Town of Victoria Park

Parking Management Plan

APRIL 2022

Acknowledgement of Country

Many of the transport routes we use today – including rail lines, roads and water crossings follow the traditional song lines, trade routes and ceremonial paths that Australia's First Nations People traversed for tens of thousands of years.

In preparing this Strategy, the Town of Victoria Park acknowledges this heritage, as well as the Whadjuk elders past and present who remain traditional custodians of the land that includes the Town of Victoria Park.

Lizard and Eggs (1997) by Beverley Pickett
(Source: Town of Victoria Park – Reflect Reconciliation Action Plan).

Summary

Background and Context

The Town's Integrated Transport Strategy sets the strategic direction for managing the Town's transport network over the next 10 years. It identifies a range of mobility focussed initiatives that will enable the Town to continue prospering as a vibrant inner-city community. Complementing the Strategy is the Town's updated Parking Management Plan (PMP). Together, both documents outline a cohesive strategy for transport and parking related decision making within the Town.

The updated PMP is consistent with the Draft Local Planning Strategy, Town Planning Scheme No. 1 and future Local Planning Scheme No. 2, Public Open Space Strategy, Urban Forest Strategy, Land Asset Optimisation Strategy, Place Plans, Corporate Business Plan and Strategic Community Plan.

In recent years, the Town has adopted a "place based" approach to planning which guides the allocation of funding and resources across individual neighbourhoods. In response to this, the updated PMP outlines specific parking-related recommendations for a number of key places around the Town.

Goals and Required Outcomes

The goals and required outcomes of the updated PMP include:

- Creating a clear and logical strategy for transport and parking related decision making and business planning.
- Adopting a Movement and Place approach to the categorisation of lanes, streets, roads and paths (in line with the state government's proposed movement and place framework, to give clear guidance to the Town to assist with future design and capital works.
- Identifies those major projects that require the Town to advocate to an external body.
- Reviewing parking requirements as they relate to the Town's planning framework and recommendations for any necessary changes to these requirements to ensure they are appropriately aligned to the Town's strategic transport direction.
- Exploring travel demand management initiatives and plans to guide the town in managing travel demand and creating a balanced and sustainable transport network by promoting sustainable transport modes.
- Reviewing the Town's parking management practices and comparing with other inner-urban local governments in Perth and Australia.
- Developing clear guidelines for parking treatments and practices that provides a matrix of when to intervene and implement these practices in various scenarios.
- Reviewing the Town's pricing model for parking with intent to extend demand-based pricing and its impact on the broader transport network and travel behaviour.
- Identifying methods for promotion and education of the parking management approach and focus on active transport.

Key Findings

The Town offers over 5,100 parking bays including both on-street and off-street parking. There is a mix of paid parking, time-restricted parking, and unrestricted bays. At present, there is no decision-making framework in place to assist the Town on how and when to make changes to parking management.

In addition, the Town is faced with the challenge of managing a finite amount of road, kerbside, and footpath space with increasing demands for better amenity, access and mobility and space for pedestrians. These competing demands need to be balanced with parking.

Technology and Enforcement

The Town uses 141 Pay and Display (PnD) parking ticket machines to manage on-street parking. Additionally, 211 parking bay sensors are installed along Albany Highway, as part of the Dynamic Parking Trial, which collect utilisation and compliance data.

The current technology system has the following drawbacks:

- Aging parking machine fleet, malfunctioning machines.
- PnD requires customer to park, leave vehicle, purchase ticket, and return to vehicle to display ticket.
- Inefficient enforcement.
- Minimal data derived from bays without sensors, fragmented reporting.
- Limited wayfinding.

The Town has consciously made the decision not to take a hard-line approach to enforcement. An early version of mobile LPR technology was previously trialled. Due to the concerns of a perception of intrusive surveillance being created, and an aversion to mail-out infringements which was seen to be negatively impacting the customer experience, the technology is no longer in use. Consequently, the Town's parking officers reverted to traditional high visibility enforcement methods.

Recent Initiatives

The Town has implemented some advanced parking management techniques. One such technique is the use of dynamic parking. The Dynamic Parking Trial, implemented in 2019, investigated the impacts of paid parking, parking bay occupancy and the relationship to price and free time periods of 62 on-street parking bays in some hot spot zones of the Albany Highway.

The Trial has been a success and has resulted in increased numbers of parkers staying for longer during the off-peak periods and a greater spread of demand throughout the day. In response, the Town implemented the changes on a permanent basis with the aim of encouraging parking turnover and providing economic benefits to local businesses.

The Easy Park Phone App was introduced in 2020 and Pay by Phone now accounts for 19% of all payments which equals cash payments.

The first Car Free Day on the Albany Highway cafe strip took place in October 2020. A section of road was closed to traffic and business owners were encouraged to establish pop-up dining areas both along the roadway and kerbside. Locals could enjoy a range of activities throughout the day and businesses were also able to enjoy the advantages of increased dining space. The event was a huge success and reinforced the benefits of less cars in activity centres to the community.

Data Collection and Management

Though infrequent, the Town has undertaken several utilisation surveys of its parking inventory, as scheduled in the Town's corporate business plan. Except for the parking sensor data, which is restricted to the Albany Highway area, undertaking an analysis of parking demand and utilisation using this the current fragmented data is not ideal. Being cognisant of the shortfalls in the existing data, the Town is now committed to undertaking parking utilisation surveys of each activity centre during the next financial year.

Increasing Parking Supply

The Town is expecting to receive a Development Application for a Woolworths development located at the corner of Albany Highway and Shepperton Road in St James. This is likely to include a large amount of basement car parking. It is likely this parking will only be available during Woolworths' trading hours.

Potentially suitable sites that have previously been identified include 1–5 Westminster Street, where a portion of the site has already been modified to accommodate additional parking with potential to further increase capacity. However, the provision of additional parking in this area is unlikely to be the best use of the land, especially on freehold land, given the Albany Highway Precinct Structure Planning currently being developed.

The car park at 4–6 King George Street had been identified as a potential area where redevelopment for additional parking could occur which will require an independent feasibility assessment.

Community Engagement

The Town is actively listening to the community's concerns about local parking. A detailed comments and complaints register is maintained in the form of an electronic Customer Relationship System. An examination of those complaints relating to parking overstays revealed most complaints emanated from the activity centres of Burswood, Victoria Park and East Victoria Park.

The community was engaged as part of the development of the Parking Management Plan, via the Town's online engagement platform. The key findings were;

- Private vehicle use was the most common form of travel, accounting for 52% of all trips.
- Private vehicle use is considered practical and convenient.
- Daily travel by car, where a parking space was required at the destination, constituted 46% of trips.
- 48% of respondents never travel by rideshare (taxi or uber).
- The community noted that a key improvement was to remove vehicles from key destinations such as Albany Highway.
- Respondents of the survey were asked to rank what transport interventions are most important to improving their journey in their local area and within the Town's activity centres. "Managing parking / easier to park close to my destination" was identified as the lowest rank improvement, with improvements to sustainable transport options being ranked as more important.
- Travel mode choice was most impacted by the lack of walking/cycling infrastructure and public transport services.

The fact that almost half of the respondents travel by means other than private vehicle, confirmed a significant portion of the community is willing to use more sustainable modes of transport.

Comparisons with Other Local Governments

To inform the PMP, a comparison of the Town's parking situation was undertaken against six other Local Government Areas Development Control Plans within Australia and three other jurisdictions in the United States of America. The comparison exercise explored the use of the minimum and/or maximum parking ratios and the implementation and available details of dynamic parking, cash-in-lieu and paid parking.

Management Options

Parking policy can influence levels of traffic congestion and dependence on private vehicles. In general, a parking area which is operating efficiently is defined as operating at 65–85% occupancy. Above and below this range indicates that the parking bays are not effectively being managed. Using these thresholds, an intervention matrix can be developed which promotes a consistent and objective review of street parking areas.

Commuter parking tends to be of lesser value to activity centres and should ideally be supplied on the periphery of activity centres in large-scale parking structures priced to support all-day parking. Commuters tend to displace other parking user groups such as activity centre customers which can result in overflow parking into residential areas and visitor frustration.

Parking controls encourage street parking turnover and encourage use of off-street parking facilities whilst providing sufficient time for visitors to access services and amenities. Paid parking increases equity of access by charging users (user pay) for their parking costs and by reducing the parking costs imposed on non-drivers who are generally rate-payers. Paying directly rather than indirectly benefits consumers because it reduces parking and traffic problems and allows individuals to decide how much parking to purchase, giving them an opportunity to save money. Non-drivers do not require parking and it would be inequitable to burden these visitors with the same level of costs as those drivers using the parking provided.

A common misconception of businesses is that paid parking will deter customers. However, paid parking often improves the customer experience through increased parking turnover and therefore availability at the destination of choice.

Motorcycle/scooter parking is generally treated no differently to that of cars. If vehicles are to be charged for parking, this should apply equally to motorcycles if they use spaces allocated to cars. Car share provides for efficient use of parking space where a single car share vehicle can replace more than 10 private vehicles according to kerb space productivity[1] based on hourly turnover.

There is no such thing as free parking; the costs are simply subsumed elsewhere in the economy. Ratepayers are not only paying for the cost of cleaning, insurance and maintenance of these bays, they are subsidising parking on valuable land that could be generating income, providing improved amenity or could be put to other uses.

Revenue from paid parking can be reinvested to improve the places that produce the revenue. This concept is termed parking benefits districts, where the revenue derived from paid parking is allocated to improving sustainable travel alternatives, streetscape, and the general amenity of the immediate area.

Best Practice

Successful travel mode shift initiatives deliver reduced parking demand through change to travel choice and, are supported by appropriate infrastructure and services. Parking availability will be an increasing consideration in travel choice decisions. A location that is well serviced by public and active transport, means more attractive alternative travel options exist for people and a reduced need for parking can result.

New technologies have enabled a smarter and more equitable approach to parking which supports the following best practice concepts:

- Providing quick and easy payment.
- Pricing according to parking demand.
- Investment of parking revenue into local improvements.
- Acknowledgment of the real cost of parking.

These integrated technologies can benefit both the Town and customers in determining how parking is used, managed, priced, and charged.

The Parking Management Plan

The Parking Management Plan provides for a balanced approach to parking management that better matches the range and location of parking options to emerging needs. The Parking Management Plan will help the Town manage car parking and deliver the following improvements:

- Increase parking turnover to help promote economic activity for local businesses.
- Help reduce local traffic congestion and increase the attractiveness of urban areas.
- Promote behavioural change through improved travel choices and encourage more public transport, walking and cycling.
- Make better use of available land for community benefit.

Travel Mode Shift

The Town will continue to support travel mode shift initiatives that reduce the dependence on private vehicles. The actions contained within the Parking Management Plan will support a reduced reliance on private vehicles and reduced parking demand through an increased use of car sharing, ride sharing, carpooling, public transport, park and ride, walking and cycling. This requires a significant improvement of the public transport network and a coordinated approach with the State to link public transport improvement with parking demand management.

Evidence Based Decision Making and Data Collection

Monitoring of Town controlled parking occupancy and turnover is a critical tool for making evidence-based decisions to be applied to the intervention matrix. It will provide utilisation in terms of occupancy and duration of stay. It will also provide data to monitor the success or otherwise of specific actions.

Management Techniques and Planning Mechanisms

Within the Parking Management Plan sit clear guidelines and actions relating to various parking management techniques and the implementation planning mechanisms, including:

- On-street and off-street Public Parking.
- Types of Parking Restrictions, Parking Levels of Service.
- Enforcement, user restrictions, parking permits.
- Regulation of private parking consolidated and shared parking.
- Parking Benefits Districts.
- Off-street public parking investment.
- Parking ratios, cash-in-lieu.
- Smart Parking Technology, Electric Vehicles.

Parking on Movement Corridors

The Strategy identifies the movement and place street typology of roads within the Town. The key transport corridors in the Town are called 'Movement Corridors' which provide safe, reliable, and efficient movement of people and goods between regions and strategic centres while mitigating the impact on adjacent communities.

These roads will continue to provide a high movement function within the Town and there may be a need to consider the removal of some kerbside parking to accommodate future transport growth along some roads. Other 'Movement Corridors' may see a change in street typology, and in response, parking may be converted to other uses including bus stops, loading zones, car share bays and streetscape improvements.

Intervention Matrix

The Parking Management Plan incorporates an Intervention Matrix that will facilitate evidence-based decision making using data derived from inground parking sensors or parking surveys. The matrix provides details of actionable options that will be implemented when utilisation trigger points are reached.

INTERVENTION TRIGGER	ACTION(S)
On-street parking occupancy above 85%	1. Introduce time restrictions 2. Modify maximum time restrictions 3. Introduce paid parking 4. Increase paid parking fees through use of dynamic parking model 5. Provide additional paid parking
On-street parking occupancy below 65% (only applies in areas with existing parking restrictions)	Modify time restrictions Reduce paid parking fees through use of dynamic parking model
Off-street parking occupancy above 85%	1. Introduce time restrictions 2. Modify time restrictions 3. Introduce paid parking 4. Increase paid parking fees
Off-street parking occupancy below 65% (only applies in areas with existing parking restrictions)	Decrease paid parking fees
Complaints regarding lack of compliance	1. Education by authorised officer monitoring 2. Issue warning/infringement notices 3. On reciept of 15 independent complaints for the same issue/ location within a twelve month period. initiate parking survey.
Request by private parking owner for Town management of parking	Review parking management by owner If required, regulate private parking
New developments in close proximity to one another	Encourage the creation of consolidated and shared parking
Resident parking permit request	Check location of application is within resident parking permit zone Review resident parking permit application and issue if approved
Business parking permit request	Check if other parking locations are available nearby Review business parking permit application and issue if approved
Request for loading zone, taxi zone, accessible parking, bus parking, motorcycle parking	Review request with consideration of the movement and place street typology function Implement if it benefits the community and suits the street function
Developers cannot provide required parking	Require payment of cash-in-lieu funds for each unsupplied parking bay
Complaints regarding school parking	Education by authorised officer monitoring Issue warning/infringement notice
Increase in private vehicle use	Educate the community on sustainable transport options
Parking safety issue	1. Review safety issue 2. Remove, add or amend signs and line marking to resolve parking safety issue 3. Remove parking bays to resolve parking safety issue

Prioritised Action Timelines

This summary of all the parking issues, appropriate actions and prioritised timelines will guide the Town in the implementation of the Parking Management Plan. This includes budget forecasting, as well as Strategy development.

Place Parking Plans

Each activity centre within the Town has unique characteristics with respect to land use and parking. To address this, individual parking management plans have been established for 10 key places within the town. The parking landscape within these places will change in the future, with some 'Movement Corridors' within the activity centres changing movement and place street typology, to become 'Vibrant Streets' or 'Streets for People'. This change will play an important role in achieving the Town's vision as a Dynamic Place for Everyone.

Consequently, a Place Parking Plan has been developed for each of the activity centres of Oats Street, East Victoria Park, Victoria Park, Burswood South, Raphael Park, Victoria Park Station, Technology Park, Burswood Station East, Lathlain and Carlisle.

Performance Measurement

When parking controls are changed, the benefits can be determined using the methods of monitoring contained within the intervention matrix. Occupancy and turnover data is gathered using parking sensors or parking surveys. The success or otherwise of the parking management intervention will then be used to inform future decision making for the Town.

Another performance measurement is to listen to the community through community consultation or community response provided to the parking officers. This qualitative feedback will provide information to help with decision making for future parking management changes or improvements.

The alignment with the vision of the Parking Management Plan and the Integrated Transport Strategy are an overall performance measure to ensure strategy goals and vision are being achieved through parking management changes. All parking management decisions will be linked to the goals and objectives of the Town.

Advocacy and Education

Advocacy and Education are important methods of improving the available travel options and encouraging people to travel sustainably throughout the Town.

The State Government manages all public transport infrastructure and services within the Town of Victoria Park and, will often make changes to State owned public transport infrastructure within the Town. These changes impact the local parking environment and provide opportunity for the Town to request assistance.

Public Transport service needs change over time. Often the local government is best placed to advise on required changes to frequency and route planning of services due to their close contact with the community.

In terms of education, the community need to understand that:

- Drivers cannot expect unlimited parking close to their destination.
- Unlimited supply has environmental, social, and economic drawbacks.
- Parking needs to be sustainable.
- There is a cost for the provision of parking.
- Parking users need to contribute to the cost of parking infrastructure equitably.
- Net surplus from parking services is to be reinvested into improving access and transport infrastructure.

Integrated Technology

Key to the successful application of the Parking Management Plan will be the incorporation of integrated smart parking technology throughout the Town.

Integrated smart parking technology will greatly improve the customer experience by making it easier to find car parking sites and available spaces and, provide flexible options for payment. These technologies will also improve the efficiency and effectiveness of parking enforcement and management as well as future planning with more frequent, current, and accurate data.

Conclusion

Changing demographics and lifestyles are changing traditional patterns of mobility. Places are growing with increasing demands on land, roads, and kerbside space while new technologies and policies are enabling a more responsive and integrated approach to parking.

This Parking Management Plan ensures that parking is available in the right place, at the right time and at the right price. Providing local access and mobility, safe and engaging streets, and attractive places.

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APPENDICES

1 Context and Strategic Alignment

The Town of Victoria Park (the Town) is a progressive and diverse local government located south-east of the Perth Central Business District. Residents enjoy an enviable quality of life. Protecting and enhancing that quality of life is a high priority. With an increasing population, the Town is looking for ways to deliver services more efficiently and improve the lifestyle of residents. The effective management of parking will play a significant role in achieving this goal. It is important to understand the context, strategic alignment, and vision for parking within the Town.

Context

In February 2021, the Town's Council resolved to update the existing Parking Management Plan (PMP) which was developed in November 2012. The existing PMP is out of date due to developments within the Town creating different priorities within activity centres. The travel choices of residents and visitors have also evolved. The updated PMP is a guiding document for the management of existing and future parking within the Town.

Strategic Alignment

In 2020, the Town resolved to update the existing Integrated Movement and Network Strategy. The updated version of this key strategic document has been renamed the Integrated Transport Strategy (the Strategy). It will be used to inform many aspects of the PMP to ensure the Town's parking and movement networks are strategically aligned with the Town's Place Plans and Corporate Business Plan.

The PMP is guided by a range of strategic documents to assist in delivering the vision for the Town including:

- Draft Local Planning Strategy (2021) which details parking requirements of developments throughout the Town for the next 10–15 years.
- Strategic Community Plan (2017) is a plan that defines the Town's community priorities across the next 20 years.
- Public Open Space Strategy (2019)
- Urban Forrest Strategy (2018)
- Land Asset Optimisation Strategy (2013)

The PMP reflects the Strategy's goal of supporting the State Government's activity centres as detailed in the draft State Planning Policy (SPP) 4.2 – Activity Centre for Perth and Peel.

In terms of transport, the Town is responsible for the following:

- Maintaining, developing and enhancing the local walking and cycling network, including footpaths, shared paths and crossings, as well as street furniture, trees and lighting;
- Maintaining parts of the road network (excluding primary regional roads);
- Managing transport demand, through the implementation of initiatives such as travel behaviour change programs, adjusting the supply and pricing of parking, and modifying street layouts;
- Maintaining access to destinations, such as bus stops, train stations, taxi or rideshare stands, and loading zones; and
- Advocating to external stakeholders on behalf of the community.

Vision

This PMP aims to connect with the Strategy by supporting the Town in achieving the overarching vision of A dynamic place for everyone.

The vision of the PMP is to "Provide clear guidance and consistent initiatives and actions for the management of parking across the Town of Victoria Park".

To achieve this vision, the following objectives have been identified:

- Better manage parking across the Town through efficient use of parking supply
- Support the economic activity of centres within the Town by providing a reasonable supply of short and medium-stay car parking spaces for the existing and future individual parking needs of residents and visitors.
- Recognise the interaction of public and private car parking capacity, to manage changes in car parking demands over time.
- Provide car parking spaces in conveniently located and easily accessible areas relative to key destinations.
- Provide Town wide guidance on the approach to parking with local Parking Plans, providing more detailed, localised guidance.
- Manage parking demand through balancing parking supply and encouraging alternate travel modes
- Provide the appropriate supply of parking, not oversupplying parking.
- Ensure that approaches to the provision, management and pricing of parking are undertaken in a fiscally responsible manner.
- Support the parking requirements of the Town to ensure movement and place outcomes are achieved.

Community Engagement

The Town is actively listening to the community's concerns about local parking. The community was engaged as part of the development of the PMP, via the Town's online engagement platform. The survey undertaken in March 2021 included an interactive map. The survey received 66 responses which were used to inform the actions detailed in the parking plans for the Town.

Key learnings from the survey responses that helped to inform the PMP include:

- Private vehicle use was the most common form of travel, accounting for 52% of all trips.
- Private vehicle use is considered practical and convenient.
- Daily travel by car, where a parking space was required at the destination, constituted 46% of trips.
- 48% of respondents never travel by rideshare (taxi or uber).
- The community noted that a key improvement was to remove vehicles from key destinations such as Albany Highway
- Respondents of the survey were asked to rank what transport interventions are most important to improving their journey in their local area and within their local activity centre. "Managing parking / easier to park close to my destination" was identified as the lowest rank improvement with improvements to sustainable transport options being ranked as more important.
- Travel mode choice was most impacted by the lack of walking/cycling infrastructure and public transport services.

2 The Reason for a Plan

The Town offers over 5,100 parking bays including both on-street and off-street parking. There is a mix of paid parking, time-restricted parking, and unrestricted bays. At present, there is no guiding document to provide the Town with advice on how and when to make changes to the management of parking.

Intent

The provision of a well-managed car parking regime can bring real benefits to the Town's community, businesses, and visitors. However, successful parking management depends on many factors and if parking is not actively managed, there can be a range of unintended consequences.

The PMP will help the Town better manage car parking and deliver the following improvements:

- Increase parking turnover to help promote economic activity for local businesses.
- Help reduce local traffic congestion and increase the attractiveness of urban areas.
- Promote behavioural change through improved travel choices and encourage more public transport, walking and cycling.
- Make better use of available land for community benefit.

Parking requirements vary across the Town, shaped by each location's unique functions, topography, environment and built form. Different people will also have different priorities when looking for a parking space at the same location.

Car parking needs to be managed in a way that matches the unique demands and pressures of each location in addition to the needs of the individual. The PMP provides for a balanced approach to parking management that better matches the range and location of parking options to emerging needs. The PMP supports and is strongly linked with future improvements to public transport service provision and the necessary shift in travel behaviour change required to ensure the long-term sustainability of the Town.

In general, people are conscious of proximity and prefer not to walk a long distance for short-stay parking compared to what may be acceptable for long-stay parking. This will generally mean providing short-stay parking close to the destination and long-stay parking further away. This approach encourages more frequent turnover in the more convenient spaces at the core of a centre and therefore maximises use and availability to a larger number of people.

Managing parking demand is key to the Town's operation and regulation of parking. The approach in order of priority is to:

1. Reduce the demand for parking through provision of sustainable alternative travel choices and education.
2. Improve the operation of existing parking assets through the effective use of an intervention matrix.
3. Measure the performance of planning mechanisms used to manage parking to ensure they are optimised.
4. Provide additional parking supply in a cost-effective manner, utilising funds from paid parking.

The Role of the PMP

The PMP will aid in achieving the vision of the Town, support local businesses, create a more sustainable community, and improve the quality of life for residents. The PMP identifies the parking issues and challenges, providing guidance on appropriate interventions and the proposed parking management approach to be applied across the Town.

The PMP identifies the Town's role in managing and influencing the various types of parking areas and the ratio of available private and public parking. The Town can influence parking outcomes by:

- Using technology to improve how parking is experienced and managed.
- Promoting travel behaviour change programs and encouraging adoption of emerging technologies.
- Supplying and maintaining public on and off-street parking facilities.
- Regulating the use of public parking through time limits and pricing.
- Enforcing parking regulations.

Movement and Place Approach

The PMP was developed in response to the Integrated Transport Strategy and uses its assessment of the Town through the Movement and Place approach. This approach recognises that streets are not just for the movement of people and goods but are also places. The Strategy provides a Movement and Place street typology function for all streets within the Town. These typologies were used in the development of the initiatives and actions of the PMP and are presented in Table 21.

Table 2.5: Integrated Transport Strategy Street Typologies, Goals and Street Functions

STREET TYPOLOGY	FUNCTION	TYPICAL PARKING RESPONSE
Movement corridors	Movement Corridors provide safe, reliable, and efficient movement of people and goods between regions and mitigate impact on adjacent communities	Limited or no on-street parking
Vibrant Streets	Vibrant Streets are 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.	Formal and restricted on-street parking
Local Streets	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.	Informal and unrestricted on-street parking only
Streets for People	Streets for People are significant places which attract large volumes of people and facilitate pedestrian access and activity.	Accessible parking only (where possible)

3 Parking Management Approach

The purpose of this section is to detail the approach the Town will take in managing parking. It begins with general parking management guidelines and information then, details planning mechanisms with related actions that will be applied in different parking situations. The intervention matrix provides planning mechanisms in response to intervention levels identified by evidence-based parking data. A prioritised timeline for the actions is provided to assist in allocation of time and resources to parking projects. The success or otherwise of the parking planning mechanisms can be measured using the actions in the performance measurement section. Education on parking for residents and community is detailed in the next section along with the times when advocating to the State Government is required.

3.1 Intervention Matrix

The intervention matrix as presented in Table 31 should be used to guide all decision making before intervening in the parking network. The matrix will use evidence-based decision data derived from inground parking sensors or parking surveys.

Table 3.1: Parking Intervention Matrix

INTERVENTION TRIGGER	ACTION(S)
On-street parking occupancy above 85%	Introduce time restrictions Modify maximum time restrictions Introduce paid parking Increase paid parking fees through use of dynamic parking model Provide additional paid parking
On-street parking occupancy below 65%	Modify time restrictions Reduce paid parking fees through use of dynamic parking model
Off-street parking occupancy above 90%	Introduce paid parking Increase paid parking fees
Off-street parking occupancy below 70%	Decrease paid parking fees
Complaints regarding lack of compliance	Education by parking officer monitoring Issue infringement notices
Request by private parking owner for Town management of parking	Review parking management by owner If required, regulate private parking
New developments in close proximity to one another	Encourage the creation of consolidated and shared parking
Resident parking permit request	Check location of application is within resident parking permit zone Review resident parking permit application and issue if approved
Business parking permit request	Check if other parking locations are available nearby Review business parking permit application and issue if approved
Request for loading zone, taxi zone, accessible parking, bus parking, motorcycle parking	Review request with consideration of the movement and place street typology function Implement if it benefits the community and suits the street function
Developers cannot provide required parking	Require payment of cash-in-lieu funds for each unsupplied parking bay
Complaints regarding school parking	Education by parking officer monitoring Issue infringement notice
Increase in private vehicle use	Educate the community on sustainable transport options
Parking safety issue	1. Review safety issue 2. Remove, add or amend signs and line marking to resolve parking safety issue 3. Remove parking bays to resolve parking safety issue

3.1 Prioritised Action Timelines

Table 3.2 presents the summary of the required actions for each of the parking planning mechanisms as well as a timeline for their implementation.

Table 3.2: Prioritised Action Timelines

PLANNING MECHANISM	REQUIRED ACTIONS	SHORT TERM 1–3 YRS	MEDIUM TERM 3–5 YRS	LONG TERM 5–10 YRS
Travel Mode Shift	Develop and implement travel demand initiatives	✓		
	Advocate to the State Government for improved public transport infrastructure and services	✓		
	Provide and improve active transport infrastructure to motivate travel mode shift	✓		
	Educate on travel mode choices to reduce reliance on the private vehicle and parking demand	✓		
	Communicate the benefits of travel mode shift away from the private vehicle, even if only for some travel within the Town	✓		
Monitoring Parking	Install parking sensors in rapidly changing parking places within the Town to monitor parking occupancy and inform decision making using the intervention matrix	✓		
	Undertake parking surveys in areas where the parking management is perceived to require further changes.		✓	
	Monitor the success of parking management improvements and planning mechanisms through the monitoring of before and after occupancy and turnover data	✓		
	Celebrate parking management success through communicating positive impacts of planning mechanisms to the community	✓		
Dynamic Parking Model	Implement the dynamic parking model in areas of existing paid parking where the occupancy and turnover of bays is not within the target limit of 65–85% as detailed in the intervention matrix.	✓		
	Decrease the parking fees by 50% for the times where the parking occupancy is less than 65%.	✓		
	Increase the parking fees by 50% for the times where the parking occupancy is more than 85%.	✓		
	Provide an increased free time period at the start of the paid parking period if needed to increase the occupancy of the bays during particular times.	✓		
	Set parking fees using 10c increments for ease of payment and acceptance	✓		
Parking Benefits Districts	Develop a Parking Benefits District policy to ensure revenue produced in an activity centre is utilised to benefit that centre through improvements to the amenity and sustainable travel alternatives.		✓	
Enforcement	Continue to implement the Education and Compliance focussed method of enforcement allowing residents and visitors opportunity to learn and change behaviours before compliance is enforced	✓		
Regulation of Private Parking	Regulation of private parking is to be dealt with on a case-by-case basis	✓		
	The Town will only regulate private parking where there is a demonstrated benefit, and will not have a significant negative impact on public parking assets and facilities		✓	
Consolidated and Shared Parking	Encourage developers to cooperate to create consolidated and shared parking in a single location		✓	
	Consider permitting a small reduction in the number of parking bays to be provided in consolidated facilities on a case-by-case basis		✓	
Parking Permits	Issuing of business parking permits to be in line with existing adopted policy	✓		
	Issuing of residential parking permits to be in line with the existing adopted policy.	✓		
	Residential parking permits are not to be extended to new or improved activity centres.	✓		
	Regularly review all the permit types and their applications in line with future place planning.		✓	
Use Restrictions	Provide Loading Zones in convenient locations to serve local business, commercial and retail activities only when off-street loading is not available	✓		
	Provide safe and easy to use Accessible Parking in commercial and mixed-use areas	✓		
	Consider Taxi Parking in locations where there is a demonstrated high public demand for taxis	✓		
	Consider Night-time taxi stands in areas where there is high night-time activity and include the use of loading zones or bus stops		✓	
	Provide Bus Parking along designated scheduled bus routes in consultation with the State Government as detailed in the Integrated Transport Strategy		✓	
	Provide Motorcycle Parking subject to demonstrated demand in areas that are not suitable for regular car parking		✓	

PLANNING MECHANISM	REQUIRED ACTIONS	SHORT TERM 1–3 YRS	MEDIUM TERM 3–5 YRS	LONG TERM 5–10 YRS
Parking on Movement Corridors	Existing on-street parking located along 'Movement Corridors' will be considered for removal or change of use if there is a justified need		✓	
	Consider the removal of on-street parking on a case-by-case basis, based on a detailed consideration of the place plans for the activity centre and the movement and place street typology		✓	
Off-Street Public Parking Investment	Implement new off-street parking supply once level of service is not met despite the use of exhaustive parking planning mechanisms			✓
	Adopt a strategic and commercial approach to the location and size of new off-street parking facilities to ensure the investment is a benefit to the economy of the Town			✓
	Commit Parking Benefits District revenue to fund new off-street parking facilities		✓	
	Ensure location and operation of any new off-street parking facility continues to encourage sustainable travel choices above the use of the private vehicle			✓
Parking Ratios	Review minimum parking requirements, with consideration for maximum parking requirements, to allow development that is oriented towards active and public transport access, rather than access by private vehicle.		✓	
Cash-in-lieu	Provide a cash-in-lieu formula to determine the appropriate fee to be paid by developers when they cannot meet the minimum parking requirements for their development. The fee will cover all costs in providing other available parking		✓	
Smart Parking Technology	Implement appropriate technology to benefit drivers and to provide responsive and informed parking management	✓		
	Integrate technologies for the management of parking operations, enforcement, and communication		✓	
	Improve the collation and analysis of parking related information	✓		
	Continually monitor global transport technology changes	✓		
Electric Vehicles	Collaborate with RAC and the State Government to facilitate appropriately located electric vehicle charging stations in strategically located parking bays within the Town			✓
	Support and encouragement developers to include electric vehicle charging stations within their off-street car parks		✓	

PLANNING MECHANISM	REQUIRED ACTIONS	SHORT TERM 1–3 YRS	MEDIUM TERM 3–5 YRS	LONG TERM 5–10 YRS
School Parking	Advocate for the State and privately-owned schools to provide their own parking supply off-street for staff and visitors.	✓		
	Work with schools to optimise vehicle circulation through drop-off and pick-up areas.	✓		
	Require all new schools to provide their own off-street staff and visitor parking and drop-off and pick-up areas.		✓	
Event Parking	Encourage event organisers to use and promote alternative travel modes to the private vehicle	✓		
Performance Measurement	Determine performance measurements of parking changes through monitoring of parking occupancy and turnover before and after the parking changes are made and checking if occupancy goals have been met.	✓		
	Gain qualitative performance measurement information through community feedback to the parking officers.	✓		
	Compare the results of the parking management planning mechanism to the goals and objectives of the Town in the PMP and the Strategy		✓	
Advocacy	Request the State Government extends their project to include beneficial parking projects within the vicinity of their project that will enhance the whole area for all users	✓		
	Request the State Government assists the Town in funding parking projects adjacent to their projects.	✓		
	Advocate on behalf of the travelling public for more frequent public transport services and any route changes for bus services.		✓	
	Advocate for any proposed new bus routes to assist in transport mode shift.		✓	
Education	Continue to provide communication on the website of the unsustainability of current parking practices within the Town and the benefits to the residents of the parking management	✓		
	Undertake communication and engagement with the community, and visitors to the Town of Victoria Park by the parking officers to inform of the options for parking and other sustainable travel options	✓		
	Advise the Business Advisory Group of the effectiveness of parking management through evidence-based data to show that the parking management is successful.	✓		
	Place Parking Plan Actions			

Place Parking Plan Actions

PLANNING MECHANISM	REQUIRED ACTIONS	SHORT TERM 1–3 YRS	MEDIUM TERM 3–5 YRS	LONG TERM 5–10 YRS
Oats St PPP	Advocate for the State Government to either construct pedestrian connections from the Oats Street Station across Bank Street as part of the Oats Street level crossing removal project or, provide funding for the Town to construct the pedestrian connections.	✓		
	Encourage the Aqualife Centre to install boom gates to manage their parking and prevent all day parkers for the TAFE or commuters from using the short-stay off-street bays.		✓	
	Reduce the off-street parking fee within the Somerset Street Carpark to encourage drivers to park in the car park rather than cruise the streets searching for a vacant on-street bay.	✓		
	After the Somerset Street Carpark fees have been reduced, review the parking occupancy and turnover of the vehicles off-street and on-street in the area. Use this information in conjunction with the intervention matrix to make changes to the time restrictions both on-street and off-street in the area to best manage the parking.	✓		
East Victoria Park PPP	Reduce the parking time restrictions along Albany Highway between Basinghall Street and Dane Street to 2P paid parking to allow for more turnover of vehicles in this high demand parking area.	✓		
	Monitor the parking along the Albany Highway between Basinghall Street and Dane Street and the section of Basinghall Street adjacent to the Albany Highway to determine if the target occupancy levels are being met. Use the intervention matrix to determine any changes required to the parking fees in the area using the dynamic parking model.	✓		
	Remove parking bays as required to provide pedestrian connectivity opportunities along the Albany Highway to plan for the 'Streets for People' function.	✓		
Victoria Park PPP	Reduce the parking time restrictions along the Albany Highway between Teddington Road and Harvey Street to 2P paid parking to allow for more turnover of vehicles in this high demand parking area.	✓		
	Monitor the parking along the Albany Highway between Teddington Road and Harvey Street to determine if the target occupancy levels are being met. Use the intervention matrix to determine any changes required to the parking fees in the area using the dynamic parking model.		✓	
	Remove parking bays as required to provide pedestrian connectivity opportunities along the Albany Highway near the Rushton Street/Mackie Street intersection to plan for the 'Streets for People' function.	✓		
	Review the parking fees in the off-street car parks to provide consistent hourly and daily parking rates for the off-street paid parking.	✓		

Place Parking Plan Actions

PLANNING MECHANISM	REQUIRED ACTIONS	SHORT TERM 1–3 YRS	MEDIUM TERM 3–5 YRS	LONG TERM 5–10 YRS
Burswood South PPP	Investigate the areas that are most underutilised, 2P or P ticket through investigation of parking occupancy data to determine what demand there is for parking on-street in the area. Apply this information to the intervention matrix to determine any parking changes.	✓		
	Ensure off-street paid parking is a cheaper rate to provide an incentive for drivers to park in the off-street parking areas, leaving the more desirable on-street bays for the short to medium-stay parkers.		✓	
	Review the parking utilisation on the weekends to determine if the parking restrictions and paid parking should be implemented across the weekends. A cheaper rate could be applied for the weekends if the demand is less than on weekdays.		✓	
	Encourage businesses to use the laneway parking for staff. Provide improvements to the laneways to increase the desire to park due to increased safety through design.		✓	
Raphael Park PPP	Review the occupancy of the parking across the paid and time restricted parking areas to identify times of underutilisation and turnover rates. This will provide information needed to make parking management decisions to increase the utilisation and turnover of parking in the activity centre.	✓		
	Review the lighting in the areas of parking near the underpass with a view to providing adequate lighting for the pedestrians parking in these streets to access McCallum Park.		✓	
	As McCallum Park is developed, parking occupancy and turnover in the activity centre will need to be reviewed to allow for parking changes to be made that are appropriate for the changes in the demands of the area.			✓
Victoria Park Station PPP	Undertake regular reviews of parking occupancy and turnover of the activity centre which, will determine the parking demands and identify areas where long-stay parking is infiltrating residential streets. This information can be used to better manage the parking in and around Victoria Park Station.	✓		
	Review the current short-stay on-street parking restrictions with a view to consolidating to one short-stay time restriction in areas of high demand for short-stay parking where no other off-street parking is available.	✓		
	Advocate the State Government to provide more off-street commuter parking along Kitchener Avenue to reduce the overflow of commuter parking into the residential area.			✓

Place Parking Plan Actions

PLANNING MECHANISM	REQUIRED ACTIONS	SHORT TERM 1–3 YRS	MEDIUM TERM 3–5 YRS	LONG TERM 5–10 YRS
Technology Park PPP	Encourage Technology Park businesses to ensure all on-site parking is available for use by staff to remove some of the high demand for on-street parking and increase staff satisfaction.	✓		
	Improve the safety of shift workers walking to their vehicles by upgrading lighting in highly pedestrianised streets within the Technology Park.		✓	
	Encourage businesses to promote a car share arrangement for workers within the Technology Park who work similar shifts times. These workers could be guaranteed off-street bays as an incentive.		✓	
	Advocate to the State Government for more frequent bus services to and from Curtin University to remove the demand for student parking within the Technology Park.	✓		
Burswood Station East PPP	Implement short-stay parking restrictions across on-street parking in the area.	✓		
	Implement on-street drop off and pick up areas near the station to encourage commuters to be dropped off rather than driving to the station and requiring a parking bay all day.			✓
	Provide off-street cycle parking throughout the activity centre to encourage cycling to the area rather than driving.	✓		
	Regularly review the occupancy and turnover of parking in the area to determine changes in parking demands. This will help guide parking management decisions.	✓		
	Investigate the parking demands with a view to implementing paid parking when the occupancy of the time-restricted bays reaches 85%.	✓		
Lathlain PPP	Review the parking demands on event days to gather information to allow more efficient parking management for future events.	✓		
	Use the parking information gathered to provide education to visitors of the available and preferred parking locations.		✓	
	Encourage the West Coast Eagles management to provide incentives for catching the train to Victoria Park Station to attend Lathlain Park events such as including public transport travel costs in the ticket price.	✓		
	Improve the streetscape from Victoria Park Station to Lathlain Park to encourage the use of other forms of transport which removes the need for more parking in the area.	✓		

Place Parking Plan Actions

PLANNING MECHANISM	REQUIRED ACTIONS	SHORT TERM 1–3 YRS	MEDIUM TERM 3–5 YRS	LONG TERM 5–10 YRS
Carlisle Town Centre PPP	Advocate for the State Government to either construct pedestrian connections from the Carlisle Station to Archer Street or request funding to construct the pedestrian connections.	✓		
	Consider removing on-street parking in strategic locations within Archer Street where other uses may be more valuable to help to create a more attractive and functioning 'Vibrant Street'.	✓		

3.2 General Parking Management

The Town currently provides various on-street and off-street public parking including:

- Marked and unmarked on-street parking.
- Off-street parking at most parks, sports facilities and community facilities.

Balancing parking supply and demand is central to the Town's management of parking. The Town's approach is to:

- Reduce the demand for parking through provision of sustainable alternative travel choices and education.
- Improve the operation of existing parking assets through the effective use of an intervention matrix.
- Measure the performance of planning mechanisms that are used to manage parking to ensure they are optimal.
- Provide additional parking supply in a cost-effective manner, utilising funds from paid parking.

The parking management techniques applied by the Town step through an action process as utilisation increases. The Town should:

1. Regulate through line marking and signs.
2. Apply, monitor, and modify time restrictions.
3. As appropriate
    a. Provide additional unpaid parking, or
    b. Apply paid parking to existing parking, or
    c. Provide additional parking and apply paid parking.

Intervention levels for each of these management options are included in the intervention matrix.

On-street Public Parking

The Town is responsible for the management of all on-street parking in the Town. It is a community asset and as such must provide a Town wide community benefit. However, growth, land use change, the implementation of the movement and place framework, and other pressures require ongoing review of parking policy.

On-street parking provides for:

- Convenient access to street fronting small businesses.
- Activities with a regular turnover of parking.
- Temporary peaks in demand generated by surrounding development.
- General social and recreational activities in an area.

Off-street Public Parking

The Town also manages a variety of existing off-street public parking sites and will continue to play a role in the provision and management of new off-street parking sites in the future. Additional parking supply will usually be provided as off-street parking.

Off-street public parking facilities are an important element of the overall parking supply and restrictions in these areas should seek to complement on-street restrictions, to achieve balanced outcomes for an area.

While the overall aim is consistency across the Town, there may be specific local issues that require different management strategies to be applied. In these cases, it is important that evidence-based decisions are used in relation to management of these sites.

The following off-street car parks are managed by the Town:

- Hubert Street Off-street Car Park (free)
- King George Street Off-street Car Park (paid)
- GO Edwards Park Off-street Car Park (paid)
- Planet Street Off-street Car Park (free – 4-hour limit)
- Somerset Street Off-street Car Park (paid)

Types of Parking Restrictions

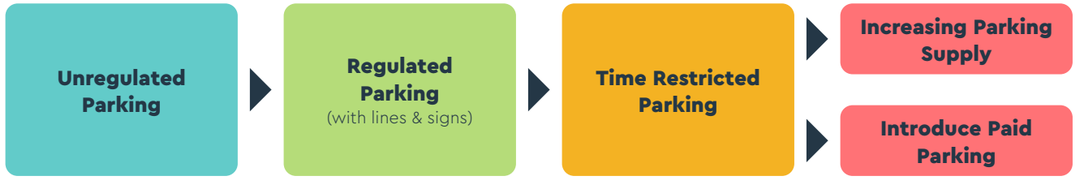
The allocation of parking bays will incorporate an appropriate mix of parking types and controls to accommodate the parking needs of an area and to support the goal of maximising the place function of a street.

Types of parking restrictions applied in the management of parking include:

- Unrestricted parking.
- Use restricted parking.
- Time restricted parking.
- Paid parking.
- No parking.

The type of parking restriction used is determined using the intervention levels related to the parking levels of service. Figure 31 presents the evolution of different types of parking.

Figure 3.1: Flow Chart Depicting the Evolution of Parking Types



Parking Levels of Service

Parking areas can be managed through the application of a variety of controls and demand management techniques that seek to provide an appropriate level of service to the community.

The challenge is to firstly determine the required level of service for different users, trip types and areas, and secondly, how to provide that level of service in a timely and effective way.

The Town recognises that individuals have different needs for different types of trips at different times. These requirements include:

- Proximity which considers how close parking needs to be to a particular destination and how sensitive the individual is to this distance.
- Duration which refers to how long a parking bay is needed. The length of time required reflects the purpose of the trip.

The Town attracts a high number of short-stay, medium-stay and long-stay visitors who provide an important contribution to the Town's economy.

People also need sufficient car parking to undertake a range of day-to-day activities. Shopping, personal business or a social activity which, typically require car parking for a short-stay and within proximity to a destination.

To provide an optimum use of public parking, it is generally desirable that an overall occupancy of between 65% – 85% be targeted within an acceptable and convenient distance from destinations. This provides a choice for drivers to match their planned activity to where they park and ensures availability of a bay.

Beyond 85% occupancy, there is a greater circulation by drivers looking for vacant bays. This causes inconvenience through delay and uncertainty, adding to traffic volume and potential congestion. This results in a likely perception that there is not enough parking. Occupancy of under 65% means the kerbside parking is underutilised which is a waste of resources.

When 65 – 85% occupancy is achieved and maintained, parking resources provide accessible and convenient parking to destinations while ensuring parking bays are available for newly arrived vehicles.

It may not be possible to easily achieve this desired level of service for all time periods of the day. This is where dynamic parking is an effective tool. The dynamic parking model allows for adjustments in the parking management to achieve between 65–85% occupancy at most times of day.

The availability of car parking and time limits needs to suit the purpose of the trip and the activities at the location. Levels of service for different trip purposes will therefore be considered relative to the intended duration of stay.

Short-stay parking (2P) will exist close to the intended destination, medium-stay parking (3P-4P) further from the destination and long-stay parking (greater than 4P) being accommodated further from the intended destination. For long-stay parking, a walk of five or more minutes is generally considered acceptable for stays over four hours. These catchments need to consider the scale, topography, movement and place street typologies and characteristics of the activity centre.

Actions

- Achieve target level of service for on-street public parking of 65–85% occupancy and for off-street public parking of 90% occupancy.
- Utilise the intervention matrix and corresponding planning mechanism to achieve level of service when it has exceeded the target level.
- Utilise the intervention matrix and corresponding planning mechanism to achieve level of service when it has dropped below the target level of service
- Regularly review levels of service for constantly changing places through the use of parking occupancy data from inground parking sensors or parking surveys to ensure the target goal of 65%-85% is met.

Parking management is only effective with the implementation of various planning mechanisms. Details of planning mechanisms available to the Town are provided in Section 3.4 together with suggested actions and intervention levels.

3.3 Planning Mechanisms

There are various planning mechanisms that can be used to plan future parking, manage existing parking, encourage travel mode shift, and create revenue for improving sustainable travel initiatives. The planning mechanisms are detailed with appropriate actions herein. The intervention levels at which to implement these mechanisms are provided in the intervention matrix in Section 3.1.

The planning mechanisms include:

- Travel Mode Shift.
- Monitoring Parking.
- Dynamic Parking Model.
- Parking Benefits Districts.
- Enforcement.
- Regulation of private parking.
- Consolidated and shared parking.
- Parking Permits.
- User Restrictions.
- Parking on Movement Corridors.
- Off-street public parking investment.
- Parking ratios.
- Cash-in-lieu.
- Smart Parking Technology.
- Electric Vehicles.

Travel Mode Shift

As outlined in the Integrated Transport Strategy, the Town will continue to support travel mode shift initiatives that reduce the dependence on private vehicles. A location that is well serviced by public and active transport means more attractive alternative travel options exist for people and a reduced need for parking can result.

Reduced reliance on private vehicles requires a significant improvement of the public transport network. The Town requires a coordinated approach with the State to link public transport improvement with parking demand management.

Successful travel mode shift initiatives deliver reduced parking demand through change to travel choice and are supported by appropriate infrastructure and services. Parking availability will be an increasing consideration in travel choice decisions. These initiatives would see a reduced reliance on private vehicles and reduced parking demand through an increased use of car sharing, ride sharing, carpooling, public transport, park and ride, walking and cycling.

Actions

- Develop, implement, support, and inform travel demand initiatives with the aim of effectively reducing reliance on private vehicle trips to achieve a reduction in parking demand.
- Advocate to the State Government for continued improvement to public transport infrastructure and services.
- Provide and improve active transport infrastructure to motivate travel mode shift.
- Educate on travel mode choices to reduce reliance on the private vehicle and parking demand.
- Communicate the benefits of travel mode shift away from the private vehicle, even if only for short or local trips within the Town.

Monitoring Parking

Monitoring of public parking occupancy and turnover is a critical tool for making evidence-based decisions to be applied to the intervention matrix. It will provide the level of utilisation in terms of occupancy and duration of stay. It will also provide data to monitor the success or otherwise of specific actions.

Parking Sensors

Some areas within the Town are expected to change rapidly which will be reflected within the parking behaviours. These changes need to be monitored to allow for parking changes to be applied when intervention levels are met. Parking sensors allow for ongoing parking monitoring of occupancy and turnover which can be used to manage the ever-changing parking demands in the area.

Parking Surveys

For areas within the Town that experience a less rapid change in parking behaviours, a more infrequent method of parking monitoring can be undertaken. Parking surveys will provide occupancy and other information for a typical weekday and weekend day if required. This can be undertaken whenever the need for a survey is perceived to be useful for parking management in an area.

Actions

- Install parking sensors in rapidly changing parking places within the Town to monitor parking occupancy and inform decision making using the intervention matrix.
- Undertake parking surveys in areas where the parking management is perceived to require further changes.
- Monitor the success of parking management improvements and planning mechanisms through the monitoring of before and after occupancy and turnover data.
- Celebrate parking management success through communicating the positive impacts of planning mechanisms to the community.

Dynamic Parking Model

Fixed parking rates and times do not always result in the occupancy and turnover desired by the Town. A Dynamic Parking Model is a method of adjusting paid parking rates and times to maintain occupancy within ideal limits of 65–85% and frequent turnover of bays. This model will require the Town to obtain parking occupancy and turnover data to determine the intervention levels required for the implementation of dynamic parking within an activity centre.

Actions

- Implement the dynamic parking model in areas of existing paid parking where occupancy and turnover of bays is not within the target limit of 65–85% as detailed in the intervention matrix.
- Decrease the parking fees by 50% for the times where the parking occupancy is less than 65%.
- Increase the parking fees by 50% for the times where the parking occupancy is more than 85%.
- Provide an increased free time period if needed to increase the occupancy of the bays during particular times.
- Set parking fees using 10c increments for ease of payment and acceptance.

Parking Benefits Districts

Revenue from paid parking should be used to improve the places that produce the revenue. This concept is termed parking benefits districts, where the revenue derived from paid parking is allocated to improving sustainable travel alternatives, public realm, amenity and general liveability. This system will allow the Town to demonstrate tangible benefits of well-managed parking and promote the economic development, amenity and liveability of precincts where parking revenue is generated.

As demonstrated in this document, the cost of private vehicle parking is high. A user-pays system in strategic locations ensures that parking costs are distributed equitably while parking benefits districts ensure that any revenue is spent equitably.

Potential locations for Parking Benefits Districts may include Victoria Park, East Victoria Park, St James, Burswood South and Burswood Station East. Where paid parking is implemented in other precincts, a Parking Benefit District should be established.

Actions

- Council adopt and endorse a financial policy based on the following criteria;
  - Where parking income is generated, revenue should be reinvested in place, public realm, transport or parking improvements within that precinct.
  - Parking revenue spent on transport improvements should be used to promote and facilitate sustainable transport modes or directed to other initiatives identified within the Integrated Transport Strategy that will directly benefit that precinct.
  - Parking revenue allocated to improving the parking network should be aligned to place parking plans or be determined using the intervention matrix provided in this document.
  - Parking revenue spent on public realm and place improvements should improve walkability, vibrancy and economic development within the precinct it was generated.

Enforcement

Enforcement can be used to ensure turnover of parking bays, allowing equitable parking opportunity for all users. Increased enforcement is required when:

- Occupancy extends beyond signed restrictions.
- Changes to parking restrictions occur in an activity centre.
- Parking behaviour is inappropriate.

There are three methods of enforcement which include:

- Compliance.
- Education and compliance.
- Education.

Compliance focussed enforcement is where the main goal is to ensure residents and visitors are not overstaying to allow equal opportunity for all users.

Education and compliance focussed enforcement is where the main goal is to educate drivers regarding the parking restrictions and issue parking infringements as required. The parking officers walk the streets primarily to provide advice and information to drivers and secondarily to issue infringements as a last resort. This method provides drivers with the opportunity to learn about parking and to be better informed when travelling to the Town to park their vehicle. It also ensures that overstay parking is not encouraged through the issue of infringements when necessary.

Education focussed enforcement is where the parking officers walk the streets to inform drivers of the parking restrictions and help them to make good parking choices. No parking compliance is undertaken as the community are expected to respond well to the education surrounding the parking restrictions in place.

Actions

- Continue to implement the Education and Compliance focussed methods of enforcement allowing residents and visitors opportunity to learn and change behaviours before compliance is enforced.

Regulation of Private Parking

Management of private property parking is the responsibility of the land owner but needs to be consistent with parking outcomes required to meet the needs of the activity centre. There are situations where owners of larger scale private parking may find it beneficial to have the Town regulate and enforce parking on the site.

Any request for the Town to undertake the regulation of parking on private property will be determined on a case-by-case basis following consideration of how the Town's involvement may help deliver the overall goals for parking management in the activity centre. Consideration will also be given to the measures taken to date by the owners to manage their parking. Any regulation will require a formal agreement and would be undertaken on a commercial basis.

Actions

- Regulation of private parking is to be dealt with on a case-by-case basis.
- The Town will only regulate private parking where there is a demonstrated benefit and will not have a significant negative impact on public parking assets and facilities.

Consolidated and Shared Parking

Shared parking between several sites results in an overall reduced peak demand across the day rather than catering for individual land use peaks. The Town encourages developers to cooperate collectively or with the Town to develop alternative parking solutions. Consolidated parking leads to shared parking which creates a benefit by:

- Giving people a single point of parking supply with greater opportunity of finding a car park
- Providing developers with the potential to reduce the cost of their on-site parking.

The intended outcome is a developer provided and maintained area open to all people 24 hours a day, seven days a week. In response to the beneficial outcomes, the Town is to consider permitting a small reduction in the number of displaced consolidated parking bays on a case-by-case basis. Innovative solutions to creating consolidated parking outcomes will be considered.

Actions

- Encourage developers to cooperate to create consolidated and shared parking in a single location.
- Consider permitting a small reduction in the number of parking bays to be provided in consolidated facilities on a case-by-case basis.

Parking Permits

The Town will periodically review the use and issuing of all permits. The Town has previously issued business parking permits and residential parking permits based on strict criteria. Residential parking permit schemes are used by the Town where a residential property, does not comply with the on-site parking requirements of the State Planning Policy 7.3 Residential Design Codes (R Codes). Properties are ineligible for a Residential Permit if:

- They comply with the on-site parking requirements of the State Planning Policy 7.3 Residential Design Codes (R Codes); or
- The development approval concedes less than the required number of on-site parking bays under the R Codes

A permit does not guarantee that a vacant parking space will be available. The existing residential parking permit scheme will not be extended to new or improved activity centres with a goal of encouraging sustainable transport modes.

Actions

- Issuing of business parking permits to be in line with existing adopted policy.
- Issuing of residential parking permits to be in line with the existing adopted policy.
- Residential parking permits are not to be extended to new or improved activity centres.
- Regularly review all permit types and their applications in line with future place planning.

Use Restrictions

The Town is responsible for allocating public parking spaces to a specific use. Typically, between 5% and 10% of the spaces may be allocated to specific use types. These use restrictions relate to the designation of parking spaces for specific use and vehicle types and are impacted by the movement and place street typology.

The typical categories applied include:

- Loading zones
- Accessible parking
- Taxi parking
- Bus parking
- Motorcycle parking
- Other.

Actions

- Provide Loading Zones in convenient locations to serve local business, commercial and retail activities only when off-street loading is not available.
- Provide safe and easy to use Accessible Parking in commercial and mixed-use areas.
- Consider Taxi Parking in locations where there is a demonstrated high public demand for taxis.
- Consider Night-time taxi stands in areas where there is high night-time activity and include the use of loading zones or bus stops.
- Provide Bus Parking along designated scheduled bus routes in consultation with the State Government as detailed in the Strategy.
- Provide Motorcycle Parking subject to demonstrated demand in areas that are not suitable for regular car parking.

Parking on Movement Corridors

The Integrated Transport Strategy identifies the movement and place street typology of roads within the Town. The key transport corridors in the Town are called 'movement corridors' which provide safe, reliable, and efficient movement of people and goods between regions and strategic centres while mitigating the impact on adjacent communities. These roads will continue to provide a high movement function within the Town and there may be a need to consider removal of some kerbside parking to accommodate future transport growth along some roads. Other 'Movement Corridors' may see a change in street typology, and in response, parking may be converted to other uses including bus stops, loading zones, car share bays and streetscape improvements.

Actions

- Existing on-street parking located along 'Movement Corridors' will be considered for removal or change of use if there is a justified need.
- Consider the removal of on-street parking on a case-by-case basis, based on a detailed consideration of the place plans for the activity centre and the movement and place street typology.

Off-Street Public Parking Investment

The investment in additional off-street parking facilities will only be considered when the levels of service for parking are not being met, despite implementation of a range of parking planning mechanisms.

The integration of parking requirements with the planning for other transport modes needs to maximise the potential of the Town's investment. Provision of additional parking supply as either an at-grade site or changing an at-grade site to a multi-storey facility is a costly exercise. Revenue from paid parking with each activity centre will be used to fund the additional supply through the concept of Parking Benefits Districts which is detailed in this plan. The Town needs to control the pricing and regulation of any new off-street public parking to manage and influence parking outcomes and operation of an activity centre and across the Town to best protect community interest.

The construction of additional supply will be deemed as a last resort after all other parking measures have been exhausted and proved unsuccessful in restraining parking demand and encouraging transport mode shift. The guiding principle is to manage the existing parking infrastructure more efficiently in response to increasing demand. Increasing supply for long-stay parkers should only be considered remote from the activity centres.

Actions

- Implement new off-street parking supply once level of service is not met despite the use of exhaustive parking planning mechanisms.
- Adopt a strategic and commercial approach to the location and size of new off-street parking facilities to ensure the investment is a benefit to the economy of the Town.
- Commit Parking Benefits District revenue to fund new off-street parking facilities.
- Ensure location and operation of any new off-street parking facility continues to encourage sustainable travel choices above the use of the private vehicle.

Parking Ratios

Parking management aims to provide an appropriate mix of public and private off-street parking supply. Private parking and its provision are important elements for holistic Town-wide parking outcomes.

It is expected that development:

- Provides private on-site parking for its staff and customers in accordance with the Town of Victoria Park Planning Scheme
- Encourages staff to use sustainable transport options such that public parking demand is not impacted through the provision of end of trip facilities.

Historically, minimum parking ratios have been used to provide adequate on-site parking for new developments. With the goal of reducing private car usage, maximum parking ratios have been introduced to provide a limit on the supply of parking in Town centres. The provision of alternative transport choice end of trip facilities is required to be provided as an encouragement for staff to move from using their private vehicle to an alternative travel mode.

Actions

- Review minimum parking requirements, with consideration for maximum parking requirements, to allow development that is oriented towards active and public transport access, rather than access by private vehicle.

Cash-In-Lieu

Cash-in-lieu is a one-off fee paid to the Town by developers when they cannot meet the minimum parking ratios for their development. This fee is based on the cost to provide a parking space using current land costs in the development and the construction costs to build the required parking. These funds will be used to develop future parking infrastructure.

Actions

- Investigate a cash-in-lieu formula for developments that cannot meet the minimum parking requirements, consistent with that laid out Schedule 2, Clause 77H(4) of the Planning and Development (Local Planning Schemes) Regulations 2015 – Payment in lieu of parking condition for non-residential development. The fee will cover costs in providing other available parking and contribute toward infrastructure that supports active transport modes.

Smart Parking Technology

One key to the successful application of the Parking Management Plan will be the incorporation of integrated smart parking technology throughout the Town.

Integrated smart parking technology will greatly improve the customer experience by making it easier to find car parking sites and available spaces and, provide flexible options for payment. These technologies will also improve the efficiency and effectiveness of parking enforcement and management as well as future planning with more frequent, current, and accurate data.

Integrated parking technologies benefit both the Town and users and, have enabled a re-think of the policies that determine how parking is bought, managed, priced, and charged.

Some benefits of improved technology and information availability include:

- Smart phone Apps allowing people to source information to make parking an easier experience (e.g., advice on parking restrictions, payment, reminders of expiry time, reducing vehicle circulation time)
- Real-time information for users including parking availability prior to travel or when arriving at the destination.
- Responsive directional signage and guidance systems that lead drivers to nearby areas with available parking
- New and easy payment methods where paid parking applies (e.g., ticketless 'tap and go', cash, card, QR code and phone pay/top up options)
- SMS service to mobiles to avoid overstaying
- Less traffic congestion and carbon emissions
- Improved, more efficient and more accurate management of enforcement staff through real-time transmission of non-payment or overstay offences rather than seeking them out.
- Better data collection and analysis on a bay-by-bay basis to improve management and planning (e.g., recording occupancy and duration of parking)
- Opportunities for multifunctional on-street parking sentinels that can sell public transport tickets, book taxis, or provide tourist information.

Care should be taken when introducing parking related smart technology given the initial and ongoing costs and the short life cycle of technology which leads to potential redundancy.

There is rapid change occurring in other transport technologies globally that will also impact upon future vehicle use and parking needs. These include:

- Driverless vehicles
- Electric vehicles with in built smart technology.
- Car share schemes
- Real time public transport information systems linked to mobile apps.

These technologies are emerging and will mature over time. The Town should adopt appropriate technologies and devise its approach to parking accordingly.

The Town is committed to the implementation of smart technology and will trial some of these prototype systems.

Actions

- Implement appropriate technology to benefit drivers and to provide responsive and informed parking management.
- Integrate technologies for the management of parking operations, enforcement, and communication.
- Improve the collation and analysis of parking related information.
- Constantly monitor global transport technology changes

Electric Vehicles

Electric vehicles are fast becoming a popular choice of vehicle for Australians including those in the Town. These vehicles require charging stations and as more vehicles are in circulation throughout the Town more vehicle charging stations will be required.

Actions

- Collaborate with RAC and the State Government to facilitate appropriately located electric vehicle charging stations in strategically located parking bays within the Town.
- Support and encouragement developers to include electric vehicle charging stations within their off-street car parks.

School Parking

A short period of congestion is often experienced on-street around schools during drop-off and pick-up times. Most parents or caregivers only require a very short time to drop-off or pick-up resulting in high turnover of vehicles. To achieve efficient circulation of traffic, well designed facilities are required.

Parking for school staff and visitors should be provided by the educational institute in off-street parking on site.

Actions

- Advocate for State and privately-owned schools to provide their own parking supply off-street for staff and visitors.
- Work with schools to optimise vehicle circulation through drop-off and pick-up areas.
- Require all new schools to provide their own off-street staff and visitor parking and drop-off and pick-up areas.

Event Parking

Short-stay parking demands can exceed supply during events. Parking for these short-stay events cannot be provided for but must be well managed. Temporary parking arrangements should be implemented, and alternative travel modes should be encouraged.

Actions

- Encourage event organisers to use and promote alternative travel modes to the private vehicle.

3.4 Performance measurement

The effectiveness of parking management is essential when making changes or improvements to parking.

When parking controls are changed, the benefits can be determined using the methods of monitoring contained within the intervention matrix. The data of occupancy and turnover is gathered using a combination of parking sensors and parking surveys. This data needs to be recorded and analysed before the changes are made to the parking and then further data is to be recorded and analysed after the changes have been made. The success or otherwise of the parking management intervention will then be used to inform future decision making. Ongoing performance measurement will be required in certain areas to identify if the effectiveness of the change where a new or improved change needs to be made.

Another performance measurement is to listen to the community through community consultation or community response provided to the parking officers. This qualitative feedback can provide information to help with decision making for future parking management changes or improvements.

The alignment with the vision of the PMP and the Strategy are an overall performance measure to ensure strategy goals and vision are being achieved through parking management changes. All parking management decisions should be linked to the goals and objectives of the Town.

Actions

- Determine performance measurements of parking changes through monitoring of parking occupancy and turnover. Analyse data from before and after the parking changes were made to check if occupancy goals have been met.
- Gain qualitative performance measurement information regarding parking changes through community feedback via parking officers or direct communication to the Town.
- Compare the results of the parking management planning mechanism to the goals and objectives of the Town in the PMP and the Strategy

3.5 Advocacy and Education

Advocacy

Advocacy and Education are important methods of improving the available travel options and encouraging people to travel sustainably throughout the Town.

The State Government manages all public transport infrastructure and services within the Town of Victoria Park. They will often make changes to State owned public transport infrastructure within the Town. These changes impact the local parking environment and provide opportunity for the Town to request assistance.

Public Transport service needs change over time. Often the local government is best placed to advise on required changes to frequency and route planning of services due to their close contact with the community. These changes impact the location of parking provisions on-street and encourage the reduction in parking bays due to the increased uptake in public transport.

Actions

- Request the State Government extends their project to include beneficial parking projects within the vicinity of their project that will enhance the whole area for all users.
- Request the State Government assists the Town in funding parking projects adjacent to their project.
- Advocate on behalf of the travelling public for more frequent public transport services and any route changes for bus services.
- Advocate for any proposed new bus routes to assist in transport mode shift.

Education

Despite every driver being a parker, the broader environmental, economic, and social impacts of parking are rarely understood or appreciated by users, unlike their understanding of the effects of vehicle use. The Town has provided some easy-to-understand videos on the website explaining the how and why of parking.

The community need to understand that:

- Drivers cannot expect unlimited parking close to their destination.
- Unlimited supply has environmental, social, and economic drawbacks.
- Parking needs to be sustainable.
- There is a cost for the provision of parking.
- Parking users need to contribute to the cost of parking infrastructure equitably.
- Net surplus from parking services is to be reinvested into improving access and transport infrastructure.

The Town has a Business Advisory Group that is consulted on parking matters. The businesses need to know that the Town is working with them to encourage turnover of bays which provides more customers for their businesses.

Actions

- Continue to provide communication surrounding the unsustainability of current parking practices within the Town and the benefits to the residents of the parking management.
- Require parking officers to inform visitors and residents of the most suitable parking opportunities for their needs and encourage the use of sustainable transport options.
- Advise the Business Advisory Group of the effectiveness of parking management through evidence-based data to show that the parking management is successful.

4 PLACE BASED INITIATIVES

Each activity centre within the Town has unique characteristics with respect to land use and parking. To address this, individual parking management plans have been established for 10 key places within the town. The parking landscape within these places will change in the future with some 'Movement Corridors' within the activity centres changing movement and place street typology to become 'Vibrant Streets' or 'Streets for People'. This change will play an important role in achieving the Town's vision as a Dynamic Place for Everyone.

4.1 Oats Street Parking Plan

The Oats Street activity centre covers parts of Oats Street, Somerset Street, Bank Street, Read Street, Withnell Street, Tuckett Street, Beatty Avenue, Carnarvon Street and Rutland Avenue. The major land use in this activity centre is residential with light industrial, commercial, and retail on the fringes. Within this activity centre is Oats Street Station with the South Metropolitan TAFE Carlisle Campus to the south of the station on Bank Street. The Aqualife Centre is located to the southwest of the TAFE.

Oats Street is currently a 'Movement Corridor' within the Town. The Town has identified the future movement and place street typology of Oats Street to be a 'Vibrant Street'. This will create a more liveable environment in and around the Oats Street Station, while still facilitating a high movement function. Additionally, the Inner Armadale Level Crossing Removal Project will see the grade separation of the existing Oats Street level crossing and the transformation of the land under the rail viaduct adjacent to a portion of Rutland Avenue as a 'street for people'.

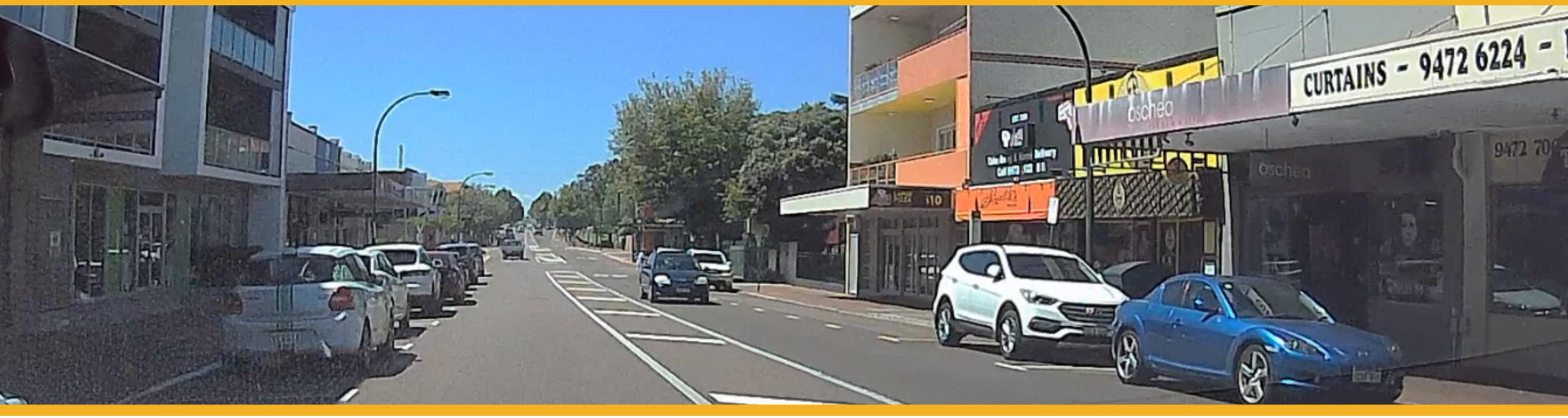
Oat Street

Observations

Oats Street has competing parking demands from commuters, TAFE students and staff, residents, and businesses. The bus transfer station location has competing traffic demands with drivers looking for parking bays. The plans to relocate the bus transfer station to the other side of the station will enable ease of access for buses as the interactions with private vehicles searching for parking will be reduced. There are numerous pedestrians in the area and there needs to be a focus on improving pedestrian connectivity. The METRONET project to remove the level crossing at Oats Street will ease the traffic congestion, improve circulating to find parking and provide more accessible and safe pedestrian facilities in the area.

Actions

- Advocate for the State Government to either construct pedestrian connections from the Oats Street Station across Bank Street, as part of their Oats Street level crossing removal project or, provide funding for the Town to construct the pedestrian connections.
- Encourage the Aqualife Centre to install boom gates to manage their parking and prevent all day parkers for the TAFE or commuters from using the short-stay off-street bays.
- Reduce the off-street parking fee within the Somerset Street Carpark to encourage drivers to park in the car park rather than cruise the streets searching for a vacant on-street bay.
- After the Somerset Street Carpark fees have been reduced, review the parking occupancy and turnover of the vehicles off-street and on-street in the area. Use this information in conjunction with the intervention matrix to make changes to the time restrictions both on-street and off-street in the area to best manage the parking.



4.2 East Victoria Park Parking Plan

East Victoria Park is a vibrant and diverse place covering the central spine of Albany Highway and adjoining side streets from Shepperton Road to Kent Street which are primarily residential areas. The Albany Highway strip attracts people from across the town and beyond and the largest shopping centre in the Town is in East Victoria Park on Albany Highway.

Under the movement and place framework, Shepperton Road is currently a 'Movement Corridor' within East Victoria Park. Additionally, Albany Highway and sections of Basinghall Street and Sussex Street have the function of 'Vibrant Streets'. The Strategy has identified the future movement and place street typology to 'Streets for People' function for Albany Highway between Basinghall Street and Dane Street, Basinghall Street adjacent to Albany Highway and Etwell Street. This change will make East Victoria Park a more attractive place to visit.

East Victoria Park

Observations

The area is a high demand parking area with high turnover due to the presence of the cafes and restaurants. The car free day event that was held last year on Albany Highway within East Victoria Park was hugely successful. The collaboration of the Town with the Vic Park Collective to facilitate this event has shown the community that the Albany Highway precinct in East Victoria Park can be converted to a 'Street for People' that can be enjoyed by residents and visitors.

Actions

- Reduce the parking time restrictions along the Albany Highway between Basinghall Street and Dane Street to 2P paid parking to allow for more turnover of vehicles in this high demand parking area.
- Monitor the parking along the Albany Highway between Basinghall Street and Dane Street and the section of Basinghall Street adjacent to the Albany Highway to determine if the target occupancy levels are being met. Use the intervention matrix to determine any changes required to the parking fees in the area using the dynamic parking model.
- Remove parking bays as required to provide pedestrian connectivity opportunities along the Albany Highway to plan for the 'Streets for People' function.

4.3 Victoria Park Parking Plan

Victoria Park is the heritage heart of the Town and extends along the central spine of Albany Highway covering side streets north and south of Albany Highway. Within the activity centre there are cafes, restaurants, shopping centres and other retail.

The street typology of Shepperton Road is a 'Movement Corridor', and Albany Highway is a 'Vibrant Street'. The Strategy has identified the movement and place street typology of Albany Highway between Teddington Road and Harvey Street to be a 'Streets for People' in the future. Like the East Victoria Park changes, this will help to create a more welcoming environment for residents and visitors to Victoria Park.

Victoria Park

Observations

The area is highly popular due to its cafes, restaurants and retail. Short-stay parking within the area is in high demand. Plans for the Albany Highway, Rushton Street and Mackie Street intersection will involve the removal of some parking bays to create a more pedestrian friendly place. This project will be undertaken under the Old Spaces, New Places initiative which will assist in revitalising the Heart of the Town Centre.

Actions

- Reduce the parking time restrictions along the Albany Highway between Teddington Road and Harvey Street to 2P paid parking to allow for more turnover of vehicles in this high demand parking area.
- Monitor the parking along the Albany Highway between Teddington Road and Harvey Street to determine if the target occupancy levels are being met. Use the intervention matrix to determine any changes required to the parking fees in the area using the dynamic parking model.
- Remove parking bays as required to provide pedestrian connectivity opportunities along the Albany Highway near the Rushton Street/Mackie Street intersection to plan for the 'Streets for People' function.
- Review the parking fees in the off-street car parks to provide consistent hourly and daily parking rates for the off-street paid parking.

4.4 Burswood South Parking Plan

The Burswood South activity centre is situated between the Great Eastern Highway and Shepperton Road along Burswood Road. Burswood South is home to numerous businesses and residents with GO Edwards Park to the north. The Strategy has identified that the Burswood South 'Movement Corridor' of Burswood Road will change its movement and place street typology to a future 'Vibrant Street'.

Burswood South

Observations

An Old Spaces New Places project is occurring in Burswood South with the aim of revitalising the area. This includes streetscape improvements to create an attractive and safe environment for users. There is limited to no parking required currently at night due to the lack of land use activities at night.

Actions

- Investigate the areas that are most underutilised, 2P or P ticket through investigation of parking occupancy data to determine what demand there is for parking on-street in the area. Apply this information to the intervention matrix to determine any parking changes.
- Ensure off-street paid parking is a cheaper rate to provide an incentive for drivers to park in the off-street parking areas, leaving the more desirable on-street bays for the short to medium-stay parkers.
- Review the parking utilisation on the weekends to determine if the parking restrictions and paid parking should be implemented across the weekends. A cheaper rate could be applied for the weekends if the demand is less than on weekdays.
- Encourage businesses to use the laneway parking for staff. Provide improvements to the laneways to increase the desire to park due to increased safety through design.

4.5 Raphael Park Parking Plan

The Raphael Park activity centre is bound by Albany Highway, Canning Highway and Washington Street. The area includes businesses, high density residential, medium residential and three local schools. Raphael Park activity centre is across Canning Highway from McCallum Park which is a highly popular park with various recreational opportunities.

Raphael Park

Observations

Traffic and parking is an issue around school pick-up and drop-off times due to the large number of schools in the area. Parking officers monitor the area 2–4 times per week using an educational approach to encouraging compliance.

Actions

- Review the occupancy of the parking across the paid and time restricted parking areas to identify times of underutilisation and turnover rates. This will provide information needed to make parking management decisions to increase the utilisation and turnover of parking in the activity centre.
- Review the lighting in the areas of parking near the underpass with a view to providing adequate lighting for the pedestrians parking in these streets to access McCallum Park.
- As McCallum Park is developed, parking occupancy and turnover in the activity centre will need to be reviewed to allow for parking changes to be made that are appropriate for the changes in the demands of the area.

4.6 Victoria Park Station Parking Plan

The activity centre of Victoria Park Station covers Duncan Street from Albany Highway to Kitchener Avenue and adjoining side streets. Victoria Park Station is located near the intersection of Duncan Street and Kitchener Avenue. The area includes one school, residential housing, and some businesses.

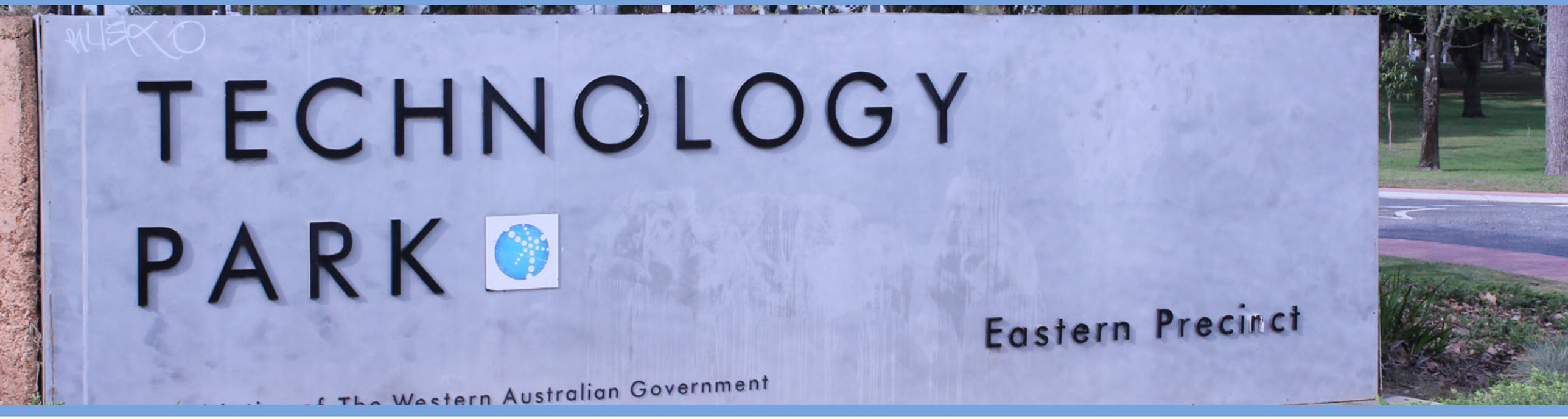
Victoria Park Station

Observations

There are limited parking restrictions around the Victoria Park Station. The area is utilised by high school students walking and cycling to school from the Station. There is a low tree canopy in the area which discourages pedestrian activity. The Integrated Transport Strategy has an action to implement a streetscape improvement plan for Duncan Street to improve the attractiveness of walking and cycling.

Actions

- Undertake regular reviews of parking occupancy and turnover of the activity centre which, will determine the parking demands and identify areas where long-stay parking is infiltrating residential streets. This information can be used to better manage the parking in and around Victoria Park Station.
- Review the current short-stay on-street parking restrictions with a view to consolidating to one short-stay time restriction in areas of high demand for short-stay parking where no other off-street parking is available.
- Advocate the State Government to provide more off-street commuter parking along Kitchener Avenue to reduce the overflow of commuter parking into the residential area.



4.7 Technology Park Parking Plan

The Technology Park activity centre is bound by Hayman Road and Kent Street and includes Jarrah Road and other streets. The Technology Park is bounded by the South Metropolitan TAFE, Bentley Campus to the east and Curtin University and the Perth Hockey Stadium to the south. All of these generate high parking demand. The Technology Park is surrounded by the 'Movement Corridors' of Kent Street and Hayman Road.

Technology Park

Observations

There are numerous complaints regarding lack of parking within the Technology Park. With other competing demands for medium- to long-stay parking adjacent to the Technology Park, the available parking is often utilised well for most of the day. Of note are the Curtin University students who can park in the Technology Park for free rather than pay to park within the university grounds. There are no timed parking restrictions in place. The Technology Park is a pedestrian barrier limiting the walkability between the Town and the University.

Actions

- Encourage Technology Park businesses to ensure all on-site parking is available for use by staff to remove some of the high demand for on-street parking and increase staff satisfaction.
- Improve the safety of shift workers walking to their vehicles by upgrading lighting in highly pedestrianised streets within the Technology Park.
- Encourage businesses to promote a car share arrangement for workers within the Technology Park who work similar shifts times. These workers could be guaranteed off-street bays as an incentive.
- Advocate to the State Government for more frequent bus services to and from Curtin University to remove the demand for student parking within the Technology Park.

4.8 Burswood Station East Parking Plan

The Burswood Station East activity area is bound the Graham Farmer Freeway, Great Eastern Highway and Victoria Park Drive. The Town's goal is to regenerate the area from a service and industrial precinct into a transit-oriented development that is pedestrian friendly due to its proximity to Burswood Peninsula and the popular Albany Highway. As part of the planning for the redevelopment of the area near Burswood Station the Town commissioned the Burswood Station East Parking Supply and Management Plan.

The movement and place street typology in the Strategy identified Victoria Park Drive as a 'Movement Corridor' within the Burswood Station East activity centre.

Burswood Station East

Observations

The redevelopment plans for the Burswood Station East area includes an upgrade to "Urban Avenue" portions of Goodwood Parade, Stiles Avenue and Griffiths Street in accordance with the concept plan in the Burswood Station East Planning Framework. Residential development in the area includes the provision of one parking bay per dwelling and the Town will not allow residential parking permits in the area. The goal is to inform new residents that they are sacrificing parking if they move to the area. Various other transport options will be available due to the location of the Station and plans to improve the streetscape for pedestrians and cyclists.

Actions

- Implement short-stay parking restrictions across on-street parking in the area.
- Implement on-street drop off and pick up areas near the station to encourage commuters to be dropped off rather than driving to the station and requiring a parking bay all day.
- Provide off-street cycle parking throughout the activity centre to encourage cycling to the area rather than driving.
- Regularly review the occupancy and turnover of parking in the area to determine changes in parking demands. This will help guide parking management decisions.
- Investigate the parking demands with a view to implementing paid parking when the occupancy of the time-restricted bays reaches 85%.

4.9 Lathlain Parking Plan

The Lathlain activity centre is a residential area bounded by Great Eastern Highway, Orrong Road, Roberts Road, and the Perth-Armadale railway. Two main streets are Lathlain Place and Gallipoli Street, and Lathlain Park (Mineral Resources Park) is in the area and is the headquarters for the West Coast Eagles.

Orrong Road is identified as a 'Movement Corridor' in the area. The Strategy has identified the change of movement and place street typology of Lathlain Place and a portion of Gallipoli Street to become future 'Streets for People'.

Lathlain

Observations

There are sections of 4P parking near Lathlain Park, but McCartney Crescent is unrestricted. On event days at Lathlain Park, the demand for parking in the surrounding streets is high. The Lathlain Park development in the area continues to create large areas of unrestricted parking. The residents who live around the park become frustrated at the parking behaviours of visitors on game days.

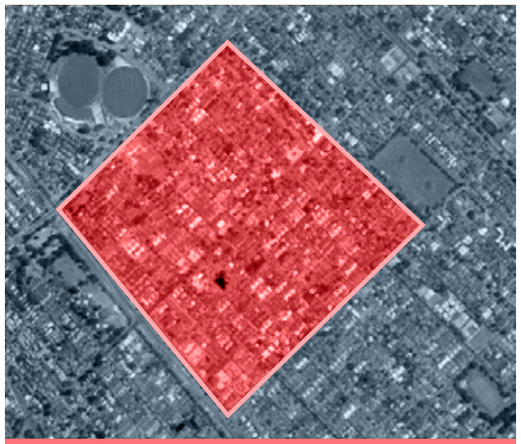
Actions

- Review the parking demands on event days to gather information to allow more efficient parking management for future events.
- Use the parking information gathered to provide education to visitors of the available and preferred parking locations.
- Encourage the West Coast Eagles management to provide incentives for catching the train to Victoria Park Station to attend Lathlain Park events such as including public transport travel costs in the ticket price.
- Improve the streetscape from Victoria Park Station to Lathlain Park to encourage the use of other forms of transport which removes the need for more parking in the area.

4.10 Carlisle Town Centre Parking Plan

Carlisle is a primarily residential area focused around a vibrant local centre on Archer Street. The neighbourhood offers a great lifestyle with a range of housing choices, well-connected to the Perth CBD and beyond by two train stations, and multiple lifestyle outlets on its doorstep. There are plenty of places to walk including green spaces such as Fletcher Park and the new Zone 2X.

The Strategy has identified Orrong Road as a 'Movement Corridor' and Archer Street as a 'Vibrant Street' within the movement and place street typology. The Archer/Mint Streetscape Improvment project includes improvements such as protected cycling infrastructure, shared road space, dwelling street space, efficient movement of people via public transport and significant vegetation coverage.



Carlisle Town Centre

Observations

As part of the IALXR Project, Carlisle Station will be redeveloped including revitalised station precincts and new station access infrastructure. Archer Street is increasingly gaining focus as the vibrant centre of Carlisle.

Actions

- Advocate for the State Government to either construct pedestrian connections from the Carlisle Station to Archer Street or request funding to construct the pedestrian connections.
- Consider removing on-street parking in strategic locations within Archer Street where other uses may be more valuable to help to create a more attractive and functioning 'Vibrant Street'.

APPENDIX A
REVIEW OF BACKGROUND INFORMATION

A.1 Previous Reports

The existing PMP and Integrated Movement Network Strategy are the reports required to be updated. An overview of these documents is provided below.

Town of Victoria Park PMP

This Plan provides a framework for the implementation of parking management changes to specific areas and future parking management activities. It consists of an analysis of seven hotspots, each consisting of:

- A look into the current parking environment, such as the stakeholders, transport, available parking, and the main parking problems in the area
- Analysis of current information on the hotspot such as reports from consultation and data
- Recommendations on parking management changes (such as technologies and techniques)
- A plan of implementation for these changes
- A plan of how to monitor and review the impact of applying changes

Parking management issues:

- 'Significant' amounts of illegitimate parking
- Moving of vehicles to avoid enforcement.
- Variations between existing parking restrictions throughout ToVP.
- Short-stay parking being dominated by all day parking in some areas.
- Cycle routes running nearby parking areas with little clarity.

Many of the solutions to these problems involve either changing the time restrictions in certain areas, mainly to 2P parking, providing free parking in specific areas, or changes to the pricing of parking in the car parks. It also includes the use of best practice technology for enforcement and the use of revenue raised by enforcement to be put back into the area.

Integrated Movement Network Strategy

This is a strategic document that intends to provide a framework to guide the development of a multi-modal transport network to improve accessibility for all and facilitate sustainable and active travel. It defines the regional framework of the town as well as what can be changed in this framework, a local framework that responds to the regional framework while also providing for future local needs and aspirations, identifies issues and strategies that should be focused on for the next 20 years, and provides a guide on what to prioritise council resources and lobbying power on within the strategy. The strategy adopted includes:

- A focus on limited improvements to balance the needs of traffic.
- The direction of resources and revenue used in public transport to be used to greatly improve infrastructure (such as light rail), developmental requirements and preserve current rail networks for the possibility of future expansion.
- Supporting active management of parking supply whilst monitoring and adjusting future supply
- Giving greater priority for pedestrians and cyclists, their accessibility, and their facilities and infrastructure
- Adopting a proactive approach to transport planning

In regard to parking, the strategy consists of eight different elements:

1. Supporting the strategies outlined in their management plan.
2. Adopting a parking hierarchy
3. Supporting the use of off-street parking limits
4. Developing more stringent parking restrictions for new developments to encourage the use of more sustainable modes.
5. More proactive management of parking within the town
6. Support new on-street parking based on the parking hierarchy, with a focus on ACROD parking provision.
7. Ensure that new off-street parking supply is informed by data and support alternative modes of transport.
8. Use revenue collected from parking management policies to go in the integrated movement network strategy.

A.2 Plans, Schemes and Strategy documents

The Town has produced various plans, schemes and strategy documents that refer to parking and its impacts on the sustainability and streetscapes of the Town. These documents have been reviewed and the information is considered in the recommendations of this PMP.

Public Open Space Strategy

The public open space strategy provides the ToVP on equitable provision, access, type and quality of Public Open Space (POS). It is a key reference document that informs the Town on its current and future direction of its public open space. In relation to parking, the vision of the town includes equitable access to POS as well as a connected POS network, both of which can be affected by decisions on the management of parking. Examples include the consideration of Belmont Park as a large scale, inner-city, high density development should include active sporting facilities, noting that the current plan not allowing sufficient space for these facilities, which may have a flow on effect upon the supply of parking in that area and its possible reduction.

Town Planning Scheme

This Scheme was prepared for the purpose of controlling and guiding development and growth in a responsible manner that can also respond to change. In relation to parking, it refers to a separate policy. The policy covers the principals, policies, and any additional matters related to developing parking in the town.

The objectives of this parking policy are to ensure adequate provision of parking for various services, facilities, and residential developments and to efficiently manage parking supply and demand, ensure that the environmental and amenity objectives in the town planning scheme are not prejudiced, maintain secure and attractive parking facilities, and to provide guidance on the development and design of parking facilities within the Town.

Urban Forest Strategy

The urban forest strategy was developed in response to community concerns about the levels of tree cover throughout the town, with around a total canopy cover of 10% in 2016. The plan aims to increase the tree canopy to 20% by protecting existing tree and undertaking a mass tree planting program.

The impact this strategy will have on parking will include suggestions to reclaim parking bays for tree planting as well as changes to the design code of parking which may require landscaping in external car parks to include shade trees, which may have a small impact on the cost and maintenance of the car parks.

Place Plans – Town of Victoria Park

These place plans summarise the plans and strategies for the ToVP. It addresses parking in Action 1.14 stating:

- That the Town's PMP is due for a review and parking revenue requires a clearer expenditure plan.
- The town had adopted a dynamic parking management approach which requires a review and a parking benefit strategy to be included in the review to guide expenditure of parking revenue.
- The PMP is in need of an update and include a parking benefit strategy.
- It is categorised to be part of a plan to reactivate the local economy, be part of the new and revived local economy and be a significant contributor to the Town's climate change adaptation and mitigation efforts.

Corporate Business Plan

This plan was developed as part of the town Strategic Community Plan. It is a 5-year planning document that documents some of the deliverables the ToVP has promised in its Strategic Community Plan, outlines of 27 service areas in which to deliver the outcomes outlined in the strategic community, and a list of major projects that will be undertaken within the district.

It stated that hotspots 1, 4, 5, and 6 identified in the PMP have been reviewed as well as the management of Hubert Street car park and the Parking Permit Policy, with hotspots 2 and 3 going under review in 2020. It is planning to:

- Review parking hotspots 1, 4, 5, and 6 and the parking around Burswood Station again
- Develop a parking benefits strategy over the next 2 years.
- Conduct a review of parking operations.

Strategic Community Plan

This plan is the principal strategy and planning document that reflects what the community wants. It will be used to guide local government on what to prioritise in the short and long-term future of the town and inform other strategies and plans. While it does not address parking directly, survey results show that traffic management, parking and streetscapes were ranked the highest priority issue by people in the town. It has also stated there will be a focus on sustainable transport and rail networks in the plan, with more focus on public transport networks, cycling and walking throughout the town.

Previous Policies and Actions

Recommendations from the PMP were implemented in 2014 and 2015 across the Town of Victoria Park. These include upgrading and installation of lighting, ACROD bays, upgrade and installation of kerbing, car park bay line marking, parking nibs, footpath installation and upgrades, along with more major works including car park upgrades and expansion of car parks.

These parking infrastructure projects were partly funded from the revenue of parking infringements.

Since the PMP, the Town has committed to the review of each of the identified hotspot areas. In 2015 reviews of the Oats Street Area, Burswood Area and Raphael Park Area were undertaken, and, in response, amendments were made to the paid parking fees and timed parking restrictions.

Historical Data Analysis

Data for 2017, 2018, and 2019 were selected for analysis as occupancy rates for 2020 greatly decreased due to the COVID-19 pandemic.

Though infrequent, the Town has undertaken regular utilisation surveys of its parking inventory, as scheduled in the Town's corporate business plan. The following data was provided to determine utilisation and compliance as well as customer feedback relevant to utilisation:

Legal Occupancy Report 2017,2018,2019

This data is derived from the parking machines reporting system, however six months of data for 2019 was not recorded. This data distorts the calculation of occupancy. For example, it records occupancy as being more than 100% in some areas. The main reason for this is drivers may not stay for the whole duration they have paid for. A driver may choose to purchase a ticket for two hours to only stay for one and a half, where another driver may take up that spot and repeat the same process as the previous driver. Additionally, occupancy may still occur illegally. Drivers may still choose to occupy a bay without paying for a ticket.

Furthermore, the legal occupancy does not record any data outside of 8.00am to 7.00pm, where the occupancy rates in some areas with the parking sensors installed is still high, whilst the legal occupancy rates indicate there is no occupancy occurring within these areas. The result is the data will be skewed.

Summary of Infringements 2017,2018,2019

This report summarised the data downloaded from the hand-held units used by the officers to issue infringements. It contained all parking and road related infringements. Only those infringements specific to parking overstays were extracted to determine current levels of compliance. Six months of infringement data was also not available. The results are presented in Section C5 of the Appendix.

Parking Sensor Occupancy Data Nov/ Dec 2020, Jan 2021

This accurate data is derived from the Parking Sensors, installed along Albany Highway, reporting system, and was only provided for three months in 2020 and 2021.

CRMS Complaints Register 2016-2020

All parking related complaints and issues raised by customers were provided from the Town's Customer Relationship Management System (CRMS) for the period 2016–2020. Those complaints relating to parking overstays were extracted and summarised for each activity centre in Section C5 of the Appendix.

Validation of Data

To check the accuracy of the legal occupancy data, it was compared with the parking sensor data for two street segments along the Albany Highway. The results of the comparison are presented in Figure 41 and Figure 42. These graphs highlight the inaccuracy of the legal occupancy data and shows it greatly inflates prevailing levels of utilisation.

Figure 4.1: Comparison of Legal Occupancy and Parking Sensor Data Hampshire Street

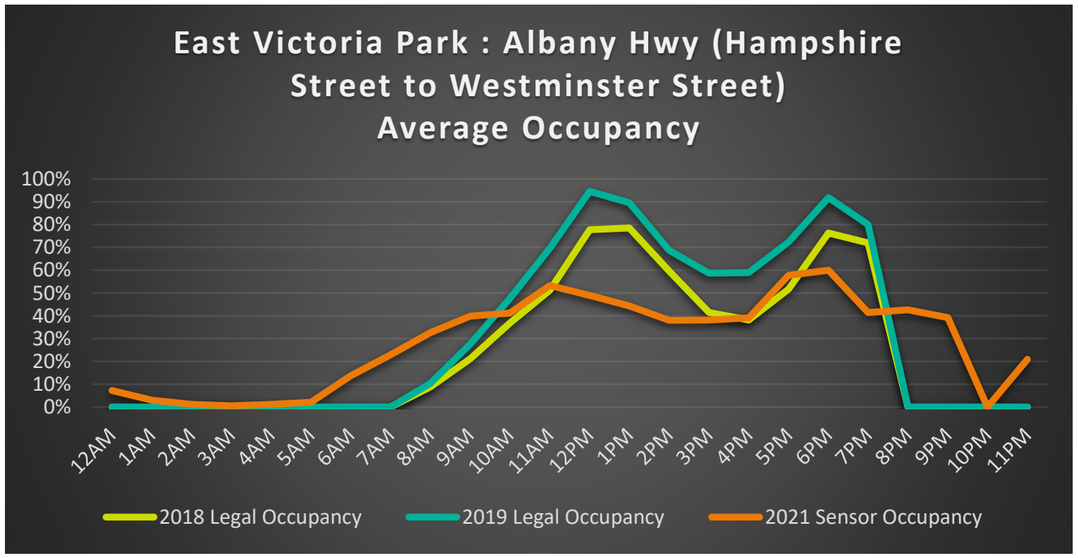
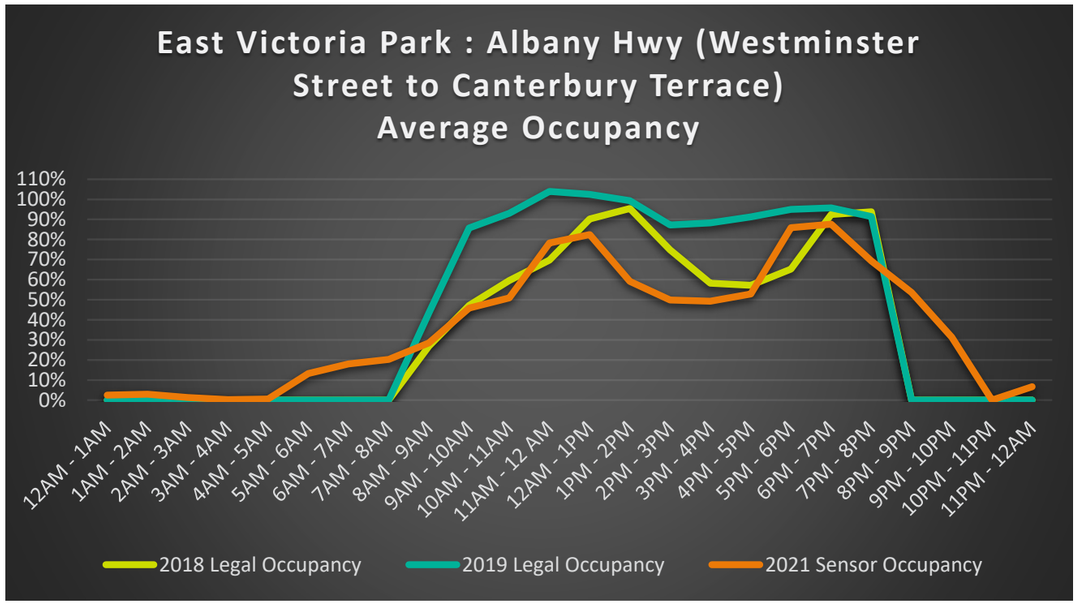


Figure 4.2: Comparison of Legal Occupancy and Parking Sensor Data Westminster Street



Consequently, factors were applied to the legal occupancy data to enable a form of year-on-year comparison. The results are presented in Section C5 of the Appendix.

Except for the parking sensor data, which is restricted to the Albany Highway area, undertaking an analysis of parking demand and utilisation using this fragmented data is not ideal. However, certain trends and issues can be identified which is beneficial. Being cognisant of the shortfalls in the existing data, the Town is now committed to undertaking parking utilisation surveys of each activity centre during the next financial year.

APPENDIX B
OPTIONS AND BEST PRACTICE

The purpose of this section is to consider the tools and options that are available for the management of car parking in the Town of Victoria Park. The tools and options are best practice, and they include regulating the supply of public parking to support parking and transportation objectives including:

- Regulating users and limiting the types of vehicles that may use certain parking bays.
- Favouring higher value uses – such as for service vehicles, deliveries, customers, and access for persons with a disability.
- Encouraging remote parking by offering benefits to commuters to encourage them to use alternatives to a car.
- Pedestrian improvements.
- Reducing free parking spaces to discourage long-stay parking.

It is worthwhile to consider several important issues and strategic approaches in relation to the nature of parking management in a modern urban environment.

B.3 Comparisons with other Jurisdictions

Table 4.1 presents a comparison of the Town's parking situation with six (6) other Local Government Areas Development Control Plans within Australia and three (3) other jurisdictions in the United States of America. The comparison includes the minimum and/or maximum parking ratios and the implementation and available details of dynamic parking, cash-in-lieu and pay parking. Minimum ratios refer to the minimum number of bays required by a LGA to be provided as part of a development to be approved, expressed as a ratio to the m2 of floor area to be developed. Maximum ratios refer to the maximum number of bays that can be incorporated in a development.

The three USA jurisdictions have no minimum parking ratios. The Town has a maximum parking ratio of 1:10m2 which is much more than the other local government areas and jurisdictions. Their maximum parking ratios range from 1:15m2 to 1:60m2 with the majority within the 1:15m2 – 1:25m2 range.

Dynamic parking technology has been implemented in Seattle, Washington and is planned for implementation in the City of Greater Bendigo, Victoria. No other jurisdictions have implemented dynamic parking to date.

Cash in lieu is in use in all of the Australia local government areas with the fee per bay set as a fixed amount between $5400 to $15000 for all areas except South Perth which has no fixed fee. Like the Town of Victoria Park, Seattle has a cash in lieu fee that is to be calculated and agreed by Council on application. Annapolis and the City of Hartford have no cash in lieu provision.

Pay parking throughout the jurisdictions varies in pricing from a flat fee per hour to variable rates to all day fees. The hourly rates are typically between $1.00 – $3.00 per hour and some areas provide a free 30 minutes or hour incentive.

Table 4.1: Comparisons with Other Jurisdictions

LGA	POPULATION & LAND SIZE	MAX PARKING RATIO	MIN PARKING RATIO	DYNAMIC PARKING TECHNOLOGY	CASH-IN-LIEU USE	PAID PARKING
Town of Victoria Park	34, 990 17.92km2	1:10m2	1:100m2	Dynamic Parking trial successful with plans to implement in other areas	Based on the estimated cost of the land, construction of the bay, and other related costs i.e. no specific dollar amount	Free for first half hour Variable rates (either $1.10/hr or $2.20/hr) Fees without variable rates are $1.50/hr for off-street or $2.20/hr
Seattle Washington	724,305 217km2	1 space per 650 square ft 1:60m2	1 space per 2000 square ft 1:186m2	Dynamic Parking throughout the city with rates reviewed regularly	Cash fee, performance bond, or guarantee acceptable to the director	Min $0.50 to max $5 per hour Pay by phone for on street
Annapolis, Maryland	39,278 21km2	1:24m2(255 sqft)	No min parking ratios	None	None	Flat fees, either $2 or $3 per hour
City of Hartford, Connecticut	123, 088 46.5km2	1:23m2	No minimum	None, plans to have pay by plate	None, but allowed up to 15% leeway for requirements	Flat $3/hour, can pre-pay with phone app
City of Greater Bendigo, Victoria	122,430 287km2	1:25m2	1:67m2	Plans to implement dynamic pricing and enhanced technology in paid areas	Application fee $199 plus any credit/cash in lieu as determined by council, currently $10, 562 per bay	$1.80 per hour, daily rates for different all day car parks. Pay by Plate (Oct 2020) Pay by phone
City of Fremantle, Western Australia	7,643 19km2	1:20m2	1:50m2	None	$6,000 per bay	Has several different pricing models, short-stay free parking, buy first hour, get second free, all day parking
Subiaco, Western Australia	7,127 3.2km2	1:15m2	1:100m2	None	$15, 000 per bay	Flat hourly rate ($1.80 or $2.50) or whole day parking
Perth, Western Australia	2,042,000 6,418km2	No specific commercial requirement 1:40m2 For tenant parking allowances	No specific commercial requirement 1:125m2 For tenant parking allowances	Real time bay availability	$5,400 per bay	Has hourly rate, day rate, night rate, and weekend & public holiday rate Parking card (can add funds to it and get permits on it), pay by phone

LGA	POPULATION & LAND SIZE	MAX PARKING RATIO	MIN PARKING RATIO	DYNAMIC PARKING TECHNOLOGY	CASH-IN-LIEU USE	PAID PARKING
City of Vincent, Western Australia	36,692 11.3km2	1:20m2	1:100m2	Has plans to introduce wayfinding signage for car parks	$5,400 per bay	Hourly rate ($2.90), and day rate ($18.50) Pay by phone (EasyPark)
South Perth, Western Australia	43,554 19.8km2	1:17m2	1:20m2	Has plans to introduce wayfinding signage for car parks	Amount to be determined by local governments. It has not been calculated as of 2019 report	Hourly rate ($2), and day rate ($8/$6) Pay by phone (EasyPark)

B.4 Management Options

Parking Plans

Parking plans for activity centres can be developed using a street parking framework which promotes consistent and transparent decision-making and supports sustainable outcomes.

The framework is developed around the concept of maintaining the 'operational efficiency' of street parking areas, and parking to support the viable operation of land-use activities. Parking areas that are operating efficiently provide reasonable opportunity to access parking spaces, thereby alleviating 'cruising' and activity centre congestion. Cruising is the term referring to drivers circulating in search of a parking bay. This behaviour is triggered when parking facilities are more than 85% occupied and parking bays are not readily available. This causes visitors to search or wait for parking bays to become available.

In general, a parking area which is operating efficiently is defined as operating at 65–85% occupancy. Above and below this range indicates that the parking bays are not effectively being managed. Using these thresholds, an intervention matrix has been developed which promotes a consistent and objective review of street parking areas.

Time Restricted and Unrestricted Parking

On-street parking is a high demand area, particularly near the middle of activity centres. Further from the activity centres, the demand for on-street parking decreases but remains a recommended short to medium-stay opportunity. On the fringe of the activity centres on-street parking can be unrestricted.

Parking controls in the activity centres should support the viable operation of the adjacent land-use and user needs. It is important to manage and prioritise access to street parking spaces to reflect the primary user group in that area. For example, in areas dominated by commercial, retail, cafés and restaurants, parking limits of two hours during the weekday act to prioritise parking for visitors and supports the viability and efficient operation of local businesses. The parking controls encourage street parking turnover and encourage use of off-street parking facilities whilst providing sufficient time for visitors to access services and amenities.

Changes to the parking time limits can be adapted through monitoring and feedback about parking conditions and regular parking utilisation surveys to determine occupancy and turnover rates.

When appropriate time restrictions have been operational for some time and occupancy remains high, ticket parking will act to improve parking compliance when supported by efficient enforcement. Prices for street parking in these areas will be set to encourage visitors to firstly consider parking in dedicated off-street parking spaces and secondly, to encourage parking spaces to be available at a rate which supports local businesses. Pricing will be the key mechanism that regulates demand and will again be monitored and adjusted in accordance with intervention matrix.

Short-Stay Parking

Short to medium-stay parking is required to meet business and retail needs. Generally short-stay parking is for up to 2 hours and medium-stay parking between 2 and 4 hours. These user classes should be considered for commercial centres, hospitals, sports facilities, entertainment centres and hotels. Enforcement should ensure compliant turnover of this parking.

Long-stay Employee and Commuter Parking

Long-stay parking (4–24 hours) is provided to cater for employees, commuters and other long-stay parkers. This user class should generally be allocated a relatively low priority, particularly on-street and in areas with high public transport accessibility.

Commuter parking tends to be of lesser value to activity centres and should ideally be supplied on the periphery of activity centres in large-scale parking structures priced to support all-day parking. Commuters tend to displace other parking user groups such as activity centre customers which can result in overflow parking into residential areas and visitor frustration.

The effort to create a communal all-day parking supply is considered worthwhile, since commuters tend to arrive during the roadway peak and have the greatest impact on traffic operations. Removing this demographic from the main activity areas improves pedestrian and cycling safety, public transport efficiency and intersection operation. Commuters are also more willing to walk longer distances, particularly if the pedestrian environment is attractive and lower fees or unrestricted parking are obtained.

To assess potential parking overspill and demand for on-street parking, acceptable walking distances should be considered. Previous research suggests the following distances can be used as a guideline for different parker user groups:

- Less than 250 m (< 3 minutes) for visitors, staff and contractors.
- Less than 400 m (< 5 minutes) for staff and contractors.
- Less than 800 m (< 10 minutes) for commuters and more economical parking.

These walking distances are based on the surrounding topography and the assumption most people can walk 250 m in less than 5 minutes.

Remote parking can free up quantities of parking for short-stay visitors to the activity centres. On average, each bay vacated by a commuter parker will enable access for four additional short-stay parkers based on an average two hour stay.

This involves encouraging long-stay parkers to use offsite or fringe parking facilities through regulation and pricing, for example, streets adjacent to train stations but not conveniently located to commercial centres.

Paid Parking

Paid parking is one of the most effective ways of influencing parking and travel demand. Paid parking can influence parking location, destination, mode, travel time and in particular, duration of stay. The impacts vary depending on the price structure and the relative convenience of alternative parking facilities and modes.

As paid parking generally results in improved levels of compliance and reductions in car use and traffic congestion among other environmental benefits, it is one of the essential transport measures necessary to ensure the long-term viability of commercial centres.

Paid parking increases equity of access by charging users (user pay) for their parking costs and by reducing the parking costs imposed on non-drivers. Paying directly rather than indirectly benefits consumers because it reduces parking and traffic problems and allows individuals to decide how much parking to purchase, giving them an opportunity to save money.

The community engagement surveys shows that approximately 50% of visitors do not travel to the town by private motor vehicle. These non-drivers do not require parking and it would be inequitable to burden these visitors with the same percentage of costs as those drivers using the parking provided

Best practice is for the introduction of paid parking off and on-street to be considered when regular peak-hour demand is starting to exceed 85% as this will facilitate efficient use of public parking.

Offering suitable free parking alternatives to pay parking provides drivers a choice and may reduce objections to the implementation of pay parking on ideological grounds. Additionally, offering an initial free period of parking also gives users further incentive to reduce their duration of stay resulting in increased turnover.

Regardless of the emotion and politics often surrounding the introduction of paid parking, there is little doubt that it represents an efficient and effective means to manage on and off-street parking demand and encourage turnover of bays.

All paid parking should offer convenient payment systems and value for money in terms of easy access, wayfinding, security, lighting, and clean presentation. The guiding principles supporting the introduction of paid parking include:

- Facilitating an increased turnover of parking bays.
- Increasing supply and access for short-stay parkers.
- Providing several options for different categories of parker.
- On-street high turnover bays for short-stay parking.
- Cheaper parking slightly further away for medium-stay (3–4 hours).
- More remote parking for long-stay parking by employees and commuters.
- Improved customer and visitor turnover in high demand locations
- Placing a value on parking conveniently located to a customer's destination.
- Creating a more equitable user-pays system.

Pricing

A common misconception of businesses is that paid parking will deter customers. In reality, paid parking often improves the customer experience through increased parking turnover and therefore availability at the destination of choice.

Many successful commercial districts have found that appropriate on-street pricing ensures better parking availability and supports the vitality of high-demand areas. Charging a fee for on-street parking limits stay duration, increases vacancy rates and increases the predictability of finding a parking space.

The following guidelines are applicable to the implementation of pay parking fees in any sector:

- Charge drivers directly rather than indirectly and offer convenient parking and payment options (i.e.cash, credit card, pay-wave and mobile phone). It is noted that cash payments will likely be phased out by the industry in the medium term.
- Ensure that fee structures are flexible and can be varied in accordance with daily, weekly, and seasonal demand. The annual review of parking fees is inefficient and unresponsive to the fluid demand in parking availability across the Town.
- Charge higher fees at the most convenient on-street bays to encourage high turnover and use incremental price structures to favour short-stay users, for example, first thirty minutes free, $1.50 between 30 minutes and first hour, $3 for second hour then $4.50 for third hour, etc.
- Set parking fees with some reference to popular public transport fares, for example, all day parking should be higher than a two-zone return bus/train fare.

- Daily rates should be set at greater than six times the hourly rate and minimise discounts for long-stay parking (early bird and commuters).
- Use small time charge units so drivers can avoid paying for more time than they need; for example, five-minute units for short-stay parking and one-hour units for long-stay parking rather than the day.
- Encourage businesses to price parking and offer discounts or refunds to their bona fide clients. This can be accommodated with new technologies.
- Minimise the exceptions to pay parking, for example, all loading vehicles, couriers and other parkers using public or designated on-street parking spaces should be required to pay if they exceed the initial free period and should always display a ticket.

The underlying strategy is to increase the turnover of on-street pay parking with alternative off-street parking available free or at a cheaper rate. On-street parking fees should be 15–20% higher than equivalent off-street parking charges to reflect the premium nature of kerbside parking and to encourage drivers to use the off-street

Free Parking

There is no such thing as free parking; the costs are simply subsumed elsewhere in the economy. Reserving large areas of land for parking directly impacts the affordability of property and goods and services. The cost of providing parking for residential dwellings can add 10–30% to the total costs of development. In medium to high-density residential developments, the costs associated with providing parking facilities can exceed the capital value of the land
. The true cost of parking is hidden in higher development costs, and consequently higher rents and prices to consumers.

Ratepayers of the Town fund parking. Ratepayers are not only paying for the cost of cleaning, insurance and maintenance of these bays, they are subsidising parking on valuable land that could be generating income, providing improved amenity or could be put to other uses.

Many councils in Australia provide free public parking both on-street and off-street. Paying for public provision and management of parking from general rates is regressive and disproportionately impacts those on low and fixed incomes, such as students and the elderly and those ratepayers who elect to use alternative forms of transport and do not normally drive cars.

Owners of private vehicles are expected to cover the costs associated with owning and operating a car and constructing and maintaining road infrastructure; however, in most instances, the costs associated with vehicle storage, e.g. parking, may not be charged directly to users.

Residential Parking

Parking controls in residential areas aim to balance the parking needs of residents with the needs of all households who require street space for visitors, family, care workers and tradespeople. Parking spaces are to be prioritised for residents in streets near to shops and businesses where there is a high visitor demand for parking.

Three-hour parking controls are the preferred parking restriction in residential permit parking areas as it allows reasonable access for short visits, without the need for permits. However, local conditions may justify different time limits depending on adjacent land uses and available parking capacity.

Throughout streets where long-stay employee and commuter parking occurs, for example on the fringe of the Town Centre and adjacent to train stations. However, in recognition that not all employees reside locally, and many arrive from areas where the car is the only economical or viable transport option, 8P ticket parking controls can be implemented.

ACROD Parking

The Australian Disability Parking Scheme helps eligible people park nearer to their destination. Permit holders are entitled to park:

In any space provided for a person with a disability in an on-street or off-street parking location, such as shopping centres, hospitals etc.

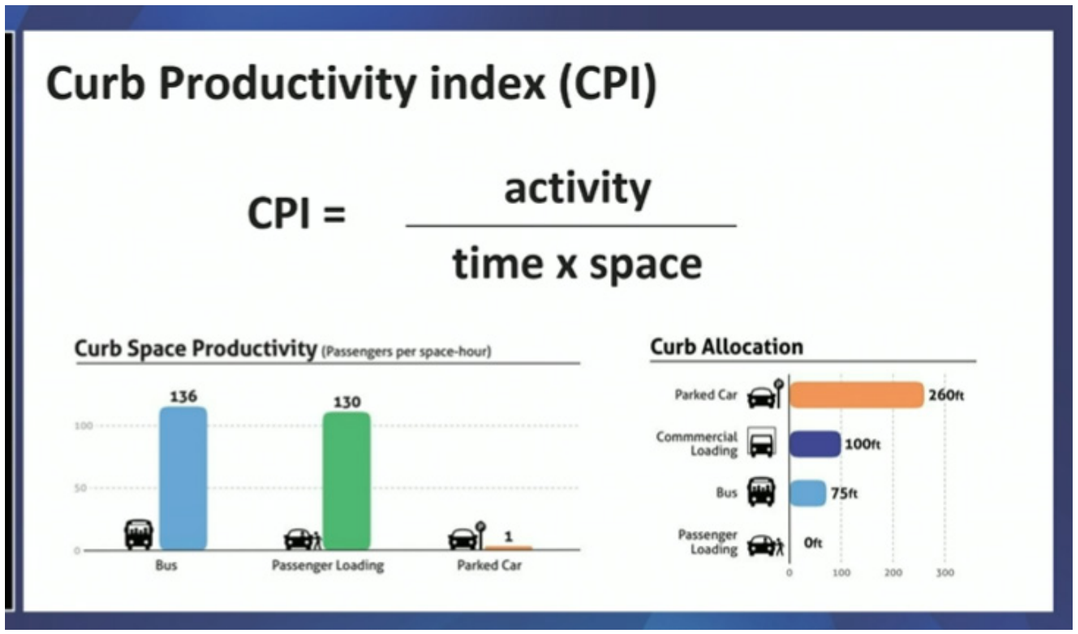
In local government metered or regulated parking areas on-street for two hours in a 30-minute parking area and unrestricted for over a 30-minute parking area.

Car Share

Car share is an innovative form of transport that allows people to hire vehicles on demand for short periods of time, via a telephone or internet booking service. The vehicles are parked in dedicated bays and are accessible to members at any time of the day or night. Members benefit from the flexibility of having access to a private vehicle without having to pay the fixed cost associated with owning a car.

Car sharing is an affordable, convenient and sustainable transport option for residents and businesses. Car sharing enables sustainable travel habits and provides increased connectivity. Additionally, car share provides for efficient use of parking space where a single car share vehicle can replace more than 10 private vehicles according to kerb space productivity
 based on hourly turnover. Figure 43 presents the Curb Productivity Index used to determine the estimated additional capacity.

Figure 4.1: Curb Productivity Index



Motorcycle and Bicycle Parking

Motorcycle/scooter parking is generally treated no differently to that of cars. If vehicles are to be charged for parking, this should apply equally to motorcycles if they use spaces allocated to cars. An incentive for these motorcycles is to provide them with free parking in dedicated motorcycle spaces.

As car parking spaces can be easily divided into two motorcycle spaces, there is flexibility to convert spaces depending on demand.

Parking for cyclists falls into two broad categories. Firstly, all-day parking for employees and park-and-ride parking at public transport stations. Secondly, short-stay parking for visitors to shops, restaurants, offices, recreational facilities and other institutions (distributed throughout commercial centres).

Parking Ratios

To a large extent, minimum parking ratios are a historical by-product of plentiful and inexpensive land and a lack of convenient payment technologies. The ratios were a means of shifting responsibility for catering for parking demand onto private developers, thereby ensuring the safe and efficient operation of the local road network.

The methodology underlying minimum parking ratios is considered to lack accuracy and efficiency in the following ways:

Uses Conservative Design Standards: Minimum parking ratios are typically designed so as to cater for most peak demands. This considers developments independently of the surrounding urban environment and ignores the potential to share parking resources between adjacent developments, leading to an oversupply of parking which is underutilised.

Results in Fragmented Parking Supplies: Because of the requirement for individual developments to cater for their parking demands, urban areas are increasingly dominated by fragmented parking areas.

Ignores Value: Minimum parking ratios ignore value and give no consideration to the marginal benefits and costs of additional parking bays. The costs of meeting minimum parking ratios tend to increase in district centres and growth corridors where land values are higher, thereby preventing intensification and redevelopment. This works against regional and local strategies designed to intensify development.

Unresponsive to Demand Management: There are numerous examples of cost effective parking management measures that do not require increasing the supply of parking. Examples include shower and locker facilities for employees who walk or cycle, unbundling employee parking from salary packages, providing free passenger transport passes for employees, and developing workplace travel plans. Minimum parking ratios fail to account for demand management strategies and therefore provide no incentive for consideration of alternative transport modes.

For these reasons, minimum parking ratios are considered to be inaccurate and inefficient. It is also significant that the costs associated with minimum parking ratios have become disproportionately high in relation to their advantages.

Cash-in-lieu

Many local governments give developers the option to pay a one-off fee in lieu of providing the required number of parking bays imposed by parking ratios. This money is then traditionally used to supply public parking stations to cater for the parking demands within a town centre. Cash-in-lieu is particularly beneficial when parking needs to be limited.

An effective cash-in-lieu policy will provide many benefits:

Policy Flexibility: Developers gain a new option to pay the cash-in-lieu fee instead of constructing bays if providing all the required parking bays onsite would be difficult or too expensive.

Shared Parking: Public parking bays allow shared use among different sites whose peak parking demands may occur at different times (e.g. a bank and a bar), and fewer bays are needed to meet the combined peak parking demands.

Park Once: Shared public parking allows drivers to park once and visit multiple sites on foot, thereby reducing vehicle traffic and increasing pedestrian traffic.

Consolidation: Some Councils also allow developers and property owners to pay cashinlieu fees to remove existing required parking bays. This option consolidates scattered parking bays, assists infill development, improves urban design, and encourages conversion of parking areas to higher-and-better uses that provide more services, yield more revenue, and employ more people. All property owners, not just developers, can use more of their land for buildings and less for parking.

Fewer Variances: Where providing the required parking is difficult, developers often request variances to reduce the parking requirements for their sites. These variances weaken the general plan, require administration, and can create unearned economic windfalls for some developers but not others. By making fewer variances necessary, cash-in-lieu fees allow Councils to create a level playing field for all developers.

Better Urban Design: Parking requirements typically result in at-grade (surface) parking for smaller buildings that cannot support the expense associated with providing their own deck parking. Because cash-in-lieu fees allow businesses to meet their parking requirements without on-site parking, they allow continuous storefronts without 'dead' gaps created by parking or parking driveways. Public parking structures consume less land than would be required if each site provided its own on-site parking, and Councils can place the structures where they interfere least with vehicle and pedestrian circulation. The cash-in-lieu policy thus contributes to a better-looking, safer and more walkable environment.

True Value: Another important purpose of cash-in-lieu is that it reveals the high cost of providing parking bays especially if they will be subject to a low parking fee or are expected to be provided at no charge. Developers have the choice to pay for or provide their own parking and the flexibility to charge a fee for its use or provide it for free. Note that developers who pay the cash-in-lieu do not subsidise the commercial centre, and the commercial centre does not subsidise developers. Instead, developers subsidise parking.

Most councils specify that the funds be used to provide off-street public car parking, either in the vicinity or anywhere in the commercial centre or activity centre.

Limiting the use of cash-in-lieu generated funds to provide public parking is restrictive and assumes that additional parking is both necessary and desirable. In view of the importance of integrating transport policy and management and the competition for limited funding, it is clearly desirable that the funds raised be available for transport purposes in general. This should include services and infrastructure, such as funding a shuttle bus to serve the commercial centres.

Shared Parking

Shared parking means that parking bays on the same site are shared concurrently by more than one user, which allows parking facilities to be used more efficiently. Shared parking takes advantage of the fact that most parking bays are only used part-time by a particular group, and many parking facilities have a significant portion of unused bays, with utilisation patterns that follow predictable daily, weekly and annual cycles. Efficient sharing of bays can allow parking requirements to be reduced significantly.

Electric vehicles

The Electric Vehicle Council
reports globally, there are now more than 3 million electric vehicles on the road. Significant technological shifts have seen several new lower cost models coming to market, along with continued decreases in electric vehicle battery costs. Further, several countries have announced their intention to ban the sale of petrol and diesel vehicles and several global automakers have put forward extensive plans to electrify vehicles.

The number of charging stations in Australia has increased to approximately one charging station for every six electric vehicles. An important consideration for electric vehicles and charging infrastructure is the source of electricity used to power the vehicle. Analysis across all states and territories in Australia shows that an average electric vehicle charged from the grid in 2016 emitted less than an average internal combustion engine vehicle in all states except Victoria, where it is only slightly higher. Figure 44 presents the growth in Australia of EV purchases from 2011–2019 while Figure 45 presents EV's sold in each state.

Figure 4.2: EV Purchases in Australia 2011–2019

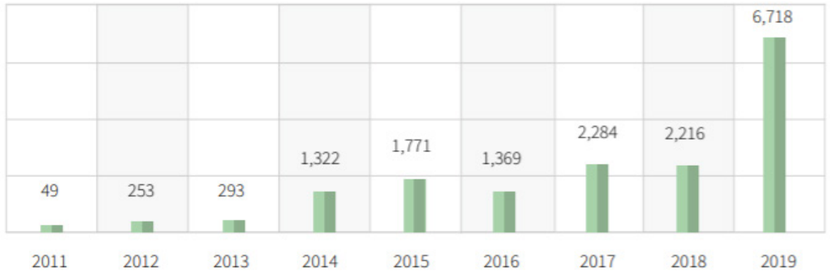
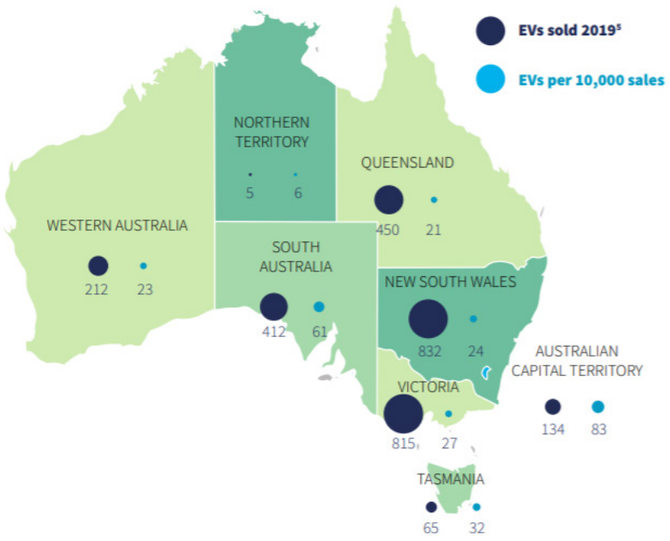


Figure 4.3: EV's Sold in nEach State 2019



Parking Benefits District

Opportunity exists, within the Australian Local Government realm, to introduce activity centre wide paid parking / community benefit schemes, known as Parking Benefit Districts (PBD's). With PBD's, a percentage of parking revenue is reinvested back into the district to fund a wide range of items such as parking and wayfinding technology, walking and cycling infrastructure, EV charging stations, establishing day and night market facilities, shuttle buses, park maintenance and streetscape improvements including benches and lighting. They are used to support local economic development and revitalisation initiatives.

Research reveals these are prevalent in the United States. The historic district of Pasadena, California, raises over $1M annually which is allocated to fund landscaping, street furniture, footpaths, and security. The cities of Portland, Austin, Houston, and San Diego also have PBD's.

In Australia there are some known similar examples but they are rare. In Queensland, the Gold Coast's, 2015 parking plan provides for 50% of new on-street meter revenue to be allocated for local improvements including landscaping and public transport. However, under this scheme, revenue raised from one activity centre could potentially be funding initiatives and infrastructure in other activity centres.

Additionally, a 55-hectare section of land, now known as Fagan Park, was donated to the New South Wales State Government and Hornsby Shire Council was appointed sole trustee. Council introduced metered paid parking. A proportion of the Consolidated Fund, which includes parking revenue, is budgeted annually to be spent on maintenance of the park. In the past, this has been communicated to stakeholders that the funding is directly attributable to parking revenue.

While the intent is similar, these schemes cannot be described as true PBD's. PBD's usually require transparent accounting of revenue and associated costs directly attributable to paid parking in a specific activity centre, which can be appropriately scrutinised by stakeholders.

There are constraints stemming from the Local Government Act 1995, however, a different accounting approach involving the establishment of separate trust funds for separate activity centres may provide a suitable solution.

APPENDIX C
KEY FINDINGS

C.1 Parking Management

Paid Parking

There is currently limited on-street paid parking within the Town. These parking areas are spread throughout the five activity centres of Oats Street, East Victoria Park, Victoria Park, Burswood South, and Raphael Park. The fees, time restrictions, days of restrictions and available free time varies throughout the town and even within each street.

In 2014 new parking restrictions were implemented in the Town of Victoria Park as part of the Town's PMP (PMP). Changes to time limits were introduced in January 2014, followed the introduction of paid parking in selected areas in February 2014. In May 2014, the Town endorsed changing some of the restrictions along Albany Highway after feedback received from local businesses and residents. This included the first 30 minutes free parking with a ticket being introduced along Albany Highway and selected side streets. Some areas include the first 15, 30 or 60 minutes free. Most of the on-street parking is $2.20 per hour or $1.00 per hour and off-street parking is $1.50 per hour.

The EasyPark (pay-by-phone) App is in use throughout the Town allowing users to pay only for the time needed and extend or stop their required parking time from their phone.

Enforcement and Compliance

The Town has consciously made the decision not to take a hard-line approach to enforcement. An early version of mobile LPR technology was previously trialled. Due to the concerns of a perception of intrusive surveillance being created, which was seen to be negatively impacting the customer experience, the technology is no longer in use. Consequently, the Town's parking rangers reverted back to traditional enforcement methods.

It is to be considered that the use of ticketed parking and the associated methods of enforcement is now approaching obsolescence due to the inherent inefficiencies as well as impacts on the carbon footprint. Latest technology reduces the carbon footprint and increases productivity and efficiency levels.

Policy

The Town of Victoria Park website has a Parking section that clearly states the Town's Policy on Parking. It explains why time limited and paid parking are necessary. It also encourages business owners to provide various travel alternatives to staff and unbundling parking.

Policy regarding the use of the revenue raised from paid parking monies is explained in detail. The money is directed towards improving other sustainable travel related initiatives which are detailed in the Integrated Movement Network Strategy (IMNS). These include the provision of more ACROD bays, elderly persons' rest spots along Albany Highway, safer movement of children around schools, additional pathways and cycleways, and improved visibility through increased lighting to increase community safety.

Parking Permits

The Town provides parking permits to residents in accordance with the Parking Permit Policy and local law.

1. Residential Permits ($25) residents who have limited onsite parking with an exemption to access parking near their properties that has sign-posted restrictions.
2. Transitional Permits ($25) provides residents up to 12 months to make alternative arrangements if there is inadequate onsite parking when restrictions adjacent to their property have recently changed. Up to three transitional permits are allowed for a residential property.
3. Event Permits provide residents and businesses with an exemption to access parking near their properties, on dates which are published on the Optus Stadium website, for events held at Optus Stadium. These permits are free and offered digitally.

The Town also provides business related parking permits:

1. Parking Work Zone Permit is required before undertaking any activity or trade which obstructs a parking bay, or part of a public road within the Town of Victoria Park. A $30 application fee is required for a 5m bay with half day $5 per bay, full day $10 per bay and a month $200 per bay.
2. Loading Zone Permit is for non-commercial vehicles to use a private vehicle in a 30-minute loading zone to pick up or set down goods. The application fee is $30.
3. Commercial Parking Permit is for businesses which do not have any on-site parking. An application fee of $30 and an annual fee of $1000 is required and only one permit is allowed per commercial property.

Reserved Parking Bay Agreement

A Reserved Parking Bay Agreement provides business allocated parking bays in King George Street Car Park or Hawthorne Place Car Park. An application fee of $30 then a daily fee of $5 per bay with a minimum agreement of one month and maximum agreement of one year.

Application Fee – $30 per permit

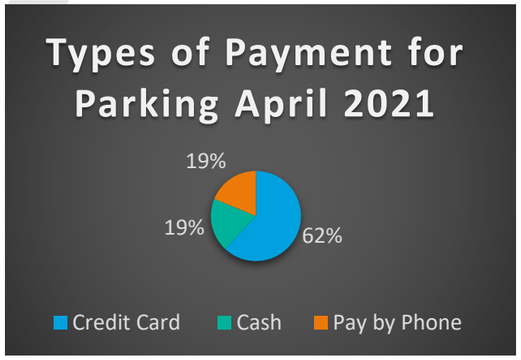
C.2 Recent Key Initiatives

Easy Park Phone APP

Figure 46 presents the percentage of payment methods used to pay for parking as of April 2021. The introduction of the Easy Park Phone App has been a success. Following the first year of release, Pay by Phone accounts for 19% of all payments and now equals cash payments. The amount of cash currently being used as payment for parking is diminishing as payment by credit/debit cards, mobile phones and phone Apps increases.

The residual effects of the COVID-19 pandemic need to be considered as the population is more aware of the hygienic benefits of contactless payment.

Figure 4.4: Types of Payment for Parking



Dynamic Parking Management Trial

Provision of equitable access to parking resources for the community is a priority for the Town, as detailed in the PMP (2009). This inspired the undertaking of a Dynamic Parking Management Trial extending for six months from April 2019. The trial investigated the impacts of paid parking, parking bay occupancy and the relationship to price and free time periods of 62 on-street parking bays in some hot spot zones of the Albany Highway.

The Town has previously identified that peak demand for parking occurs from 11am to 2pm, and from 5pm to 9pm (50–80% occupancy) and that off-peak demand for parking occurs from 8am to 11am, and from 2pm to 5pm (10–50% occupancy). The trial extended the free time to one (1) hour free parking and halved the hourly parking rates during off-peak times. In-ground sensors were implemented to gather accurate occupancy data which was compared with the parking ticket sales.

Success was achieved with the trial resulting in increased users staying for longer during the off-peak periods. In response the Town implemented the changes on a permanent basis with the aim of encouraging parking turnover and hence providing economic benefits to local businesses.

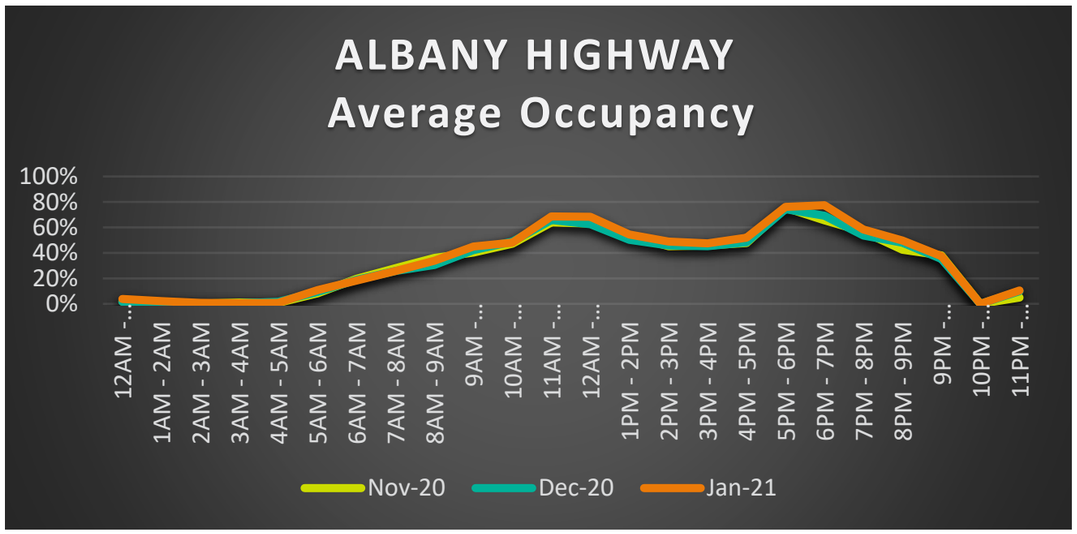
The Town resolved to review the parking occupancy on a six-monthly basis with a view to adjusting the parking rates in response to the demand and availability of parking. A dynamic pricing model has also been introduced which has enabled the Town to adjust the amount of free time and pricing to encourage demand. A dynamic approach to parking throughout the Town is envisaged for the future to encourage more parkers and higher bay turnover during the non-peak periods.

On Albany Highway, parking fees are dynamic and change depending on the time of the day. As of 17 August 2020, the fees are:

- 8AM –10AM to $1.10/hour and 60 minutes FREE
- 10AM –1PM to $2.20/hour and 30 minutes FREE
- 1PM – 4PM to $1.10/hour and 60 minutes FREE
- 4PM – 8PM to $2.20/hour and 30 minutes FREE

Figure 47 presents the average occupancy derived from the parking sensors for the months provided. This suggests the Trial is achieving the desired outcomes with the peak occupancy periods of 12 noon and 6.00pm being manged to not exceed 85% and a greater spread of demand throughout the day.

Figure 4.5: Albany Highway Average Occupancy



Pedestrian Wayfinding

In October 2019, with the support of Department of Transport, the town installed wayfinding signs to connect people between Curtin University and the East Victoria Park and St James Town Centres. The signs promote walking and cycling between Albany Highway and Curtin University as well as in and around Technology Park.

The signs provide clear directions with estimated walking and cycling times and reinforce sustainable options to navigating through these areas using private vehicles.

Car Free Day

The first Car Free Day on the Albany Highway cafe strip took place in October 2020. A section of road was closed to traffic and café owners were encouraged to establish pop-up dining areas both along the roadway and kerbside.

Locals could enjoy a range of activities throughout the day and businesses were also able to enjoy the advantages of increased dining space. The event was a huge success and reinforced the benefits of less cars in activity centres as presented in Figure 48.

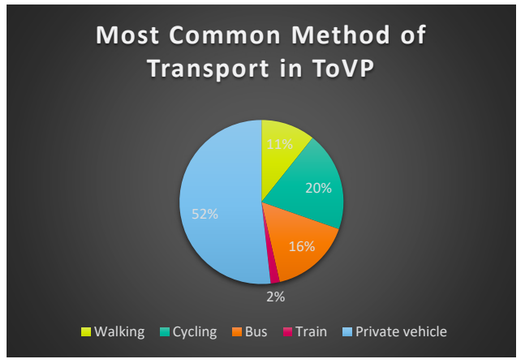
Figure 4.6: Locals Enjoying Car Free Day

C.3 Community feedback

An onlinme Community Survey was undertaken online regarding parking and transportation within the Town of Victoria Park.

The most common method of transport used by survey respondents was private vehicle (52%). This was more than triple the number of respondents who cycle or travel by bus as presented in Figure 49. This choice to use private vehicle was made because it is convenient and practical. Fifty percent seldom or never cycle or travel by train 48% seldom or never travel by rideshare (taxi or uber) and 36% seldom or never travel by bus. Forty-six percent of respondents travel daily by car, requiring a parking bay at their destination.

Figure 4.7: Most Common Method of Transport



One elderly respondent who struggles with more active transportation has identified a need for short to medium-stay parking for residents who rely on private vehicle travel for health reasons. He also suggested seniors' concessions for parking areas such as Aqualife.

There were responses suggesting that improving cycling facilities, pedestrian facilities and public transport services would reduce the need for reliance on private vehicle use. Safety and lighting were also highlighted as issues that preventing people from using public transport or walking/ cycling.

Customer complaints received by the Town during the years 2016 to 2020 were provided by the Town were also examined, in particular, those complaints regarding vehicles overstaying time restrictions and not affording equitable access to parking bays. This can be used to determine certain levels of compliance.

Figure 4.8 presents the number of parking overstay complaints for each activity centre. Most complaints emanated from the activity centres of Burswood, Victoria Park and East Victoria Park.

Figure 4.8: CRMS Complaints Related to Parking Overstay

C.4 Increasing parking supply

There are opportunities for increasing off-street parking supply within the Town.

Sites Previously Identified

Potentially suitable sites that have previously been identified include 1–5 Westminster Street, where a portion of the site has already been modified to accommodate additional parking with potential to further increase capacity. From previous reports, a high-level recommendation was developed for the Town to monitor the situation and consider acquiring land for parking around Albany Highway in the area roughly between Colombo and Mackie Streets. The Town currently believes the provision of additional parking in this area is unlikely to be the best use of the land, especially on freehold land, given the Albany Highway Precinct Structure Planning currently being developed.

Redevelopment of Existing Parking

The car park at 4–6 King George Street had been identified as a potential area where redevelopment for additional parking could occur. Each of the Town's existing car parks has unique circumstances constraining the development of additional capacity such as different zoning, some with high density opportunity and commercial outcomes. Others with limited alternative uses other than car parking, however, each requires an independent assessment and business case approach.

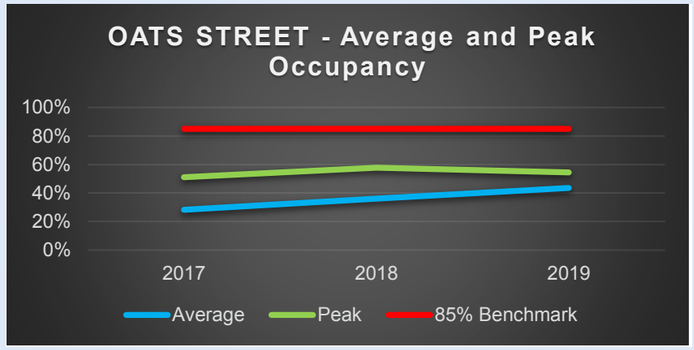
Future Private Development

The Town is expecting to receive a Development Application for a Woolworths development located at the corner of Albany Highway, Shepperton and Welshpool Roads. This is likely to include a large amount of basement car parking. However, it is likely this parking will only be available during Woolworths' trading hours.

C.5 Place Findings

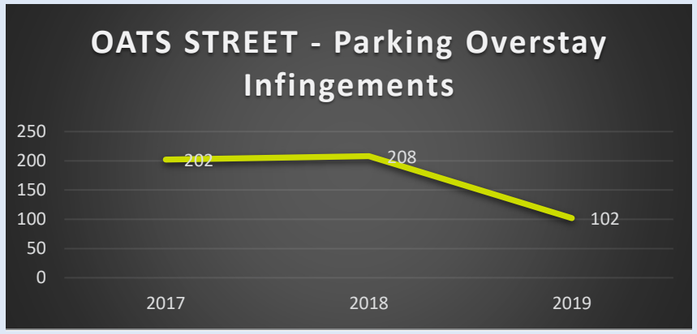
OATS STREET

Occupancy Data Analysis



Oats Street has seen an increase in the average occupancy rate from 2017 to 2019, from 28% to 44%, while its peak occupancy has decreased from 58% in 2018 to 54% in 2019.

Infringement Data Analysis



Site Inspection

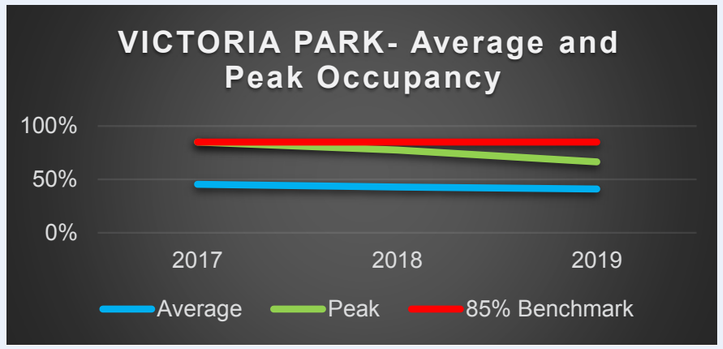
- No parking is provided on-site at the TAFE for students.
- The Aqualife Centre provides 3-hour parking for members only.
- Students park in the Aqualife Centre carpark which limits the parking for the bona fide users of the centre.
- The majority of vehicles were observed to be owned by rail commuters, employees of surrounding businesses or TAFE students.

OATS STREET

Research	• The Somerset Road Car Park between the TAFE and the Aqualife Centre is managed by the Town providing 53 P Ticket parking bays at $1.50/hour or $5/day Monday to Friday. • Parking restrictions in the activity centre includes 128 paid parking bays on Bank Street, Rutland Avenue, Read Street, Withnell Street and Somerset Street and some short-stay and all-day time limited parking. • Paid parking in the activity centre is between the hours of 8am-6pm Monday to Friday. The P ticket parking is $1/hour or $5/day with a 15-minute free period. • Peak occupancy of the on-street paid parking is around 60%
Threats / Opportunities	• Off-street paid parking is more expensive than on-street paid parking, discouraging drivers from using the off-street parking bays. • On-street paid parking is not implemented consistently throughout the activity centre. • The majority of parking demand in this activity centre is generated on weekdays by businesses and the TAFE. The paid parking restrictions are applied during weekdays only.

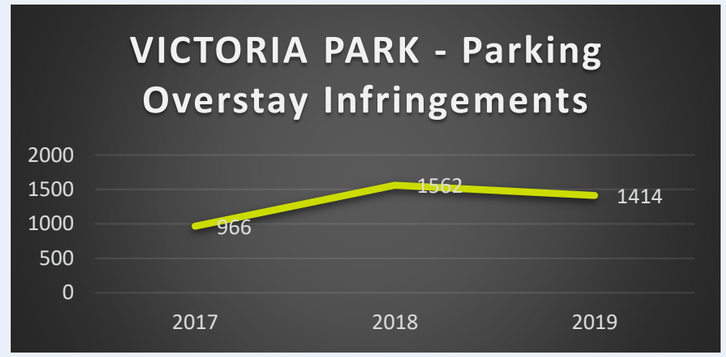
EAST VICTORIA PARK

Occupancy Data Analysis



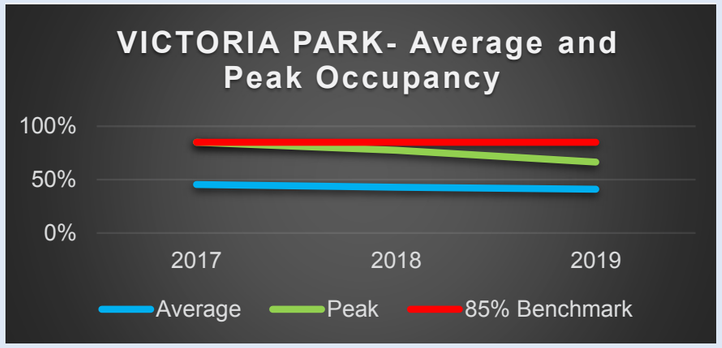
The average and peak occupancy within the zone of East Victoria Park has not changed significantly, with the average occupancy rising slightly above 40% in 2019 and peak occupancy fluctuating around 70% over the past three years.

EAST VICTORIA PARK

Infringement Data Analysis	
Site Inspection	• There is regular turnover of parking bays along the Albany Highway. • The Albany Highway is highly pedestrianised due to the street dining. • Parking along the Albany Highway reduces the traffic speeds along this section of the road creating a safer pedestrian environment.
Research	• Parking restrictions in the activity centre includes 240 paid parking bays on parts of the Albany Highway, Canterbury Terrace, Hampshire Street, Westminster Street, Alday Street, Dane Street, Basinghall Street and Sussex Street and some short-stay and all-day time limited parking in other areas. • Paid parking in the activity centre is between the hours of 8am-8pm Monday to Sunday. The 2P paid parking fee is $2.20/hour with a 30-minute free period. • Paid parking with the dynamic parking model is located along the Albany Highway allowing fluctuating fees throughout the day that vary in response to evidence-based demand. The amount of free time also varies throughout the day. • Peak occupancy of the on-street paid parking is around 60%.
Threats / Opportunities	• Overstay infringements may indicate that the short-stay parking restriction of 2 hours is insufficient for those wanting to dine at the cafes and restaurants. • There may be opportunity to increase the paid parking into other streets within the activity centre. • The dynamic parking model is an opportunity to maximise the utilisation and turnover of the on-street parking bays. • Regular parking surveys are required to determine any changes to the dynamic parking model.

VICTORIA PARK

Occupancy Data Analysis



The average and peak occupancy has decreased in this zone, with the small decrease from 45% to 41% in the average occupancy rate and a larger decrease from the 85% recommended limit in 2017 to 66% in 2019.

Infringement Data Analysis

Site Inspection

- There is regular turnover of parking bays along the Albany Highway.
- The Albany Highway is highly pedestrianised due to the street dining and retail.
- Parking along the Albany Highway reduces the traffic speeds along this section of the road creating a safer pedestrian environment.

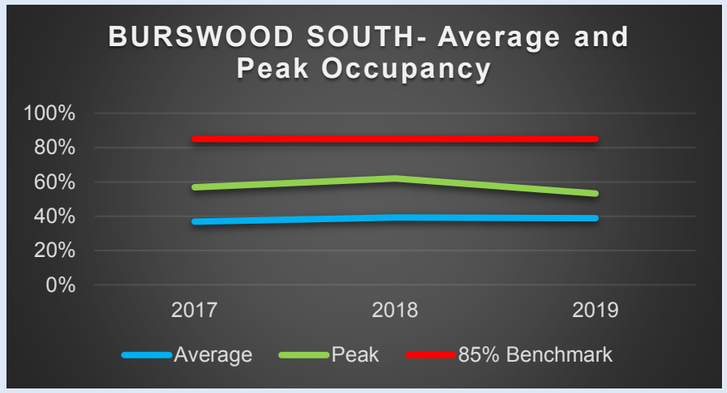
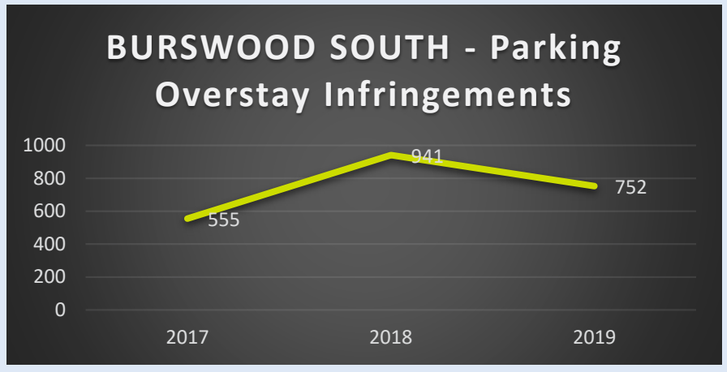
VICTORIA PARK

Research

- Parking restrictions in the activity centre includes 240 paid parking bays on parts of the Albany Highway, Duncan Street, Harper Street, Harvey Street, Mackie Street, King George Street, Leonard Street, Rushton Street, State Street and Temple Street and some short-stay and all daytime limited parking.
- Paid parking in the activity centre is mostly between the hours of 8am-8pm with some 8am-6pm restrictions.
- Paid parking days vary across the activity centre with some Monday to Friday, some Monday to Saturday and some Monday to Sunday.
- The 2P paid parking fee is $2.20/hour with a 30-minute free period.
- Peak occupancy of the on-street paid parking is around 66%.
- The off-street carpark off Harvey Street has 35 bays and is P ticket between 8am-6pm Monday to Friday at a fee of $1.00/hour or $10/day with a 30-minute free period.
- The King George Street off-street car park has 83 bays and is an 8P paid parking area between 8am-8pm Monday to Sunday with a fee of $1.50/hour or $7.50/day with a 1-hour free period.

Threats / Opportunities

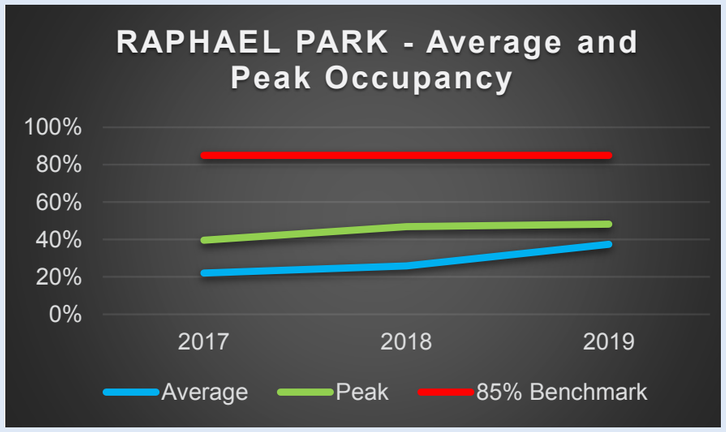
- The current on-street parking restrictions for the paid parking areas within the activity centre are inconsistent across days of implementation and times of implementation.
- The off-street car parks are inconsistent across type of ticket, days of implementation, times of implementation, hourly and daily fees and free time period.
- Only about half of the streets that intersect with the Albany Highway have paid parking implemented near the Albany Highway section of the street.
- Overstay infringements may indicate that the short-stay parking restriction of 2P paid parking is insufficient for those wanting to dine at the cafes and restaurants.
- There may be opportunity to increase the paid parking into other streets within the activity centre.
- Regular parking surveys are required to determine any changes to the dynamic parking model.

BURSWOOD SOUTH	
Occupancy Data Analysis	 The average occupancy in this zone has had a small increase from 37% in 2017 to 39% in 2019 whilst the peak occupancy has decreased from its high of 62% in 2018 to 53% in 2019.
Infringement Data Analysis	
Site Inspection	• There are many underutilised parking bays in the area.

BURSWOOD SOUTH	
Research	• Parking restrictions in the activity centre includes 228 paid parking bays on sections of Asquith Street, Benporath Street, Burswood Road, Craig Street, Hawthorne Place, Kitchener Way, Leigh Street, Teddington Road, Thororgood Street and Twickenham Road and some short-stay and all-day time limited parking in other streets. • Paid parking in the activity centre is mostly between the hours of 8am-6pm Monday to Friday. A small section of Burswood Road is limited between 9:30am – 2:30pm. • The paid parking restrictions include sixty-six 2P and 188 P ticket parking with a fee of $1/hour and $5/day in the P ticket areas with a 15-minute free period. • The 19 bays of the GO Edwards Park car park and the 25 bays of the Hawthorne Place car park is P ticket with a fee of $1/hour and $5/day with one hour free. • Peak occupancy of the on-street paid parking is around 53–62%
Threats / Opportunities	• The paid parking fees for the on-street and off-street parking are the same. The only incentive to park off-street is the one-hour free parking which is not applicable for drivers parking all day as the $5/day fee still applies. • The mix of 2P and P ticket parking throughout the activity centre is inconsistent and confusing. • There may be opportunity to increase the paid parking into other streets within the activity centre. • The is an opportunity to implement the dynamic parking model in this activity centre to maximise the utilisation and turnover of the on-street parking bays. • There is opportunity to review parking occupancy on the weekends to determine the appropriate parking management technique is applied to maximise the utilisation and turnover of parking in this activity centre on the weekends. • There is laneway parking provided behind businesses that is underutilised.

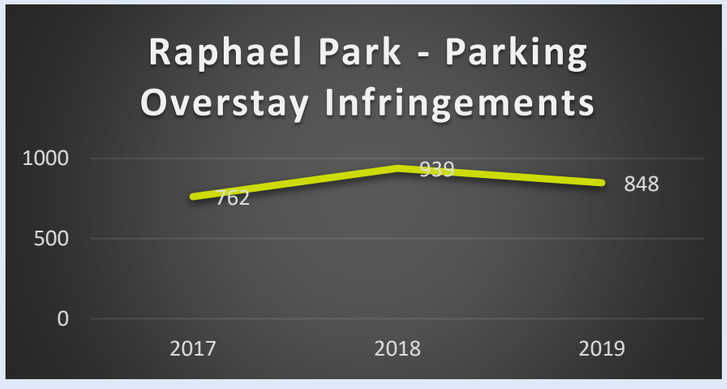
RAPHAEL PARK

Occupancy Data Analysis



Raphael Park has seen an increase in both its average occupancy, from 26% to 37%, and its peak occupancy, from 40% to 48% over the three-year period.

Infringement Data Analysis



Site Inspection

- There are a large number of high-density developments in the area.
- There is a pedestrian and cyclist underpass from Armagh Street under the Canning Highway to McCallum Park.
- Around the school on Cargill Street and Geddes Street there are restrictions to support school drop off and pick up.

RAPHAEL PARK

Research

- Parking restrictions in the activity centre includes 122 paid parking bays on sections of Armagh Street, Asquith Street, the Albany Highway, Oswald Street, Twickenham Road and Geddes Street and some short-stay and all-day time limited parking on other streets.
- Paid parking in the activity centre is between the hours of 8am-6pm Monday to Friday. The majority of the paid parking is 2P with some P ticket parking and the fee is $1/hour with a 15-minute free period. The P ticket parking has the option of $5/day.
- Peak occupancy of the on-street paid parking is around 40–48%

Threats / Opportunities

- There are various land uses in the activity centre contributing to varied parking demands from short-stay to long-stay.
- There are plans to develop McCallum Park and increase the opportunities within the park which will impact the parking demand in the activity centre.

VICTORIA PARK STATION

Infringement Data Analysis

Site Inspection

- There are parking restrictions near the school on Duncan Street and Teague Street to assist with school drop off and pick up.
- The Victoria Park Station small off-street commuter carpark off Kitchener Avenue was observed to be high occupancy during the weekday.

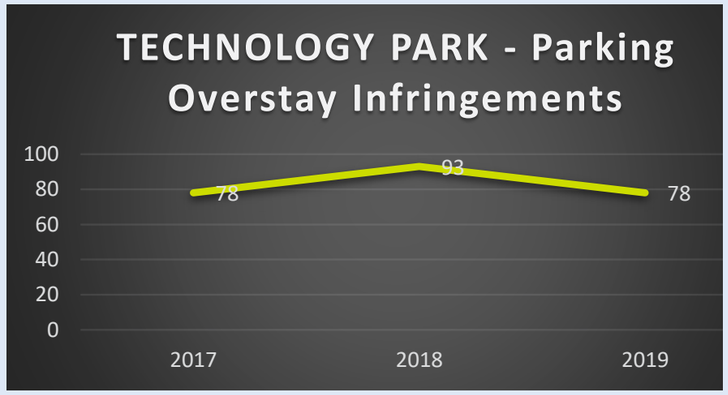
Research

- The Strategy includes an action to develop and implement a streetscape improvement plan for Duncan Street.
- Parking restrictions include time limited short-stay and all-day parking in most streets.
- There is a small off-street carpark at the train station.

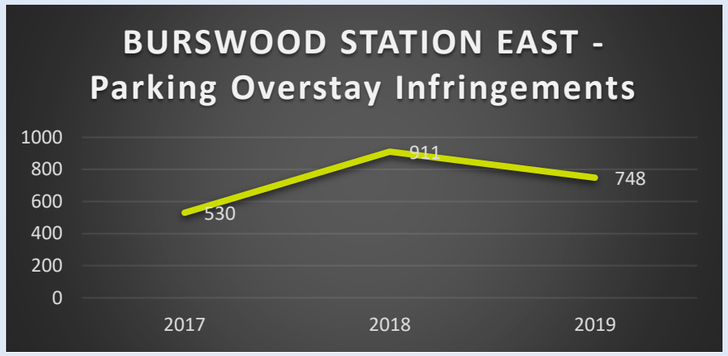
VICTORIA PARK STATION

Threats / Opportunities	• There is a risk that with increased parking demand for the train station there will create excessive overflow of parking into residential streets. • There are not many competing demands for parking in the area. Commuters for the Victoria Park train station and residents are the largest user group.

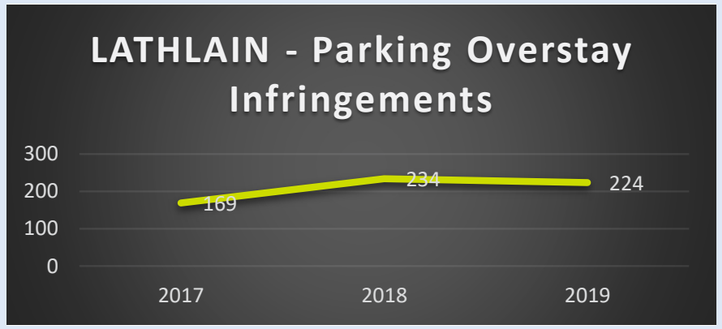
TECHNOLOGY PARK

Infringement Data Analysis	
Site Inspection	• Although there is no street access from Jarrah Road to the Technology Park, it is used for all day parking for staff of the Technology Park as there is pedestrian access near the TAFE.
Research	• There are no on-street parking restrictions within the Technology Park. • There is off-street parking provided on private property within the Technology Park. • There is a large parking demand within the activity centre from long-stay staff parking, shift worker parking and customer parking.
Threats / Opportunities	• Shift worker parking and long day parking overlap in the activity centre creating parking issues. • Private parking is unlikely to be fully utilised, contributing to workers searching for on-street parking bays.

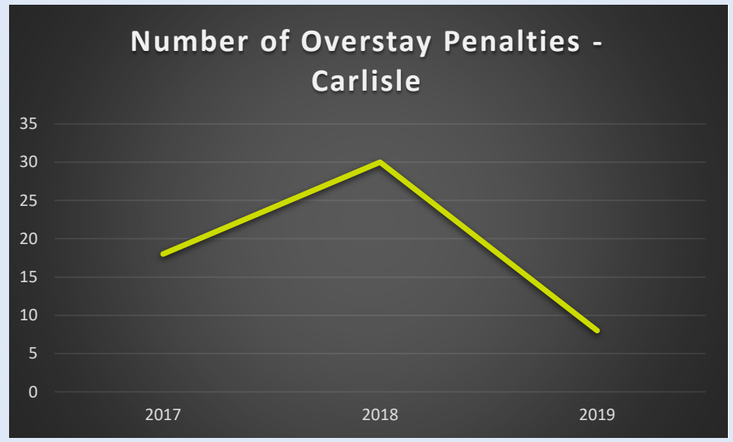
BURSWOOD STATION EAST

Infringement Data Analysis	
Site Inspection	• The area includes 18 storey developments. • More of the area is under development.
Research	• The Burswood Station East Parking Supply and Management Plan advises that the parking on-street in the area should be 2P time limited short-stay parking or 10-minute loading zone parking and that all off-street parking areas are to be managed using a roller door or boom gate. • Limited parking restrictions are in place in the activity centre.
Threats / Opportunities	• With the increase in developments in the area the need for short-stay parking will increase. • There is a lot of unrestricted parking in the activity centre. • If the parking demands are not managed during and after the development and regeneration time, the competing demands for parking will become a problem. • There is opportunity to manage the implementation of parking restrictions to meet user demands.

LATHLAIN

Infringement Data Analysis	
Site Inspection	• On event days at Lathlain Park the demand for parking in the surrounding streets is an issue. • McCartney Crescent has unrestricted parking and is well utilised most days.
Research	• There are limited areas of restricted parking including 4P near Lathlain Park. • Much of the parking is unrestricted.
Threats / Opportunities	• As Lathlain Park is the headquarters for the West Coast Eagles there are plans to use the park more often which may cause parking issues on event days. • There is limited off-street parking provided for Lathlain Park for event days. • Event day parking can be better managed.

CARLISLE TOWN CENTRE

Infringement Data Analysis	
Site Inspection	• Development opportunities along Archer Street • Ad-hoc management of parking restrictions throughout town centre
Research	• Time restrictions include 1/2P and 1P around Carlisle Town Centre • Large amounts of unrestricted parking
Threats / Opportunities	• Increasing demand for parking around the Carlisle Town Centre as its popularity grows • Unrestricted parking close to activity centres, some businesses want this to change

APPENDIX D
Suitable Technology

Industry Trends

The latest smart parking industry trends include the following:

- Ticketless technology.
- Parking sensors.
- Cashless payment options
- Integrated phone Apps.
- Collection of big data.
- Electronic permits.
- Enhanced wayfinding.

Current System

The current system being used by TVP is the pay and display (PnD) metres. Drivers park their car, go to a PnD metre, pay, collect a ticket and display it on the dashboard of the vehicle. Enforcement staff must inspect each ticket to determine if the ticket is valid for the date and time.

The Easy Park Phone App is also used for payment, drivers log on to the App and pay for their parking via credit/debit card which has been previously registered in the phone App. Enforcement staff check the dashboard of the vehicle if no ticket is displayed thy enter the registration number into their handheld enforcement device. If payment has been made by the Phone App, the handheld device will advise them of the date and time. If the date and times are current, no action is taken, if not current the enforcement staff will infringe the vehicle. Most payment systems are open to abuse where an enforcement officer's presence is detected by parkers who are trying to avoid paying, however, PbB and vehicle bay detection systems will provide information when a bay if first occupied and payment is not received within a grace period.

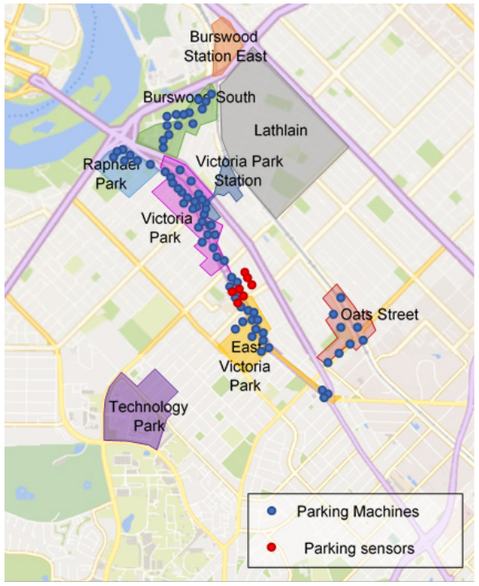
There are a total of 79 parking ticket machines located in the Town, which are concentrated around the blue dots depicted in the figure below. There are also 210 parking bay sensors installed in the areas depicted by the red dots in Figure 411.

The current technology system has the following inherent drawbacks:

- Aging parking machine fleet, malfunctioning machines.
- PnD requires customer to park, leave vehicle, purchase ticket, and return to vehicle to display ticket.
- Inefficient enforcement.
- Permits manually issued.
- Minimal data derived, fragmented reporting.
- Limited wayfinding

ToVP have online parking permits for events, residents and commercial parking with the payment of an application fees, replacement fees and annual fees. Proof of identity and residency is required when applying for the permits. A link to the ToVP application page for these permits could be included in a phone App.

Figure 4.9: Location of Parking Machines and Sensors



Pay by Plate (PbP)

The PbP meters allows the driver to enter their registration details and pay for parking, collect a receipt (optional) and proceed to their destination. The registration, date and time information is sent to the enforcement software via the 4G mobile network, and the vehicle is recorded in the system as paid for their parking. The Easy Park Phone App can also be used to pay.

Enforcement staff will still be required to log the registration details into their handheld and if the date and times are valid take no action, if not valid, infringe the vehicle.

Pay by Bay (PbB)

All bays are delineated with painted lines and designated a bay number. The PbB meters allows the driver to enter the bay number their vehicle is parked in and pay for parking, collect a receipt (optional) and proceed to their destination. The bay number, date and time information is sent to the enforcement software via the 4G mobile network and the bay is recorded in the system as paid for its parking. The Easy Park Phone App can also be used to pay.

Enforcement staff will be required to check the PbB meter, and all bays paid for at the meter or by the Phone App will be displayed on the meter. Any vehicle parked in a bay that is not displayed on the meter as paid for can be infringed.

All the above methods of paid parking require infringement staff to inspect a ticket, PbB meter or check a registration number to determine if payment has been made.

Mobile Licence Plate Recognition (LPR) Cameras

A mobile LPR system allows licence plates to be recorded to determine if parking has been paid for by PbP meters or a Phone App or in the case of time restricted parking only, if the vehicle has overstayed the time restriction.

Individual inspection of vehicles, meters or handheld devices is not required.

Vehicle Detection Systems

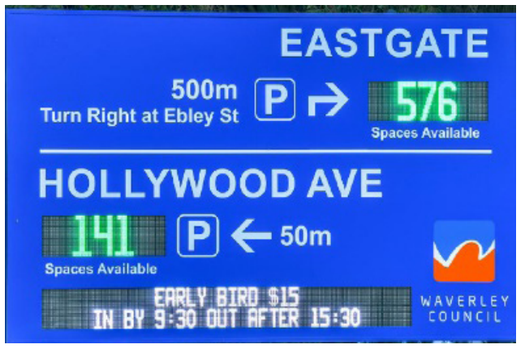
There are two types of vehicle detection systems for on-street parking, inground sensors in individual bays or CCTV cameras viewing multiple bays.

The inground sensors are more accurate than cameras, especially at night and during heavy rainfall or foggy weather.

Variable Message Signage (VMS)

VMS signs are generally placed on main road at an intersection to advise drivers of available bays down the intersecting street. Vacant bay information is provided to the signs from the vehicle detection systems and allows drivers who do not have the Phone App or are not using it to see parking availability.

Figure 4.10: Variable Message signage



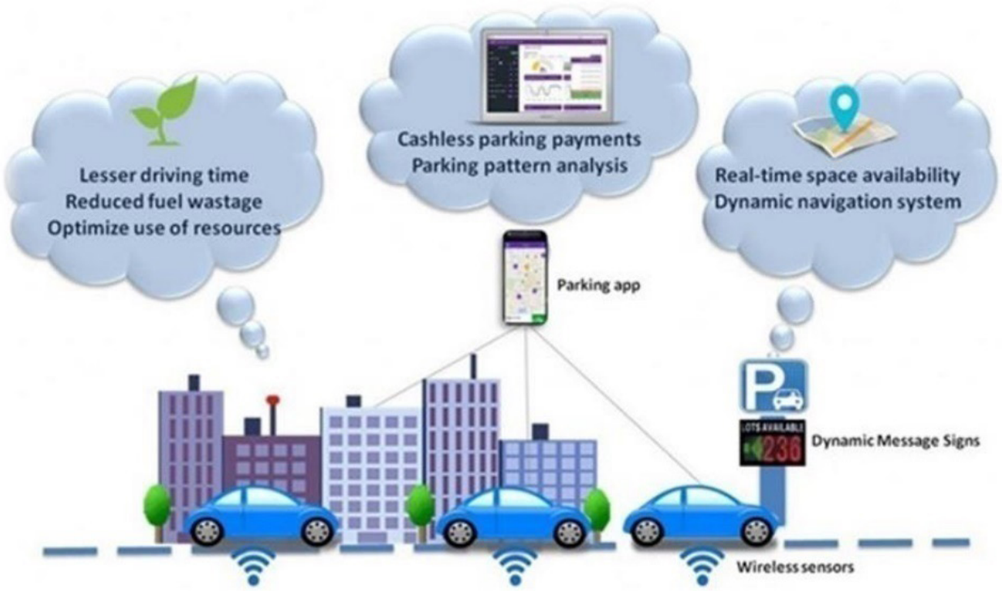
Website Phone / APP

The existing Easy Park Phone App should also be linked to the Town's website to provide drivers information of the location of available parking and accurate information of vacant bays.

Accurate parking utilization data can also be used to provide predictive bay availability information to motorists to plan their trips to each activity center in advance.

Recommended Technology Platform

Figure 4.11: Recommended Technology Platform



The recommended technology platform, as presented in Figure 413 is a system using PbB meters with inground sensors, VMS signs and fully integrated Phone App and the Town Website. This system is the most accurate and efficient method currently available to managing parking.

The benefits it provides include:

- Latest tested, future proofed technology.
- Accurate bay availability on Phone App and can direct drivers to available bays via the App.
- Unpaid or overstay alerts for to enforcement staff for each bay where a vehicle is detected.
- Zeroing payment at each bay as soon as the vehicle leaves.
- Eliminates the need for enforcement staff to chalk tyers.
- Eliminates the need for enforcement staff to regularly inspect-parking bays or vehicles.
- Alerts provide reactive enforcement of information provided to them, they do not have to inspect vehicles, meters, or handheld devices.
- Payment charges begin when the vehicle is detected in the bay, not when payment is applied to the meter or phone App.
- Increased patrol frequency, improved efficiency, and compliance.
- Live streamed reporting and accurate parking utilization data.
- User friendly with improved customer experience.
- Improved wayfinding, reduced traffic congestion and carbon emissions.
- More user-friendly operation and better customer experience.

However, there are some drawbacks:

- Capital hardware costs.
- Each bay must be line marked and have a bay number.
- Increased maintenance costs of vehicle detection sensors.
- Heightened perception of greater focus on revenue raising.

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