BALLINA CBD PARKING PERFORMANCE REVIEW (2004)

Prepared for
Ballina Shire Council

June 2005

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1.0 INTRODUCTION

Eppell Olsen and Partners has been commissioned by Ballina Shire Council to undertake a review of the performance of the existing on and off street parking within the Ballina Central Business District (CBD). The focus of this review was the area generally bound by Kerr Street to the west, Tamar Street to the north, Martin Street to the east and the Richmond River to the south (refer to diagram at Appendix A).

This study is an update to the parking review of the Ballina CBD which was undertaken in 2003. The 2003 review was stimulated by CBD traders, a number of whom identified that insufficient parking existed to service the demands of existing businesses.

The 2003 study identified that sufficient spare capacity existed within the CBD and therefore additional parking was neither justified nor necessary. However, a major recommendation of the report was to extend parking time restrictions across the CBD to free up more spaces for short-term customer parking demands. As a result, Ballina Shire Council introduced some parking limit changes to the CBD during 2004, and the new time limits are demonstrated on Figure 5 at Appendix B.

The principal purpose of this 2004 review is to understand the impact that the time limit changes have had on parking trends within the CBD. The key objectives of the 2004 study are to:

- identify the utilisation of parking spaces within the CBD (presented as both average and peak occupancies);
- analyse the duration of stay profile for on and off street parking within the study area to determine whether any inappropriate usage of parking is occurring;
- compare the 2003 and 2004 parking survey results to determine if car parking within the CBD is being used more efficiently, as a result of the introduced time limit changes;
- recommend any further changes to on street parking to overcome any identified deficiencies or inefficiencies.

2.0 STUDY METHODOLOGY

The parking survey area adopted for the 2004 study was the same as that defined for the 2003 parking performance study, and is illustrated at Appendix A. A program of parking surveys was undertaken on Thursday 18th November 2004 between 8.00am and 5.00pm. This Thursday was selected to represent an average weekday and is the same day on which surveys were completed in 2003.

A field surveyor was assigned to each of the seven parking beats identified in Figure 1 at Appendix B attached. The beats were chosen to allow the survey of all car parking spaces (kerbside, central and specified off street spaces) within a 30 minute period. Where a vehicle was identified in a specific space, it's number plate was recorded providing sufficient information to allow later calculation of parking occupancy and duration of stay characteristics.

From the survey results, the following parking characteristics have been specifically determined:

- the average occupancy, peak occupancy, and average duration of stay for each parking type within each beat;
- the average occupancy, peak occupancy, and average duration of stay for all parking within each beat;
- the average occupancy, peak occupancy, and average duration of stay for all parking within the surveyed Ballina CBD area.

A total of 972 parking spaces were included within the 2004 defined survey area compared to 1064 spaces within the 2003 survey area. The reduction in spaces within the 2004 study is most likely associated with streetscaping works undertaken since the 2003 surveys. A summary of the survey results is included at Appendix C herein. The 2003 results have also been included for comparison purposes.

3.0 SUMMARY OF RESULTS (2004)

3.1 Average Parking Occupancy

The average parking occupancy for the entire survey area was approximately 65% according to the 2004 surveys (i.e. 631 spaces). Therefore, on average, approximately 35% of all spaces (i.e. 341 spaces) are available at any particular time.

While the average parking occupancy has increased from 61% to 65% between 2003 and 2004, this is primarily attributable to the reduction in parking supply. In 2003 an average of 649 spaces were utilised at any one time, in comparison to 631 spaces in 2004. Therefore the average demand for parking spaces has actually slightly decreased since 2003 based on analysis of the survey results.

Parking utilisation clearly varies by street section dependant upon adjacent land uses and proximity. The average parking occupancies for the various street sections within the survey area are presented graphically on Figure 2 at Appendix B, and tabulated within Appendix C of this report.

Key observations in relation to average occupancies are as follows:

- the on street spaces on Cherry Street to the south of River Street demonstrated the highest average occupancies of the survey area (between 81% and 91%) on the day of the surveys. The utilisation of these spaces was higher than in 2003 (i.e. between 48% and 75%). This increase is most likely the result of overflow from high parking demands for on street parking on River Street (between Moon and Cherry Streets). New developments in the immediate area may also be contributing to the increased demand in this area;
- the on street spaces on River Street between Moon Street and Cherry Street continue to be well utilised with an average occupancy of 87% for the spaces on the northern kerb side and 83% for the spaces on the southern kerb. This compares to 76% and 80% respectively in 2003, for the same street sections. Demand for spaces appears to have increased in this location since 2003;

- the average utilisation of the on street spaces at the southern end of Grant Street (i.e. south of River Street) has dropped notably since 2003. This location demonstrated one of the highest average utilisations for the centre in 2003 with average occupancies of between 87% and 94%. Since the 2003 surveys, two hour time limits have been applied to the kerbside parking in this location. The introduction of these time limits appears to have successfully increased the turnover of these spaces, with average occupancies of between 72% and 80% demonstrated in this location on the day of the 2004 surveys;
- in 2003, the on street spaces on Tamar Street (between Cherry and Martin Streets) demonstrated an average utilisation of 91% for the northern kerb side spaces and 84% on the southern kerb side spaces. A two hour time limit has since been introduced to the spaces on the southern kerb side only. This has most likely contributed to the reduced utilisation of parking during the 2004 surveys to 77% on the northern kerb side and 65% on the southern kerb side;
- the lowest parking demand observed in 2003 occurred towards the western end of River Street (i.e. between Kerr and Grant Streets). Parking on the southern kerb side experienced an average occupancy of only 7%, with the spaces on the northern kerb side demonstrating an average occupancy of 39%. These spaces continue to be amongst the least utilised in the study area with average occupancies of 22% and 34% respectively, according to the 2004 surveys.

Based upon the above results, the parking spaces generally located towards the eastern end of the study area appear to have the highest demand. Convenience retail services (i.e. banks, bakeries, newsagents, hairdressers) are predominantly located on River Street and within the south-eastern precinct of the study area, where higher demands were observed.

The parking in most street sections appears to have increased marginally since 2003. Significant increases were observed along Cherry Street.

3.2 Peak Parking Occupancy

The peak parking demand observed in the entire survey area during the 2004 surveys was 81% (or 789 spaces) at 11am. The peak parking demand in 2003 was 74% (or 788 spaces) at 10:30am. The peak demand has therefore not changed significantly however as a result of the reduced supply the spare supply has decreased. Some 183 spaces are available within the study area during the peak demand time. Almost all of these spaces are located within a reasonable walking distance of the town centre (i.e. 400m to 500m).

At peak demand times, many of the street sections are fully occupied. Locations where the peak parking occupancy reduced from 100% since 2003 include:

- the cul-de-sac section of Fawcett Lane (50% in 2004);
- the eastern kerb of Moon Street between Fawcett Lane and River Street (83% in 2004);
- the northern and southern kerbs of Tamar Street between Cherry and Martin Streets (91% and 84% in 2004 respectively);
- the centre parking on Grant Street between River Street and the river (94% in 2004);
- the centre parking on Moon Street between River and Tamar Streets (95% in 2004).

To understand where demands are greatest, peak parking occupancies for the various street sections within the survey area have been calculated and are presented graphically on Figure 3 at Appendix B, and tabulated at Appendix C.

All locations which exhibited high average occupancies (discussed in Section 3.1) reached 100% occupancy levels at some time during the survey day. Those locations include:

- River Street (between Moon and Cherry Streets);
- Cherry Street (between Tamar Street and the Richmond River);
- the eastern, western and southern kerbs of Grant Street, south of River Street;
- the eastern kerb of Moon Street between Tamar and River Streets;
- Fawcett Lane between the cul-de-sac and Moon Street;

- Tamar Street between Grant and Moon Streets;
- the western kerb of Moon Street between Fawcett Lane and River Street.

The spaces demonstrating the lowest peak occupancy were located in the western precinct of the study area, including the southern kerb of River Street between Kerr and Grant Streets (38%) and the western kerb of Kerr Street between Tamar and River Streets (41%).

The most significant decrease in peak occupancy since 2003 occurred along Fawcett Lane. In 2003, the peak occupancy was between 90% and 100%. Where a two hour time limit has been introduced since 2003, the peak parking occupancy decreased to between 50% and 54% in 2004.

In summary, the peak parking occupancy within the survey area has remained relatively unchanged since 2003. However, occupancy has increased significantly on some sections of Cherry Street and decreased likewise on Fawcett Lane. The peak parking occupancy increased on 16 of the 42 street sections since 2003.

3.3 Duration of Stay

The average duration of stay for the various street sections within the survey area are presented graphically on Figure 4 at Appendix B and tabulated at Appendix C. This characteristic identifies the predominant type of parking occurring in each street section (i.e. short term or long term parking). For the purpose of this review, short term parking is identified by a duration of stay of less than two hours.

Review of the duration of stay information indicates the following:

- predominantly short term parking occurs on River Street (between Kerr and Martin Streets) with an average duration of stay of approximately one hour (between 42 minutes and 66 minutes). The spaces between Grant Street and Martin Street are the most convenient of the on street spaces and although utilisation is high in these locations, the average duration of stay is within acceptable levels;
- long term parking (i.e. longer than 2 hours) continues to generally occur on the peripheries of the study area, including the western end of Fawcett Lane, Moon Street and Grant Street (south of River Street), the southern end of Cherry Street and Tamar Street (between Kerr Street and Moon Street, and between Cherry Street and Martin Street). This is discussed further herein;
- as noted above, posted 1 hour time limits on River Street (between Moon Street and Cherry Street) are generally being observed;
- overstaying of posted 2 hour time limits is however occurring in the following locations:
    - Moon Street south of River Street where a 2 hour (120 minute) time limit applies. The average duration of stay on the day of surveys was 131 minutes on the eastern kerb side and 125 minutes on the western kerb side;
    - the eastern kerb of Cherry Street between Tamar and River Streets. A 2 hour (120 minute) time limit applies in this location; however the average duration of stay in these spaces on the day of surveys was 124 minutes;
    - two hour (120 minute) time limits apply to the parking in Grant Street, south of River Street. The average duration of stay in this location is 123 minutes;
    - the southern kerb side on Fawcett Lane, east of Moon Street has a 2 hour (120 minute) time limit. The average duration of stay in this location on the day of the surveys was 207 minutes. The average time limit in this location was significantly higher than the posted time limit.

3.4 Summary of Results (2003 vs 2004)

Table 3.4 below summarises key results for both 2003 and 2004:

Table 3.4 ***2003/2004 Comparison***

Characteristic	2003	2004	Comments
Average Occupancy	61%	65%	The average demand for spaces was actually marginally greater in 2003 than 2004
Peak Occupancy	74%	81%	The peak demand for spaces is however near identical 788 vs 789 spaces
Short Term vs Long Term Parking Supply	69% Short Term 31% Long Term	74% Short Term 26% Long Term	
Most Utilised Street Sections	River St (btw Moon and Cherry); Grant St (sth of River St); Tamar St (btw Cherry and Martin)	River St (btw Moon & Cherry); Cherry St (btw Tamar and the river)	Cherry Street as a parking option appears to have increased in 2004
Least Utilised Street Sections	Kerr St (btw Tamar and River); River St (btw Kerr and Grant)	Kerr St (btw Tamar and River); Grant St (btw Tamar and River); River St (btw Kerr and Grant)	The western end of the study area remains a low utilised area for parking

Table 3.5 below provides a summary of key issues identified for improvement as a result of the 2003 surveys. The table also provides a summary of the trends observed as a result of changes that have been introduced to parking since 2003.

Table 3.5 ***Discussion of 2003 Issues***

2003 Issue	2004 Survey Result
Employee long term parking appears to be occurring on Fawcett Lane	The average duration of stay in this location has decreased to 120minutes. The average and peak occupancies have also reduced. The introduction of a 2 hour time limit in this location appears to have successfully reduced long term parking in this location
Employee long term parking appears to be occurring on Grant Street	The average duration of stay has reduced to approximately 2 hours since the introduction of posted 2 hour limits in this location
Employee long term parking appears to be occurring on Tamar Street (between Martin and Cherry Streets)	The average duration of stay in this location is greater than 2 hours; therefore long term employee

	parking is still occurring. The southern kerb in this location has a posted 2 hour time limit, with the northern kerb having unrestricted parking. The time limit on the southern kerb is therefore generally not being adhered to. The average occupancy in this location has also increased, however a 100% peak occupancy wasn't achieved at any time of the day during the 2004 surveys. Parking therefore appears to be available at any given time at this location
Turnover on River Street appears to be poor, leading to a perceived lack of parking in the area	The duration of stay, average utilisation and peak occupancy results have all increased from the 2003 surveys. Further reductions in time limits in this location may be appropriate to increase parking turnover and availability
Parking on River Street (between Kerr and Grant Streets), Grant Street (between River and Tamar Streets) and Martin Street (between River and Tamar Streets) was increased from a 1 hour posted limit to a 2 hour posted limit	The average duration of stay in these locations is less than 2 hours. The average occupancies and peak occupancies are within reasonable limits. Increasing the time limits in these locations appears to have been successful

Other significant changes that have been observed since 2003 include the following:

- the unrestricted centre parking in Tamar Street (between Moon and Grant Streets), recorded an average duration of stay which has significantly increased from 151 minutes to 275 minutes since 2003. This indicates long term employee parking has been attracted to this location;
- parking demand for spaces in Cherry Street has increased since 2003. This has most likely occurred due to the limited parking supply along River Street.

The application of greater time restrictions throughout the study area as a result of the 2003 surveys appears to have been successful, as general parking demands in the CBD have not reduced.

4.0 TIME LIMIT REVIEW

Sufficient parking supply appears to exist within the study area, and parking limits are generally being adhered to in most locations, however, parking turnover in high demand locations could be further increased. This could be achieved through the implementation of additional parking regulation changes in locations of highest demand.

The existing time limits within the study area are demonstrated on Figure 5 at Attachment B. The recommended time limits, based on the survey results, are presented on Figure 6 attached, and discussed as follows:

- a number of 15 minute parking zones are recommended at strategic locations along River Street between Grant and Martin Streets. River Street continues to demonstrate the highest parking demand due to its proximity to immediate land uses. Therefore, high turnover of these spaces is warranted to increase available parking. To increase availability a small number of the one and two hour time limits could be reduced to 15 minutes to cater for the pick-up/set-down demands of customers in this location;
- long term parking, (most likely local employees) appears to be occurring within the cul-de-sacs of Fawcett Lane and Cherry Street. This could be discouraged by introducing a two hour time limit within this area;
- one hour parking limits could be implemented on Moon Street and Cherry Street south of Tamar Street, to increase the parking turnover in these locations. If 30 minute time limits are applied in some locations on River Street, the demand for parking in these locations is also likely to increase due to overflow parking demands. Parking in these two locations is already high, therefore a 1 hour time limit will increase turnover and parking availability in these locations. Parking for longer term demands (i.e. greater than one hour) is still available within 100-200 metres of the core, so these demands would still be accommodated;

- a two hour time limit could be applied to the southern kerb of Tamar Street between Grant and Moon Streets. Parking demands in Tamar Street between these two street sections is notably high, and currently most of the parking is not restricted by time limits. The post office, professional and medical suites front Tamar Street and these uses generate medium - high turnover of customers, thus relying on short to medium term car parking. As predominantly unrestricted parking currently exists, and longer term parking demands are being observed, the availability of short term parking is limited. Applying a 2 hour time limit to one section of Tamar Street would provide some opportunity for short term parking whilst not precluding long term parking.

It should also be noted parking durations are exceeding the posted time limits along Moon Street (south of River Street), Grant Street (south of River Street) and on the southern kerb of Tamar Street (between Cherry and Martin Streets). Increased parking enforcement is therefore recommended within these areas.

5.0 CONCLUSIONS

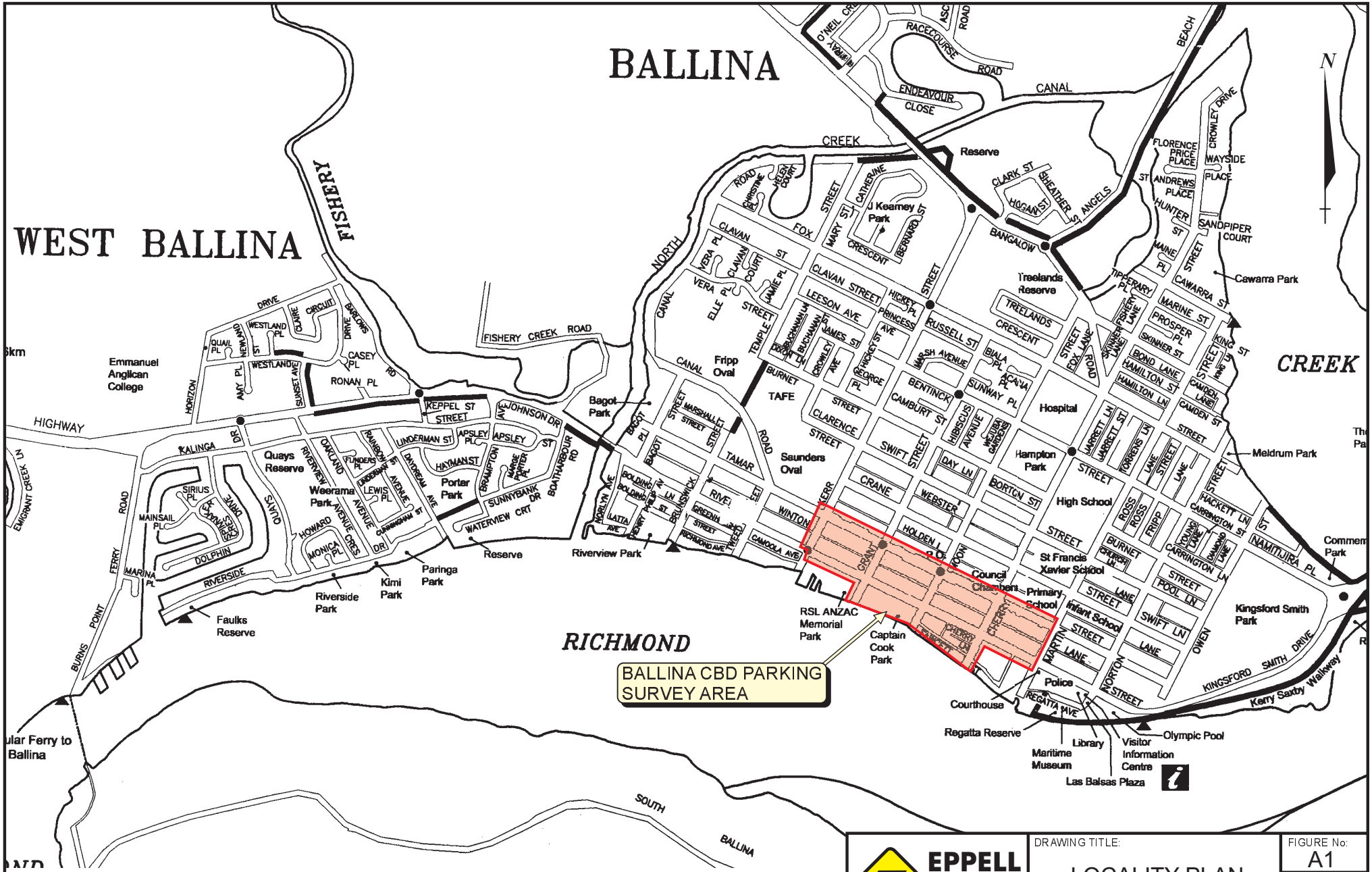
This report documents the findings of a parking performance review within the Ballina CBD area. The results indicate that peak parking demands in some locations within the Ballina CBD are very high. However, average and peak parking occupancy results suggest that sufficient spare capacity exists and therefore additional parking is not necessary at this time. A number of street sections within the study are experiencing notable demands across the day potentially contributing to concerns regarding a perception of insufficient parking.

It has been recommended that parking time limits be reduced in some high demand such as where retail land uses are located close by, to increase parking turnover and hence parking availability. This is most effectively achieved through the application of time restrictions. The trade off will be a reduction in the availability of long term commuter parking for employees within the centre.

The recommended parking restrictions will see long term parking demands being displaced to the peripheries of the core CBD and to private car parks. This would be a desirable outcome as central on street spaces would be used for short term parking, whilst off street parking would be used for longer term demands.

Appendix A

Locality Plan



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DRAWING TITLE: LOCALITY PLAN

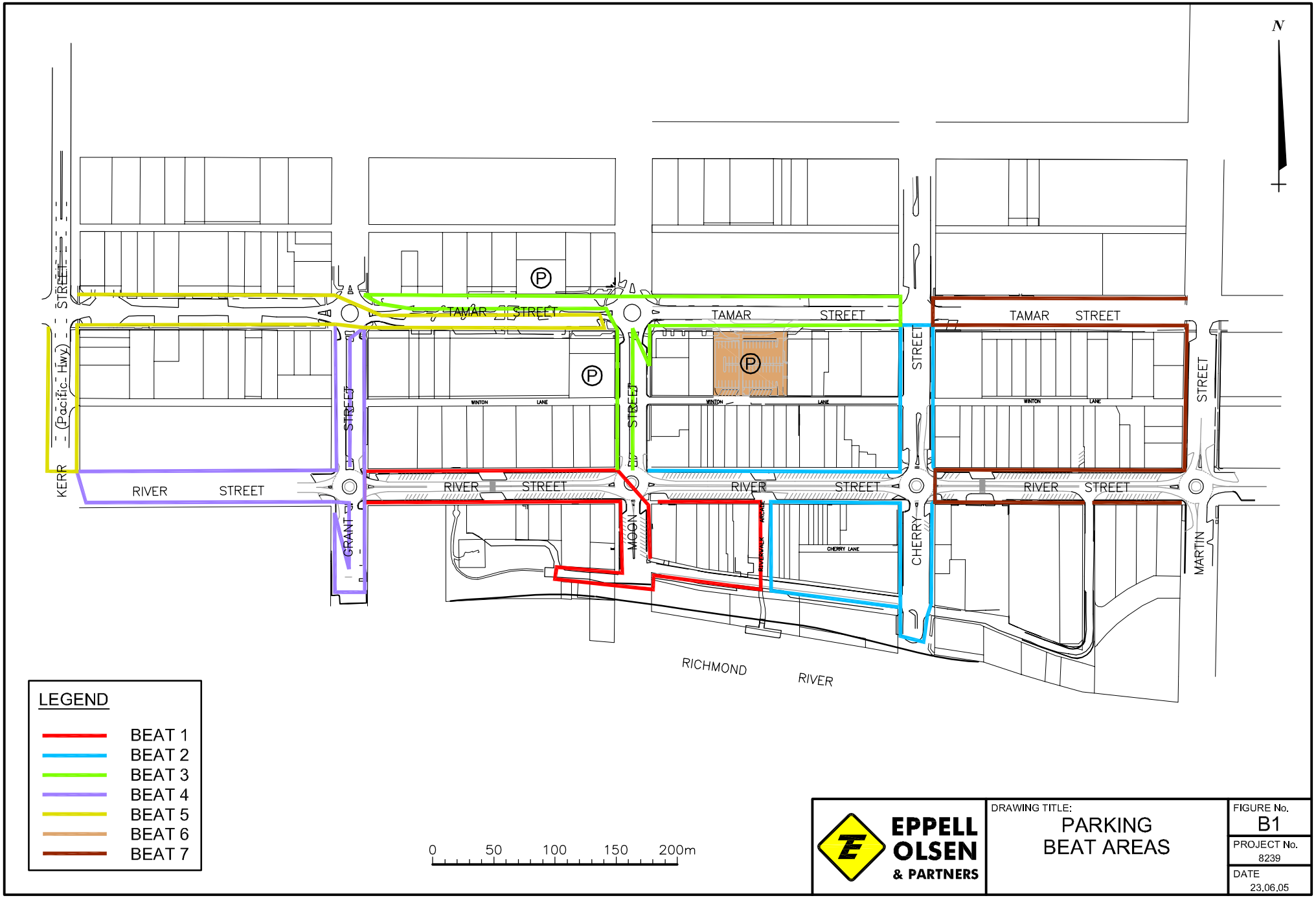
FIGURE No: A1

PROJECT No: 8293

DATE: 3.02.05

FILE NAME: X:/ 8293 LOCALITY MAP.CDR

Appendix B
Parking Figures



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DRAWING TITLE:
PARKING
BEAT AREAS

FIGURE No. B1
PROJECT No. 8239
DATE 23.06.05

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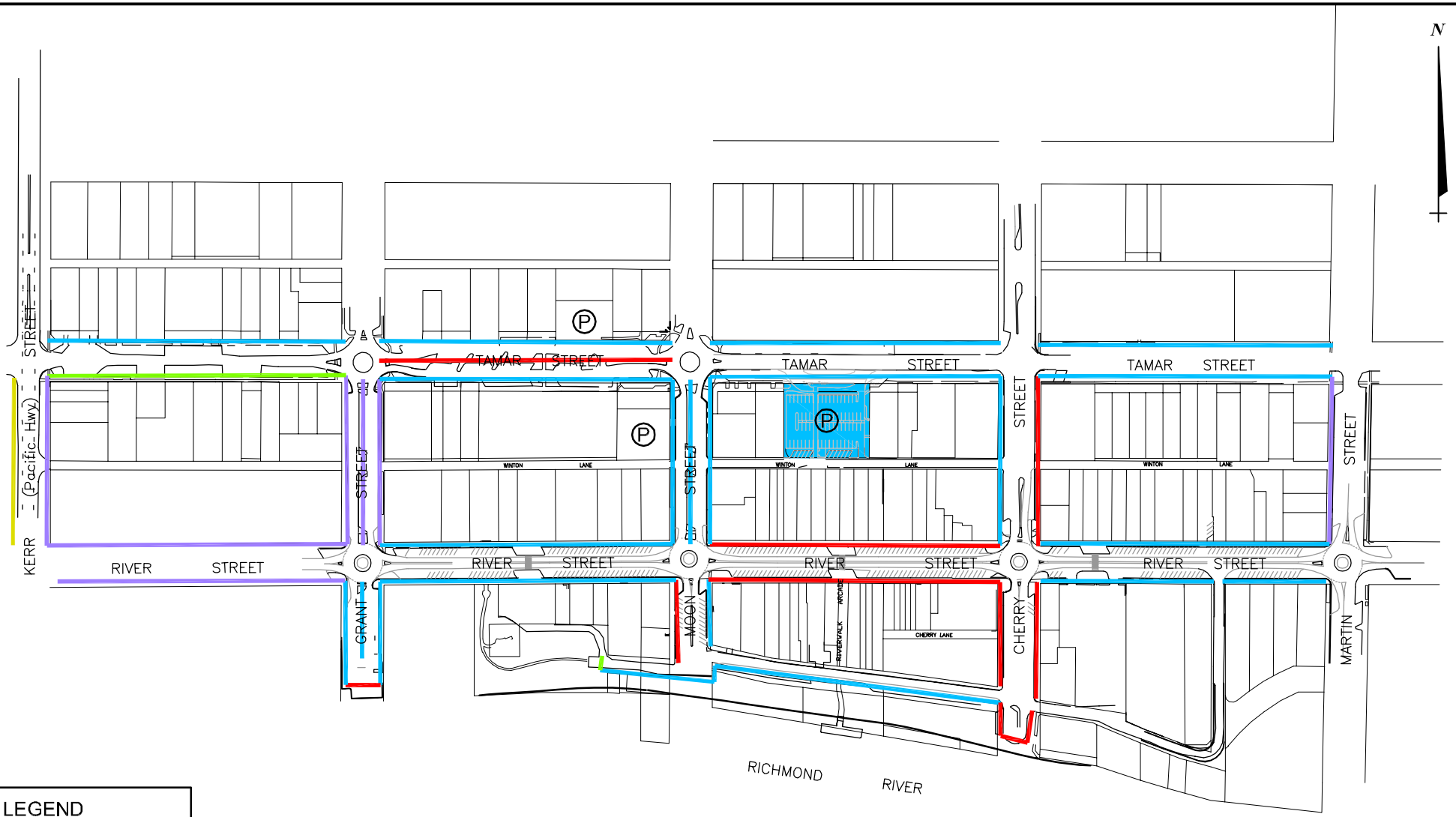

EPPELL OLSEN & PARTNERS

DRAWING TITLE:
AVERAGE OCCUPANCIES

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DATE 23.06.05

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FILE NAME: X:/8239_FIGURE01.DWG

EPPELL OLSEN & PARTNERS

DRAWING TITLE:
AVERAGE DURATION OF STAY

FIGURE No. B4
PROJECT No. 8239
DATE 23.06.05

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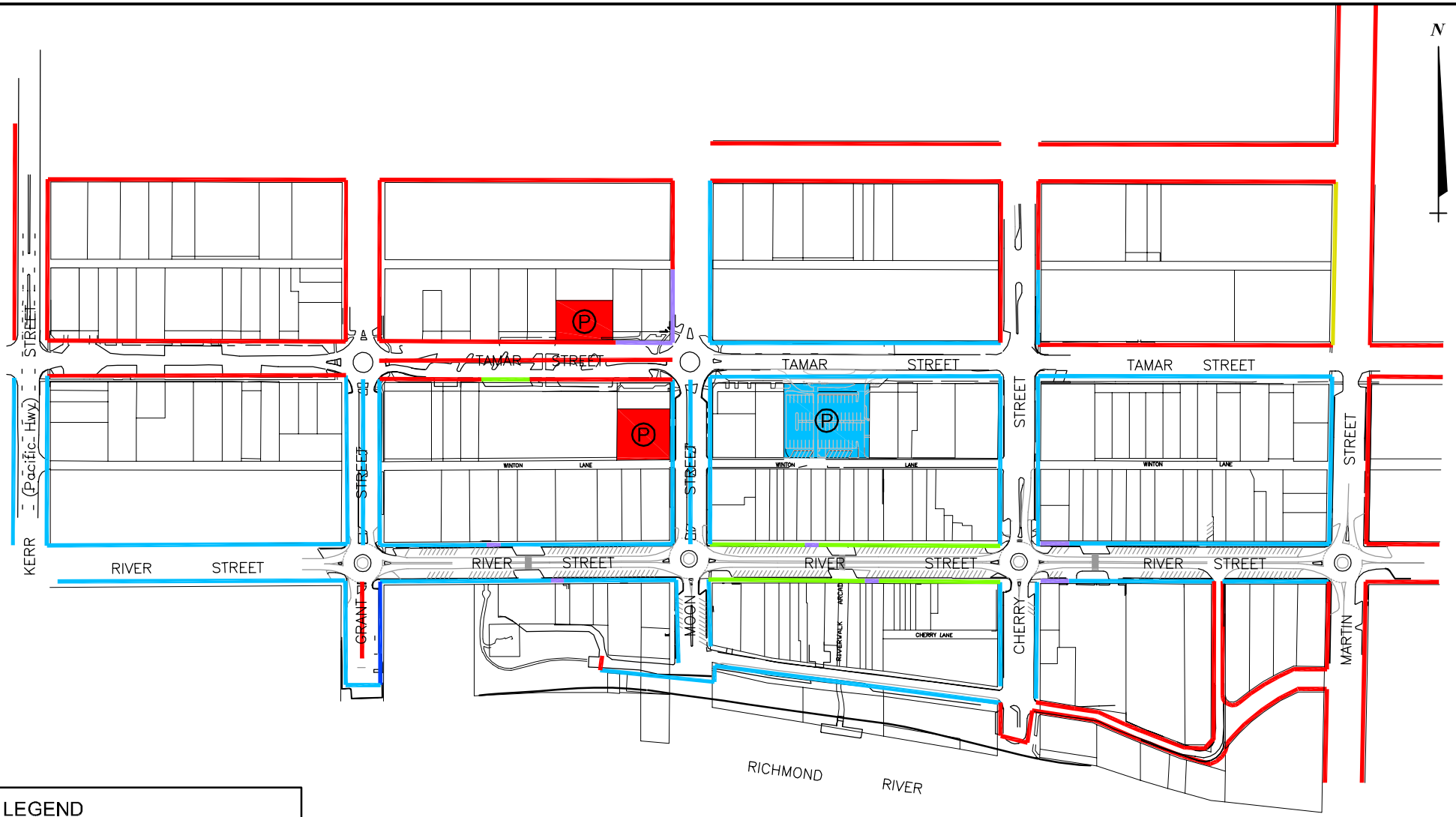

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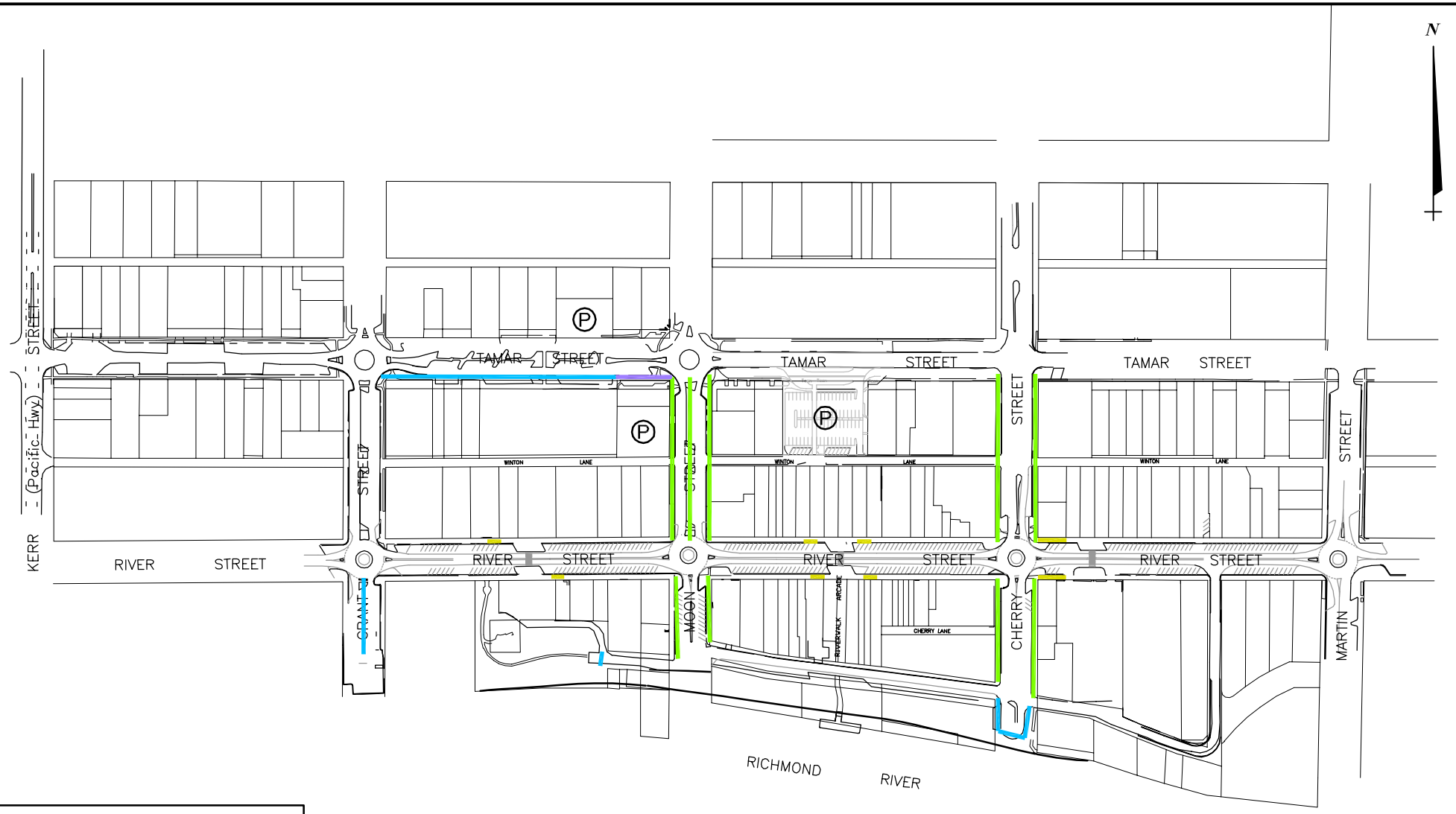

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DRAWING TITLE:
RECOMMENDED NEW TIME LIMITS

FIGURE No. B6

PROJECT No. 8239

DATE 23.06.05

FILE NAME: X:/8239_FIGURE01.DWG

Appendix C
Survey Results

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AVERAGE DURATION OF STAY - BY STREET SECTION

Location						2004 Results					2003 Comparitive Results				
Street 1		Street 2		Street 3	Position	Type	# Space	Av. Stay (mins)	Av. Occ	Peak Occ.	Type	# Space	Av. Stay (mins)	Av. Occ	Peak Occ.
Kerr St	btwn	River St	&	Tamar St	East Kerb	2P	7	37	33%	71%	NL/1P	7	35	28%	71%
River St	btwn	Moon St	&	Cherry St	South Kerb	1P	37	42	83%	100%	1P	45	42	80%	96%
Kerr St	btwn	River St	&	Tamar St	West Kerb	2P	8	43	12%	38%	NL	8	75	22%	50%
River St	btwn	Moon St	&	Cherry St	North Kerb	1P	38	44	87%	100%	1P	47	46	76%	96%
River St	btwn	Cherry St	&	Martin St	South Kerb	2P	22	46	69%	95%	1P	27	54	69%	85%
River St	btwn	Cherry St	&	Martin St	North Kerb	2P	*43*	*47*	*77%*	*98%*	1P	*42*	48	75%	90%
River St	btwn	Grant St	&	Moon St	North Kerb	2P	36	48	63%	97%	1P	35	44	63%	83%
Moon St	btwn	River St	&	Tamar St	West Kerb	2P	9	49	65%	89%	1P	9	39	60%	78%
Cherry St	btwn	Fawcett Lne	&	River St	West Kerb	2P	8	52	85%	100%	1P	5	38	48%	80%
River St	btwn	Kerr St	&	Grant St	North Kerb	2P	36	54	34%	50%	1P	41	46	32%	61%
Moon St	btwn	River St	&	Tamar St	Centre	2P	22	54	67%	95%	1P	20	48	68%	100%
Grant St	btwn	River St	&	Tamar St	West Kerb	2P	10	57	39%	60%	NL/1P	13	102	41%	62%
Martin St	btwn	River St	&	Tamar St	West Kerb	2P	17	58	33%	59%	1P	19	84	36%	84%
Tamar St	btwn	Moon St	&	Cherry St	North Kerb	2P	35	61	62%	97%	1P	35	49	52%	71%
Cherry St	btwn	River St	&	Tamar St	West Kerb	2P	14	61	73%	100%	1P	12	56	64%	92%
River St	btwn	Kerr St	&	Grant St	South Kerb	2P	49	62	22%	41%	1P	82	22	7%	16%
Tamar St	btwn	Moon St	&	Cherry St	South Kerb	2P	22	63	65%	95%	1P	22	68	56%	77%
Car Park	on	Tamar St			South Kerb	2P	75	63	70%	97%	2P	75	58	71%	97%
River St	btwn	Grant St	&	Moon St	South Kerb	2P	36	66	62%	86%	1P	36	51	59%	86%
Grant St	btwn	River St	&	Tamar St	East Kerb	2P	10	71	39%	70%	NL/1P	13	89	29%	54%
Tamar St	btwn	Grant St	&	Moon St	North Kerb	NL/0.5P	17	75	63%	100%	NL/1P	17	67	61%	82%
Cherry St	btwn	Fawcett Lne	&	River St	East Kerb	2P	17	86	81%	100%	1P	14	68	75%	86%
Moon St	btwn	River St	&	Tamar St	East Kerb	2P	4	88	69%	100%	1P	4	50	68%	100%
Grant St	btwn	River St	&	Tamar St	Centre	2P	23	98	33%	65%	1P	20	134	42%	70%
Grant St	btwn	River	&	River St	Centre	NL	16	100	74%	94%	NL	13	176	82%	100%
Fawcett Lne	btwn	Moon St	&	Cherry St	South Kerb	2P	37	113	73%	54%	NL	63	279	74%	90%
Fawcett Lne	btwn	Building	&	Moon St	Cul-de-sac	NL	6	120	44%	50%	NL	4	336	92%	100%
Tamar St	btwn	Cherry St	&	Martin St	South Kerb	2P	31	123	65%	84%	NL	30	234	84%	100%
Cherry St	btwn	River St	&	Tamar St	East Kerb	2P	8	124	88%	100%	1P	8	50	56%	100%
Moon St	btwn	Fawcett Lne	&	River St	West Kerb	2P	6	125	87%	100%	1P	6	122	82%	100%
Grant St	btwn	River	&	River St	West Kerb	2P	13	130	72%	100%	NL	13	173	92%	100%
Moon St	btwn	Fawcett Lne	&	River St	East Kerb	2P	12	131	61%	83%	1P	12	157	73%	100%
Grant St	btwn	River	&	River St	River End	2P	7	143	80%	100%	NL	8	105	87%	100%
Grant St	btwn	River	&	River St	East Kerb	Dis	5	153	72%	100%	Dis	5	130	72%	100%
Tamar St	btwn	Kerr St	&	Grant St	South Kerb	NL	56	185	56%	68%	NL	53	228	73%	87%
Tamar St	btwn	Grant St	&	Moon St	South Kerb	NL/1P	34	193	73%	88%	NL/1P	35	126	62%	80%
Fawcett Lne	btwn	Cul-de-sac	&	Moon St	South Kerb	2P	6	207	60%	100%	NL	9	232	83%	100%
Tamar St	btwn	Kerr St	&	Grant St	North Kerb	NL	30	211	67%	83%	NL	34	165	73%	91%
Tamar St	btwn	Grant St	&	Moon St	Centre - Nth	NL	26	275	80%	96%	NL	27	151	64%	89%
Tamar St	btwn	Cherry St	&	Martin St	North Kerb	NL	47	284	77%	91%	NL	42	294	91%	100%
Cherry St	btwn	River	&	Fawcett Lne	Cul-de-sac	NL	10	295	91%	100%	1P	10	220	74%	100%
Tamar St	btwn	Grant St	&	Moon St	Centre - Sth	NL	27	314	84%	96%	NL	29	285	71%	86%

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AVERAGE PARKING OCCUPANCY - BY STREET SECTION

Location						2004 Results					2003 Comparitive Results				
Street 1		Street 2		Street 3	Position	Type	# Space	Av. Stay (mins)	Av. Occ	Peak Occ.	Type	# Space	Av. Stay (mins)	Av. Occ	Peak Occ.
Kerr St	btwn	River St	&	Tamar St	West Kerb	2P	8	43	12%	38%	NL	8	75	22%	50%
River St	btwn	Kerr St	&	Grant St	South Kerb	2P	49	62	22%	41%	1P	82	22	7%	16%
Kerr St	btwn	River St	&	Tamar St	East Kerb	2P	7	37	33%	71%	NL/1P	7	35	28%	71%
Grant St	btwn	River St	&	Tamar St	Centre	2P	23	98	33%	65%	1P	20	134	42%	70%
Martin St	btwn	River St	&	Tamar St	West Kerb	2P	17	58	33%	59%	1P	19	84	36%	84%
River St	btwn	Kerr St	&	Grant St	North Kerb	2P	36	54	34%	50%	1P	41	46	32%	61%
Grant St	btwn	River St	&	Tamar St	West Kerb	2P	10	57	39%	60%	NL/1P	13	102	41%	62%
Grant St	btwn	River St	&	Tamar St	East Kerb	2P	10	71	39%	70%	NL/1P	13	89	29%	54%
Fawcett Lne	btwn	Building	&	Moon St	Cul-de-sac	NL	6	120	44%	50%	NL	4	336	92%	100%
Tamar St	btwn	Kerr St	&	Grant St	South Kerb	NL	56	185	56%	68%	NL	53	228	73%	87%
Fawcett Lne	btwn	Cul-de-sac	&	Moon St	South Kerb	2P	6	207	60%	100%	NL	9	232	83%	100%
Moon St	btwn	Fawcett Lne	&	River St	East Kerb	2P	12	131	61%	83%	1P	12	157	73%	100%
Tamar St	btwn	Moon St	&	Cherry St	North Kerb	2P	35	61	62%	97%	1P	35	49	52%	71%
River St	btwn	Grant St	&	Moon St	South Kerb	2P	36	66	62%	86%	1P	36	51	59%	86%
Tamar St	btwn	Grant St	&	Moon St	North Kerb	NL/0.5P	17	75	63%	100%	NL/1P	17	67	61%	82%
River St	btwn	Grant St	&	Moon St	North Kerb	2P	36	48	63%	97%	1P	35	44	63%	83%
Tamar St	btwn	Moon St	&	Cherry St	South Kerb	2P	22	63	65%	95%	1P	22	68	56%	77%
Moon St	btwn	River St	&	Tamar St	West Kerb	2P	9	49	65%	89%	1P	9	39	60%	78%
Tamar St	btwn	Cherry St	&	Martin St	South Kerb	2P	31	123	65%	84%	NL	30	234	84%	100%
Tamar St	btwn	Kerr St	&	Grant St	North Kerb	NL	30	211	67%	83%	NL	34	165	73%	91%
Moon St	btwn	River St	&	Tamar St	Centre	2P	22	54	67%	95%	1P	20	48	68%	100%
Moon St	btwn	River St	&	Tamar St	East Kerb	2P	4	88	69%	100%	1P	4	50	68%	100%
River St	btwn	Cherry St	&	Martin St	South Kerb	2P	22	46	69%	95%	1P	27	54	69%	85%
Car Park	on	Tamar St			South Kerb	2P	75	63	70%	97%	2P	75	58	71%	97%
Grant St	btwn	River	&	River St	West Kerb	2P	13	130	72%	100%	NL	13	173	92%	100%
Grant St	btwn	River	&	River St	East Kerb	Dis	5	153	72%	100%	Dis	5	130	72%	100%
Tamar St	btwn	Grant St	&	Moon St	South Kerb	NL/1P	34	193	73%	88%	NL/1P	35	126	62%	80%
Cherry St	btwn	River St	&	Tamar St	West Kerb	2P	14	61	73%	100%	1P	12	56	64%	92%
Fawcett Lne	btwn	Moon St	&	Cherry St	South Kerb	2P	37	113	73%	54%	NL	63	279	74%	90%
Grant St	btwn	River	&	River St	Centre	NL	16	100	74%	94%	NL	13	176	82%	100%
Tamar St	btwn	Cherry St	&	Martin St	North Kerb	NL	47	284	77%	91%	NL	42	294	91%	100%
River St	btwn	Cherry St	&	Martin St	North Kerb	2P	43	47	77%	98%	1P	42	48	75%	90%
Tamar St	btwn	Grant St	&	Moon St	Centre - Nth	NL	26	275	80%	96%	NL	27	151	64%	89%
Grant St	btwn	River	&	River St	River End	2P	7	143	80%	100%	NL	8	105	87%	100%
Cherry St	btwn	Fawcett Lne	&	River St	East Kerb	2P	17	86	81%	100%	1P	14	68	75%	86%
River St	btwn	Moon St	&	Cherry St	South Kerb	1P	37	42	83%	100%	1P	45	42	80%	96%
Tamar St	btwn	Grant St	&	Moon St	Centre - Sth	NL	27	314	84%	96%	NL	29	285	71%	86%
Cherry St	btwn	Fawcett Lne	&	River St	West Kerb	2P	8	52	85%	100%	1P	5	38	48%	80%
River St	btwn	Moon St	&	Cherry St	North Kerb	1P	38	44	87%	100%	1P	47	46	76%	96%
Moon St	btwn	Fawcett Lne	&	River St	West Kerb	2P	6	125	87%	100%	1P	6	122	82%	100%
Cherry St	btwn	River St	&	Tamar St	East Kerb	2P	8	124	88%	100%	1P	8	50	56%	100%
Cherry St	btwn	River	&	Fawcett Lne	Cul-de-sac	NL	10	295	91%	100%	1P	10	220	74%	100%

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PEAK PARKING OCCUPANCY - BY STREET SECTION

Location						2004 Results					2003 Comparitive Results				
Street 1		Street 2		Street 3	Position	Type	# Space	Av. Stay (mins)	Av. Occ	Peak Occ.	Type	# Space	Av. Stay (mins)	Av. Occ	Peak Occ.
Kerr St	btwn	River St	&	Tamar St	West Kerb	2P	8	43	12%	38%	NL	8	75	22%	50%
River St	btwn	Kerr St	&	Grant St	South Kerb	2P	49	62	22%	41%	1P	82	22	7%	16%
River St	btwn	Kerr St	&	Grant St	North Kerb	2P	36	54	34%	50%	1P	41	46	32%	61%
Fawcett Lne	btwn	Building	&	Moon St	Cul-de-sac	NL	6	120	44%	50%	NL	4	336	92%	100%
Fawcett Lne	btwn	Moon St	&	Cherry St	South Kerb	2P	37	113	73%	54%	NL	63	279	74%	90%
Martin St	btwn	River St	&	Tamar St	West Kerb	2P	17	58	33%	59%	1P	19	84	36%	84%
Grant St	btwn	River St	&	Tamar St	West Kerb	2P	10	57	39%	60%	NL/1P	13	102	41%	62%
Grant St	btwn	River St	&	Tamar St	Centre	2P	23	98	33%	65%	1P	20	134	42%	70%
Tamar St	btwn	Kerr St	&	Grant St	South Kerb	NL	56	185	56%	68%	NL	53	228	73%	87%
Grant St	btwn	River St	&	Tamar St	East Kerb	2P	10	71	39%	70%	NL/1P	13	89	29%	54%
Kerr St	btwn	River St	&	Tamar St	East Kerb	2P	7	37	33%	71%	NL/1P	7	35	28%	71%
Tamar St	btwn	Kerr St	&	Grant St	North Kerb	NL	30	211	67%	83%	NL	34	165	73%	91%
Moon St	btwn	Fawcett Lne	&	River St	East Kerb	2P	12	131	61%	83%	1P	12	157	73%	100%
Tamar St	btwn	Cherry St	&	Martin St	South Kerb	2P	31	123	65%	84%	NL	30	234	84%	100%
River St	btwn	Grant St	&	Moon St	South Kerb	2P	36	66	62%	86%	1P	36	51	59%	86%
Tamar St	btwn	Grant St	&	Moon St	South Kerb	NL/1P	34	193	73%	88%	NL/1P	35	126	62%	80%
Moon St	btwn	River St	&	Tamar St	West Kerb	2P	9	49	65%	89%	1P	9	39	60%	78%
Tamar St	btwn	Cherry St	&	Martin St	North Kerb	NL	47	284	77%	91%	NL	42	294	91%	100%
Grant St	btwn	River	&	River St	Centre	NL	16	100	74%	94%	NL	13	176	82%	100%
Tamar St	btwn	Moon St	&	Cherry St	South Kerb	2P	22	63	65%	95%	1P	22	68	56%	77%
Moon St	btwn	River St	&	Tamar St	Centre	2P	22	54	67%	95%	1P	20	48	68%	100%
River St	btwn	Cherry St	&	Martin St	South Kerb	2P	22	46	69%	95%	1P	27	54	69%	85%
Tamar St	btwn	Grant St	&	Moon St	Centre - Nth	NL	26	275	80%	96%	NL	27	151	64%	89%
Tamar St	btwn	Grant St	&	Moon St	Centre - Sth	NL	27	314	84%	96%	NL	29	285	71%	86%
Tamar St	btwn	Moon St	&	Cherry St	North Kerb	2P	35	61	62%	97%	1P	35	49	52%	71%
River St	btwn	Grant St	&	Moon St	North Kerb	2P	36	48	63%	97%	1P	35	44	63%	83%
Car Park	on	Tamar St			South Kerb	2P	75	63	70%	97%	2P	75	58	71%	97%
River St	btwn	Cherry St	&	Martin St	North Kerb	2P	*43*	*47*	*77%*	*98%*	1P	*42*	48	75%	90%
Moon St	btwn	Fawcett Lne	&	River St	West Kerb	2P	6	125	87%	100%	1P	6	122	82%	100%
Tamar St	btwn	Grant St	&	Moon St	North Kerb	NL/0.5P	17	75	63%	100%	NL/1P	17	67	61%	82%
River St	btwn	Moon St	&	Cherry St	North Kerb	1P	38	44	87%	100%	1P	47	46	76%	96%
River St	btwn	Moon St	&	Cherry St	South Kerb	1P	37	42	83%	100%	1P	45	42	80%	96%
Grant St	btwn	River	&	River St	West Kerb	2P	13	130	72%	100%	NL	13	173	92%	100%
Grant St	btwn	River	&	River St	River End	2P	7	143	80%	100%	NL	8	105	87%	100%
Grant St	btwn	River	&	River St	East Kerb	Dis	5	153	72%	100%	Dis	5	130	72%	100%
Moon St	btwn	River St	&	Tamar St	East Kerb	2P	4	88	69%	100%	1P	4	50	68%	100%
Cherry St	btwn	Fawcett Lne	&	River St	West Kerb	2P	8	52	85%	100%	1P	5	38	48%	80%
Cherry St	btwn	River St	&	Tamar St	West Kerb	2P	14	61	73%	100%	1P	12	56	64%	92%
Cherry St	btwn	River	&	Fawcett Lne	Cul-de-sac	NL	10	295	91%	100%	1P	10	220	74%	100%
Cherry St	btwn	Fawcett Lne	&	River St	East Kerb	2P	17	86	81%	100%	1P	14	68	75%	86%
Cherry St	btwn	River St	&	Tamar St	East Kerb	2P	8	124	88%	100%	1P	8	50	56%	100%
Fawcett Lne	btwn	Cul-de-sac	&	Moon St	South Kerb	2P	6	207	60%	100%	NL	9	232	83%	100%