Project Report

Town of Victoria Park
Albany Highway Precinct Structure Plan

Transport Strategy

Prepared by: James Pearse, Timothy Dawson & Caitlin Thacker

Reviewed by: Andrew Brodie

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1. Introduction

1.1 Background

The Town of Victoria Park is preparing a Precinct Structure Plan for the proposed Albany Highway Secondary Centre in accordance with State Planning Policy 7.2 Precinct Design (SPP 7.2) and the Planning and Development (Local Planning Schemes) Regulations 2015 (as amended).

The Albany Highway Precinct extends from the Causeway to Welshpool Road. The precinct is defined in the Town of Victoria Park Town Planning Scheme No. 1 and incorporates the Victoria Park Secondary Centre and the East Victoria Park District Centre.

The Precinct Structure Plan will provide the guiding framework for the planning and development of the Albany Highway Precinct by taking a holistic, long term approach that can be updated in response to contemporary issues and community aspirations. The Precinct Structure Plan will also provide support for the Town's aspiration to elevate the Albany Highway Precinct to a Secondary Centre under SPP 4.2 by coordinating planning, infrastructure and development controls across the entire Precinct.

1.2 Purpose of this document

The purpose of this document is to provide evidence/context for the various transport recommendations which will be proposed within the Precinct Structure Plan, and to provide a line-of-sight between higher level strategies, statutory planning instruments, and infrastructure planning, by aligning with the objectives of the Town's Integrated Transport Strategy and Parking Management Plan.

This document provides an overview of the existing traffic, public transport and active transport context; how planned infrastructure upgrades are likely to influence the way people move to/from and through the Albany Highway Precinct moving forward; and how the growth of the Precinct can be expected to impact the movement network at a high level.

To support the preparation of the Precinct Structure Plan, a series of guiding principals and recommendations for enhancing movement and access have been established. The final section of this report evaluates the proposed recommendations against the objectives and criteria outlined in SPP 7.2 (refer Appendix A). This report builds upon on the Phase 1 report prepared by GTA Consultants (refer Appendix B).

1.3 Planning Context

Underpinning the recommendations outlined in this document is the Albany Highway Tomorrow Report. This report summarises feedback and ideas put forward by landowners, community groups and local resident during the initial phases of the PSP's development.

From a transport standpoint, SPP 7.2 promotes active and public modes of transport to achieve a more sustainable built environment. It also specifies that precinct designs must provide places with good connectivity and sightlines which are easy to navigate.

In addition to SPP 7.2, the mobility and access recommendations for the Albany Highway corridor have been informed by the Town's Integrated Transport Strategy and Parking Management Plan (both of which received council endorsement in 2022).

Figure 1: Key planning documents used in informing the Albany Highway PSP

The Town's Integrated Transport Strategy outlines a number of recommendations pertaining specifically to the Albany Highway corridor. Notable recommendations include:

- The implementation of streetscape and public realm improvements through the *Streetscape Improvement Plan* and *Old Spaces New Places Program;*
- Lowering speeds limits in areas of high pedestrian activity
- Categorising portions of Albany Highway are identified as "Streets for People" in accordance with the Department of Transport's Movement and Place framework
- Improving cycling infrastructure to ensure it is a safe, attractive and inclusive mode of transport through design interventions such as skinny streets and bike boulevards, as well as investigating priority bike and e-ridable routes
- Advocating for a mid-tier transit system along Albany Highway
- Delivering intersection upgrades to enhance pedestrian safety, including the McMillan Street - Albany Highway intersection

Key recommendations outlined in the Parking Management Plan include:

- Tightening timed-parking for high-value bays to facilitate a higher turnover of vehicles
- Monitoring parking to assess whether occupancy targets are being achieved
- Removing an appropriate number of parking bays to provide space for pedestrian amenity and connectivity opportunities

1.4 Community Engagement Findings

In accordance with SPP 7.2, the development of this Precinct Structure Plan has involved a comprehensive community engagement process which has been used to inform the analysis, vision and ideas. Community feedback shaped the 18 ideas in the Albany Highway Tomorrow report, and a Community Reference Group was established to test ideas and evaluate community response to the draft growth scenarios. Future stages of the project will include public advertising of the draft Precinct Structure Plan.

Key engagement findings relating to transport include:

- Improving public transport availability, cost and coverage
- Developing a safe and well-connected cycling network
- Prioritising pedestrians, cyclists and public transport over cars
- Enhancing public spaces and streetscapes
- Reducing the vehicle dominance of Albany Highway where possible

Concerns raised at the Community Reference Group Workshop included:

- Changes to parking and their potential impacts on certain businesses
- Cars rat running and parking on side streets due to loss of parking along Albany Highway
- Whether the construction of new train stations at Carlisle and Oats Street may impact on Albany Highway (either positively or negatively)
- Issues arising between pedestrians and cyclists in shared spaces

2. Existing Situation & Context

2.1 Overview

Albany Highway is strategically situated at the heart of Perth's inner east. One of four major urban corridors radiating from the Perth CBD, Albany Highway is an important regional centre connecting residents to amenities, commercial services and local jobs. At approximately 3.8 kilometres in length, Albany Highway is Perth's longest high street. The Highway is also close to Curtin University, one of Perth's largest and most economically important education hubs. It also benefits from its connections to the Burswood peninsula, including Crown and Optus Stadium, which attract millions of visitors each year.

Albany Highway is a complex corridor which has both high movement and place functions. The corridor caters for local and district-level trips, and provides access to a diverse arrange of residential, retail, and community land uses.

Figure 2: Typical urban streetscape on Albany Highway

Figure 3: One of four formal pedestrian crossings on Albany Highway

This Precinct Structure Plan has divided the urban corridor into six sub-precincts: Causeway, Victoria Park, Central, East Victoria Park, East End and St James. The relationship between the various sub-precincts, key roads and nearby train stations is shown in Figure 4.

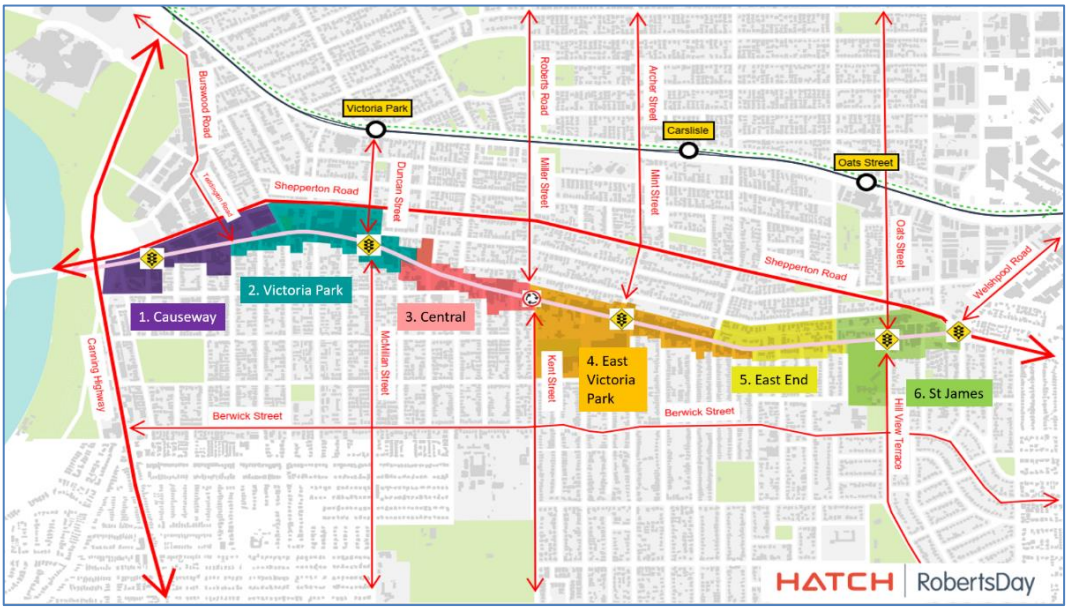


Figure 4: Overview of sub-precincts relation in relation to key road and train stations

2.2 Land Use

Land Use on Albany Highway is regulated by the Town's Local Planning Scheme No. 1. It establishes several different zones along the Highway that are consistent with current development patterns. The core retail areas of Victoria Park, East Victoria Park and St. James are zoned 'District Centre' under the Scheme, permitting a mix of retail, commercial, shop and residential uses as seen in Figure 5 and Figure 6.

The area between the East Victoria Park and Victoria Park centres are zoned 'Commercial'; permitting a range of larger and more intensive uses such as bulky goods and light industry, while still permitting residential. The eastern side of Duncan Street is zoned 'Office/Residential', while Albany Highway between Dane and Oats streets is zoned 'Residential/Commercial'. These areas are more restrictive of retail and commercial activity. These zones are broadly comparable, but have the effect distinguishing and separating Victoria Park, East Victoria Park, and St. James retail centres from the balance of the Highway in activity, built form and character.

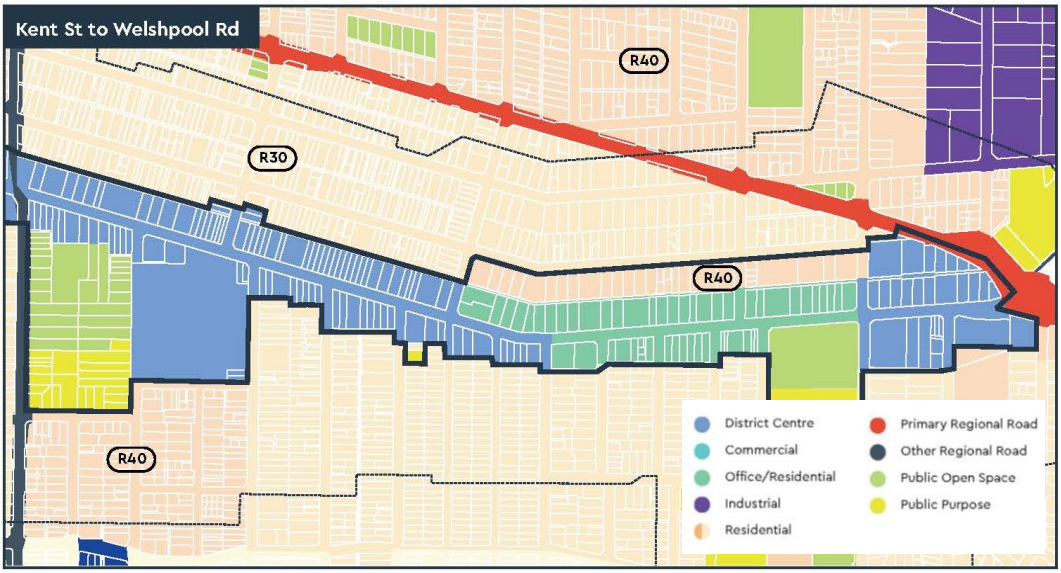


Figure 5: LPS1 Zoning (Canning Highway to Kent St)

Albany Highway's economy is far more diverse than other inner urban centres such as Mt. Lawley, Subiaco, Leederville and Claremont. It supports retail, storage, manufacturing and community service floorspace, as well as a strong evening economy. A higher proportion of Albany Highway businesses are open past 6pm than Northbridge (43% vs. 38%). The diversity of land use present in Albany Highway therefore requires a different transport response than a traditional, retail/food/beverage inner urban activity centre.

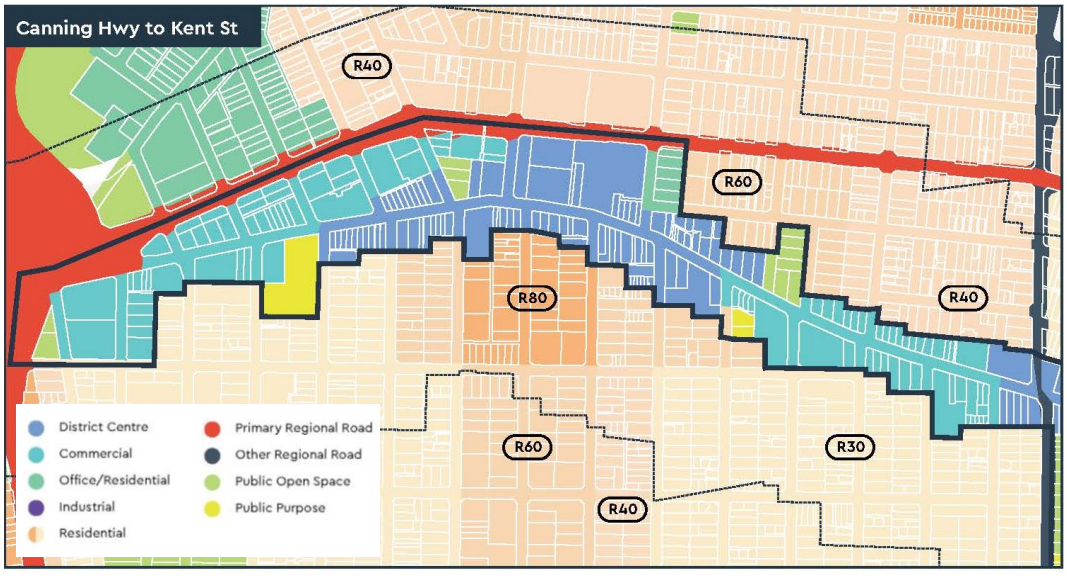


Figure 6: LPS1 Zoning (Kent Street to Welshpool Road)

2.3 Traffic

Albany Highway is designated as a 40km/h zone along the entire length of the study area. Albany Highway is currently classified as a Distributor B Road in accordance with the Main Roads WA Functional Road Hierarchy, while Shepperton Road (which was built to bypass Albany Highway) is classified as a Primary Distributor.

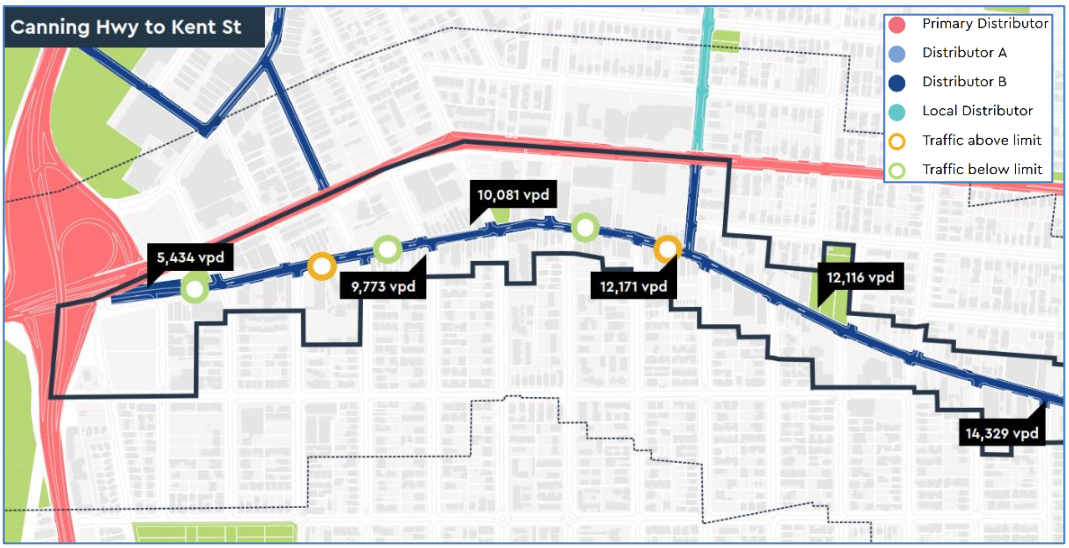


Figure 7: Road hierarchy and traffic volumes (Canning Highway Kent Street)

As shown in Figure 7 and Figure 8, traffic volumes along the corridor range from approximately 5,000 vehicles per day near to the Causeway to over 16,000 vehicles per day near Welshpool Road. Shepperton Road accommodates 28,000-30,000 trips per day, which is less than comparable urban arterials such as Stirling Highway, Nedlands (35,000 - 40,000vpd) or Canning Highway, Applecross (50,000-60,000vpd)[1].

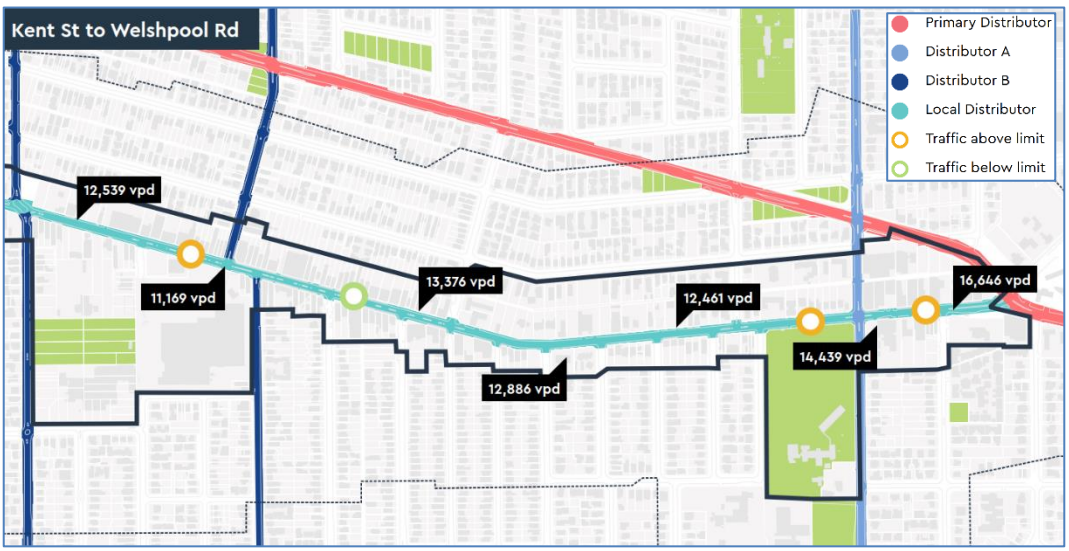


Figure 8: Road hierarchy and traffic volumes (Kent Street to Welshpool Road)

[1] trafficmap - Main Roads WA

In many places along the Highway, cars regularly travel up to 5km/h above the posted limit. Between Hillview Terrace and Baillie Avenue, traffic is consistently more than 5km/h over the speed limit.

Table 1: Albany Highway traffic volume/speed (ToVP, December 2022)

PRECINCT	LOCATION	AWT TRAFFIC VOLUME (VPD)	85th PERCENTILE SPEED (KM/H)
Causeway	Between Teddington Road and Geddes Street	7,188	46.3
Victoria Park	Between Leonard Street and King George Street	11,068	38
Central	Between State Street and Tuam Street	12,293	43.4
East Victoria Park	Between Westminster Street and Canterbury Terrace	12,284	36.4
East End	Between Balmoral Street and Willis Street	12,825	45.7
St. James	Between Alday Street and Hill View Terrace	14,751	37.3

Key cross-connector streets such as Teddington Road, McMillan Street, Miller Street/ Kent Street, Mint Street and Oats Street average approximately 10,000 vpd.

2.4 Vehicle Access & Laneways

Albany Highway exhibits a lack of consistency along its length in approach to vehicle access. Lot access by rear laneway is a common solution in the East Victoria Park and East End precincts, and the Victoria Park and St. James precincts to a lesser degree. The rear access laneway plays an important role in these precincts by removing vehicle infrastructure from Albany Highway, thereby supporting the density of land uses and high-amenity pedestrian environment that characterises the Albany Highway streetscape in these precincts.

Laneways are notably absent as a typology in the Causeway and Central precincts, which is reflective of the prevailing land use and development patterns in these areas. The result is a vehicle-dominated street environment characterised by large expanses of hardscape, numerous vehicle crossovers and a lack of tree canopy.

2.5 Public Transport

2.5.1 Bus

As shown in Figure 9, Albany Highway carries eight different bus routes providing connections to the Perth CBD, Curtin University, Canning Vale, Bentley, Cannington, Wilson, Bull Creek, Armadale, Belmont, and Mirrabooka. These broad, far-reaching connections provide for convenient city commuting during peak hours. They also offer a high degree of regional access for local residents.

While a number of Transperth services run on Albany Highway, direct connections via bus to the adjacent railway stations are limited. Transperth route 220 is the only service which runs the full length of Albany Highway within the proposed secondary centre. This route provides approximate 20-minute peak period headways, dropping to 60-minute headways off-peak. The significant number of bus services which access the Highway therefore does not result in a commensurate level of service along its length, with few opportunities for hop-on/hop-off access between Albany Highway sub-precincts.

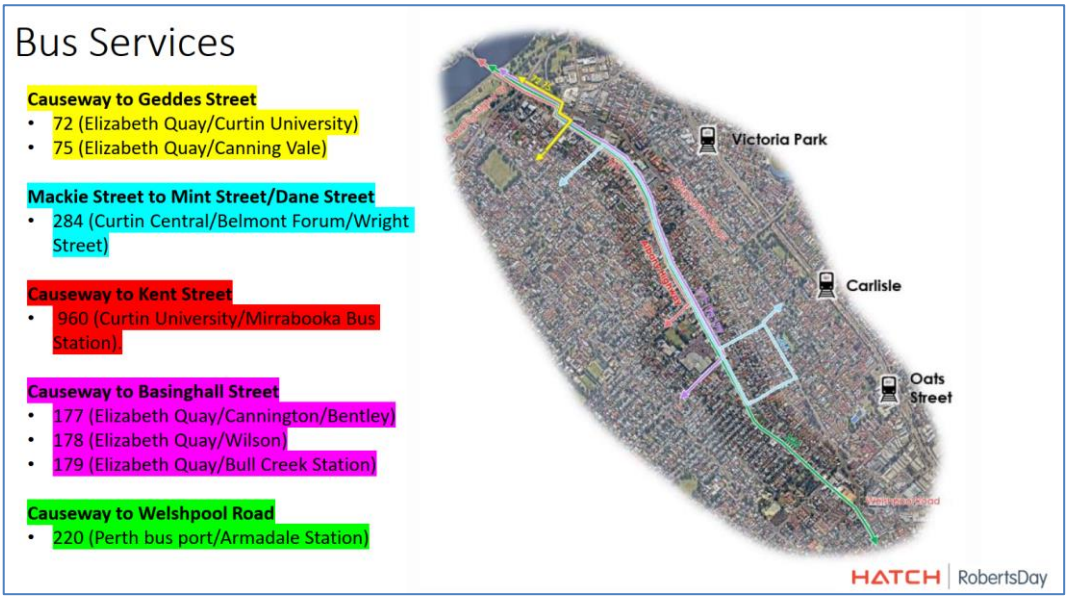


Figure 9: Albany Highway bus services

2.5.2 Victoria Park Transfer Station

The Victoria Park Transfer Station (VPTS) is located at the northern end of Albany Highway, where Shepperton Road intersects with Canning Highway/Great Eastern Highway. The VPTS facilitates approximately 150 bus movements during the peak period. Approximately 70-80% of all departures from the VPTS involve transfers between buses. Five high-frequency bus services run through the VPTS, including:

- Route 910 – Elizabeth Quay to Fremantle via Canning Hwy
- Route 930 – Elizabeth Quay to Thornlie via Shepperton Rd and Albany Highway
- Route 935 – Kings Park to Redcliffe via Perth and Belmont Forum
- Route 960 – Mirrabooka to Curtin University via Alexander Drive, ECU Mt Lawley and Perth
- Route 940 – Elizabeth Quay to Redcliffe via Great Eastern Highway

2.5.3 *Rail*

There are three Transperth train stations in relative proximity to Albany Highway - Victoria Park Station, Carlisle Station, and Oats Street Station as seen in Figure 10. The stations are located at the terminus of Duncan Street, Mint/Archer Street and Oats Street and are respectively 540m, 830m and 740m from the highway. This equates to a walking time of 5 to 10 minutes, providing access to high frequency transit for residents, workers and visitors. Station ridership is relatively low with cumulative daily boardings across all three stations of just 3,112 - 64% of which are at Oats Street (PTA 2017). Ridership at these stations is lower than comparable stations such as Subiaco and Maylands.

Figure 10: Most of the Albany Highway Secondary Centre is located within 600-900m of a train station.

2.6 Active Transport

Based on available information (ABS journey-to-work data), active transport accounts for a relatively low modal share along Albany Highway. As of 2016, only 1.6% of workers accessed the Albany Highway precinct by walking, while approximately 4% cycled. Target mode shares for the Albany Highway corridor have been established in Section 4.3.1.

2.6.1 Walking

With its relatively high volumes, crossing Albany Highway can be difficult for pedestrians, particularly the young, elderly and those with mobility impairments. Formal pedestrian crossings (zebra crossings) are limited to four locations (around one per kilometre) and key intersections generally prioritise vehicle movements over pedestrian crossing movements. In this environment, pedestrians are observed to rely on the median to help with crossing. At present, medians do not exist between the Causeway and Teddington Road, McMillan Street and Kent Street, and Shepperton Road and Hill View Terrace. Additionally, the median is generally painted only, with a physical median only present between Dane Street and Sussex Street in East Victoria Park.

Despite this, the Albany Highway Precinct is generally very walkable, with most daily errands able to be completed without use of a car. The surrounding street network is highly legible and typically has good footpaths. There is generally high levels of tree canopy cover, which is being improved through the Town's Urban Forest Strategy. Albany Highway generally enjoys a Walk Score of approximately 90, with some precincts being more walkable than others (

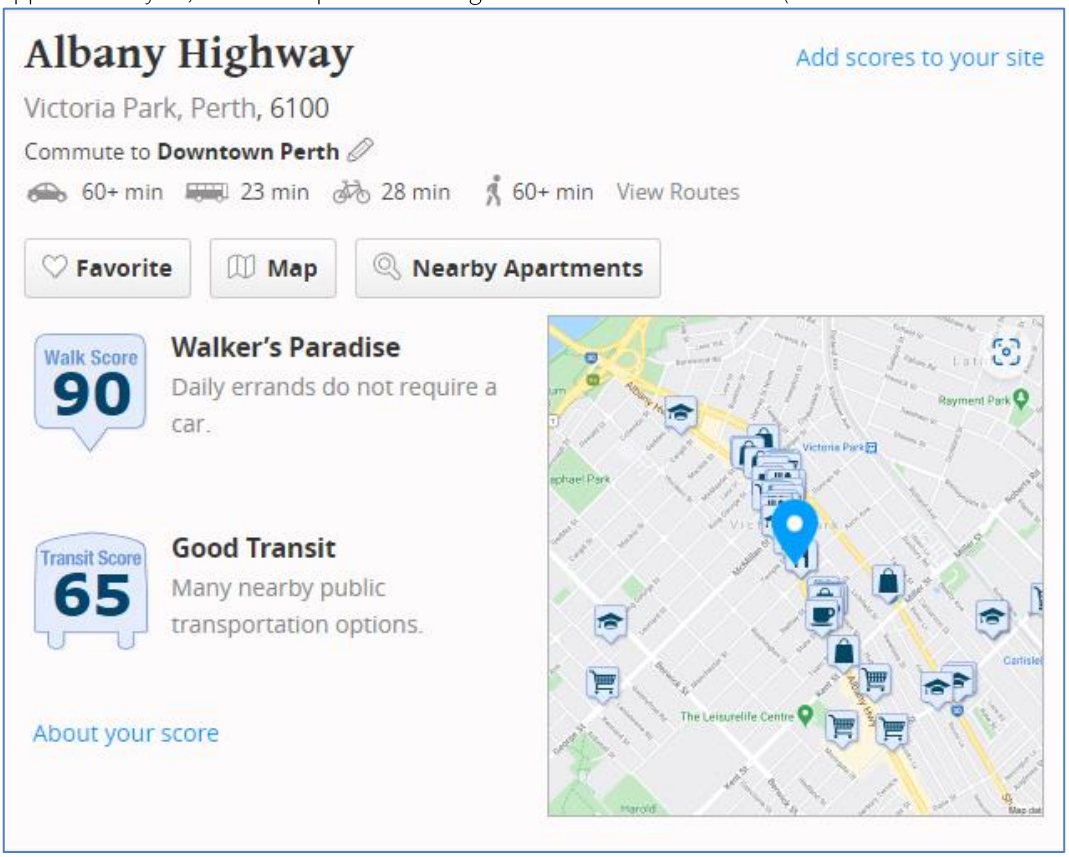


Figure 11).

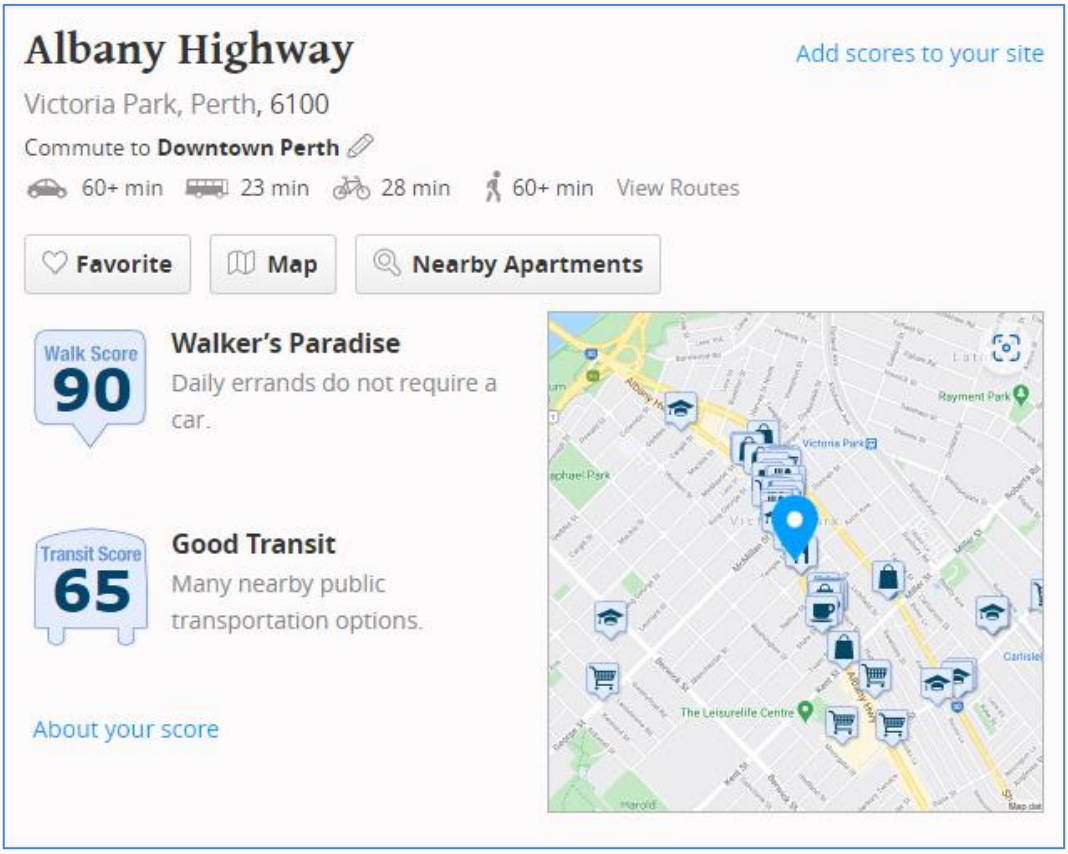


Figure 11: Albany Highway Walk Score

2.6.2 *Cycling/micromobility*

There is currently no dedicated cycling infrastructure along Albany Highway, with the exception of a short east-bound protected bike lane in the Causeway precinct. Despite this, Albany Highway carries a significant volume of cyclists, steadily increasing from the Central precinct towards the Perth CBD. Volumes peak on Albany Highway between Leonard and King George streets, where it is assumed cyclists begin to peel off the Highway toward Hordern Street to access the Canning Highway underpass (see Figure 12 and Figure 13).

The Town of Victoria Park / City of South Perth Joint Bike Plan identifies Albany Highway as a potential cycling corridor for future investigation (Figure 14). However, given the complex and busy nature of Albany Highway, the interaction between different types of cyclists and other road users' needs to be carefully considered. This includes catering for commuter and leisure cycling as well as people with different levels of experience/confidence. Several parallel routes to Albany Highway have been considered for Safe Active Street treatments (explored further in Section 4.4.6).

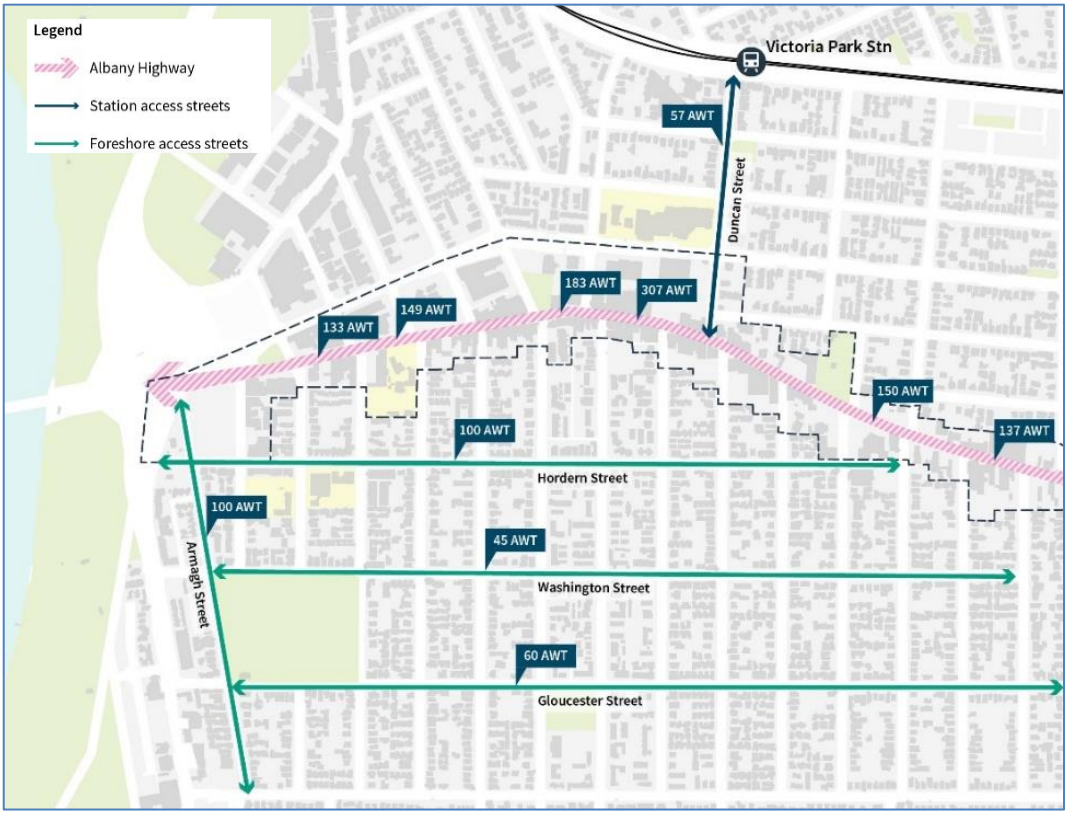


Figure 12: Cyclist volumes between the Causeway and Kent Street (Source: Town of Victoria Park)

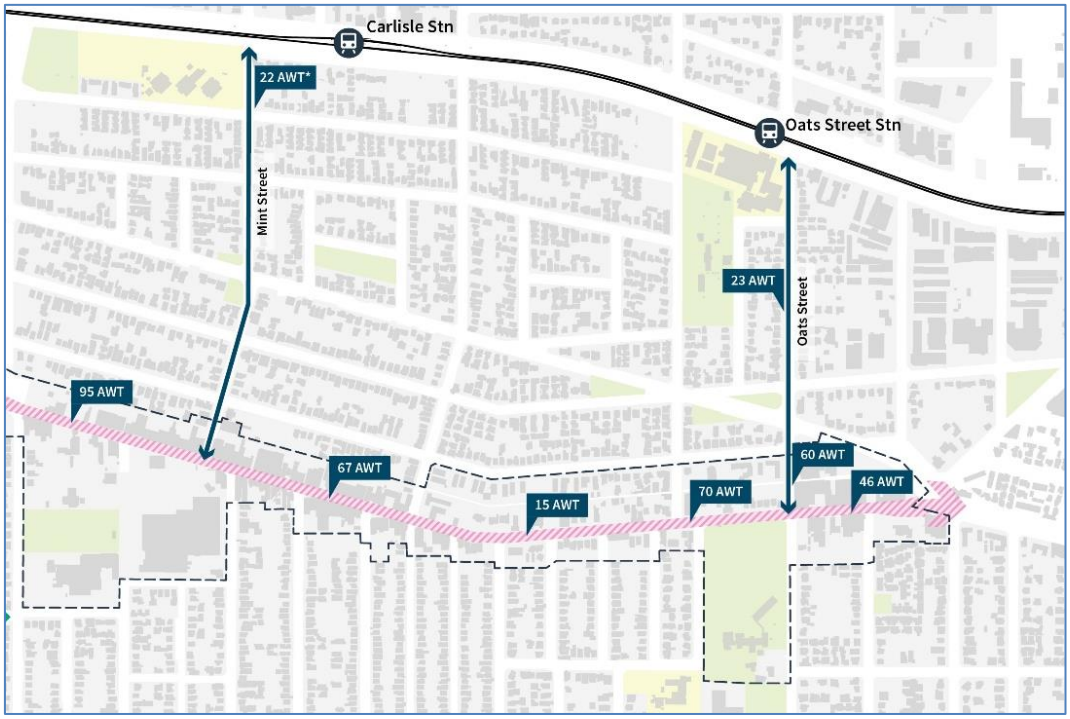


Figure 13: Cyclist volumes between Kent Street and Welshpool Road (Source: Town of Victoria Park)

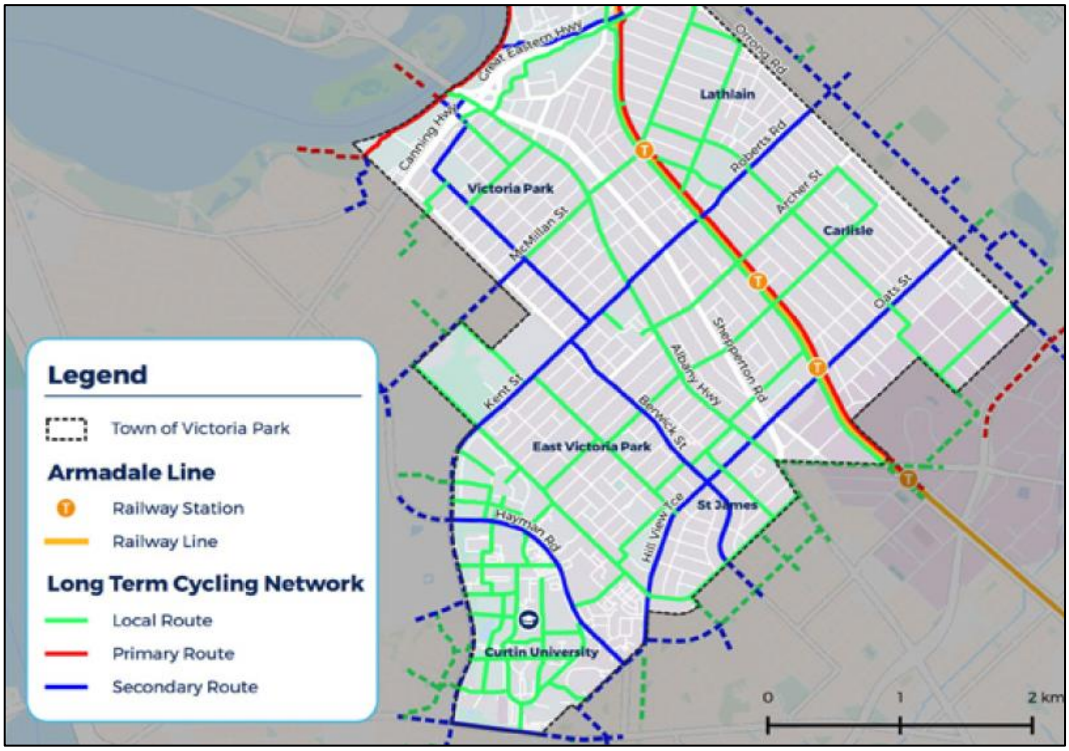


Figure 14: Town of Victoria Park long-term cycling network (Source: ToVP ITS)

2.7 Parking

Based on the data provided by the Town of Victoria Park, there are around 600 public parking spaces within and adjacent to Albany Highway. These are contained within Town-owned car parks, as well as Town-managed on-street parking along the Highway's itself. There is also considerable private parking provided for workers and visitors at the rear of commercial premises and in large privately-owned car parks such as the Park Centre. Additional parking exists further afield on surrounding residential streets and at train stations.

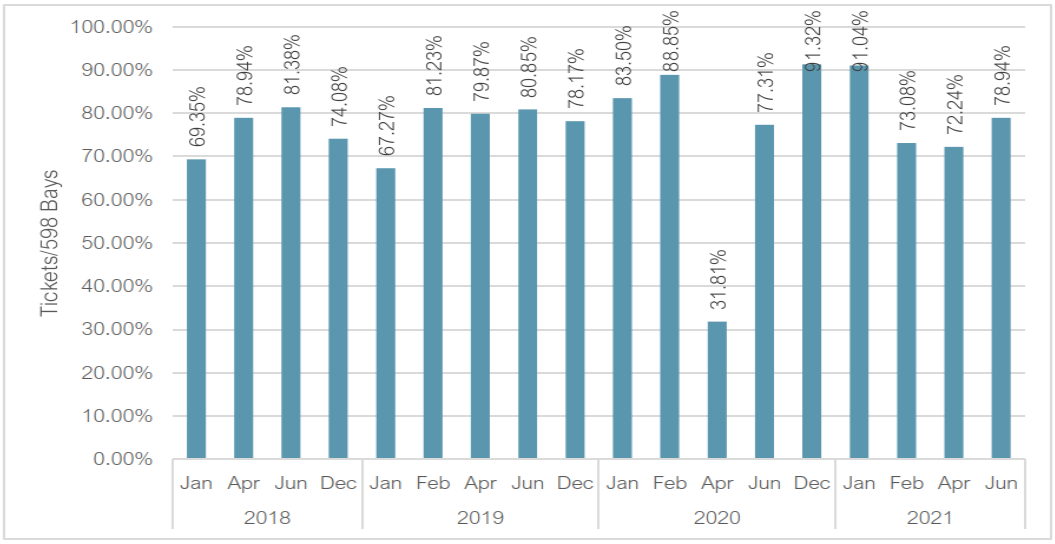
In terms of Albany Highway itself, there are approximately 377 on-street bays between the Causeway and Welshpool road. As shown in Figure 15, these are relatively evenly distributed longitudinally along the Highway.

Precinct	On-street Parking Bays
Precinct 1. Causeway (Canning Highway to Cargill Street)	16
Precinct 2: Victoria Park (Cargill Street to Temple Street)	68
Precinct 3: Central (Temple Street to Miller Street)	73
Precinct 4: East Victoria Park (Miller Street to Dane Street)	124
Precinct 5: East End (Dane Street to Somerset Street)	68
Precinct 6: St James (Somerset Street to Welshpool Road)	28
Total	377

(numbers approx.)

Figure 15: On-street parking bays by sub-precinct

Paid parking data shows that most parkers are staying for 30-60 minutes, which has remained generally consistent since 2018.

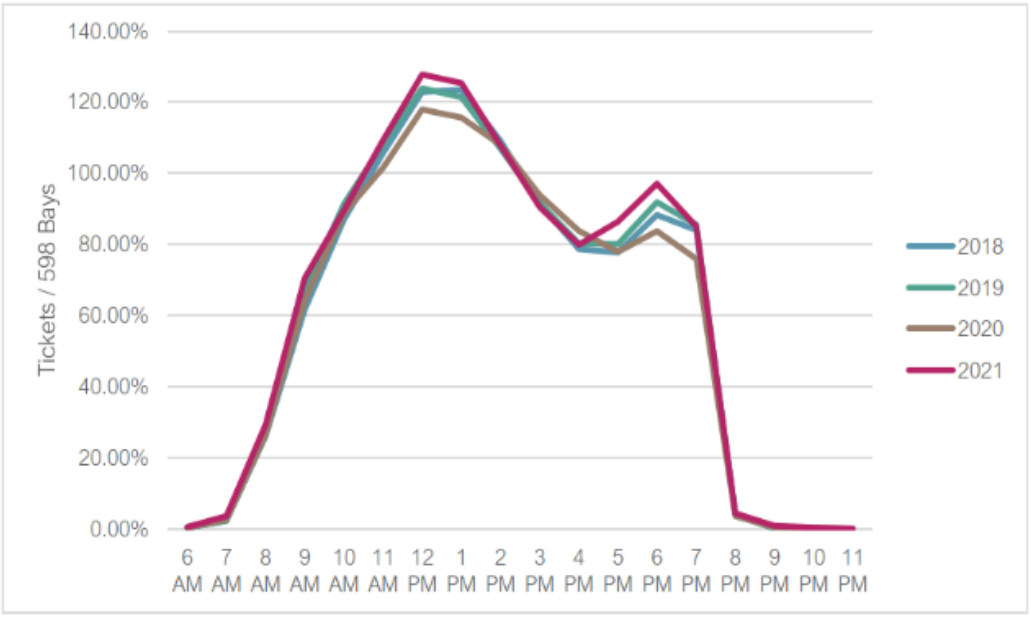


Note: Includes free parkers

Figure 16: Average daily occupancy (7am-8pm) by month (Albany Highway ticketed on-street bays)

Since 2018, the number of monthly paid parking transactions has shown small but steady increases year on year, with these exceeding 40,000 for the first time in November 2020 (Figure 16). This rate was exceeded in March, May and June of 2021. Parking and driving to Albany Highway therefore seems to have increased in the post-COVID period, contrary to policy objectives. This is consistent with transport behaviour recorded nation-wide, where pre-COVID public transport patronage levels have not yet recovered, but road congestion is higher than ever.

Parking data indicates that parking occupancy is routinely above 65% of capacity, with summer months approaching 85%. Peak demand for parking coincides with lunch (12pm-1pm) and dinner (5pm-7pm) times as shown in Figure 17.



Note: Includes free parkers

Figure 17: Annual average hourly parking occupancy by time of day (Albany Highway ticketed on-street bays)

3. Planned or Proposed Infrastructure Projects

3.1 Victoria Park – Canning Level Crossing Removal

The Victoria Park – Canning Level Crossing Removal project will result in new, elevated train stations at Carlisle and Oats Street as shown in Figure 18. These stations will be reconstructed in more appropriate locations that will improve the public realm, traffic flow and safety for both people and vehicles. Enabling works and service realignments have already begun, and the project will ultimately provide the opportunity to improve public and active transport networks and connections to/from the Albany Highway precinct.

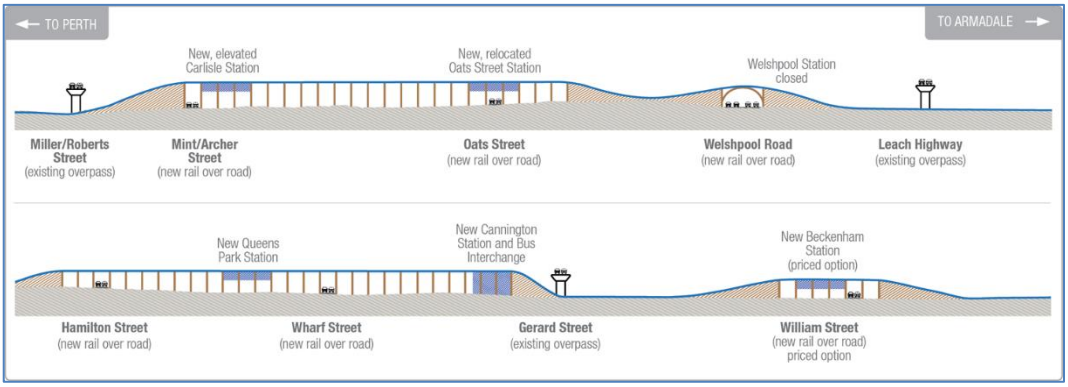


Figure 18: The Inner Armadale Level Crossing Removal Project will see new stations at Carlisle and Oats Street (Source: METRONET).

3.2 Causeway Pedestrian and Cycle Bridge

The Causeway Pedestrian and Cycling Bridge Project (Figure 19), which is being delivered by Main Roads WA, is set to commence construction in early 2023. The bridge is anticipated to be complete by mid-late 2024, and will significantly improve the walking/cycling connection between Victoria Park and the Perth CBD. The bridge will be 6.0m wide, and comprise separate pedestrian and cycle paths. The completion of this project will enhance active travel between the Albany Highway Secondary Centre and existing path networks along the Swan River, and is expected to encourage higher rates of active transport to/from and within the Town.

Figure 19: The Causeway Pedestrian & Cyclist Bridge will improve connectivity between Victoria Park and the Perth CBD for active modes

3.3 Victoria Park Transfer Station

The PTA is currently exploring options for reconfiguring the Victoria Park Transfer Station (VPTS). PTA's current preferred layout includes a central island platform enabling easier transfers between buses. Based on this option, Perth-bound vehicular access between Albany Highway and the Causeway will be via Asquith Street.

3.4 Mid-tier transit

The "Knowledge Arc" refers to potential rapid transit connection linking UWA to Curtin University, via the Perth CBD and along part of Albany Highway. The concept, which was initially explored by government in the early 2010s, remains part of the Town's long-term planning agenda. Infrastructure WA's Draft State Infrastructure Strategy (SIS) recommends this project be progressed as a strategic priority to address congestion and help meet Perth's urban consolidation targets. This includes completing a full business case and options assessment comparing the Knowledge Arc mid-tier transit corridor against a more extensive bus rapid transit system for Perth.

In parallel to this, a consortium consisting of eighteen metropolitan Local Governments is currently advocating for the development of a mid-tier transit strategy for Perth. This project has sought to identify the most important connections and create a high-level corridor plan as shown in Figure 20. We understand that further investigation of mid-tier transit is being progressed at the State level as a result of this advocacy.

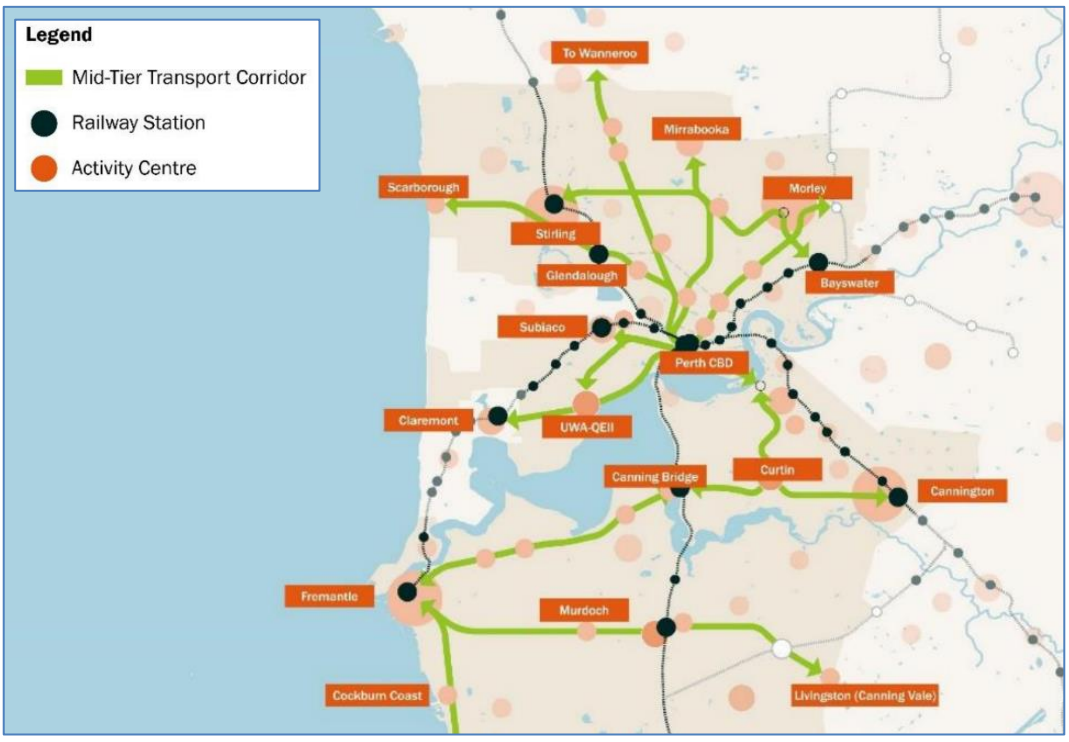


Figure 20: Shortlisted corridors identified by Mid-tier Transit Consortium

It is important that any changes to Albany Highway do not preclude the eventual-roll-out of mid-tier transit. Based on the review of other systems from around Australia, it is expected that an operating space of approximately 7-9m will be required to accommodate a two-way mid-tier service. Examples are shown in Figure 21, Figure 22, Figure 23 and Figure 24.

Figure 21: George Street, Sydney

Figure 22: Church Street, Parramatta

Figure 23: Gold Coast Highway, Gold Coast

Figure 24: Alinga Street, Canberra

4. Structure Plan Proposal

4.1 Draft Built Form Strategy

Hatch RobertsDay are preparing a Built Form Strategy as a key input to support the Precinct Structure Plan. The Structure Plan and associated planning instruments will ultimately include specific planning controls that regulate building design, size, location and community benefit requirements. The Built Form Strategy provides a framework to guide the preparation of these controls, and includes formalised built form principles and two alternate concept scenarios to accommodate forecast growth for Albany Highway.

The Concentrated Scenario is predicated on concentrating future growth within a limited number of major sites, and within the existing precinct boundary. The Distributed Scenario distributes this same growth over a wider area, expanding the precinct beyond its current boundary. Through consultation and review, a third combined scenario was developed which incorporated varying elements of each.

Due to the expected timeline for ultimate development under this Precinct Structure Plan, it is anticipated that the timing for any major transport interventions will emerge incrementally as major sites are redeveloped, the Town embarks on new capital works, or the State Government proposes significant new infrastructure projects (e.g. mid-tier transit).

Figure 25: Concept Scenarios - Draft Built form Strategy

4.2 Draft Public Realm Strategy

ASPECT Studios have prepared a draft Public Realm Strategy as a key input to support the Precinct Structure Plan. The Public Realm Strategy provides a framework to guide the incremental transformation, look and feel of the Albany Highway public realm, with a focus on creating a 'Street for People'.

The draft Public Realm Strategy proposes new public space typologies via streetscape upgrades and new major spaces, aligning with Idea 7 of the Albany Highway Tomorrow report – Reallocate Highway space from cars to people; and Idea 8 – Deliver new open spaces within major sites. Where possible, the recommended transport upgrades align with the objectives of the Public Realm Strategy.

Figure 26: Streetscape typologies (Public Realm Strategy)

4.3 Guiding Principles

Outlined below are a series of principles which have guided the recommended transport upgrades for the Precinct Structure Plan. These guiding principles have been derived from the ideas outlined in the Albany Tomorrow Report and are based on established best-practice transport planning evidence, existing Local and State Government policies, as well as feedback received from stakeholders and the broader community. Ideas from the Albany Highway Tomorrow report which relate specifically to mobility and access include:

- Idea 6: Transform the Gateway to Victoria Park
- Idea 7: Reallocate Highway Space from Cars to People
- Idea 10: Improve Walking, Cycling and Transit Infrastructure
- Idea 11: Reduce the Negative Impacts of Vehicle Traffic
- Idea 12: Rethink Parking Supply and Management
- Idea 18: Promote Vibrant Streetfronts and Public Life

4.3.1 GP1 Providing greater transport choice to encourage modal shift

Car dependency is a significant and ongoing issue affecting the economic, environmental and social sustainability of Perth. In addition to causing air and noise pollution, an over-reliance on private vehicles (particularly for short trips) is linked to higher rates of obesity and cardiovascular disease. Additionally, the spatial requirement of the movement and storage of vehicles creates a dispersed development pattern, requiring large parcels of land and increasing the distances of

daily trips. The cost of owning and running a car is becoming increasingly expensive, placing further pressure on households. Although there is a global transition to electric vehicles, the vast majority of cars in Perth still run petrol/diesel which contributes to global resource depletion as well as global warming.

Fundamental to supporting the next phase of growth of Albany Highway is reducing reliance on private motor vehicles so that increased residential population and visitation does not have a corresponding increase in vehicle traffic. The provision of high-quality active transit networks and "car light areas" will improve safety and comfort, reduce air pollution and generally enhance the experience for people.

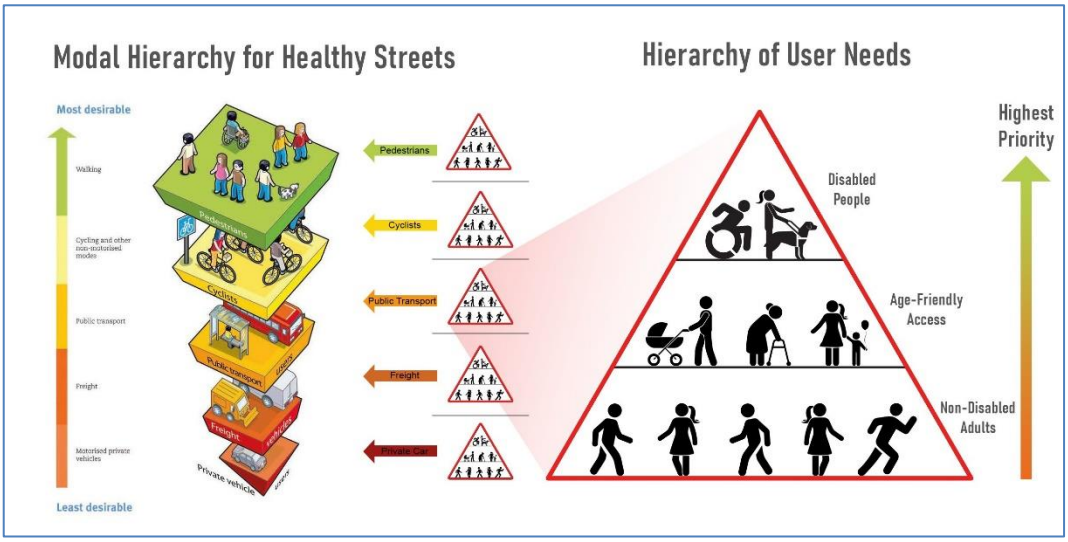


Figure 27: Modal hierarchy based on user needs (Kieran Ryan 2021)

Figure 27 identifies that private vehicles are the least desirable mode of transit to achieve healthy streets and productive places. While there is a clear need to prioritise sustainable modes of transport over private vehicles, it remains important to also consider the access requirements of other vulnerable groups including the young, elderly and those with impaired mobility.

Providing high-quality public and active transit options helps encourage modal shift, which leaves road space and parking for those people who genuinely need it. Adopting the recommendations outlined in the subsequent sections of this report will help achieve the mode shift targets proposed in the Precinct Structure Plan (refer Table 2 below).

Table 2: Existing and target modes shares

Mode	Town of Victoria Park (journey to work only)		Albany Highway Secondary Centre (all trips)	
	2016 mode share (ABS, 2016)	2031 target mode share (ToVP ITS, 2022)	Existing mode share	Target mode share (2031)
Car, as driver	69%	62%	Unknown	40%
Car, as passenger	5%	6%	Unknown	8%

Mode	Town of Victoria Park (journey to work only)		Albany Highway Secondary Centre (all trips)	
	2016 mode share (ABS, 2016)	2031 target mode share (ToVP ITS, 2022)	Existing mode share	Target mode share (2031)
Train	5%	6%	Unknown	11%
Bus	12%	12%	Unknown	16%
Ferry	0%	1%	Unknown	1%
Bicycle	3%	5%	Unknown	11%
Walked Only	4%	6%	Unknown	11%
Other	2%	2%	Unknown	2%

4.3.2 *GP2 Albany Highway as a destination, not a thoroughfare*

During this project's community consultation phase, there emerged a desire to treat Albany Highway as more of a "destination", and less as a "thoroughfare". The Albany Highway Tomorrow report highlights how this is crucial to creating an attractive and competitive precinct. It is well understood that Albany Highway will continue to facilitate vehicle movements, however it needs to prioritise enhancing its friendliness for alternative modes of transport including walking, cycling and micromobility. A key strength of Albany Highway is the existence of parallel traffic routes including Shepperton Road, Orrong Road and (to a lesser extent) Berwick Street. While the Precinct Structure Plan recommends that full longitudinal connectivity is maintained, the intention is to reduce the amount of through traffic along Albany Highway by:

- Maintaining the default speed limit of 40km/h and considering 20 km/h shared zones in strategic locations (refer to Section 4.3.3)
- Introducing shared space environments in the Victoria Park, East Victoria Park and St James town centres (refer to Section 4.4.2.2)
- Implementing localised traffic calming interventions such as pedestrian priority treatments and bus build-outs (refer to Section 4.4.4)

This principle relates to ideas 6, 7, 10, 11 and 18 in the Albany Tomorrow Report.

4.3.3 *GP3 Lowering speeds to create people-friendly environments*

Speed influences both likelihood and severity of traffic crashes. Vulnerable road users, such as pedestrians, cyclists and motorcycle riders, have little protection, so their chances of survival rapidly decrease when impact speeds exceed 30km/h. As shown in Figure 28, a pedestrian or cyclist is twice as likely to be killed by a car travelling at 50km/h than one travelling at 40km/h, and five times as great as one travelling at 30km/h.

In addition to setting speed limits which reflect the tolerances of the human body, it is also important that roads/streets are designed to be self-explaining to avoid an over-reliance on police enforcement. A key consideration outlined in this Precinct Structure Plan involves maintaining Albany Highway's default 40km/h speed and considering 20km/h shared zones in the three urban cores. This is intended to create safer streets for all road users as well as enhance community

connectivity and vibrancy. A high priority of the Albany Highway Tomorrow Report also includes prioritising vulnerable road users over cars which also suggests lowering speed limits through signage and traffic calming interventions.

This principle relates to ideas 10, 11 and 18 from the Albany Highway Tomorrow Report.

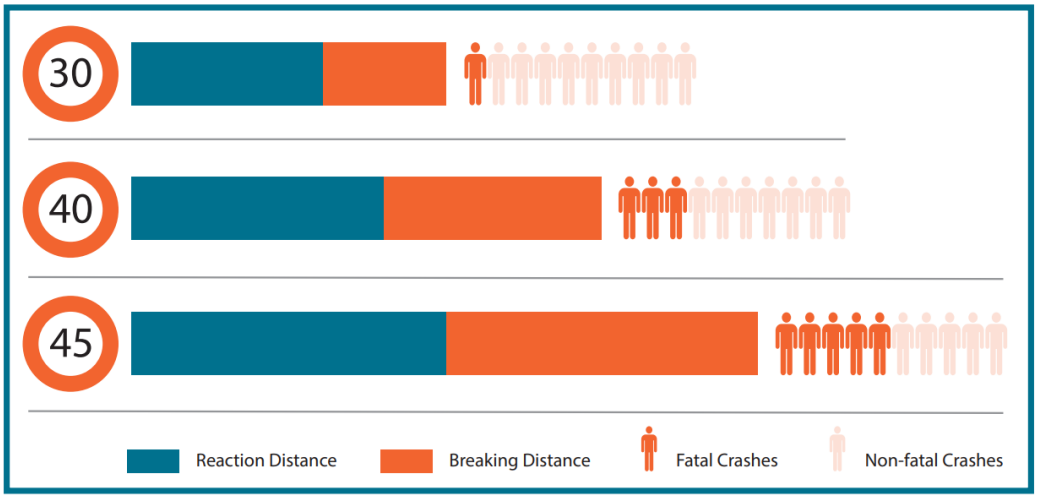


Figure 28: Likelihood of death based on impact speeds (Source: Auckland Transport)

4.3.4 *GP4 Taking a strategic approach to parking management*

Car parking consumes large amounts of valuable land (approximately 15sqm per bay). In addition to contributing to the urban heat island effect, an oversupply of parking can further entrench car dependency and its associated problems (outlined in Section 4.3.1 above). To address these issues, the Albany Highway Tomorrow Report proposes taking a more strategic approach to parking management. The Town of Victoria Park's Parking Management Plan seeks to provide adequate parking in appropriate places, however, the plan also acknowledges the role that increased rates of active and public transport can play in ensuring that parking bays remain available for those who need them most.

Potential planning mechanisms that can be used to manage parking and encourage modal shift include the implementation of maximum parking ratios in new developments and the use of dynamic pricing structures (particularly for high value on-street bays).

This principle responds to Idea 12 from the Albany Highway Tomorrow Report.

4.4 Proposed upgrades

4.4.1 Movement and Place Classification and Speed Limits

Fundamental changes to the layout and operation of the road network are not proposed as part of the Precinct Structure Plan, however reviewing the existing movement network through a Movement and Place lens reveals opportunities to support a higher Place function. The Town's Integrated Transport Strategy utilises a Movement and Place Framework with four classifications:

Movement Corridors	Provide safe, reliable and efficient movement of people and goods between regions and strategic centres and mitigate the impact on adjacent communities.
Vibrant Streets	Significant complex places that attract both large numbers of people and move large numbers of people by various modes from all over the region. Vibrant Streets aim to ensure a high quality public realm with a strong focus on supporting businesses, traders and neighbourhood life.
Local Streets	Provide quiet, safe and desirable residential access for all ages and abilities. Local Streets aim to foster community spirit through facilitating local access.
Streets for People	Significant places which attract large volumes of people and facilitate pedestrian access and activity.

Figure 29: Town of Victoria Park's Movement and Movement and Place Framework

Albany Highway is currently classified as a 'Vibrant Street' under this framework, and the ITS identifies the aspiration for the Victoria Park and East Victoria Park centres to transition to 'Streets for People'. The ITS outlines the priority to advocate for the reduction of speed limits throughout and the Town to 40km/h as standard (replacing the default 50km/h limit); and 30km/h in activity centres. The Precinct Structure Plan proposes a speed limit of 40km/h for Albany Highway, with a further reduction to 20km/h within shared space zones on the Highway (Streets for People).

The proposed Road Hierarchy (

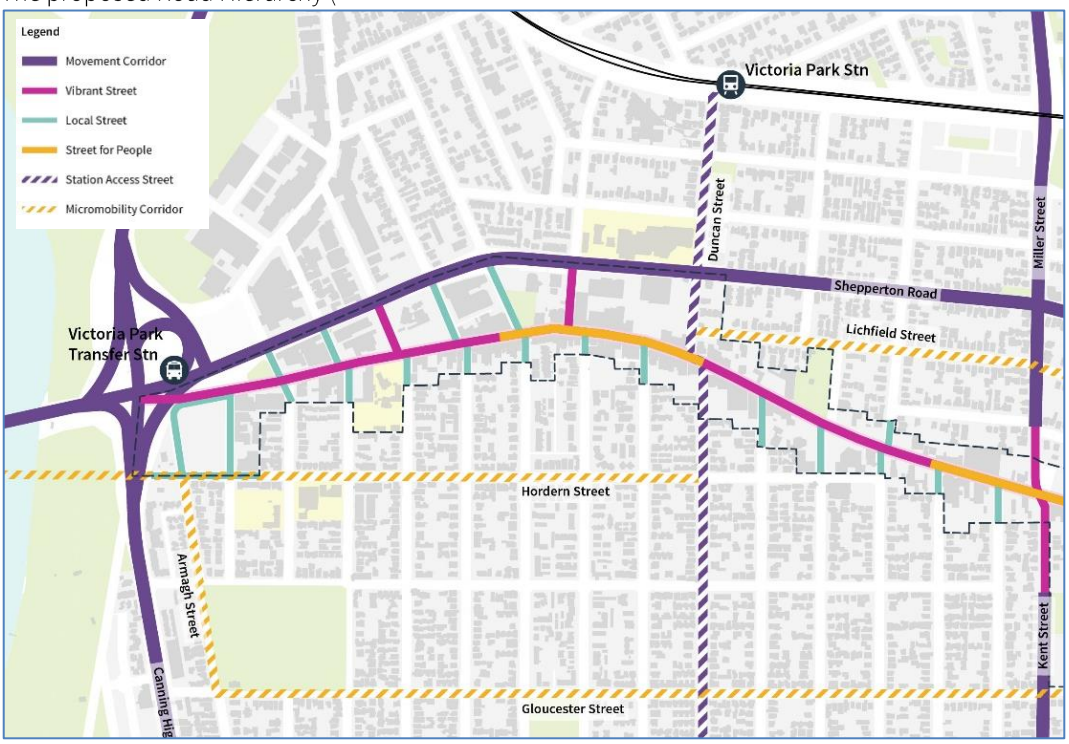


Figure 30 and Figure 31) aligns the Streets for People with the 'Shared Space' proposed in the draft Public Realm Strategy. Two key additions proposed in the Precinct Structure Plan which extend on the M&P Framework in the ITS, are the identification of 'Station Access Streets' and 'Micromobility Corridors'. Station Access Streets will play an important role in balancing multi-modal access from the upgraded Victoria Park, Carlisle and Oats Street stations with Albany Highway, as well as being key spines of development activity off the Highway in the distributed growth scenario. Micro-mobility corridors will help to stitch together the bike network of the Town through infrastructure upgrades such as protected bike lanes or Safe Active Streets in order to cater for people of all ages and abilities. It also makes travelling to Albany Highway by active modes more attractive and safe, as well as enhancing regional commuting.

These upgrades respond to GP1, GP2 and GP3.

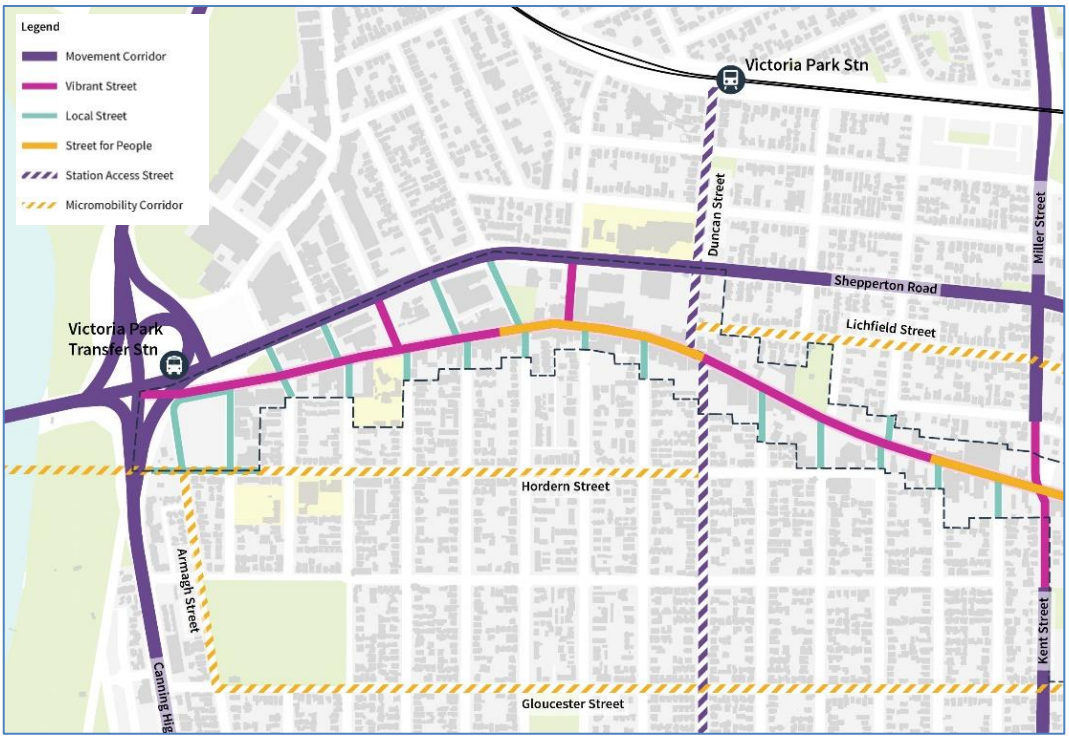


Figure 30: Proposed Movement and Place Classification (Causeway to Kent Street)

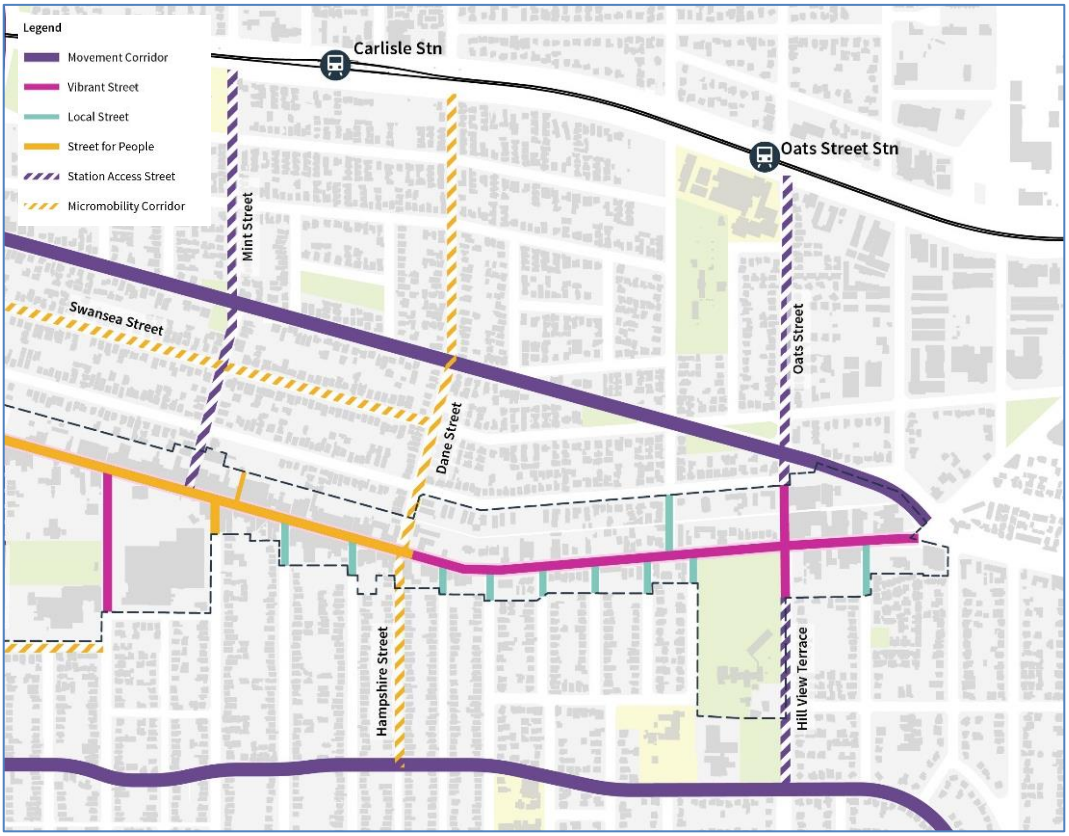


Figure 31: Proposed Movement and Place Classification (Kent Street to Welshpool Road)

4.4.2 Proposed Cross-Sections

4.4.2.1 Albany Highway (typical)

Outside of the core urban areas, the proposed cross section for Albany Highway involves relatively minor changes that should be undertaken in a staged approach. Shown in Figure 32, the proposed cross section involves some modifications to the existing kerb lines, median and footpaths. It also includes adding and preserving vegetation to assist in reaching the Town's target canopy cover as outlined in Town of Victoria Park's Urban Forest Strategy. Proposed changes shown in the typical cross-section include:

- Introducing parklets and footpath widening at key locations (see Public Realm Strategy)
- Implementing streetscape typologies (explored further in Section 4.4.5 – see also Public Realm Strategy)
- Implementing kerb extensions and bus build-outs (see Public Realm Strategy)

Benefits of this treatment include:

- Relatively low cost
- Enables retention of existing trees
- Enables retention of some on-street parking

- Provides additional footpath space in certain locations for tree planting pedestrians and alfresco

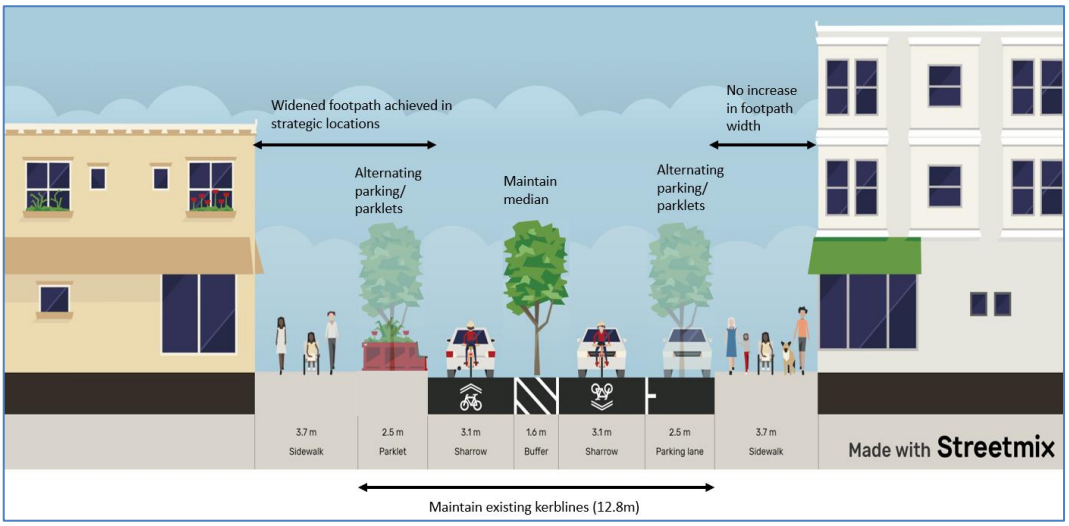


Figure 32: Proposed cross-section enhancement for Albany Highway (typical treatment outside urban cores)

It is recommended the roll out of streetscape interventions be undertaken in a staged approach in line with demand and business/community support. Outside of the core urban nodes, it is recommended that Albany Highway's 40km/h speed limit is maintained.

These upgrades respond to GP2 and GP3.

4.4.2.2 *Albany Highway (core retail nodes)*

In order to provide an enhanced pedestrian experience, shared space environments (Streets for People) are proposed for the Victoria Park, East Victoria Park and St James town centres. In order to improve safety and comfort for pedestrians, a speed limit of 20km/h is proposed.

Shown in Figure 33, the proposed cross section for these areas involves:

- Reducing the road width from ~12.8m to ~9.2m, comprising two-way travel lanes and intermittent on street parking
- Removing the central median
- Reallocating road space to create wider footpaths (up to 5.5m)
- Repaving both the road and footpaths using higher quality materials
- Raising the road surface to footpath level and introducing flush kerbing
- Planting additional street trees
- Water sensitive urban design

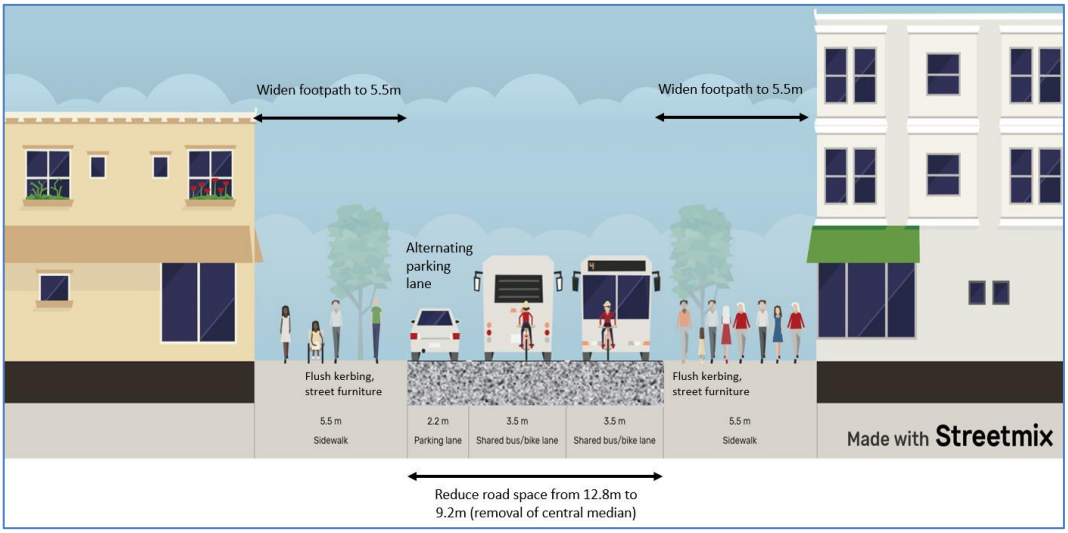


Figure 33: Proposed shared space zone cross-section for Albany Highway

As indicated in Aspect's Public Realm Report, the roll out of this typology is recommended to be staged in line with business/community support, and development of major sites. The extent of these shared space environments in each town centre is subject to refinement but should be limited to locations with highly active land uses and large amount of pedestrian activity. In Victoria Park, this typology is recommended to extend from Mackie Street to McMillan Street (~500m). In East Victoria Park, the share space environment is recommended to extend from State Street to Hampshire Street (~1150m). The shared space environment in St James is suggested to be located between Oats Street and Welshpool Road.

In response to the Town's Reconciliation Action Plan, the shared space zones have the potential to create attractive, sustainable and inclusive environments which acknowledge the culture and storytelling of the area's traditional owners.

These upgrades respond to GP1, GP2 and GP3.

4.4.3 Station Access Streets

4.4.3.1 Duncan Street

'Copenhagen' style bicycle lanes are proposed for Duncan Street in order to connect the Victoria Park town centre to the Victoria Park train station and Perth-Armadale principal shared path. As shown in Figure 34, the proposed bicycle lanes will be raised above road level, providing additional safety/comfort for younger and less experienced bike riders.

In addition to the provision of high quality bike lanes, other streetscape enhancements proposed for Duncan Street include:

- Narrowing traffic lane widths from 5m to 3.3m to pacify motorist behaviour and shorten crossing distances for pedestrians
- Widening footpaths from 1.6m to 2.0m
- Planting additional/more appropriate street trees
- Investigating the removal of overhead power lines (east of Shepperton Road)

- Retaining access to existing driveways

The implementation of these streetscape enhancements is likely to necessitate the removal of on-street parking bays between Albany Highway and Shepperton Road (approximately 11 bays); and between Sunbury and Teague Streets (approximately 15 bays).

These upgrades respond to GP1 and GP2.

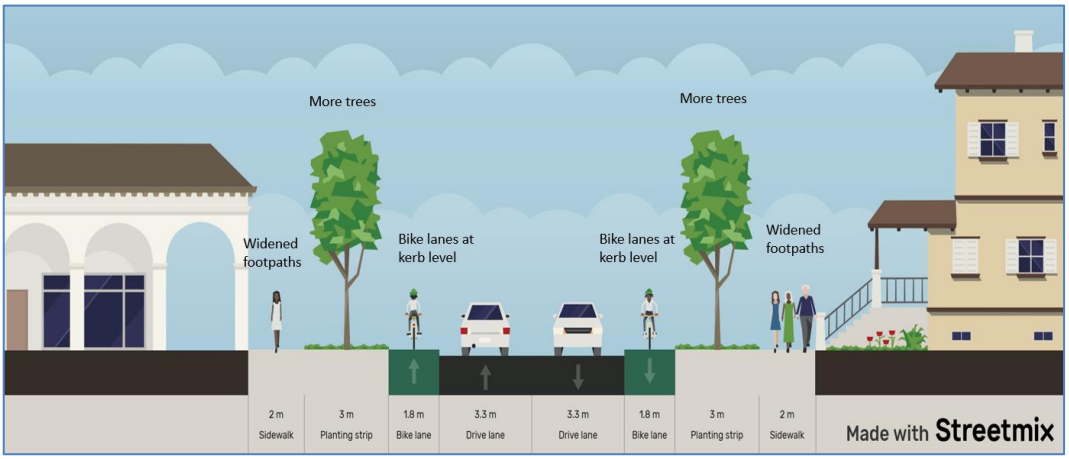


Figure 34: Proposed streetscape enhancement for Duncan Street

4.4.3.2 *Mint/Archer Street*

In 2019, the Town of Victoria Park commenced planning for the upgrade and improvement of Mint and Archer Streets (Figure 35). The Mint/Archer corridor connects Orrong Road to Albany Highway, and links Carlisle Train Station to the Carlisle and East Victoria Park town centres. The Town's Public Open Space Strategy identifies this corridor as a future 'Active Park Street'.

The proposed design includes narrowing of the existing road pavement width, constructing separated bike lanes, enhanced street tree planting, widened footpaths, and modified side road entry treatments.

Construction has commenced on Stage 1 of the Mint/ Archer upgrade.

These upgrades respond to GP1 and GP2.

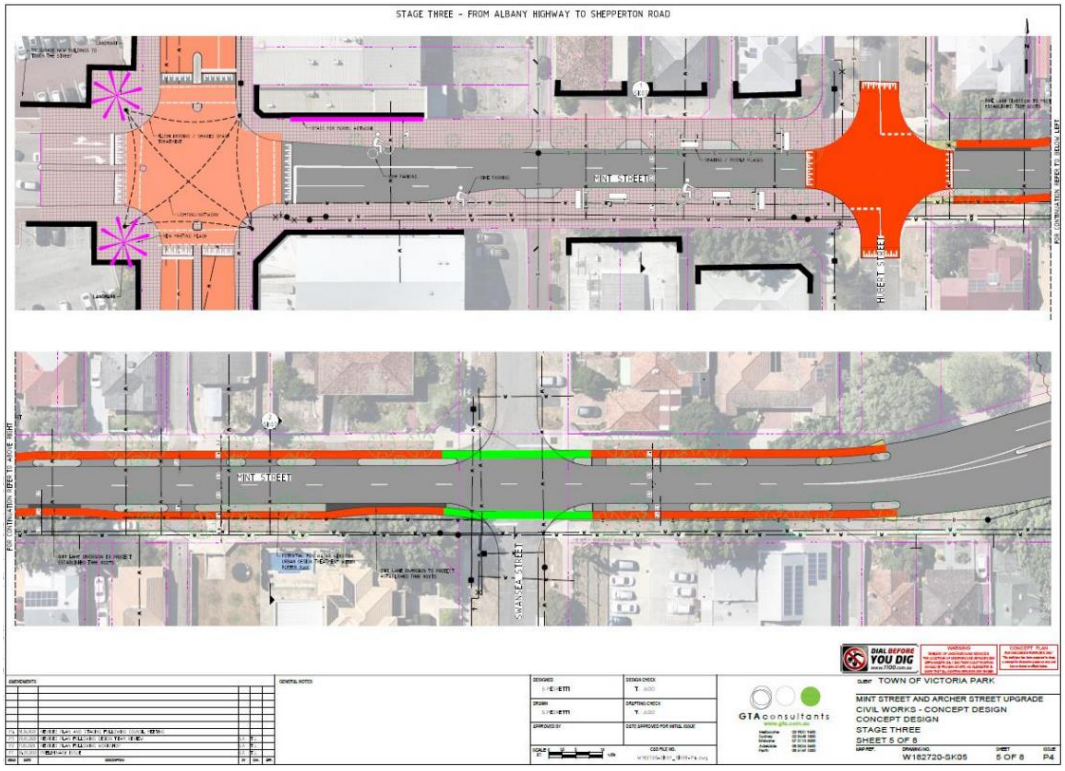


Figure 35: Mint/Archer Street upgrade

4.4.3.3 *Oats Street*

Like Duncan Street, "Copenhagen" bicycle lanes are proposed for Oats Street in order to connect the St. James town centre to the Oats Street train station and Perth-Armadale principal shared path. As shown in Figure 36, the proposed bicycle lanes will be raised above road level, providing a much greater level of safety and comfort for bike riders compared to the existing 1.1m wide sealed shoulders.

In addition to the enhanced bike lanes, other streetscape enhancements proposed for Oats Street include:

- Removing the central median
- Increasing traffic lanes from 3.0m to 3.5m to support bus services

- Widening footpaths from 1.6m to 2.0m
- Planting additional/more appropriate street trees
- Retaining access to existing driveways

These upgrades respond to GP1 and GP2.

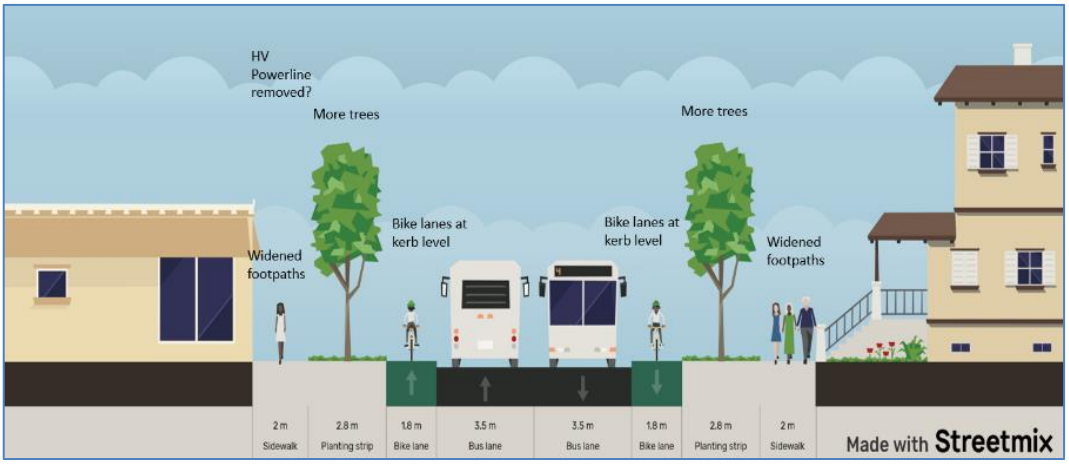


Figure 36: Proposed streetscape enhancement for Oats Street

4.4.4 Key Intersection Upgrades

4.4.4.1 Duncan Street / McMillan Street

The Town of Victoria Park Integrated Transport Strategy identifies the need to investigate the potential upgrade of the Duncan Street/McMillan Street signalised intersection. Potential treatments that should be considered may include:

- Tightening intersection radii to reduce the speeds of turning vehicles
- Upgrading footpaths to improve the pedestrian experience and achieve DDA compliance
- Upgrading refuge islands and/or cut throughs to improve safety and amenity

The traffic signals operate as a standard 4-way, despite the offset arrangement of Duncan and McMillan Streets. This creates safety and legibility issues for pedestrians and cyclists moving through the intersection, often requires pedestrians to make two separate crossing movements through the intersection, and creates confusion for drivers while supporting high turning speeds.

This location is identified for a number streetscape upgrades in the draft Public Realm Strategy which support the actions proposed in the ITS:

- McMillan Street Corner Conversion
- Albany Highway Shared Space (Mackie Street to McMillan Street)
- Bus Bay Build-out (west of Duncan Street)

In addition, it is recommended that the removal of the McMillan Street signals be investigated which, combined with the corner conversion could result in one-way access either to or from the Highway on McMillan Street, with a traditional traffic signal arrangement retained at Duncan Street. Following simplification of this intersection, continuation of the Duncan Street bike lanes

proposed in Section 4.4.3.1 could be investigated to provide onward access towards the Causeway Bridge or west towards Kensington/South Perth.

4.4.4.2 *Kent Street / Miller Street*

The Town of Victoria Park Integrated Transport Strategy identifies the need to investigate the delivery of improved cycling infrastructure along the Kent/Miller Street corridor under the Bike Network Sub-Program. The Albany Highway intersection is currently the site of the 'peanut' roundabout, adding complexity to this cycle route for novice riders. The recommended actions in the ITS are:

- Upgrading shared path facilities along Kent Street / Miller Street and Roberts Road (linking Curtin University to Orrong Road)
- Prepare a design which delivers a separated and safe cycling corridor along Kent Street between Curtin University and Albany Highway

Additionally, Kent Street is identified as an Environmental Park Street in the Town's Public Open Space Strategy, which proposes to use streets to provide POS function in areas of undersupply or key environmental or social value.

The roundabout functions well for the movement of traffic, but poorly for pedestrians and cyclists. The scale of the roundabout requires pedestrians to travel large distances to cross the intersection; and the absence of dedicated cycle infrastructure or priority means this is not a safe or comfortable intersection to negotiate for novice riders.

This location is identified for a number streetscape upgrades in the draft Public Realm Strategy which support the actions proposed in the ITS:

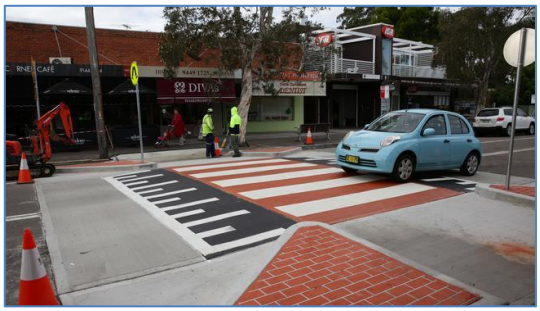
- Albany Highway Shared Space (State Street to Hampshire Street)
- Traffic Calming (all approaches)

A key consideration for potential upgrades to this intersection is the uncertain planning around a potential mid-tier transit system, which is a priority of the ITS as well as a long-term priority for the Town. Under the Knowledge Arc proposal, this intersection facilitated turning movements for light rail vehicles travelling between Curtin University and the Perth CBD. Moving forward, it is important that sufficient space is preserved at this intersection to meet the spatial requirements of a future mid-tier transit system.

4.4.5 *Streetscape Typologies*

In addition to the typical cross sections discussed in Section 4.4, a number of streetscape typologies are proposed for Albany Highway as shown in Table 3 below. These have been addressed in Aspect's Public Realm report as approaches to improve the pedestrian experience along Albany Highway, and proposed for a number of locations along the corridor. These design responses are reflected in the Town's Integrated Transport Strategy, which has the aim of creating vibrant streets which prioritise people.

Table 3: Streetscape Typologies.....can we use examples consistent with Aspect report?

Typology	Description/overview	Example
Traffic Calming – Raised plateau	Raised plateaus are recommended at key intersections to reduce vehicle speeds, enhance pedestrian safety and amenity.	 Figure 37: Raised plateau with shark's teeth markings
Traffic Calming- Raised pedestrian crossing (wombat crossing)	A wombat crossing is a raised pedestrian (zebra) crossing. As with zebra crossings, wombat crossings also afford pedestrians priority over motorists. The use of a raised hump profile and associated signs/pavement markings significantly increases the likelihood that a motorist will acknowledge (and subsequently give way) to pedestrians crossing at these locations. A study undertaken by the *Australasian College of Road Safety* in 2017 found that wombat crossings can reduce road death and serious injuries by up to 63%.	 Figure 38: Wombat crossing
Corner Conversion	The use of generous corner radii can negatively impact on pedestrian safety and comfort. In addition to increasing crossing distances, they also encourage motorists to turn at higher speeds which reduces the likelihood they will give way to pedestrians. Reducing the size of a corner radius also provides an opportunity to improve public realm and create active corner frontages.	 Figure 39: "Bulb-out" kerb extensions

Typology	Description/overview	Example
Shared Space (shared zone)	A shared zone is an all-inclusive design approach which removes the physical boundary between motor vehicles, pedestrians and cyclists. This is achieved by removing typical road/street features including kerbs, road markings and traffic signals. This form of place-making enables streets to become more of a destination and less of a thoroughfare.	 Figure 40: Example of a shared zone (Hay Street, Perth)
Kerb Extension	Kerb extensions involve widening the footpath to align with the parking lane. This reduces the crossing distance for pedestrians. It improves the safety of pedestrians as they become more visible to oncoming traffic, rather than being blocked by parked cars.	 Figure 41: Kerb extension
Bus Build-out	The removal of bus embayments provides an opportunity to increase pedestrian space as well as slow down vehicle traffic. Transperth have indicated they will support the removal of certain bus embayments along Albany Highway. Transperth require (in most cases) embayments to be maintained at timing points/timed stops and potentially at other locations such as schools, train stations, major attractions or for operational requirements. See Figure 43 and Figure 44 for current Transperth timed stop locations.	 Figure **42**: Bus build-out

Figure 43: Transperth service routes and timed stops (Causeway to Kent Road)

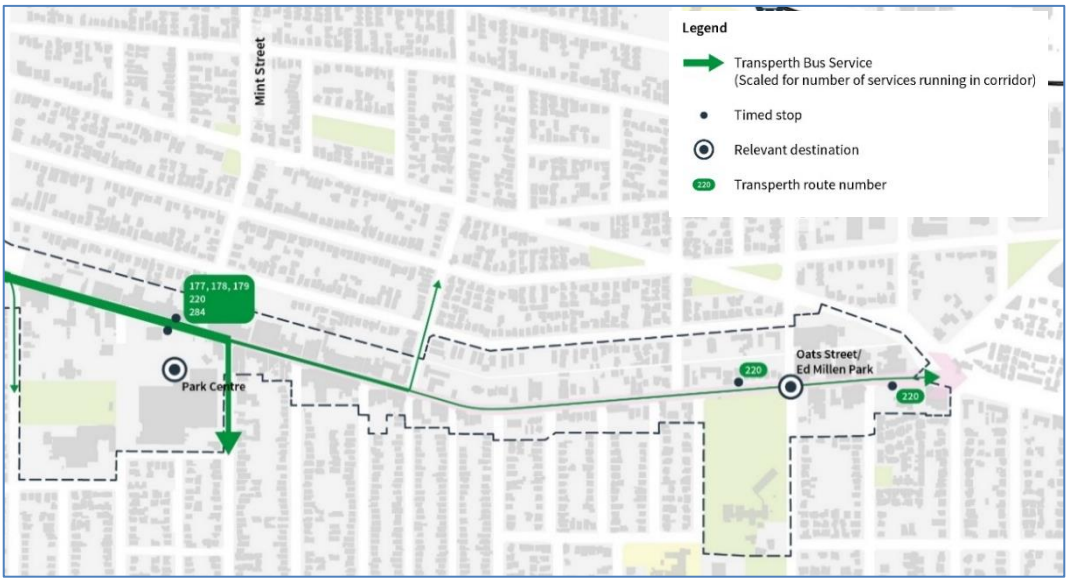


Figure 44: Transperth service routes and timed stops (Kent Street to Welshpool Road)

4.4.6 *Catering for micromobility*

As described in Section 2.6.2, Albany Highway's relatively constrained road reserve makes it difficult to provide dedicated cycling facilities while maintaining two-way traffic and on-street parking, as well as increasing tree canopy and implementing desired public realm space reallocation. Accordingly, it is recommended that a network of parallel and perpendicular cycling routes are investigated to support active travel for people of all ages and abilities. Key considerations include providing access to/from the Perth-Armadale Principal Shared Path, existing and emerging Albany Highway destinations, the Causeway Pedestrian & Cyclist Bridge, and local schools.

A series of potential micro-mobility corridors have been identified below together with high level opportunities and constraints. Further planning should consider their delivery with respect to development staging, the objectives of the Long Term Cycle Network, the City of South Perth and Town of Victoria Park Joint Bike Plan, and Town of Victoria Park Integrated Transport Strategy.

4.4.6.1 *Potential micromobility corridors parallel to Albany Highway*

Potential corridors running parallel to Albany Highway are shown in Figure 45 and include:

- Hordern, Washington and Gloucester Streets (west of Albany Highway)
- Lichfield/Swansea and Merton/Hubert Streets (east of Albany Highway)

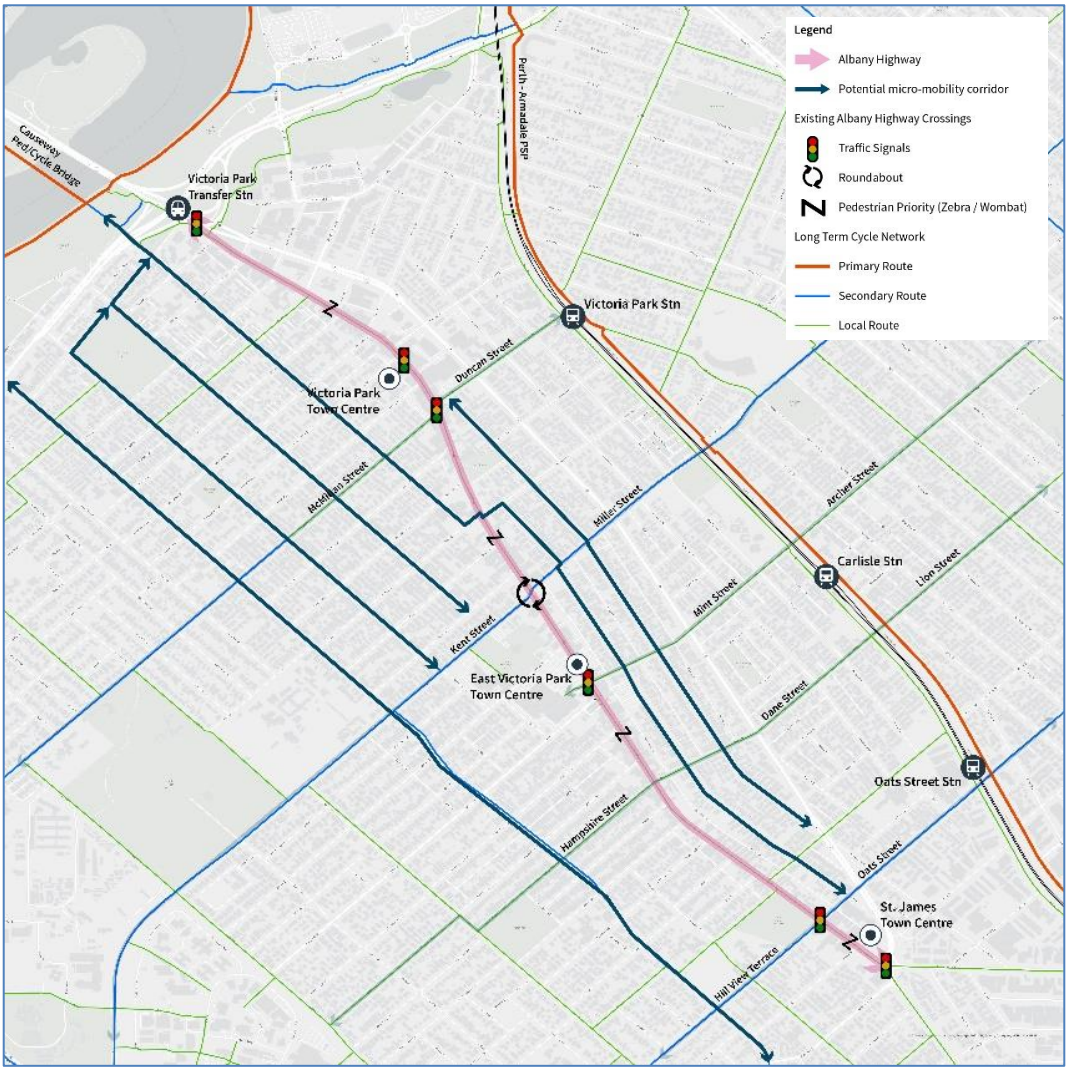


Figure 45: Potential alternative cycling routes parallel to Albany Highway

In order to make these streets appealing/suitable to people of all ages and abilities, a range of local area traffic management interventions should be considered. These may include changes in intersection priority, one-way slow points with bicycle bypass facilities, or modal filtering. Table 4 below assesses the advantages and disadvantages of each potential route.

Table 4: Potential micromobility corridors parallel to Albany Highway

Route	Proposed Treatment	LTCN designation	Identified in ToVP ITS	Advantages	Disadvantages
Hordern Street	Safe Active Street	Local route	No	• Provides direct connection to Canning Highway underpass & Causeway Ped/Cycle Bridge • Provides connection to McMillan/Duncan Local Route • Proximity to Victoria Park Primary School • Already a popular cycling route (evidenced by Strava heatmaps)	• Very steep grades near King George Street (but could potentially be resolved with a series of switchbacks using existing road closure) •
Washington Street	Safe Active Street	None	No	• Provides connection to McMillan/Duncan Local Route • Already a popular cycle route (evidenced by Strava heatmaps) • Located relatively equidistant between Albany Highway and Berwick Street.	• Provides a slightly indirect connection to Canning Highway underpass & Causeway Ped/Cycle Bridge (via Armagh Street) • Relatively steep grades (although not as steep as Hordern Street) • Only extends as far south as Tuam Street
Gloucester Street	Safe Active Street	Secondary route	Yes but ITS proposes changing route to Berwick Street	• Provides connection to McMillan/Duncan Local Route • Provides connection to Kent Street Secondary Route • Provides connection to MacMillan Park & Park Centre • Already a popular cycling route (evidenced by Strava heatmaps)	• Provide an indirect connection to Canning Highway underpass & Causeway Ped/Cycle Bridge (via Armagh Street)

4.4.6.2 *Potential micro mobility corridors perpendicular to Albany Highway*

A number of connections are needed perpendicular to Albany Highway in order to link the precinct to the Perth- Armadale PSP. These corridors include Duncan/McMillan, Kent/Miller, Mint/Archer. Oats/Hill View. These routes are all identified in the LTCN and have potential to connect with METRONET stations on the Armadale line.

In addition to these, Hampshire, Dane and Lion streets have emerged as a potential micromobility corridor due to the elevation of the Armadale railway line and Carlisle and Oats Street stations as part of METRONET's Victoria Park-Canning Level Crossing Removal Project (VPCLXR). As part of the Carlisle and Oats Street Station projects, a path providing a north-south crossing of the proposed linear park beneath the rail line will help provide local connection between Dane Street and Lion Street. This presents an opportunity to envisage a Safe Active Street along this corridor. Starting at Orrong Road, a SAS corridor could be established connection a number of elbows starting at Galaxy Way through to Lion, Dane and Hampshire Street and potentially through Riverview Road to connect to Hayman Road. This can be achieved through modal filtering, restricting through movement to pedestrians, cyclists and other micromobility users. This intervention would prioritise active forms of transit and potentially reduce motor vehicle volumes and speeds.

A summary of these potential micromobility corridors has been provided in Table 5 and Figure 46.

Figure 46: Alternative cycling routes perpendicular to Albany Highway

Table 5: Potential micromobility corridors perpendicular to Albany Highway

Route	Proposed Treatment	LTCN designation	Identified in ToVP ITS	Advantages	Disadvantages
Duncan / McMillan	Protected on-road bike lanes	Local Route	No	• Provides direct connection to Victoria Park station • Provides access to Perth-Armadale PSP • Provides access to Ursula Frayne • Provides access to Victoria Park Central shopping centre • Signalised crossing at Albany Highway • Provides onward connection to Curtin University/ Technology Park	• Current McMillan/Duncan intersection arrangement is not suitable for young/inexperienced cyclists • Overhead power lines on Duncan Street
Kent / Miller	Protected on-road bike lanes and/or off-road path	Secondary Route	No	• Presence of existing infrastructure (in places) which could be upgraded • Provides connection to Perth-Armadale PSP • Provides direct connection to MacMillan Park • Provides direct connection to Gloucester Street Secondary Route • Provides direct connection to Kent Street SHS • Provides onward connection to	• Existing bike lanes are unprotected • Existing roundabout is not suitable for young/inexperienced cyclists

Route	Proposed Treatment	LTCN designation	Identified in ToVP ITS	Advantages	Disadvantages
				Curtin University/ Technology Park	
Mint / Archer	Protected on-road bike lanes	Local Route	Yes, currently under construction	• Provides direct connection to Perth-Armadale PSP • Provides direct connection to future Carlisle Station • Provides direct connection to East Victoria Park town centre • Potential onward connection to Gloucester Street Secondary Route • Signalised intersection with Albany Highway	• Does not extend west of Albany Highway (unlike the other routes)
Oats / Hillview	Protected on-road bike lanes	Secondary Route	Yes, on-road cycle lanes proposed.	• Provides direct connection to Perth-Armadale PSP • Provides direct connection to Oats Street Station • Provides access to emerging St. James centre • Provides access to Edward Millen Park • Provides onward connection to Curtin University/ Technology Park	• Existing infrastructure is narrow and unprotected • Existing infrastructure is discontinuous • HV overhead power lines

Route	Proposed Treatment	LTCN designation	Identified in ToVP ITS	Advantages	Disadvantages
				• Signalised intersection with Albany Highway	
Hampshire / Dane	Safe Active Street	Local Route	No	• Provides direct connection to Perth-Armadale PSP. • Infrastructure investment as part of VPCLXR; • Potential onward connection to Belmont • Provides onward connection to Curtin University/ Technology Park	• No existing priority crossing at Albany Highway or Shepperton Road • Dane Street has steep grades in places.

4.4.6.3 *Micromobility parking and end-of-trip facilities*

As micromobility continues to evolve and be adopted by more people, it will become increasingly important for the Town to provide additional parking and end-of-trip facilities along Albany Highway. Austroads recommends that micromobility parking be safely accessible from nearby active transport corridors, and should minimise interactions with pedestrians, particularly in high activity areas. Moving forward, it is important the town provides micromobility parking at regular intervals along the Highway. In terms of design, this parking should accommodate a range of bicycle types as well as other micromobility devices, such as eScooters.

End-of-trip facilities refer to amenities such as secure bike racks/cages, showers, changerooms, lockers and other supporting ancillary features to support riders. It is important to acknowledge that on established high streets such as Albany Highway, there is limited private space for businesses to provide their own end-of trip facilities. To encourage workers and visitors of the precinct to use active transport, the Town should consider providing public end-of-trip facilities. Potential locations may include in/near council buildings such as the Town's offices or the McMillan precinct. The requirement for public end-of-trip-facilities should be set out in the Town's Planning Scheme and Local Planning Policy 23. In addition, it is recommended that larger developments be required to provide their own end-of-trip facilities to support residents and workers. This should also be addressed in the Town's next scheme amendment and Local Planning Policy 20.

4.5 Management of parking

Parking data provided by the Town indicates that parking occupancy is routinely above 65%, with summer months approaching 85%. An occupancy rate of 85% is the industry standard for the efficient use of parking bays. When average parking occupancy exceeds 85%, it can result in higher rates of traffic circulation and can lead to a perception that there is a general lack of parking in the precinct. On the other hand, average occupancy rates below 65% indicate an oversupply of parking which suggests that valuable land could be converted for a more efficient use. The ideal car parking occupancy rate is between 65% and 85%.

The Town of Victoria Park's Parking Management Plan has identified a hierarchy of actions to address demand for both on and off-street parking. Moving forward, it is important these actions are pursued to better manage the parking supply and demand across the Albany Highway precinct.

Table 6: ToVP suggested actions to managing on and off-street parking

On-Street parking		Off-Street parking	
If below 65% occupancy	If above 85% occupancy	If below 65% occupancy	If above 85% occupancy
1. Modify time restrictions 2. Reduce parking fees at certain times through the use of dynamic pricing	1. Modify maximum time restrictions 2. Introduce paid parking 3. Increase paid parking fees through use of dynamic parking model 4. Provide additional paid parking	1. Decrease paid parking fees	1. Introduce time restrictions 2. Modify time restrictions 3. Introduce paid parking 4. Increase paid parking fees

Managing parking supply and demand for the Albany Highway precinct also includes ensuring there is parking available for high priority users such as the mobility impaired. This can be achieved through providing ACROD (Australian Council for Rehabilitation of Disabled) bays. The National Construction Code specifies that the number of ACROD parking bays typically ranges between 1:50 and 1:100 (depending on the type of building or land use it will service). For exact requirements, refer to the *National Construction Code Part D3: Access for people with a disability*.

It is also essential that short-term parking is prioritised in the Albany Highway Precinct. As identified in the Town of Victoria Park's Parking Management Plan, the Town attracts many short-stay visitors who contribute significantly to the local economy. Adequate parking located within close proximity to the Secondary Centre is of a high demand. It should therefore be sufficiently provided to ensure a high number of people can carry out a range of day-to-day activities which

require prompt stops. The PMP identifies short-term parking to be 2-hour parking, however, it is recommended that timed restrictions for certain bays are reduced to increase turnover in particularly busy areas.

4.5.1 *On-street parking (Albany Highway)*

The potential removal of on-street parking bays from Albany Highway to facilitate other uses should be undertaken using a staged/considered approach. Recommendations for managing Albany Highway's on-street parking bays include:

- Tightening fee and time restrictions (particularly on high-value bays in core retail nodes to encourage higher turnover)
- Expanding the use of dynamic pricing during busy periods
- Investing in smart parking technology (such as in-round sensors) to assist with enforcement and monitoring occupancy levels/trends.
- Monitoring business/community sentiment toward the removal of on-street bays for other users.

Removing on-street parking bays can create pick up/drop off zones at key locations along Albany Highway. This will support the use of taxis and on-demand ride sharing services. It is recommended that a least one pick up/drop off zone is provided in each the three core urban areas of Victoria Park, East Victoria Park and St James. The provision of pick-up/drop off zones could be achieved by converting a small number of short-term on-street parking bays.

In the event that demand for on-street parking reduces due to sustained investment/uptake in public/active transport, there may be opportunities to repurpose these bays for higher value purposes. Examples may include converting on-street parking to alfresco dining, parklets or additional street trees.

4.5.2 *On-street parking (other streets)*

The removal of parking bays on Albany Highway may inadvertently increase demand for parking on certain side streets, particularly those located near the Victoria Park and East Victoria Park town centers. Recommendations for managing on-street parking along these side streets include:

- Expanding the use of residential parking permits
- Investing in smart parking technology (such as in ground sensors) to assist with enforcement and monitoring occupancy levels/trends.

4.5.3 *Provision of additional off-street parking*

As land use intensifies along Albany Highway, it is recommended the Town investigate the possible development of one or more multideck parking structures. Potential locations include the King George Street Car Park (in Victoria Park) and the IGA Car Park (in East Victoria Park). The use of cash-in-lieu provisions and/or decoupling of minimum parking requirements from future residential or commercial land uses should be investigated as possible mechanisms for funding the development of such facilities. Consideration should also be given to "sleeving" multideck structures with retail businesses, or designing them in such a way that can facilitate future adaptive re-use.

Figure 47: King George Street car park

Figure 48: IGA car park

Key design considerations for the adaptive reuse of multideck parking structures include:

- Flat floor plates (i.e. ramps to be provided as external structure)
- Higher floor-ceiling heights (providing enough space for utilities and services).
- Appropriately located vertical transport systems (stairs and elevators).

Figure 49 and Figure 50 show an example of a former multistorey car park in Melbourne being transformed into eight upmarket apartments.

Figure 49: Car park adaptive reuse in Melbourne

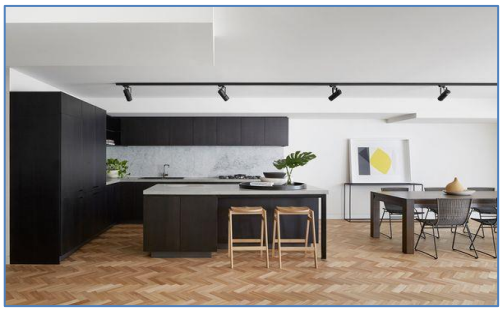


Figure 50: Apartments transformed from an old car park

4.5.4 *EV parking*

It is recommended that public charging facilities for electric vehicles (EVs) be considered at key locations along Albany Highway. Acknowledging that it takes a standard electric car (60kWh battery) around eight hours to recharge from empty-to-full (using a 7kW charging point), it is recommended that EV charging parking bays be located in long-term off-street parking areas. In addition to maintaining the aesthetics of the Albany Highway, locating the facilities in off-street parking areas minimises the risk of creating additional trip hazards for pedestrians. Potential locations for EV charging stations include King George Street, IGA and Centro Shopping Centre car parks as shown in Figure 51.

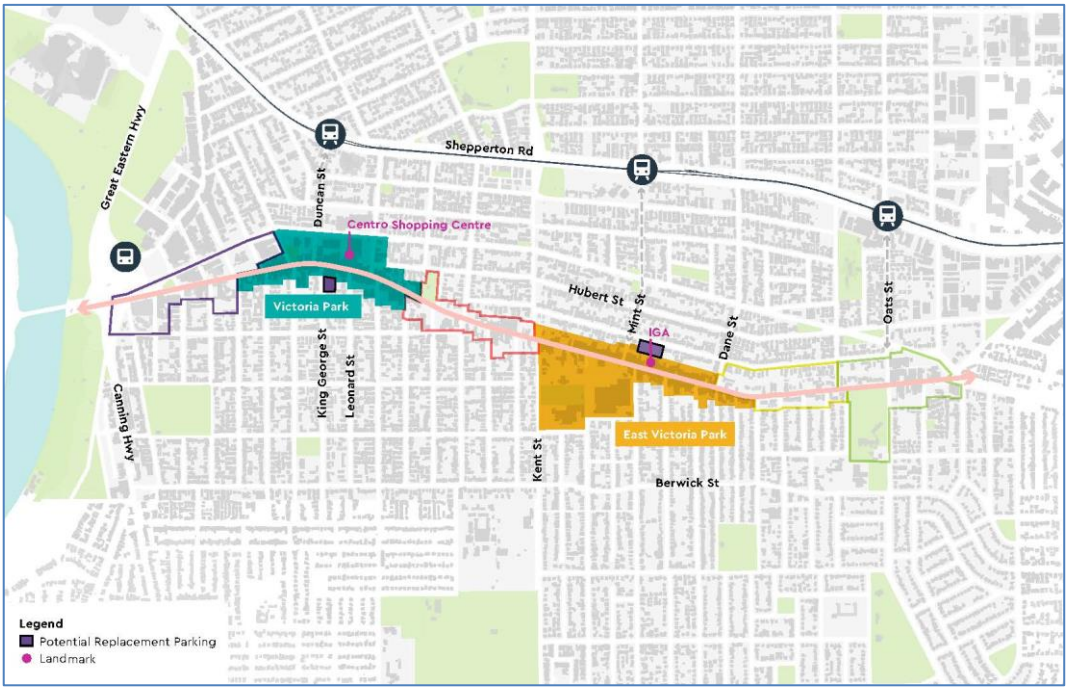


Figure 51: Potential off-street parking consolidation sites

4.6 Vehicle access and laneways

The WAPC Transport Impact Assessment Guidelines outline that careful consideration shall be given to properties which require access from busy roads. This requirement is reflected in Liveable Neighbourhoods which states that vehicles reversing out of driveways should be avoided on roads carrying more than 5,000 vehicles per day. Recommended strategies include:

- Individual direct lot access;
- Shared access (between two properties);
- Service lanes;
- No frontage access.

As discussed in Section 2.4, the provision of direct vehicle access from the Highway in the Causeway and Central precincts has negative impacts on the public realm and pedestrian experience. The East End and East Victoria Park, and to a lesser extent Victoria Park and St. James precincts already have an existing access solution consistent with the TIA Guidelines (rear access laneways).

The Town's ITS identifies a recommended initiative under the Old Spaces New Places Program to deliver progressive upgrades of laneways in key locations, including ROW 51, ROW 60, Iceworks Lane, Nurse Lane, and ROW 52. Aspect's Public Realm Strategy is consistent with this initiative in recommending the upgrade of laneways as public spaces in order to unlock desirable pedestrian and cycling routes parallel to Albany Highway and create new active spaces supported by pedestrian activity.

Despite these aspirations, the ongoing function of rear access laneways as a vehicle access solution must be maintained in order to support the desired public realm outcomes for Albany Highway.

The following vehicle access recommendations are proposed:

- New developments must provide vehicle access from a rear ROW, or secondary street (in that order), unless not available;
- Where vehicle access to Albany Highway cannot be avoided, cars must be able to exit in forward gear;
- Where vehicle access to Albany Highway cannot be avoided, parking must be sleeved behind/within built form;
- New developments of major sites should incorporate new rear access/internal movement networks in order to support site permeability and Albany Highway public realm quality;
- The Town should continue investigations of Laneway upgrades, in the context of this PSP and with a view to maintaining vehicle access from rear laneways;
- The Town should review minimum parking rates for the Albany Highway Secondary Centre.

4.7 Freight and heavy vehicle access

Heavy vehicles are generally inconsistent with Vibrant Streets and Streets for People, however it is acknowledged there will be an ongoing requirement for heavy vehicles to travel on Albany highway for a number of reasons (construction of new developments, service and waste vehicles, as well as the delivery of freight). Despite the existing 40km/h speed limit and areas of high activity, the Highway continues to exhibit relatively high numbers of heavy vehicles – generally in excess of 5% of all trips.

It is expected that the proposed public realm upgrades and traffic calming will make Albany Highway a less attractive route for heavy vehicles, however, as the population and services of the Secondary Centre grow, so too will the Highway's requirements for construction, freight and servicing. We anticipate Teddington Road, Kent Street/Miller Street, and Oats Street/Hill View Terrace will continue to play important roles in providing heavy vehicle access to the Highway. As proposed upgrades move into the detailed design phase, it will be important that swept path analysis for relevant vehicle types is considered for these intersections.

4.8 High Level Impact Assessment of Development Scenarios

Table 7 (below) is a high level overview of the anticipated impacts of the three development scenarios considered as part of the PSP's Built Form Strategy. As discussed in Section 4.2, the Concentrated Scenario is predicated on concentrating future growth within a limited number of major sites, and within the existing precinct boundary. The Distributed Scenario distributes this same growth over a wider area, expanding the precinct beyond its current boundary.

Through consultation, specialist analysis and review, a third scenario has been developed which incorporates varying elements of each, known as the Combined Scenario. While a consistent transport response is proposed, it is expected there will be nuanced differences in each scenario's implications for car use/parking, public transport, as well as walking, cycling and micromobility.

Table 7: High level comparison of Built Form Strategy development scenarios

	Concentrated Scenario	Distributed Scenario	Combined Scenario
Dwellings	Approximately 9,000		
Residents	Approximately 20,000		
Jobs	Approximately 20,000		
Implications for car use and parking	- This scenario may concentrate more traffic / parking demand on Albany Highway, particularly from the Causeway to Duncan Street (Causeway and Victoria Park precincts), around the Park Centre/MacMillan (East Vic Park precinct), and within the St. James precinct. - Additional traffic / parking demand may require new laneways or alternatives as part of vehicle access strategy. - Potential that side streets will begin to carry significant additional volumes (connecting Albany Highway/Shepperton Road with new development).	- This scenario may distribute slightly more traffic to local streets, particularly in Victoria Park and St James sub-precincts where land use is expected to intensify south of the highway. - Lower density development may support greater car use and limit mode shift. - Likely increase of vehicle infrastructure (e.g. crossovers). - Increased development south of Albany Highway may result in additional impacts on Berwick Street and Hill View Tce. - Greater potential for CBD-bound traffic to use Albany Highway rather than Shepperton Road, especially in Causeway and Victoria Park precincts).	- This scenario may concentrate more traffic / parking demand on Albany Highway, particularly from the Causeway to Duncan Street (Causeway and Victoria Park precincts), around the Park Centre/MacMillan (East Vic Park precinct), and within the St. James precinct. - Additional traffic / parking demand may require new laneways or alternatives as part of vehicle access strategy. - Potential that side streets will begin to carry significant additional volumes (connecting Albany Highway/Shepperton Road with new development).
Implications for public transport	- The higher intensity land use proposed near the Causeway may necessitate a different and/or higher quality design response for the Victoria Park Transfer Station.	- On average, residents and workers will be located slightly further from bus stops (compared to the concentrated scenario) – especially in expanded precinct areas (Victoria	- The higher intensity land use proposed near the Causeway may necessitate a different and/or higher quality design response for the Victoria Park Transfer Station.

	Concentrated Scenario	Distributed Scenario	Combined Scenario
Dwellings	Approximately 9,000		
Residents	Approximately 20,000		
Jobs	Approximately 20,000		
	- All proposed development is within 400m ped shed of Albany Highway and/or Shepperton Road bus stops.	Park and St. James precincts). - May justify additional bus stop on Hill View Terrace adjacent to Edward Millen Park.	- Residents in precinct frame will experience poorer public transport access (compared to concentrated scenario). - May justify additional bus stop on Hill View Terrace adjacent to Edward Millen Park.
Implications for walking, cycling and micromobility	- With more activity concentrated on Albany Highway, this scenario will provide greater support for early public realm, pedestrian and cycling upgrades in accordance with Public Realm Strategy.	- Increased residential density in precinct frame supports enhancing micromobility corridors, both perpendicular and parallel to Albany Highway. - Greater importance of Hordern St and McMillan/Duncan corridors. - Potential that Hill View Tce becomes less attractive cycle route due to additional development traffic.	- With additional jobs expected under the Combined Scenario, there is strong impetus to improve walking and cycling connectivity, in order to limit the use of private vehicles for short trips. - Increased residential density in precinct frame supports enhancing micromobility corridors, both perpendicular and parallel to Albany Highway. However, more dispersed development may not justify investment. - Greater importance of Hordern St and foreshore access to Causeway precinct. - Greater importance of public realm upgrades/ space reallocation in accordance with public realm strategy, however more dispersed development may not justify investment. - Potential for increased importance of Hubert St and rear laneways in East Vic Park, East End and St. James precincts.

The metrics proposed in the Built Form Strategy, and outlined above, in terms of residential population, non-residential floorspace and forecast jobs represent ultimate development metrics

for the precinct if developed to maximum capacity allowed under proposed development controls. Based on historic and forecast rates of development, it is highly unlikely that ultimate development occurs within the lifetime of the PSP (10 years). The PSP will provide a framework to enable growth and redevelopment, as well as guide public realm and infrastructure upgrades, and the need for any major transport interventions are expected to emerge incrementally. As major sites are redeveloped, it is anticipated that traffic impact assessments will be prepared in accordance with WAPC guidelines. Traffic modelling and intersection capacity analysis will be required when changes are proposed to key intersections along the highway (e.g. Duncan Street/McMillan Street or Kent Street/Miller Street), in accordance with Main Roads WA's Traffic Signal Approval Policy (TSAP). Finally, the potential for mid-tier transit on the Albany Highway corridor will have significant implications for traffic distribution and signal phasing, and will also necessitate detailed traffic modelling/analysis. These represent key trigger points for further detailed traffic analysis.

5. Summary and Recommendations

The recommendations outlined in this Strategy are geared to support the long term functionality, liveability and prosperity of the proposed Albany Highway Secondary Centre. Drawing upon the ideas outlined in the Albany Tomorrow Report, this strategy has been developed based on best-practice transport planning evidence, existing Local and State Government policies, as well as feedback received from stakeholders and the broader community.

Through the engagement process, it is evident there is strong community support to reduce the reliance/dominance of private vehicles along Albany Highway, by instead prioritising public and active transport where possible. The community also confirmed their strong support for more pedestrian friendly environments and vibrant and attractive streetscapes.

The proposed streetscape upgrades have considered the Movement and Place classifications outlined in the Town's ITS. Here, the aim is to strike a balance between the corridor's competing movement and place functions, recognising that Albany Highway will continue to facilitate some longitudinal vehicle movement while also catering for higher amounts of pedestrian activity. Moving forward, it is recommended that 20km/h speed limits be implemented in the core retail nodes, while maintaining 40km/h speed limits outside of these areas. Intersection upgrades are proposed in key locations to make it easier and safer for pedestrians to cross both side streets and Albany Highway itself.

Upgrades to station streets are also highlighted as being critical to the long term success of the Albany Highway precinct. In addition to enhancing connectivity to the Victoria Park, Carlisle and Oats Street train stations, improvements to these streets will also make it safer and easier to for cyclists and other micromobility users to access Albany Highway from the wider region.

In terms of micromobility, it is recognised that Albany Highway's relatively constrained road reserve makes it difficult to provide dedicated cycling facilities while maintaining two-way traffic on-street parking, prioritising space for pedestrians and creating opportunities for additional tree planting. Accordingly, it is recommended that a network of parallel and perpendicular cycling routes be investigated to support active travel for people of all ages and abilities. This is supplemented by planned public realm upgrades and space reallocation typologies outlined in the Public Realm Strategy to encourage walking and cycling to/from core retail nodes along the Highway. Key considerations for parallel/perpendicular routes include providing access to/from the Perth-Armadale Principal Shared Path, existing and emerging Albany Highway destinations, the proposed Causeway Pedestrian and Cyclist Bridge, and local schools.

Furthermore, this strategy provides recommendations surrounding the management of on and off-street parking. Drawing upon the guidance outlined in the Town's PMP, it is recommended that a range interventions be adopted in balancing parking supply and demand within the precinct. Detailed monitoring of parking utilisation in the precinct should be carried out as a high priority, with upgrades and investment in new infrastructure carried out in accordance with the PMP. Should there be sustained demand for additional paid parking, the Town should consider the possible development of consolidated off-street parking structures in the Victoria Park and East Victoria Park town centres. Moving forward, it is recommended that investment be made in providing additional parking for electric vehicles as well as public end-of-trip facilities for micromobility users.

Appendix A: Review against SPP 7.2

Objective	Consideration	Existing Situation		With Proposed Recommendations	
		Score	Justification	Score	Justification
O4.1 To ensure the movement network supports the function and ongoing development of the precinct.	C4.1.1 Address the current and future access needs of the precinct through an integrated transport planning and land use assessment process.	Poor	To date, there has been a lack of coordination/integration between land use planning and transport planning along Albany Highway. This has resulted in a somewhat disconnected and car-dependant transport network.	Good	The development of this Precinct Structure Plan considers the relationship between land use and transport.
	C4.1.2 Design the movement network in balance with place considerations, local access and neighbourhood/ district/regional access requirements for travel to, through and around the precinct.	Poor	At present, the Albany Highway Secondary Centre facilitates both local and interregional movement functions. As a result, place outcomes are compromised.	Good	As part of the Precinct Structure Plan's development, the corridor has been split into six sub-precincts. The proposed cross sections and traffic calming interventions seek to respond to the unique place characteristics of each sub-precinct.
	C4.1.3 Develop a movement network that enables convenient and comfortable travel and access for users of all ages and abilities.	Poor	At present, Albany Highway's active transport infrastructure is inadequate. There are limited formal/safe crosswalks at key intersections, and motor vehicles are often prioritised over pedestrian movements. In addition, existing cycling routes are not compelling for young or inexperienced users.	Fair	While it unlikely that "all ages and abilities" cycling infrastructure can be retrofitted to Albany Highway, the Town will investigate improving outcomes for micromobility users along parallel side streets including Hordern Street, Washington Street, Gloucester Street, Lichfield Street, Swansea Street, Merton Street and Hubert Street. Providing safe and inclusive movement networks for all roads users has been identified as primary objectives in the Town of Victoria Park's Integrated Transport Strategy.
	C4.1.4 Design transport infrastructure that provides a safe network for all users.	Poor	There are no dedicated cycle lanes along Albany highway. Due to lack of infrastructure, cyclists are forced to either ride on the pedestrian paths or on the road with cars and busses.		
O4.2 To ensure a resilient movement network that prioritises affordable, efficient, sustainable and healthy modes of transport.	C4.2.1 Prioritise walking, cycling, public transport and shared mobility, to minimise car dependency.	Fair	While the precinct does have access to bus and train services, there remains a high reliance on private cars.	Good	The safety and comfort of people walking/cycling will be improved through the introduction of lower speed limits, traffic calming interventions and increased tree canopy. Public transport will be prioritised through targeted bus embayment removal and improvements to stop/shelters.
	C4.2.2 Establish mode share targets for the precinct	Poor	To-date, no mode share targets have established for this precinct.	Good	Council-wide mode share targets were established in the Town of Victoria Park's Integrated Transport Strategy published in April 2022. To support the development of this Precinct Structure Plan, specific precinct mode share targets have been established (refer Section 4.3.1).
O4.3 To enable a range of transport choices that meet the needs of residents, workers and visitors.	C4.3.1 Prioritise provision of direct and legible pedestrian routes within the precinct and to adjacent areas.	Poor	While there are pedestrian paths along Albany Highway, they lack connectivity and safe crossings. In some areas, pedestrians rely on painted medians to cross a highway that experiences high volumes of traffic.	Good	This Precinct Structure Plan recommends a number of treatments which will enhance the safety and comfort of pedestrians using Albany Highway including wider footpaths, lower traffic speeds, additional crossing points and more street trees.

Objective	Consideration	Existing Situation		With Proposed Recommendations	
		Score	Justification	Score	Justification
	C4.3.2 Provide a bicycle network within the precinct that integrates with the broader cycle network and connects safely and conveniently to key destinations.	Poor	There are no dedicated cycle lanes along Albany highway. Due to lack of infrastructure, cyclists are forced to either ride on the pedestrian paths or on the road with cars and busses.	Fair	While it unlikely that "all ages and abilities" cycling infrastructure can be retrofitted to Albany Highway, the Town will investigate improving outcomes for micromobility users along parallel side streets including Hordern Street, Washington Street, Gloucester Street, Lichfield Street, Swansea Street, Merton Street and Hubert Street. An improvement to cycling access should be focussed along station streets including Duncan, Mint, Dane and Oats Street, providing access between Albany Highway precinct and the Perth-Armadale PSP.
	C4.3.3 Identify public transport services and infrastructure to be upgraded or established to improve coverage, frequency, connection and user choice.	Fair	While the precinct does have access to bus and train services, there remains a high reliance on private cars.	Good	Recommendations include improving pedestrian and cycling access along Duncan and Oats Streets, and working with PTA to improve access to (and land use integration with) the Victoria Park Transfer Station.
	C4.3.4 Design public transport infrastructure to integrate with and be appropriate for the intended mode share, patronage and place character of the precinct.				
	C4.3.5 Consider access requirements for service vehicles and logistical freight movements within the precinct	Fair	At present, service vehicles generally have good access to homes and businesses along Albany Highway.	Fair	While the Precinct Structure Plan recommends the removal of some on-street parking bays from Albany Highway, loading bays and rear lane access will be maintained wherever possible.
	C4.3.6 Design the movement network to allow for private vehicle access and movement that is appropriate to the precinct function.	Poor	At present, Albany Highway acts as both a destination and a thoroughfare. Certain sections of the corridor carry in excess of 15,000 vehicles per day.	Good	The Precinct Structure Plan outlines a series of recommendations for reducing the quantum of through traffic along Albany Highway.
O4.4 To ensure the quantity, location, management and design of parking supports the vision of the precinct.	C4.4.1 Provide the minimum amount of car parking appropriate for the precinct.	Good	There are around 600 public parking spaces which are adjacent to Albany Highway. Data from the Town of Victoria Park indicates that around 80% of public parking along the Highway is regularly occupied.	Good	The Precinct Structure Plans seeks to adopt a balanced and considered approach to parking management. While some bays are planned to be removed, the provision of better public/active transport is intended to facilitate modal shift, reduce the demand for car parking.
	C4.4.2 Manage and locate car parking to prioritise access according to the needs of different user groups.	Fair	The corridor has existing ACROD bays.	Good	This Precinct Structure Plan recognises the need to support the movement needs of certain priority user groups including the young, elderly and disabled.
	C4.4.3 Design parking to be integrated with the urban form.	Fair	Some of Albany Highway's existing car parks detract from the corridor's urban form.	Good	Moving forward, new parking (including multideck structures) should be integrated with surrounding land uses. This may include "sleeving" structures with retail businesses, or designing
	C4.4.4 Design parking for adaptability over time to	Poor	Parking in the Albany Highway Precinct has not traditionally been	Good	

Objective	Consideration	Existing Situation		With Proposed Recommendations	
		Score	Justification	Score	Justification
	accommodate potential future change of use.		designed to adapt to potential future land use changes.		structures with future adaptive re-use in mind.
	C4.4.5 Consider parking requirements and end of trip facilities for other transport modes.	Fair	While there is existing bike parking along Albany Highway, the provision of public end-of-trip facilities is currently limited.	Good	As part of planned upgrades to Council/Community facilities, the town should consider providing public end-of-trip facilities to encourage additional uptake in cycling and other forms of micromobility.

Appendix B: GTA Phase 1 Report

TECHNICAL NOTE

GTAconsultants now Stantec

Project Code:	301400757	**Project Name:**	Albany Highway Precinct Structure Plan
Dept:	Transportation Planning		
Date:	9 August 2021	**Version No.**	A (2)
Author:	Alix Oakes		
Reviewer:	Tim Judd		
SUBJECT:	**High Level Transport Analysis**		
Page 1 of	22		

INTRODUCTION

Movement forms a fundamental part of any precinct and analysis of current and expected transport trends will become increasingly important as the concepts for the Albany Highway Precinct evolve and are refined. This Technical Note provides a high-level assessment of the following datasets:

- Existing car parking capacity and supply
- Current car parking development standards
- Existing traffic, pedestrian and cycle volumes and generations, where available.

BASE CONDITIONS

The project boundaries for the development of an Activity Centre Precinct Structure Plan include the full length of Albany Highway activity corridor within the Town of Victoria Park. This corridor is proposed as a Secondary Centre under State Planning Policy 4.2 by the Town of Victoria Park in their Local Planning Strategy.

Stretching from the intersection with Shepperton Road and the interchange with Canning Highway/Great Eastern Highway in the northwest to the intersection with Welshpool Road in the southeast, this corridor is a vibrant commercial corridor with a diverse mix of uses and numerous amenities. As one of the main activity centres in the Town, it is essential that the Precinct Structure Plan be comprehensive and employ a long-term approach to ensure that this area remains an important destination in the future.

The corridor is approximately 3.66 kilometres in length.

VIC | NSW | QLD | SA | WA
Ground Floor, 226 Adelaide Terrace
PERTH WA 6000
t// +618 6222 7000
ABN 17 007 820 322
www.gta.com.au

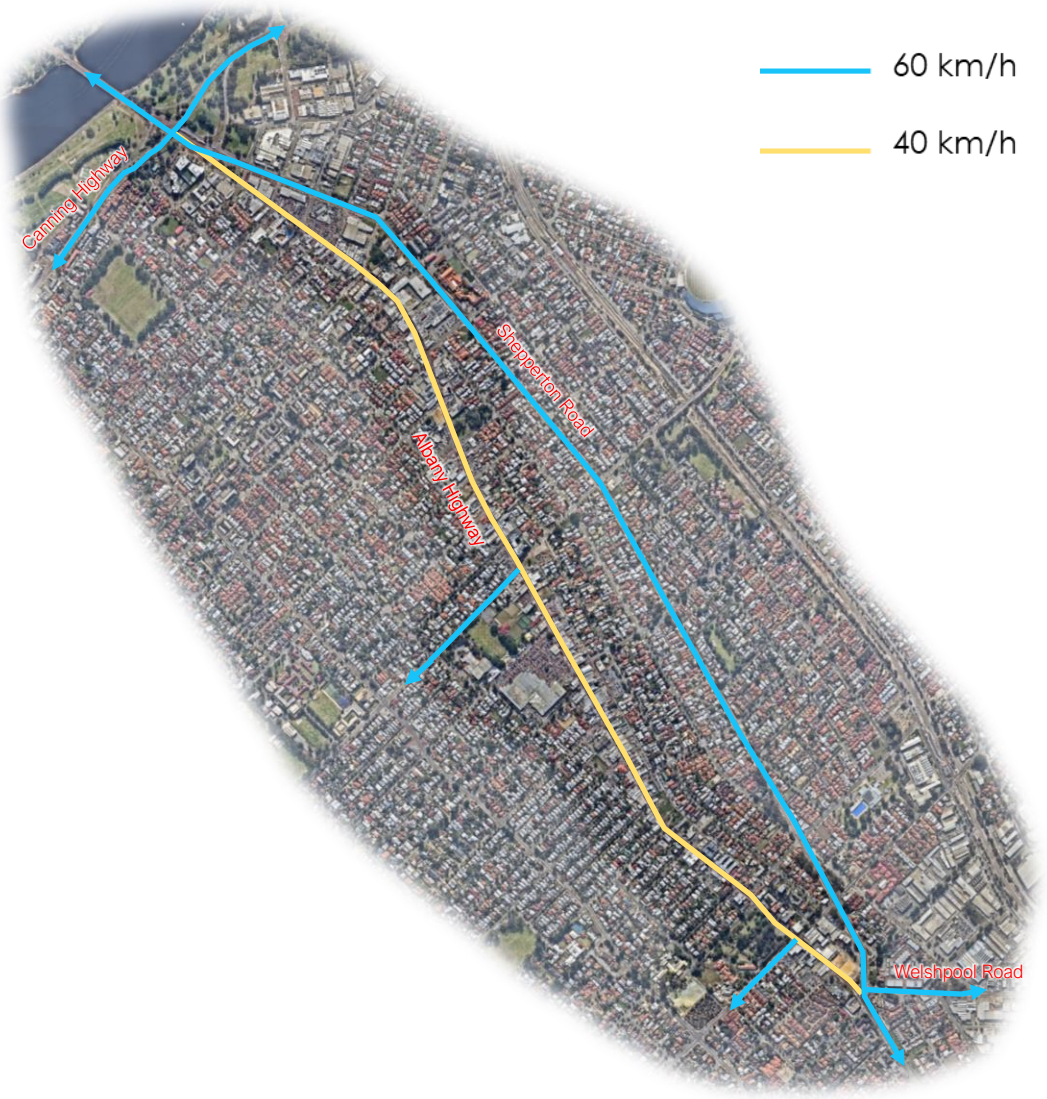
Within the project area, Albany Highway is designated as a Distributor B Road, while Shepperton Road is a Primary Distributor. Where indicated, Albany Highway is traversed by Distributor B roads and one Distributor A facility. All other roads that intersect with Albany Highway are designated as Access Roads and have not been indicated on this map for to ensure clarity.

Figure 1 Study Area Road Hierarchy

Albany Highway in Victoria Park is designated as a 40 km/h zone from the intersection of Shepperton Road, Albany Highway, and Canning Highway in the northeast to the intersection with Welshpool Road in the southeast. Shepperton Road, Canning Highway/Great Eastern Highway, Kent Street, Hill View Terrace, and Welshpool Road are all 60 km/h facilities.

All other roads that intersect Albany Highway are signed as or are by default 50 km/h roads.

Figure 2 Posted Speeds



Main Roads Western Australia has provided information about the median and 85th percentile speeds at certain locations along Albany Highway. For the purposes of this analysis, the 85th percentile speed at each location has been evaluated between the hours of 7:00 AM and 10:00 PM.

Figure 3 85th Percentile Speeds

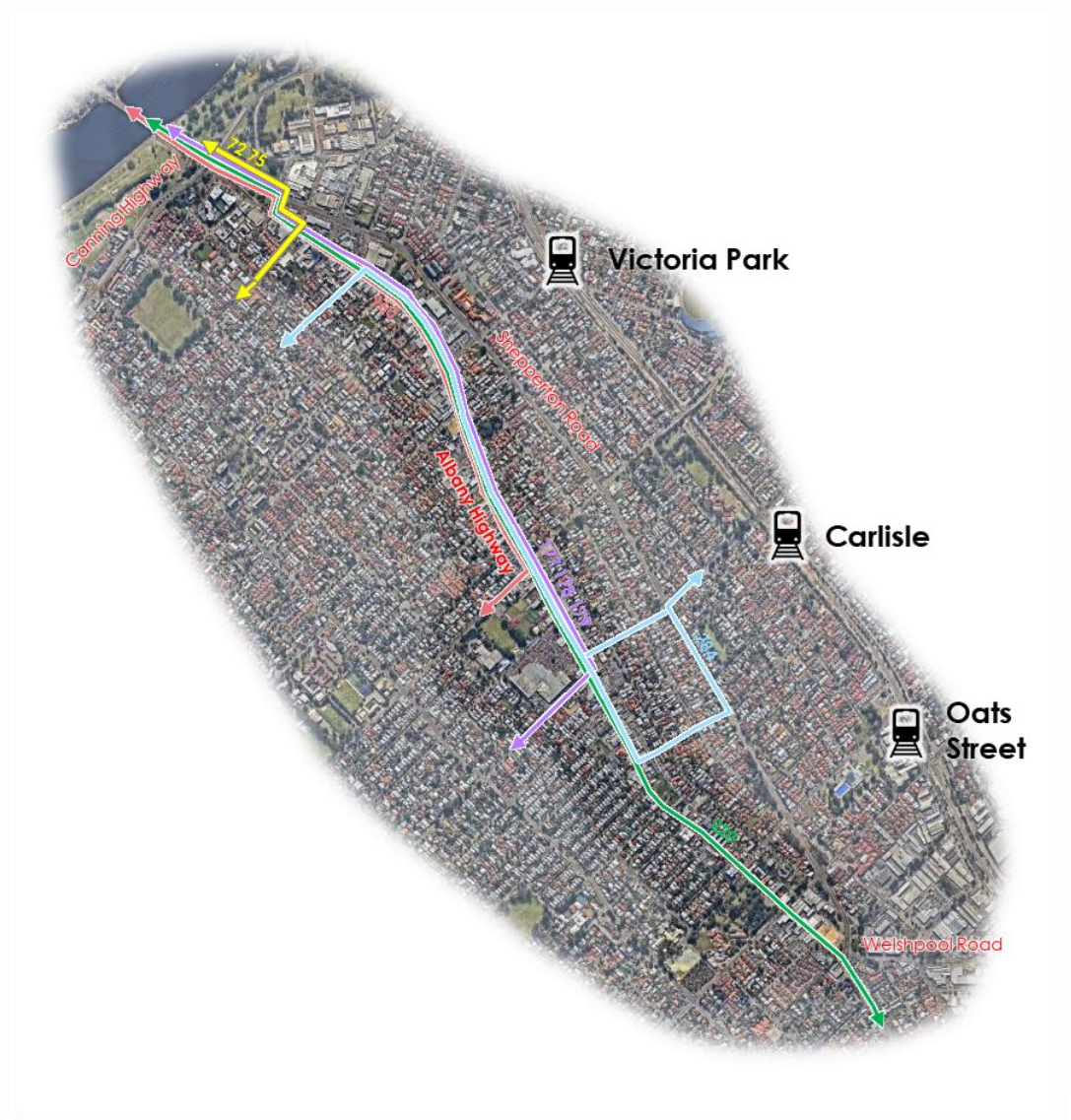
It can be seen that there is just one location where the 85th percentile speed is consistently 5km/h over the posted speed limit and that is on Albany Highway between Hillview Terrace and Baillie Avenue, within the 40km speed zone, and four areas where 85th percentile is consistently over 40km/h.

Albany Highway carries several bus routes (as provide below):

- 72 (Elizabeth Quay/Curtin University)
- 75 (Elizabeth Quay/Canning Vale)
- 177 (Elizabeth Quay/Cannington/Bentley)
- 178 (Elizabeth Quay/Wilson)
- 179 (Elizabeth Quay/Bull Creek Station)
- 220 (Perth Bus port/Armadale Station)
- 284 (Curtin Central/Belmont Forum/Wright Street)
- 960 (Curtin University/Mirrabooka Bus Station).

In addition, there are three Transperth train stations in relative proximity to Albany Highway; Victoria Park station, Carlisle Station, and Oats Street Station.

Figure 4 Public Transport Services



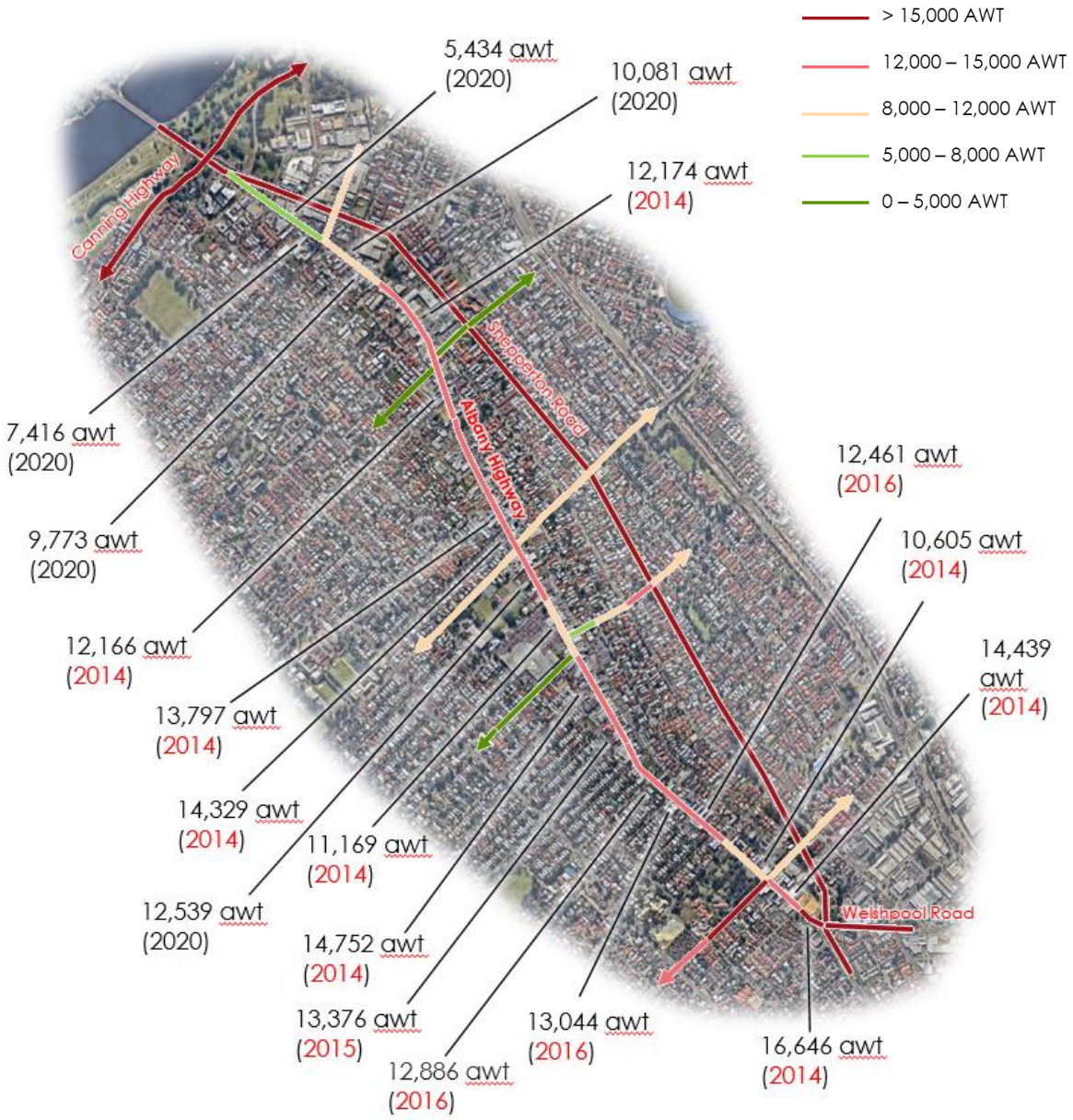
EXISTING VOLUMES

Traffic

The traffic count data along Albany Highway notes a high variance in number of vehicles along its length, from 5,432 average weekday traffic (AWT) at the north-western terminus of the project area to 16,645 AWT at the south-eastern terminus. In most instances, however, Albany Highway carries between 11,000 and 15,000 vehicles in average weekday traffic.

Distributor B roads are expected to carry above 6,000 vehicles per day. Their predominant purpose is to have reduced capacity but high traffic volumes travelling between industrial, commercial, and residential areas.

Figure 5 Traffic Volumes (note: data in red indicates older data)



Pedestrians

The Town has three pedestrian counters situated along Albany Highway, which have been measuring pedestrian volumes since 2013. These counters are situated on Albany Highway outside:

- Kabuki Japanese
- City Farmers
- Cinnamon.

Average pedestrian volumes are shown by day of the week and by hour in Figure 6 to Figure 8.

Figure 6 Victoria Park Albany Highway (Kabuki Japanese)

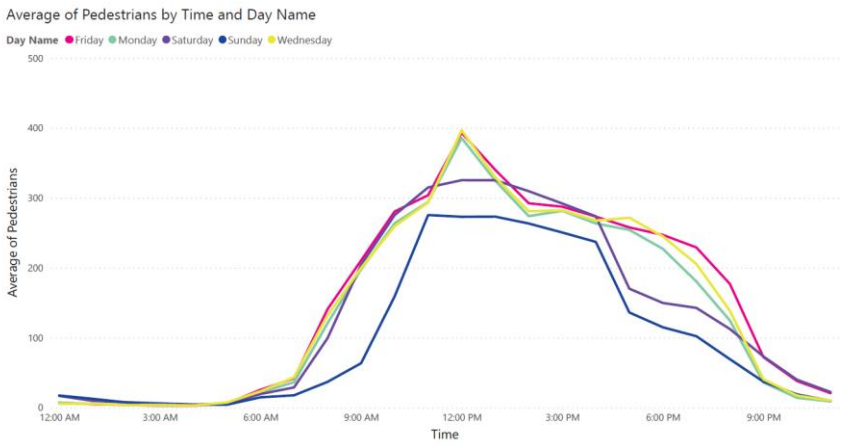


Figure 7 East Victoria Park Albany Highway (City Farmers)

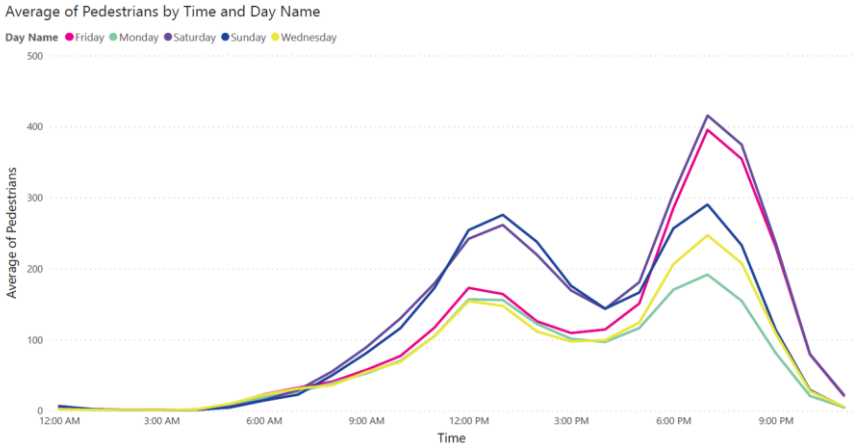
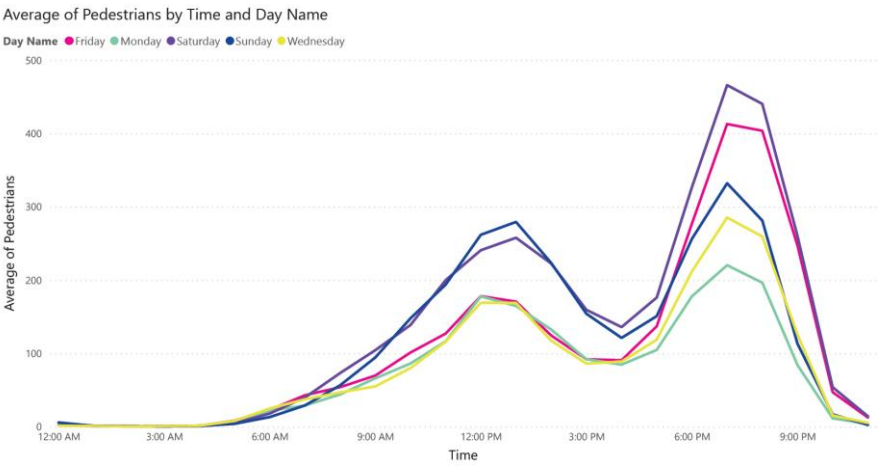


Figure 8 East Victoria Park 2 (Cinnamon)



The charts show that in East Victoria Park, the pedestrian volumes are higher in the evening between 7pm and 8pm whereas the volumes from the counter outside Kabuki Japanese show that volumes are higher between 11am and 1pm. Given that these peaks coincide with lunch and dinner times, they may be a function of the type of land uses (and potentially their operating hours) that are concentrated in these areas.

Cyclist

Cycle volumes have not been provided or sources for locations within or nearby the study area. As such, the assessing how Albany Highway interfaces with the Long-Term Cycle Network (LTCN) has been reviewed, in lieu of cyclist data.

The north-western terminus of the project area intersects with a Primary Route of the LTCN along the Swan River, while the Albany Highway itself is a Local Route and is traversed or intersected by multiple other Local Routes along the following routes:

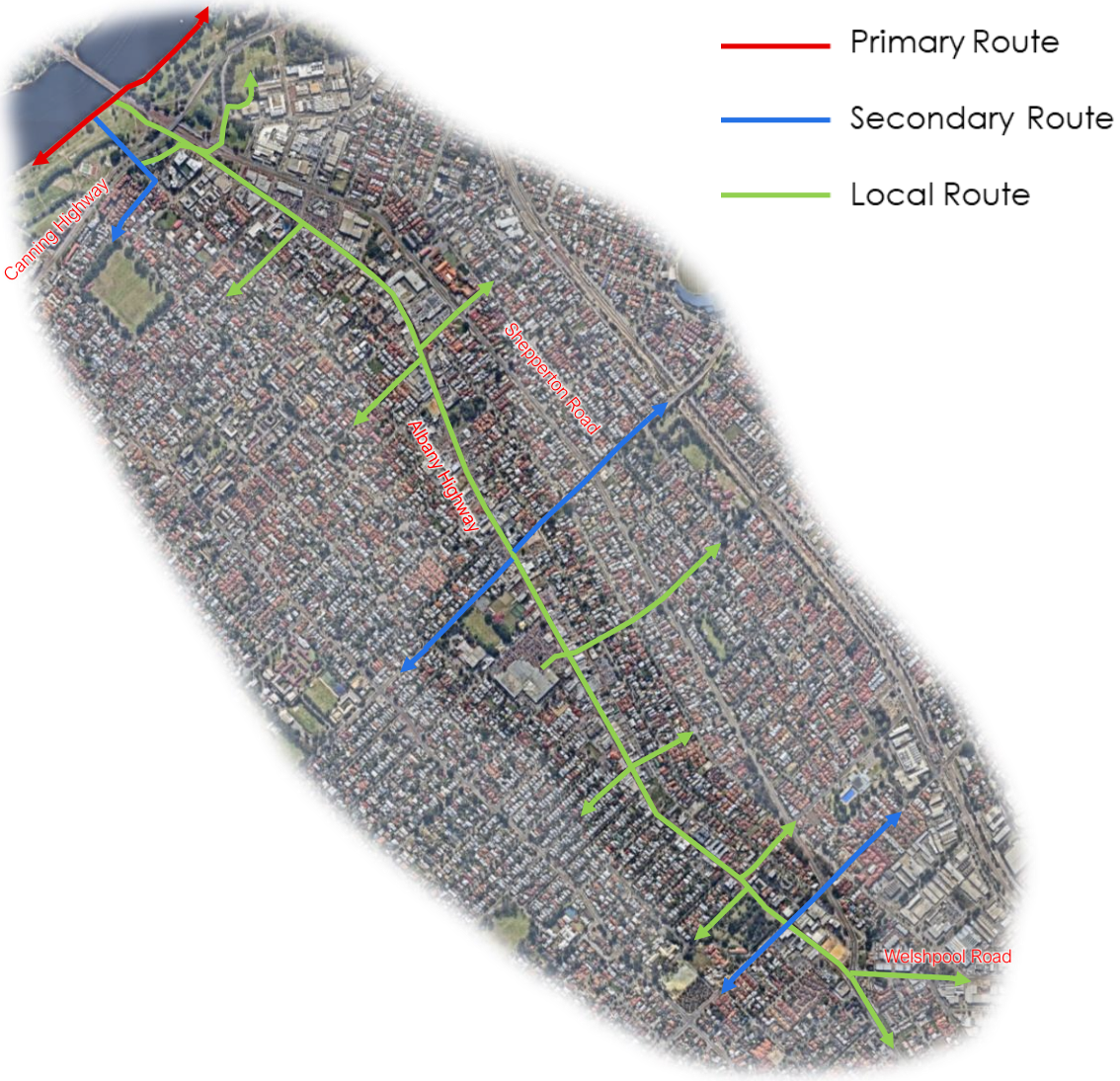
- Cargill Street
- McMillan Street
- Duncan Street
- Mint Street
- Hampshire Street
- Dane Street
- Baillie Ave
- Somerset Street

Hill View Terrace/Oats Street and Kent Street/Miller Street are identified as Secondary Routes in the LTCN. Welshpool Road and Albany Highway continue on as Local Routes outside of the Project Area.

It is noted within the Victoria Park Bike Plan that Albany Highway is flagged as a key corridor for investigation, noting Albany Highway (between Oats Street and the Causeway) a key commercial and entertainment destination for Town of Victoria Park residents and for the wider Perth metropolitan area. Access to this area is predominantly by car, with up to 15,000 vehicles a day, while the posted speed limit is 40km/h for the entire length. The parallel Shepperton Road carries significantly higher traffic volumes, and although there is some usage from cyclists, bicycle infrastructure is not recommended along this route. Albany Highway is a key through route and destination for recreational cyclists, however there is a significant opportunity to increase ridership for less confident cyclists. As such, priority should be given to bringing cyclists to Albany Highway as a destination. In assessing Albany Highway, the interaction between different types of cyclists and other road users' needs to be carefully considered.

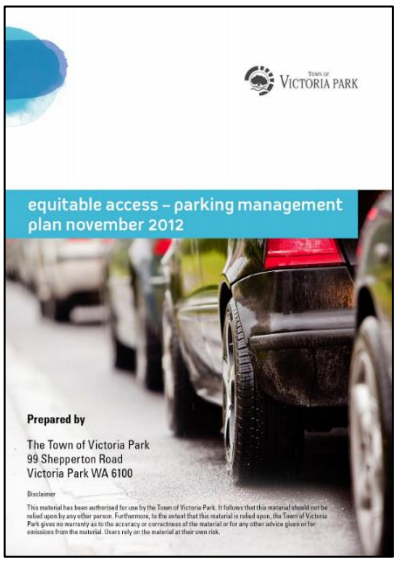
Consultation through the bike plan noted Albany Highway was the key concern for residents and users with issues raised covering:

- a desire for dedicated bicycle infrastructure (i.e. bicycle lanes) to provide adequate separation from turning and parked vehicles (i.e. dooring)
- cars often exceed the 40km/hr speed limit creating an intimidating road environment for cyclists
- lack of appropriate traffic calming measures and motorist awareness increases the probability of conflicts between cyclists and other modes of transport


Primary Route
Secondary Route
Local Route
Canning Highway
Albany Highway
Shepperton Road
Welshpool Road

PARKING

Current Car Parking Development Standards



Parking in the Town of Victoria Park is governed by the **Town of Victoria Park Equitable Access – Parking Management Plan** (November 2012). This plan identifies seven key parking management hotspots in the Town of Victoria Park and outlines the key steps to address existing problems within the identified hotspots and future activities for completion by the Town. This plan is focussed on managing the existing parking amenities and does not consider medium and long-term parking management. Specifically, this plan addresses providing equitable access to parking resources to the community, tools and techniques to manage parking, enforcement techniques, complementary tools, and the various processes to manage parking within the Town of Victoria Park. Additionally, this document provides a decision-making framework to ensure parking management practices support and contribute to the continued vibrancy of Victoria Park.

This plan was not developed in isolation and should support the Integrated Movement Network Strategy and future land use planning initiatives. In order to address parking issues raised in the parking hotspots, this plan proposes a parking management framework, comprised of five steps. The first step is to evaluate the current knowledge of the parking environment and associated transport considerations and stakeholders. The next steps are to evaluate the situation using existing tools, recommend solutions, and implement them. The final step is to review the effectiveness of the solution and monitor the situation. The Albany Highway corridor is contained in Hotspots 2, 3, 5, and 6.

In 2021, the Town of Victoria Park completed a draft version of the **Parking Management Plan**. This plan was developed in coordination with the update of the Town of Victoria Park's Integrated Movement Network Strategy and represents the future direction of the Town's strategy for managing transport and parking decisions. This plan updates the Town of Victoria Park Equitable Access – Parking Management Plan (November 2012). At the time of writing, this plan is currently out for consultation.

This plan introduces a series of important new ideas to the parking management area, including managing parking to reduce the dependence on private motor vehicles; the promotion of car and ride sharing, carpooling, public transport, and active transport modes; and identifying corridors based on categorisations of movement and place, resulting in the different allocation of parking, depending on the corridor type. The goals of this plan are also different. While still providing a cohesive strategy for transport and parking-related decision making, this plan also adopts the movement and place framework as a tool to categorise streets and roads based on function, identifies major projects requiring advocacy to regional bodies, explores travel demand management efforts, and reviews parking pricing, among others.

Another major change to the previous planning initiative is the inclusion of an intervention matrix. This matrix indicates a suite of actions that will be undertaken, if certain utilisation trigger points are activated. By

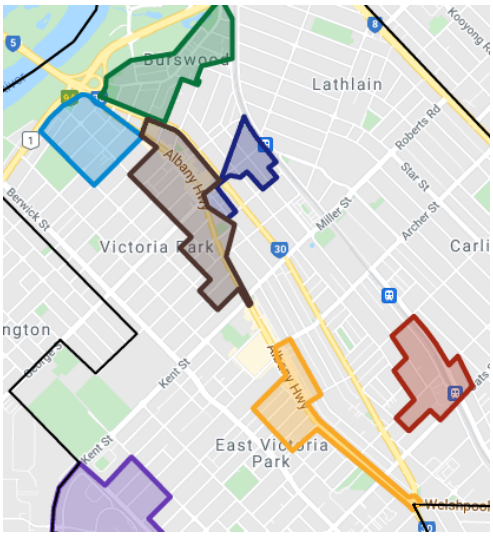
determining the key occupancy percentages to optimise the use of private and public parking and identifying actions to undertake ahead of time, the Town will have a clear path to ensuring that parking is well-utilised, correctly priced, and supports local planning initiatives. Overall, this document provides a very clear guideline with realistic action items and will support the strategic direction of the Town.

Finally, the **Local Planning Policy 23: Parking Policy** also has an influence on parking in the Town of Victoria Park. This document outlines the objectives of parking policy in the Town, provides a list of principles, and specifies the parking requirements for parking based on land use.

Existing Parking Supply and Demand

Based on data provided by the Town of Victoria Park (the Town), there are slightly more than 500 parking spaces within and adjacent to Albany Highway. These spaces are contained within parking areas which have been divided up into hotspots based on levels of activity in each area, which then dictates the level of parking restrictions.

Figure 9 Parking Hotspots



Source: Town of Victoria Park

Parking restrictions relating to hotspots which are relevant to the study area are described in the table below.

Table 1 Parking hotspots - restrictions

Area Name	Coverage	Restrictions
East Victoria Park Area 2 (Yellow)	Albany Highway and adjoining side streets from Shepperton Road to Kent Street	• Time limited areas for all day and short-term parking • No stopping areas for safety when needed • User pays in identified streets • 30 minutes free with ticket on user pays street parking
Victoria Park Area 3 (Brown)	Albany Highway and adjoining side streets from Kent Street to Cargill Street and side streets nearby	• Time limited areas for all day and short-term parking • No stopping areas for safety when needed • User pays in identified streets and car parks • 30 minutes free with ticket on user pay street parking • One hour free with ticket in King George Car Park

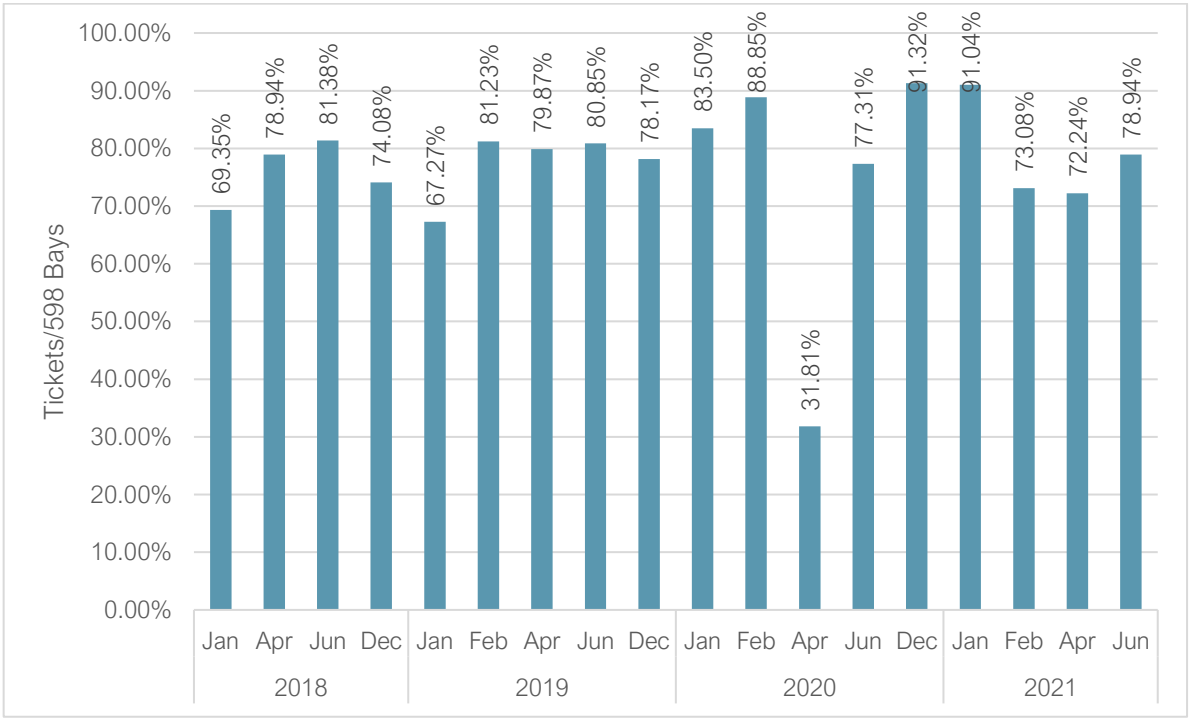
Area Name	Coverage	Restrictions
Raphael Park Area 5 (Light Blue)	Albany Highway from the Causeway to Cargill Street and side streets nearby	• 2P time limit on Albany Highway • Time limited areas for all day and short-term parking • Restrictions to support the school on Cargill and Geddes Streets • User pays parking in identified streets
Victoria Park Area 6 (Dark Blue)	Duncan Street from Albany Highway to Kitchener Avenue and adjoining side streets	• Time limited areas for all day and short-term parking • No stopping areas for safety when needed • Parking restrictions which apply during school pick up and drop off times • Railway station has paid parking areas • User pays parking in identified streets • Shopping centre with their own parking management solutions

Parking data concerning free and paid parking within the study area (Albany Highway and cross streets) from 2018/19 has been provided by the Town and relates to:

- Average daily occupancy
- Average hourly occupancy
- Duration of stay
- Total number of patrons
- Monthly paid parking patrons (paid parking only).

The figure below shows that excluding April 2020 (which coincided with the initial Coronavirus lockdown), that parking occupancy is routinely above 65%, with the summer months approaching or exceeding 85% occupancy.

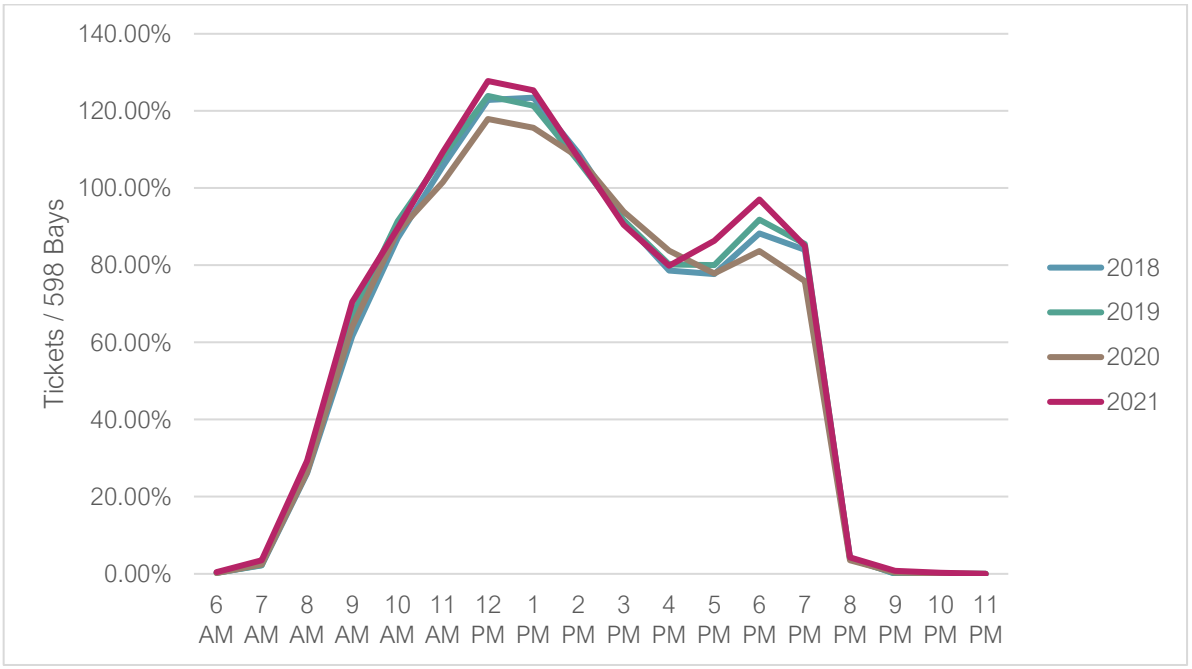
Figure 10 Albany Highway Average Daily Occupancy (7am-8pm)



Note: Includes free parkers

The parking demand at peak times is noted in the figure below indicating that the busiest times of the day for parking within the study seem to coincide with lunchtimes (12-1pm) and dinner times (5-7pm).

Figure 11 Average Hourly Occupancy – Albany Highway and Crossroads (East Victoria Park and Victoria Park)

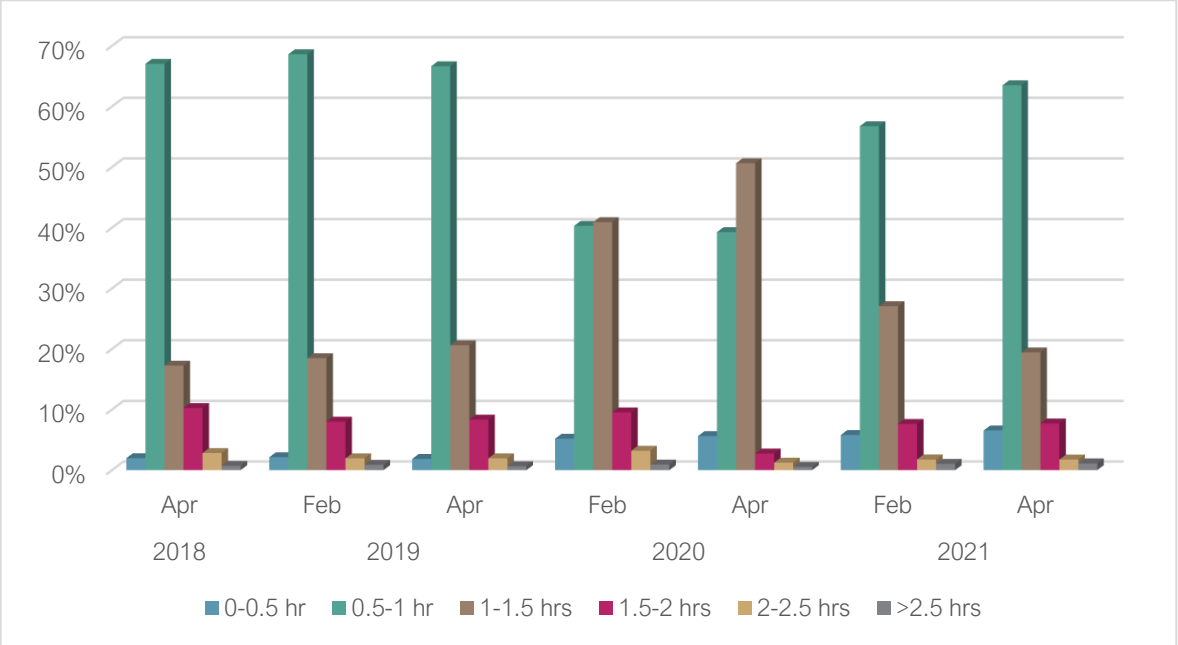


Note: Includes free parkers

The figure below shows that most parkers are staying for between 30-60 minutes although there seems to be a large change in duration of stay in 2020 where more people are staying for up to 1.5 hours. The data does not provide a reason as to why this change may have occurred although perhaps a temporary change in

restrictions took place during 2020 as a result of Coronavirus. Shorter stays appear more prevalent in all other years, and this maybe a function of the 30 minutes free parking with a ticket along Albany Highway.

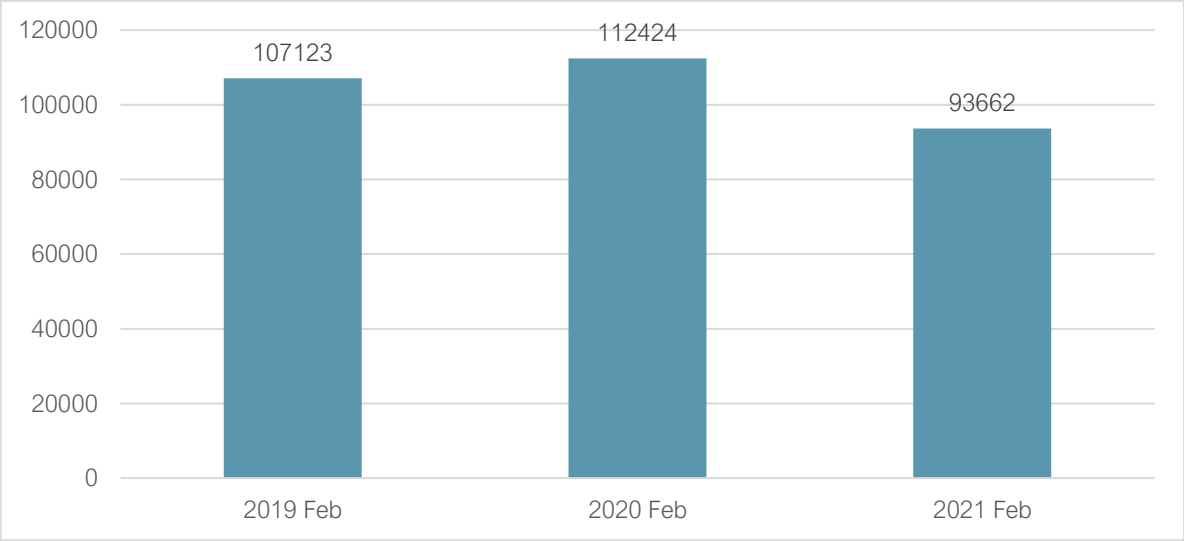
Figure 12 Albany Highway – Duration of Stay



Note: Includes free parkers

The total number of parking patrons from 2019 to 2021 does not show a clear trend, accepting that data from 2021 is only from part of the year. It may be expected that parking patrons in 2021 may exceed that of 2020 given there are still 5 months left of the year.

Figure 13 Total Parking Patrons – Albany Highway

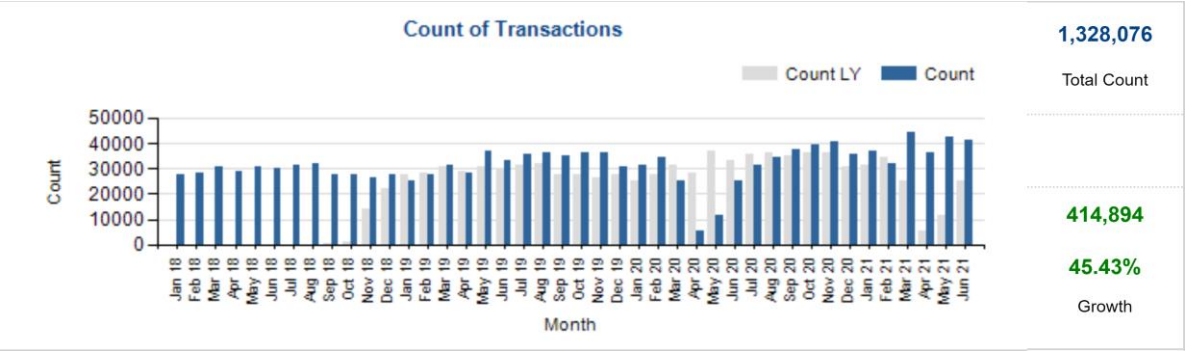


Note: Includes free parkers

The number of monthly paid parking transactions from 2018 has shown small but steady increases year on year (excluding the blips during the time of the initial Coronavirus lock down), with monthly transactions exceeding 40,000 in November 2020 for the first time. This level of transactions has been exceeded in March, May and June of 2021. Peak parking transactions generally seem to peak during the summer months, which corresponds to the average daily occupancy data described in

Figure 10.

Figure 14 Monthly Paid Parking Patrons (Albany Highway and Crossroads)



MOVEMENT AND PLACE

A growing population in the Town will require a more efficient use of streets, resulting in a potential need to reallocate road space. To undertake the process of reallocation, the Movement and Place approach can help the planning and designing of roads and streets with aims to allocate road space in a way that improves the liveability of places for all people regardless of the transport mode they select.

As the Movement and Place Framework for Western Australia is developing and has not yet been released, the road network classification for the study area will be developed using the Movement and Place Framework for NSW which is also referenced in Austroads guidelines and within the Main Roads WA speed zoning guideline.

The framework seeks to define streets and places that are geared for slow movement, pedestrian activity and the enjoyment of a place, and on the opposite end of the spectrum it defines roads and corridors that are designed for maximising the flow of vehicles and goods.

The framework defines a preliminary strategic level of current and future function of the road network and can be applied to Albany Highway based on the future land use, transport objectives and desired outcomes. Classification is informed by version 0.1 of the *Practitioner's Guide to Movement and Place*, published by the New South Wales Government Architect in March 2020.

The four street environments matrix from the guideline which is shown in Figure 15, has been used to classify the current and future interaction between movement and place in the study area. The definition of each category is provided below.

Civic spaces are streets at the heart of our communities and have a significant meaning, activity function, or built environment. They are often in our major centres, our tourist and leisure destinations, and our community hubs. These streets are often pedestrian priority, shared spaces.

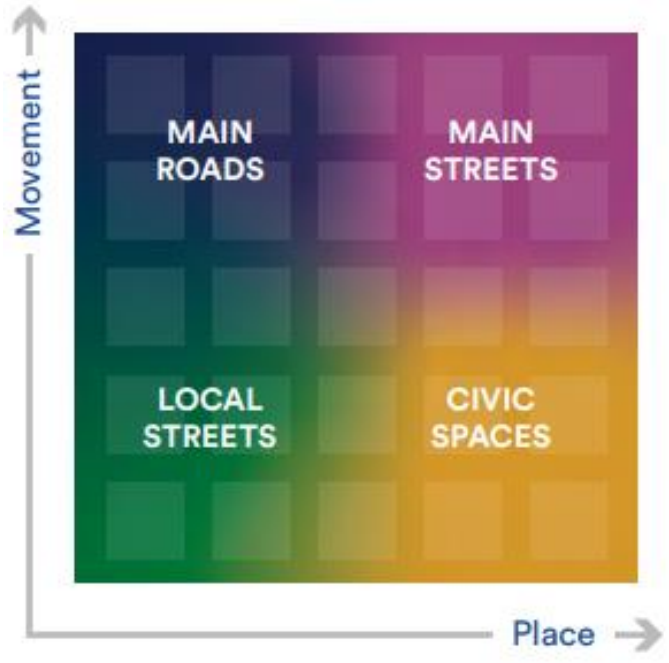
Local streets are the majority of streets within our transport networks and often have important local place qualities. Activity levels are less intense. However, these streets can have significant meaning for local people.

Main streets have both significant movement functions and place qualities. Balancing the functions of these streets is a common challenge.

Main roads are routes central to the efficient movement of people and freight. They include motorways, primary freight corridors, major public transport routes, the principal bicycle network, and key urban pedestrian corridors. Place activity levels are less intense. However, these roads and routes can have significant meaning to local people.[1]

[1] Practitioner's Guide to Movement and Place, NSW Government, March 2020

Figure 15 Four Street Environments



Source: Practitioner's Guide to Movement and Place, NSW Government, March 2020

As part of the work involved in the updated of the Town's Integrated Movement Network Strategy, a high-level assessment of movement and place has been undertaken for Local Government Area as a whole using the Department of Transport's Draft Movement and Place matrix which is based on the above but with differing category naming, as below.

Figure 16 DoT Draft Preliminary Movement and Place Street Typologies

Movement Corridors	Provide safe, reliable and efficient movement of people and goods between regions and strategic centres and mitigate the impact on adjacent communities.
Vibrant Streets	Significant complex places that attract both large numbers of people and move large numbers of people by various modes from all over the region. Vibrant Streets aim to ensure a high quality public realm with a strong focus on supporting businesses, traders and neighbourhood life.
Local Streets	Provide quiet, safe and desirable residential access for all ages and abilities. Local Streets aim to foster community spirit through facilitating local access.
Streets for People	Significant places which attract large volumes of people and facilitate pedestrian access and activity.

Source: Town of Victoria Park Draft Transport Strategy

The figure below shows at a high level how these typologies apply to the Town as a whole.

Figure 17 Existing Movement and Place Classifications (entire LGA)

Source: Town of Victoria Park Draft Transport Strategy

It can be seen that the entirety of the Albany Highway is assessed as a Vibrant Street – a significant complex place that attracts both large numbers of people and moves large numbers of people by various modes. Vibrant Streets aim to ensure a high-quality public realm with a strong focus on supporting businesses, traders and neighbourhood life.

- **Error! Reference source not found.**Armagh Street to Cargill Street – Movement Corridor
- Cargill Street to Duncan Street – Vibrant Street
- Duncan Street to Sussex Street – Movement Corridor
- Sussex Street to Dane Street – Vibrant Street
- Dane Street to Hillview Terrace – Movement Corridor

- Streets for People:
  - Mackie/Rushton Street intersection
  - Kent Street/Miller Street Intersection
  - Westminster Street to Dane Street

The resulting adjustments to the movement and place classifications might then look like that represented in the figure below (indicated by the blue and pink shapes).

Figure 18 Updated Movement and Place Classifications (Albany Highway)

Understanding the nature of future changes in land uses, and developments, as well as aspirations for the corridor as a whole along Albany Highway will allow an assessment of the future movement and place network to be undertaken, and adaptations to be made to ensure alignment with the desired planning outcomes.

SUMMARY

The key findings of this high-level assessment are:

- Speed data:
  - The entire Albany Highway is subject to a 40km speed zone
  - The 85th percentile speed of the Albany Highway is operating within 5km/h of, or slightly under the posted speed limit except for between Hillview Terrace and Baillie Avenue
- Albany Highway is served by eight bus routes and 3 train stations and as such, is a key public transport corridor.
- Albany Highway carries between 11,000 and 15,000 vehicles in average weekday traffic which provides a stressful environment to vulnerable road users.
- Pedestrian volumes
  - In East Victoria Park, pedestrian volumes are highest in the evening between 7pm and 8pm
  - The counter outside Kabuki Japanese show that volumes are highest between 11am and 1pm.
- Parking supply and demand
  - There are slightly over 500 parking bays within the study area
  - Parking occupancy is routinely above 65%, and is usually higher in the summer months
  - Peak parking demand occurs between 12pm and 1pm, and between 5pm and 7pm
  - Shorter stays (up to 1.5hours) appear more prevalent
  - The number of monthly paid parking transactions from 2018 has shown small but steady increases year on year
- Parking standards
  - The 2013 Parking Management Plan is being updated
  - The 2021 Draft Parking Management Plan (PMP) is currently out for consultation
  - The Draft PMP makes reference to:
    - identifying corridors based on categorizations of movement and place
    - allocation of parking depending on the corridor type
    - adopts the movement and place framework as a tool to categorise streets and roads based on function
    - identifies major projects requiring advocacy to regional bodies
    - explores travel demand management efforts
    - reviews parking pricing
    - an intervention matrix which indicates a suite of actions that will be undertaken, if certain utilisation trigger points are activated.
- Movement and Place
  - The Town's Draft Transport Strategy indicates that the Albany Highway in its entirety is a Vibrant Street (based on the DoT's draft preliminary matrix)
  - A closer consideration of the data may suggest that locations along the corridor might be more prone to movement, and some sections with higher place values, particularly as the corridor evolves.

It is clear that the Albany Highway corridor is a popular destination, experiencing high traffic volumes, high demand for parking, and is being served by multiple bus services from a wide range of destinations. The land use types along its length attract people mainly during lunch and dinner times. From a movement and place perspective, the corridor transitions between areas of high place value and high movement functions along its

length with some locations developing into Streets for People (using DoT's preliminary draft matrix). Understanding the relationship between these roles within and between these areas and considering desired planning outcomes will help to shape appropriate future transport and land use decisions.