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City of Ipswich Parking Pricing Strategy

Final Report

Prepared for: Ipswich City Council

Prepared by: MRCagney Pty Ltd, Brisbane, Australia

Document Information

Project Name	City of Ipswich Parking Pricing Strategy
Status	Final Report
Client	Ipswich City Council
MRC Reference	6641

Quality Assurance Register

Issue	Description	Prepared by	Reviewed by	Authorised by	Date
a	Draft Report	TL	DW	DW	03/06/2019
1	Draft Final Report	TL	DW	DW	21/06/2019
2	Final Report	RB/DW	DW	DW	30/06/2019
3	Final Report (minor edits)	DW	DW	DW	05/07/2019

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Executive Summary

The City of Ipswich Parking Pricing Strategy has been prepared to provide guidance for decision-making on parking management in the City of Ipswich, including the management of time restrictions and priced parking in the Ipswich City Centre and Springfield Town Centre.

The strategy establishes a strategic direction for Ipswich City Council ('Council') to adopt in its approach to managing parking which will allow consistent and uniform responses to priced parking implementation and management of time restrictions in each centre.

The strategy provides direction for parking management that is consistent with working towards Council's long-term strategic goals by aligning parking objectives with established policy for sustainable transport, as outlined in Council's transport strategy iGO. In developing this strategy, MRCagney has:

- Undertaken a review of existing Council policy documents relevant to the Ipswich City Centre and Springfield Town Centre including plans and strategies for car parking, transport and land use, including the Council-wide transport strategy, iGO;
- Attended meetings and workshops with Council officers;
- Undertaken an assessment of the parking environments in both the Ipswich City Centre and Springfield Town Centre, including analysis of parking demand, review of parking inventory and assessment of operational parking controls;
- Undertaken a review of best practice case studies for parking management regimes used in other council jurisdictions to understand successful approaches to on-street parking management, parking technology and parking revenue distribution;
- Developed parking objectives that align with Council's established goals for sustainable transport and active and vibrant activity centres;
- Developed a Priced Parking Framework to guide systematic and consistent decision-making for the implementation of priced parking and the adjustment of existing parking controls in the Ipswich City Centre and Springfield Town Centre; and
- Developed a suite of recommendations to improve parking management outcomes for the centre of Ipswich and Springfield.

Assessment of the parking environments in the Ipswich City Centre and Springfield Town Centre has provided information about the level of demand for parking spaces currently experienced in each respective centre. This process has highlighted the level of parking supply relative to existing parking demands experienced in each centre and helped inform development of appropriate recommendations which are expected to improve parking management practices for Council.

This strategy identifies a total of seven (7) broad recommendations which have been designed to assist Council with managing priced parking the Ipswich City Centre and the Springfield Town Centre and the application of supporting parking management tools. The recommendations are intended to assist Ipswich City Council with working towards achieving its long-term objectives for transport which includes a shift to sustainable modes of transport. The recommendations are listed as follows:

1. **Adopt City of Ipswich Parking Management Framework**
   Application of a framework for priced parking allows Council to respond to different parking contexts in a systematic and consistent manner in both centres. It is recommended that Council apply the framework when considering expanding parking regimes or introducing priced parking in the Ipswich City Centre and the Springfield Town Centre. The framework allows for uniform decision-making where reformed parking management may be necessary and seeks to provide guidance on:

- **Triggers** – Occupancy-based triggers have been developed to ensure that appropriate parking management actions can be implemented to respond to different parking environments. There are three different occupancy ranges (parking demand) that are intended to provide a trigger for actioning the appropriate parking management intervention (introduction of priced parking or adjustment of existing controls).
- **Parking demand/alternative uses** – Where parking facilities are poorly utilised (below 65% peak period occupancy), Council can consider re-developing under-performing off-street parking or repurposing on-street parking to more active uses (expanded footpaths, public realm investments or improved bicycle facilities).

Council will be preparing a guideline to assist with the implementation of Parking Management Framework.

2. **Fee structures**
   The current structure for priced parking within the City of Ipswich is considered to be generally appropriate, particularly considering the relatively moderate levels of overall parking demand observed and analysed previously. Modification of the current pricing structure in the immediate short-term would likely have greater dis-benefits (i.e. confusion over parking prices / application) than any potential benefits, particularly considering current parking demands, and is therefore not recommended at this time.

3. **Price Adjustments**
   To affect parking demand changes of 10-15%, it is recommended to adopt pricing changes of 15-25%, as a conservative approach, until the relationship between parking demand and pricing within the City of Ipswich context is better established. Parking price adjustments (where appropriate) should be trialled, with parking surveys before, during and after to understand the impacts of any changes.

4. **Parking revenue distribution**
   It is recommended that Council use revenue accrued through its priced parking regime to invest in facilities and programmes to encourage a shift to sustainable modes of transport. This may include the expansion of Council's existing on and off-street cycling network, streetscape improvement works in each centre and behavioural change programmes and incentives for residents to shift to walking, cycling or public transport.

5. **Periodically review data**
   It is recommended that the parking demand in each centre is reviewed at least every 12 months to support application of Council's priced parking framework. Surveys may be carried out at more regular intervals (3-6 months) if there is evidence that parking demands are changing rapidly. The use of internal Council resources is encouraged to conduct 'observational surveys' prior to procurement of formal surveys. Where changes to parking management are being contemplated, particularly for implementation, expansion or adjustment of priced parking, formal surveys before and after implementation are recommended.

6. **Enforcement**
   Effective enforcement is a necessary complement for effective parking controls. It is recommended that enforcement practices continue in accordance with the newly adopted approach outlined herein.

7. **Parking technology**
   Emerging improvements for parking management systems supported by advances in available technology and, as identified in the iGO *Intelligent Transport Systems Strategy* should be investigated.

1 Introduction

1.1 Purpose

Car parking is an important component of Ipswich's transport system with travel by car the dominant mode of travel used by Ipswich residents. For every trip that begins in a car, a car space must become available at its final destination. Car parking policy can be a valuable tool in influencing transport outcomes and people's transport choices and play an important role in shaping a vibrant, welcoming and successful urban centre.

Ipswich City Council is actively involved in parking through its roles in:

- Managing public on- and off-street parking facilities through setting time limits, pricing and accompanying enforcement of parking controls;
- Providing parking spaces as part of the street network and with dedicated off-street facilities at activity centres and as part of Council-managed community facilities;
- Regulating minimum on-site parking requirements for development; and
- Influencing and advocating other organisations involved in the provision of parking such as shopping centres and state government agencies that provide parking at locations such as railway stations.

The Parking Pricing Strategy has been prepared to assist Council with decision-making relating to priced parking implementation in the Ipswich City Centre and Springfield Town Centre.

The purpose of this Strategy is to establish a strategic direction that guides a consistent and effective approach for parking management, including the application of parking tools (priced parking and time restrictions) for Council-owned on- and off-street parking. The strategy is designed to work towards achieving Council's guiding principles and objectives for transport and implementing key initiatives for car parking outlined in the City of Ipswich Transport Plan (branded as 'iGO').

1.2 Scope

The strategy provides direction for parking management that is consistent with working towards Council's broader aspirations for the municipality by aligning parking objectives with established policy for sustainable transport, as outlined in iGO.

Underpinning this strategy is preparation of a framework which is intended to guide decision-making to support consistent parking outcomes in both centres. The framework allows Council to respond to different parking issues in each centre by considering the application of appropriate actions to support consistent and effective parking management.

Preparation of the strategy has involved a review of strategic policy documents for transport and land use in the municipality as well as a review of parking occupancy, time restrictions and parking revenue in each centre.

This strategy is linked to Council's broader objectives for sustainable transport and acknowledges the role that strong and robust parking management can have on economic and social outcomes for the City of Ipswich.

This strategy is structured as follows:

1. **Introduction** – purpose, scope and approach of the strategy;
2. **Background** – reviews Council's existing policies for transport and provides information about the importance of parking management for the City of Ipswich;
3. **Current parking scenario** – reviews parking demand and time restrictions in each centre;
4. **Successful approaches to car parking in activity centres** – provides information and guidance regarding the role of priced parking and the importance of effective parking management (including pricing) in centres;
5. **Framework for priced parking** – develops a set of objectives to provide a working 'definition of success' for parking management outcomes as well as a framework to guide decision-making for priced parking;
6. **Implementing priced parking** – provides guidance for implementing priced parking;
7. **Distributing funds from priced parking** – provides examples of how authorities divert funding from parking to sustainable transport initiatives; and
8. **Recommendations for parking management** – provides a summary of the recommendations detailed in this strategy.

2 Background

2.1 Context

The City of Ipswich is a Local Government Area (LGA) located west of the Brisbane metropolitan area. The current population is approximately 215,000 which is set to grow to around 435,000 by 2031 and 520,000 by 2041. As significant growth is expected within the LGA, planning for the various aspects of transport (including parking policies) for residents and workers is key to being able to balance users' demand with available resources.

The City of Ipswich Transport Plan, branded as 'iGO', is outlined below, and provides strategic guidance on how Council will look to manage the transport task within existing and emerging areas.

2.2 iGO

iGO is Ipswich City Council's existing policy for transport. It outlines Council's aspirations to advance the city's transport network to accommodate a future population of 435,000 people by shifting trips to more sustainable modes of transport.

With forecasted population growth in the City of Ipswich, iGO is an important policy document that focusses on integrating land use with transport to advance the transport system and foster the development of strong, compact and connected mixed-use activity centres and complete communities.

Car parking has been recognised as a critical element of the transport system requiring careful management, particularly in regard to how Council provides and manages on-street and off-street car parking in its activity centres. The strategy recognises that effective car parking policy can improve streetscape amenity, support sustainable modes of transport and reduce issues arising from traffic congestion and car dependency, which will be important considerations as the city undergoes future growth.

The plan articulates how Council must take a more strategic approach to the provision and management of car parking, particularly in the Ipswich City Centre and Springfield Town Centre, to support Council's long-term strategic objectives.

2.3 Importance of parking management

Car parking is one of the biggest challenges facing local governments like the Ipswich City Council, as the impacts of population growth, increased traffic and congestion, and the associated demands on transport infrastructure (including parking) can often require significant attention, resources and investment.

Council provides more than 3,500 car parking spaces in the Ipswich City Centre, which includes both on-street and off-street spaces. Of these car parking spaces, approximately 710 spaces are subject to priced parking enforcement while the remaining are understood to be both unrestricted and managed using time restrictions.

Council's existing transport policy recognises that individual travel trends will need to change in the future to accommodate population growth. Transitioning the transport network (including pedestrian movements) from one that is predominantly car oriented to one that is more sustainable, will be critical to ensure liveability can be enhanced in the future.

Currently, around 85% of all trips in the City of Ipswich are made by private vehicles and household car ownership rates are understood to be increasing. This reliance on the car, particularly for short trips and journeys to work and education, will have serious implications for traffic congestion, parking demand, economic development, the environment, safety and public health.

A successful Parking Pricing Strategy will ensure a consistent and logical approach in managing priced parking within the City of Ipswich, which is one of many elements that will address some of these existing and future transport challenges and assist in nurturing vibrancy, activity and prosperity for the Ipswich City Centre and Springfield Town Centre.

3 Current parking scenario

This section provides information about the existing car parking environment in both Ipswich and Springfield centres and presents a summary of existing parking demands. A plan outlining the parking locations and a detailed review of time restrictions has also been undertaken, with the findings and recommendations for minor changes provided in Appendix A of this report.

The existing parking scenario analysis was carried out using surveyed data for parking occupancy and parking meter data. The data was obtained for Saturday (27 October 2018), Tuesday (30 October 2018) and Thursday (1 November 2018), and to understand parking demand experienced in each centre on both weekdays and weekends. The surveys were conducted for both the Ipswich City Centre and the Springfield Town Centre areas on concurrent days.

For the Ipswich City Centre area, parking demand data has been categorised using the same parking precincts as defined with iGO to ensure consistency across both documents.

3.1 Ipswich City Centre

The surveyed occupancy data for Ipswich City Centre was summarised by calculating the average parking occupancy for Tuesday, Thursday and Saturday survey periods. The average occupancy per day was compared with the supply volume (by precinct) is demonstrated in Figure 3-1 (and Table 3-1 overleaf) which considered both on-street and off-street parking spaces managed by Council.

Figure 3-1: Ipswich City Centre - Average Parking Occupancy (Tuesday, Thursday and Saturday)

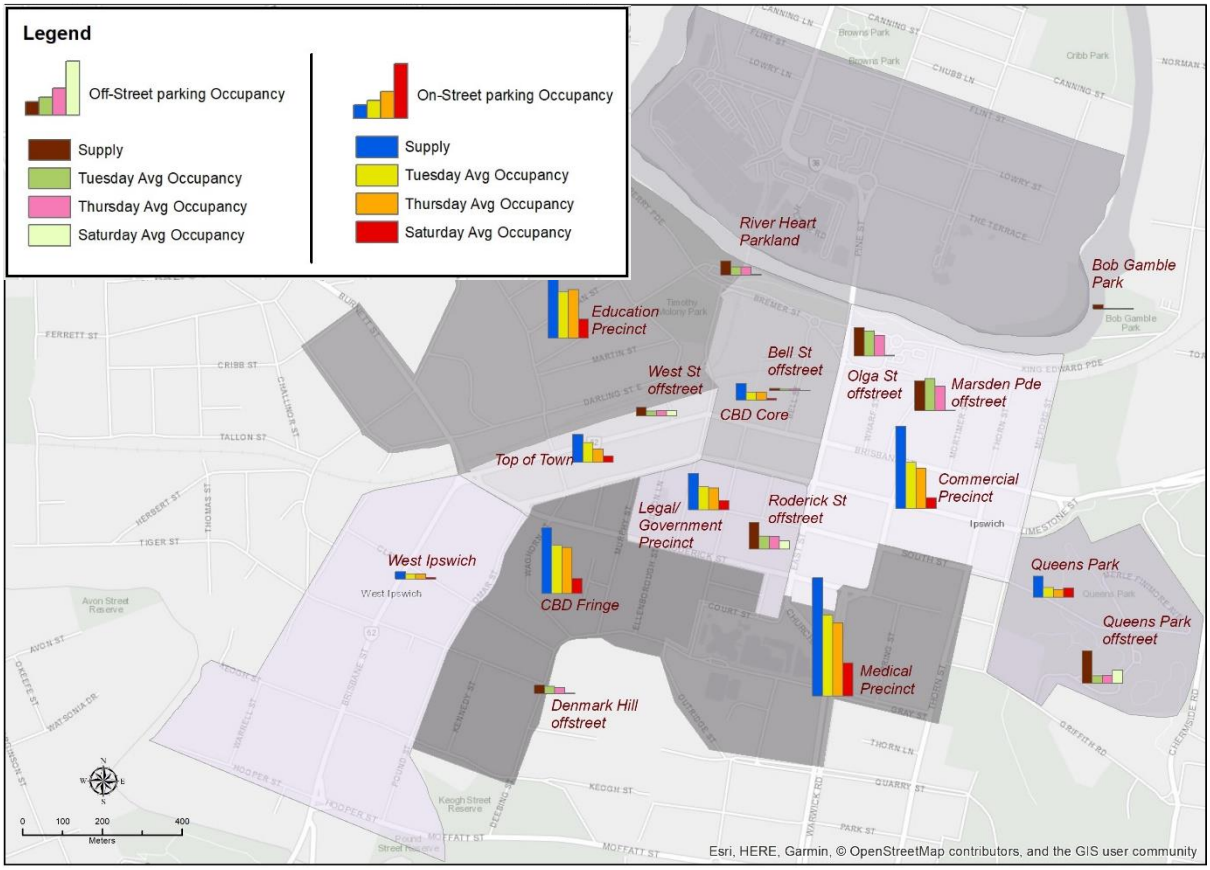


Table 3-1: Ipswich City Centre – Summary of Occupancy Data

Type	Name		Saturday		Tuesday		Thursday	
		Supply	Avg	Max	Avg	Max	Avg	Max
		Occupancy Volume						
On-street	CBD CORE	96	11	20	45	59	47	69
On-street	CBD FRINGE	383	89	115	281	344	268	339
On-street	COMMERCIAL	475	62	90	267	325	234	302
On-street	EDUCATION	495	110	138	267	355	282	372
On-street	LEGAL & GOVT	212	54	92	134	169	126	184
On-street	MEDICAL	684	191	241	469	562	423	530
On-street	QUEENS PARK	121	53	77	56	92	43	84
On-street	TOP OF TOWN	162	36	49	113	128	77	100
On-street	WEST IPSWICH	41	8	13	30	37	27	39
Off-street	Bell St off-street	14	3	7	8	11	8	12
Off-street	Bob Gamble Park	24	4	10	3	5	2	8
Off-street	Denmark Hill off-street	50	4	5	42	49	37	50
Off-street	Marsden Parade off-street	173	2	3	184	213	141	198
Off-street	Olga St	165	4	6	145	164	120	163
Off-street	Queens Park off-street	191	77	121	46	69	47	94
Off-street	River Heart Parkland	82	5	8	47	57	46	69
Off-street	Roderick St off-street	154	48	89	75	104	72	124
Off-street	West St off-street	50	32	43	30	41	31	51
		Occupancy Percentage (%)						
On-street	CBD CORE	96	12%	21%	47%	61%	49%	72%
On-street	CBD FRINGE	383	23%	30%	73%	90%	70%	89%
On-street	COMMERCIAL	475	13%	19%	56%	68%	49%	64%
On-street	EDUCATION	495	22%	28%	54%	72%	57%	75%
On-street	LEGAL & GOVT	212	25%	43%	63%	80%	59%	87%
On-street	MEDICAL	684	28%	35%	68%	82%	62%	77%
On-street	QUEENS PARK	121	44%	64%	46%	76%	36%	69%
On-street	TOP OF TOWN	162	22%	30%	69%	79%	47%	62%
On-street	WEST IPSWICH	41	20%	32%	72%	90%	66%	95%
Off-street	Bell St off-street	14	23%	50%	57%	79%	57%	86%
Off-street	Bob Gamble Park	24	17%	42%	13%	21%	9%	33%
Off-street	Denmark Hill off-street	50	8%	10%	83%	98%	73%	100%
Off-street	Marsden Parade off-street	173	1%	2%	106%	123%	81%	114%
Off-street	Olga St	165	2%	4%	88%	99%	73%	99%
Off-street	Queens Park off-street	191	40%	63%	24%	36%	24%	49%
Off-street	River Heart Parkland	82	6%	10%	58%	70%	56%	84%
Off-street	Roderick St off-street	154	31%	58%	49%	68%	47%	81%
Off-street	West St off-street	50	64%	86%	59%	82%	63%	102%

Table 3-1 provides a summary of parking demand across each parking precinct in the Ipswich City Centre. The highest number of unoccupied on-street parking was found in the Commercial, Education and Medical precincts which suggests that existing car parking supply in these locations is generally under-utilised.

The occupancy data analysis reveals that there is a significant imbalance between parking supply and parking demand across each defined precinct with parking supply comfortably satisfying existing parking demands. While there may be localised areas that have higher parking demand, or limited parking supply, overall parking occupancies across the precincts are relatively moderate.

Detailed comparisons between parking supply and demand, segregated into maximum and average parking occupancy for each surveyed day has been undertaken to illustrate the parking demand across different locations, as shown in Figure 3-2 and Figure 3-3.

Figure 3-2: Ipswich City Centre – On-Street Parking Supply and Occupancy

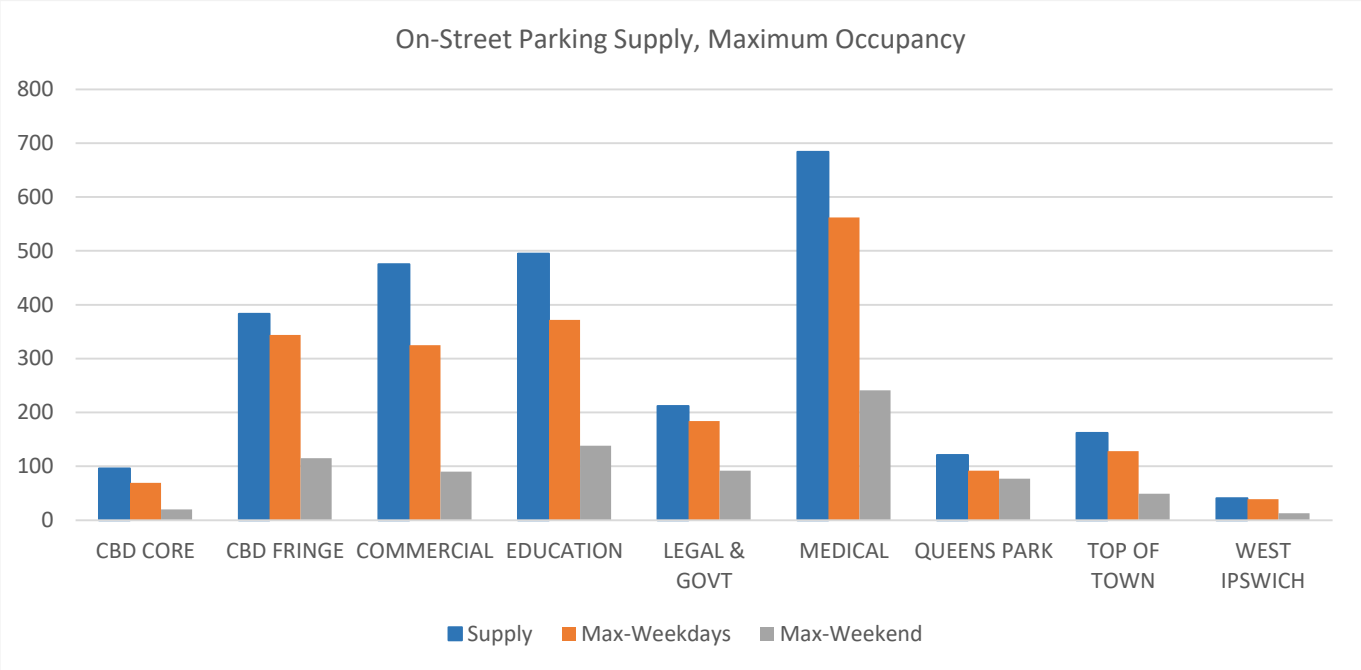
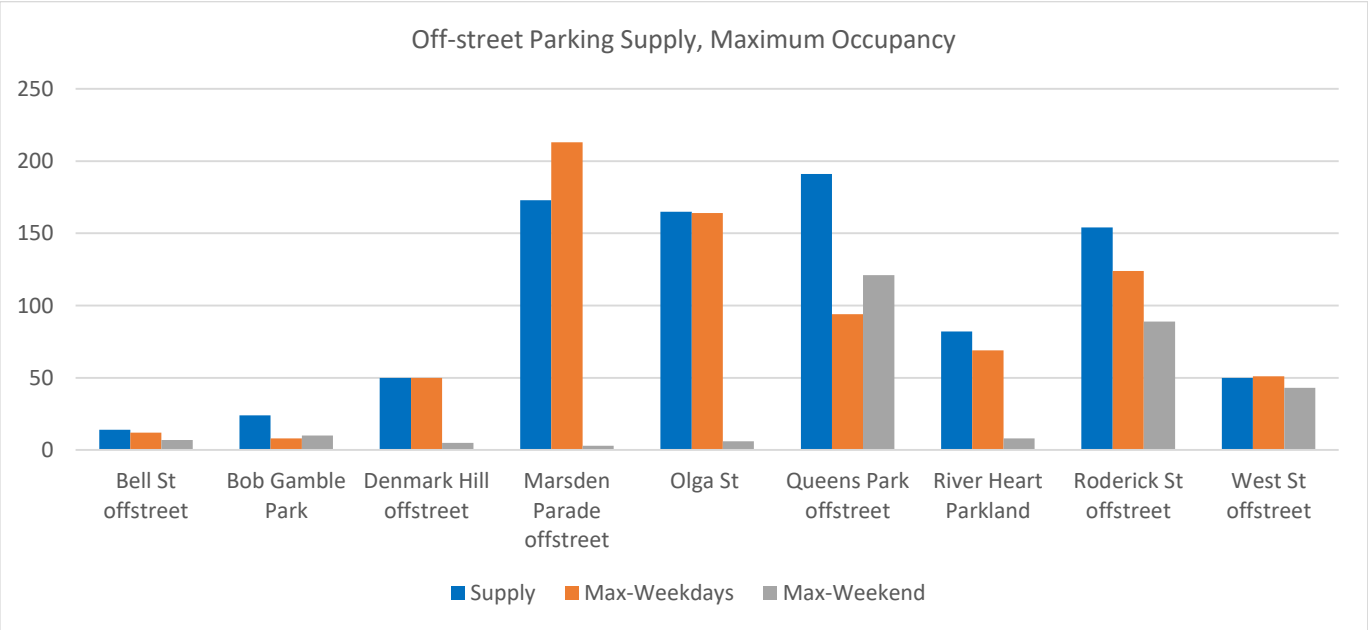


Figure 3-3: Ipswich City Centre – Off-Street Parking Supply and Occupancy



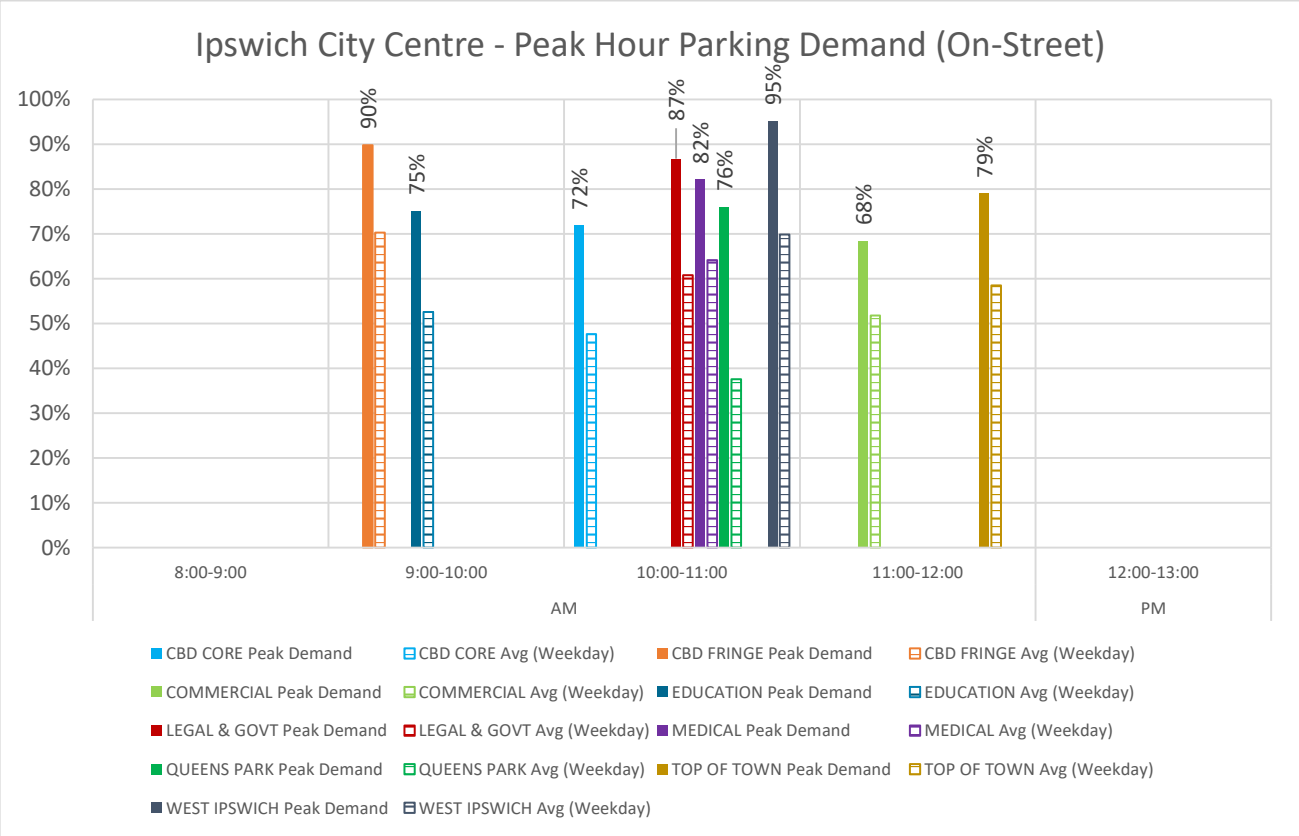
Overall, it can be seen that parking demand is higher on weekdays (Tuesday and Thursday) compared to weekends (Saturday) which can be attributed to employee parking, and off-street parking is favoured over on-street due to the longer-term parking controls satisfying the needs of commuters and employees in the Ipswich City Centre.

Higher parking demand during weekdays is not uncommon for key activity centres like Ipswich City Centre given the key land uses and users which traditionally generate significantly higher weekday demands.

The analysis of parking demand has also identified peak parking demand experienced in the Ipswich City Centre. The identified peak parking occupancy duration shows how different land use types attract variations in peak parking demand throughout the day. For estimating the peak parking demand, the highest percentage of occupancy volumes were used to identify the peak hour.

Figure 3-4 shows the peak parking demand for a range of land-uses in Ipswich City Centre for on-street parking.

Figure 3-4: Ipswich City Centre – Peak Parking Demand (On-Street)



Notes:

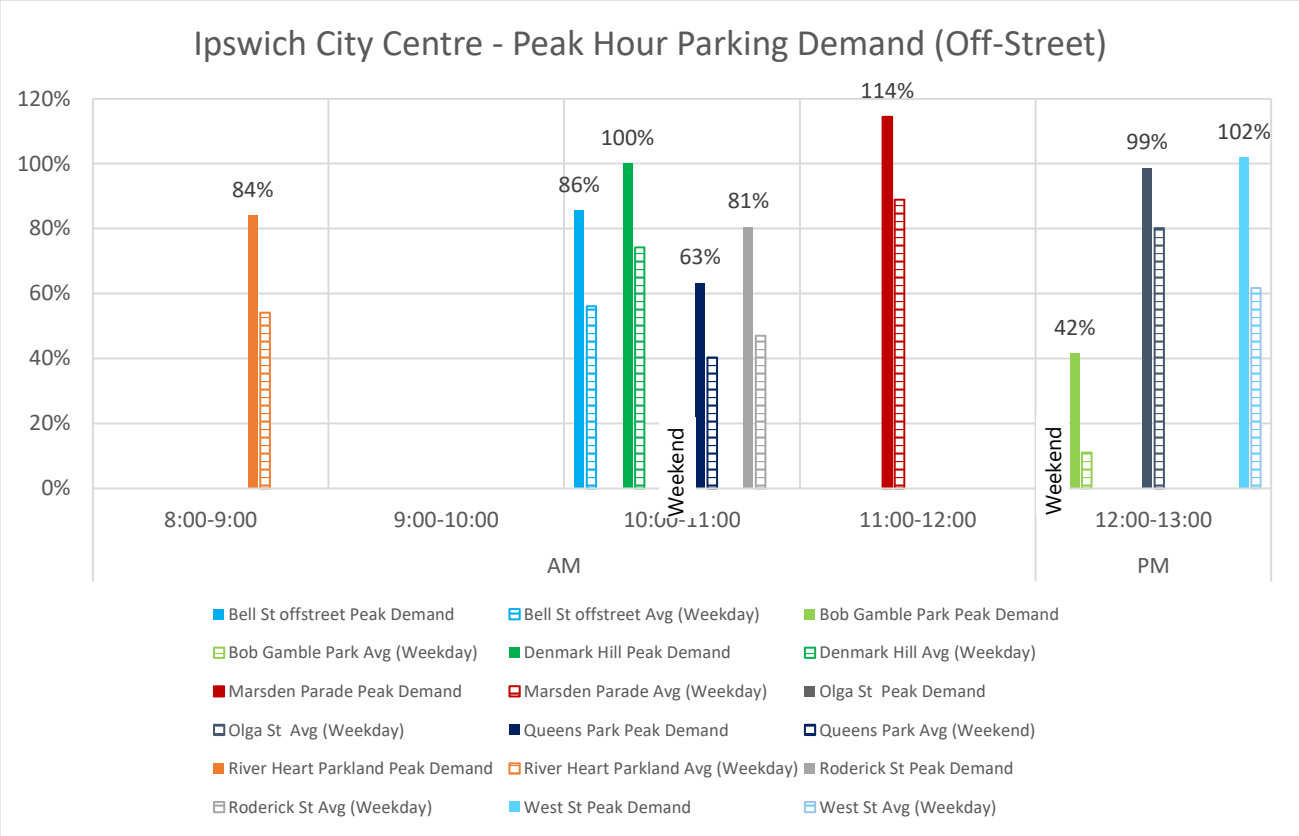
On-street peak parking demand for all precincts lies in AM of weekdays from 9:00 to 12:00 AM.

No peak demand for PM hour is observed.

The West Ipswich peak parking occupancy is not representative of the entire precinct as only a limited number of streets were surveyed.

Figure 3-5 overleaf shows the off-street parking demand in peak hours.

Figure 3-5: Ipswich City Centre – Peak Parking Demand (Off-Street)



Notes:

Off-street peak parking demand lies both in AM and PM hours of weekdays and weekends from 8:00 AM to 13:00 PM.

No peak demand in rest of the PM hours is observed.

The weekend peak demand was observed for Queens Park and Bob Gamble Park only.

The off-street parking demands indicate a relatively high peak utilisation across the various locations, however, average parking occupancy across the day (typically weekday) was significantly lower. It is noted that the Marsden Parade off-street parking area experienced peak parking demand beyond the formal parking supply on both surveyed weekdays and has an average (weekday) parking occupancy approaching 90% of the supply.

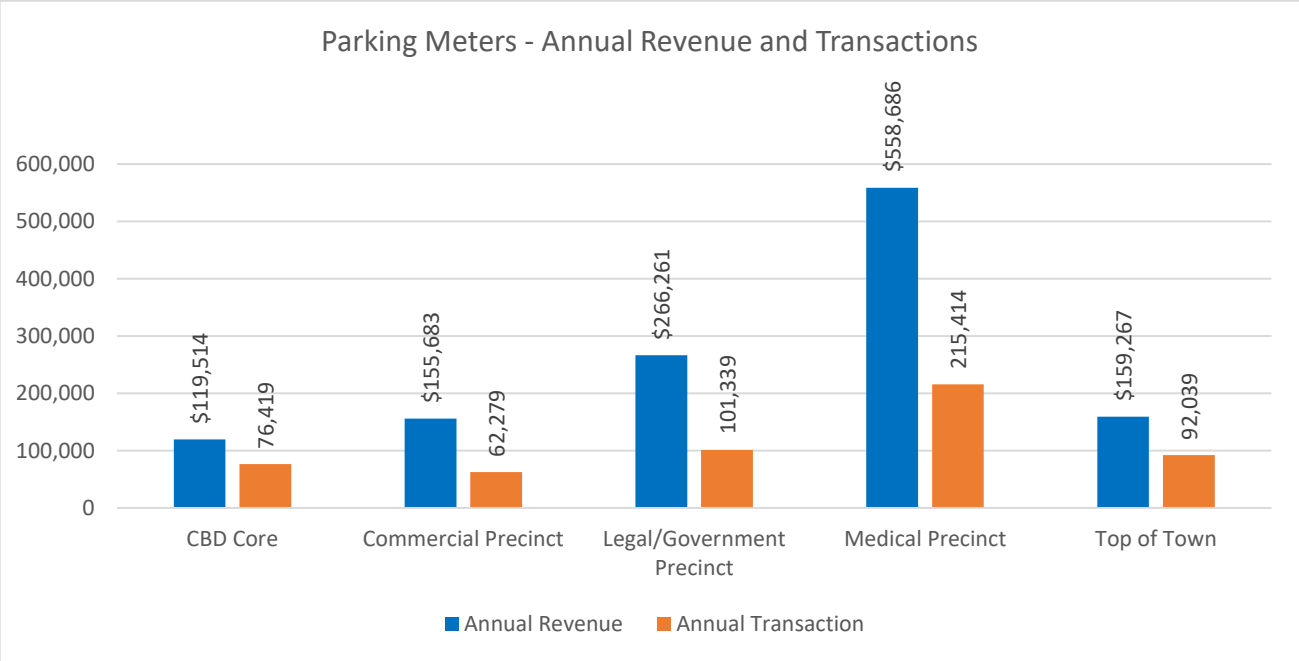
Similarly, the Olga Street off-street carpark parking demand peaks at almost 100% of capacity, with an average occupancy of approximately 80% during the weekdays. While the Denmark Hill and West Street off-street carparks have peak occupancies of approximately 100%, the average occupancy is significantly lower, and the overall size of the parking supply is relatively small.

3.1.1 Ipswich City Centre parking revenue

In addition to the parking occupancy analysis undertaken in this section, further analysis has been carried out to compare the annual transactions and monetary amount generated by each precinct in Ipswich City Centre. A summary of the parking revenue generated within each parking precinct of the Ipswich City Centre study area is provided in Figure 3-6, with a total of approximately $1.29 million collected overall within the City of Ipswich in the 2018 calendar year.

The parking precinct that saw the highest amount of parking revenue raised was the Medical precinct which raised approximately $558,000. This is not uncommon because hospitals are unique parking demand generators due to the need for access by private vehicle for patients, staff and visitors. Furthermore, Figure 3-6 suggests that, as a proportion of annual revenue, there aren't as many transactions when compared to other parking locations because hospitals traditionally attract longer term demands.

Figure 3-6: Ipswich City Centre – Parking Meter Transactions and Revenue by Parking Precinct (2018)



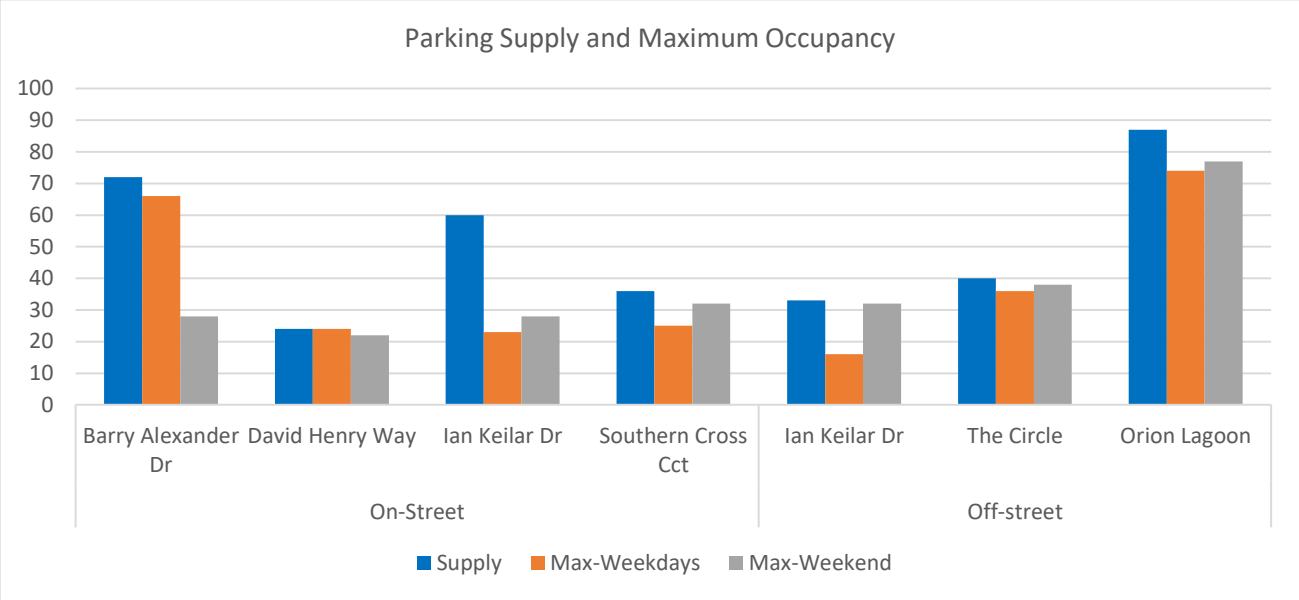
Examining the number of priced parking transactions in comparison to the overall parking supply, it was noted that the CBD Core, Legal / Government and Top of Town Precincts had, on average three (3) transactions per day, while the Medical Precinct had just over two (2) transactions per day on average and the Commercial parking precinct had just under one (1) transaction per day on average. In terms of the parking meter revenue generated, it is noted from Figure 3-6, that the average revenue per transaction for the Medical, Legal/Government and Commercial Precincts ranged between $2.49 and $2.62, and were relatively higher than the other precincts (i.e. CBD Core and Top of Town) which were between $1.56 and $1.73 (respectively).

It is also to be noted that costs are incurred for operating the existing priced parking systems as well as maintenance / upgrading of equipment. Current annual costs for operation of the existing priced parking systems (primarily the current parking meters within the City of Ipswich) are noted as approximately $350,000 per annum (p.a.) which covers hosting, maintenance and transaction costs. In addition to the on-going operational costs, infrastructure upgrades occur approximately every five years, which are equivalent to an annual cost of approximately $100,000 p.a. Therefore, the cost of operating the existing priced parking system is approximately $450,000 p.a. or approximately 35% of the revenue.

3.2 Springfield Town Centre

This section reviews and analyses the parking demand in the Springfield Town Centre. Figure 3-7 presents the parking demand experienced across the centre for both weekdays and weekends. It is also noted that the parking demand varies significantly across each location due to different land use types and likely trip generators. Table 3-2 overleaf summarises the occupancy data for the Springfield Town Centre.

Figure 3-7: Springfield Town Centre – Parking Supply and Average Occupancy (All Surveyed Days)



The analysis of the Springfield Town Centre parking occupancy data indicates that the average occupancy of parking during weekdays and weekends share some similarities, with parking supply comfortably meeting demand during weekdays at Ian Keilar Dr and Southern Cross Cct.

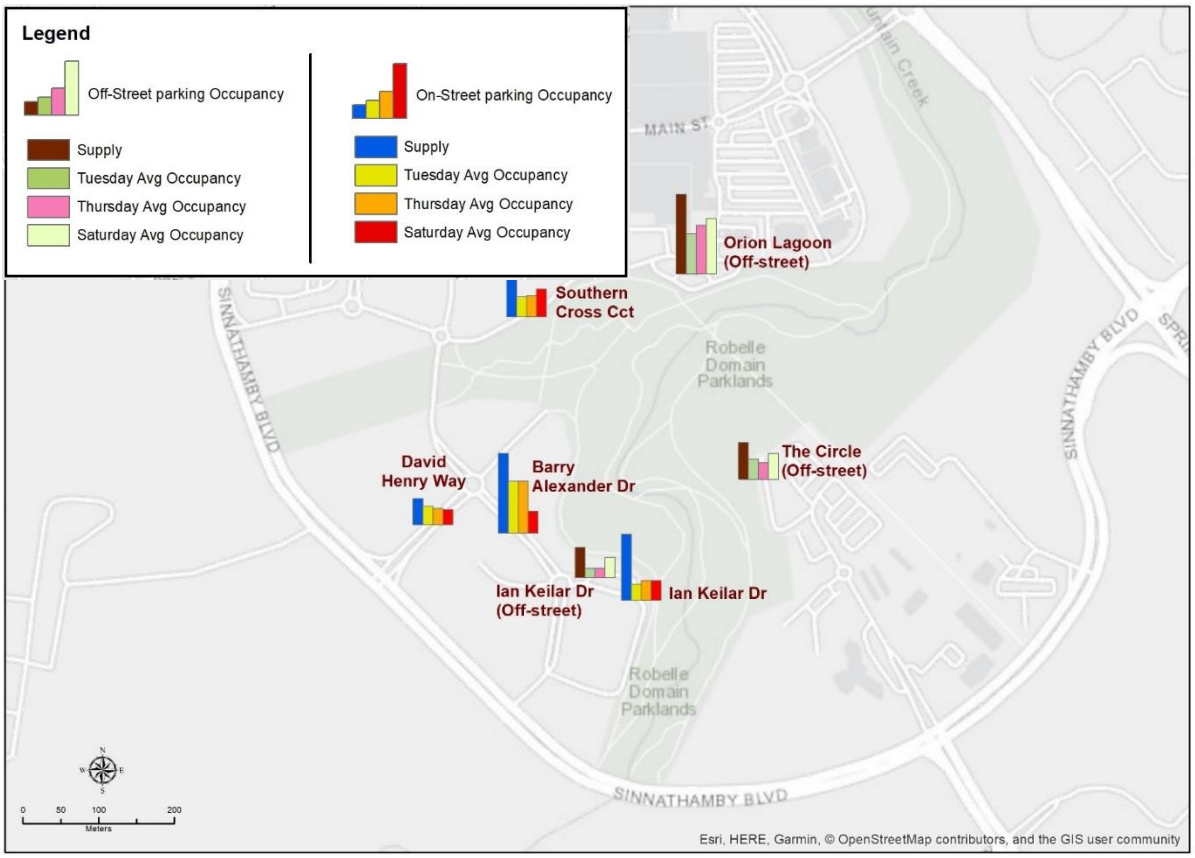
Barry Alexander Drive having lower occupancy on weekends and, conversely, parking on Ian Keilar Drive (off-street) parking showing higher occupancy on weekend as compared to weekdays.

Additionally, the spatial distribution of parking supply and average occupancy volumes for each surveyed day has been mapped and is presented in Figure 3-8 overleaf. It confirms that across the study area, parking supply is excessively high against existing demands and that at any given time, motorists will not be inconvenienced when searching for available parking. This is particularly the case at Orion Lagoon, Barry Alexander Dr and Ian Keilar Dr.

Table 3-2: Springfield Town Centre – Summary of Occupancy Data

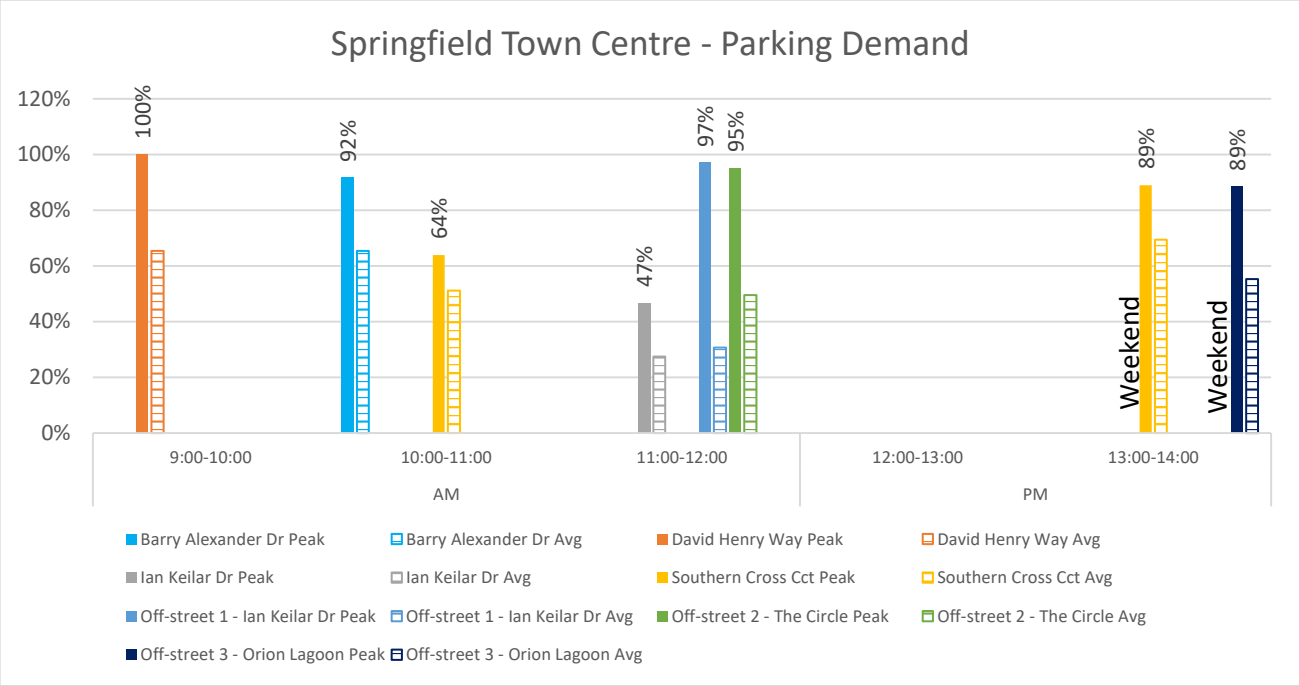
Type	Name	Supply	Saturday		Tuesday		Thursday	
			Average	Max	Average	Max	Average	Max
Occupancy Volume								
On-Street	Barry Alexander Dr	72	20	28	47	60	47	66
On-Street	David Henry Way	24	14	22	17	23	15	24
On-Street	Ian Keilar Dr	60	18	28	15	20	18	23
On-Street	Southern Cross Cct	36	25	32	18	23	19	25
Off-street	Ian Keilar Dr	33	22	32	10	16	10	14
Off-street	The Circle	40	28	38	22	36	18	36
Off-street	Orion Lagoon	87	61	77	44	68	53	74
Occupancy Percentage (%)								
On-Street	Barry Alexander Dr	72	28%	39%	66%	83%	65%	92%
On-Street	David Henry Way	24	57%	92%	70%	96%	61%	100%
On-Street	Ian Keilar Dr	60	30%	47%	26%	33%	29%	38%
On-Street	Southern Cross Cct	36	69%	89%	50%	64%	53%	69%
Off-street	Ian Keilar Dr	33	66%	97%	31%	48%	31%	42%
Off-street	The Circle	40	70%	95%	54%	90%	45%	90%
Off-street	Orion Lagoon	87	70%	89%	50%	78%	60%	85%

Figure 3-8: Springfield Town Centre- Average Parking Occupancy (Tuesday, Thursday and Saturday)



Peak parking demand for the Springfield Town Centre has been analysed and is presented in Figure 3-9 overleaf.

Figure 3-9: Springfield Town Centre – Peak Parking Demand



Note: Peak parking demand was observed for AM in weekdays and for PM in weekends.

The peak parking demand for the Springfield Town Centre presented in Figure 3-9 shows that peak demand for weekdays predominantly lies in AM hours while peak demand during weekend periods favours PM hours (13:00 to 14:00 PM).

The highest demand was recorded at David Henry Way (100%) from 9:00 to 10:00 AM on weekday periods while the lowest peak demand was recorded at Ian Keilar Drive (42%). The peak demand for Southern Cross Circuit and Barry Alexander Drive is identified from 10:00 to 11:00 AM in weekdays. Peak parking demand for the other locations in the study area are recorded between 11:00 AM to 12:00 Noon during weekdays which is typical for activity centre locations.

It is noted that the Orion Lagoon peak parking occupancy was 89% (average occupancy of approximately 70%) during the weekend survey, which was conducted in late October 2018. While the timing of the survey would be considered to represent an average demand across the year, it is likely that parking demand would be somewhat seasonal with lower demand during winter (colder) months and higher parking demand during summer (warmer) months and/or during school holiday periods. Therefore, consideration should be given to the seasonal fluctuation of parking demands for activity-based land-uses.

4 Successful approaches to car parking in activity centres

Effective car parking management is a useful tool that optimises parking space in areas of high parking demand to ensure parking availability, turnover and accessibility. Parking management is also an effective element of the broader transport system and, when well enforced, can support Council in achieving its broader transport objectives by reducing traffic congestion, encouraging the use of sustainable transport modes and supporting vibrant and walkable activity centres.

This section provides an overview of the various elements of parking management that need to be considered and understood when developing supporting policies for transport, including priced parking.

4.1 The impacts associated with excessive parking supply

The investment in off-street public parking has traditionally been considered an appropriate response to high demand for parking in each activity centre. As a result, both the Ipswich City Centre and Springfield Town Centre now have a large supply of public off-street car parking dispersed around each centre. This parking supply is not highly utilised at all times, particularly during off-peak times and during weekends, meaning visitors are generally able to easily secure convenient parking.

While an excessive supply of parking typically induces car trips to a centre and subconsciously determines the transport mode of residents, there are a myriad of issues associated with this approach, which can lead to unfavourable outcomes, namely:

- **Vehicle intrusion** – an oversupply of parking encourages vehicle use, short car trips within the city centre, and increased traffic. As a result, cars have a greater impact on amenity and safety.
- **Inefficient use of land** – surface car parks prevent high value land from being used for a range of higher value uses, including infill development or public open space.
- **Urban form and place quality** – car parks (particularly surface car parks) contribute to dispersed and disconnected urban forms and inactive street frontages. Excessive car parking is a significant barrier to making attractive and interesting places.
- **Less walkable places** – large surface car parks result in spread out town centres, disconnected destinations and long walking distances.
- **Retail prosperity** – less walkable town centres that encourage short vehicle trips do not support vibrant and prosperous retail. Town centres prosper when people walk and stay for extended periods, however, an oversupply of parking encourages short stays, lower value 'convenience' trips and minimal visitor interaction with the street, shop fronts, and broader community.

Best practice approaches to the supply of public parking have successfully been implemented to support bold sustainability, liveability and sustainable transport objectives for local government areas around the world. These approaches are uniformly based on a holistic consideration of the accessibility needs of complete precincts, together with a host of sustainability, urban design and transport objectives, as opposed to simply looking at parking as a problem in isolation of broader factors.

While Council's management of parking facilities (on- and off-street) is important, the way Council provides parking is an equally important consideration that should be understood. Regarding Council's role as a

provider of public parking, there are some common principles and best practice approaches to parking supply that Council needs to consider as it reforms its approach to parking management, including:

- **Consolidated parking facilities** – Parking is provided in a small number of consolidated facilities (generally multi-level) rather than multiple dispersed surface car parks. This reduces the land dedicated to parking and permits a more compact and walkable urban form.
- **Peripheral parking facilities** – Consolidated car parks are located on the periphery of the precinct, reducing the intrusion of cars within the site, and discouraging short car trips.
- **Appropriately scaled facilities** – Parking facilities are designed to conform with the surrounding urban form. The supply of parking within consolidated facilities is designed to support mode share and broader sustainable travel objectives, rather than satisfy demand.
- **Unbundled parking** – Parking spaces are not included in the sale of dwellings. Instead, people who own cars are able to buy spaces in consolidated facilities separately at the market rate.

While Council's provision of car parking is different to Council's management of parking, there are important links between the level of parking provision in a centre and the impetus to manage parking more efficiently. This needs to be understood in order to develop an effective and strategic response through parking management policy as the overall supply of parking – through Council's provision of car parking – has direct implications and linkages to broader parking management outcomes.

4.2 The role of parking management

Parking management refers to the tools that local governments use to achieve desired parking outcomes and meet stated objectives for transport and land use. Therefore, parking management can be used both as a tool to optimise parking space in activity centres and as a strategy to achieve broader transport objectives, including reducing traffic congestion and encouraging a shift to sustainable or public transport.

Parking management tools typically include time restrictions and pricing which are applied in areas that attract high parking demand. These areas generally include activity centres and retail areas but can also include areas adjacent to train stations, public institutions, hospitals and employment areas.

In the absence of parking management tools, motorists are not encouraged to limit their stay to a certain time. This can create a perception that there is an under-supply of parking spaces because some motorists may find it difficult to secure an available parking space. These scenarios can lead to community and stakeholder expectations placed on Council to invest in new parking facilities which are invariably a significant cost. Avoiding these scenarios reinforces the importance of an effective parking management regime.

Generally, parking management objectives are articulated in a Council-wide parking strategy or policy which can directly be applied at a precinct or activity centre-level. Strategic documents for parking include guidance on managing public parking through interventions for pricing and time restrictions. Parking management also involves broader themes generally linked to Council's established objectives and long-term goals, such as:

- Linking car parking with broader objectives for transport and land use, including mode shift targets and sustainable transport goals;
- Using car parking management to improve the public realm by reducing the impact of car parking in activity centres and articulating Council's goals for streetscapes, parklets and public realm design; and
- Shifting community assumptions that car parking is 'free' or a 'public infrastructure' to an appreciation where parking is seen as a market good.

Effective parking management can be a useful policy tool for achieving sustainable transport objectives. This relates to achieving an optimal amount of supply that encourages alternative modes of transport as opposed to an unmanaged parking environment that further stimulates private vehicle travel.

4.3 Time limit parking controls

In determining the most appropriate response to setting time restrictions in each study area, the Austroads *Guide to Traffic Management – Part 11: Parking*, as provided in Table 4-1, have been reviewed. These guidelines can be used as a reference tool when setting appropriate time restrictions, as guidance is not based solely on the overall parking demand experienced within the area being assessed. Consideration also needs to be given to the land-use context of the surrounding area.

Table 4-1: Parking time limit guidelines

Time Period	Applications of these Periods
5-minute	• Areas with very high arrival rates, for example where passengers are dropped off, but some waiting is likely • May apply in cinemas, post offices and hotels and pay potentially be used in business districts and schools
10-minute or ¼ hour (15-minute)	• For areas with high turnover outside commercial facilities providing a high level of convenience such as banks, post offices, milk bars and newsagents • For pick-up and set-down outside schools • Only appropriate for motorists who go to one address
½ hour (30-minute)	• For areas directly outside local shops that rely on providing a reasonably high level of convenience to maintain a competitive market position • There is usually a high demand and one-hour parking would result in inadequate parking turnover • Half-hour restriction allows people to go to 2-3 shops
1 hour (60-minute)	• Areas outside major shopping centres and in other locations where there is a demand for parking and the activity is likely to take longer than half an hour (e.g. commercial developments providing professional and personal services) • This type of parking is able to be diverted to off-street locations, but parking access needs to be clearly visible from the frontage road
2 hour (120-minute)	• Sometimes appropriate outside major shopping centres although it can result in enforcement difficulties with some motorists staying excessively long times • More likely to be applicable in areas with developments containing professional and personal services • Also applicable on streets where a resident parking permit scheme applies, and time limited parking is available for non-residents • The 2 hour limits results in commuter parking being removed • This type of parking can also be diverted into off-street car parks, access to the car park can be provided via other streets but access arrangements need to be clearly identifiable from arterial roads
4 hour (240-minute) *Also applicable for 3 hour (180-minute)*	• Appropriate where it is desired to stop all-day commuter parking but allow parking by other local people • This type of parking can also be diverted into off-street car parks. While it desirable that car park access is identifiable from the arterial road, it will often be acceptable to assume that motorists are relatively well informed regarding the access arrangements for the site
No time limit (all day) *Unrestricted*	• Usually generated by employees or park and ride motorists and will occur across all types of development • Does not require signs to be used to indicate that parking is permitted where there is no time limit or no user limitation

Source: Damen, P. & Huband, A. (2008). Guide to Traffic Management Part 11: Parking. Sydney, Australia: Austroads.

A review of time restrictions was carried out by using surveyed data for the Ipswich City Centre and Springfield Town Centre locations, to identify whether there were areas of parking that could potentially have adjustments to current time restrictions to better manage parking turnover. The overall parking occupancy of 'Unrestricted' spaces will be reviewed in considering potential parking time limit adjustments (provided in Appendix A).

4.4 When to introduce priced parking

Common practice typically sees priced parking introduced once the effectiveness of time restrictions has been exhausted, making priced parking the final stage in the hierarchy of parking management interventions for public parking spaces (both on and off-street). The steps Council can take when considering changes to parking controls typically responds to the following scenarios:

- If high parking occupancy becomes problematic in an area of unrestricted parking, the application of time restrictions should first be introduced ahead of the consideration of priced parking;
- If high parking occupancy becomes problematic in an area managed under time restrictions, the application of tighter time restrictions can be introduced and monitored ahead of the introduction of priced parking; and
- If high parking occupancy continues to be problematic following the application of tighter time restrictions, then priced parking is recommended.

Priced parking is best implemented as part of precinct-wide integrated parking reforms that also includes improved user information, review of time restrictions, wayfinding and improved enforcement of parking regulations.

Common practice for introducing priced parking is the trigger of consistently high parking demand (~85% occupancy or above) in relation to available parking supply. High parking demand is typically experienced in activity centres that attract visitors for a variety of retail, social and cultural purposes but can also exist in areas of high employment, particularly hospitals or public institutions.

4.5 Priced parking benefits

In understanding how priced parking can support Council's broader objectives for transport, liveability and land use, known benefits that are widely acknowledged as direct outcomes of a priced parking regime:

- **Mode shift** – Priced parking influences mode choice, meaning residents who can access activity centres by walking, cycling or public transport will do so to avoid paying for parking.
- **Turnover and utilisation** – Priced parking supports efficient utilisation and encourages regular turnover to ensure sufficient parking availability at all times.
- **Equity** – Priced parking ensures that parking is always available to those who require it most, including disabled parking and special needs parking.
- **Town centre amenity** – Priced parking contributes to vibrant town centres and the public realm by accommodating visitors and supporting kerbside activity.
- **Road network** – Priced parking reduces the amount of traffic on the local street network due to discouraging short trips made by private vehicle where walking, cycling or public transport are viable options.
- **Fringe parking and walkability** – Priced parking encourages longer-term parkers to use less convenient spaces (i.e. off-street or fringe locations) to increase activity on local streets.
- **Development** – Priced parking reduces the number of spaces needed to meet demand, reducing total parking costs, and allowing more compact development.
- **Revenue** – Priced parking revenue is accrued by Council and used to fund sustainable transport infrastructure and initiatives, or investment in streetscapes and the public realm.

4.6 Developing a consistent approach to priced parking

To date, priced parking areas have been established on an ad-hoc basis in response to high parking demands and in isolation of any guidance from an overarching policy. Further, review of parking pricing has been constrained to simple increases based on Consumer Price Index (CPI) and does not provide appropriate mechanisms for the potential for increases/decreases in the rate of priced parking.

A consistent approach to the management and application of priced parking will provide a clear policy rationale for expanding areas subject to priced parking, altering existing priced regimes or adjusting time restrictions to achieve an effective and consistent response to parking management that can also contribute to Council's broader policy for transport.

Furthermore, developing a consistent approach to priced parking will simplify the decision-making process will allow Council to respond systematically and uniformly to issues relating to high parking demand in different parking contexts.

4.7 Developing triggers for priced parking

A framework for priced parking will allow Council to respond to different parking contexts in a systematic and consistent manner. A common method for councils to respond consistently to parking challenges is through the application of parking 'triggers'. The most basic 'trigger' for considering introduction of priced parking is high parking demand, in relation to available parking supply. High parking demand locations are commonly activity centres that attract large numbers of visitors, such as shopping strips like the Ipswich City Centre or Springfield Town Centre. They may also include areas close to public transport, educational institutions, hospitals and recreational centres and emerging activity centres.

Triggers also allow councils to respond to unique parking issues that may be become prevalent in certain areas of the municipality. A parking framework where triggers can be applied ensures consistency and transparency for parking management and is the most effective approach to priced parking, as opposed to practices that may see priced parking introduced through ad-hoc or reactive practices.

Occupancy-based measures provide good trigger mechanisms by being based on survey data that provides a common and systematic mechanism for triggering application (or at least consideration) of priced parking. This type of data-based mechanism has advantages over 'reactive'-type trigger mechanisms (e.g. requests from shop keepers, residents or other businesses/organisations) or ad-hoc application across selected areas.

Typically, occupancy rates for parking obtained through survey data may be the most appropriate information source for determining implementation triggers. A common occupancy rate used by councils as a trigger for the introduction of priced parking is 85%. This rate is an appropriate level of demand where adjustments to existing time restrictions are no longer the most effective management tool.

In New Zealand, Auckland Transport's Parking Strategy (2015) uses occupancy-rate measures to not only trigger implementation of priced parking, but to trigger shifts along the full range of interventions within the parking management hierarchy. Auckland Transport use an 85% peak period occupancy measure as the trigger for considering introduction of more stringent management interventions. Introduction of priced parking is recommended in contexts where existing time restrictions are failing to achieve peak period occupancy of less than 85%, as shown in Table 4-2 overleaf.

Table 4-2: On-street parking intervention triggers, Auckland Transport

Issue	Trigger Point	Response
Demand pressure in currently unrestricted areas	Demand for on-street parking regularly exceeds 85% at peak times.	• Introduce time restrictions suitable to local demand or paid parking to encourage turnover of spaces; or • Establish new residential parking schemes
Demand pressure in residential areas	Parking demand regularly exceeds 85% of available supply in residential areas at peak times where off-street parking options are constrained (e.g. heritage zones, or areas where off-street parking constraints apply).	• Introduce or alter time restrictions (suited to local demand) to encourage turnover of spaces (with resident parking permit schemes where appropriate); or • Establish new residential parking schemes; or • Introduce paid parking areas to manage the high demand.
Demand pressure in areas with time restrictions	Occupancy levels for time-restricted spaces regularly exceed 85% at peak times.	• Investigate opportunities to reduce the time restriction and/or introduce additional time restrictions on adjacent streets; or • Introduce paid parking with no time limits and use demand responsive pricing
Demand pressure in areas with paid parking	Occupancy rates for paid parking in on-street spaces regularly exceed 85% at peak times.	• Increase parking charges, in line with Policy 1C • Consider provision of additional off-street paid parking consistent with the investment criteria.

A systematic policy supported by data may ease the political acceptability of introducing new priced parking areas. There are a number of factors for Council to consider in making decisions on specific trigger points for priced parking:

1. What is an appropriate average occupancy rate (and over what time period and geographic extent) to trigger implementation?
2. What data collection / monitoring regime is needed to support the use of occupancy-based triggers?
3. What local changes or contextual factors (other than occupancy rates) could be considered as a trigger for review of parking management or prior to implementation of changes?

Regarding **point (1)**, the average peak-period occupancy universally used to trigger priced parking is 85% which is generally recommended as an ideal target occupancy rate for on-street parking within most contexts. However, some priced parking regimes have been introduced for other reasons - see Horsham case study in Appendix C of this report.

An 85% trigger point means that even at peak demand periods, around one in seven spaces is empty and available for users. When parking occupancy rises significantly above this level it becomes difficult for users to find a space, requiring them to circle around to search for parking, time their trips earlier to avoid the rush, or park on nearby residential streets.

Conversely, when occupancy of un-priced parking falls significantly below this level in commercial centres, it may indicate an over-supply of publicly available parking. This presents opportunities for alternative uses of parking spaces (both on-street and off-street) which may include reallocating kerbside space for other uses or consolidating surface parking spaces to suitable locations that can contribute to vibrant and active centres by increasing the level of pedestrian footfall across the centre by enabling 'park once and walk' behaviour.

With regard to **point (2)**, using occupancy-based triggers does require a systematic approach to ongoing data collection and monitoring of on-street and public off-street parking occupancy. It is recommended parking surveys typically be conducted on an annual basis, particularly where significant proportions of a precinct parking are highly occupied (i.e. approaching or exceeding 85%). The costs and feasibility of data collection should inform the regularity of occupancy monitoring. Spot observations by Council officers can provide a cost-effective means of gathering data on a regular (i.e. every 3 or 6 months) basis.

With regard to **point (3)**, consideration of a review of parking management in an area (including potential for priced parking) should not entirely depend on occupancy levels but could also be triggered by or consider a range of contextual factors that may impact on the decision to review parking and the most appropriate regulatory regime for the area. These factors include, but are not necessarily limited to, the following:

- **Land use changes:** Redevelopment that changes the nature of an area through density or use, or changes to zoning of planning scheme controls that are likely to lead to significant redevelopment (particularly commercial/retail/mixed use).
- **Parking supply:** Significant changes to the supply of on-street parking in a commercial, mixed use or retail area through reallocation of road space to other uses.
- **The costs of enforcement**: Relative to expected revenues from parking pricing: If revenues are not sufficient to cover the costs of collecting parking machine revenues and enforcing payment, alternative management regimes like time limits are likely to be preferred.
- **Public transport**: Parking prices should respond accordingly to investment in public transport infrastructure or provision of more frequent services, which may apply to commuter parking.

4.8 Recommended triggers for priced parking

For the City of Ipswich, there are three core factors relevant to decision-making on the implementation of priced parking locations. In determining the most appropriate trigger for priced parking for each centre, the following factors should be considered in decision-making:

- **Parking occupancy** - An indicator of demand for parking at the location. It is suggested that an 'average peak-period occupancy' metric is utilised - which is calculated as the average % of parking spaces across a precinct occupied during the highest four (peak) hours of parking demand, typically during the weekday. Parking demand on weekends (typically Saturday) should also be considered, particularly in relation to activity-based parking demand areas.
- **Activity Centre –** Ipswich City Centre and Springfield Town centre are uniquely different centres that may both require tailored approaches to the use of priced parking rather than an application of a uniform approach.
- **Land use category -** The dominant land use types within each centre and whether different parking rates may apply within different land use contexts – hospital, education, activity centre.

In addition, several other contextual factors should be considered when determining appropriate locations for priced parking. These factors can influence parking demand significantly and are also linked closely with transport mode shift and other land use/transport objectives of Council. These factors include proximity to city centre; proximity to public transport; quality of active transport alternatives; and risk of spillover parking into adjacent areas. Each factor represents important considerations that can influence whether people decide to drive over other modes of transport and therefore should be considered when setting priced parking regimes.

5 Developing a framework for priced parking

At present, Ipswich City Council has no systematic process for making decisions on the alteration of existing priced parking in the Ipswich City Centre or the expansion of priced parking into new areas across the local government area (LGA).

A successfully implemented Parking Pricing Strategy will deliver a set of positive outcomes and assist Council to achieve a broader policy agenda for liveability, economic development and sustainable transport in the City of Ipswich. In recognising the benefits associated with priced parking regimes on town centre vitality, transport mode shift and economic development.

The following points reflect possible outcomes expected from a successfully implemented policy of this nature:

- **Mode shift -** Car parking policy enables Council to achieve broader transport objectives including achieving a long-term mode shift to more sustainable forms of transport. This is achieved through a variety of outcomes including changes to land use, parking fee adjustments, adjustments to parking supply, rationalisation of residential permit schemes and future public transport investment in the area.
- **Hierarchy -** A positive shift is recognisable in the hierarchy that supports Council's stated objectives from iGO (Parking User Priority Hierarchy) for priority users in shopping streets and residential streets while increasing the importance of public transport, walking and cycling for everyday travel needs
- **Revenue -** Car parking revenue remains consistent across the year to ensure associated costs are managed and revenue is available for additional projects / initiatives which may include public realm improvements or transport improvements for walking and cycling projects and / or public transport services.
- **Small business satisfaction -** Small business and local traders are satisfied with the provision of parking available to access their business and can easily grasp the policy rationale that determines fee levels and car parking supply as it applies to them. Local business supports Council's car parking policy and understands its application.
- **Town centre vitality** - Car parking is rationalised and considers the impact it can have on the vitality of activity centres and neighbourhood centres. Time-restrictions, priced parking and supply management are coordinated strategically to ensure adjacent land uses benefit. Car parking in town centres should support the public realm, not hinder it, and streetscapes are active all year round to ensure each centre remains a welcoming and vital place for all visitors.

This section develops a framework for priced parking which has been designed to provide guidance to Council for the implementation of new priced parking, the alteration of existing priced parking or the adjustment of time restrictions in the Ipswich City Centre or Springfield Town Centre.

5.1 The purpose of priced parking in the City of Ipswich

Successfully implemented and effective priced parking regimes are widely acknowledged as delivering a range of broader benefits. In acknowledging the advantages of priced parking, as a minimum, the purpose of a priced parking strategy for the City of Ipswich will:

- Focus on achieving efficient utilisation of parking resources via a range of management tools such as hourly or daily pricing, permits, time limits, and parking enforcement;
- Prioritise the needs of specific users, such as people with disabilities, delivery vehicles or contractors;
- Provide information to users (e.g. parking guidance on access roads and straightforward rules for users); and
- Enable flexibility and sharing (e.g. adjust parking management or availability in response to changes in demand or special event requirements).

5.2 Parking pricing strategy objectives

This section presents parking management objectives that have been prepared to guide Council decision-making and to articulate the role that parking management plays in achieving Council's broader policy goals.

Seven (7) parking objectives, based on iGO, have been prepared which provide a working 'definition of success' for parking management outcomes and to ensure that a strategic approach is embedded in all decision-making on matters relating to car parking within the City of Ipswich.

The following seven objectives have been prepared to articulate Council's strategic approach to car parking and recognise that a successfully adopted car parking management regime typically:

1. Facilitates the balanced provision of car parking in activity centres and ensures parking is accessible to those who require it the most.
2. Ensures the highest and best use of kerbside space.
3. Contributes to active and vibrant retail areas and activity centres by increasing turnover of parking space where required.
4. Reduces traffic congestion and reliance on private vehicles and encourages the use of more sustainable forms of transport.
5. Progressively shifts longer-term parking demand to more peripheral locations to promote more pedestrian focussed activity centres.
6. Ensures the cost to provide public parking is recognised and considered in people's travel choice.
7. Provides opportunity for investing parking revenue into sustainable transport & public realm initiatives.

The objectives articulate Council's desired outcomes or 'what success looks like' and are to be applied in the context of car parking in each activity centre. Building on the above listed objectives, further elaboration of each objective is provided in Table 5-1 overleaf by drawing them to Council's existing high-level transport objectives detailed in iGO.

Table 5-1: Parking management objectives

Parking Management Objectives	*iGO Reference*	*Other comments*
1. Facilitates the balanced provision of car parking in activity centres and ensures parking is accessible to those who require it the most.	"Strategically manage car parking to support economic vitality, balance the parking needs of all users and promote sustainable transport use" *iGO, page 142 (Parking Policy Focus)*	Public parking in the City of Ipswich is shared by a range of different users, all with a range of different needs. The prevailing suburban form of the City of Ipswich and the region's limited access to public transport means many people will continue to rely on publicly available parking in activity centres, however, over time this level of supply will need to reflect the growing participation in sustainable modes of transport.
2. Ensures the highest and best use of kerbside space.	"Space on the road network is prioritised, designed and managed for all of the different types of road users with regard to the overall strategic transport intent" *iGO, page 99 (Roads Policy Focus)*	Parking management is an important mechanism within activity centres to ensure the needs of different users are facilitated. It can provide pick up and drop off space, conveniently located on-street parking, space for deliveries, room for riding bikes, or space for expanded footpaths and streetscaping. Maintaining fair access to those with the greatest need while delivering the highest value to the broader community will be a direct outcome of a successfully implemented pricing strategy.
3. Contributes to active and vibrant retail areas and activity centres by increasing turnover of parking space where required.	"Ipswich's urban form creates high levels of accessibility to key destinations such as employment, education, retail, health care and recreation." *iGO, page ix (iGO Objective 5)*	Car parking is rationalised and considers the impact it can have on the vitality of activity centres and neighbourhood centres. Time-restrictions, priced parking and supply management are coordinated strategically to ensure adjacent land uses benefit.
4. Reduces traffic congestion and reliance on private vehicles and encourages the use of more sustainable forms of transport.	"The provision and operation of parking spaces will need to be strategically managed to encourage travel behaviour changes to more sustainable transport modes to assist with achieving the mode share targets of iGO." *iGO, page 142 (Parking Policy Focus)*	Parking Pricing Strategy will support Council with its ambitions to encourage greater use of sustainable transport, particularly walking and cycling. It will also be used to reduce the externality costs associated with over-provision of un-priced parking including traffic congestion caused from 'cruising' for parking spaces.

Parking Management Objectives	*iGO Reference*	*Other comments*
5. Progressively shifts longer-term parking demand to more peripheral locations to promote more pedestrian focussed activity centres.	"The construction of more and more facilities for longer stay parking is not the sustainable way of the future as it promotes car use for commuter trips, creates traffic congestion and is detrimental to business activities." *iGO, page 12 (issues)*	The management of on-street car parking is important to ensure that parking is being used as efficiently as possible, to ensure public safety and amenity, promote turnover and allow for the effective loading of goods and passengers. On-street parking is to be managed to prioritise these users while longer-term demands can be accommodated at consolidated parking facilities at more peripheral locations. Strategically located parking facilities encourage 'park once and walk' behaviour which allows motorists to make multiple trips within a centre by foot instead of 'cruising' for available parking at each different destination which is proven to add to town centre congestion.
6. Ensures the cost to provide public parking is recognised and considered in people's travel choice.	"As the city grows, there will need to be a shift in culture from expecting a free car park to having to park further away and/or having the privilege to pay for it." *iGO, page 141 (Parking Challenges)*	Reformed parking management will allow parking to be viewed as a valuable resource for which demand should be actively managed to achieve multiple economic and social objectives. Council parking management focuses on managing demand within limited supply using a range of tools such as time limits and pricing rather than attempting to provide unrestricted supply to meet demand.
7. Provides opportunity for investing parking revenue into sustainable transport & public realm initiatives.	"In order to improve facilities that support sustainable travel modes, a portion of revenue from parking meters and fines could be used to improve footpaths, bikeways and bike parking. These benefits would promote the use of active transport and result in improved amenity in these areas" *iGO, page 140 (Parking Opportunities)* *IGO ATAP, page 91 (Action 2.4)*	Typically, priced parking revenue recoups the costs associated with operation and maintenance of ticketed parking systems and infringement while additional revenue can be used for investment in public realm initiatives and infrastructure to encourage residents to shift to sustainable modes of transport.

5.3 The on-street parking management framework

A framework has been developed as an appropriate management tool to assist Council in making informed and responsive decisions in relation to the management of on-street parking, including priced parking. The framework is to be used as a management tool to inform decision making with regard to changing time restrictions or introducing / expanding priced parking area within the on-street parking supply. It also suggests that other contextual factors should be considered when introducing new parking management tools – i.e. proximity to public transport services or potential for spillover into adjacent residential areas.

The framework confirms that priced parking is a suitable parking management tool to introduce when on-street parking demand reaches 85% occupancy across a four-hour peak demand period. This is consistent with guidance provided in iGO which states parking management measures may need to be considered when parking demand reaches 85% occupancy, including the introduction or altering of time restrictions, the introduction of priced parking or the consideration of increasing the fee of existing priced parking regimes.

Similarly, where on-street parking demand is relatively low - less than 65% occupancy across a four-hour peak demand period – consideration should be given to making adjustments to parking management controls, which would typically the form of changes to parking time limits. While the easing of parking prices (if in operation) may be considered where parking demand is relatively low, it is generally recommended that alternative approaches, such as parking supply rationalisation are adopted to achieve ideal occupancy levels.

Other guidance for developing approaches to priced parking is found in the iGO *Intelligent Transport Systems Strategy* which provides information about managing parking demand by adjusting prices up or down to achieve an average utilisation of between 60% and 80% - comparable to the 65% to 85% range espoused above.

Priced parking is to be accompanied by time restrictions that can encourage turnover and prioritise short-stay users rather than commuters, however, it is generally not considered to be appropriate in established residential areas. Despite parking occupancy often being high in these areas, priced parking is not generally recommended in these areas as encouraging parking turnover has less benefit than in activity centres or mixed-use areas.

Priced parking is also generally not considered to be appropriate in contexts where average peak occupancy is less than 75%. In these locations, time restrictions are a more suitable management tool, particularly for retaining local vibrancy around activity centres.

Table 5-2 overleaf provides guidance to Council for decision-making the management of on-street parking within the Ipswich City Centre, which has been designed as a framework to assist with the implementation and expansion of priced parking or adjustment of time restrictions. A similar framework for on-street parking within the Springfield Town Centre is provided in Table 5-3 following.

The framework is to be supported by guidelines which can be followed when assessing different parking contexts in each centre. Council will be preparing a guideline to assist with the implementation of Parking Management Framework. Additional guidance for the implementation of the Framework is provided in Section 6 of this strategy.

Table 5-2: Parking Management Framework – Ipswich City Centre (on-street)

Precinct	Priority Parking Users	Appropriate time restrictions	Average peak-period parking space occupancy (% of spaces occupied within an area during four peak hours of parking demand within a single day – typically weekday)		
			<65%	65%-85%	>85%
CBD Core	• Loading/unloading for goods & deliveries • Disability parking • Loading passengers • Short-stay parking	15m - 2P	1. Consider easing priced parking fee level (if in operation) 2. Consider easing time restrictions (1P - 2P) with acknowledgement of the parking time limit guidelines in Table 4-1 3. Consider alternative uses/ or decommissioning parking space – e.g. street trees, wider footpaths, or conversion to loading zone, EV charging station, share car parking etc.	Maintain time restrictions and priced parking (if in operation).	1. Consider introducing priced parking (if not in operation) 2. Consider tightening time restrictions (15m – 1P) with acknowledgement of the parking time limit guidelines in Table 4-1 3. Consider increasing fee levels for priced parking
Top of Town	• Loading/unloading for goods & deliveries • Disability parking • Short- to medium-stay parking • Loading passengers	15m - 4P	1. Consider easing time restrictions (2P - 4P) with acknowledgement of the parking time limit guidelines in Table 4-1 2. Consider easing priced parking fee level (if in operation) 3. Consider alternative uses/ or decommissioning parking space – e.g. street trees, wider footpaths, or conversion to loading zone, EV charging station, share car parking etc.	Maintain time restrictions and priced parking (if in operation).	1. Consider tightening time restrictions (15m – 2P) with acknowledgement of the parking time limit guidelines in Table 4-1 2. Consider introducing priced parking (if not in operation) 3. Consider increasing fee levels for priced parking
Commercial	• Loading/unloading for goods & deliveries • Disability parking • Short- to medium-stay parking • Residential parking • Loading passengers • Long-stay parking	15m – Unrestricted	1. Consider easing time restrictions (4P - UR) with acknowledgement of the parking time limit guidelines in Table 4-1 2. Consider easing priced parking fee level (if in operation) 3. Consider alternative uses/ or decommissioning parking space – e.g. street trees, wider footpaths, or conversion to loading zone, EV charging station, share car parking etc.	Maintain time restrictions and priced parking (if in operation).	1. Consider tightening time restrictions (15m – 4P) with acknowledgement of the parking time limit guidelines in Table 4-1 2. Consider introducing priced parking (if not in operation) 3. Consider increasing fee levels for priced parking

Precinct	Priority Parking Users	Appropriate time restrictions	Average peak-period parking space occupancy (% of spaces occupied within an area during four peak hours of parking demand within a single day – typically weekday)		
			<65%	65%-85%	>85%
Medical	• Disability parking • Loading passengers • Short- to medium-stay parking • Loading/unloading for goods & deliveries • Residential parking	15m - 4P	1. Consider easing time restrictions (3P – 4P) with acknowledgement of the parking time limit guidelines in Table 4-1 2. Consider easing priced parking fee level (if in operation) 3. Consider alternative uses/ or decommissioning parking space – e.g. street trees, wider footpaths, or conversion to loading zone etc.	Maintain time restrictions and priced parking (if in operation).	1. Consider tightening time restrictions (15m – 3P) with acknowledgement of the parking time limit guidelines in Table 4-1 2. Consider introducing priced parking (if not in operation) 3. Consider increasing fee levels for priced parking.
Legal/Government	• Disability parking • Loading passengers • Short- to medium-stay parking	15m - 4P	1. Consider easing time restrictions (2P – 4P) with acknowledgement of the parking time limit guidelines in Table 4-1 2. Consider easing priced parking fee level (if in operation) 3. Consider alternative uses/ or decommissioning parking space – e.g. street trees, wider footpaths, or conversion to loading zone, EV charging station etc.	Maintain time restrictions and priced parking (if in operation).	1. Consider tightening time restrictions (15m – 2P) with acknowledgement of the parking time limit guidelines in Table 4-1 2. Consider introducing priced parking (if not in operation) 3. Consider increasing fee levels for priced parking
Education	• Disability parking • Loading passengers • Short- to medium-stay parking • Residential parking • Loading/unloading for goods & deliveries • Long-stay parking	15m - Unrestricted	1. Consider easing time restrictions (4P – UR) with acknowledgement of the parking time limit guidelines in Table 4-1 2. Consider easing priced parking fee level (if in operation) 3. Consider alternative uses/ or decommissioning parking space – e.g. street trees, wider footpaths, or conversion to loading zones etc.	Maintain time restrictions and priced parking (if in operation).	1. Consider tightening time restrictions (15m – 4P) with acknowledgement of the parking time limit guidelines in Table 4-1 2. Consider introducing priced parking (if not in operation) 3. Consider increasing fee levels for priced parking

Precinct	Priority Parking Users	Appropriate time restrictions	Average peak-period parking space occupancy (% of spaces occupied within an area during four peak hours of parking demand within a single day – typically weekday)		
			<65%	65%-85%	>85%
CBD Fringe	• Residential parking • Short- to medium-stay parking • Long-stay parking	15m - Unrestricted	1. Consider easing time restrictions (4P – UR) with acknowledgement of the parking time limit guidelines in Table 4-1 2. Consider easing priced parking fee level (if in operation) 3. Consider consolidation or decommissioning of existing Council-owned parking facilities.	Maintain time restrictions and priced parking (if in operation).	1. Consider tightening time restrictions (15m – 4P) with acknowledgement of the parking time limit guidelines in Table 4-1 2. Consider introducing priced parking (if not in operation) 3. Consider increasing fee levels for priced parking
West Ipswich	• Short- to medium-stay parking • Loading/unloading for goods & deliveries • Residential parking • Disability parking • Loading passengers • Long-stay parking	15m - Unrestricted	1. Consider easing time restrictions (4P – UR) with acknowledgement of the parking time limit guidelines in Table 4-1 2. Consider easing priced parking fee level (if in operation) 3. Consider alternative uses/ or decommissioning parking space – e.g. street trees, wider footpaths, or conversion to loading zones etc.	Maintain time restrictions and priced parking (if in operation).	1. Consider tightening time restrictions (15m – 4P) with acknowledgement of the parking time limit guidelines in Table 4-1 2. Consider introducing priced parking (if not in operation 3. Consider increasing fee levels for priced parking
North Ipswich	• Disability parking • Loading/unloading for goods & deliveries • Short- to medium-stay parking • Residential parking • Long-stay parking • Loading passengers	15m - Unrestricted	1. Consider easing time restrictions (4P – UR) with acknowledgement of the parking time limit guidelines in Table 4-1 2. Consider easing priced parking fee level (if in operation) 3. Consider alternative uses/ or decommissioning parking space – e.g. street trees, wider footpaths, or conversion to loading zones etc.	Maintain time restrictions and priced parking (if in operation).	1. Consider stronger time restrictions and/or residential parking permits 2. Consider introducing priced parking (if not in operation) with acknowledgement of the parking time limit guidelines in Table 4-1 3. Consider increasing price level for priced parking

Note: Council will consider the introduction of priced parking or expand/increase existing priced parking based on overall demand on a precinct-level, where (further) adjustments to time restrictions are not considered practical. For priced parking and/or the introduction or management of time restrictions, Council will apply these on a street-by-street basis, considering localised parking uses / demands.

Table 5-3: Parking Management Framework - Springfield Town Centre (on-street)

Dominant land-use of area	Priority Parking Users	Appropriate time restrictions	Average peak-period parking space occupancy (% of spaces occupied within an area during four peak hours of parking demand within a single day – typically weekday)		
			<65%	65%-85%	>85%
Activity Centre	• Loading/unloading for goods & deliveries • Disability parking • Loading passengers • Short-stay parking	15m - 2P	1. Consider easing time restrictions (1P - 2P) with acknowledgement of the parking time limit guidelines in Table 4-1 2. Consider easing priced parking fee level (if in operation) 3. Consider alternative uses/ or decommissioning parking space – e.g. street trees, wider footpaths, or conversion to loading zone, EV charging station, shared vehicle parking etc.	Maintain time restrictions and priced parking (if in operation).	1. Consider introducing priced parking (if not in operation) 2. Consider tightening time restrictions (15m – 1P) with acknowledgement of the parking time limit guidelines in Table 4-1 3. Consider increasing fee levels for priced parking.
Commercial	• Loading/unloading for goods & deliveries • Disability parking • Short- to medium-stay parking • Loading passengers	15m - 4P	1. Consider easing time restrictions (2P – 4P) with acknowledgement of the parking time limit guidelines in Table 4-1 2. Consider easing priced parking fee level (if in operation) 3. Consider alternative uses/ or decommissioning parking space – e.g. street trees, wider footpaths, or conversion to loading zone, EV charging station, shared vehicle parking etc.	Maintain time restrictions and priced parking (if in operation).	1. Consider tightening time restrictions (15m – 2P) with acknowledgement of the parking time limit guidelines in Table 4-1 2. Consider introducing priced parking (if not in operation) 3. Consider increasing fee levels for priced parking

Dominant land-use of area	Priority Parking Users	Appropriate time restrictions	Average peak-period parking space occupancy (% of spaces occupied within an area during four peak hours of parking demand within a single day – typically weekday)		
			<65%	65%-85%	>85%
Medical	• Disability parking • Loading passengers • Short- to medium-stay parking • Loading/unloading for goods & deliveries	15m - 4P	1. Consider easing time restrictions (2P – 4P) with acknowledgement of the parking time limit guidelines in Table 4-1 2. Consider easing priced parking fee level (if in operation) 3. Consider alternative uses/ or decommissioning parking space – e.g. street trees, wider footpaths, or conversion to loading zone etc.	Maintain time restrictions and priced parking (if in operation).	1. Consider tightening time restrictions (15m – 2P) with acknowledgement of the parking time limit guidelines in Table 4-1 2. Consider introducing priced parking (if not in operation) 3. Consider increasing fee levels for priced parking
Education	• Disability parking • Loading passengers • Short- to medium-stay parking • Loading/unloading for goods & deliveries • Long-stay parking	15m - Unrestricted	1. Consider easing time restrictions (4P – UR) with acknowledgement of the parking time limit guidelines in Table 4-1 2. Consider easing priced parking fee level (if in operation) 3. Consider alternative uses/ or decommissioning parking space – e.g. street trees, wider footpaths, or conversion to loading zone etc.	Maintain time restrictions and priced parking (if in operation).	1. Consider tightening time restrictions (15m – 4P) with acknowledgement of the parking time limit guidelines in Table 4-1 2. Consider introducing priced parking (if not in operation 3. Consider increasing fee levels for priced parking

Note: Council will consider the introduction of priced parking or expand/increase existing priced parking based on overall demand on a precinct-level, where (further) adjustments to time restrictions are not considered practical. For priced parking and/or the introduction or management of time restrictions, Council will apply these on a street-by-street basis, considering localised parking uses / demands.

5.4 Managing off-street parking

Ipswich City Council provides parking in several off-street facilities in activity centres to help facilitate access for the community, mostly surface car parks that facilitate easy car access and convenient parking for users.

While surface (or at-grade) parking facilities accommodate large parking demands, parking in this configuration is expensive to provide, uses large areas and contributes to disconnected urban forms that increase walking distances typically resulting uninviting places for people to walk, stop and stay. Furthermore, large surface car parks provide a significant amount of parking in poorly accessible locations that are unsafe and poorly activated at night. Ultimately, however, there is greater value in an off-street parking supply being re-purposed for other land-uses which will provide better economic and/or social value.

5.4.1 A case for priced parking within off-street parking facilities

The majority of Council-owned off-street parking facilities within the Ipswich City Centre have unrestricted parking, with off-street parking associated with Council administration offices within the Legal & Government Precinct having parking limits of 1- and 2-hours applied to facilitate turnover of parking to cater for the parking demands of Council customers. It is also noted that the Marsden Parade off-street parking areas are unrestricted with a large portion of the adjacent on-street parking also unrestricted.

Given the proximity of this parking supply to the city centre, the current unrestricted parking supply and the relatively high utilisation (measured at greater than 100% in some instances), review of current parking management strategies is suggested. The review of current parking management would extend to consideration of priced parking - in conjunction with priced parking for the adjacent on-street parking. An example of this approach can be found within Toowoomba Regional Council with the Water Street carpark providing a priced parking supply for CBD employees and visitors on the city centre edge.

An additional consideration is relative pricing between on-street and off-street parking supplies. It is generally recommended that off-street parking supplies should be priced at a moderate proportion (70%-80%) to the price of adjacent on-street priced parking in order to encourage longer-stay parking in off-street locations and higher turnover in on-street locations. An example of the price differential between on-street and off-street parking is provided by the Canadian city of Victoria, British Columbia, which prices its on-street parking at $1 for the first hour and $2 for each subsequent hour, while parkade (off-street) parking is priced at $1 per hour.

5.4.2 Introduction of priced parking for off-street parking facilities

Consistent with the recommended approach for managing on-street parking within the City of Ipswich, a similar management approach to off-street parking is also advised. Most off-street parking areas in the Ipswich City Centre and Springfield Town Centre act as extensions to the overall parking supply and are typically being well utilised.

Where parking demands are high for off-street parking, it is recommended that Council apply parking management tools to manage demand and work towards achieving peak occupancy targets. Unlike on-street parking where the trigger for priced parking is the target level of parking occupancy of 85%, a suitable level of demand to trigger priced parking for off-street parking is 90% due to the relatively lower turnover of off-street parking (based on longer or no time limits). This means that the off-street facility is well used but visitors can still access available parking conveniently. Parking occupancy of 60% for off-street parking is considered an appropriate lower bound of efficient operations, and values below this require measures to improve utilisation.

Table 5-4 overleaf provides a framework that Council should consider when seeking to better manage off-street parking facilities in the City of Ipswich.

Table 5-4: Parking Management Framework – City of Ipswich (off-street - Council Owned & Operated)

Type of off-street facility	Priority Parking Users	Appropriate time restrictions	Average peak-period parking space occupancy (% of spaces occupied within an area during four peak hours of parking demand within a single day)		
			<60%	**60%-90%**	**>90%**
Off-street (Short-medium Stay)	• Disability parking • Short- to medium-stay parking	1P – 4P	1. Consider easing time restrictions (2P-4P) with acknowledgement of the parking time limit guidelines in Table 4-1. 2. Consider easing priced parking fee levels (if in operation)/ or removal of priced parking. 3. Consider alternative uses for parking space – e.g. EV charging stations, shared vehicle parking etc.	Maintain time restrictions and priced parking (if in operation).	1. Consider isolated tightened time restrictions (1P-2P) 2. Consider introducing priced parking (if not in operation) 3. Consider increasing fee levels for priced parking
Off-street (Long Stay)	• Disability parking • Long-stay parking	*4P - UR (**4P can be appropriate if in isolation*)	1. Consider easing time restrictions (9P/UR) with acknowledgement of the parking time limit guidelines in Table 4-1 2. Consider easing priced parking fee levels (if in operation)/ or removal of priced parking. 3. Consider alternative uses for parking space – e.g. EV charging stations, shared vehicle parking etc.	Maintain time restrictions and priced parking (if in operation).	1. Consider isolated tightened time restrictions (4P) 2. Consider introducing priced parking (if not in operation). 3. Consider increasing fee levels for priced parking

Note: The following fee structures should be used for Council owned & operated off-street parking:

- Short- to medium-stay: Hourly Fee Structure
- Long-stay: All-day Fee Structure or Hourly Fee Structure (depending on location and parking system capabilities) - hourly rate with all-day cap may also be appropriate.

5.5 Navigating the framework for priced parking

The framework is designed to provide guidance for the introduction of priced parking or expansion of existing priced parking in the Ipswich City Centre and Springfield Town Centre respectively, and has been developed as an appropriate management tool to assist Council in making informed and responsive decisions in relation to the management of priced parking regimes. Each framework is to be used to inform decision-making and facilitate systematic processes for the introduction or expansion of priced parking.

These frameworks are to be navigated by Council officers when assessing different parking environments. Each parking environment has been categorised by a precinct, as shown in Table 5-2 and Table 5-3, and the framework provides guidance for the appropriate management measure that responds to different parking environments, which may include challenges relating to high parking demand or the need to review the appropriateness of existing parking controls. When Council is considering the introduction of priced parking or expansion/increase of existing priced parking regimes, it is recommended that this reform is applied on a precinct-level as directed by each table. This means that the same priced parking control (fee level) applies to the same area.

The rationale behind the introduction of priced parking at a precinct-level mitigates the likelihood of parking demands to migrate to un-priced locations in the same precinct. This approach is more equitable for users and stakeholders in a respective centre and is a more efficient approach to managing parking demands across an entire precinct.

Conversely, when Council is considering the introduction of time restrictions or tightening/relaxation of existing time restrictions it is recommended that Council first identify the precinct subject to proposed changes before implementing the appropriate parking control. For time restrictions, Council may wish to introduce time restrictions on a street-by-street basis within a particular precinct, however, this should be done with regard to the potential for parking spillover into adjacent streets with no parking controls.

As presented in the Framework for **on-street** parking, the main trigger for parking control reforms is parking occupancy which has been split into three main occupancy percentage categories to explain the rationale for each intervention listed under the parking occupancy categories, with a brief summary provided as follows:

- **<65%** - At this level of parking demand, time restrictions can be relaxed to enable longer stays. Additionally, such low demand can also suggest that there is an oversupply of car parking meaning Council may wish to decommission parking facilities by re-purposing-grade parking assets or consolidating parking to more suitable locations with a smaller land footprint.
- **65% - 85%** - At this level of demand, time restrictions can be maintained and priced parking (if in operation) retained at current fee levels.
- **>85%** - At this level of parking demand, should adjustments to parking time limits no longer be appropriate, priced parking is recommended as a suitable intervention at a precinct-level.

Similar rationales for intervention can be associated with the Framework for **off-street** parking, noting that the categories for parking occupancy triggers differ slightly with **<60%**, **60% - 90%**, and **>90%** identified as being appropriate.

The framework is to be supported by guidelines which can be followed when assessing different parking contexts in each centre. Council will be preparing a guideline to assist with the implementation of Parking Management Framework. Additional guidance for the implementation of the Framework is provided in Section 6 of this strategy.

5.6 Parking pricing considerations

Through review of documents and discussions with Ipswich City Council regarding the current parking management / pricing issues currently occurring within the Ipswich City Centre and Springfield Town Centre, the following specific considerations have been identified:

- In what increments should priced parking be adjusted?
- Should parking pricing be maintained at a common value across the City of Ipswich?
- Should parking pricing be removed on weekends (i.e. Saturday mornings)?
- Should parking pricing be implemented within off-street parking facilities?

5.6.1 Parking price increments

Changes to parking pricing are intended to influence overall parking demand – i.e. an increased price lowers demand. In economic terms, this relationship is often described as the elasticity of demand with respect to price, as it reflects how elastic (responsive) parking occupancy is to higher or lower prices.

Measurements of the price elasticity of demand attempt to account for a complex range of responses to price changes, including:

- Continuing to use parking and pay higher prices;
- Travelling by different modes (e.g. public transport, walking, or cycling) to avoid higher parking charges;
- Choosing to park in different locations with lower prices, resulting in longer walk times to their destinations, or 'cruising' for un-priced on-street parking; and
- Choosing to avoid travelling to the area (e.g. working from home).

It is likely that demand for parking is 'inelastic' – i.e. a 10% increase in prices will be met with a less than 10% reduction in demand – and will vary between different groups and individuals within groups. As there is a significant range of uncertainty around any estimates of price elasticity for parking, it is misleading to suggest that one parking price elasticity could be used with confidence in analysing parking price policies. The elasticity will depend on the nature and type of parking spaces affected by a particular price change and the opportunities for using alternative parking facilities. These opportunities will differ by time of day and the elasticities themselves would differ for, say, shoppers as opposed to commuters. They would also depend on the physical measures adopted for controlling parking spaces in addition to the price charged.

Based on the published literature, the elasticity of car travel demand with respect to parking prices, principally related to commuters, is likely to fall in the range of -0.10 to -0.60, with a recommended 'best guess' elasticity for commuter car travel with respect to CBD parking changes of -0.30 as outlined in Table 5-5.

Table 5-5: Relative parking price elasticities

Estimate	Elasticity	Interpretation
Low	-0.1	A 10% increase in prices would be associated with a 1% reduction in parking demand
Medium	-0.3	A 10% increase in prices would be associated with a 3% reduction in parking demand.
High	-0.6	A 10% increase in prices would be associated with a 6% reduction in parking demand.

Considering that a price change may seek to adjust parking demand by 15% (i.e. from 60% to 75% or from 90% to 75%), based on the elasticities identified above, this would suggest a change in pricing of between 25% (-0.6 elasticity) to 50% (-0.3 elasticity). Given that parking price sensitivity in Ipswich is relatively unknown, it would be more appropriate to take a precautionary approach by assuming a higher elasticity, as this reduces the risk of crashing visits to the centres (or parking revenues) with a large price shock. Should smaller adjustments of 10% parking demand be targeted, then using the conservative approach of applying -0.6 elasticity would suggest a parking price change of approximately 15%.

It would also be recommended that some caps are placed on how much prices will change in the short term. Auckland Transport's parking management strategy suggests changing prices by no more than 25% (or so) per annum, to mitigate the risk of unexpected large impacts from larger price changes. It is also noted that within the Gold Coast trial of Parking in Centre Scheme (PICS), the dynamic pricing varied by approximately 25% between $2.90 and $3.60.

Therefore, to affect parking demand changes of 10-15%, it is recommended to adopt pricing changes of 15-25%, based on the conservative adoption of an elasticity of -0.6 (i.e. a 10% increase in prices would be associated with a 6% reduction in parking demand). Trials of parking price adjustments (where appropriate), along with parking demand surveys before, during and after the trial period will provide better guidance as to the relative elasticity for parking pricing within the City of Ipswich context.

5.6.2 Common parking price

Assessment of the current parking demands through the Ipswich City Centre, including assessment of the current priced parking spaces and their demand, identified that the current overall parking demand is relatively well managed with no broad issues with the current overall parking supply. Subsequently, the current approach of having a common pricing structure for parking across the City of Ipswich is considered adequate, noting that the current hourly rate for parking with a daily cap is also considered an appropriate structure. Benefits of this simplistic approach is that motorists are aware of the potential price of parking when making travel decisions and there is no incentive to shop around for lower priced parking areas.

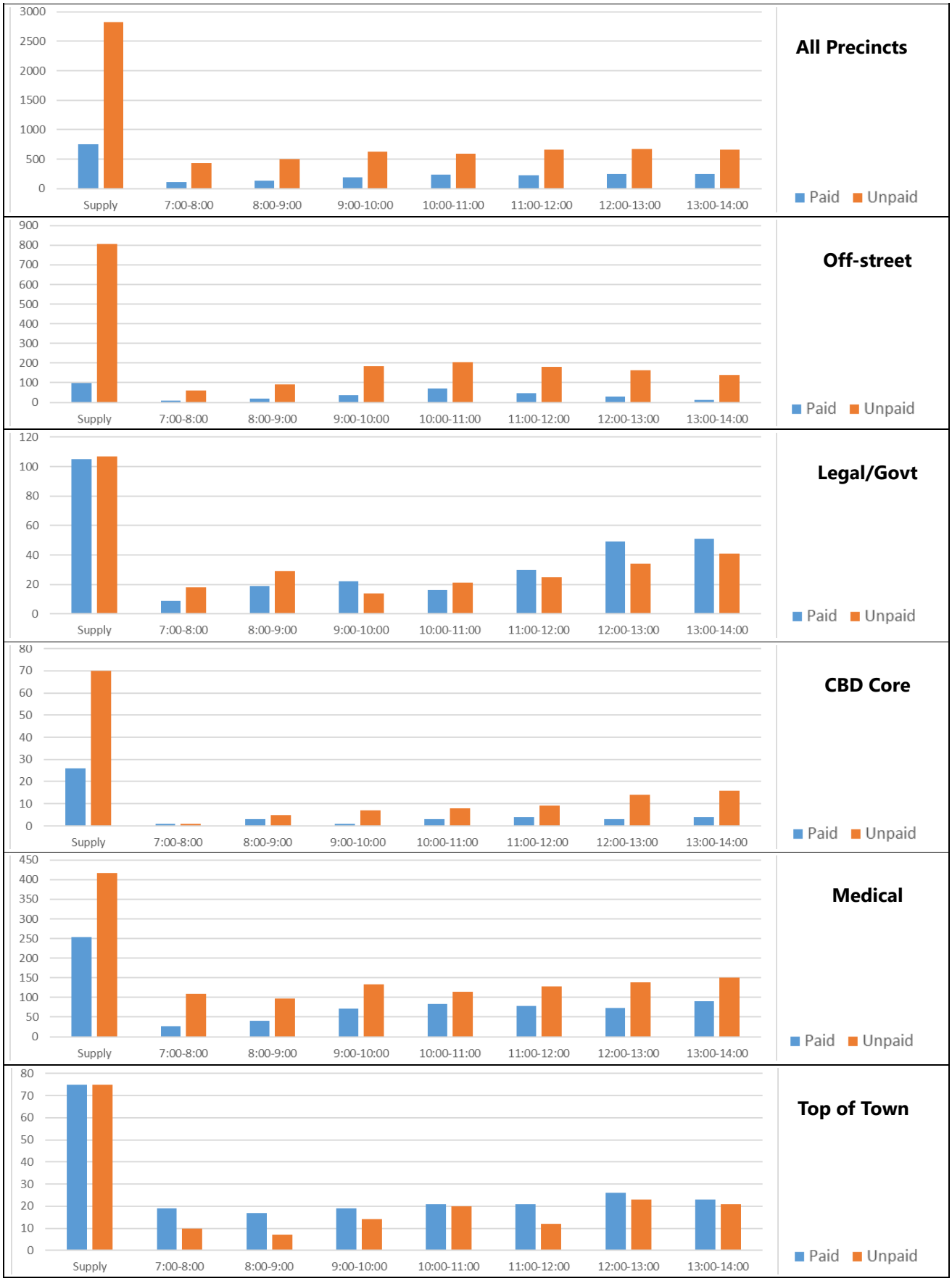
In summary, the current structure for priced parking within the City of Ipswich is considered to be generally appropriate, particularly considering the relatively moderate levels of overall parking demand observed and analysed previously. Modification of the current pricing structure in the immediate short-term would likely have greater dis-benefits (i.e. confusion over parking prices / application) than any potential benefits, particularly considering current parking demands, and is therefore not recommended at this time.

Notwithstanding the current recommendation, as parking demands increase into the future, through increased development and/or rationalisation of the parking supply, more sophisticated parking management (including pricing) techniques and strategies may be required to address localised parking demand pressures. Disaggregation of parking pricing to allow prices to be set individually within parking precincts is one method that could be considered in the future to manage parking demands by better catering to different parking users within the relatively priority hierarchy of each precinct.

5.6.3 Saturday priced parking

One potential strategy discussed was whether there was a perceived impact on the desire to access the Ipswich City Centre on Saturday mornings due to the current parking pricing that exists (typically until 11am) in various locations. Assessment of the parking survey data for Saturday mornings within the Ipswich City Centre parking precincts was undertaken to identify if there was any significant shift in parking behaviour before / after 11am. Figure 5-1 overleaf illustrates the overall demand on Saturday mornings.

Figure 5-1: Priced Parking on Saturday Morning



Overall, Figure 5-1 indicates that there is not a signficant increase in the priced parking spaces after 11am on a Saturday morning, when the pricing period typically ends – parking demand for priced parking spaces generally remains constant / falls after 11am on Saturday. An exception to this is the Legal & Government Precinct, however, it is also noted that overall parking demand increases beyond 11am on Saturday in this precinct, indicating that pricing does not have a significant influence on parking behaviour. Other factors that may influence parking behaviour would be the overall proportion of businesses open on Saturday mornings and their opening hours.

Based on the above, removal of parking pricing within the Ipswich City Centre on weekends (typically only applied on Saturday mornings up to 11am) would not have significant impact on parking demand, which is relatively low, or general parking behaviours. Therefore, changes to current arrangements for parking pricing on Saturdays (typically mornings) are not recommended at this time.

5.7 Expanding priced parking to new areas

A systematic approach supported by data may ease the political acceptability of introducing new priced parking areas and enable implementation in a more transparent manner. Similarly, where Council seeks the implementation of new priced parking regimes, there are a number of factors for the Ipswich City Council to consider including:

1. What is an appropriate average occupancy rate (and over what time period and geographic extent) to trigger implementation?
2. What data collection and monitoring regime is necessary to support the use of occupancy-based triggers?
3. What local changes or contextual factors (other than occupancy rates) could be considered as a trigger for review of parking management or prior to implementation of changes?

Should Council consider expanding priced parking into new areas across the LGA, including Goodna and the Ripley Town Centre, Council should exercise the same strategic approach adopted for Ipswich City Centre and Springfield Town Centre. That is, follow the same frameworks for on-street (Table 5-3 is considered a more appropriate starting point as it is based on dominant land-uses within an area rather than pre-defined areas) and off-street (Table 5-4) parking to guide the implementation of priced parking or adjustment parking management tools in operation in each centre.

6 Implementing priced parking

The final stage in developing a priced parking strategy is the implementation of parking reforms that can achieve stated outcomes and contribute to established objectives for transport, economic development and liveability.

Council will be preparing a guideline to assist with the implementation of Parking Management Framework. This section provides guidance to Council on the implementation of priced parking in the Ipswich City Centre and Springfield Town Centre including approaches to stakeholder engagement and how to respond to anticipated challenges arising from introducing priced parking.

6.1 Priced parking implementation

Parking is something that naturally gets people talking. It is an emotive issue of which everyone has their own set of experiences to share. Confusion regarding Council management of car parking, including the rationale or justification to introduce priced parking, adds to the challenge Council faces, which can hinder efforts to debate important reforms that could enable more informed and clearer thinking on the issue. Priced parking implementation requires buy-in from the community and stakeholders which can be achieved through thorough and effective engagement with a broad cross section of the community.

Implementation of priced parking is best pursued as part of a broader package of city centre revitalisation initiatives which can include trials or parklets, street-based community engagement, street parties, completion of or commencement of beautification streetscape upgrades or other master planning activities. This can have a powerful impact on people's perceptions about town centre space and the trade-offs that may be necessary in realising broader town centre visions.

Critically, acceptance and understanding of the benefits associated with priced parking is particularly important to support smooth implementation of priced parking. This is especially important in town centre environments where some traders traditionally may oppose priced parking due to the perception that it discourages visitation from customers and negatively affects business. Engaging with trader groups is particularly important and must be done so in an effective manner to ensure local traders understand why priced parking is being introduced and what the benefits are.

This would ideally be achieved through meetings and presentations with local trader associations and the Chamber of Commerce and be facilitated by a parking professional with experience in capacity building and a track record in achieving buy-in on complex and misconceived issues like car parking. Additionally, an advisory committee could be set up to bring together local trader representatives, Councillors and Council officers to champion the roll out of new priced parking regimes once clearer thinking on the topic is reached.

Local traders need assurance that their respective business investments will not be negatively impacted due to changes in parking rates or management. Perceived issues held by local traders related to on-street parking and pricing should be resolved as a matter of priority through effective policy development and consultation.

Priced parking may be first trialled to test its impact and allow community members to experience the system in operation. This presents the opportunity for monitoring and evaluation initiatives over a 6- or-12-month period to test the outcomes of priced parking to understand the impact on parking turnover and occupancy, foot traffic, trade and business satisfaction, parking infringement and level of parking revenue.

A case study in San Francisco revealed that residents, when consulted and surveyed regarding parking revenue and priced parking management, supported increases to fee levels when they could select where the funds would later be invested.

The survey revealed that residents valued on-street availability most importantly and would support increases in fees granted on-street availability would be prioritised. Surveys also tested three areas of improvements where increases in parking revenue could be redistributed including availability, convenience, and investment in neighbourhood improvements of which on-street availability remained the most valued parking outcome.

Concerns regarding spillover of parking demand away from priced parking areas into residential areas can be addressed through effective consultation with local traders and retaining yet rationalising the permit scheme to a more appropriate transitional model as well as improving parking restrictions and regulations, user information and enforcement.[1]

For Council to respond effectively to issues that may arise during the implementation of priced parking regimes, Litman (2018) which describes common objections and obstacles to parking pricing, and potential solutions as shown in Table 6-1.[2]

Table 6-1: Potential challenges and solutions for priced parking management

Objections and obstacles	**Strategies to address**
New inconveniences associated with purchasing parking tickets, delay and enforcement practices.	• Ensure ticket machines offer multiple payment options (coins, bills, credit and debit cards, and pay-by-phone) • Improve user information to support easy transactions • Ensure that enforcement is fair, friendly and courteous
Priced parking sees motorists park to avoid paying for priced parking by parking in residential streets and causing 'spillover'.	• Address through effective consultation with local traders and retaining yet rationalising the permit scheme to a more appropriate transitional model as well as improving parking restrictions and regulations, user information and enforcement.
Customers are discouraged to visit centre due to priced parking and will instead visit centres with unpriced parking.	• Ensure traditional centres can compete against 'big box' retailers by providing a 'point of difference' and unique shopping experience. • Invest in public realm projects to support a vibrant and interesting town centre environment
Financial burden on motorists, particularly those with lower incomes.	• Ensure available unpriced parking is retained in fringe locations to satisfy longer term demands and encourage 'park once and walk' behaviours • Ensure provision of disabled parking is retained at central and convenient locations and is not priced
Where parking supply is abundant it seems inefficient to price parking if it results in spaces left unoccupied.	• Allow parking supply to over time rebalance to reach an efficient equilibrium through consolidation of under-performing facilities and tighter management.
Perceptions that priced parking is simply a 'cash grab' for Council and general unhappiness and mistrust towards Council.	• Clearly articulate Council's policy for priced parking and how raised revenue is to be spent. • Invest revenue back into the centre as a way to demonstrate commitment towards traders and vibrance of the centre.

[1] SFCTA (2009) On-street Parking Management and Pricing Study
[2] Litman, T (2018) Parking Pricing Implementation Guidelines, Victoria Transport Policy Institute

6.2 Implementing new parking management tools

The Parking Management Framework was previously presented in Section 5, along with an outline of how to navigate it. Council will be preparing a guideline to assist with the implementation of Parking Management Framework. This section provides additional support and assistance to Council officers where introducing new parking management tools (priced parking or time restrictions) may be necessary.

This section outlines the actions that Council should consider when applying the Parking Management Frameworks for the Ipswich City Centre and Springfield Town Centre. Guidance to undertake this process is detailed below, with these general themes addressed:

- Periodically review parking occupancy;
- Refer to Parking Management Frameworks in accordance with parking occupancy surveys;
- Examine impact on mode diversity; and
- Regularly liaise with the local business and stakeholders.

Periodically review parking occupancy

It is recommended that parking demand be reviewed at least every 12 months. Surveys may be carried out at more regular intervals (e.g. on a three-monthly or six-monthly basis) if there is evidence that parking demands are changing rapidly. For instance, financial information (e.g. monthly data on the number of parking transactions and revenue) can be used as a timely source of data on emerging trends in parking demands. In addition, requests from local stakeholders who perceive issues with parking occupancy may serve as a trigger for a review.

Refer to Parking Management Frameworks in accordance with parking occupancy surveys

The parking surveys will identify areas where peak parking occupancy experience demands outside of the ideal 65% to 85% for on-street parking areas or 60% to 90% for off-street parking areas. Therefore, suggesting parking management interventions are warranted. Navigation of the Frameworks (on-street and off-street) will lead to a set of options to introduce time restrictions / priced parking or adjust existing regimes.

The Frameworks ensure informed and consistent parking reforms can be introduced in accordance with Council's strategic approach and rationale for transport. It enables consistent and standardised decision-making for parking management and uniform responses to address the following common issues:

- At what point should restrictions be introduced;
- What areas should restrictions be applied; and
- How much should be charged for parking.

The Frameworks provide three occupancy-based triggers to support decision making which are organised under three parking demand percentage ranges. Guidance for managing different levels of parking demand is provided across different precincts within the study area to ensure the appropriate intervention is considered.

When considering new parking controls via the Frameworks, Council officers are to follow the guidance, based on parking occupancy (over the highest weekday four hours).

Examine Impact on Mode Diversity

Where applying changes to parking management (including priced parking), consideration needs to be given to impact on other transport modes, such as:

- Is the parking policy having the desired impact on travel patterns in the City of Ipswich?
- Are active and public transport modes increasing?
- Is private vehicle travel demand being managed?
- What changes need to be made to address this? *Reduce supply, increase fees, improve turnover etc*

Regularly liaise with the local business and stakeholders

Inform and advise stakeholders about the introduction of priced parking and/or adjustment of fees. Form partnerships with key stakeholders to ensure transparency about parking management reforms and Council initiatives. Monitor and repeat.

6.3 Supporting initiatives for implementation

In supporting the future considerations for priced parking, which would also include any significant changes to the existing parking pricing regime in the City of Ipswich, it is recommended that Council undertake a thorough and genuine engagement programme to provide the opportunity for the community to develop a broader appreciation of priced parking and to understand Council's rationale for its implementation. The following initiatives could be considered to provide clearer thinking on priced parking and optimise community support:

- **Community engagement** – Council will need to engage with a broad cross section of the community should it pursue the adoption of new priced parking regimes. Engagement activities should take place online, in a formal workshop/presentation setting facilitated by an independent parking expert, as well as informally, as part of a pop-up park or street set up. Council will need to carefully frame the messaging to the community and should avoid engagement practices that simply ask the community 'do you support priced parking?' Instead, Council should encourage 'big picture' thinking about the future of the centre and the role that priced parking may have in achieving that vision.
- **Alignment with Council projects and initiatives** – Council could introduce priced parking as part of a broader package of city centre revitalisation initiatives which may include trials or parklets, street-based community engagement, street parties, completion of or commencement of beautification streetscape upgrades or other master planning activities.
- **Priced parking trial** – Council could consider a priced parking trial to ascertain the level of community satisfaction following the introduction of priced parking. This would typically apply to new areas where priced parking is intended to be implemented. A trial would be best conducted over a 6- or 12-month period.
- **Community involvement in revenue redistribution** – Council could involve the community in decision-making for the distribution of Council revenue accrued through priced parking regimes. This could include the allocation of revenue towards streetscaping and public realm works, public transport or active travel infrastructure.
- **Community value survey** – Council could conduct a municipality-wide survey seeking feedback on what the community values most about the City of Ipswich by selecting from a set of options and place attributes. A survey of this nature would likely see respondents place a greater value on the vibrancy of main streets, the retail offer of activity centres and the safety of public places, and accordingly place less value on parking management.

7 Priced parking distribution

Typically, priced parking schemes generate higher revenue than their overall costs (maintenance, administration, enforcement etc). This section provides an overview of how different municipal jurisdictions use revenue streams from priced parking regimes as well as examples of how and where these funds are distributed. It reveals that different councils use parking revenue for different uses beyond simply incorporating it into consolidated revenue, such as investing in public realm interventions and investing in alternative public transportation services.

Table 7-1 identifies a range of options for distributing revenue from priced parking, as well as identifying examples where this has already been applied - with further details provided in Table 7-2 following.

Table 7-1: Priced parking revenue distribution options

Distribution	Description	Examples
Directed to consolidated revenue	Funds are then allocated through the normal budgetary planning cycle to provide for a variety of council services.	**Ipswich City Council currently** City of Port Phillip (Victoria) Victoria, British Columbia (Canada)
Manage existing priced parking infrastructure	Revenue from priced parking is simply directed towards the maintenance, upgrade/expansion and monitoring of priced parking areas.	Cairns Regional Council (Queensland)
Directed to streetscaping / public service initiatives	Revenue (or part thereof) is allocated to streetscaping improvements such as landscaping, or public services such as libraries.	Pasadena, California (USA) City of Port Philip (Victoria) Horsham Rural City Council (Victoria) City of Gold Coast (Queensland)
Directed to public / active transport initiatives	Revenue (or part thereof) is allocated to public transport and mobility initiatives. These could take the form of micro-mobility (scooters), active (cycle hire scheme) or public transport (CBD loop bus).	City of Perth (Western Australia) City of Boulder, Colorado (USA) Barcelona (Spain) City of Gold Coast (Queensland)
Community initiatives	Revenue (or part thereof) is allocated to funding of projects, based on input from local community groups.	San Diego (California, USA)

In distributing priced parking revenue to areas other than consolidated revenue, there are a number of approaches that can be taken as outlined below:

- **Total (100%) distribution:** In Barcelona, 100% of the priced parking revenue is used to operate and expand the city's bike share programme.
- **Partial distribution:** The City of Gold Coast nominates that 50% of on-street parking revenue will be allocated to active transport, public transport and streetscaping improvement projects.
- **Fixed amount:** In Pasadena, California, the council allocated $1 million in annual parking revenue to streetscape upgrades.
- **Fund schemes:** San Diego facilitated a program to share 45% of parking meter revenue towards projects, such as revitalising commercial districts and enhancing the pedestrian experience, based on input from local community groups.

As previously noted in Section 3.1.1, the Ipswich City Council could potentially distribute all (approximately $1.29 million) parking revenue or potentially the residual (approximately $840,000 or 65%), or part thereof, as a partial distribution or fixed amount towards other initiatives such as additional transport services, streetscape upgrades or community-led schemes. Further details of how various municipal jurisdictions, both within Australia and overseas, have distributed priced parking revenue, are summarised in Table 7-2 overleaf.

Table 7-2: Examples of priced parking revenue distribution

Horsham Rural City Council (Victoria)
Horsham Rural City Council introduced priced parking to its city centre to meet the objectives of ensuring road safety and maintaining traffic flows. It was also designed to improve business activity and encourage parking turnover to ensure availability of parking spaces. Parking revenue typically accrues approximately $600,000 per annum while costs associated with its operation is generally 30%. All funds accrued are deposited into the CBD Car Park Development Reserve Fund with funds available to use for CBD revitalisation and beautification as well as landscaping; the widening of footpaths; laneway improvements; and relocating power lines underground.
City of Port Phillip (Victoria)
As a dense inner-city municipality, the City of Port Phillip has developed an effective approach to parking management through a variety of strategic measures, including a comprehensive priced parking regime. The City manages 5,600 ticketed on-street parking spaces with the operation of 465 machines (243 credit card and coin and 222 coin only machines). Council has recently installed 500 new parking sensors as part of an upgrade to Council technology. Council collects $13.6 million in parking revenue through priced parking and parking infringements which is returned to the City of Port Phillip as consolidated revenue. These funds are then allocated through the normal budgetary planning cycle to provide for a variety of council services including libraries and the contribution to other community facilities and services. The revenue generated from priced parking along the foreshore directly funds the maintenance and improvement of the foreshore parkland and paths.
Cairns Regional Council (Queensland)
Cairns Regional Council manages both on and off-street parking in the CBD through a variety of time restrictions and ticketed parking. Council reinvests the revenue from parking fees and fines into parking infrastructure and parking technology as well as covering operating and maintenance costs of parking. Council has invested more than $8.5 million to improvements, including the introduction of a Licence Plate Recognition (LPR) system, upgrading parking ticket machines to accept credit cards and creating additional parking.
City of Perth (Western Australia)
The City of Perth uses parking revenue raised from ticketed parking to fund a free bus service which operates in the Perth CBD, Fremantle and Joondalup. The funding redistribution pays for the CAT buses, free public transport and has also been used for complementary public realm and accessibility measures including upgrading pedestrian and cycle paths and the Perth Busport.
City of Gold Coast (Queensland)
The City of Gold Coast uses parking revenue collected to fund active transport, public transport and streetscaping improvement projects. In accordance with the City's Parking Plan, 50% of revenue raised through on-street parking is allocated for these investments. Off-street parking revenue is invested in the maintenance and improvement of the relevant asset. The method for calculating parking fees and the way the revenue is invested is clear, transparent and simple to understand.
San Diego (California, USA)
The City of Gold Coast's City Parking Plan identifies San Diego (California, USA) as an example of Established in 1997, San Diego's Parking Meter District Program provides a mechanism to distribute funds through a parking revenue sharing model. The proposal to share 45 per cent (45%) of parking revenue created local support for new meters and new revenue to offset the costs. The city contains six designated community parking districts. Each has its own local objectives. In the first year, one of these districts, the Uptown District, sought community input and developed a five-year implementation plan that lists community goals such as revitalising commercial districts and enhancing the pedestrian experience. Specific expenditures are determined for each local district and detailed in an annual report that contains community input from public workshops and parking committee meetings.
City of Boulder (Colorado, USA)
The City of Boulder, 30 miles north-west of Denver in the USA uses priced parking as a demand management tool in the city's downtown area for approximately 4,000 public parking spaces. Revenue raised though the priced parking regime is used for a variety of travel demand management (TDM) initiatives including paying for bicycle parking facilities, managing paid and shared parking, and an Eco-Pass program, which is a transit pass to the regional bus and rail system (RTD). An Eco-Pass allows holders to enjoy free trips across the system using bus and rail services. The program costs approximately $750,000 per year, which is paid for out of parking revenues. This breaks down to around $125 per downtown employee. The pass is understood to have had strong uptake by downtown employees and is also attributed to diminishing parking demand and improving availability.

8 Recommendations for parking management

This section presents a summary of recommendations that have been developed to ensure successful parking management outcomes for the City of Ipswich. Recommendations have been prepared through an assessment of parking occupancy in the centres of Springfield and Ipswich. Understanding of the parking context of each centre and acknowledgement of Council's existing policy objectives for transport and land-use across the municipality, with a key focus of using parking management to shift transport demands to sustainable travel modes.

8.1 Approach to developing recommendations

The proposed new approach to parking management and recommendations outlined in this section have been developed to:

1. Work towards achieving effective turnover of parking spaces and ensuring customer satisfaction in the Ipswich City Centre and Springfield Town Centre.
2. Respond strategically to the parking environments of the Ipswich City Centre and Springfield Town Centre through guidance to ensure successful parking management outcomes.
3. Work towards realising Council's transport objectives through parking management to encourage greater participation in sustainable modes of transport.
4. Provide guidance to Council for managing parking assets, including the decommissioning and repurposing of underperforming parking facilities.
5. Enable Council to utilise parking revenue for re-investment in the community.
6. Ensure Council uses available and new technology to optimise priced parking outcomes in each centre.

8.2 Summary of recommendations

The recommendations presented below have been prepared to improve parking management and broader transport outcomes in the City of Ipswich and assist Council make decisions for the management of car parking in the Ipswich City Centre and Springfield Town Centre.

A total of seven (7) broad recommendations have been developed as detailed below:

1. **Adopt City of Ipswich Parking Management Framework**
   Application of a framework for priced parking allows Council to respond to different parking contexts in a systematic and consistent manner in both centres. It is recommended that Council apply the framework when considering expanding parking regimes or introducing priced parking in the Ipswich City Centre and the Springfield Town Centre. The framework allows for uniform decision-making where reformed parking management may be necessary and seeks to provide guidance on:
   - **Triggers** – Occupancy-based triggers have been developed to ensure that appropriate parking management actions can be implemented to respond to different parking environments. There are three different occupancy ranges (parking demand) that are intended to provide a trigger for actioning the appropriate parking management intervention (introduction of priced parking or adjustment of existing controls).
   - **Parking demand/alternative uses** – Where parking facilities are poorly utilised (below 65% peak period occupancy), Council can consider re-developing under-performing off-street

parking or repurposing on-street parking to more active uses (expanded footpaths, public realm investments or improved bicycle facilities).

Council will be preparing a guideline to assist with the implementation of Parking Management Framework.

2. **Fee structures**
   The current structure for priced parking within the City of Ipswich is considered to be generally appropriate, particularly considering the relatively moderate levels of overall parking demand observed and analysed previously. Modification of the current pricing structure in the immediate short-term would likely have greater dis-benefits (i.e. confusion over parking prices / application) than any potential benefits, particularly considering current parking demands, and is therefore not recommended at this time.

3. **Price Adjustments**
   To affect parking demand changes of 10-15%, it is recommended to adopt pricing changes of 15-25%, as a conservative approach, until the relationship between parking demand and pricing within the City of Ipswich context is better established. Parking price adjustments (where appropriate) should be trialled, with parking surveys before, during and after to understand the impacts of any changes.

4. **Parking revenue distribution**
   It is recommended that Council use revenue accrued through its priced parking regime to invest in facilities and programmes to encourage a shift to sustainable modes of transport. This may include the expansion of Council's existing on and off-street cycling network, streetscape improvement works in each centre and behavioural change programmes and incentives for residents to shift to walking, cycling or public transport.

5. **Periodically review data**
   It is recommended that the parking demand in each centre is reviewed at least every 12 months to support application of Council's priced parking framework. Surveys may be carried out at more regular intervals (3-6 months) if there is evidence that parking demands are changing rapidly. The use of internal Council resources is encouraged to conduct 'observational surveys' prior to procurement of formal surveys. Where changes to parking management are being contemplated, particularly for implementation, expansion or adjustment of priced parking, formal surveys before and after implementation are recommended.

6. **Enforcement**
   Effective enforcement is a necessary complement for effective parking controls. It is recommended that enforcement practices continue in accordance with the newly adopted approach outlined herein.

7. **Parking technology**
   Emerging improvements for parking management systems supported by advances in available technology and, as identified in the iGO *Intelligent Transport Systems Strategy* should be investigated.

Appendix A – Review of time restrictions

The review of time restriction was carried out by using surveyed data for the locations where time restrictions are no longer effective in managing turnover. The data for Saturday (27 October 2018), Tuesday (30 October 2018), and Thursday (01 November 2018) has been reviewed to under- or over-utilised parking for both Ipswich City Centre and Springfield Town Centre.

Ipswich City Centre

The data collected from this parking survey has been summarised by average parking occupancy for each of the three survey days identified above and is presented in Table A-1. The summary data identifies the street locations of unrestricted parking where adjustments to time limits can be considered based on the following.

- Under-utilised parking (less than 50% occupancy) highlighted in green; and
- Over-utilised parking (weekday survey days >85% occupancy) highlighted in red.

Table A-1: Parking Occupancy by Street within Ipswich City Centre

Precinct	Street	Supply	Average Occupancy		
			Tuesday	Thursday	Saturday
CBD Fringe		**319**	**73%**	**70%**	**23%**
	Chelmsford Ave	33	71%	61%	37%
	Clay St	33	77%	58%	11%
	Deebing St	5	72%	72%	29%
	Ellenborough St	14	76%	77%	15%
	Hancock St	11	0%	0%	18%
	Murphy St	51	78%	78%	16%
	Nicholas St	28	72%	87%	76%
	Roderick St	34	72%	76%	12%
	Spresser St	9	86%	81%	22%
	Tiger St	43	80%	63%	13%
	Waghorn St	58	76%	80%	18%
Commercial		**197**	**84%**	**69%**	**8%**
	King Edward Parade	44	58%	30%	25%
	Marsden Parade	31	86%	76%	3%
	Milford St	60	85%	74%	4%
	Mortimer St	27	88%	47%	4%
	Thorn St	35	89%	82%	10%
Education		**350**	**70%**	**71%**	**24%**
	Arthur St	33	81%	89%	32%
	Darling St E	55	81%	74%	43%
	Elizabeth St	44	51%	57%	19%
	Ellenborough St	9	76%	67%	40%

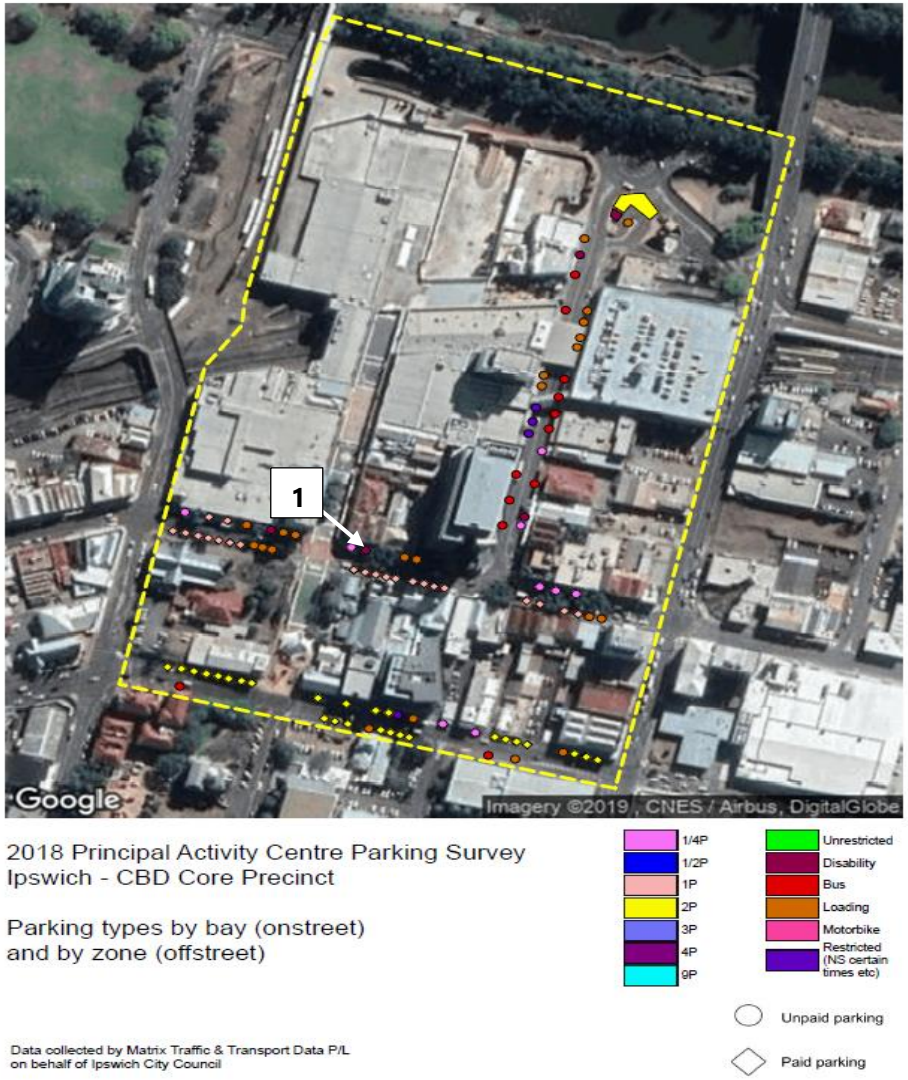
Precinct	Street	Supply	Average Occupancy		
			Tuesday	Thursday	Saturday
	Horan St	35	58%	55%	3%
	Martin St	59	66%	72%	22%
	Mary St	55	75%	79%	11%
	Waghorn St	60	72%	72%	28%
Legal Gov		**45**	**72%**	**71%**	**30%**
	Roderick St	45	72%	71%	30%
Medical		**301**	**79%**	**69%**	**34%**
	Gray St	43	81%	73%	52%
	MacAlister St	10	95%	84%	7%
	Milford St	12	83%	79%	23%
	Outridge St	10	81%	76%	23%
	Quarry St	71	91%	74%	29%
	Roderick St	16	88%	67%	19%
	South St	26	93%	80%	45%
	Thorn Ln	20	18%	24%	16%
	Thorn St	63	74%	71%	33%
	Walker St	11	60%	46%	29%
	Warwick Rd	19	92%	73%	72%
Off-street		**628**	**60%**	**53%**	**20%**
	Bob Gamble Park	22	14%	9%	18%
	Bowling Club off-street	62	21%	42%	47%
	Denmark Hill off-street	45	84%	75%	9%
	Marsden Pde off-street	171	89%	81%	1%
	Nerima Gardens off-street	89	23%	13%	33%
	Old Incinerator off-street	11	54%	24%	70%
	Olga St off-street	164	88%	72%	2%
	Queens Park Nursery off-street	9	50%	44%	73%
	River Heart Parkland	50	87%	77%	7%
	Roderick St off-street	5	20%	55%	0%
Queens Park		**118**	**46%**	**36%**	**43%**
	Goleby Ave	89	46%	33%	36%
	Merle Finimore Ave	29	45%	43%	67%
Top of Town		**28**	**75%**	**54%**	**22%**
	Limestone St	28	75%	54%	22%
West Ipswich		**37**	**77%**	**66%**	**20%**
	Omar St	37	77%	66%	20%
GRAND TOTAL		**2,023**	**73%**	**67%**	**25%**

Examining the unrestricted parking in comparison to the parking supply identified, the following were noted:

- The Off-Street and CBD Fringe and Medical parking precincts has the largest number of unrestricted parking spaces;
- These parking areas have an average occupancy above 70% during surveyed weekdays;
- Unrestricted parking that was under-utilised was highest for Off-Street with an average occupancy around 30% during surveyed weekdays; and
- The occupancy analysis reveals that a significantly lower parking occupancy for the weekends in comparison to the weekdays.

Review of the existing time limited parking areas for each of the parking precincts within the Ipswich City Centre are provided within this appendix, with a summary page for each precinct that contains the following:

- A map of the parking inventory and time limits;
- Key attractors within the precincts – such as schools, hospitals etc;
- Identification of overall key parking supply locations and their relative parking occupancy usage; and
- Recommendations for adjustments to parking time limits.



CBD Core Precinct

Number	Street Name	Usage Notes / Recommended Changes
1	Brisbane Street	• **Timed Parking** ○ Mix of 15-minute and 1P parking on northern verge Convert all spaces to 15-minute parking for consistency, legibility – *"high turnover outside commercial facilities"*. Note that 1P parking is available on southern verge.

Top of Town Precinct

Number	Street Name	Usage Notes / Recommended Changes

1	Limestone Street	• Wide mix of time limits:
		  ○ 1 1P spaces;
		  ○ 23 2P spaces; and
		  ○ 22 Unrestricted spaces.
		• Utilisation of all parking types is ~55-60%

2018 Principal Activity Centre Parking Survey
Ipswich - Education Precinct

Parking types by bay (onstreet)
and by zone (offstreet)

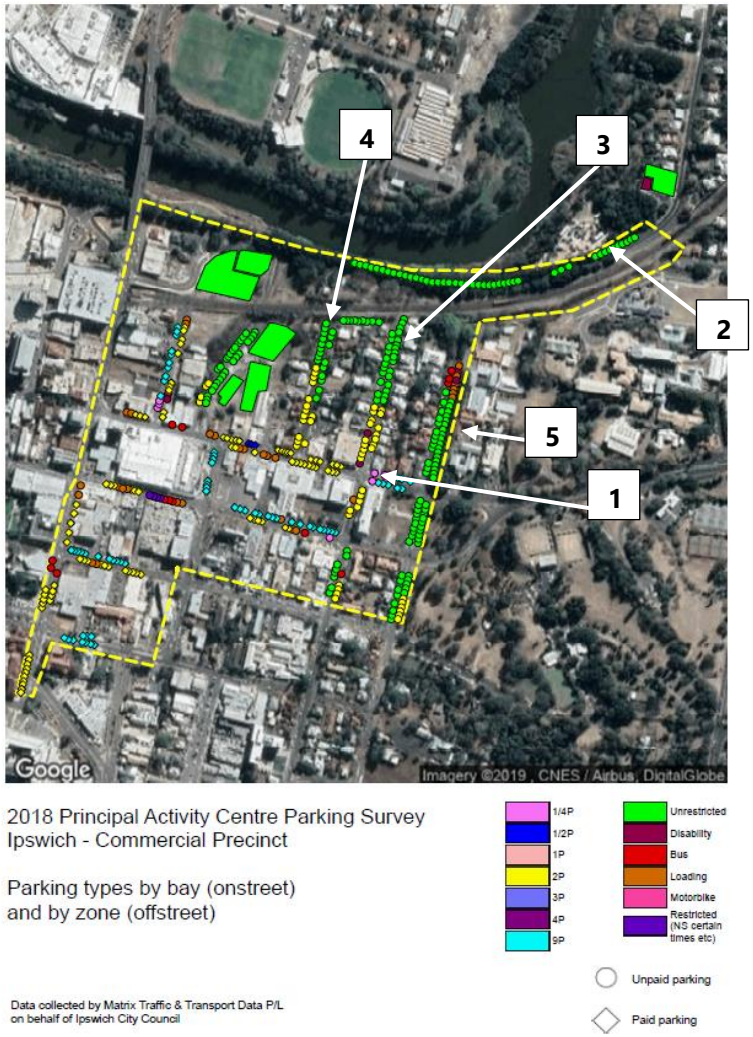
1/4P
1/2P
1P
2P
3P
4P
9P
Unrestricted
Disability
Bus
Loading
Motorbike
Restricted (NS certain times etc)
Unpaid parking
Paid parking

Data collected by Matrix Traffic & Transport Data P/L
on behalf of Ipswich City Council

Education Precinct

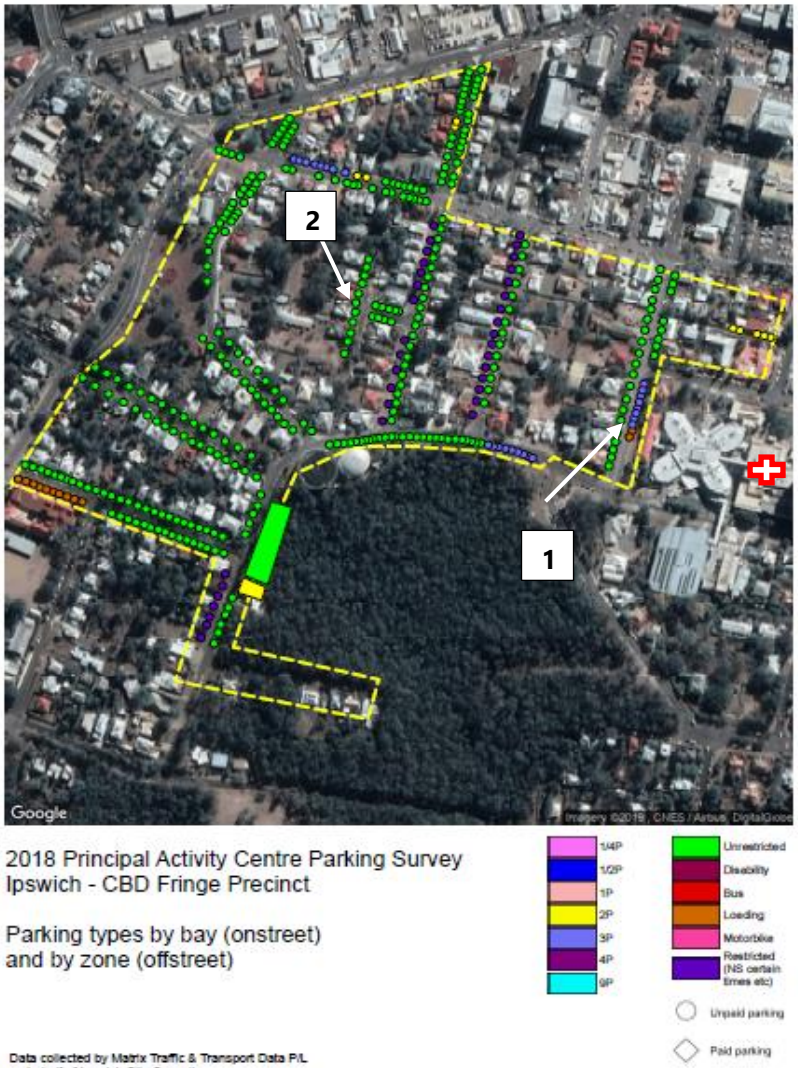
Number	Street Name	Usage Notes / Recommended Changes
1	Darling Street East	• **Timed parking:** o Number of spaces- 33 o Average occupancy weekdays- 18% o Average occupancy weekend- 6% • **Unrestricted parking:** o Number of spaces- 55 o Average occupancy weekdays- 78% o Average occupancy weekend- 43% • Unrestricted parking is well utilised
2.	Mary Street	• Mary Street **(Unrestricted Parking):** o Number of spaces- 55 o Average occupancy weekdays - 77% o Average occupancy weekend - 11% • Convert whole of Mary Street (South) to 3P for consistency and as average occupancy is relatively high (parking close to CBD) – *"where it is desired to stop all day commuter parking."*
3.	Horan Street	• **Unrestricted parking** o Number of spaces - 35 o Average occupancy weekdays - 57% o Average occupancy weekend - 3%
4.	Elizabeth Street	• **Unrestricted parking** o Number of spaces - 44 o Average occupancy weekdays - 54% o Average occupancy weekend - 19%

S **Ipswich Grammar School**
PS **St Mary's Primary School**
MC **St Mary's College**
EC **St Edmund's College**



Commercial Precinct

Number	Street Name	Usage Notes / Recommended Changes
1	Brisbane Street	• **Timed parking** ○ Number of spaces - 50 ○ Average occupancy weekdays - 22% ○ Average occupancy weekend - 6%
2	King Edward Parade	• **Timed parking** ○ Number of spaces - 41 ○ Average occupancy weekdays - 44% ○ Average occupancy weekend - 21%
3	Thorn Street	• **Timed parking** ○ Number of spaces - 24 ○ Average occupancy weekdays - 29% ○ Average occupancy weekend - 13%
4	Marsden Parade	• **Unrestricted parking** ○ Number of spaces - 31 ○ Average occupancy weekdays - 81% ○ Average occupancy weekend - 3%
5	Milford Street	• **Unrestricted parking** ○ Number of spaces - 60 ○ Average occupancy weekdays - 80% ○ Average occupancy weekend - 4%



CBD Fringe Precinct

Number	Street Name	Usage Notes / Recommended Changes

1	Nicholas Street	• **Timed parking:**
		  ○ Number of spaces - 28
		  ○ Average occupancy weekdays - 80%
		  ○ Average occupancy weekend - 76%
		• Convert remainder of eastern side to the north to 3P, for consistency – *"where it is desired to stop all day commuter parking."*

2	Hancock St	• **Unrestricted parking**
		  ○ Number of spaces - 11
		  ○ Average occupancy weekdays - 0%
		  ○ Average occupancy weekend - 18%

Ipswich Hospital

2018 Principal Activity Centre Parking Survey
Ipswich - Medical Precinct

Parking types by bay (onstreet)
and by zone (offstreet)

1/4P
1/2P
1P
2P
3P
4P
9P
Unrestricted
Disability
Bus
Loading
Motorbike
Restricted (NS certain times etc)
Unpaid parking
Paid parking

Data collected by Matrix Traffic & Transport Data P/L on behalf of Ipswich City Council

Medical Precinct

Number	Street	Usage Notes / Recommended Changes
1	Pring Street	• **Timed parking** ○ Number of spaces - 98 ○ Average occupancy weekdays - 46% ○ Average occupancy weekend - 11% • Unrestricted parking is available nearby hospital
2	Thorn Street	• **Unrestricted parking** ○ Number of parking spaces - 63 ○ Average occupancy weekdays - 73% ○ Average occupancy weekend - 33%
3	Gray Street	• **Unrestricted parking:** ○ Number of parking spaces - 38 ○ Average occupancy weekdays - 87% ○ Average occupancy weekend - 50%
4	Pring Street	• **Timed parking** ○ Number of spaces - 51 ○ Average occupancy weekdays - 46% ▪ Paid 57% and Unpaid 38% ○ Average occupancy weekend - 12% • Unrestricted parking is available nearby hospital • Consolidate (reduce) central median parking – provide additional landscaping and pedestrian refuge crossings

Note:
St Andrew's Ipswich Private Hospital
Ipswich Hospital
Ipswich Day Hospital

Note: While it is noted that long-stay ('Unrestricted') parking is not typically supported in the Medical Precinct, the precinct covers large residential areas, where time-limited parking would not be appropriate. Time-limited parking could be expanded occur once Pring Street parking reaches capacity (i.e. >85% occupancy).

2018 Principal Activity Centre Parking Survey
Ipswich - Queens Park Precinct

Parking types by bay (onstreet)
and by zone (offstreet)

1/4P
1/2P
1P
2P
3P
4P
9P
Unrestricted
Disability
Bus
Loading
Motorbike
Restricted (NS certain times etc)
Unpaid parking
Paid parking

Data collected by Matrix Traffic & Transport Data P/L
on behalf of Ipswich City Council

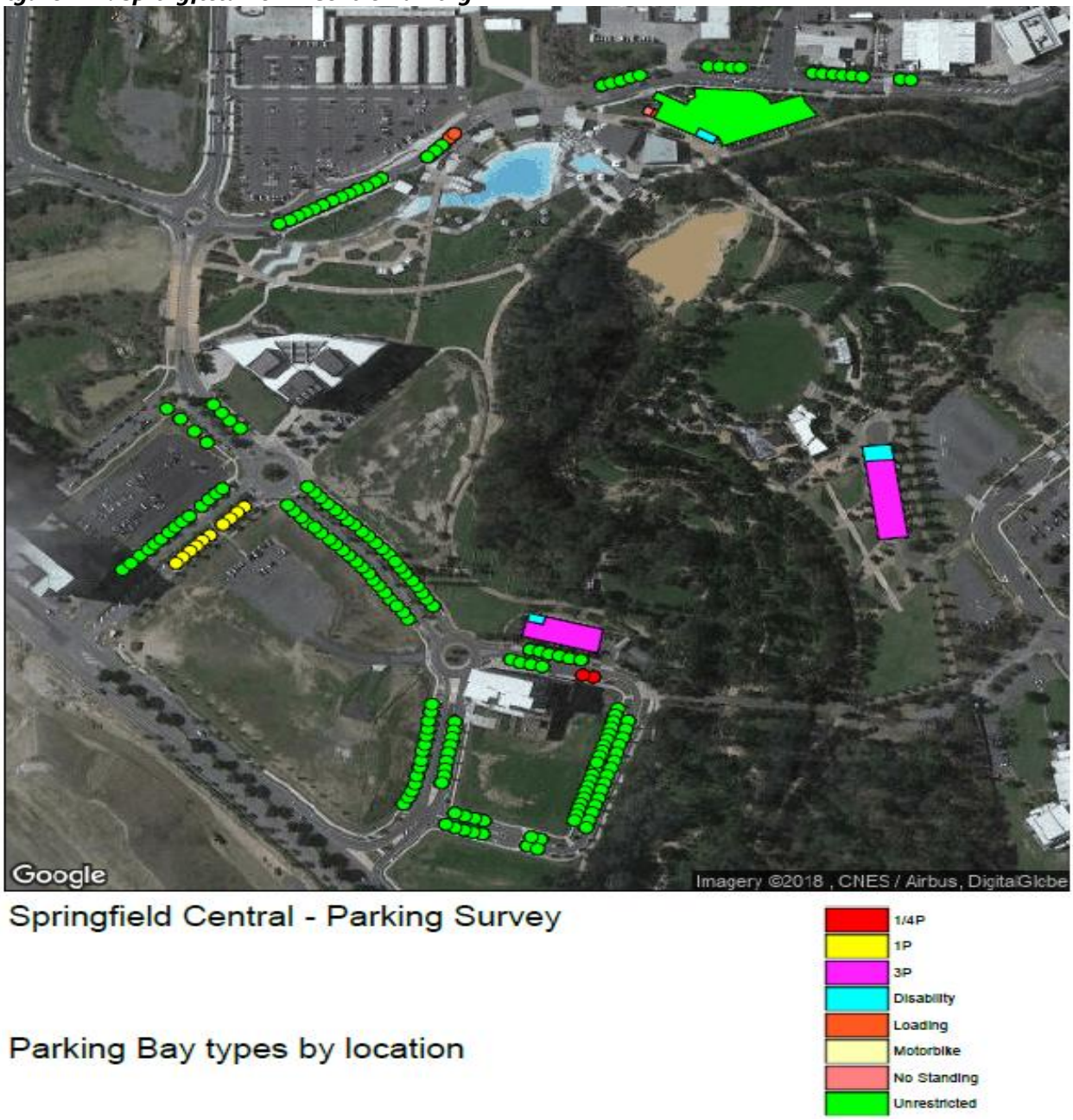
Queens Park Precinct

Number	Street	Usage Notes / Recommended Changes
1	Goleby Ave	• **Unrestricted parking** ○ Number of spaces - 89 ○ Average occupancy weekdays - 40% ○ Average occupancy weekend - 36%
2	Merle Finimore Ave	• **Unrestricted parking** ○ Number of spaces - 32 ○ Average occupancy weekdays - 44% ○ Average occupancy weekend - 67%

Springfield Town Centre

As with the Ipswich City Centre, a parking occupancy survey for the Springfield Town Centre was undertaken on and Saturday (27 October 2018), Tuesday (30 October 2018), and Thursday (01 November 2018). The overall parking supply (including any time limits) is shown in Figure A-1, while the average occupancy for these parking spaces was determined and is provided in Table A-2.

Figure A-1: Springfield Town Centre Parking



The summary data provided in Table A-2identifies the street locations of unrestricted parking where adjustments to time limits can be considered and highlights the following:

- Under-utilised parking (less than 50% occupancy during all survey days) highlighted in green; and
- Over-utilised parking (weekday survey days >85% occupancy) highlighted in red.

Table A-2: Parking occupancy in Springfield Town Centre

Street	Supply	Average Occupancy		
		Tuesday	Thursday	Saturday
Barry Alexander Dr	71	67%	66%	29%
David Henry Wy	14	70%	58%	67%
Ian Keilar Dr	58	25%	29%	29%
Off-Street	80	50%	50%	50%
Southern Cross Cct	36	50%	53%	69%

The parking occupancy analysis summarised indicates the following:

- Ian Keilar Dr and Off-Street parking are generally under-utilised;
  Note: The Springfield Town Centre is still developing, and significant development potential still remains which will increase overall activity and likely on-street parking demand into the future.
- As with the Ipswich City Centre, parking occupancy is generally higher on weekdays than weekends with the exception Southern Cross Circuit (likely due to the proximity of the Orion Lagoon and associated activities); and
- The relatively higher parking occupancy in Barry Alexander Dr in the weekday, compared to the lower weekend parking occupancy, may reflect external university parking demands (with a pedestrian path facilitating connection between external parking and the campus.

Overall, given the moderate parking demands across the surveyed area, there is little impetus to change current parking controls. As the Springfield Town Centre continues to develop and parking demands increase, adjustments to parking controls (starting with time limit restrictions) can be used to ensure parking space availability is maintained for the relevant parking user groups.

Appendix B – Parking technology

Parking management can be supported by advances in available technology and, as identified in the recently released iGO *Intelligent Transport Systems Strategy*, Ipswich City Council has an opportunity in modernising its parking management services by adopting smart parking solutions to:

- Improve the customer experience;
- Enhance economic development and social interaction opportunities in activity centres; and
- Provide more effective monitoring and compliance capabilities.

This can be achieved by using smart technology and the benefits are as follows:

1. Sensor-based innovation can be used to detect whether the space has been occupied or not by using mobile app in real time;
2. Real time data generated from sensors can be used to identify utilisation and transaction data, which can help to identify vehicles that have overstayed or not paid;
3. The utilisation data can also be used to inform a quarterly review of parking pricing;
4. Council can offer a variety of payment methods to reduce or even remove parking meters in future;
5. Council can also implement dynamic pricing and variable time limits and duration which can allow users to pay via mobile for extending duration to avoid infringement;
6. Customer can use mobile apps to find and pay for the parking in advance; and
7. Mobile apps can be used to undertake regular qualitative surveys to obtain customer feedback.

Parking 'App' Technology

Parking payment systems, such as CellOPark currently provided parking payments run through a free smartphone app. The app allows you to pay for parking quickly and eliminates the need to display paper tickets. The system is application for large open or structured parking areas, as well as kerbside parking within centres (see left).

Your vehicle registration is recorded when you start a parking session and is used by parking officers to check if there is an active parking session for your car. Payments for parking sessions are taken automatically from traditional methods, such as credit or debit card, or via a pre-paid card.

These types of parking management systems also incorporate the ability to have (virtual) permits. Parking officers can check for valid permits using mobile license plate technology as they drive around to ensure only permit holders are parking in permit-only areas.

Image source: https://www.parking.asn.au/la-trobe-university-selects-cellopark-for-convenient-ticketless-parking/

Directional Signage

Directional signs can be either static or dynamic, providing real time information on the location and availability of parking resources. These signs should be placed on key access roads to inform drivers of the locations, availability (if dynamic), and the price associated with the parking facilities. This information allows drivers to identify the nearest available parking facilities and evaluate the relative value associated with different parking areas. An example is shown in the figure below.

Image source: MRCagney photo

The goal of directional signs is to reduce the distance travelled by vehicles looking for a car park, thereby resulting in positive external benefits to other road users, as well as encouraging more efficient use of available resources. Directional signs are not, in isolation, expected to significantly reduce parking demand. However, they can improve relative parking utilisation within a region by providing information on underutilised, less noticeable carparking areas.

Static directional signage should be implemented where there is significant variation in parking utilisation of similar parking products within the surrounding area, while dynamic signage is more appropriate / cost effective in areas with large concentrations of parking supply (i.e. off-street locations).

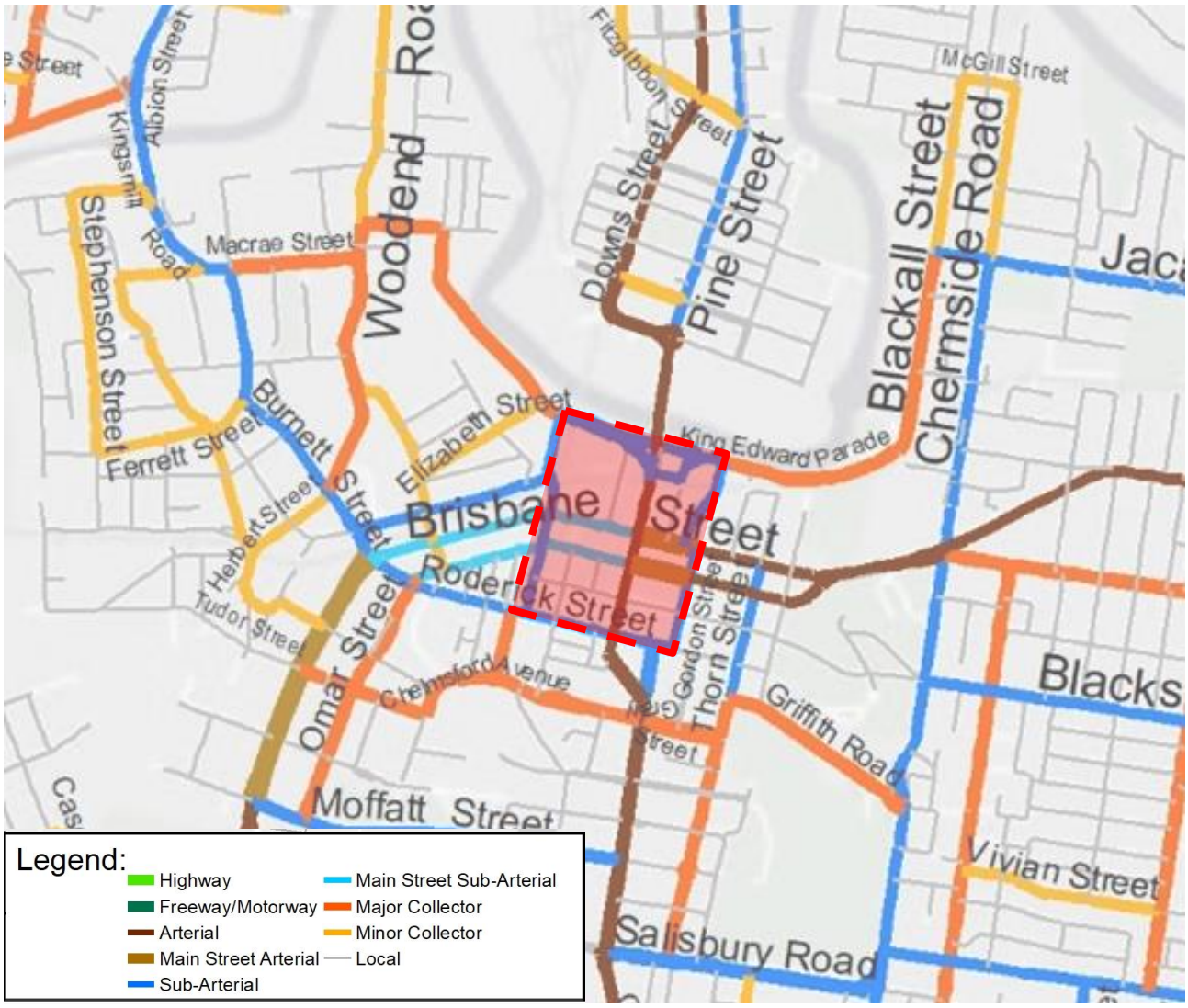
Central Traffic (Parking) Area

One of the recommendations of the Ipswich Parking Strategy was the implementation of a Central Traffic Area within the Ipswich City Centre area. This recommendation has been implemented, however, signage identifying the Ipswich Central Parking Area is inconsistent or non-existent on some approaches. Further, the area covered is expansive (i.e. out to Thorn Street to the east), which has therefore required generic parking controls to be indicated (i.e. 'No Time Limit unless otherwise signed).

This central traffic area should be largely based on the surrounding road network hierarchy, which is especially important within the Ipswich City Centre given the one-way circulation through Limestone and Brisbane Streets, as well as natural barriers such as the Bremer River and Ipswich Rail Line.

A map of the road hierarchy from iGO is provided in Figure B-1 overleaf. Further, an indicative consolidation (reduction) of the central parking area is also shown.

Figure B-1: Indicative Central Traffic (Parking) Area

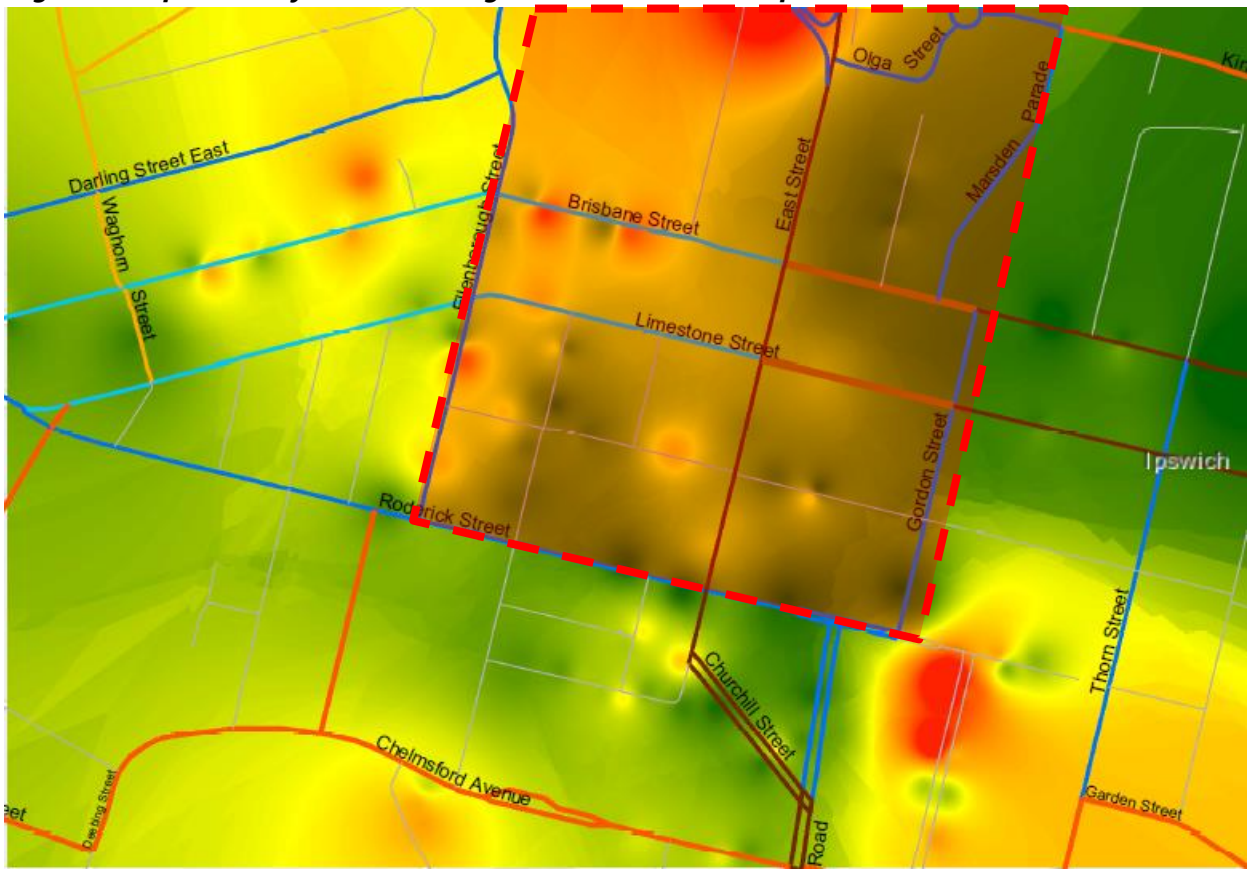


The consolidation of the existing central traffic (parking) area, indicatively shown in Figure B-1 will provide opportunities for:

- Clearer identification of boundary of the Central Parking Area, generally better aligned with the CBD Core Precinct;
- More legible identification of significant (typically off-street) parking areas that are within walking distance of the CBD area – greater indication that the parking operations / controls for this parking needs to be considered within the context of the CBD; and
- Better potential for staggering of parking controls (including pricing) which will more clearly define the desire for reduced traffic movement / parking demand within the CBD area.

As further information in regard to the consolidation of the existing central traffic (parking) area, the 'heat map' image for priced ('paid') parking transactions within the Ipswich City Centre area is shown in Figure B-2 overleaf.

Figure B-2: Ipswich City Centre Parking Transactions Heat Map



Parking Overstay Detection

Parking Overstay Detection Systems (PODS) can be used by councils to manage priced parking more efficiently and are useful tools to collect parking occupancy data. PODS are effective tools that provide valuable data relating to length of stay, peak demand times and turnover. PODS also allow the variable setting of rates, meaning parking is priced based on demand allowing seasonal, time of day and weekday variation.

The introduction of PODS would align with Council's policy objectives to manage priced parking in the City of Ipswich. PODS can collect data and provide important information and allow Council to respond to different parking scenarios across different contexts.

15-minute free parking

A potential adjustment to parking control regime that has previously been considered is the introduction of a general 15-minute free parking "grace" period – such as that adopted within Brisbane City Council parking control areas. While this strategy has some merit in that parking users that genuinely only park for a short period of time (i.e. less than 15 minutes) will need to be concerned with payments (or risking an infringement), there are significant implications on potential over-stay, likely additional monitoring / enforcement / administration, lost revenue as well as requirements for parking meter technology upgrades.

Therefore, as the overall benefits (some confidence to parking users) is unlikely to be greater than the potential costs / efforts of administering a 15-minute free parking strategy further, more detailed assessment of the overall implications of adopting such a strategy should be considered.

Appendix C – Approaches to priced parking

Pricing methods

This section presents information about the different approaches Councils can take to setting pricing structures for priced parking regimes and the rationale underpinning different parking management frameworks.

Council currently sets the prices for Council-owned and operated parking throughout the Ipswich LGA, with prices set under a fixed hourly regime. This system is commonly used in other jurisdictions throughout Australia where priced parking regimes apply which sees hourly parking rates charged at a fixed rate, irrespective of experienced demand.

There is a growing body of research that focusses on the importance of shifting the perception of parking as 'public infrastructure' to a 'market good'. Shoup (2017) argues that policies that treat parking as public infrastructure disguise the real costs and real demand of parking spaces, which leads to the systematic under-pricing of on-street parking.[3]

Taylor (2018) refers to the common method of parking pricing in Australia as 'first come first served'. This approach to pricing refers to the application of fixed hourly parking rates. The title implies that once a motorist has parked in a car parking space, there is little incentive to move on and make the space available to another user because the price per hour does not increase.[4] While such an approach is not considered appropriate at this time, consideration in the future may be warranted in key locations (i.e. CBD / Core areas) where parking demands are consistently excessive and/or highly variable.

With new technology becoming available for parking, the use of dynamic pricing is now being explored. Unlike fixed hourly parking rates, dynamic parking adjusts hourly based on level of demand and observed usage patterns. The goal of dynamic pricing is to minimise both under-priced and over-priced parking by matching the turnover of parking spaces with demand.

The model of setting prices for on-street parking proposed by Shoup is demand-based 'performance' parking, which is generally outlined as follows:

- Remove minimum parking requirements;
- Set the right price for kerbside parking (dynamic pricing – adjusted by availability and time of day); and
- Return the parking revenue to pay for public services (hypothecation).

A commonly referenced example of dynamic pricing is SF Park in San Francisco, USA (see also City of Gold Coast example). SF Park adjusts prices every two months to manage demand, aiming to even out occupancy in a range of 60%-80% per street. The results of SF Park show that traffic congestion has been reduced by 10% and 'cruising', which refers to motorists circling an area in search of available car parking, has also reduced.

SF Park has been a particularly successful parking policy reform and genuinely seen as a benchmark case study when preparing parking strategies. It indicates that people place a greater value on parking availability then the actual price they pay for parking (up to a point).

[3] Shoup, D (2017) Parking in the City
[4] Taylor, E (2018) City of Melbourne Discussion Paper: Car Parking

Case studies – priced parking operation

Priced parking policies have been reviewed in various Australian contexts to understand the different approaches used to successfully manage car parking through pricing.

Toowoomba Regional Council

Toowoomba is a regional city in the Darling Downs region and is located in the state of Queensland with a population of over 130,000 introduced its biennial on-street and off-street parking fee on 2nd July 2018. It includes:

- 10c per hour increase in all parking fees to a maximum additional charge of 50c a day
- Council is using various payment methods such as credit card payment machines, payWave and pay-by-bay technology.[5]

Council has recently replaced approximately 55 single head parking meters with new pay by space meters (ticketless and user-friendly system) on Margaret Street between Neil and Hume Streets. The objective of new technology is to provide more options to user and reduce infrastructure damage by vehicles. Furthermore, the minimum payment for each meter is one dollar and the time limit are two hours maximum.[6]

According to 2018-19 annual budgets, Council is planning to spend $140,000 on the upgrade and enhancement of parking infrastructure to meet the demand of growing city.[7]

City of Gold Coast

In recognising the complex and sensitive nature of car parking on the Gold Coast, the City of Gold Coast has developed a scheme called the 'Park in centre scheme' or 'PICS' to achieve efficient and equitable parking outcomes. PICs is managed by adjusting parking prices (up or down) by 20-25% increments, which is based on demand data from in-ground parking sensors. Parking prices are reviewed quarterly and can be altered to respond to changes in demand. For example, in streets with low demand, prices may decrease, while streets that record high demand, prices will increase.

A pilot was undertaken by Council in Burleigh Heads and Broadbeach in 2015 which is understood to now be permanent. The scheme aims to:

- Improve parking availability by encouraging turnover in business districts
- Open parking spaces in high demand areas
- Reduce traffic congestion caused by 'cruising' for available parking spaces.

Costs for Council-owned car parking under the scheme are currently $1.90 per hour to $3.70 per hour and Council has invested $7.5 million to fund the required technology to operate the scheme, which involves inground sensors. Additionally, City of Gold Coast will use funds accrued through the scheme for a variety of different initiatives and programmes with 50% of parking revenue allocated for local improvement projects, including streetscaping, landscaping and improved public transport.[8]

[5] (Parking fees to increase from Jule 2, 2018, 2018) http://www.tr.qld.gov.au/component/content/article/mediareleases/newspublications/13405-parking-fees-to-increase-from-july-2-2018

[6] (Roll out of new parking technology for Margaret Street, 2018) http://www.tr.qld.gov.au/component/content/article/mediareleases/newspublications/13574-roll-out-of-new-parking-technology-for-margaret-street

[7] (Annual Budget 2018/19, 2019) http://www.tr.qld.gov.au/about-council/council-governance/plans-strategy-reports/13412-budget

[8] City of Gold Coast http://www.goldcoast.qld.gov.au/thegoldcoast/parkincentre-schemes-28100.html

City of Port Phillip (Victoria)

The City of Port Phillip provides a good example of a Melbourne municipality effectively managing on-street car parking through a priced parking management regime. The management framework applies to the whole municipality and ensures that car parking is managed consistently across different activity centres and urban contexts within the municipality.

The Draft City of Port Phillip Integrated Transport Strategy articulates Council's role in parking and sets some bold directions for parking management with the intention of reducing traffic congestion and improving transport choice for its residents and visitors.

While the land use context of Port Phillip is different to that of Ipswich City Council and the municipality is richer in transport options, benefiting through bus, tram and train connectivity and high-quality cycling infrastructure, the approach to car parking policy by City of Port Phillip that focuses on taking a strategic and systematic response to parking challenges and application of tools across the municipality is relevant to Ipswich City Council.

City of Port Phillip currently manages approximately 57,000 parking spaces which are predominantly on-street. Within activity centre contexts, the Strategy acknowledges that simply building more parking spaces to accommodate growing demand is uneconomic as it would sacrifice space that could be used for higher value uses.

The Strategy acknowledges that pricing, time restrictions and reserved parking spaces are critical management tools for supporting vibrancy and activity while ensuring the kerbside space is available for priority user groups.

Council is also set to introduce a new parking policy which will provide criteria to ensure a consistent application of both priced parking and time restrictions across the municipality. This is expected to achieve effective responses to existing issues around inconsistent pricing models, lack of seasonal responsiveness, poor demand management and integration with land uses.

Implementation of the policy will be undertaken in conjunction with a parking technology program. Technology will assist in ongoing monitoring of parking activity and can inform regular reviews of parking controls in activity centres. [9]

Horsham City Council (Victoria)

The rural township of Horsham located approximately four hours west of Melbourne with a population of 20,000 residents introduced priced parking for on-street facilities in 2014.

Council introduced priced parking to manage on-street CBD parking. According to a Council meeting report from November 2015, parking meters were introduced to serve two objectives:

- To ensure road safety; and
- To maintain traffic flows and turnover.

Furthermore, the priced parking regime was introduced to encourage business activity and growth, improve the local economy and increase the opportunity of short-term parking whilst being financially sustainable by encouraging regular turnover of cars, and therefore customers, in and around the Horsham CBD. Parking

[9] City of Port Phillip ITS - https://haveyoursay.portphillip.vic.gov.au/30803/documents/69846

revenue typically accrues approximately $600,000 per annum with operating costs taking roughly 30%. Revenue received is understood to be put towards streetscape and town centre revitalisation initiatives.

The priced parking regime is managed using 'EasyPark' which is a service providing easy parking solutions for Horsham residents via use of a smart phone application allowing cashless parking transactions. It allows drivers to pay for their parking in a simple, cashless and efficient way through use of the EasyPark smartphone application. It delivers the following solutions in an integrated system:

- Cashless payment through phone parking
- Virtual permits (for example residential permits)
- Digital infringement notices and enforcement management.

Cairns Regional Council

Cairns is located on the east coast of far north Queensland and has an estimated residential population of over 160,000 residents introduced change for on- and off-street parking in CBD. The changes have been effective since 2nd January 2018 and are summarised as follows:

- 20c per hour increase in parking fees, each year, for four years to a final cost of $2 an hour;
- 15% increase in parking fines; and
- Increased time-limited parking hours to 8:30am - 6pm, Monday to Sunday.

All centre median car parking in Cairns CBD is free, with time restricted and low-cost-all-day parking is also available at Council's off-street car park on Bunda Street ($2 a day) and Hartley Street ($3 a day).

Council is planning to reinvest the revenue from parking fees and fines into parking infrastructure and parking technology as well as covering operating and maintenance costs of parking. In the past 5 years, Council has invested more than $8.5 million to improve parking, including the introduction of Licence Plate Recognition (LPR) system, upgrading parking ticket machines to accept credit cards and creating further 450 parking bays.[10] Licence Plate Recognition (LPR) system is used to inspect pay and display tickets by using LPR camera mounted on Council patrol car, that is connected to an on-board computer and works as follows:

1. Parking officers drive along a street or area and record license plates using in-car LPR.
2. Officers complete a second "pass" along the street or area at the end of the regulated parking limit. In a 2P area this is every 2 hours; in a loading zone every 20 or 30 mins, and so on.
3. At the end of the section, LPR cross-references photos taken in both passes to determine if a vehicle has overstayed in the parking bay.
4. Parking officers stop the vehicle, print out any parking infringements and place a ticket on the offending vehicle's windscreen if a valid permit is not displayed.
5. If no offence has been committed, all photos and data related to the vehicles are permanently deleted from the system.[11]

[10] (Changes to parking in the CBD, n.d.) https://www.cairns.qld.gov.au/water-waste-roads/parking/cbdparkchange
[11] (Licence Plate Recognition (LPR), 2015) https://www.cairns.qld.gov.au/region/tourist-information/parking/licence-plate-recognition/licence-plate-recognition-faq

Fee levels in other municipalities

Parking prices in operation at selected Queensland and interstate council (local government) areas have been reviewed and presented in Table C-1. When compared against the selected examples, parking prices are typically cheaper per hour within the current parking pricing for the Ipswich City Centre.

Table C-1: Parking fee levels in other local government areas (LGAs)

LGA	Parking fee charged	Parking enforcement area
Ipswich City Council	0.5 hours - $0.70 1 hour - $1.40 2 Hours - $2.80 3 Hours - $4.20 4 Hours - $5.60 9 Hours - $7.00	Ipswich City Centre
Toowoomba Regional Council	1P meter (1-hour maximum)- $1.80 per hour 2P meter (2-hours maximum) - $1.80 per hour 3P meter (3-hours maximum) - $1.80 per hour 4P meter (4-hours maximum) - $1.80 per hour 8P metre (8-hours maximum) - $1.80 per hour Maximum of $5.50 per day.	Toowoomba CBD (on-street)
	Clifford Street car park - $1.80 per hour to a maximum of $5.50 per day. Station Street car park – $1.80 per hour to a maximum of $7 per day. Julia Street car park – $1.80 per hour to a maximum of $7 per day. Chalk Drive – $1.80 per hour maximum $5.50 per day. Herries/Water Street – $1.80 per hour maximum $5.50 per day. Neil/Annand Street – $1.80 per hour maximum $8.50 per day. Central car park – $1.80 per hour maximum 3-hour parking. <u>Toowoomba bus station:</u> 6am - 6pm Monday to Saturday $2.30 per hour to a maximum of $8.50 per day. 6pm - 6am Monday to Saturday $2.30 per hour to a maximum of $4 per evening.	Toowoomba CBD (off-street)
Brisbane City Council	Up to and including 3-hour meter: 7am-7pm Monday to Friday $4.90 4-hour meter and greater with maximum charge capped at $11 7am-7pm Monday to Friday $3 Up to and including 3-hour meter 7pm-12am Monday to Friday $2.20 Up to and including 3-hour meter 7am-7pm Saturday and Sunday $2.20 4-hour meter and greater with maximum charge capped at $6.60 7am-7pm Saturday and Sunday $1.10	Parking Zone 1

LGA	Parking fee charged	Parking enforcement area
Brisbane City Council (cont'd)	Up to and including 3-hour meter 7am-7pm Monday to Friday $3 4-hour meter and greater with a maximum charge capped at $9.20 7am-7pm Monday to Friday $1.80 Up to and including 3-hour meter 7pm-12am Monday to Friday $1.70 Up to and including 3-hour meter 7am-7pm Saturday and Sunday $1.70 4-hour meter and greater with a maximum charge of $4.40 7am-7pm Saturday and Sunday $1.10	Parking Zone 2
	Up to and including 3-hour meter 7am-7pm $1.70 4-hour meter and greater with maximum charge capped at $5.50 7am-7pm Monday to Friday $0.80	Parking Zone 3
City of Melbourne (Vic)	$3.20 - ½, 1 & 2 hr parking $2 - 3 hr parking $1.70 - 4 hr parking $0.80 - All day (unrestricted)	Parkville, Carlton, East Melbourne and other areas.
City of Gold Coast	$3.90 per hour Monday to Sunday 9am to 7pm including public holidays.	Surfers Paradise
	*Variable fees, between $1.50 per hour and $2.50 per hour (the current hourly rate will be displayed on the parking meter screen).	Burleigh Heads
	*Variable fees, between $2.90 per hour and $3.60 per hour (the current hourly rate will be displayed on the parking meter screen)	Broadbeach
Waverley Council (NSW)	Bondi Beach priced parking rates: Summer (September – May) 7am – 7pm - $7.20 per hour 7pm – 10pm - $4.20 per hour Winter (June – August) 7am – 7pm - $7.20 per hour 7pm – 10pm – FREE	Waverley Council operates a network of parking meters in commercial areas in Bondi Junction, as well as visitor and residential areas at Bondi Beach and Bronte to help manage the demand for parking.