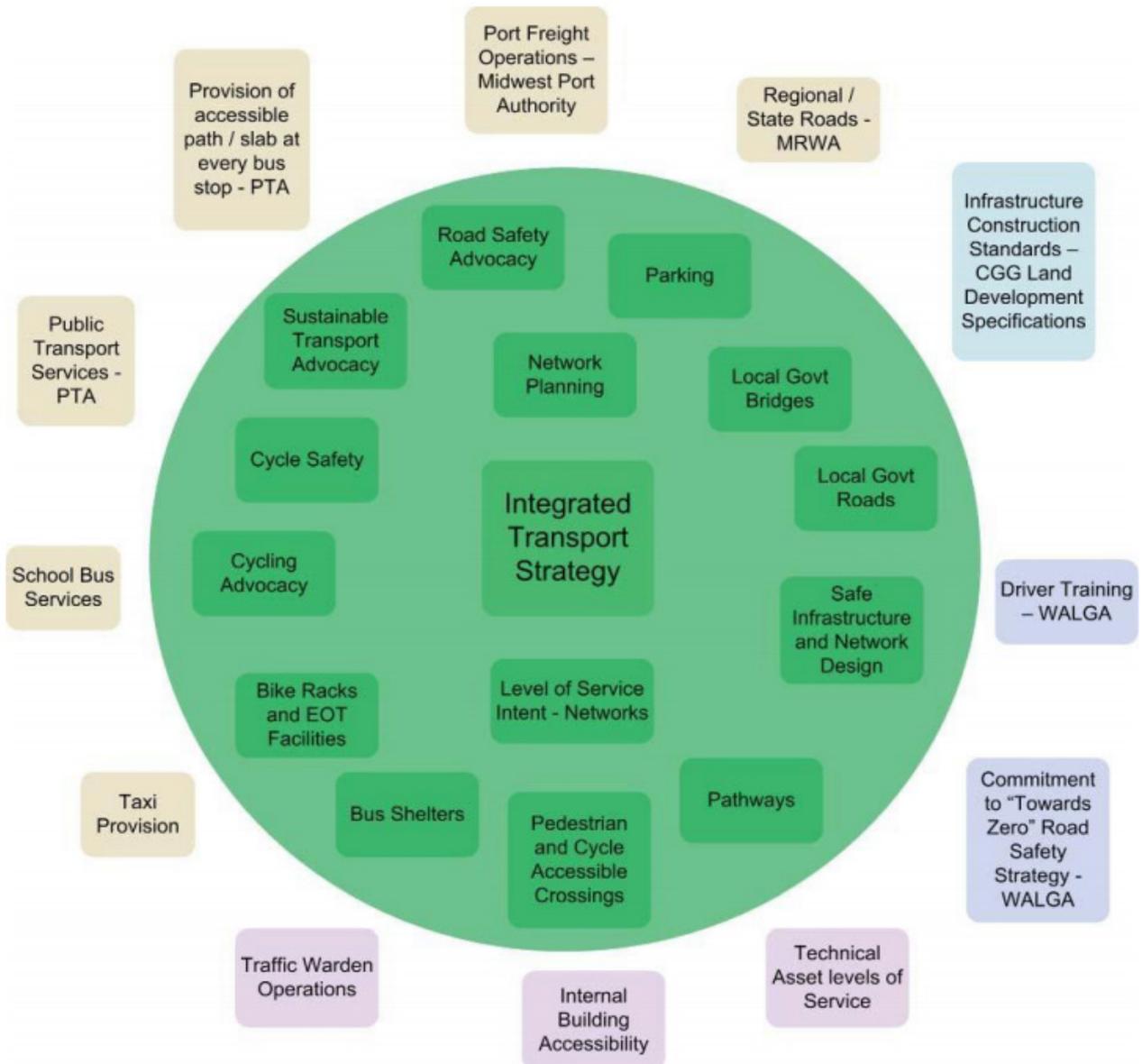
Elements of the ITS that are within Council's control include:

- Capital works projects, including works relating to footpaths and bicycle paths and the local road network;
- The development of more detailed strategies and policies, including pedestrian and bicycle strategies and parking policies; and
- Behaviour change programs to encourage and influence personal travel behaviour to utilise more sustainable modes such as walking and cycling.

The figure below illustrates the elements on which the ITS provides guidance.

The ITS has limited influence on those elements which are outside the circle.

These external elements are either managed by other agencies and/or covered in other strategic documents.



4 Goals

The ITS covers all forms of public transport, walking, cycling, freight, private vehicles and the street network. It does this through a set of seven complimentary goals which have been derived through research and analysis of data and feedback from the community. The goals have been developed to keep the City of Greater Geraldton's community mobile by supporting a shift towards more environmentally sustainable travel modes in a way that supports economic activity whilst contributing to the health and wellbeing of the community.

The ITS adheres to the following Goals for integrated transport, and this must remain the basis for all transport infrastructure decisions in the City. Proposed amendments to current networks have been considered holistically, ensuring that all objectives have been considered in every decision, resulting in an integrated and equitable outcome for users. The Figure below includes a description of the overall goals for Integrated Transport.

Goal 1	Create a 'destination' City Centre	Create transport networks which support and enhance the City as a tourist destination.
Goal 2	Improve connectivity	Remove legacy 'stagers' on high order local roads and pathways to provide an intuitive transport network that follows travel 'desire lines'.
Goal 3	Encourage sustainable modes of transport	Increase the use of public transport, walking and cycling. Identifying routes where pedestrians and cyclists have priority is an important part of improving their safety and security, which can be a barrier to the use of these modes.
Goal 4	Support access and inclusion	Access to services, education, employment, leisure for everybody, irrespective of location or type of dwelling, physical ability/impairment.
Goal 5	Integrate transport and land use	Land use planning and development conditions need to complement the recommended infrastructure proposals of this ITS to ensure sustainable travel can be maintained as Geraldton grows.
Goal 6	Plan for the future	New land development and infrastructure proposals must always consider the need to protect land for future implementation of integrated transport measures.
Goal 7	Improve safety	Safety of all road users is to be considered when proposing upgrades.

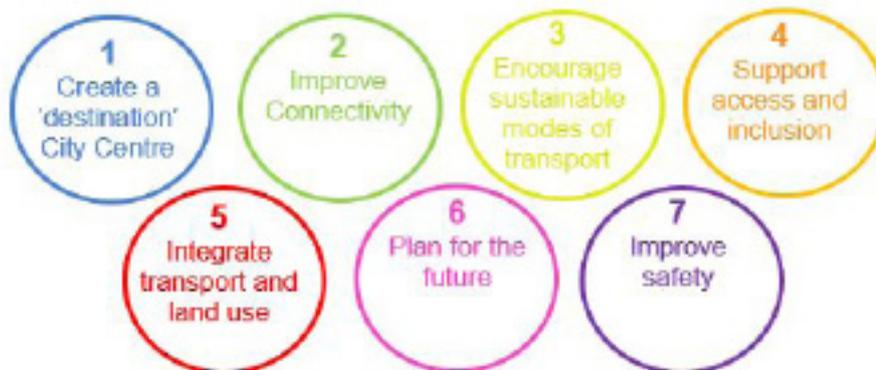
5 Vision Statement

Vision for Transport

Keep the City of Greater Geraldton's community mobile by supporting more environmentally sustainable transport modes, increasing economic activity whilst contributing to the health and wellbeing of the community.



Guiding Principles



Strategic Directions and Actions

Each goal is supported by relevant strategic directions and actions that will deliver the community benefits associated with a more integrated and sustainable transportation system.



6

Strategic Directions

Goal 1 – Create a ‘destination’ City Centre



Council will create transport networks that support and enhance the City as a tourist destination.

The City of Greater Geraldton offers a diverse set of environmental, cultural, and heritage tourism opportunities. As a 'City on the Beach', Geraldton also offers a wide range of sporting activities, both land and water based. The City Centre has a growing dining, café, retail and shopping experience. All these qualities make Geraldton a tourist destination in its own right.

The City of Greater Geraldton is used as a through route for both freight and tourism to and from the Coral Coast and Kimberley, and is included on the 'official' route map of the Indian Ocean Drive. It is important to maximise the economic benefits that these activities may have on the City. The networks must be managed to encourage and plan for future growth.

Strategic Directions for a Destination City Centre

SD 1 Promote alternative through-traffic routes around the City Centre.

The City Centre itself is intended to be a destination, not a thoroughfare; the priority is to provide access to the City Centre for those doing business in the City Centre. Heavy traffic through the City Centre does not enhance the vibrancy of this area.

Through-traffic should divert around the City Centre using higher order roads. Access to the destination of the City Centre should be, where possible, by modes of transport other than cars, prioritising pedestrians and cyclists first and vehicles last.

SD 2 Support the City as a travel destination.

The Tourism Development Strategy was prepared by the Mid-West Development Commission in 2014 to guide local governments in this region.

Under the 'Mid-West Tourism Lifecycle' Geraldton is identified as moving from a 'stagnation' stage to developing in the 'rejuvenation' phase with an increase in the proportion of tourists. However, 'the rest of Geraldton region' is only rated as 'involvement' (p17). This is an improvement from the Geraldton-Greenough Tourism Strategy (2009) which showed visitors perceived Geraldton as a stopover or stepping-stone. Wider publicity and marketing, the growth of cruise ship visits, and campaigns such as 'making Geraldton your base' will continue to help make Geraldton a must-see place for travellers.

SD 3 Deliver quality public realms and streets.

Improving overall amenity will assist in creating pedestrian friendly, attractive and comfortable environments that people will be drawn to. Amenity can be improved relatively quickly and at low cost in the short term, and then further enhanced with larger scale streetscape improvement projects.

SD 4 Attract the right users in the right locations.

Pedestrians will be directed via desired movement corridors and between key attractions.

SD 5 Provide sufficient parking for residents and visitors.

Parking provision and management is a significant consideration for the City in the context of the overall transport network and it is crucial that the City's parking is managed effectively, prioritising supply to shoppers, then tourists and visitors, and finally all-day parkers and workers.

Goal 2 – Improve connectivity



Council will remove legacy ‘stagers’ on high order local roads and pathways to provide an intuitive transport network that follows travel ‘desire lines’.

Strategic Directions to improve connectivity

SD 6 A road network that is efficiently maintained and managed.

The local road network is maintained by the City and the arterial road network by Main Roads. Planning for the future needs of the road network is illustrated in a wide range of documents, and across multiple agencies and organisations.

As part of this ITS Update, a review of previous modelling has been completed, indicating that development patterns for resident and employment zones have changed since 2015.

This suggests some need to revisit precinct and strategic understandings for the road network, insofar as behaviour shifts may change the relative priority of projects within the City.

One objective of this ITS is to identify critical transport corridors through a multi-modal road hierarchy 'TransPriority' assessment of existing and future need and, through this methodology, propose works to protect and enhance the function of these corridors for supported transport modes. Sections of the ITS deal with improvements to specific transport modes, such as walking, cycling, public transport, and freight, but these all need to be considered in the light of the hierarchy of the roads concerned.

The City receives regular requests to seal rural gravel roads. Drivers using unsealed roads are required to "drive to conditions", which places the duty of care essentially on the driver. Sealing roads allows higher speed limits, but requires a much higher level of service as the road needs to be maintained to facilitate those operating speeds.

Consequently, roads should only be sealed when the existing road geometry has been audited and declared suitable for high speed limit (up to 110 km/h) and the road is a school bus route, a grain haulage route, or has been identified as a high-order rural road. Minnenooka Road has been identified as requiring sealing due to its important strategic nature as both a school bus and grain haulage route.

SD 7 Promote walking and cycling around the City of Greater Geraldton.

Development of dual use paths has not been strategic, so there are missing linkages which need to be managed and completed to improve connectivity. This is especially prevalent in some of the older suburbs, in which many paths within the network are aging and require significant renewal works to be undertaken.

The existing on-road bicycle network also has connectivity issues with missing links on priority routes and unexpected terminations. These need to be addressed and resolved through network upgrade projects.

SD 8 Make pathfinding clear and intuitive.

Simple pathfinding around the Geraldton City Centre is required to assist in directing locals/visitors choosing to walk and cycle. In many instances, people do not know where the local hotspots are located, especially when walking or cycling.

Goal 3 – Encourage sustainable modes of transport



Council will promote non-car transport modes through infrastructure provision and upgrades.

The terrain in the City of Greater Geraldton varies from flat to rolling hills, making its rural local roads attractive to commuter, recreational and sports cyclists. With over 200km of dual use paths and trails within the City, there are many options for cyclists and pedestrians, as well as opportunities to promote walking and cycling, particularly for local trips in the key urban areas.

Currently, the primary modes of public transport within the City of Geraldton are buses and taxis. The public bus services are run by independent bus operators and managed by the PTA. There have been no passenger rail services since the closure of the passenger lines in 1975.

While there is scope for increased public transport provision, existing bus services are very under-used, except for school journeys, and the use of these services should be encouraged.

The City is experiencing natural growth in demand for public transport and this growth will be crucial for increasing services.

It is important to note that responsibility for public transport is shared between the City and the Public Transport Authority of Western Australia (PTA): bus services are determined by the PTA, with the City providing the infrastructure to support these services. Council can advocate for improved coverage and frequency of bus services.

Strategic Directions to encourage sustainable modes of transport

SD 9 Increase walking and cycling around the City.

Geraldton has a Mediterranean climate, an ideal climate for cycling and walking trips, either for recreation or for transport. However, the primary transport mode in Geraldton is private vehicle, largely due to the limited infrastructure to support the growing demand for sustainable travel, including public transport and cycling.

The provision of improved pedestrian and cycling infrastructure and facilities alone will be unlikely to facilitate a significant increase without a complementary investment in a program of promotion and behaviour change initiatives.

SD 10 Promote increased walking and cycling to schools.

Within the City of Greater Geraldton there is a residential college and several schools including Geraldton Primary School, Geraldton Senior College, Holland Street School, Midwest Clontarf Academy, Nagle Catholic College, and St. Francis Xavier Primary School.

School precinct roads in Geraldton present unique challenges to the local road network. The large number of cars and buses twice daily creates congestion. This can make drivers impatient, which reduces safety for students crossing the road. As the congestion is short-lived each day, it may be an inefficient use of funds to address; however, the safety issues it creates suggest that the use of school roads by other drivers should be avoided during these times.

The City will not support large scale development within the school precinct without a full traffic impact assessment utilising the City's Strategic Transport and Land Use Model (GSTLUM). While existing road links may have capacity, intersections within the precinct, without substantial upgrade, are expected to have a significant reduction in performance as a result of development and will have downstream impact on the network.

SD 11 Provide a responsive and targeted Public Transport service that equitably covers needs across the City.

Public transport services run at low frequencies, particularly in outlying areas, and often do not arrive at times conducive for normal work starts and finishes, or for late night shopping. The frequency of existing routes should be improved, extending daily operational periods.

This will improve usage for commuting as people will be able to rely on the journey home when working late. The current bus routes are frequently circuitous, and leave several areas entirely unserved, such as the eastern suburbs of Geraldton and regional satellite towns such as Greenough.

A bus route from Geraldton to Mullewa has been recently introduced to serve retail/service-related trips to Geraldton Town Centre, Council will liaise with the PTA regarding further improvements to bus service provision, ensuring access to locations where there are currently no public transport options available.

SD 12 Improve integration of public transport with other modes of transport.

Park 'N' Ride facilities enable drivers to stop before entering the City Centre, park their cars in a secure location and take the bus for the remainder of the journey, thus reducing the number of vehicles entering the City Centre.

Formal park 'n' ride facilities are not currently feasible and requires further investigation into the conditions required for implementation, in particular integration with PTA bus services. However, in areas where surplus parking is available adjacent to bus routes, the City could investigate informal park 'n' ride at shopping centres or other retail/service nodes (eg Glenfield Shopping Centre). This has the potential to support complementary business economic activity at the start and end of the work day.

End-of-trip facilities, including cycle racks or lockable bike sheds with showers and changing facilities allow travellers to split their commute between public transport and active transport means. This is particularly helpful to encourage uptake from less confident cyclists.



Goal 4 – Support access and inclusion



Council will provide access to services, education, employment and leisure for everybody, irrespective of location or type of dwelling, physical ability or impairment.

Like many regional locations, the percentage of persons with a disability in the City of Greater Geraldton is higher than that of capital cities – estimated to be around 21% of the current population (City of Greater Geraldton: Disability Access & Inclusion Plan, 2019). People in this category are some of the most vulnerable users of the transport networks and are generally under-catered for.

An important element of social equity is to ensure all people have access to a transport network of an appropriate standard. Limited transport options contribute significantly to social exclusion by restricting access to activities that enhance people's lives, such as work, learning, health care, food shopping and leisure activities.

Strategic Directions to support access and inclusion

SD 13 Ensure transport networks equally cover all areas of the City.

In some areas of the City the network is disjointed or substandard and is not adequately providing connectivity to services.

SD 14 Provide efficient and convenient public transport access for all residents irrespective of ability.

The lack of access to public transport increases social exclusion. The City intends to improve transport within the City Centre, between and within activity centres. In addition, priority must be given to connecting residential assisted-living facilities with services and medical care throughout the City. All new shared pathways shall be designed and constructed to cater for the mobility-impaired in full compliance with Australian Standard AS1428.

SD 15 Provide sufficient accessible parking.

Supply of accessible parking should be located within a reasonable distance to major generators and managed appropriately to determine hotspots and low utilisation areas.

SD 16 Explore Community Transport options.

The Public Transportation Authority determines bus routes, restricting Council's ability to directly address community needs. Partnership with a community group or not-for-profit would be another avenue to explore.

The City has considered a proposed taxi rank to be located at Rangeway Shopping Precinct, to assist in providing residents and visitors throughout Geraldton with convenient access to an additional transport service.

Goal 5 – Integrate transport and land use



Council will work to ensure that land use and development supports sustainable transport use.

Land use plays a major contributing role in how the community chooses to travel as the location of new developments influences people's travel choices through the provision of parking, access to public transport and the presence of safe and pleasant places to walk or cycle. Council can shape and influence the development of the municipality by applying zones, overlays and policies.

Strategic Directions to integrate transport and land use

SD 17 Well-planned communities that cater for the needs of the transport disadvantaged.

The City is committed to facilitating the inclusion of people with disabilities, administering best practice design principles through the Disability Access and Inclusion Plan, and continually developing accessibility infrastructure to a high standard.

All future transport infrastructure projects shall prioritise Access and Inclusion as part of design and construction. If there are physical barriers or the cost is prohibitive, a safe alternate route will be provided for users. The City has commenced development of a specific priority list of disability access and inclusion projects with the DAIP Committee, including the Foreshore beach access ramp. The City will continue to work with the Committee in planning, designing and implementing these priorities.

SD 18 Incorporate active transport into all redevelopments and new developments.

In assessing development applications and scoping the City's capital works projects, priority will be given to pedestrian and cyclist infrastructure provision. Provisions such as; kerb ramps, pedestrian refuges, shared pathways, at-grade crossings, traffic calming, carriageway narrowing (lane widths), on-road bicycle lanes, green conflict pavement

marking, on/ off ramps at terminations and bicycle parking facilities are to be considered.

SD 19 A freight network that is able to meet the demand and potential of a growing and evolving regional economy.

Freight movement within and to/from/through Geraldton comprises road, rail and sea freight. The Geraldton Port handles on average 16 million tonnes of freight per annum.

Sea freight through the Port is also facilitated by road and rail freight through Geraldton. There is a rail link to/from the Port, which is also served by road links that are designated for Restricted Access Vehicles (RAVs), ie John Willcock Link which in turn connects to the Brand Highway, North-West Coastal Highway (NWCH) and the Geraldton Mt Magnet Road.

The network of RAV links enable freight movements between the Port and a wide area north, east and south of Geraldton, as well as to/from businesses within Greater Geraldton itself. In addition to freight movements to/from Geraldton itself, the RAV network carries freight movements through Geraldton between locations elsewhere in the state.

The combination of the Brand Highway and NWCH provides a link between destinations as far apart as Perth and Port Hedland. Therefore, movement of freight through Geraldton is an important element of the broader road freight task.

The current permit-approved RAV roads are shown in the MRWA RAV routes map:

<https://mrwebapps.mainroads.wa.gov.au/hvsnetworkmap>

Main Roads WA has jurisdiction over the approval of RAV routes, in consultation with the City. This network is considered sufficient to provide adequate capacity into the future and changes to these designations by default will not be supported by the City. There is currently no intention to alter the City's existing RAV network.

There is likely to be future need to increase rail cartage to meet the growth demands of industry and the proposed Geraldton Port expansion. This would result in longer, more frequent trains, impacting level crossing service to the community (eg at Marine Terrace and John Willcock Link).

The City will not support the reduction in the current level of service on the local road network. Increased cartage proposals, including as a result of Port expansion, will need to address any negative impact on local road service levels and community amenity.

Future freight growth will be guided by the Revitalising Agricultural Region Freight Strategy (2019), which provides a framework for the future

investment in road, rail, internodal and port infrastructure for the next 10 – 15 years. This strategy covers the Mid-West Region.

SD 20 Provide parking with a focus on management rather than supply.

Recent updates in 2019 to the Parking Management Plan confirm that the City still has a parking management problem as opposed to a parking supply problem. While a number of recommendations made in 2013 have been implemented, resulting in a shift in focus for future interventions, an abundance of free parking bays continue to be provided in the City Centre.



Goal 6 – Plan for the future



Council will protect land for future implementation of integrated transport measures.

Managing road assets for future transport growth requires careful planning to ensure the network is suitable for these varied users. It is important to note that all options for changes to roads, intersections and other infrastructure will need to be further assessed as appropriate, for example through road safety audits and detailed design. Roads represent approximately 60% of the City's total asset current replacement costs and road investment needs to be more proactive to conserve limited budget to provide an agreed level of service to community.

Strategic Directions to plan for the future

SD 21 Future-proof new infrastructure proposals.

Infrastructure projects across the City of Grater Geraldton will require consideration as to whether or not new projects will be effective over a longer period, and take into consideration the City's future plans.

SD 22 Improve the City's financial position.

The City receives regular requests to seal rural gravel roads, but sealed roads add greater annual depreciation expense to the City and introduce risk. The purpose of sealing a road is to keep moisture out of the pavement and minimise operational maintenance. Sealed roads without sufficient volumes to enliven the seal (a minimum of 100 vehicles per day) will experience accelerated deterioration. Where sealed rural roads do not qualify, by dint of traffic volume, road geometry or type of use, they may be returned to an unsealed road standard.

The impact of RAVs on local road pavements is significantly greater than that of passenger vehicle traffic and this has cost implications for the City by reducing the service life of pavements. In the past, the City's ability to recover actual costs of road wear has been limited due to agreements being

made with operators by third parties, with the City making claims against the impacts. This has not always yielded the best outcome and is administratively onerous.

The City has legislative powers to directly impose charges for the marginal costs of road wear, ie those costs relating to consumption of the road asset beyond what it was reasonably designed for. The City will develop a charging mechanism to ensure that the community does not pay for more than its own consumption of the asset.

Pavements are designed for a certain percentage of commercial vehicles; to deliver a target service life (nominally 20 years) based on reasonable traffic expectations. When this percentage unexpectedly and substantially increases (eg due to a new or expanded mining operation), the service life of the road is consequently reduced, bringing forward asset renewal expenditure in advance of when it was planned in the City's Long-Term Financial Plan.

The proposed charges would not apply to seasonal grain haulage, as this is expected and planned for by the City. Rather, it applies to unexpected and sustained step increases in heavy haulage freight movement, eg freight associated with mining activity. Any new development generating permanent RAV volumes on the local road network may be required to carry out initial upgrades to the local road network instead of having charges imposed.

Research into the marginal costs of road wear has been undertaken by WALGA through ARRB and the results have been compiled into the User Guide: Estimating the Incremental Cost Impact on Sealed Local Roads from Additional Freight Tasks. This document will form the basis for any future assessment of contributions.

SD 23 Prepare for Geraldton's transport needs at 100,000

The concept of a future north-south Bus Rapid Transit (BRT) corridor has been considered in the City of Greater Geraldton Structure Plan. The route of the scheme that has been considered is (from north to south): the full length of Chapman Road; Cathedral Avenue southbound to Brand Highway; Brand Highway southbound to Cape Burney. The BRT will not be feasible until the City reaches a significantly higher population, at which point feasibility will be dependent on the performance of the rest of the transport network and other factors such as parking, congestion, uptake of cycling and the cost of private motoring.

The City intends to factor BRT into future planning and developments to ensure it can be incorporated into the City's networks when required.

SD 24 Protect key roads from the impact of coastal processes

Some roads within the City are at risk of impact from coastal processes. Specific strategy is required along the City's coastline to determine what roads will be defended and what roads will be sacrificed. This is a complex and sensitive topic; however, it is not affordable for the City to protect its entire coastline.

The City commissioned several Inundation and Coastal Processes studies for Point Moore, Town Beach to Drummond Cove and Cape Burney to Greys Beach. The results of these studies will assist the City to identify strategies on the vulnerable roads.



Goal 7 – Improve safety



Council will consider the safety of all users when proposing upgrades.

The issue of safety, including specific consideration of the safety of particular user groups such as cyclists and pedestrians, needs to be considered in any new proposal. This is a complex area that needs to be considered on a case-by-case basis, through the appropriate procedures such as road safety audits.

In general, the City intends to improve existing four-way crossroads that currently operate under stop control by upgrading to roundabouts or other controlled intersections, as appropriate. Safety is the prime consideration in the design of new transport infrastructure in the City. The ITS is not intended as a road safety study; however, it does outline some matters that require addressing to improve safety outcomes.

Strategic Directions to improve safety

SD 25 Improve safety for walking and cycling.

For active transport to be perceived as a convenient mode of transport for short trips in the City of Greater Geraldton, it will require the provision of a safe walking environment supportive of all ages, including those with disabilities. This includes the provision of regular formal crossing opportunities, particularly on roads with high traffic volumes and improved supporting facilities such as regular seating.

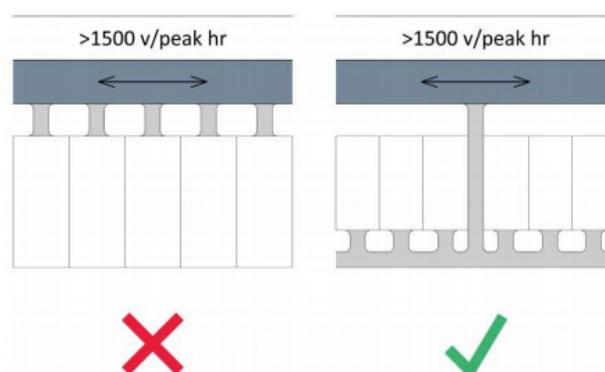
There is a perceived lack of safety around bus shelters, particularly after business hours and after dark. While the City would prefer to provide a shelter or seat at every bus stop, in the short term only those identified as high priority will have shelters installed. The City will continue to review, replace and upgrade existing shelters where appropriate. Rural school bus stops will generally not be provided with a bus shelter due to fluctuating demand.

Previous studies have identified various areas for improvement of road safety around Nagle Catholic College and Geraldton Primary School. In particular, buses can create a safety hazard for pedestrians due to visibility obstruction; this may be more of a problem with children, who are likely to be less aware of the danger.

SD 26 Safer and more efficient roads.

Close attention must be paid to instances where direct RAV access from higher volume roads into industrial lots has been permitted. The challenge in these cases is to provide safety for all users whilst ensuring efficient through traffic flow. Higher volume roads (>1500 vehicles in peak) will not be permitted direct access to properties in industrial areas, as shown in the Figure below.

This is largely due to the volume/speed of vehicle movements on the through road and their inability to readily react to a stopping or manoeuvring vehicle entering an allotment. Local Distributors and higher will need to connect to internal Industrial Access Roads which then provide access to the property from within the development. This restriction applies to all new developments not currently covered by a WAPC endorsed Structure Plan or valid conditional WAPC subdivision approval.



Deepdale Road and parts of Arthur Road are 53.5-metre (RAV Network 10) permitted access roads, with direct access to facilities between CBH and Patience Bulk Haul and Mitchell Logistics, as approved by MRWA and the City for many years.

A 250m section of Edward Road north of the Southern Transport Corridor roundabout has also been approved for RAV Network 10 vehicles. This enables these vehicles to access the Meru Development Industrial Area (MDIA) which is zoned Industry Light – Restricted Use. RAV10 vehicles are not approved north of this point; the remaining portion of Edward Road is designated for Road Trains up to 36.5m (RAV Network 7). This is consistent with structure planning for the MDIA.

Direct residential access to properties in Wonthella from Flores Road has been identified as a concern as Flores Road is currently an approved 36.5m road train route. The City will take appropriate action to reduce risk and improve public safety in this area.

7 Methodology

This ITS has been prepared using a broad approach to draw information from five main sources:

1. Review of current policy context;
2. Best-practice review;
3. Strategic Transport Modelling;
4. TransPriority Assessment; and
5. Previous stakeholder and community consultation.

These six sources are summarised briefly below.

7.1 Review of Current Policy Context

A range of transport and planning policies and documents have been reviewed, to ensure the ITS remains relevant in assisting future transport recommendations throughout the City of Greater Geraldton.

7.2 Best-Practice Review

A review of various other integrated transport strategies of other councils within Australia, as well as a technical document on integrated transport-planning, has been undertaken as part of the preparation of this ITS. The purpose of the ITS is to enhance the future development throughout the City of Greater Geraldton by gaining ideas and guidance from a range of relevant documents.

7.3 Strategic Transport Modelling

A vital aspect of the development of the ITS is an understanding of the future patterns of traffic flow and resultant locations of congestion on the network. Such traffic volumes are affected by land-use development patterns as well as new road schemes.

The assessment of capacity of the transport infrastructure of Greater Geraldton, in view of three potential population growth scenarios and four assessment years, is based on a previous study undertaken by Cardno Ltd in November 2013,

which used CUBE software to create the Geraldton Strategic Transport and Land Use model (GSTLUM). The results of this model are a useful indicator of the future volume / capacity ratios (V/C ratios) on various links within Geraldton, taking account of population growth and also planned infrastructure improvements.

The model examined the years 2016, 2021, 2026 and 2031; and three growth scenarios, as follows:

- Minimum growth: 1.5% per annum;
- Expected growth: 3.0% per annum; and
- Optimistic growth: 5.0% per annum.

For this ITS update, a high-level assessment of the suitability and robustness of this modelling exercise has been undertaken, with results and recommendations as follows:

- An overall increase of 2.0% in the population has been noted in the study area (over the 5-year period), with notable increases to the populations in the SA2 sectors of Geraldton – North (51212) and Geraldton – South (51213). However, the population in Geraldton (51210) and Northampton - Mullewa – Greenough (51217) has decreased. Educational enrolments in the study area have also changed proportionately to the population numbers;
- An overall growth of 3.7% has been seen in terms of households in the study area, with notable increases in Geraldton – North (51212) and Geraldton – South (51213). However, previously noted, household numbers have reduced in Geraldton (51210);

- Employment has generally increased in the study area, with an overall increase in employment of 8.4%; and
- A review of the assumed future year highway schemes shows that the future year schemes for the 2016 model year have mostly been realised, with the exception of the Chapman Road and Cathedral Road downgrades. None of the highway schemes assumed in the 2021, 2026 and 2031 model year schemes have constructed to date.

Based on the above information, it is concluded that the future year land use and road network assumptions in the GSTLUM will need to be updated to ensure that the model is sufficiently reflective of existing conditions and can therefore be used for scenario testing.

As no major changes to travel behaviour is considered to have occurred between 2012 and 2021, it is not considered that new Household Travel Surveys are required to be undertaken at this stage. However, this will likely be required in the medium-term (ie within the next five years) to ensure the trip generation coefficients in the model are valid.

7.4 Transit Priority Assessment

The “TransPriority Assessment” is a methodology pioneered in Victoria under the name of “*SmartRoads*”, and adopted by the Western Australian Department of Transport for assessment of integrated transport across corridors, Centres and regions.

it is described by the VicRoads website as follows:
“SmartRoads is an approach that manages competing interests for limited road space by giving priority use of the road to different transport modes at particular times of the day.”

The VicRoads site further adds that “All road users will continue to have access to all roads.

However, certain routes will be managed to work better for cars while others will be managed for public transport, cyclists and pedestrians”.

Part of the TransPriority concept is that the road may need to cater to different transport modes depending on what time of the day it is (AM peak, High off-peak, PM peak and off-peak). This is considered where practicable.

In summary, the approach in this ITS is to define the future hierarchy of each road by holistically considering the traffic demands in conjunction with the requirements of other modes.

7.5 Previous Stakeholder and Community Consultation

Since the development of the ITS, a range of public consultations on transport-related issues has been completed in Geraldton, which include the following:

- Disability Access and Inclusion Plan Review (6 March 2019);
- Geraldton 2050 Cycling Strategy – (5 June 2018); and
- Geraldton Coastal Hazard Risk Management and Adaptation Planning Report (2018).

The outcomes of this consultation are reflected in the individual strategies and plans, and referenced in this updated ITS.

8 Background

History

Sustainable and active modes of transport are essential in expanding the City of Greater Geraldton's transport system to service a population of 100,000. The updated 2021 ITS has been developed to align the City's changing transport priorities and provide a range of strategic directions which move towards a more sustainable future.

Previous Strategy

In April 2015 the City of Greater Geraldton adopted the Geraldton Integrated Transport Strategy which established a modified approach to future transport planning in Geraldton.

A number of road improvements have been completed since the 2015 Geraldton ITS, with improvements to safety, capacity and operation that will support the network into the future. These improvements include:

- The construction of a three-way roundabout to resolve congestion and safety issues at Abraham Street and Horwood Road;
- Modifications to signal phasing to permit full controlled right turning movements at Chapman Road/Bayly Street
- Construction of a three-way roundabout to resolve safety issues at Durlacher Street and Maitland Street
- Construction of a three-way roundabout to resolve safety issues at Sanford Street and Cathedral Avenue (underway)
- An upgrade to traffic signals along Brand Highway (MRWA)/Ackland Road;
- Construction of a signalised intersection at Place Road and Flores Road;
- Construction of the Abraham Street Bridge to create a link between Mount Tarcoola, Wandina and the southern suburbs;
- Improvements along Chapman Road (Beresford) to support pedestrian and cycle movements;
- The construction of a four-leg roundabout at Hosken Street/North West Coastal Highway and Horan Street; and
- The number of installed bus shelters has risen to 60.

9

Policy and Strategic Context

A purpose of the ITS is to give greater certainty over future development decisions, which can be achieved partly by ensuring that various relevant policies and programs concur with the ITS. The policies, strategies or other documents presented in this section have been reviewed to understand the level of consistency in planning across the City.

State Government Policy

Department of Infrastructure and Transport Ministerial Statement Walking, Riding and Access to Public Transport Supporting Active Travel in Australian Communities (2013)

This document considers the purpose of the road as the primary factor in determining the prioritisation of different user groups. Vulnerable road users (pedestrians / cyclists) are given higher priority than all other users in spaces that are designed for local access.

Department of Transport – Western Australian Bicycle Network Plan (2017)

The vision of the Western Australian Bicycle Network Plan 2017 is to make Western Australia a place where cycling is safe, connected, convenient, and a widely-accepted form of transport.

Department of Transport: Western Australian Regional Freight Transport Network Plan (2013)

This document provides clear strategic direction for the development of the transport network, identifies the regional freight transport infrastructure that will be needed over the next two decades and provides new and improved transport connections to shape growth and development.

Department of Transport, Main Roads WA, Public Transport Authority and Department of Primary Industries and Regional Development: Revitalising Agricultural Region Freight Strategy – Responding to Change (2019)

This strategy identifies and prioritises specific infrastructure upgrades and suggests regulatory and policy measures that will help make freight transport in WA's agricultural regions more productive, efficient, and safer.

Roads 2030 Regional Road Development Strategies

Roads 2030 documents a strategic review of regionally significant Local Government roads and the development strategies for them. Inclusion in Roads 2030 is a prerequisite for Road Project Grant funding.

Western Australian Planning Commission – Development Control Policy 1.6: Planning to Support Transit Use and Transit Oriented Development (2006)

This policy seeks to maximise the benefits to the community of an effective and well used public transit system by promoting planning and development outcomes that will support and sustain public transport use.

Western Australian Planning Commission – Development Control Policy 1.7: General Road Planning (1998)

This policy brings together in one document all those policies of the WAPC which are not included in the residential road planning policy and apply generally to the planning of all roads.

Western Australian Planning Commission – Guidelines for Preparation of Integrated Transport Plans (2012)

The guidelines present best practice approaches to preparing an integrated transport plan together with details of suggested principles and policy context.

Western Australian Planning Commission – Transport Impact assessment guidelines (2016)

The Transport Impact Assessment (TIA) guidelines have been prepared to assist land use planners and transport planning professionals to undertake and assess transport impact assessments of land use development proposals.

Western Australian Planning Commission – State Planning Policy 3.6 - Infrastructure Contributions

SPP 3.6 sets out the principles and considerations that apply to development contributions for the provision of infrastructure in new and established urban areas, and the form, content and process to be followed.

Council Strategies and Policies

Local Planning Scheme No. 1 (2015)

This scheme sets out local government's planning aims and intentions, as well as processes and procedures for plans and developments within the City of Greater Geraldton.

Local Planning Policy – City Centre Planning Policy (2019)

This policy seeks to facilitate the development of the city centre, with a focus on ensuring it remains the principal activity centre within the district, provides a high level of amenity, and is the focal point for all modes of transport.

Local Planning Policy – Geraldton From a Local to Global Regional City (2015)

This document maps out how the people of the Geraldton region can embrace economic opportunities to become a global centre, while retaining their local, regional character.

Local Planning Policy – Geraldton City Centre Revitalisation Plan (2017)

This plan provides short, medium, and long-term aspirations and strategies to guide the future development revitalisation, improvement and activation of the Geraldton city centre.

Local Planning Policy – Travel Plans (2015)

This document is a guide to the preparation and use of travel plans as tools to promote more sustainable travel and help reduce single occupancy car use.

Local Planning Policy – International Charter for Walking (2015)

Serves as a guide to creating walkable communities, outlining what pedestrians have a right to expect from the City in terms of meeting their travel needs; establishing principles to guide the development of policies and practices that affect pedestrians; and identifying the features of an urban environment and infrastructure that encourage and support walking.

Local Planning Policy – Making Geraldton Recreational Vehicle (RV Friendly) (2015)

This strategy investigates ways to establish Geraldton as a Regional Resource Hub for RV

travellers and identifies ways to increase tourism figures and income from this sector.

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Local Planning Policy – Geraldton North-South Transport Corridor (2015)

This is a local planning policy for a north-south bypass of Geraldton, intended to reroute heavy vehicles away from the Brand and North West Coastal Highways.

South Greenough 2 Cape Burney Coastal Planning Strategy (2013)

This strategy provides strategic planning guidance for future land use, development and subdivision that is consistent with local and State Government policy and sustainable development principles.

Disability Access and Inclusion Plan 2019-2023 (2019)

This document outlines the strategies and plans of action to provide equitable access to the City's facilities and services.

Geraldton 2031 Strategic Community Plan (2021)

The Community Strategic Plan is a blueprint for the future direction of the City of Greater Geraldton and its community members. It identifies shared community objectives and priorities, and sets out long term strategies designed to strengthen and build on Greater Geraldton's unique assets.

Growing Greater Geraldton – A Growth Plan 2020-2023 (2020)

The plan is designed to strengthen strategic positioning, attract business and investment, support the growth of competitive industries, and build a better place to live for existing and new residents.

Mid-West Development Commission – Mid West Tourism Development Strategy (2014)

This strategy aims to facilitate a coordinated, collaborative approach to grow regional tourism and

maximise the existing tourism capacity between 2015 and 2025, with the eventual goal of hosting 1,000,000 overnight visitors by 2050.

Department of Transport: Geraldton 2050 Cycling Strategy (2018)

The Strategy aims to create a safe, direct, comfortable and integrated cycling network.

Mid-West Ports: Port of Geraldton Master Plan (2020)

This document outlines one way of providing facilities and infrastructure to accommodate the trade demand predicted in a high growth scenario. It is designed to guide planning and investment decisions.

Local Planning Policy – Geraldton / Beachlands Heritage Area (2016)

The Geraldton/Beachlands Headlands area has been identified as an urban precinct whose particular circumstances require more focused management and control.

LPP Design Guidelines

Local Planning Policy – Design Guidelines – Beresford Beachfront Mixed Use (2015)

This document presents the Beresford beachfront sub-precinct as representing a major increase in the potential for best practice city edge residential development.

Local Planning Policy – Design Guidelines – Marine Terrace Foreshore Precinct Mixed Use (2015)

This document sets a future vision for the precinct, which holds a transitional function between the Geraldton city centre, the working port and residential neighbourhoods.

LPP Precinct Plans

Precinct Plan – Sunset Beach (2014)

This development plan identifies and guides improvement required for the Sunset Beach precinct to attract urban renewal investment.

Local Planning Policy – Precinct Plan – Rangeway Utakarra Karloo (2013)

This development plan identifies and guides

the improvements required for the Rangeway – Utakarra – Karloo precinct to attract urban renewal investment.

Precinct Plan – Spalding (2019)

This development plan seeks to revitalise the Spalding precinct, with a focus on improving connectivity and accessibility.

Car Parking Plans

City Centre Car Parking Management Plan – Update (2019)

This document provides options and recommendations to determine the optimum quantity and most appropriate management regimes for car parking in the city.

City Centre Transport Planning & Car Parking Strategy (2019)

This strategy lays out the guidelines for car parking in the City of Greater Geraldton.

Rural Road Plans

Grain Haulage Route Options Study (2016)

This study investigates alternative grain haulage routes and options for safety and efficiency improvements to the rural road network in the grain growing localities of Eradu, Ambania and Tenindewa, which adjoin the Geraldton-Mount Magnet Road during the grain harvest.

City of Greater Geraldton - Asset Management Policy (2021)

This Policy sets out a broad framework to provide clear direction in the provision and management of all City of Greater Geraldton (City) assets – including rural roads, ensuring sustainable outcomes and agreed levels of service for present and future stakeholders.

Wheatbelt Development Commission - Revitalising Agricultural Region Freight Strategy (2020)

The final Revitalising Agricultural Region Freight (RARF) Strategy sets the direction for future investment in freight infrastructure in the key agricultural regions of WA including the Mid West, Wheatbelt, Great Southern and Goldfields-Esperance. The strategy provides a framework and consolidated project packages that prioritise future investment in road, rail, intermodal and port infrastructure projects for the next 10-15 years.

10

Financial Analysis

Funding of Actions

The City's first preference to fund ITS priorities is through full external funding, minimising the use of general rates revenue. However, in many cases, funding needs to come from matched sources with City funds. The funding for the ITS schemes is likely to come from a range of sources, as outlined below. Funding should be sought for strategic priority infrastructure which fits with the proposed transport infrastructure capital priorities. The City does not intend to seek opportunistic grants.

Department of Transport

Funding from the Department of Transport (DoT) will consist mainly of Regional Bike Network Grants. The Regional Bike Network (RBN) Grants Program is a State Government funding initiative to provide financial assistance to regional local governments for planning and implementing cycling related projects. RBN grants are provided for projects that deliver the greatest benefit for the community, particularly those that reduce barriers to additional people cycling to specific destinations.

MRWA Grants

Funding from Main Roads WA (MRWA) will comprise mainly Regional Roads Grants and Black Spot Funding for accident remedial measures.

Road Project Grants

Only projects on local roads which are included in Roads 2030 will be eligible for Road Project Grant funding under the State Road Funds to Local Government Agreement.

Black Spot Funding

Black Spot Programs directly target improvements to the safety of roads with proven crash history or high-risk locations. Funding for the Program is mainly focused on cost-effective treatment of hazardous road locations. Approximately \$2M in funding was

allocated to the region in the 2019/20 year, between State and Federal Black Spot programs.

Lotterywest Trails Grants

Lotterywest provides grants to local government, community groups and individuals for the improvements of community services. A Lotterywest grant can be used for planning, developing and promoting trails and pathways.

Developer Contributions

There is an opportunity to collect developer contributions towards transport infrastructure, with construction by the City in the future, or to set conditions on construction to be undertaken by developers. The City's preferred method for implementation of transport infrastructure improvements is for developers to construct simultaneously with their development works (or stage them appropriately).

Provisions for the establishment and management of 'development contribution plans' are included within Part 7 of the Planning and Development (local Planning Schemes) Regulations 2015.

The ITS outlines, at a high level, the transport infrastructure priorities for developer contributions.

Mid West Sports Federation

The Mid West Sports Federation has been identified as a potential funder of actions for the Geraldton Bike Plan.

11

Implementation and Reporting

In order to measure the success and progress of the ITS, it is important to maintain a set of key indicators. Given many stakeholders would be involved in progressing various improvements to the transport system within the City of Greater Geraldton, the indicators shown below have been developed to measure what the City can control.

An ITS implementation progress report and multi-criteria assessment (MCA) will be presented to Council which outlines the progress made against the delivery of actions from the ITS and the progress made against each of the indicators. Importantly, it is noted that performance measures are still under development.

Objective	Indicator	Baseline	Target				
			2022	2023	2024	2025	2026
Support and promote the City of Greater Geraldton to become a walking and cycling friendly City	Construct secure end-of-trip facilities in the City Centre	2021	To be determined.				
	Upgrade existing cycling infrastructure	2021					
	Increase the number of people travelling to work by bike	2016 Census Data					
Create a modern, integrated, targeted and well-used public transport system	Upgrade bus stops to ensure adequate shelter is provided	2021	To be determined.				
	Increase the daily bus services in the City Centre	Service frequency					
	Increase travel for after-hours travel within the City Centre						
Create a road hierarchy system that is capable of efficient vehicle movement while reducing the potential adverse effects of traffic flow and increasing pedestrian/cyclist safety	Upgrade a range of existing intersections throughout the City Centre to benefit pedestrian/cycling safety	2021	To be determined.				
	Upgrade a range of corridors which could improve traffic movement	2021					
Support and improve the movement of freight to, through and within the City of Greater Geraldton	Construct further port expansions to support land and infrastructure pressures	2021	To be determined.				
	Upgrade existing road networks within close proximity to the Port	2021					
Ensure sufficient parking is provided for residents and visitors to the City of Greater Geraldton	Modify parking and directional signage to reflect proposed changes to operation	2021	To be determined.				
	Introduce time restrictions and introduce paid parking to encourage turn over	Occupancy Survey					
	Monitor and enforce parking within the City Centre	2021					

12

Glossary

Term	Definition
Active Transport	Non-motorised forms of transport involving physical activity, such as walking and cycling.
Access Road	The lowest order of road within the Main Roads WA (MRWA) hierarchy. These roads are bicycle and pedestrian friendly, and provide access to abutting properties with amenity, safety and aesthetic aspects over the vehicle movement function.
Desire Lines	In urban planning, 'desire lines' are used to analyse traffic patterns for a given mode of travel - allowing for the creation of an 'intuitive' network as opposed to a prescribed or predetermined network.
Formal Crossing Opportunity	A formal crossing opportunity covers a range of crossing treatments including zebra crossings. In its simplest form is facilitated using access ramps and median islands.
Green Conflict Pavement	Coloured pavement within a bicycle lane which increases the visibility of the facility and identifies potential areas of conflict, whilst reinforcing priority to cyclists.
Legacy Stagger	Describes two roads that were constructed with a staggered T-intersection form. The plan is to remove and realign the road so they meet in a simple 4-way junction, like a round-about or signalised intersection.
Local Distributor	A road order within the MRWA Hierarchy. The Hierarchy describes such roads as roads that connect to other Rural Distributors and to Rural Access Roads. Not Regional Distributors, but which are designed for efficient movement of people and goods within regional areas.
Local Planning Scheme	Local Planning Schemes outline how land is to be used and developed, classify areas for land use and include provisions to coordinate infrastructure and development in a locality.
Major Generator	A land use larger in scale, which attracts people/visitors to the development (e.g, shopping centre).
Restricted Access Vehicle	A vehicle that is restricted to use only roads within the "Permit Network" corresponding to its class. The Permit Networks are RAV Networks 1 to 10; RAV Network 1 includes all Public Roads within the State of WA except for five designated exclusions (though some usage with conditions is permitted in some cases). RAV Networks 2 to 10 comprise the roads on which the corresponding classes of vehicles are permitted (subject to additional conditions in some cases).