Parking and Access Strategy for Guildford

FINAL
Executive Summary

Objectives

This report provides an access and parking strategy for Guildford in response to currently perceived parking issues and also guidance for the development and use of parking in the future.

The objectives of the strategy are to:

- promote the introduction of appropriate parking measures which reflect land-use activity and parking demand
- effectively balance the street parking needs of residents, visitors and employees
- develop a street parking system which is easily understood and promotes self-compliance
- optimise the efficient operation and enforcement of street parking facilities
- support and sustain vibrant local economies, places and communities
- promote and encourage accessibility and journeys by alternative transport.

Stakeholder Consultation

An important part of the investigation for this project was engagement with stakeholders to identify key issues of priority and concern with regard to parking and access within Guildford. Stakeholder engagement was achieved using the following methods:

- two parking workshops were offered to the public and attended by local residents and business owners
- an interactive map was distributed at the workshops for posting comments and suggestions relating to specific locations
- an on-line web survey was made available for one week either side of the workshops.

The 21 stakeholders at the workshops highlighted five major parking and access issues:

1. Safety – for pedestrians, schoolchildren, cyclists and vehicle drivers.
2. Speed – of vehicles travelling through the town centre.
3. Inadequate information and signage – for visitors about parking location and pedestrian access options.
4. Lack of convenient parking – occasionally, such as on market days.
5. Inconsistent cycling network – and parking for both local residents and visitors.

The 31 respondents to the on-line survey focused on alternative modes of transport to the town centre other than by private car, in particular pedestrian links (77%) and cycle links (74%). The responses highlighted six key areas with regard to parking and access:

1. Lack of convenient parking – particularly in and around the shops at James Street
2. Commuter parking in residential areas leading to congestion - particularly around Ethel Street
3 Lack of safe places to cross James Street
4 Lack of safe drop off / pick up point at Guildford Primary School
5 Concern regarding speed of heavy traffic through the James Street
6 61% respondents are against paying for parking and 13% were in favour of it.

Parking Survey

A car parking survey was undertaken on Thursday 10 March and Saturday 12 March 2016 to identify the current parking supply and utilisation of the existing parking within Guildford. The survey results showed the following:

- The overall town site did not have a parking supply problem on the two surveyed days as there were always more than 2078 public parking bays available.
- Even in the town centre within 400 m of the major northern and southern retail precincts, there were always more than 360 bays available out of a total of 474 public parking spaces in the Northern precinct, and 295/407 in the Southern precinct.
- At no time during the survey in either the town site or town centre did occupancy exceed 30% of the available parking spaces.
- While it is acknowledged that some of the vacant bays in the town site are more than 400 m away from drivers’ destinations, and therefore less likely to be used by drivers (especially those seeking short-term parking), better management of the existing parking supply will result in more effective use of the available capacity.
- In the town site, 15% of parkers surveyed on Thursday were long-term parkers, generally employees, contractors and commuters. On Saturday 13% were long-term parkers.
- In the town centre between 78% and 87% of parkers occupy their spaces for less than 3 hours.
- Verge parking is popular on weekdays (> 150 cars) and also on weekends (> 100 cars).
- It is clear that Guildford has more of a parking management problem than a parking supply problem.

Opportunities

The City has many opportunities to improve safety and the availability and convenience of parking.

1 New technology can be utilised to provide better wayfinding guidance, quicker location of vacant bays, and improved compliance with regulations. New technology will increase the level of service on-street to all stakeholders especially visitors to the town centre.
2 New technology will also significantly increase the management information available to the City, which can develop a better understanding of the patterns of user demand for on-street parking. This information will provide some of the underlying rationale for
amending time limits, altering enforcement patrols and eventually introducing pay parking in areas of high demand.

3 Data will also allow the City to respond to complaints about the perceived lack of parking supply with accurate data, rather than anecdotal information.

4 Regular surveys of parking demand every three years will provide comparative results which will assist to determine fee and time restriction amendments and provide the trigger for the expansion of pay parking to manage demand.

5 The City can reduce the costs of enforcement with more efficient monitoring of spaces as the need for tyre chalking will be significantly reduced if in-ground sensors are installed.

6 Simplified signage referring to large zones with common parking regulations will make parking easier to understand and use, and will provide drivers with a greater level of confidence when driving to the town centre.

7 The City can have a greater impact on integrating parking with walking and cycling, especially with the provision of improved end-of-trip facilities.

8 The implementation of many of the common recommendations made in recent reports will assist in achieving the most consistent objective, which is to maintain the accessibility of the city centre for use by shoppers and visitors.

9 The redundant oval at the western end of Hill Street could provide some relief for peak-event demand. This is just 500 m from the railway station by road or footpath but is within the 100-year floodplain and is part of a regional parks and recreation reserve.

10 Upgraded footpaths and street lighting will ensure safe and convenient pedestrian access to the commercial areas from the parking in some side streets.

11 Expansion of the allowed uses of cash-in-lieu should include the upgrade of infrastructure to improve accessibility to the town centre.

12 On-street parking management can be improved with new signage and bay markings. In the narrow roads between James Street and Helena Street the main outcome will be better management of parking but will not increase parking for commuters. The priority for parking in the narrow streets must stay with local shoppers and visitors and a two or three hour parking limit should be applied.

13 The provision of safe and well-maintained cycle end-of-trip facilities is essential to improving the mode share. This will apply in particular to the growing popularity of bicycle use by local residents and visitors.

14 It is worthwhile to clearly indicate to all users the walking distance to/from their destination. Most people can walk 250 m in less than 5 minutes and 400 m in less than 10 minutes. This information can assist long-stay parkers to seek alternatives to parking close to their destination.

15 Extension of the free public parking trial at the train station will improve available capacity on weekends, but offering the facility in the evenings will also make better use of parking supply.

16 In the longer-term, the use of the Swan River for water taxis will enhance the attractiveness of Guildford as a destination, providing high quality pedestrian access is integrated with the river.
Cash-in-lieu

To date the balance in the City’s Parking Fund is nil. This is partially due to the cash-in-lieu fee not being fully charged on many developments. The City has not been collecting cash-in-lieu because up until now there has been no plan for the City to construct public parking in Guildford. The benefits and concerns associated with cash-in-lieu are discussed and key findings are:

1. The current provisions in the City of Swan Parking Policy (Section 2.12) are restrictive and limited and the potential uses of cash-in-lieu need to be expanded.
2. The City clearly requires a revenue stream to assist in funding the construction of surface and eventually a deck parking facility.
3. The cost of construction requires that the funds available from cash-in-lieu are significantly increased over the next 10 years.
4. The proposed current fees for cash-in-lieu are reasonable and equitable in that they are less than the cost of construction and land and therefore provide a developer with a significant discount.
5. Cash-in-lieu funding is also necessary to improve parking information and signage which will make it easier for drivers to access the town centre.

Recommendations

Many recommendations have been made in this report and in previous reports aimed at improving the parking and access for Guildford. They are all listed below in Table 9.1 under five major categories.

1. safety
2. parking management
3. cash-in-lieu
4. alternative modes of transport particularly cycling and walking
5. compliance.

Implementation of the recommendations requires a commitment to a strategic focus to improve parking and access to Guildford in the next 10 years. The recommendations in previous reports to the City and in this report have been listed below and prioritised into three timeframes:

- **U** = urgent, within 2 years by end 2018
- **N** = necessary within 5 years by end 2021
- **D** = desirable within 10 years by 2026.

The right-hand column provides a reference to the section in this report.
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<th>Priority</th>
<th>Reference section</th>
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<tr>
<td>Safety</td>
<td>Draft Guildford parking review</td>
<td>a) Upgrade footpaths to enable safe and convenient pedestrian access to the commercial areas from defined parking.</td>
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<td>Section 2.1</td>
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<td></td>
<td>Improving walkability</td>
<td>a) The 60 km/h sign on James Street immediately west of Johnson Street sign be replaced with a 50 km/h sign. b) Zebra crossings be installed on all exits/entrances of the two roundabouts at Swan Street/West Swan Road/Meadow Street and Swan Street/Terrace Road. c) Zebra crossing be installed near the station entrance at the site of the existing ‘unassisted’ crossing. d) All footpaths are upgraded to high standards. e) Install tactile plates at all road crossings in Guildford.</td>
<td>N</td>
<td>Section 2.3</td>
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<td></td>
<td>Guildford LATM study</td>
<td>c) Consult with Main Roads WA to review the types of heavy vehicles using arterial roads through Guildford and determine remedial action if necessary. d) Implement all LATM measures accompanied by a lighting scheme compliant with Australian Standards.</td>
<td>D</td>
<td>Section 2.5</td>
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<tr>
<td></td>
<td>Transport strategy</td>
<td>a) Improve pedestrian crossing facilities at Meadow Street/Terrace Road. b) Signalised pedestrian crossing at Guildford Station. c) Improve alternative routes including Lloyd Street and Great Eastern Highway Bypass.</td>
<td>U</td>
<td>Section 2.6</td>
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<tr>
<td></td>
<td>Luxmoore strategy</td>
<td>A formal Road Safety Audit is undertaken in the vicinity of the Johnson Street/Helema Street intersection and on James Street from Meadow Street to Ethel Street.</td>
<td>U</td>
<td>Section 3.2</td>
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<tr>
<td></td>
<td>Luxmoore strategy</td>
<td>The crash statistics be examined for East and Water streets to determine whether it meets MRWA criteria for blackspot funding or warrants a roundabout.</td>
<td>N</td>
<td>Section 3.2 Table 3.1</td>
</tr>
<tr>
<td></td>
<td>Luxmoore strategy</td>
<td>A right-turn arrow is needed at James Street/Meadow Street intersection.</td>
<td>N</td>
<td>Section 3.2 Table 3.1</td>
</tr>
<tr>
<td></td>
<td>Luxmoore strategy</td>
<td>The speed hump at the primary school pedestrian crossing be converted to a raised zebra crossing or be removed.</td>
<td>U</td>
<td>Section 3.2 Table 3.1</td>
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<td></td>
<td>Luxmoore strategy</td>
<td>The controlled crossing be moved to the north side of Helena Street and incorporate a pedestrian refuge. This would reduce the distance people would have to walk and encourage the use of the designated crossing.</td>
<td>N</td>
<td>Section 3.2 Table 3.1</td>
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<tr>
<td></td>
<td>Luxmoore strategy</td>
<td>Signalised pedestrian crossing be provided across Meadow Street at the James Street intersection.</td>
<td>N</td>
<td>Section 3.2 Table 3.1</td>
</tr>
<tr>
<td>Parking management</td>
<td>Draft Guildford parking review</td>
<td>Designate all on-street parking directly adjoining the commercial premises as short-term parking and much later, paid parking. No parking on the south side of Victoria Street.</td>
<td>N</td>
<td>Section 2.1</td>
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<tr>
<td>Transport strategy</td>
<td></td>
<td>e) Implement a parking strategy for Guildford, as part of the Swan Parking Policy.</td>
<td>U</td>
<td>Section 2.6</td>
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<tr>
<td>Luxmoore strategy</td>
<td></td>
<td>As parking management decisions in Guildford are to be based on actual surveyed data of parking supply and demand, a comparative survey of the town centre public parking is undertaken every 3 years to assess patterns of occupancy and duration of stay.</td>
<td>N</td>
<td>Section 4.5</td>
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<tr>
<td>Luxmoore strategy</td>
<td></td>
<td>The parking strategy for Guildford is to be identified and coordinated as part of an integrated transport strategy for the City. The strategy is to incorporate five sustainable parking principles: 1. Focus on people access not vehicle access. 2. Provide efficient and effective alternatives to car access. 3. Parking policy and strategy must support sustainable transport. 4. The appropriate amount of parking for a centre will be well below the unconstrained demand for parking. 5. The provision of parking requires a demand management, not a demand satisfaction approach.</td>
<td>U</td>
<td>Section 6.2.5</td>
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<tr>
<td>Luxmoore strategy</td>
<td></td>
<td>The street parking framework is applied to street parking management decisions in Guildford.</td>
<td>N</td>
<td>Section 6.8</td>
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<td>Luxmoore strategy</td>
<td></td>
<td>The City upgrade and improve parking and access information to Guildford: (a) The City provide practical and clear information about public parking availability on all major roads leading into the town centre. (b) The City should create an integrated parking website that serves as a primary source of information for all parking-related matters. (c) The current website information on parking in the City is improved to include detailed information about all public parking facilities, access, hours of operation, and time restrictions. (d) A static and web-based wayfinding and parking signage package is to be developed which assists drivers to know where to look for parking and obtain the information quickly and without fuss. (e) At major parking locations, signage which is easy to comprehend is to indicate walking distances to major destinations.</td>
<td>N</td>
<td>Section 8.2</td>
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<tr>
<td>Luxmoore strategy</td>
<td></td>
<td>The City agree with the PTA to confirm the success of the trial and the permanent availability of free public parking on weekends and allow the City to promote this with additional signage. Additionally the City is to negotiate with the PTA to permit free public parking after 6pm until midnight on weekdays.</td>
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<td>Section 8.3</td>
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<tr>
<td>Luxmoore strategy</td>
<td>The City install “No Parking on Road or Verge” on both sides of Johnson Street and regular enforcement be conducted especially at times of peak demand. It is also recommended the City provides information about parking options near the Guildford Hotel through the City’s web site. The City should also encourage the Guildford Hotel to provide information about parking to their patrons within the Hotel and on their website.</td>
<td>U</td>
<td>Section 8.4</td>
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<tr>
<td>Luxmoore strategy</td>
<td>The City improve parking signage and line markings for all parking bays along Ethel Street and regular enforcement be conducted especially at times of peak demand.</td>
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<td>Section 8.4</td>
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<td>Luxmoore strategy</td>
<td>The City introduce a single, consistent and distinct system to guide drivers to all car parks.</td>
<td>N</td>
<td>Section 8.5</td>
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<tr>
<td>Luxmoore strategy</td>
<td>Temporary wayfinding signs directing drivers to alternative parking on Victoria Street be erected at the Meadow Street /Stirling Street intersection and Meadow Street /Swan Street intersection on market days.</td>
<td>N</td>
<td>Section 8.5</td>
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<td>Luxmoore strategy</td>
<td>The City investigate the establishment of additional parking spaces on the south side of Helena Street adjacent to the Kings Meadow polo ground.</td>
<td>D</td>
<td>Section 8.6</td>
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<tr>
<td>Alternative modes of transport</td>
<td>Midland access and parking strategy</td>
<td>c) Re-allocate some on-street parking for other priorities such as loading bays, ACROD bays and cycle ways, to enable connection of cycle commuting into and through Midland consistent with a separate cycle plan.</td>
<td>N</td>
<td>Section 2.2</td>
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<tr>
<td>Improving walkability</td>
<td>i) Work with PTA to get the bike lockers repaired and marketed to cyclists wishing to use train services.</td>
<td>N</td>
<td>Section 2.3</td>
<td></td>
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<tr>
<td>Cash-in-lieu</td>
<td>Draft Guildford parking review</td>
<td>d) Accept cash-in-lieu from developments in the defined commercial area of Guildford for the purposes of building/maintaining additional parking capacity in or within 400 m that area.</td>
<td>N</td>
<td>Section 2.1</td>
</tr>
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<td>Midland access and parking strategy</td>
<td>a) Refresh the cash-in-lieu policy within a local planning policy such that it reflects the present needs for at-grade parking development and the future need for multi-deck parking development, including phasing in of appropriate mechanisms to ensure an adequate cash flow to develop such structures.</td>
<td>U</td>
<td>Section 2.2</td>
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<tr>
<td>Luxmoore strategy</td>
<td>City delete Section 2.12b of the Parking Policy and considers replacing it with the following or an equivalent that allows for the alternative use of cash in lieu founds for provision of infrastructure to improve accessibility: The Council may use the money from the special fund for any purpose connected with the creation, management of or improvement to public parking facilities, including but not limited to:</td>
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<td>Section 7.6</td>
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<td>(i) the land and construction costs of public parking stations provided by Council or within a joint venture;</td>
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<td>(c) Any parking bays provided as a result of cash-in-lieu contributions shall remain available to the public at large although the Council may charge a fee for the use of such parking to achieve the proper management of parking in the locality, the maintenance of public parking bays under its control and for the general improvement of parking and local public transport infrastructure.</td>
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<td>(ii) the cost of creating additional parking bays within road reserves;</td>
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<td>(d) Council may pre-fund the acquisition of land or the construction costs of public parking facilities and may use funds from the special parking cash-in-lieu fund to repay the costs of such pre-funding including interest on borrowings.</td>
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<td>(iii) the capital costs of new local public transportation infrastructure, including cycling and pedestrian facilities, shuttle bus services or real-time transit information, that are situated upon land under the control of the local government;</td>
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<td>(e) Council may require that a proportion, or all, of the parking bays required in any approval to commence development be provided as cash-in-lieu or may set a maximum proportion of parking bays for which applicants may provide cash-in-lieu.</td>
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<td>(iv) parking information systems;</td>
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<td>(f) The cash-in-lieu payment required shall be made in two equal instalments, the first immediately prior to commencement of development work and the balance prior to the commencement of the use the subject of the development and before an application is made for an Occupancy Permit.</td>
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<td>(v) security lights;</td>
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<td>(g) In the case of an application involving a change of use but not development works, the cash-in-lieu payment shall be made in full prior to the commencement of the use, and before an application is made for an Occupancy Permit.</td>
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<td>(vi) improved pathways to access parking areas;</td>
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<td>(h) Instead of accepting a cash-in-lieu payment, the Council may accept as a partial or full substitute the transfer in fee simple of a parcel of land to the equivalent value.</td>
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<td>(vii) upgrading the design of on-street parking facilities;</td>
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<td>(viii) maintaining any Council-owned parking facility or related infrastructure; and</td>
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<td>(ix) the reasonable costs to the Council of administering this provision including professional fees and borrowing costs.</td>
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<tr>
<td>(c) Any parking bays provided as a result of cash-in-lieu contributions shall remain available to the public at large although the Council may charge a fee for the use of such parking to achieve the proper management of parking in the locality, the maintenance of public parking bays under its control and for the general improvement of parking and local public transport infrastructure.</td>
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<tr>
<td>(d) Council may pre-fund the acquisition of land or the construction costs of public parking facilities and may use funds from the special parking cash-in-lieu fund to repay the costs of such pre-funding including interest on borrowings.</td>
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<td>(e) Council may require that a proportion, or all, of the parking bays required in any approval to commence development be provided as cash-in-lieu or may set a maximum proportion of parking bays for which applicants may provide cash-in-lieu.</td>
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<td>(g) In the case of an application involving a change of use but not development works, the cash-in-lieu payment shall be made in full prior to the commencement of the use, and before an application is made for an Occupancy Permit.</td>
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<td>(h) Instead of accepting a cash-in-lieu payment, the Council may accept as a partial or full substitute the transfer in fee simple of a parcel of land to the equivalent value.</td>
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<td>Compliance</td>
<td>Midland access and parking strategy</td>
<td>(i) In the case of a land contribution pursuant to subclause (h) the land shall be transferred to the Council prior to the commencement of development or the approval of a strata plan or survey strata plan for the property, whichever occurs first.</td>
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<td>(b) Increase the compliance resource in Guildford.</td>
<td>N</td>
<td>Section 2.2</td>
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<tr>
<td>Luxmoore strategy</td>
<td></td>
<td>The City require a parking control and management plan (PCMP) to be provided by developers, together with their building application as part of the development assessment process for all developments requiring more than five spaces. Reference to the PCMP is to be included in the parking policy, together with penalties for non-compliance.</td>
<td>U</td>
<td>Section 8.7</td>
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<tr>
<td>Luxmoore strategy</td>
<td></td>
<td>Technology is used in peak parking areas in the town centre to ensure a higher level of compliance with parking regulations.</td>
<td>D</td>
<td>Section 8.8</td>
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<tr>
<td>Luxmoore strategy</td>
<td></td>
<td>The City increase parking enforcement around high demand parking areas to help improve parking compliance.</td>
<td>U</td>
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### GLOSSARY

<table>
<thead>
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<th>Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>City</td>
<td>City of Swan</td>
</tr>
<tr>
<td>GLA</td>
<td>Gross leased area</td>
</tr>
<tr>
<td>Guildford</td>
<td>The town site area including the town centre within the area marked in blue in Figure 1-1.</td>
</tr>
<tr>
<td>LGA</td>
<td>Local government area</td>
</tr>
<tr>
<td>LATM</td>
<td>Local area traffic management – the use of physical devices, streetscaping treatments and other measures (including regulations and other non-physical measures) to influence vehicle operation, in order to create safe and more liveable local streets</td>
</tr>
<tr>
<td>Long-term parking</td>
<td>More than four hours</td>
</tr>
<tr>
<td>Off-street parking</td>
<td>Public and private parking that is not on-street</td>
</tr>
<tr>
<td>pcm</td>
<td>Per calendar month</td>
</tr>
<tr>
<td>MLC</td>
<td>Member of the Legislative Council WA</td>
</tr>
<tr>
<td>PTA</td>
<td>Public Transport Authority</td>
</tr>
<tr>
<td>Shared parking</td>
<td>Parking facilities on one site shared concurrently by a mixed-use development or separate developments</td>
</tr>
<tr>
<td>Short-term parking</td>
<td>Less than four hours</td>
</tr>
<tr>
<td>SWOT</td>
<td>Strengths, weaknesses, opportunities and threats</td>
</tr>
<tr>
<td>Town centre</td>
<td>Guildford town centre being the area bounded by Swan Street and Terrace Road to the north, Market Street to the west, Helena Street to the south and East Street to the east.</td>
</tr>
</tbody>
</table>
1 INTRODUCTION

The Guildford town centre in the City of Swan is undergoing increased investment interest and rapid development and consequently, pressure has been placed on car parking for businesses, visitors, commuters and local employees and to accommodate other vehicle types. Minimum parking provision ratios also impact on the feasibility of new developments.

Parking issues cannot be dealt with in isolation from the broader issues of car use and transport and parking is an essential element of the overall transportation system and not a stand-alone service. The role of parking supply for the town centre requires policy to develop a balanced and equitable distribution of parking facilities to support competitive business and a varied community.

The City requires an access and parking strategy for Guildford in response to currently perceived parking issues and also to provide guidance for the development and use of parking in the future.

The parking and access strategy should enable the City to better prepare for, plan for and manage parking issues by rationalising the management of parking. In particular it is recognised that while planning must accommodate the reasonable need for car access to the town centre, other transport modes – walking, cycling, public transport and multi-occupant cars – must play an increasingly significant role.

1.1 The Guildford Town Site

The town site as shown in Figure 1-1 is bounded by the Swan River to the north and west, the Great Eastern Highway and East Street to the east and Helena and Hill Streets to the south. It contains a range of historic properties, two train stations, two schools and many commercial, tourist and entertainment businesses. Most of the area is residential.

The commercial heart of Guildford is small and linear and exists in two main parts (Figure 1-2). The first is the strip of shops and commercial establishments, mainly south of the railway station along James Street. It features shops and commercial businesses many of which trade in antiques or food.

The second strip is Swan Street and Terrace Road, north of the railway line and linked to it by Stirling Square. Swan Street also has a hotel, restaurants and other related businesses. Parking along James Street is restricted because it is a major through road.
1.2 Objectives of the Strategy

The objectives of the strategy are to:

- promote the introduction of appropriate parking measures which reflect land-use activity and parking demand
- effectively balance the street parking needs of residents, visitors and employees
- develop a street parking system which is easily understood and promotes self-compliance
- optimise the efficient operation and enforcement of street parking facilities
- support and sustain vibrant local economies, places and communities
- promote and encourage accessibility and journeys by alternative transport.
1.3 Methodology to Develop the Strategy

A multi-faceted approach has been used towards understanding the perceived and actual parking and access issues facing Guildford.

Several background documents, policies and other material relating to parking and land use in Guildford have been reviewed in Section 2.

An important part of the investigation for this project was engagement with stakeholders to identify key issues of priority and concern with regard to parking and access within Guildford. This information was sought in order to assist the City in achieving its future planning objectives.

Stakeholder engagement was achieved using the following methods:

- two parking workshops were offered to the public and attended by local residents and business owners
- an interactive map was distributed at the workshops for posting comments and suggestions relating to specific locations
- an on-line web survey was made available for one week either side of the workshops.

Stakeholder engagement is summarised in Section 3 with details of the presentations, surveys and responses contained in Appendix A.

Luxmoore undertook surveys to identify the current supply of parking and the current patronage levels of existing parking within the town site. The survey comprised of two parts; a parking supply survey and a parking utilisation survey. The survey results are summarised in Section 4. An additional benefit of the detailed surveys is the base data obtained will enable subsequent comparative surveys to be undertaken by the City every few years. The comparative data will indicate trends in demand and is fundamental to justify triggers for different parking management interventions in the future.
A SWOT analysis (strengths, weaknesses, opportunities and threats) has been used to summarise and analyse current parking and access issues in Section 5.

Section 6 details a number of parking options and initiatives which have been considered appropriate for the town centre. These include making more effective use of the available parking capacity and regulating the supply of public parking to support parking and transportation objectives and regulating users and limiting the types of vehicles that may use certain parking spaces.

The issue of developer contributions (cash-in-lieu) has been considered in Section 7.

Recommendations have been developed in Section 9 together with a timeline for their implementation.
2 BACKGROUND DOCUMENTS

A review of previous documents was undertaken.

2.1 Draft Guildford Parking Review\(^1\)

This brief informal report focused on several outcomes to retain the village/community feel especially for residents including:

- the protection of quiet residential neighbourhoods against detrimental parking congestion
- support for business viability
- recognising Guildford as a tourist destination and a jumping-off point for Swan Valley tourism
- prevention of long-stay parking in designated residential areas by commuters from other places
- ensuring a cycle corridor east-west through Guildford
- enhancing secure cycle parking at the railway station.

The report identified other considerations including:

a) Upgrade footpaths to enable safe and convenient pedestrian access to the commercial areas from defined parking.

b) Designate all on-street parking directly adjoining the commercial premises as short-term parking and much later, paid parking.

c) Amend the town plan/local planning strategy to recognise the heritage benefit, the landscape necessities and the parking developments that follow.

d) Accept cash-in-lieu from developments in the defined commercial area of Guildford for the purposes of building/maintaining additional parking capacity in or within 400 m of that area. This would be applicable if the primary option of a commercial arrangement is taken up as described above.

e) No parking on the south side of Victoria Street.

2.2 Midland Access and Parking Strategy\(^2\)

Some of the recommendations in this report included:

a) Refresh the cash-in-lieu policy within a Local Planning Policy such that it reflects the present needs of at-grade parking development and the future need of multi-deck parking development, including phasing in of appropriate mechanisms to ensure an adequate cash flow to develop such structures.

b) Increase the compliance resource in Midland and provide some service to outlying centres of Malaga, Ellenbrook and Guildford.

c) Commence the re-allocation of some on-street parking for other priorities such as loading bays, ACROD bays and cycleways, to enable connection of cycle commuting into and through Midland consistent with a separate cycle plan.

d) Keep under review the potential establishment of a centralised and coordinated business-oriented approach to parking planning and management.

1 Draft Guildford Parking Review 2014, prepared by City of Swan Special Project Manager.
2 Midland Access and Parking Strategy – Prepared by City of Swan March 2013 with changes following public comment in August 2012.
e) Commence a major ongoing communication strategy with the public about the proposed changes from 2012–13 financial year so people can be encouraged to consider mode shift rather than focussing only on parking capacity.

2.3 Improving Walkability and Wayfinding in Guildford

This report examined the need to improve walkability and wayfinding for pedestrians in Guildford. The audits of walkability issues identified a number of issues of concern:

- speed limits – especially on the antique strip of James Street
- crossability – especially at the single-lane roundabouts on Swan Street, and the need for an upgraded crossing from the Guildford train station
- footpath condition – especially near and over the rail line. Some of the needed upgrades may be the responsibility of the PTA
- inconsistencies in the installation of tactile plates
- limited public seating and a variety of styles
- signage clutter on Meadow Street
- vandalised cycle parking at the station and insufficient clearance on one section of footpath.

The analysis led to the development of several recommendations:

a) The 60 km/h sign on James Street immediately west of Johnson Street sign be removed and preferably replaced with a 50 km/h sign.

b) Zebra crossings be installed on all exits/entrances of the two roundabouts at Swan Street/West Swan Road/Meadow Street and Swan Street/Terrace Road, with advance warning yellow legs signs.

c) A zebra crossing be installed near the station entrance at the site of the existing ‘unassisted’ crossing.

d) All of the sections of substandard footpath identified are upgraded to the high standards found elsewhere in Guildford.

e) Install tactile plates at all road crossings in Guildford.

f) Develop a consistent design and colour of public seats and install them throughout Guildford, where there is adequate footpath width and limited private (café) seating.

g) Review the existing signage on Meadow Street and reduce clutter if possible.

h) Work with local shopkeepers to ensure adequate street clearance is maintained.

i) Work with PTA to get the bike lockers repaired and marketed to cyclists wishing to use train services.

j) Install a ‘family of signs’ for Guildford (with application to the whole City of Swan) at a cost of approximately $39,000.

k) Develop and implement a local marketing campaign to generate support for making Guildford more pedestrian friendly and improving both the walking environment and the wayfinding system.

---

2.4 Pedestrian and Cycling Audit

This informal report addressed 15 road and bridge locations in the town site and detailed issues including pedestrian crossings, cycle access, traffic speed and school crossings. The report set out proposed short and long-term solutions. It detailed the locations shown in Figure 2-1.

Figure 2-1: Cycle and pedestrian danger spots (April 2013)

2.5 Guildford LATM Study

LATM is also called traffic calming and involves installing devices such as road humps, roundabouts, traffic islands and kerb build-outs with the following objectives:

- to provide safe access for pedestrians, cyclists and other road users
- to allow safe parking for vehicles where possible
- to maintain and provide safe access for emergency vehicles, rubbish trucks, private and public transport vehicles and delivery vehicles
- to minimise environmental impacts such as traffic noise and other pollution
- to discourage non-local traffic
- to moderate vehicle speeds
- to provide a safe environment for pedestrians, cyclists and residents.

---

4 TTG Road Safety and Cycling Audit report prepared April 2013. Simon Kilbane, Tammy Hanson and Tanami Magnus.
This study recommended 17 treatment measures with a priority on specific road and intersection remedial measures associated with a crash history.

The study also recommended that the City:

(a) Conduct a parking study for Guildford to assist determining effective parking policies.
(b) Review and potentially implement actions recommended in the 2009 study, Walkability and Wayfinding in Guildford.
(c) Consult with Main Roads WA to review the types of heavy vehicles using arterial roads through Guildford and determine remedial action if necessary.
(d) Implement all LATM measures accompanied by a lighting scheme compliant with Australian Standards.

2.6 City of Swan Transport Strategy

This report was based on the Moving People methodology whereby the hierarchy for each road is informed by large-scale land-use planning, within a broad framework as follows:

- Road networks based on appropriate use and connectivity, connecting origins and destinations but not forming barriers to sustainable modes.
- Land-uses define the requirements for car parking quantum and location (short-stay and on-street parking close to retail precincts, long-stay commuter parking on the periphery of the centres near to employment centres and along regional access routes).
- Public transport routes designed to fit within the regional context and support sustainable transport access to activities, particularly employment.
- Pedestrian facilities to knit the various complementary land uses together to create a single, effective mixed-use community. Of particular importance are the Activated Pedestrian Zones and routes from car parking to primary activity locations. Quality and safety are vital to the effective operation of pedestrian spaces.
- Cycling facilities that follow primary desire lines and provide fine-grained access to all areas of the Activity Centre. Cycling is unique in that it allows both macro- and micro-levels of access to land-uses.

Through the Moving People framework assessment, cycling facilities are allocated as on-street or off-street, minimising conflict and safety issues for cyclists, cars and pedestrians. (e.g. in Activated Pedestrian Zones, cyclists are encouraged to ride on-street).

The report made five recommendations specifically for Guildford:

(a) Improve pedestrian crossing facilities at Meadow Street/Terrace Road.
(b) Support signalised pedestrian crossing at Guildford Station.
(c) Improve alternative routes including Lloyd Street and Great Eastern Highway Bypass.
(d) Maintain the existing road constraints as a method of restraining undesirable traffic demand.
(e) Develop a parking strategy for Guildford, as part of the Swan Parking Policy.
2.7 Key Findings

- These previous reports all focus on improving access and travel within Guildford for all user types.
- They primarily address issues of safety, speed, pedestrian and cyclist routes and the reduction of congestion.
- Other common recommendations focus on improved signage and communication.

They also recognise options to make more effective allocation of existing parking among different hierarchies of users, but few advocate increased parking capacity.

2.8 Summary of Recommendations

As many of these reports provide similar recommendations, these have been summarised in Table 2.1 under five main categories:

- safety
- parking Management
- cash-in-lieu
- alternative modes
- compliance.

The recommendations are cross-referenced to the reports as summarised in this section.
Table 2.1: Recommendations in background documents

<table>
<thead>
<tr>
<th>Category/Report</th>
<th>Draft Guildford parking review (Section 2.1)</th>
<th>Midland access and parking strategy (Section 2.2)</th>
<th>Improving walkability (Section 2.3)</th>
<th>Guildford LATM study (Section 2.5)</th>
<th>Transport strategy (Section 2.6)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Safety</td>
<td>a) Upgrade footpaths to enable safe and convenient pedestrian access to the commercial areas from defined parking.</td>
<td></td>
<td>a) The 60 km/h sign on James Street immediately west of Johnson Street sign be replaced with a 50 km/h sign. b) Zebra crossings be installed on all exits/entrances of the two roundabouts at Swan Street/West Swan Road/Meadow Street and Swan Street/Terrace Road. c) Zebra crossing be installed near the station entrance at the site of the existing ‘unassisted’ crossing. d) All footpaths are upgraded to high standards. e) Install tactile plates at all road crossings in Guildford.</td>
<td>c) Consult with Main Roads WA to review the types of heavy vehicles using arterial roads through Guildford and determine remedial action if necessary. d) Implement all LATM measures accompanied by a lighting scheme compliant with Australian Standards.</td>
<td>a) Improve pedestrian crossing facilities at Meadow Street/Terrace Road. b) Signalised pedestrian crossing at Guildford Station. c) Improve alternative routes including Lloyd Street and Great Eastern Highway Bypass.</td>
</tr>
<tr>
<td>Category/Report</td>
<td>Draft Guildford parking review (Section 2.1)</td>
<td>Midland access and parking strategy (Section 2.2)</td>
<td>Improving walkability (Section 2.3)</td>
<td>Guildford LATM study (Section 2.5)</td>
<td>Transport strategy (Section 2.6)</td>
</tr>
<tr>
<td>----------------</td>
<td>---------------------------------------------</td>
<td>-----------------------------------------------</td>
<td>---------------------------------</td>
<td>---------------------------------</td>
<td>--------------------------------</td>
</tr>
</tbody>
</table>
| Parking management | b) Designate all on-street parking directly adjoining the commercial premises as short-term parking and much later, paid parking.  
e) No parking on the south side of Victoria Street. | d) Review the establishment of a centralised and coordinated business-oriented approach to parking planning and management. | g) Review the existing signage on Meadow Street and reduce clutter.  
j) Install a 'family of signs' for Guildford (with application to the whole City of Swan).  
k) Make Guildford more pedestrian friendly and improve both the walking environment and the wayfinding system. | a) Conduct a parking study for Guildford to assist determining effective parking policies. | e) Develop a parking strategy for Guildford, as part of the Swan Parking Policy. |
| Cash-in-lieu | d) Accept cash-in-lieu from developments in the defined commercial area of Guildford for the purposes of building/maintaining additional parking capacity in or within 400 m of that area. | a) Refresh the cash-in-lieu policy within a Local Planning Policy such that it reflects the present needs of at-grade parking development and the future need of multi-deck parking development, including phasing in of appropriate mechanisms to ensure an adequate cash flow to develop such structures. |  |  |  |
| Alternative modes (cycling) |  | c) Re-allocate some on-street parking for other priorities such as loading bays, ACROD bays and cycleways, to enable connection of cycle commuting into and through Midland consistent with a separate cycle plan. |  | i) Work with PTA to get the bike lockers repaired and marketed to cyclists wishing to use train services. |  |
| Compliance |  |  | b) Increase the compliance resources in Guildford. |  |  |
3 STAKEHOLDER ENGAGEMENT

An important part of the investigation for this project was engagement with stakeholders to identify key issues of priority and concern with regard to parking and access within Guildford (Figure 3-1). This information was sought in order to assist the City in achieving its future planning objectives.

Stakeholder engagement was achieved using the following methods:

- two parking workshops attended by local residents and business owners
- an interactive map distributed at workshops for posting comments and suggestions relating to specific locations
- on-line web survey.

Community stakeholders were identified as including residents, business owners and employees, visitors, developers, the schools and parents, the information centre, local, state and federal elected officials and the public transport authority.

Specific discussions about parking and access were held with the Guildford Primary School. Other stakeholders were encouraged to provide their issues and proposed solutions via public workshops or an on-line survey, or send emails to the City.

3.1 Workshops

The public were invited to attend two workshops in February 2016; 21 stakeholders participated.

Figure 3-1: Invitation to workshops
The object of the workshops was to engage with stakeholders to investigate and understand parking and access issues in Guildford and seek their comments and vision for future parking and access.

The workshops were presented and facilitated in February by a Principal Consultant from Luxmoore and attended by several council staff and elected representatives.

A copy of the workshop presentation is attached in Appendix B. The attendees consistently identified three key areas of concern. These related to safety, inconvenient parking locations and the lack of information on parking availability. In addition, many participants referred to issues for cyclists.

### 3.2 Safety Issues

Many workshop attendees cited multiple concerns with regard to road safety. Particular areas of concern included crossings at James Street and at Guildford Primary School on Helena Street and the immediate surrounding areas. Many locations were identified as potential spots for safer and more visible pedestrian crossings. The perceived fast speed of traffic throughout the main thoroughfare of James Street was repeatedly mentioned.

Table 3.1 to outline the key issues raised and the location referred to. On Wednesday 16 March, an experienced road safety team from ARRB undertook a brief visit to the town centre. Although this was not a Road Safety Audit, their additional comments and recommendations are noted in the right-hand column in Table 3.1.

**Table 3.1:** Overview of perceived safety issues

<table>
<thead>
<tr>
<th>Issue</th>
<th>Location</th>
<th>Stakeholder suggested solutions</th>
<th>Additional comments by ARRB road safety team</th>
</tr>
</thead>
<tbody>
<tr>
<td>Speed of traffic</td>
<td>Helena Street</td>
<td>Chicanes, Shuttle bus, Traffic calming strategies, Traffic lights</td>
<td></td>
</tr>
<tr>
<td>Speed of traffic</td>
<td>James Street</td>
<td>Reduce from 60 to 40 km/h, Overhead walkway, Underground underpass, Slow-down signage particularly at train station crossing</td>
<td></td>
</tr>
<tr>
<td>Issue</td>
<td>Location</td>
<td>Stakeholder suggested solutions</td>
<td>Additional comments by ARRB road safety team</td>
</tr>
<tr>
<td>-------</td>
<td>----------</td>
<td>---------------------------------</td>
<td>-------------------------------------------</td>
</tr>
<tr>
<td>3</td>
<td>James Street</td>
<td>Introduce pedestrian crossing at train station Underground underpass Slow-down signage particularly at train station More pedestrian crossings</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>James Street/ Helena Street</td>
<td>Slow-down-point signs</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Corner of Meadow Street/Stirling Street</td>
<td>Remove</td>
<td>Move further east</td>
</tr>
<tr>
<td>6</td>
<td>East Street</td>
<td>Zebra crossing</td>
<td>Pram ramps do not seem appropriate for both crossings at this location. Three lanes need to be crossed before reaching pedestrian refuge. It was witnessed that a large amount of heavy vehicles move between East Street and Water Street causing sight line issues. It is recommended that the crash statistics be examined for this location to determine whether it meets MRWA criteria for blackspot funding or warrants a roundabout.</td>
</tr>
<tr>
<td>7</td>
<td>When turning into Meadow Street from James Street</td>
<td>Green arrow light for turning into Meadow Street</td>
<td>It was witnessed that multiple cars would like to make this movement but due to the traffic flow in the east direction on James St, the cars were only able to turn once the lights had changed to amber. This is not considered safe. A right-turn arrow is recommended.</td>
</tr>
<tr>
<td>8</td>
<td>125 Helena Street</td>
<td>Introduction of slow-down times 7–9.30am 2.30–4pm Pedestrian walkway at Ethel Street</td>
<td>Speed hump creates confusion as to who has right of way. It was witnessed that some people crossed at unsafe times expecting the cars to stop. It is recommended that the speed hump be converted to a raised zebra crossing or be removed.</td>
</tr>
</tbody>
</table>
### Table 3.2: Overview of perceived parking issues

<table>
<thead>
<tr>
<th>Issue</th>
<th>Location</th>
<th>Stakeholder suggested solutions</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Increased traffic congestion and limited parking during festivals/ polo/markets/Guildford events</td>
<td>Various</td>
</tr>
</tbody>
</table>

---

3.2.1 Parking Issues

Table 3.2 outlines the key parking issues raised, the location and stakeholder suggestions to rectify.

<table>
<thead>
<tr>
<th>Issue</th>
<th>Location</th>
<th>Stakeholder suggested solutions</th>
</tr>
</thead>
<tbody>
<tr>
<td>9</td>
<td>Limited car parking capacity at primary school – parents parking across the main road then having to negotiate heavy traffic at peak times Considered a dangerous intersection</td>
<td>Johnson Street/ Helena Street</td>
</tr>
<tr>
<td>10</td>
<td>Dangerous intersections/ places to cross, perceived ‘rat run’</td>
<td>East Street/ Attfield Street Meadow Street/ Helena Street Helena Street/ Johnson Street Ethel Street/ Swan Street (East) James Street/ Meadow Street</td>
</tr>
<tr>
<td>10</td>
<td>Difficult to U-turn</td>
<td>Stephen Street/ James Street Market Street/ James Street</td>
</tr>
<tr>
<td>11</td>
<td>Traffic speed</td>
<td>James Street/ Wellman Street</td>
</tr>
<tr>
<td>12</td>
<td>Perceived lack of lighting – cyclists feeling unsafe, potential barrier to use</td>
<td>James Street train station area</td>
</tr>
</tbody>
</table>

---

It was witnessed that many cars park on the east side of Johnson Street and then cross Johnson Street by foot, not at the designated crossing. This is a safety issue as Johnson Street is a four-lane road that traffics many heavy vehicles and there is no formal pedestrian refuge provided. There is a pram ramp that directs people from the western side of Johnson Street in to the middle of the intersection. It is recommended this pram ramp be blocked. The current location of the controlled crossing does not appear to be in the most appropriate location. This may be due to change of the school main entrance. It was witnessed that most people crossing Johnson Street were trying to get to Helena Street on the east side. Using the controlled crossing caused a substantial detour (approx. 200 m). It is recommended that the controlled crossing be moved to the north side of Helena Street and incorporate a pedestrian refuge. This would reduce the distance people would have to walk and encourage the use of the designated crossing.

James Street/Meadow Street – the current layout of pedestrian crossings and paths leading to this intersection is not user friendly. Pedestrians wishing to get from the NE to the NW side or from the SW to the NW side are not given accesses across the intersection. They are forced to make considerable detours (100 m to get from NE to NW and 160 m to get from SW to NW). The considerably long detours required to cross the intersection safely, encourage pedestrians to use the intersection unsafely. It is recommended that a signalised pedestrian crossing be provided across Meadow Street at the James Street intersection.
<table>
<thead>
<tr>
<th>Issue</th>
<th>Location</th>
<th>Stakeholder suggested solutions</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>Limited parking</td>
<td>110 Terrace Road</td>
</tr>
<tr>
<td>3</td>
<td>Access to car parking at school</td>
<td>Helena Street and surrounds</td>
</tr>
<tr>
<td>4</td>
<td>Presently an unsurfaced area being used as car park</td>
<td>Victoria Street</td>
</tr>
<tr>
<td>5</td>
<td>Parking congestion</td>
<td>Station Street</td>
</tr>
<tr>
<td>6</td>
<td>Limited parking spaces</td>
<td>James Street Meadow Street Swan Street Johnson Street Stirling Square</td>
</tr>
<tr>
<td>7</td>
<td>PTA parking availability</td>
<td>PTA car park</td>
</tr>
<tr>
<td>8</td>
<td>Parking congestion in residential area</td>
<td>Ethel street</td>
</tr>
<tr>
<td>9</td>
<td>Not enough parking spaces, perceived nuisance parking on resident verges and surrounding streets</td>
<td>Stirling Street</td>
</tr>
</tbody>
</table>

### 3.2.2 Information and Signage Issues

There was a general consensus held amongst participants that there is a lack of informative wayfinding, parking and cycle signage.

Table 3.3 outlines the key information issues raised, the location and stakeholder suggestions.

<table>
<thead>
<tr>
<th>Issue</th>
<th>Location</th>
<th>Stakeholder suggested solutions</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Lack of clear and informative signage</td>
<td>Various</td>
</tr>
<tr>
<td>2</td>
<td>Event-day signage</td>
<td>Various</td>
</tr>
<tr>
<td>3</td>
<td>Underground passing at corner of Meadow Street/James Street</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Parking availability</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Parking at the hotel</td>
<td>Rose and Crown Hotel</td>
</tr>
</tbody>
</table>
3.2.3 Bicycle Parking Issues

Many mentioned a perceived lack of clear cycle ways on the main road and a lack of secure bike parking. These factors were considered to act as a barrier to more frequent use of bikes.

<table>
<thead>
<tr>
<th>Issue</th>
<th>Location</th>
<th>Stakeholder suggested solutions</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Lack of secure bike parking</td>
<td>James Street – around the train station</td>
</tr>
<tr>
<td>2</td>
<td>Poor cycle paths</td>
<td>James Street</td>
</tr>
</tbody>
</table>

3.2.4 Key Findings from Workshops

- The stakeholders at the workshops highlighted five major parking and access issues:
  1. Safety – for pedestrians, schoolchildren, cyclists and vehicle drivers.
  2. Speed – of vehicles travelling through the town centre.
  3. Inadequate information and signage – for visitors about parking location and pedestrian access options.
  4. Lack of convenient parking – occasionally, such as on market days.
  5. Inconsistent cycling network – and parking for both local residents and visitors.

- While it is acknowledged that it is impossible to accommodate every vehicle that requires to park, the desire to park anywhere, for any length of time and at little or no cost is still prevalent. Most stakeholders agreed that a cultural change away from the expectation of unlimited free parking is necessary, but this requires convenient alternative options and improvements in the way parking is managed.

- It is recognised that one of the deficiencies of the workshop was the minimal input from occasional visitors to the town centre including drivers, cyclists and pedestrians. The majority of stakeholders were local residents, business owners and others who travel frequently to Guildford.

3.3 On-line survey

3.3.1 Summary

This section provides an overview of the responses from the on-line survey. A total of 31 people responded. The vast majority were:

- residents (76%)
- over the age of forty five (66%)
- male (59%)
Four respondents were workers employed in the local area and three were business owners. Residential parking accounted for the most responses (17) with parking for shopping and entertainment collecting 14 responses with regard to reason for parking at location.

The survey provided detail on the level of support by respondents for a number of different strategic options to parking. The table below shows the overriding response (excluding ‘not applicable’ responses) to each option.

Table 3.5: Support for parking management strategies

<table>
<thead>
<tr>
<th>Possible strategy</th>
<th>Level of support</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shorter parking times</td>
<td>Strongly agree or agree (32%)</td>
</tr>
<tr>
<td>Longer parking times</td>
<td>Strongly disagree or disagree (38%)</td>
</tr>
<tr>
<td>More enforcement of parking restrictions</td>
<td>Strongly agree or agree (48%)</td>
</tr>
<tr>
<td>Provision of real time information</td>
<td>Strongly agree or agree (51%)</td>
</tr>
<tr>
<td>Improved pedestrian access</td>
<td>Strongly agree or agree (64%)</td>
</tr>
<tr>
<td>Walking further to destination</td>
<td>Strongly agree or agree (38%)</td>
</tr>
<tr>
<td>Paying for parking</td>
<td>Strongly disagree or disagree (61%)</td>
</tr>
</tbody>
</table>

When asked what alternative modes of transport were available to the town centre other than private car, pedestrian links (77%) and cycle links (74%) were most commonly mentioned.

A number of comments were provided spontaneously within the survey responses which relate to parking issues and suggestions for solutions at specific locations and throughout Guildford.

The following charts provide an overview of perceived issues and suggested improvements.

Figure 3.2: Perceived parking issues
With regard to parking and access issues in Guildford overall, parking supply and lack of safety when crossing James Street were the most common responses.

There was a perception that many commuters were parking in residential areas around the railway station and the introduction of resident permit parking was considered an acceptable approach to discourage this behavior.
3.3.2 **Key findings from on-line survey**

The participants of the on-line survey highlighted six key areas with regard to parking and access within Guildford.

1. Lack of convenient parking – particularly in and around the shops at James Street
2. Commuter parking in residential areas leading to congestion - particularly around Ethel Street
3. Lack of safe places to cross James Street
4. Lack of safe drop off / pick up point at Guildford Primary School
5. Concern regarding speed of heavy traffic through the James Street
6. 61% respondents are against paying for parking, however 13% were in favour of it.
4 PARKING SURVEYS

4.1 Methodology

There are numerous parking generators within the Guildford town site. Although a predominantly residential area, the following land uses also have significant trip generating potential in the area:

- Guildford Grammar School
- Guildford Primary School
- main street retail
- hotels and restaurants
- train stations and associated car parks (Guildford and East Guildford)
- parks and recreation areas.

A car parking survey was undertaken on Thursday 10 March and Saturday 12 March 2016 to identify the current parking supply and utilisation of the existing parking within Guildford. These were regarded as typical days with no scheduled special events. The surveys on both days were undertaken during three timeslots: 9 to 11 am, 12 to 2 pm and 3 to 5 pm across the town site area as shown in Figure 4-1. Surveys should not be undertaken only at times of peak demand. The value of the March surveys will be enhanced when the surveys are repeated in the same month in 2017. However, it may be worthwhile to undertake the surveys again in the vicinity of the Guildford Hotel in November 2016, six months after the re-opening of the Hotel to assess the impact on parking patterns in the immediate vicinity.

The calculation of the supply of existing parking used recent high quality aerial imagery from Nearmaps, taken on Thursday 28 January and corroborated on site on Thursday 10 March 2016. It is estimated that the supply for the Guildford study area is 2533 marked and unmarked public car parking bays.

The survey included all:

- on-street formal and informal parking (non-marked street parking where parking is not prohibited)
- off-street formal and informal parking (such as the northern Transperth area where a large number of people are parked)
- disabled parking and motorcycle parking.

The parking supply excluded verge parking, however the number of verge parkers within the study area was recorded during the surveys.

Excluded from the parking survey were all private car parks which were identified as ‘patron only’ car parks including those for shopping, commercial and industrial premises. Residential bays, bus parking and loading zones were also excluded.

The majority of the parking surveyed was on-street, informal and more than 400 meters from the core shopping or transport hubs. Most people can walk 250 m in less than 5 minutes and 400 m in less than 10 minutes. The map in Figure 4-1 indicates a 400 m radius from the intersections of Terrace Road/Swan Street and from Johnson/James Streets. This
information can be used to assist long-stay parkers to seek alternatives to parking close to their destination.

Figure 4-1: Parking survey area – March 2016 (showing 400 m walking distances)

4.2 Parking Occupancy

In general, best practice for town centre parking is where on-street parking is operating at between 50–85% occupancy and this is regarded as operating efficiently. Demand above and below this range indicates that the parking spaces are not being used effectively.

A peak occupancy rate of approximately 85% ensures that parking resources are well used and people can park in a reasonable proximity to their destination; 85% occupancy effectively means that one in seven parking spaces is available. For areas with more than 85% occupancy, the introduction of further parking controls is necessary to promote a shift in behaviour.

This 85% benchmark will be applied to consideration of parking management options in this report.

4.3 Town Site Survey Results

The following data summarises the supply, occupancy and duration of stay of public parking across the entire town site.

4.3.1 Parking Occupancy across the Town Site

Table 4.1 and Figure 4.2 and Table 4.2 show the occupancy and duration of stay across the town site.
Table 4.1: Town site occupancy

<table>
<thead>
<tr>
<th></th>
<th>Thursday 10/3/16</th>
<th></th>
<th>Thursday verge parkers</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Capacity</td>
<td>9–11 am</td>
<td>12–2 pm</td>
<td>3–5 pm</td>
<td>9–11 am</td>
</tr>
<tr>
<td>Occupancy</td>
<td>2533</td>
<td>445</td>
<td>455</td>
<td>370</td>
<td>31</td>
</tr>
<tr>
<td>Min. available spaces</td>
<td>2078</td>
<td>2088</td>
<td>2078</td>
<td>2163</td>
<td></td>
</tr>
<tr>
<td>% occupied</td>
<td>18%</td>
<td>18%</td>
<td>15%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Saturday 12/3/16</th>
<th></th>
<th>Saturday verge parkers</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Capacity</td>
<td>9–11 am</td>
<td>12–2 pm</td>
<td>3–5 pm</td>
<td>9–11 am</td>
</tr>
<tr>
<td>Occupancy</td>
<td>2533</td>
<td>365</td>
<td>414</td>
<td>340</td>
<td>90</td>
</tr>
<tr>
<td>Min. available spaces</td>
<td>2119</td>
<td>2168</td>
<td>2119</td>
<td>2193</td>
<td></td>
</tr>
<tr>
<td>% Occupied</td>
<td>14%</td>
<td>16%</td>
<td>13%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Figure 4-2: Town site occupancy levels

Table 4.2: Town site duration of stay

<table>
<thead>
<tr>
<th>Surveyed on:</th>
<th>Total occupancy</th>
<th>Number of vehicles</th>
<th>Occupancy (%)</th>
<th>Number of vehicles</th>
<th>Occupancy (%)</th>
<th>Number of vehicles</th>
<th>Occupancy (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt; 3h</td>
<td>786</td>
<td>453</td>
<td>58%</td>
<td>182</td>
<td>23%</td>
<td>151</td>
<td>19%</td>
</tr>
<tr>
<td>3h to 5h</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5h to 7h</td>
<td>804</td>
<td>567</td>
<td>71%</td>
<td>159</td>
<td>20%</td>
<td>78</td>
<td>10%</td>
</tr>
</tbody>
</table>

4.4 Town Centre Survey Results

4.4.1 Survey Data across the Major Northern and Southern Retail Precincts

It is recognised that the parking survey data across the entire town site will show a higher level of availability than the town centre. Therefore, the survey results have been refined to focus only on the streets within 400 m of the two major town centre precincts.
The following data represents the quantum of parking within 400 m of the southern retail/school precinct, and the northern retail/restaurant precinct.

**Southern precinct**

The southern precinct analysis consists of the following streets and off-street parking:

- Bank Street
- Ethel Street
- Helena Street West
- James Street
- Market Street South
- Meadow Street
- Stephen Street
- Stirling Street West.

### Table 4.3: Town centre occupancy

<table>
<thead>
<tr>
<th></th>
<th>Thursday 10/3/16</th>
<th>Thursday verge parkers</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Occupancy</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Min. available spaces</td>
<td>315</td>
<td>315</td>
</tr>
<tr>
<td>% Occupied</td>
<td>23%</td>
<td>19%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Tuesday 10/3/16</th>
</tr>
</thead>
<tbody>
<tr>
<td>Summary</td>
<td>407</td>
</tr>
<tr>
<td>Capacity</td>
<td>92</td>
</tr>
<tr>
<td>12-2 pm</td>
<td>78</td>
</tr>
<tr>
<td>3-5 pm</td>
<td>64</td>
</tr>
<tr>
<td>9-11 am</td>
<td>0</td>
</tr>
<tr>
<td>12-2 pm</td>
<td>21</td>
</tr>
<tr>
<td>3-5 pm</td>
<td>9</td>
</tr>
<tr>
<td>Min. available spaces</td>
<td>315</td>
</tr>
<tr>
<td>% Occupied</td>
<td>23%</td>
</tr>
<tr>
<td>Saturday 12/3/16</td>
<td></td>
</tr>
<tr>
<td>Summary</td>
<td>407</td>
</tr>
<tr>
<td>Capacity</td>
<td>110</td>
</tr>
<tr>
<td>12-2 pm</td>
<td>112</td>
</tr>
<tr>
<td>3-5 pm</td>
<td>67</td>
</tr>
<tr>
<td>9-11 am</td>
<td>6</td>
</tr>
<tr>
<td>12-2 pm</td>
<td>7</td>
</tr>
<tr>
<td>3-5 pm</td>
<td>12</td>
</tr>
<tr>
<td>Min. available spaces</td>
<td>295</td>
</tr>
<tr>
<td>% Occupied</td>
<td>27%</td>
</tr>
</tbody>
</table>

**Figure 4-3:**

### Town centre occupancy

#### Percentage occupancy town centre

**Thursday 10/3/16**

- 9-11 am: 23%
- 12-2 pm: 19%
- 3-5 pm: 16%

**Saturday 12/3/16**

- 9-11 am: 27%
- 12-2 pm: 28%
- 3-5 pm: 16%
Table 4.4: Town centre duration of stay

<table>
<thead>
<tr>
<th>Surveyed on</th>
<th>Total occupancy</th>
<th>Number of vehicles</th>
<th>Occupancy (%)</th>
<th>Number of vehicles</th>
<th>Occupancy (%)</th>
<th>Number of vehicles</th>
<th>Occupancy (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>&lt; 3h</td>
<td>3h to 5h</td>
<td>5h to 7h</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Thursday (10/03/16)</td>
<td>180</td>
<td>140</td>
<td>78%</td>
<td>26</td>
<td>14%</td>
<td>14</td>
<td>8%</td>
</tr>
<tr>
<td>Saturday (12/03/16)</td>
<td>246</td>
<td>213</td>
<td>87%</td>
<td>23</td>
<td>9%</td>
<td>10</td>
<td>4%</td>
</tr>
</tbody>
</table>

Northern precinct

The northern precinct analysis consists of the following streets and off-street parking:

- Bertie Street
- Hugh Street
- Stirling Street West
- Sutherland Close North
- Sutherland Close South
- Swan Street Mid
- Terrace Street
- Waylen Street

Table 4.5: Town centre occupancy

<table>
<thead>
<tr>
<th></th>
<th>Thursday 10/3/16</th>
<th></th>
<th></th>
<th>Thursday verge parkers</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Capacity</td>
<td>9–11 am</td>
<td>12–2 pm</td>
<td>3–5 pm</td>
<td>9–11 am</td>
<td>12–2 pm</td>
</tr>
<tr>
<td>Occupancy</td>
<td>474</td>
<td>86</td>
<td>100</td>
<td>71</td>
<td>13</td>
<td>7</td>
</tr>
<tr>
<td>Min. available spaces</td>
<td>374</td>
<td>388</td>
<td>374</td>
<td>403</td>
<td></td>
<td></td>
</tr>
<tr>
<td>% Occupied</td>
<td>18%</td>
<td>21%</td>
<td>15%</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Saturday 12/3/16</th>
<th></th>
<th></th>
<th>Saturday verge parkers</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Capacity</td>
<td>9–11 am</td>
<td>12–2 pm</td>
<td>3–5 pm</td>
<td>9–11 am</td>
<td>12–2 pm</td>
</tr>
<tr>
<td>Occupancy</td>
<td>474</td>
<td>114</td>
<td>108</td>
<td>102</td>
<td>5</td>
<td>20</td>
</tr>
<tr>
<td>Min. available spaces</td>
<td>360</td>
<td>360</td>
<td>366</td>
<td>372</td>
<td></td>
<td></td>
</tr>
<tr>
<td>% Occupied</td>
<td>24%</td>
<td>23%</td>
<td>22%</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Table 4.6: Town centre duration of stay

<table>
<thead>
<tr>
<th>Surveyed on</th>
<th>Total Occupancy</th>
<th>Number of vehicles</th>
<th>(%)</th>
<th>Number of vehicles</th>
<th>(%)</th>
<th>Number of vehicles</th>
<th>(%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>&lt; 3h</td>
<td></td>
<td>3h to 5h</td>
<td></td>
<td>5h to 7h</td>
<td></td>
</tr>
<tr>
<td>Thursday (10/03/16)</td>
<td>188</td>
<td>138</td>
<td>73%</td>
<td>31</td>
<td>17%</td>
<td>19</td>
<td>10%</td>
</tr>
<tr>
<td>Saturday (12/03/16)</td>
<td>232</td>
<td>167</td>
<td>72%</td>
<td>38</td>
<td>16%</td>
<td>27</td>
<td>12%</td>
</tr>
</tbody>
</table>

4.5 Key Findings from Surveys

- The overall town site did not have a parking supply problem on the two surveyed days as there were always more than 2078 public parking bays available.

- Even in the town centre within 400 m of the major northern and southern retail precincts, there were always more than 360 bays available out of a total of 474 public parking spaces in the Northern precinct, and 295/407 in the Southern precinct.

- At no time during the survey in either the town site or town centre did occupancy exceed 30% of the available parking spaces.

- While it is acknowledged that some of the vacant bays are more than 400 m away from drivers’ destinations and therefore less likely to be used by drivers (especially those seeking short-term parking), better management of the existing parking supply will result in more effective use of the available capacity.

- In the town site 15% of parkers surveyed on Thursday were long-term parkers, generally employees, contractors and commuters. On Saturday 13% were long-term parkers.

- In the town centre between 78% and 87% of parkers occupy their spaces for less than 3 hours.

- Verge parking is popular on weekdays (> 150 cars) and also on weekends (> 100 cars).

It is clear that Guildford has more of a parking management problem than a parking supply problem.

Parking management options are discussed in Section 6.

It is recommended that as parking management decisions in Guildford are to be based on actual surveyed data of parking supply and demand, a comparative survey of the town centre public parking is undertaken every 3 years to assess patterns of occupancy and duration of stay.
5 SWOT ANALYSIS

Parking is a highly subjective topic which gives rise to many issues. A SWOT analysis of current parking and access to the town centre is outlined below.

5.1 Strengths

1. Recent 2016 surveys confirm that generally there is not a shortage of supply of public car parking supply on weekdays, weekends or in the evenings.

2. There is no pay parking in Guildford other than for parkers using the train.

3. The City actively encourages the shared (joint) use of parking facilities by two or more landowners or occupiers in respect of separate buildings or uses, provided that the peak hours of operation of the buildings or uses so sharing are different and do not substantially overlap.

4. Parking in residential streets on verges adjacent to homes must be with the permission of the adjoining resident.

5. Planning matters are generally resolved using the provisions of the City’s Local Planning Scheme, currently LPS 17. Heritage guidelines and other laws affect parking provision and placement of parking.

5.2 Weaknesses

Safety issues for pedestrians, school children, cyclists and employee parkers dominate the community’s concerns about parking and access to the town centre.

1. The function of James Street/East Street as part of National Highway 1 (Great Eastern Highway) and as a gateway to the Swan Valley means that the major roads in the area are dominated by through traffic, with relatively few vehicles stopping in the town centre itself.8

2. Guildford is dissected by major connecting traffic routes including Johnson Street, James Street, Meadow Street and Terrace Road. Running parallel to James Street is Helena Street. Helena Street is predominantly residential. The main roads are subject to very heavy traffic loads during the morning and afternoon peak times and moderately strong traffic patterns continue at other times.

3. The primary school south of James Street requires intense periods of parking in mornings and afternoons on school days when many parents take their children to school.

4. The majority of car parking in Guildford is on private commercial property or State Government owned property in association with the train station. The PTA has a car park on James Street alongside the railway station and another on Victoria Street, intended for its patrons.

5. Since the introduction of paid parking in PTA car parks from July 2014, there has been spill-over on nearby streets as all-day parkers hunt for alternative free parking.

6. Some property owners restrict their on-site parking for use by staff and patrons only. Few have spare capacity for additional public parking.

7 City of Swan Policy POL-TP-129 Vehicle Parking Standards Section 2.6.

7. The City owns no land close to the commercial areas that is suitable for development as additional car parking. Its reserves are encumbered and most verges feature large trees that are valued by the community.

8. The results of surveys as detailed in Section 4 clearly indicate that overall there is not a shortage of supply. The parking problems in Guildford are predominantly management-related rather than supply-related. The available parking needs to be used more effectively.

9. Surveys confirm that the overall parking supply of 2533 spaces in the town site is not being used effectively. Even at times of peak demand, there are always more than 2078 spaces available. The pattern in the town centre is the same with a minimum of 295 out of a supply of 407 always available.

10. There is little real-time, easy-to-access information about available parking supply. Wayfinding signage is scarce and the information on the city’s website provides minimal assistance to drivers or users of other transport modes.

11. There is no single map or reference that shows public parking for the town centre, its location, access-ways and operating hours. Guildford needs to provide consolidated and easy-to-use information on all public parking that is available.

12. Cash-in-lieu has not been applied. The City has not been collecting cash-in-lieu because up to now, there has been no plan for the city to construct public parking in Guildford.

13. The use of cash-in-lieu in the policy is restrictive compared to many other WA councils.

14. Parking is not yet managed as part of an integrated transport strategy for the entire City. Commuters take up premium parking bays in the early part of the day, and the City has little influence over the provision of public transport.

15. There is no single authority within Council with overall responsibility for parking. Four business units all deal with parking issues. The coordination and communication between these departments needs to be improved with clearly defined common objectives integrated within the overall transport strategy.

16. The implementation of parking restrictions has not been based on strategic principles and measured demand, but on forecasts which use a ‘predict and provide’ approach to parking. This is unsustainable in the long-term. A fundamental change to a ‘demand management’ rather than a ‘demand satisfaction’ approach is necessary.

17. The method of monitoring compliance in non-metered areas is inefficient. Chalking tyres is a labour-intensive and inaccurate process. The compliance department is under-resourced and there is a low perception of parking compliance in Guildford. Less than 6 infringements are issued a month.

18. Many common recommendations repeated in previous reports have not been implemented.

5.3 Opportunities

1. The City has many opportunities to improve safety and the availability and convenience of parking.

2. New technology can be utilised to provide better wayfinding guidance, quicker location of vacant bays, and improved compliance with regulations. New technology will
increase the level of service on-street to all stakeholders especially visitors to the town centre.

3. New technology will also significantly increase the management information available to the City, which can develop a better understanding of the patterns of user demand for on-street parking. This information will provide some of the underlying rationale for amending time limits, altering enforcement patrols and eventually introducing pay parking in areas of high demand.

4. Data will also allow the City to respond to complaints about the perceived lack of parking supply with accurate data, rather than anecdotal information.

5. Regular surveys of parking demand every three years will provide comparative results which will assist to determine fee and time restriction amendments and provide the trigger for the expansion of pay parking to manage demand.

6. The City can reduce the costs of enforcement with more efficient monitoring of spaces as the need for tyre chalking will be significantly reduced as in-ground sensors are installed.

7. Simplified signage referring to large zones with common parking regulations will make parking easier to understand and use, and will provide drivers with a greater level of confidence when driving to the town centre.

8. The City can have a greater impact on integrating parking with walking and cycling, especially with the provision of improved end-of-trip facilities.

9. The implementation of many of the common recommendations made in various recent reports will assist in achieving the most consistent objective, which is to maintain the accessibility of the city centre for use by shoppers and visitors.

10. The redundant oval at the western end of Hill Street could provide some relief for peak-event demand. This is just 500 m from the railway station by road or footpath but is within the 100-year floodplain and is part of a regional parks and recreation reserve.

11. Upgraded footpaths and street lighting will ensure safe and convenient pedestrian access to the commercial areas from the parking in some side streets.

12. Expansion of the allowed uses of cash-in-lieu should include the upgrade of infrastructure to improve accessibility to the town centre.

13. On-street parking management can be improved with new signage and bay markings. In the narrow roads between James Street and Helena Street the main outcome will be better management of parking but will not increase parking for commuters. The priority for parking in the narrow streets must stay with local shoppers and visitors and a two or three-hour parking limit should be applied.

14. The provision of safe and well-maintained cycle end-of-trip facilities is essential to improving the mode share. This will apply in particular to the growing popularity of bicycle use by local residents and visitors.

15. It is worthwhile to clearly indicate to all users the walking distance to/from their destination. Most people can walk 250 m in less than 5 minutes and 400 m in less than 10 minutes. (Figure 5-1 indicates a 250 m and 400 m radius from the information centre, and from the intersection of Ethel and Swan Street). This information can assist long-stay parkers to seek alternatives to parking close to their destination.
16. Extension of the free public parking trial at the train station will improve available capacity on weekends, but offering the facility in the evenings will also make better use of parking supply.

17. In the longer-term, the use of the Swan River for water taxis will enhance the attractiveness of Guildford as a destination, providing high quality pedestrian access is integrated with the river.

Figure 5-1: Walking distance for the north and south town centre precincts

5.4 Threats

1. Until safety issues are addressed, especially on James Street, Johnson Street and Meadow Street, the likelihood of a serious collision involving pedestrians, cyclists or school children is heightened.

2. The continued ‘predict and provide’ approach to parking supply is unsustainable in the long-term. More effective use should be made of the existing parking supply, and proactive measures undertaken to achieve mode share targets.

3. Compliance with parking regulations is directly related to the perception of enforcement. Enforcement needs to be supported with additional resources and technology.
4. The current narrow permitted usage of cash-in-lieu funds will deny the city the opportunity to generate revenue from this source.

5. The termination of the PTA free parking trial will put increased pressure on weekend parking demand.

6. Visitors will be discouraged from coming to Guildford if they cannot easily access the town centre by car or bicycles.
6 OPTIONS AND INITIATIVES

This section discusses parking options and initiatives considered appropriate for the City to implement to contribute to sustainable goals. They include regulating the supply of public parking to support parking and transportation objectives including:

- regulating users and limiting the types of vehicles that may use certain parking spaces
- favouring higher value uses – such as for service vehicles, deliveries, customers and access for people with disabilities
- encouraging remote parking by offering benefits to commuters to encourage them to use alternatives to a car
- pedestrian improvements
- reducing free parking spaces to discourage long-stay parking.

It is worthwhile to consider several important issues and strategic approaches in relation to the nature of parking management in a modern urban environment. This section first considers some fundamentals in relation to the ongoing supply and demand for parking. These will form the underlying basis of several recommendations. Based on an examination of these issues, several key objectives are recommended for the town centre.

6.1 Changing Approach to Parking

Historically, the approach by local government to the provision of parking in Australian cities has embodied four key factors:

1. Mandatory minimum parking required.
2. In addition to public parking, parking is to be provided by developers.
3. Cities and town centres are to contain both on-street and off-street parking.
4. Each development (land use) is to provide its own parking.

The traditional approach to parking has been that motorists should nearly always be able to easily find convenient, free parking at every destination. Under this ‘predict and provide’ approach, parking planning is based on the premise that ‘parking problem’ means ‘inadequate supply’, and consequently:

- more parking is better
- every destination should satisfy its own parking needs (minimum ratios)
- car parks should never fill
- parking should always be free or subsidised or incorporated into building costs.

However, in the last fifteen years there has been an increasing trend towards more efficient use of existing transport infrastructure as an alternative to expanding roads and parking facilities, incorporated in a technique known as travel demand management (TDM). TDM emphasises the movement of people and goods, rather than motor vehicles, and gives...
priority to more efficient travel and communication modes (such as walking, cycling, car sharing, public transport and telecommuting), particularly under congested conditions. Environmental concerns and rising fuel costs are other factors prompting a reduction in the reliance on private motor vehicles.

This change in approach to the strategic management of parking has been termed a paradigm shift (a fundamental change) and it has developed and is being increasingly applied in urban areas where sustainability is a major objective.

Under this new ‘demand management’ approach, as distinct from the unsustainable demand satisfaction (predict and provide) approach, parking facilities should be used more efficiently. This means that car parks at a particular destination may often fill (typically more than once a week), provided that alternative options are available nearby, and drivers have information on these options. It does not mean that car parks should have sufficient capacity to cater to once-a-week peak demand. It requires that motorists have a choice between paid parking nearby (user-pay), or free parking a reasonable distance away. It also requires a high standard of walking conditions between parking facilities and the destinations they may serve. Parking planning should therefore include shared and reciprocal parking, parking pricing and regulations, parking user information, and pedestrian improvements.

The challenge for Guildford is to find a balance between adequate parking supply to ensure the vitality of the town centre, and the environmental, social and economic necessity towards more efficient use of transportation infrastructure and travel demand management techniques.

6.2 Sustainable Parking

There is increasing recognition that sustainable town centres require a balanced multi-modal transport system, and the parking system should support the transport system. In particular, parking supply, utilisation, location and price are primary determinants relating to travel behaviour mode choice, and it is worthwhile to set out five parking principles which are to underlie future strategies relating to parking and access in Guildford, namely:

1. Focus on people access not vehicle access.
2. Provide efficient and effective alternatives to car access.
3. Parking policy and strategy must support sustainable transport.
4. The appropriate amount of parking for the town centre will be well below the unconstrained demand for parking.
5. The provision of parking requires a demand management, not a demand satisfaction approach.

6.2.1 People Access

This requires the development of innovative access programs targeted at a more active community.

6.2.2 Provide Alternatives

This requires the promotion of accessibility such as convenient cycle ways and walkways rather than the promotion of parking. The provision of high quality reliable public transport is a fundamental prerequisite for parking policies, which seek to maintain supply within
acceptable limits, reduce congestion and encourage alternative modes of transport. Unfortunately, the City does not control the provision of bus services and public transport.

6.2.3 **Encourage Sustainable Transport**

The integration of commuter parking with public transport is a major opportunity to reduce the dependency on cars coming into a centre. However, the Guildford train station provides facilities for long-term parkers who travel away from the town centre to other destinations. Additionally, there is a need for better bicycle paths and quality end-of-trip bicycle facilities.

6.2.4 **Provide Adequate Parking**

This is not contradictory to the above. It is an acknowledgement that parking must be provided, especially for special groups such as the disabled, or other needs-based groups who must use a car such as parents of school children. However, the available parking supply should be adequate, not excessive. It need not cater to occasional peak demand, or ensure that every driver will always be able to find a bay. Rather, it seeks to eliminate over-supply and unused capacity. Consolidated parking is a means of making better use of available supply. Shared parking does not require each land use to provide its own parking.

6.2.5 **Manage Demand**

Controlling parking demand is the counterbalance to the management of parking supply, but it is far easier, more flexible and less expensive to make better use of existing parking capacity than to create additional parking. Parking management strategies recognise different hierarchies of users. Fees can be used to control demand and to encourage alternative modes. Additionally, improvements to transport and access infrastructure can be funded from additional income derived from parking.

The future strategy for the town centre must therefore contain recommendations not only to curtail the supply of parking, but also to manage parking so as to constrain travel demand.

If the City intends to move towards a more sustainable, multi-modal transport system, there needs to be a commitment by all stakeholders to implementing such a policy to give effect to these principles.

**Recommended**

The parking strategy for Guildford is to be identified and coordinated with an integrated transport strategy for the City. The strategy is to incorporate five sustainable parking principles:

1. Focus on people access not vehicle access.
2. Provide efficient and effective alternatives to car access.
3. Parking policy and strategy must support sustainable transport.
4. The appropriate amount of parking for a centre will be well below the unconstrained demand for parking.
5. The provision of parking requires a demand management, not a demand satisfaction approach.
6.3 Integrated Transport Strategy

It is important to acknowledge that a parking strategy is only one part of an integrated transport strategy which should also incorporate:

- a road safety strategy
- a green travel plan
- a pedestrian strategy
- a bicycle strategy
- local area traffic management plans
- specific parking management plans.

Several of these are already in place in Guildford.

6.4 Free Parking

All public on- and off-street parking in the town centre is non-fee paying other than for train commuters at the PTA car parks. It is fundamental to recognise that there is no such thing as free parking; the costs are simply subsumed elsewhere in the economy. Reserving large quantities of land for parking directly impacts the affordability of property and goods and services, e.g. the cost of providing parking for residential dwellings can add 10–30% to the total costs of development. In many medium to high density residential developments, the costs associated with providing parking facilities can exceed the capital value of the land\textsuperscript{10}. The true cost of parking is hidden in higher development costs, and consequently higher rents and prices to consumers.

Ratepayers of the City fund on-street parking, a large portion of which is used by non-ratepayers. Ratepayers are not only paying for the cost of cleaning, insurance and maintenance of these bays, they are subsidising parking on valuable land that could be generating income or could be put to other uses.

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

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

6.5 Costs of Provision of Parking

It is important to understand some of the costs associated with the provision of parking.

Each on-street kerbside parking space requires 15.6 m\textsuperscript{2} of land and encroaches 2.4 m into the roadway, effectively reducing the roadway by one lane. Off-street parking at-grade, generally requires 28–35 m\textsuperscript{2} per space, which includes an allowance for aisles and vehicle

access. The cost of constructing above-ground deck parking is at least $31,000 per space, plus the cost of land. The cost of below-ground parking is even higher at > $39,000 per space, plus the land.\(^{11}\)

According to recent land sales in the area, the price of commercial land in the town centre is conservatively estimated at $1,200 per m\(^2\). Table 6.1 is an estimate of the cost of provision of different types of parking.

**Table 6.1:** Estimated cost of providing one public parking bay in Guildford town centre

<table>
<thead>
<tr>
<th>Type of parking</th>
<th>Land per bay</th>
<th>Land cost/m(^2) $1,200</th>
<th>Floor area per bay</th>
<th>Construction cost per bay</th>
<th>Est. min cost per bay</th>
</tr>
</thead>
<tbody>
<tr>
<td>Off-street surface (at-grade)</td>
<td>35 m(^2)</td>
<td>$42,000</td>
<td>35 m(^2)</td>
<td>$3,500</td>
<td>$45,500</td>
</tr>
<tr>
<td>Deck – 2 level</td>
<td>16 m(^2)</td>
<td>$19,200</td>
<td>32 m(^2)</td>
<td>$31,000</td>
<td>$50,200</td>
</tr>
<tr>
<td>Deck – 4 level</td>
<td>8 m(^2)</td>
<td>$9,600</td>
<td>32 m(^2)</td>
<td>$34,000</td>
<td>$43,600</td>
</tr>
<tr>
<td>Basement – 2 level</td>
<td>8 m(^2)</td>
<td>$32,000</td>
<td>32 m(^2)</td>
<td>$39,000</td>
<td>$48,600</td>
</tr>
</tbody>
</table>

The provision of free parking (or parking at a very low fee) has an opportunity cost which can be measured in terms of the value of an alternative use of the land. The provision of cheap parking has an opportunity cost to ratepayers as a car park generates far less income per annum than the interest that could be earned on the sale of the land.

### 6.6 Minimum Parking Ratios

Minimum parking ratios are also known as parking minimums, parking standards, or minimum parking requirements. The parking ratios require that new developments provide a certain number of parking bays. This has been largely the approach taken in Table 1 of TP-129\(^{12}\), which is related to the size and nature of the development, where size is generally measured in terms of gross leased area (GLA), or employee. The table contains more than 65 different land use types each with its own car parking ratio.

To a large extent, minimum parking ratios are a historical by-product of plentiful and inexpensive land and a lack of convenient payment technologies. The ratios were seen as a means of shifting responsibility for catering for parking demand onto private developers, thereby ensuring the safe and efficient operation of the local road network\(^{13}\).

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

- **Uses conservative design standards:** Minimum parking ratios are typically designed so as to cater for most peak demands. This considers developments independently of the surrounding urban environment and ignores the potential to share parking resources between adjacent developments, leading to an oversupply of under-utilised parking.

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\(^{12}\) City of Swan Policy POL-TP-129 Vehicle Parking Standards.

\(^{13}\) Strategic Parking Report for Waitakere City Council - McCormick Rankin Cagney - Feb. 2008.
• **Results in fragmented parking supplies:** Because of the requirement for individual developments to cater for their parking demands, urban areas are increasingly dominated by fragmented parking areas (e.g. the businesses on Swan Street).

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

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

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

With the benefit of overseas studies\(^\text{14}\), it is apparent that the unintended negative consequences of minimum parking requirements outweigh their benefits in urban areas. These detrimental impacts have, to a large extent, been self-reinforcing and have created a cycle of motor vehicle dependence. This cycle occurs as a result of the following processes:

- Increased vehicle use creates additional demand for parking.
- This increased demand is then reflected in increased minimum parking ratios.
- These increased parking ratios then result in reduced urban density.
- Reduced urban density then stimulates increased vehicle use, repeating the cycle.

The net effect of free or subsidised parking is reduced urban density, increased sprawl, high rates of vehicle ownership and use, more expensive goods and services, as well as increased congestion, air pollution, and noise. This is an eventual scenario for the town centre if no action is taken. In short, current parking management practices contribute towards a host of expensive and undesirable consequences. This approach is unsustainable, especially with the anticipated growth of development in the City.

### 6.7 Education

Despite every driver being aarker, the broader environmental, economic and social impacts of parking are rarely understood or appreciated by users, unlike their understanding of the effects of vehicle use. The clamour for more parking has been allowed to develop without any communication of its negative effects, and its growing unsustainability. This is true in Guildford where the city’s website relating to parking is very regulation-oriented. An upgraded
and ongoing campaign of communication on the unsustainability of current parking practices is required.

6.8 Street Parking Strategy

A street parking strategy\(^{15}\) intends to provide a framework to promote consistent and transparent decision-making which supports sustainable outcomes.

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

In general, a parking area which is operating efficiently is defined as operating at 45–85% occupancy. Above and below this range indicates that the parking spaces are not effectively being managed as is the case in the town site. Using these thresholds, a parking framework has been developed which promotes a consistent and objective review of street parking areas as illustrated in Figure 6-1.

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\(^{15}\) With acknowledgement to Draft Parking Strategy prepared by Willoughby City Council NSW 2015.

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Figure 6-1: Proposed street parking framework

![Diagram](image.png)

- Unrestricted or time-limited Parking areas
  - >90% spaces occupied: Introduce shorter time limits (e.g. from 2P to 1P) and parking fees
  - >85% spaces occupied: Introduce shorter time limits or Parking fees
  - 45%-85% spaces occupied: Periodic monitoring
  - <45% spaces occupied: Increase time period for parking (e.g. from 2P to 4P)
  - <20% spaces occupied: Remove all parking restrictions

- Existing pay-parking areas
  - Increase parking fee
  - Increase parking fee
  - Periodic monitoring
  - Reduce parking fee
  - Reduce parking fee or consider removing charges
The framework provides a consistent approach to parking management based on parking occupancy thresholds. Each threshold has a different degree or severity for parking controls. For areas that reach more than 85% occupancy, controls promote mode shift to alternative transport thereby promoting sustainability. The framework provides a flexible approach to parking management, enabling parking controls to adapt to the dynamic and transforming nature of communities and places.

It is recommended that the street parking framework is applied to street parking management decisions in Guildford.

6.8.1 Parking Controls

Parking controls should support the viable operation of the adjacent land-use and user needs. The proposed street parking strategy aims to manage and prioritise access to street parking spaces to one group of road users over another. For example, in areas alongside cafés and restaurants, parking limits of three hours during the weekday act to prioritise parking for visitors who will spend time and money at these amenities over long-stay commuters.

6.8.2 Commercial and Mixed-use Areas

Parking controls in streets dominated by retail and commercial frontages will aim to support the viability and efficient operation of local businesses. The parking controls will encourage street parking turnover and encourage use of off-street parking facilities whilst providing sufficient time for visitors to access services and amenities.

For example, in James Street where demand is high for on-street parking by visitors who need more time, daytime controls of two hours would be considered appropriate. Again, changes to the parking time limits can be adapted through monitoring and feedback about parking conditions in reference to the parking policy framework shown in Figure 6-1. Longer-term parking near the retail and commercial areas is supplemented by the availability of off-street parking facilities.

Eventually in the town centre, ticket parking will act to improve parking compliance and reduce reliance on enforcement activity. Prices for street parking in these areas will be set to encourage visitors to firstly, consider parking in dedicated off-street parking spaces, and secondly, to encourage parking spaces to be available at a rate which supports local businesses. Pricing will be the key mechanism that regulates demand and will again be monitored and adjusted in accordance to the framework in Figure 6-1.

6.8.3 Residential Areas

Parking controls in residential areas aim to balance the parking needs of residents with the needs of all households who require street space for visitors, family, care-workers and tradespeople. Parking spaces are to be prioritised for residents in streets near to shops and businesses where there is a high visitor demand for parking. This will be managed through the introduction of a resident permit parking schemes, adapted to local residential arrangements and lifestyles. Ticket parking eventually will be used in high parking demand areas to facilitate effective and efficient enforcement.

Three-hour parking controls are the preferred parking restriction in residential permit parking areas as it allows reasonable access for short visits, without the need for permits. However, local conditions may justify different time limits depending on adjacent land uses and available parking capacity (see Figure 6-1).
Throughout streets where long-stay employee parking occurs, for example on the fringe of the town centre, parking spaces are also to be prioritised to favour residents. However, in recognition that not all employees reside locally, and many arrive from areas where the car is the only economical or viable transport option, 8P ticket parking controls will be implemented. Again, ticket parking will be used to facilitate effective and efficient enforcement in these streets.

Ticket parking will only be installed after community consultation. Where ticket parking is used in residential streets, permit-holders will be exempted. The ticket parking prices in residential areas will be lower than in commercial areas. This will ensure that pricing does not exclude present and future employees from accessing jobs in the town centre. However, pricing will be at a level which will actively encourage those travelling locally, to choose alternative and more sustainable transport methods.
7 CASH-IN-LIEU

Many cities give developers the option to pay a fee in lieu of providing the required number of parking bays imposed by parking ratios. Cash-in-lieu is particularly beneficial when parking needs to be limited.

7.1 Current Status

To date the balance in the City’s Parking Fund is nil. This is partially due to the cash-in-lieu fee not being fully charged on many developments. The City has not been collecting cash-in-lieu because up until now there has been no plan for the City to construct public parking in Guildford.

Using a minimum construction cost of $31,000/bay for a multi-level above-ground car park, the fund will need significant contributions to provide any parking bays assuming that the City does not have to purchase land for additional parking.

7.2 Benefits of Cash-in-lieu

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

1. **Policy flexibility**: Developers gain a new option. If providing all the required parking bays on-site would be difficult or too expensive, developers can pay the cash-in-lieu fee instead of constructing bays.

2. **Shared parking**: Public parking bays built with cash-in-lieu revenue allow shared use among different sites whose peak parking demands may occur at different times (e.g. a bank and a bar), and fewer bays are needed to meet the combined peak parking demands.

3. **Park once**: When all businesses have individual parking bays, they want only their own customers to park there. Once customers have left the premises, the owners want them out of the parking bays as soon as possible, requiring the customers to drive to another parking area in order to make a second stop in a nearby business. Shared public parking allows drivers to park once and visit multiple sites on foot, thereby reducing vehicle traffic and increasing pedestrian traffic.

4. **Historic preservation**: Parking requirements can discourage adaptive reuse of heritage buildings if the additional parking bays required for a new use are difficult to provide on-site. By removing the requirement for on-site parking bays, cash-in-lieu fees make it easier to restore heritage buildings.

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

6. **Fewer variances**: Where providing the required parking is difficult, developers often request variances to reduce the parking requirements for their sites. These variances weaken the general plan, require administration, and can create unearned economic benefits.

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windfalls for some developers but not others. By making fewer variances necessary, cash-in-lieu fees allow cities to create a level playing field for all developers.

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

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

7.3 **Concerns**

It is recognised that there are drawbacks to cash-in-lieu. However, developers’ concerns as well as potential solutions are summarised below.

1 **Lack of on-site parking:** Parking is a valuable asset for any development, and a lack of on-site, owner-controlled parking can reduce a development’s ability to attract tenants and customers and thereby reduce the value of the investment. This may be a valid objection, but its solution is simple: developers can provide the required parking rather than pay the cash-in-lieu fee.

2 **High fees:** Cities may not build and operate parking facilities as cheaply as the private sector. Cities may pay extra to improve the architectural design of parking structures and these higher costs may increase the cash-in-lieu fees. Although this might happen, most cities set their cash-in-lieu fees lower than the full cost of providing a public parking space.

3 **No guarantees:** Cities use the cash-in-lieu fee revenue to finance public parking, but they do not guarantee when or where the bays will be provided. To address this concern, some cities build the public parking first and accept cash-in-lieu fees only for the number of public bays already provided. The cities then use the cash-in-lieu fees to retire the debt incurred to finance the bays. Other cities such as the City of Vincent, are obliged to refund the in-lieu fees if they have not built the public parking within a certain time. Cities can also allow developers to defer payment of the cash-in-lieu fees until the public parking bays are built.

9 **Fewer parking bays:** Cities use cash-in-lieu fees to finance public parking bays, but they do not commit to provide one public space for every private space not provided. Often they provide fewer. Some provide two public parking bays for each three cash-in-lieu fees paid. When this happens, the cash-in-lieu programs reduce the total number of parking bays. A smaller parking supply may lead to fewer customers and put businesses at a competitive disadvantage. There are two responses to this last concern. First, the more efficient use of shared public parking enables a smaller parking supply to meet the combined peak parking demand. Instead of many individual
parking areas being underused much of the time, the city has fewer but larger parking facilities used throughout the day. Second, if the city collects cash-in-lieu fees to finance public parking bays instead of granting variances to reduce parking requirements, the cash-in-lieu policy actually increases the parking supply.

7.4 Cash Payment in Lieu of Providing Parking Spaces

The purpose of providing for cash payment in lieu of providing parking spaces is to facilitate co-ordinated and consolidated development through the provision of parking reserves.

Based on a comparison of many cash-in-lieu policies in WA the current provisions in the City of Swan Parking Policy (Section 2.12) are restrictive and limited. These provisions are set out below.

The Council may accept or require a cash payment in lieu of the provision of paved car parking spaces, subject to the following requirements:

(a) except as otherwise provided a cash-in-lieu payment shall be not less than the estimated cost to the owner of providing and constructing the parking spaces required by this policy, plus the value, as estimated by a licensed valuer appointed by the Council, of that area of land which would have been occupied by the parking spaces and manoeuvring area;

(b) before the Council agrees to accept a cash payment in lieu of the provision of parking spaces, the Council must either have provided a public parking station nearby, or must have firm proposals for providing a public station nearby within a period of not more than five years from the time of agreeing to accept the cash payment;

(c) payments made under this policy shall be paid into a special fund to be used to provide public parking stations in the close proximity of the subject land;

(d) all costs incurred in obtaining the valuation shall be borne by the applicant for approval to commence development; and

(e) where in the opinion of the Council, there is likely to be a sharing of public parking facilities by uses with significantly different peak demand times, the cash-in-lieu contribution in respect of the requisite number of parking spaces may be reduced by up to 50 per cent of that otherwise applicable.

7.5 Key Findings

1 The Town clearly requires a revenue stream to assist in funding the construction of surface and eventually a deck parking facility.

2 The cost of construction requires that the funds available from cash-in-lieu are significantly increased over the next 10 years.

3 The proposed current fees for cash-in-lieu are reasonable and equitable in that they are less than the cost of construction and land and therefore provide a developer with a significant discount.

4 Cash-in-lieu funding is also necessary to improve parking information and signage which will make it easier for drivers to access the town centre.

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18 City of Swan POLICY POL-TP-129 Vehicle Parking Standards Section 2.12.
5 Whilst the recommendation in Section 7.6 does not place a time limit on the expenditure of cash-in-lieu, the City should plan for spending the funds over time, otherwise:
   — The cash-in-lieu provision may get out of step with the scope and cost of providing parking services and facilities noted above.
   — There is a risk that a Development Assessment Panel may make an adverse finding against the imposition of cash-in-lieu if it believes the City cannot demonstrate it requires the funds.

Planning approval applicants have an expectation that the money provided by means of cash-in-lieu will be spent on parking within the area and within a reasonable timeframe. Other owners in the area also have an expectation that the development will not exacerbate an existing parking problem, or simply give developers a windfall reduction in the parking requirement at the expense of existing businesses in the area.

7.6 Recommendation

It is essential that the City has more flexible options to allocate cash-in-lieu funds received. It is recommended that the City delete Section 2.12b of the Parking Policy and considers replacing it with the following or an equivalent that allows for the alternative use of cash in lieu funds for provision of infrastructure to improve accessibility19:

The Council may use the money from the special fund for any purpose connected with the creation, management of or improvement to public parking facilities, including but not limited to:

(i) the land and construction costs of public parking stations provided by Council or within a joint venture;
(ii) the cost of creating additional parking bays within road reserves;
(iii) the capital costs of new local public transportation infrastructure, including cycling and pedestrian facilities, shuttle bus services or real-time transit information, that are situated upon land under the control of the local government;
(iv) parking information systems;
(v) security lights;
(vi) improved pathways to access parking areas;
(vii) upgrading the design of on-street parking facilities;
(viii) maintaining any Council-owned parking facility or related infrastructure; and
(ix) the reasonable costs to the Council of administering this provision including professional fees and borrowing costs.

(c) Any parking bays provided as a result of cash-in-lieu contributions shall remain available to the public at large although the Council may charge a fee for the use of such parking to achieve the proper management of parking in the locality, the maintenance of public parking bays under its control and for the general improvement of parking and local public transport infrastructure.

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19 Based on provisions currently being considered by the Department of Planning and the WA Planning Commission for the Town of Cambridge.
(f) Council may pre-fund the acquisition of land or the construction costs of public parking facilities and may use funds from the special parking cash-in-lieu fund to repay the costs of such pre-funding including interest on borrowings.

(g) Council may require that a proportion, or all, of the parking bays required in any approval to commence development be provided as cash-in-lieu or may set a maximum proportion of parking bays for which applicants may provide cash in lieu.

(h) The cash-in-lieu payment required shall be made in two equal instalments, the first immediately prior to commencement of development work and the balance prior to the commencement of the use. The subject of the development and before an application is made for an Occupancy Permit.

(i) In the case of an application involving a change of use but not development works, the cash-in-lieu payment shall be made in full prior to the commencement of the use, and before an application is made for an Occupancy Permit.

(j) Instead of accepting a cash-in-lieu payment, the Council may accept as a partial or full substitute the transfer in fee simple of a parcel of land to the equivalent value.

(k) In the case of a land contribution pursuant to subclause (h) the land shall be transferred to the Council prior to the commencement of development or the approval of a strata plan or survey strata plan for the property, whichever occurs first.
8 IMPROVED PARKING MANAGEMENT

Successful parking management increases the availability of parking for users who need or value it most in a given situation. The intended outcome of a parking management program is a balanced parking system that efficiently prioritises and matches user profiles to available supply. The anticipated result is that as many people as possible have the opportunity to reach their intended destinations and pursue their activities as planned. While this may not mean everyone is able to park directly in front of their destination, the goal is to provide and access parking options that are within a reasonable distance. Some areas may not require significant levels of management, while other areas with high demand or limited supply may require more intensive management to support needs that vary by days (such as for the weekend markets) or times of day (such as in the evenings for the restaurants and hotels).

In order to significantly improve the current management of parking and improve access in Guildford, several options and recommendations have been considered to address the key issues.

8.1 Make More Effective Use of Existing Parking Supply

The City is to explore opportunities to maximise the use of existing supply, including the application of technology to provide information, shared parking arrangements, the use of loading-zones outside of business hours, and the promotion by the City of all off-street public parking facilities including those operated by the PTA. When these are available to the general public, the focus is to be on maximising the use of all existing parking resources to the greatest extent possible.

Several additional opportunities exist to maximise parking. There may be locations where parking can be reconfigured or re-linemarked to create new spaces, e.g. around Stirling Reserve). City staff should assess areas where uses have changed to add supply. For example, loading zones that are no longer required can be reclaimed as on-street inventory following an evaluation of needs.

8.2 Improve Parking and Access Data and Information

The location and public availability of parking facilities is not always clear to drivers. Even if a facility is open to the public, the rules of that location (such as hours of operation) are often difficult to determine. Confusion or lack of information often results in a driver defaulting to on-street parking. The provision of better information about on- and off-street parking availability combined with signage indicating pedestrian walking times to major destinations can increase utilisation of all available facilities.

This involves the provision of information on parking availability using signage, brochures, maps, websites and apps (iPhone applications). The current parking information and the ‘do not’ negative messages available on the City’s website can be substantially improved and made easier to access and print for motorists.

While there is good information provided in the Guildford Heritage Walking Map, there is no such similar information available for drivers or cyclists.

Good examples are the City of Subiaco map, the Fremantle wayfinding sign and others as shown in Figure 8-1 to Figure 8-3 below.
Figure 8-1: Subiaco’s parking and access map

Figure 8-2: Guildford’s heritage walking trails
It is recommended that the City upgrades and improves parking and access information to Guildford as follows:

(a) The City provides practical and clear information about public parking availability on all major roads leading into the town centre.

(b) The City should create an integrated parking website that serves as a primary source of information for all parking-related matters.

(c) The current website information on parking in the city is improved to include detailed information about all public parking facilities, access, hours of operation, and time restrictions.

(d) A static and web-based wayfinding and parking signage package is to be developed which assists drivers to know where to look for parking and obtain the information quickly and without fuss.

(e) At major parking locations, signage which is easy to comprehend is to indicate walking distances to major destinations.

The system should be applied uniformly across the town centre equally to City and privately owned PTA and public car parking facilities.

8.3 Shared Parking

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

The City already encourages shared parking via its Parking Policy (refer to Section 5.1).

8.3.1 Train Station Parking

The clearest example of the potential for shared parking is the PTA parking at the Guildford train station. The PTA provides two pay parking car parks exclusively for train commuters...
which are subject to a $2/day fee payable only via a Transperth Smartcard. Payment cannot be made by coin or credit card which precludes the general public who are not travelling by train. The car parks are generally filled by train commuters during the week, but are largely vacant after 5 pm and on weekends and public holidays.

The local MLC\textsuperscript{20} negotiated with the Minister of Transport and with Transperth for a six-month trial of free public parking on weekends from December 2015 to May 2016. The success or otherwise of the trial is to be assessed by the PTA monitoring occupancy via CCTV footage.

While this trial is a good example of the benefits of shared parking, it has not been adequately promoted by the City to weekend drivers and usage by the public has been low. Currently the public, especially visitors, are largely unaware of this conveniently located option. The City needs to inform potential users.

Additionally, patrons of the cafes, bars and restaurants in Guildford have raised the shortage of convenient, well-lit parking in the evening. We have observed that the majority of spaces in the PTA car parks are vacant after 6 pm. It would greatly assist these businesses if the PTA expanded the free public parking trial to include the period from 6 pm to midnight, Monday to Friday as well as on weekends. Not only would this encourage patrons of the Guildford precinct, but it would also be an incentive for train commuters, who work at night and leave for work after 6 pm, to park in the PTA car park rather than seek free parking in the residential streets near the station.

The current signage at the train station (Figure 8-4) does not highlight the free parking option and the City does not promote it anywhere.

\footnote{The Hon Alyssa Hayden MLC, Member of the Legislative Council for the East Metropolitan Region, Minister for Health and Tourism.}
Recommended

The City agree with the PTA to confirm the success of the trial and the permanent availability of free public parking on weekends and allow the City to promote this with additional signage.

Additionally, the City is to negotiate with the PTA to permit free public parking after 6pm until midnight on weekdays.

8.4 James Street Shopping/Cafe Strip Parking

Since the reopening of the Guildford Hotel there has been an increase in demand for parking around the intersection of Johnson Street and James Street. Figure 8-5 shows many vehicles parked on the verge of Johnson Street, with some cars partially blocking the footpath. Parking on the verge creates a safety concern for cars entering the 4 lane wide Johnson Street. The line of sight along Johnson Street is impeded by the parked cars, creating safety issues for cars entering Johnson Street from the Hotel car park.
Recommended

The City install “No Parking on Road or Verge” on both sides of Johnson Street and regular enforcement be conducted especially at times of peak demand. It is also recommended the City provides information about parking options near the Guildford Hotel through the City’s web site. The City should also encourage the Guildford Hotel to provide information about parking to their patrons within the Hotel and on their website.

Ethel Street is located in the middle of the James Street shopping/cafe strip and provides convenient parking for visitors to Guildford, it experiences a high level of use. This can be seen in Figure 8-6.
To ensure the parking provided on Ethel Street is used efficiently and effectively, all restrictions and bay delineations need to be clearly marked and easily understood. Current signage is difficult to interpret and creates confusion for drivers. Figure 8-7 shows some of the current convoluted signage on Ethel Street.

**Figure 8-7:** Parking restrictions signage

**Recommended**

The City improve parking signage and line markings for all parking bays along Ethel Street and regular enforcement be conducted especially at times of peak demand.

### 8.5 Wayfinding

Parking wayfinding refers to a system of signs, directories and other design features which provide an early warning navigational aid. Most of the City’s public and private parking areas are advertised by an inconsistent array of signs and P logos, which are usually located within...
5 m of the car park entrance. They do not assist drivers coming into Guildford to plan their route well in advance so as to reduce their search time, and therefore reduce traffic congestion. There is a presumption that ‘drivers know where the parking is’.

Drivers want to know where to look for wayfinding information when they need it, understand the way the information is communicated, and obtain the information quickly and without fuss.

A coherent wayfinding system is a cost-effective means to reduce searching time for bays and unnecessary circulation of cars. Predictable, consistent and authoritative public information is the key to building confidence as illustrated in Figure 8-8 on South Terrace in Fremantle.

**Recommended**

The City introduce a single, consistent and distinct system to guide drivers to all car parks.

![Parking wayfinding in Fremantle](image)

The Guildford Stirling Square Market is held on a Sunday once a month between 9am and 3pm except in January. Parking on Stirling Street and around Stirling Square is in high demand during market days. To better manage parking on market days temporary wayfinding signs should be erected.

**Recommended**

Temporary wayfinding signs directing drivers to alternative parking on Victoria Street be erected at the Meadow Street /Stirling Street intersection and Meadow Street /Swan Street intersection on market days.

### 8.6 Encourage Use of Remote Parking

This involves encouraging long-term parkers to use off-site or fringe parking facilities through regulation and pricing, for example, on Helena Street, Swan Street west and Market Street. It can free up quantities of parking for short-term visitors to the town centre.
Recommended

The City investigate the establishment of additional parking spaces on the south side of Helena Street adjacent to the Kings Meadow polo ground.

8.7 Parking Control and Management Plan

This is a tool for developers to commit to, prior to establishing a new facility with a parking requirement. It is a worthwhile document for the City, for developers, their tenants, and for other parties as it sets out in detail, how parking for a proposed development or change of use will be controlled and managed after establishment. It has been implemented in several cities (such as Stirling and Cambridge\textsuperscript{21}) and provides clarification for all parties affected by parking at a site. A proposed application form is included in Appendix C.

It places the onus on the developer to give consideration to the proposed practical plans to manage and control the parking on site in order to comply with the planning conditions. Approval of the plan will form part of the development approval for the project. Ongoing adherence to the plan will be monitored and enforced.

Discussion of each submitted parking control and management plan (PCMP) needs to occur together with compliance services, who will be responsible for monitoring compliance with the plan after construction.

Recommended

The City require a parking control and management plan (PCMP) to be provided by developers, together with their building application as part of the development assessment process for all developments requiring more than five spaces.

Reference to the PCMP is to be included in the parking policy, together with penalties for non-compliance.

8.8 Compliance

Parking restrictions throughout the City are enforced by a team equivalent to 2 FTE officers supported by 12 community safety advocates who respond to parking issues when these are reported. These staff are responsible for inspecting more than 2200 parking bays in the Midland city centre including approximately 1550 bays on private property. This department issued 7052 fines in the 2014/15 year with infringement income of $349,000. However, for the entire year, only 66 infringements (less than 1%), were issued in Guildford.

To ensure parking restrictions are adhered to and parking supply is managed effectively, enforcement needs to be conducted regularly.

At most of the on-street parking in the town centre, the current process of monitoring compliance is highly inefficient. The system whereby a parking enforcement officer must patrol an area twice in order to firstly chalk-mark a tyre, and then return one, two or four hours later to check the tyre, is an expensive use of labour resources. The efforts of the officers are often thwarted by technology such as email and SMS, which alert long-term users of short-term bays to shift their vehicles. This is common practice by employees in the town centre.

\textsuperscript{21} Town of Cambridge, Parking Management Plan Information Sheet, 8 February 2010.
Increased compliance is not a reason for implementation of parking meters, but in-ground sensors or parking meters will allow an enforcement officer to patrol once and to easily determine whether a vehicle has parked in excess of any restrictions.

The benefit of more efficient and simplified parking enforcement is the creation of additional capacity and improvement in the churn (turnover) of on-street parking bays.

It is also worthwhile to consider a reciprocal monitoring arrangement, whereby in exchange for council enforcement of private parking facilities, the bays are permitted to be used by any driver outside of business hours.

**Recommended**

The City increase parking enforcement around high demand parking areas to help improve parking compliance.

It is also recommended that technology is used in peak parking areas in the town centre to ensure a higher level of compliance with parking regulations.

**8.9 Benefits of Better Managed Parking**

Better managed parking will have a quadruple bottom-line benefit for all stakeholders in Guildford. Implementation of the recommendations will impact the following areas:

**Economic** – Support increased development in the town centre with more efficient use of land for both parking and other land uses. Development opportunities will increase and become more cost-effective when parking costs can be minimised and congestion is managed.

**Social** – Support a shift to higher density, which allows more housing and jobs that are easily accessible but may also reduce the amount of available land, because at-grade parking may be converted to building, which may or may not incorporate parking.

**Cultural** – More effective monitoring of compliance will create more turnover of spaces in high activity areas and free up more bays for the correct users. This will attract more activity and investment to higher density areas.

**Environmental** – Until cars become electric and do not emit pollution, emissions would be less than if an increased parking supply was provided. This will attract more vehicles to the city centre.

**8.10 Best Practice Residential Parking Permit Schemes**

As parking demand in the town centre grows, a residential parking permit scheme will need to be introduced. Very few permit parking schemes are identical. Best practice can be achieved by collating the key findings and procedures implemented at other councils. The key findings include:

(a) Permit information documents provide accessible and easy-to-understand information to residents and other interested permit applicants. The most accessible documents have a user-friendly layout and are available in PDF format for download on the Council’s website.

(b) Some councils include permit terms and conditions in permit application forms. This is an important inclusion as the information relevant to the allocation, use and
management of permits is readily accessible to the applicant, who may otherwise be unaware of the information.

(c) The holder of the permit is never guaranteed a parking space and this is to be emphasised in all permit documents.

(d) A fee is usually charged for permits to recoup the costs of administering, operating and monitoring the permit system and maintaining the signage and to discourage unnecessary applications.

(e) A maximum of two residential permits are usually issued to the occupier of a residential property and the number of permits issued is reduced by one permit per off-street parking space. It is not clear whether a permit concession is granted if an off-street space has been converted to another use such as a shed or additional accommodation.

(f) Permits are not issued for occupants of high-rise buildings, new multi-unit developments or for dwellings located in the town centre.

(g) Residential permits include the vehicle registration number. This assists with monitoring compliance.

(h) Permits are assigned to streets or specific precincts via a coding system to protect the residents’ privacy.

(i) Strict penalties apply for the misuse of permits including fines or the permit being revoked. The risk of cancellation/revocation of the permit is considered to be the most effective sanction to ensure compliance22.

(j) Administration costs are significantly reduced where application of permits is on-line.

(k) Labour costs are reduced with technology which provides immediate wireless verification of a valid permit, the vehicle registration it is linked to and the location where it is parked.
9 RECOMMENDATIONS

Many recommendations have been made in this report and in previous reports aimed at improving the parking and access for Guildford. They are all listed below in Table 9.1 under five major categories.

10 safety
11 parking management
12 cash-in-lieu
13 alternative modes of transport particularly cycling and walking
14 compliance.

Implementation of the recommendations requires a commitment to a strategic focus to improve parking and access to Guildford in the next 10 years. The recommendations in previous reports to the City and in this report have been listed below and prioritised into three timeframes:

- **U** = urgent, within 2 years by end 2018
- **N** = necessary within 5 years by end 2021
- **D** = desirable within 10 years by 2026.

The right-hand column provides a reference to the section in this report.

Table 9.1: Summary of prioritised recommendations

<table>
<thead>
<tr>
<th>Category</th>
<th>Source Report</th>
<th>Recommendation</th>
<th>Priority</th>
<th>Reference section</th>
</tr>
</thead>
<tbody>
<tr>
<td>Safety</td>
<td>Draft Guildford parking review</td>
<td>a) Upgrade footpaths to enable safe and convenient pedestrian access to the commercial areas from defined parking.</td>
<td>U</td>
<td>Section 2.1</td>
</tr>
<tr>
<td></td>
<td>Improving walkability</td>
<td>a) The 60 km/h sign on James Street immediately west of Johnson Street sign be replaced with a 50 km/h sign.</td>
<td>N</td>
<td>Section 2.3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>b) Zebra crossings be installed on all exits/entrances of the two roundabouts at Swan Street/West Swan Road/Meadow Street and Swan Street/Terrace Road.</td>
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<td></td>
<td>c) Zebra crossing be installed near the station entrance at the site of the existing ‘unassisted’ crossing.</td>
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<td></td>
<td></td>
<td>d) All footpaths are upgraded to high standards.</td>
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<td></td>
<td></td>
<td>e) Install tactile plates at all road crossings in Guildford.</td>
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<tr>
<td>Guildford LATM study</td>
<td></td>
<td>c) Consult with Main Roads WA to review the types of heavy vehicles using arterial roads through Guildford and determine remedial action if necessary.</td>
<td>D</td>
<td>Section 2.5</td>
</tr>
<tr>
<td></td>
<td></td>
<td>d) Implement all LATM measures accompanied by a lighting scheme compliant with Australian Standards.</td>
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<tr>
<td>Category</td>
<td>Source Report</td>
<td>Recommendation</td>
<td>Priority</td>
<td>Reference section</td>
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</tr>
<tr>
<td>Transport strategy</td>
<td></td>
<td>a) Improve pedestrian crossing facilities at Meadow Street/Terrace Road.</td>
<td>U</td>
<td>Section 2.6</td>
</tr>
<tr>
<td></td>
<td></td>
<td>b) Signalised pedestrian crossing at Guildford Station.</td>
<td>N</td>
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<tr>
<td></td>
<td></td>
<td>c) Improve alternative routes including Lloyd Street and Great Eastern Highway Bypass.</td>
<td>D</td>
<td></td>
</tr>
<tr>
<td>Luxmoore strategy</td>
<td>A formal Road Safety Audit is undertaken in the vicinity of the Johnson Street/Helena Street intersection and on James Street from Meadow Street to Ethel Street.</td>
<td>U</td>
<td>Section 3.2</td>
<td></td>
</tr>
<tr>
<td>Luxmoore strategy</td>
<td>The crash statistics be examined for East and Water streets to determine whether it meets MRWA criteria for blackspot funding or warrants a roundabout.</td>
<td>N</td>
<td>Section 3.2 Table 3.1</td>
<td></td>
</tr>
<tr>
<td>Luxmoore strategy</td>
<td>A right-turn arrow is needed at James Street/Meadow Street intersection.</td>
<td>N</td>
<td>Section 3.2 Table 3.1</td>
<td></td>
</tr>
<tr>
<td>Luxmoore strategy</td>
<td>The speed hump at the primary school pedestrian crossing be converted to a raised zebra crossing or be removed.</td>
<td>U</td>
<td>Section 3.2 Table 3.1</td>
<td></td>
</tr>
<tr>
<td>Luxmoore strategy</td>
<td>The controlled crossing be moved to the north side of Helena Street and incorporate a pedestrian refuge. This would reduce the distance people would have to walk and encourage the use of the designated crossing.</td>
<td>N</td>
<td>Section 3.2 Table 3.1</td>
<td></td>
</tr>
<tr>
<td>Luxmoore strategy</td>
<td>Signalised pedestrian crossing be provided across Meadow Street at the James Street intersection.</td>
<td>N</td>
<td>Section 3.2 Table 3.1</td>
<td></td>
</tr>
<tr>
<td>Parking management</td>
<td>Draft Guildford parking review</td>
<td>Designate all on-street parking directly adjoining the commercial premises as short-term parking and much later, paid parking. No parking on the south side of Victoria Street.</td>
<td>N</td>
<td>Section 2.1</td>
</tr>
<tr>
<td></td>
<td>e) Implement a parking strategy for Guildford, as part of the Swan Parking Policy.</td>
<td>U</td>
<td>Section 2.6</td>
<td></td>
</tr>
<tr>
<td>Luxmoore strategy</td>
<td>As parking management decisions in Guildford are to be based on actual surveyed data of parking supply and demand, a comparative survey of the town centre public parking is undertaken every 3 years to assess patterns of occupancy and duration of stay.</td>
<td>N</td>
<td>Section 4.5</td>
<td></td>
</tr>
<tr>
<td>Luxmoore strategy</td>
<td>The parking strategy for Guildford is to be identified and coordinated as part of an integrated transport strategy for the City. The strategy is to incorporate five sustainable parking principles: 1. Focus on people access not vehicle access. 2. Provide efficient and effective alternatives to car access. 3. Parking policy and strategy must support sustainable transport. 4. The appropriate amount of parking for a centre will be well below the unconstrained demand for parking. 5. The provision of parking requires a demand management, not a demand satisfaction approach.</td>
<td>U</td>
<td>Section 6.2.5</td>
<td></td>
</tr>
<tr>
<td>Category</td>
<td>Source Report</td>
<td>Recommendation</td>
<td>Priority</td>
<td>Reference section</td>
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</tr>
<tr>
<td>Luxmoore strategy</td>
<td>The street parking framework is applied to street parking management decisions in Guildford.</td>
<td>N</td>
<td>Section 6.8</td>
<td></td>
</tr>
<tr>
<td>Luxmoore strategy</td>
<td>The City upgrade and improve parking and access information to Guildford: (a) The City provide practical and clear information about public parking availability on all major roads leading into the town centre. (b) The City should create an integrated parking website that serves as a primary source of information for all parking-related matters. (c) The current website information on parking in the City is improved to include detailed information about all public parking facilities, access, hours of operation, and time restrictions. (d) A static and web-based wayfinding and parking signage package is to be developed which assists drivers to know where to look for parking and obtain the information quickly and without fuss. (e) At major parking locations, signage which is easy to comprehend is to indicate walking distances to major destinations.</td>
<td>N</td>
<td>Section 8.2</td>
<td></td>
</tr>
<tr>
<td>Luxmoore strategy</td>
<td>The City agree with the PTA to confirm the success of the trial and the permanent availability of free public parking on weekends and allow the City to promote this with additional signage. Additionally the City is to negotiate with the PTA to permit free public parking after 6pm until midnight on weekdays.</td>
<td>U</td>
<td>Section 8.3</td>
<td></td>
</tr>
<tr>
<td>Luxmoore strategy</td>
<td>The City install “No Parking on Road or Verge” on both sides of Johnson Street and regular enforcement be conducted especially at times of peak demand. It is also recommended the City provides information about parking options near the Guildford Hotel through the City’s web site. The City should also encourage the Guildford Hotel to provide information about parking to their patrons within the Hotel and on their website.</td>
<td>U</td>
<td>Section 8.4</td>
<td></td>
</tr>
<tr>
<td>Luxmoore strategy</td>
<td>The City improve parking signage and line markings for all parking bays along Ethel Street and regular enforcement be conducted especially at times of peak demand.</td>
<td>U</td>
<td>Section 8.4</td>
<td></td>
</tr>
<tr>
<td>Luxmoore strategy</td>
<td>The City introduce a single, consistent and distinct system to guide drivers to all car parks.</td>
<td>N</td>
<td>Section 8.5</td>
<td></td>
</tr>
<tr>
<td>Luxmoore strategy</td>
<td>Temporary wayfinding signs directing drivers to alternative parking on Victoria Street be erected at the Meadow Street /Stirling Street intersection and Meadow Street /Swan Street intersection on market days.</td>
<td>N</td>
<td>Section 8.5</td>
<td></td>
</tr>
<tr>
<td>Luxmoore strategy</td>
<td>The City investigate the establishment of additional parking spaces on the south side of Helena Street adjacent to the Kings Meadow polo ground.</td>
<td>D</td>
<td>Section 8.6</td>
<td></td>
</tr>
<tr>
<td>Category</td>
<td>Source Report</td>
<td>Recommendation</td>
<td>Priority</td>
<td>Reference section</td>
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<tr>
<td>Alternative modes of transport</td>
<td>Midland access and parking strategy</td>
<td>c) Re-allocate some on-street parking for other priorities such as loading bays, ACROD bays and cycle ways, to enable connection of cycle commuting into and through Midland consistent with a separate cycle plan.</td>
<td>N</td>
<td>Section 2.2</td>
</tr>
<tr>
<td></td>
<td>Improving walkability</td>
<td>i) Work with PTA to get the bike lockers repaired and marketed to cyclists wishing to use train services.</td>
<td>N</td>
<td>Section 2.3</td>
</tr>
<tr>
<td>Cash-in-lieu</td>
<td>Draft Guildford parking review</td>
<td>d) Accept cash-in-lieu from developments in the defined commercial area of Guildford for the purposes of building/maintaining additional parking capacity in or within 400 m that area.</td>
<td>N</td>
<td>Section 2.1</td>
</tr>
<tr>
<td></td>
<td>Midland access and parking strategy</td>
<td>a) Refresh the cash-in-lieu policy within a local planning policy such that it reflects the present needs for at-grade parking development and the future need for multi-deck parking development, including phasing in of appropriate mechanisms to ensure an adequate cash flow to develop such structures.</td>
<td>U</td>
<td>Section 2.2</td>
</tr>
<tr>
<td></td>
<td>Luxmoore strategy</td>
<td>City delete Section 2.12b of the Parking Policy and considers replacing it with the following or an equivalent that allows for the alternative use of cash in lieu founds for provision of infrastructure to improve accessibility: The Council may use the money from the special fund for any purpose connected with the creation, management of or improvement to public parking facilities, including but not limited to: (i) the land and construction costs of public parking stations provided by Council or within a joint venture; (ii) the cost of creating additional parking bays within road reserves; (iii) the capital costs of new local public transportation infrastructure, including cycling and pedestrian facilities, shuttle bus services or real-time transit information, that are situated upon land under the control of the local government; (iv) parking information systems; (v) security lights; (vi) improved pathways to access parking areas; (vii) upgrading the design of on-street parking facilities; (viii) maintaining any Council-owned parking facility or related infrastructure; and (ix) the reasonable costs to the Council of administering this provision including professional fees and borrowing costs. (c) Any parking bays provided as a result of cash-in-lieu contributions shall remain available to the public at large</td>
<td>U</td>
<td>Section 7.6</td>
</tr>
<tr>
<td>Category</td>
<td>Source Report</td>
<td>Recommendation</td>
<td>Priority</td>
<td>Reference section</td>
</tr>
<tr>
<td>----------</td>
<td>---------------</td>
<td>----------------</td>
<td>----------</td>
<td>-------------------</td>
</tr>
<tr>
<td></td>
<td></td>
<td>although the Council may charge a fee for the use of such parking to achieve the proper management of parking in the locality, the maintenance of public parking bays under its control and for the general improvement of parking and local public transport infrastructure. (d) Council may pre-fund the acquisition of land or the construction costs of public parking facilities and may use funds from the special parking cash-in-lieu fund to repay the costs of such pre-funding including interest on borrowings. (e) Council may require that a proportion, or all, of the parking bays required in any approval to commence development be provided as cash-in-lieu or may set a maximum proportion of parking bays for which applicants may provide cash-in-lieu. (f) The cash-in-lieu payment required shall be made in two equal instalments, the first immediately prior to commencement of development work and the balance prior to the commencement of the use the subject of the development and before an application is made for an Occupancy Permit. (g) In the case of an application involving a change of use but not development works, the cash-in-lieu payment shall be made in full prior to the commencement of the use, and before an application is made for an Occupancy Permit. (h) Instead of accepting a cash-in-lieu payment, the Council may accept as a partial or full substitute the transfer in fee simple of a parcel of land to the equivalent value. (i) In the case of a land contribution pursuant to subclause (h) the land shall be transferred to the Council prior to the commencement of development or the approval of a strata plan or survey strata plan for the property, whichever occurs first.</td>
<td>U</td>
<td>Section 8.7</td>
</tr>
<tr>
<td>Compliance</td>
<td>Midland access and parking strategy</td>
<td>b) Increase the compliance resource in Guildford.</td>
<td>N</td>
<td>Section 2.2</td>
</tr>
<tr>
<td>Luxmoore strategy</td>
<td></td>
<td>The City require a parking control and management plan (PCMP) to be provided by developers, together with their building application as part of the development assessment process for all developments requiring more than five spaces. Reference to the PCMP is to be included in the parking policy, together with penalties for non-compliance.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Luxmoore strategy</td>
<td></td>
<td>Technology is used in peak parking areas in the town centre to ensure a higher level of compliance with parking regulations.</td>
<td>D</td>
<td>Section 8.8</td>
</tr>
<tr>
<td>Category</td>
<td>Source Report</td>
<td>Recommendation</td>
<td>Priority</td>
<td>Reference section</td>
</tr>
<tr>
<td>--------------</td>
<td>-----------------</td>
<td>--------------------------------------------------------------------------------</td>
<td>----------</td>
<td>-------------------</td>
</tr>
<tr>
<td>Luxmoore</td>
<td>strategy</td>
<td>The City increase parking enforcement around high demand parking areas to help improve parking compliance.</td>
<td>U</td>
<td>Section 8.8</td>
</tr>
</tbody>
</table>
APPENDIX A  WORKSHOP PRESENTATION

The presentation at the workshops comprised the following:

Workshop Objectives
To engage with stakeholders to investigate and understand parking and access issues in the Guildford precinct and seek their comments and vision for future parking and access within the Guildford area.

Workshop agenda – Saturday 20th Feb

<table>
<thead>
<tr>
<th>Time</th>
<th>Action</th>
<th>Role</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.30pm</td>
<td>Introductions</td>
<td>Kym Leahy</td>
</tr>
<tr>
<td>2.35pm</td>
<td>Presentation by consultant</td>
<td>Larry Schneider</td>
</tr>
<tr>
<td>2.50pm</td>
<td>Separate into groups to record issues</td>
<td>Adam Strelein</td>
</tr>
<tr>
<td>3.30pm</td>
<td>Break</td>
<td></td>
</tr>
<tr>
<td>3.40pm</td>
<td>Summary of issues by each group</td>
<td>Groups</td>
</tr>
<tr>
<td>4.00pm</td>
<td>Prioritisation of issues</td>
<td>Larry Schneider</td>
</tr>
<tr>
<td>4.30pm</td>
<td>Next steps</td>
<td>Larry Schneider</td>
</tr>
</tbody>
</table>

Luxmoore Parking and Safety
- Wholly owned division of ARRB Group Ltd
- Specialist focus on parking and road issues
- Key objective is to provide professional and practical assistance
- Similar strategic and specific parking precinct plans have been undertaken for:
  - Bunbury
  - Melville
  - Stirling
  - Claremont
  - Fremantle
  - Joondalup
  - Cambridge
  - Vincent
  - Launceston
  - Perth
  - Adelaide
  - Newcastle
  - Bayswater

Role of Luxmoore
- Key objectives:
  a) Survey the current supply and patterns of demand for parking
  b) Provide prioritised recommendations to enable the City to better prepare for, plan for and manage parking and access issues
  c) Focus on policies to develop a balanced and equitable distribution of parking facilities to support competitive business and a varied community

Growth in vehicles – WA
- Registered passenger vehicles in WA
  - 2010: 1,369,133
  - 2015: 1,566,574
- An increase of 2.8% per year
- Additional 39,488 vehicles per year
- Assuming Perth represents 70% of WA’s population, additional 532 cars per week, every week, need parking
- Not just one space - at work, at home, at shops, movies, events, schools

Cars are parked >22 hours a day
Cost to provide parking

At grade
- A surface car park requires minimum 25m² per bay
- Assume a minimum land value of $1000 - land cost is $25,000
- Construction cost is $3,000
- Each 50 bays represents a cost of $1.4m

Deck parking
- Construction cost of off-street bays in deck car park is $39,000
- Each 100 bay deck car park will cost $3.9 million PLUS the cost of land

It is quicker, more flexible and less expensive to make better use of existing parking capacity, than to create additional parking.

Typical activity centres

- Mix of commercial, retail, hospitality, medical, service, residential, education
- Multiple combinations of parking generators: residents, visitors, shoppers, diners, employees, commuters, cyclists
- Five principles should underlie parking and access strategy:
  1. Focus on people access not vehicle access
  2. Provide efficient and effective alternatives to car access
  3. Parking policy and strategy must support sustainable transport
  4. The appropriate amount of parking for a centre will be well below the unconstrained demand for parking
  5. The provision of parking requires a demand management, not a demand satisfaction approach

Parking must be managed as part of an integrated transport strategy for Guildford.

Some initial observations of parking and access for Guildford

- Minimum way finding
- Unclear signage
- Availability not indicated
- Drivers encouraged to cruise around hunting for a vacant space
- Poor pedestrian access on some major roads
- School access

How do we make more effective use of all existing capacity?

Precinct walking map 1

Most people can walk 250 m in less than 5 minutes and 400 m in less than 10 minutes

Precinct walking map 2

Most people can walk 250 m in less than 5 minutes and 400 m in less than 10 minutes

Next steps

<table>
<thead>
<tr>
<th>MONTH</th>
<th>ACTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>February</td>
<td>Stakeholder meeting</td>
</tr>
<tr>
<td>March</td>
<td>Surveys of supply and demand</td>
</tr>
<tr>
<td>March</td>
<td>Preparation of draft report and recommendations</td>
</tr>
<tr>
<td>April</td>
<td>Present key findings and recommendations to City of Swan</td>
</tr>
<tr>
<td>May</td>
<td>Prepare draft report</td>
</tr>
<tr>
<td>June</td>
<td>Final report</td>
</tr>
</tbody>
</table>

What are your current, future and potential parking and access issues?
APPENDIX B  ON-LINE SURVEY

Reason for parking at location

- Resident: 55%
- Shopper / entertainment: 45%
- Worker: 13%
- Business owner: 10%
- Student: 7%
- Medical: 3%
- Drop off / pick up (e.g. college, hospital): 7%
- Other: 7%

Suggested improvements - shorter parking times

- Strongly Agree: 26%
- Agree: 6%
- Disagree: 23%
- Strongly disagree: 13%
- Not applicable: 32%

Suggested improvements - longer parking times

- Strongly Agree: 10%
- Agree: 13%
- Disagree: 19%
- Strongly disagree: 19%
- Not applicable: 39%
Suggested improvements - more enforcement of parking restrictions

- Strongly agree: 35%
- Agree: 13%
- Disagree: 13%
- Strongly disagree: 16%
- Not applicable: 23%

Suggested improvements - real time information

- Strongly agree: 32%
- Agree: 19%
- Disagree: 6%
- Strongly disagree: 3%
- Not applicable: 39%

Suggested improvements - improved pedestrian access

- Strongly agree: 45%
- Agree: 19%
- Disagree: 6%
- Strongly disagree: 3%
- Not applicable: 26%
Suggested improvements - alternative access modes

- Pedestrian links: 77%
- Cycle links: 74%
- Bus: 48%
- Taxi: 48%
- Shared car: 55%

Level of agreement - "I would pay for parking here"

- Strongly agree: 10%
- Agree: 3%
- Disagree: 19%
- Strongly disagree: 42%
- Not applicable: 26%

Level of agreement - "I would walk further to my destination if free"

- Strongly agree: 19%
- Agree: 19%
- Disagree: 13%
- Strongly disagree: 10%
- Not applicable: 39%
**Perceived parking issues**

<table>
<thead>
<tr>
<th>Issue</th>
<th>Perception</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parking supply / congestion</td>
<td>9</td>
</tr>
<tr>
<td>Commuter parking in residential areas</td>
<td>3</td>
</tr>
<tr>
<td>Insufficient signage</td>
<td>2</td>
</tr>
<tr>
<td>Lack of safe crossing on James Street</td>
<td>2</td>
</tr>
<tr>
<td>Railway Station</td>
<td>2</td>
</tr>
<tr>
<td>Parking supply at primary school</td>
<td>2</td>
</tr>
<tr>
<td>Heavy traffic / trucks</td>
<td>1</td>
</tr>
<tr>
<td>Lack of safe bicycle parking</td>
<td>1</td>
</tr>
</tbody>
</table>

**Suggested solutions**

<table>
<thead>
<tr>
<th>Solution</th>
<th>Perception</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drop off / pick up area at school</td>
<td>3</td>
</tr>
<tr>
<td>Introduce resident parking permits</td>
<td>2</td>
</tr>
<tr>
<td>Increase signage to parking</td>
<td>2</td>
</tr>
<tr>
<td>Continue free parking at Railway Station</td>
<td>1</td>
</tr>
<tr>
<td>More bike racks</td>
<td>1</td>
</tr>
<tr>
<td>Pedestrian crossing at James Street</td>
<td>1</td>
</tr>
<tr>
<td>Parallel parking</td>
<td>1</td>
</tr>
<tr>
<td>Develop more car parks</td>
<td>1</td>
</tr>
<tr>
<td>Underpass / overpass at school</td>
<td>1</td>
</tr>
<tr>
<td>Widen James Street</td>
<td>1</td>
</tr>
<tr>
<td>Paid parking meters</td>
<td>1</td>
</tr>
<tr>
<td>Divert heavy vehicles away from Town Centre</td>
<td>1</td>
</tr>
</tbody>
</table>

**Perceived issues with parking access in Guildford**

<table>
<thead>
<tr>
<th>Issue</th>
<th>Perception</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parking supply</td>
<td>5</td>
</tr>
<tr>
<td>Safety crossing James Street</td>
<td>4</td>
</tr>
<tr>
<td>Traffic speed on James Street</td>
<td>3</td>
</tr>
<tr>
<td>Bike storage</td>
<td>1</td>
</tr>
<tr>
<td>Bicycle path safety</td>
<td>1</td>
</tr>
<tr>
<td>Verge parking</td>
<td>1</td>
</tr>
</tbody>
</table>
Suggestions to improve parking access in Guildford

- Pedestrian crossing James Street: 4
- Introduce resident permit parking: 2
- Traffic lights on James Street: 1
- Divert traffic via Great Eastern...: 1
- Improve access to bicycle paths: 1
- Improve quality of bicycle paths: 1
- Reduce speed limit on James Street: 1
- Enforce parking restrictions: 1
- Slow down points: 1
- Signage to alternative parking: 1
- Introduce CAT bus system: 1
- Create pedestrian precinct: 1

Gender

- Male: 59%
- Female: 41%

Age

- 16-24: 17%
- 25-34: 17%
- 35-44: 31%
- 45-54: 21%
- 55-64: 14%
- 65 or older: 0%
City of Swan
Parking and Access Strategy for Guildford – FINAL
10 August 2016

The diagram shows the respondent types with the following percentages:

- Resident: 76%
- Business owner/worker: 14%
- Medical patient: 7%
- Visitor: 0%
- Student: 0%
- Other: 3%
APPENDIX C  PARKING CONTROL & MANAGEMENT PLAN

Proposed parking control and management plan to accompany development application

1  Background
   • Describe objective of this parking control and management plan
   • Property address
   • Property description
      – number of parking bays per category, e.g. tenant bays, short-stay bays, mobility bays etc.
      – number and category of bicycle bays to be managed (if applicable)
      – other property details
   • Operational Responsibilities and Contact Details
      – landlord
      – day-to-day management of car park
      – day-to-day management of all parking including motorcycles, bicycles and mobility bays

2  Conditions
   General conditions relating to the parking policy.
   Examples include:
   – short-stay turnovers
   – tenant and public parking bays used for those purposes in accordance with the planning approval
   – shared parking
   – mobility bays clearly marked and set aside for exclusive use
   – loading/unloading bays clearly marked and set aside for exclusive use
   – leasing of tenant bays to off-site tenants
   – on-going availability of bicycle end-of-trip facilities
   – end-of-trip facilities for cyclists

3  Surrounding area
   Details of parking on properties within 250 m of the pedestrian entry to the premises located on the property.

<table>
<thead>
<tr>
<th>Property name and address</th>
<th>Type &amp; no. of bays</th>
<th>Method of control</th>
<th>Fee (if any)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Reserved, Tenant, All day, Short-term, Loading, Mobility, Other, Total</td>
<td>Method of control</td>
<td>Fee (if any)</td>
</tr>
<tr>
<td>2</td>
<td></td>
<td>Method of control</td>
<td>Fee (if any)</td>
</tr>
<tr>
<td>3 etc.</td>
<td></td>
<td>Method of control</td>
<td>Fee (if any)</td>
</tr>
</tbody>
</table>

4  Details of public transport and pedestrian facilities serving the premises
### Proposed parking control and management plan to accompany development application

<table>
<thead>
<tr>
<th>Proposed strategies to achieve conditions</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Achievement of short-stay turnover rates</td>
</tr>
<tr>
<td>Methods are likely to include pricing and advertising.</td>
</tr>
<tr>
<td>- Non-conversion of public parking bays for tenant purposes</td>
</tr>
<tr>
<td>Methods could include: clear colour coding of tenant and public parking and locating tenant and public parking on different levels.</td>
</tr>
<tr>
<td>- Exclusive usage of mobility bays by mobility permit holders</td>
</tr>
<tr>
<td>Daily/weekly activities to ensure exclusive usage</td>
</tr>
<tr>
<td>Other activities, such as inspection of mobility marking on half yearly basis</td>
</tr>
<tr>
<td>- Exclusive use of loading bays for loading purposes</td>
</tr>
<tr>
<td>Daily/weekly activities to ensure exclusive usage</td>
</tr>
<tr>
<td>Irregular activities, such as inspection of loading bay markings on half-yearly basis</td>
</tr>
<tr>
<td>- Signage discouraging other use and directing couriers and other users towards special purpose bays. Outline policies on central loading activities or loading booking system if applicable.</td>
</tr>
<tr>
<td>- On-going availability of bicycle end of trip facilities</td>
</tr>
<tr>
<td>Proposed measures to ensure that unused bicycle bays are not converted into storage and visitors are aware of bicycle bays and are able to access these.</td>
</tr>
<tr>
<td>- On-going provision of safe access and internal route to the bicycle end of trip facilities</td>
</tr>
<tr>
<td>The safe entry/exit and internal route should be shown on drawings. In addition, the plan should indicate how on-going provision is ensured, e.g. regular remarking of bicycle lane logos etc.</td>
</tr>
<tr>
<td>- Spare parking on site to be offered to the tenants or occupants of buildings not part of the complex unless the parking is to be used for private residential purposes. For example, outlining options for reciprocal or shared parking, especially outside of business hours.</td>
</tr>
</tbody>
</table>
APPENDIX D  OVERVIEW OF PARKING INVENTORY

The following map and table show the total parking capacity of 2535 spaces that was estimated for the surveys.

The map also shows a walking distance of 250m and 400m for both the North and South Town Centre Precincts. The centre points of Victoria Street (South Precinct) and Swan Street (North Precinct) have been used as they are considered to be two central points within the town centre, close to both the Guildford Train Station and the Swan Valley Visitor Centre.

Colours on the map illustrate parking areas where there are formal line marked bays (red), informal unlined marked bays on-street (blue) and off-street (orange), where there are no lined bays. It also shows narrow streets where parking is available on only one side of the road (purple).
The following table shows the estimated parking capacity on each street.

The highlighted figures show the total number of bays on both sides of the named street. However, these streets are only wide enough to allow parking on one side at any given time. As such, a figure of total parking capacity on one side of the street has also been provided.

<table>
<thead>
<tr>
<th>Street</th>
<th>Start</th>
<th>End</th>
<th>Capacity</th>
<th>10/03/2016</th>
<th>12/03/2016</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Sides</td>
<td>am</td>
<td>noon</td>
</tr>
<tr>
<td>Allpike St</td>
<td>Single</td>
<td></td>
<td>25</td>
<td>50</td>
<td>0</td>
</tr>
<tr>
<td>Amond St</td>
<td>Single</td>
<td></td>
<td>6</td>
<td>6</td>
<td>0</td>
</tr>
<tr>
<td>Astfield St</td>
<td>Both</td>
<td></td>
<td>60</td>
<td>60</td>
<td>0</td>
</tr>
<tr>
<td>Bank St</td>
<td>Single</td>
<td></td>
<td>32</td>
<td>32</td>
<td>0</td>
</tr>
<tr>
<td>Bertie St</td>
<td>Both</td>
<td></td>
<td>42</td>
<td>42</td>
<td>0</td>
</tr>
<tr>
<td>Chestnut St</td>
<td>Single</td>
<td></td>
<td>3</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>Claymore Cl</td>
<td>Single</td>
<td></td>
<td>8</td>
<td>8</td>
<td>0</td>
</tr>
<tr>
<td>East St North</td>
<td>Both</td>
<td></td>
<td>4</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>East St South</td>
<td>Both</td>
<td></td>
<td>55</td>
<td>55</td>
<td>0</td>
</tr>
<tr>
<td>Ethel St</td>
<td>Both</td>
<td></td>
<td>46</td>
<td>46</td>
<td>0</td>
</tr>
<tr>
<td>Fauntleroy St</td>
<td>Swan St</td>
<td>James St</td>
<td>36</td>
<td>70</td>
<td>0</td>
</tr>
<tr>
<td>Gibson Way</td>
<td>Single</td>
<td></td>
<td>8</td>
<td>8</td>
<td>0</td>
</tr>
<tr>
<td>Helena East</td>
<td>Johnson St</td>
<td>East St</td>
<td>230</td>
<td>230</td>
<td>10</td>
</tr>
<tr>
<td>Helena West</td>
<td>Market St</td>
<td>Johnson St</td>
<td>30</td>
<td>30</td>
<td>0</td>
</tr>
<tr>
<td>Hill St</td>
<td>Single</td>
<td></td>
<td>20</td>
<td>20</td>
<td>0</td>
</tr>
<tr>
<td>Howell Ct</td>
<td>Single</td>
<td></td>
<td>7</td>
<td>7</td>
<td>0</td>
</tr>
<tr>
<td>Hubert St</td>
<td>Both</td>
<td></td>
<td>55</td>
<td>55</td>
<td>0</td>
</tr>
<tr>
<td>Hugh St</td>
<td>Single</td>
<td></td>
<td>24</td>
<td>53</td>
<td>0</td>
</tr>
<tr>
<td>James St</td>
<td>Both</td>
<td></td>
<td>57</td>
<td>57</td>
<td>0</td>
</tr>
<tr>
<td>James St (Alfreds Kitchen)</td>
<td>N/A</td>
<td></td>
<td>18</td>
<td>18</td>
<td>0</td>
</tr>
<tr>
<td>James St (Garden Centre)</td>
<td>N/A</td>
<td></td>
<td>18</td>
<td>18</td>
<td>0</td>
</tr>
<tr>
<td>James St Transperth Car Park</td>
<td>N/A</td>
<td></td>
<td>119</td>
<td>119</td>
<td>0</td>
</tr>
<tr>
<td>Johnson Ave</td>
<td>Single</td>
<td></td>
<td>20</td>
<td>32</td>
<td>0</td>
</tr>
<tr>
<td>Johnson St North</td>
<td>Swan St</td>
<td>Stirling St</td>
<td>20</td>
<td>36</td>
<td>5</td>
</tr>
<tr>
<td>Johnson St South</td>
<td>James St</td>
<td>bridge</td>
<td>N/A</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Market St North</td>
<td>Swan St</td>
<td>Victoria St</td>
<td>52</td>
<td>52</td>
<td>15</td>
</tr>
<tr>
<td>Market St South</td>
<td>James St</td>
<td>Helene St</td>
<td>77</td>
<td>77</td>
<td>4</td>
</tr>
<tr>
<td>Martha St</td>
<td>Single</td>
<td></td>
<td>12</td>
<td>30</td>
<td>0</td>
</tr>
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