Final Report

Dickson Precinct Traffic and Parking Study

25 July 2012 Ref. 3002303

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Dickson Precinct Traffic and Parking Study – Final Report

For: ESDD

JULY 25, 2012

EXECUTIVE SUMMARY

A master plan for the Dickson Group Centre was developed in 2011 by ACT Planning and Land Authority (ACTPLA, now Environment and Sustainable Development Directorate (ESDD)). This master plan defines the structure of development in the Dickson precinct over the next 30 years. SMEC has been engaged to undertake an assessment of the master plan and make recommendations regarding transport, including non-motorised transport, parking and traffic, for the current situation, the short term time frame and the long term implementation of the master plan.

A number of transport studies have been conducted in Dickson recently, especially regarding parking, and these studies have been reviewed and the outcomes used where appropriate for this study.

ES.1 Existing Conditions

The following investigations into the current conditions in Dickson were undertaken:

- Examination of pedestrian and cycle network connectivity and condition
- Survey of pedestrian and cycle volumes
- Survey of parking supply and utilisation
- Survey of traffic volumes
- Micro-simulation modelling
- Intersection analysis

All surveys of demand (cyclist, pedestrian, parking and traffic) were carried out for four peak periods, namely:

- Weekday AM peak (7:00AM-9:00AM)
- Weekday PM peak (4:00PM-6:00PM)
- Weekend midday peak (11:00AM-1:00PM)
- Weekend evening peak (6:00PM-8:00PM)

A site visit was conducted to examine the provision of pedestrian and cyclist infrastructure, as well as its condition and possible safety risks. It was found that, while the provision and condition of the infrastructure tend to be good, there are a few areas that require upgrades.

The pedestrian and cyclist volumes at 24 locations across Dickson were surveyed to allow identification of areas of high demand and possible prioritising of recommendations based on volumes.

A parking supply and utilisation survey was carried out for the centre. 23 parking areas were identified and surveyed for the four peak periods. It was found that there is significant spare capacity across the centre, with utilisation peaking at 63%. However, demand during different peaks is focused on certain parking areas and the centre may benefit from better signage and pedestrian connectivity to encourage better use of car parking areas that are slightly further from the land use they are serving. Gated and publicly accessible car parks were analysed separately and it was found that 65% of the parking is publicly accessible. The publicly accessible parking had a maximum utilisation of 64%, which occurred in the weekday PM and weekend midday peak periods. It is noted that 391 parking spaces were not surveyed (329 in the Dame Pattie Menzies House structured car park and up to 62 on-street parking spaces on Antill Street).

Traffic turning volume surveys were conducted for 21 intersections across the precinct for the four peak periods. These surveys showed that traffic volumes tend to be higher on external roads, including Northbourne Avenue, Antill Street and Cowper Street, than inside the centre. These roads had significantly higher traffic volumes on weekdays than weekends. However, the traffic volumes inside the centre tended to be higher during the weekend peaks than the weekday peaks.

The hierarchy of the road network in the study area was assessed, based on the traffic volumes. It was found that most roads carried traffic volumes appropriate to their hierarchy. However, Antill Street, Cowper Street and Challis Street are currently carrying more traffic than is recommended for their respective hierarchies.

Finally, the 21 intersections were analysed for the four surveyed peaks using SIDRA Intersection. The results of this analysis showed that there are a small number of intersections currently experiencing traffic congestion and high levels of delay for vehicles travelling through them.

ES.2 Assessment of Master Plan

The master plan goals were assessed for two future scenarios:

- Short term, including the development of supermarkets on Blocks 19 and 21
- Long term where the entire master plan is assumed to be implemented

In the short term, only the parking requirements during construction of the supermarkets were assessed as the traffic impacts of the completed supermarket developments were assessed in 2011 by Brown Consulting. It was found that there was insufficient spare parking capacity to cater for the lost capacity while construction is underway if both blocks are developed at the same time. In addition, there is unlikely to be sufficient spare capacity in existing car parks to cater for the lost capacity while Block 21 is being developed, if construction cannot be staged and part of the car park kept open during construction. Indicative levels of development of the two sites were found by Brown Consulting to require replacement of the existing 326 parking spaces and provision of an additional 359 parking spaces. Any development on this site should comply with the requirements of the *ACT Parking and Vehicular Access General Code*.

In the long term, a number of recommendations were made to meet the pedestrian connectivity goals. These included new crossing points and upgrades to existing paths. Some of the goals of the master plan regarding pedestrian and cyclist facilities were addressed in the short term recommendations.

The level of detail available regarding future developments in the Dickson master plan is relatively low so a detailed parking assessment was not able to be carried out. However, indicative parking requirements were developed based on potential land use supplied by ESDD. The calculations carried out indicate that the parking demand is likely to increase to approximately 6,000 in 2031 from 2,500 in 2012. All of this parking will need to be provided inside future developments, probably as basement levels.

The potential indicative road hierarchy, based on predicted daily traffic volumes was also investigated. It was found that with the increased development in Dickson, a number of roads would be carrying substantially higher traffic volumes than is recommended for their hierarchy. These roads include:

- Cowper Street
- Challis Street
- Cape Street (including the extension)

- Badham Street
- Dickson Place

The predicted traffic volumes on these streets mean that on-street parking may not be appropriate. In addition, access and egress to and from developments may be impacted by the high volumes.

The final assessment of the long term scenarios was intersection analysis, both with and without the implementation of the master plan. The same 21 intersections that were analysed for the current situation were analysed for the long term scenarios. In addition, the new intersection related to the extension of Cape Street to Northbourne Avenue in the west and Dickson Place in the east were analysed for the master plan scenario.

It was found that there are a number of intersections that are expected to perform at Level of Service F, which indicates an unacceptable level of delay for drivers, in the long term. Many of these intersections showed similar performance in scenarios both with and without master plan implementation. A number of potential upgrades were recommended to address the performance issues.

ES.3 Cost Estimates

Cost estimates for the recommended upgrades and modifications were developed for the current situation and the long term master plan scenario. These costs are shown in the table below and include 40% contingency and GST.

Time Frame	Estimated Cost (inc GST)
Short term recommendations	$650,850
Long term recommendations	$1,113,600
Total	**$1,764,450**

These recommended actions will address all current issues identified and allow the implementation of the developments proposed in the master plan.

ES.4 Recommendations

The current operation of the transport network in Dickson was assessed and found to be generally good. However, addressing the following improvements should be prioritised in the short term:

- Pedestrian and cyclist infrastructure and safety:
  - Provide a pedestrian crossing on Challis Street near its intersection with Morphett Street
  - Provide a pedestrian crossing on Challis Street near the Telstra Building
  - Provide a pedestrian crossing on Antill Street near its intersection with Pigot Street (short term only)
  - Provide a pedestrian crossing on Dickson Shops Road close to the intersection with Cowper Street

- Monitor the safety of the pedestrian crossing on Challis Street north of Daramalan College and intervene with a raised pedestrian crossing if required
- Widen the 1.2m concrete paths around Daramalan College to 2.0 metres wide
- Provide better lighting on the path extension from Badham Street to the shared path to the south of the precinct to improve security
- Ensure pedestrian ramps along Challis Street have appropriate steepness for wheelchair access.
- Construct a new pedestrian/cyclist path connection from north of Rosevear Place to shared path to the south and swimming pool

▪ Car parking operations:

- Implement better signage to inform users about the location of parking areas that are currently underutilised, especially the pool car park, the surface car park south of Dickson Place and the car park underneath the Dickson Tradies Club

▪ Road network and intersections

- Signalise the intersection of Morphett Street with the southbound carriageway of Northbourne Avenue. The northbound carriageway would remain as it is.

These recommendations are expected to improve the transport operations and safety in Dickson in the short term.

A number of recommendations have been made to allow implementation of the master plan and these should be implemented as required. These recommendations include:

▪ Pedestrian and cyclist infrastructure and safety:

- Provide north/south external links into Dickson by signalising the intersection of Antill Street and Badham Street
- Improve pedestrian safety at the intersection of Morphett Street and Challis Street (preferably by signalisation)
- Improve pedestrian safety at the intersection of Morphett Street and Cowper Street (preferably by signalisation)

▪ Car parking operations:

- Implement an area wide parking strategy to efficiently plan parking for future developments

▪ Road network and intersections:

- Signalise the intersection of Antill Street and Challis Street
- Signalise the intersection of Challis Street and Cape Street
- Signalise the intersection of Challis Street and Morphett Street
- Signalise the intersection of Antill Street and Badham Street (also recommended to improve pedestrian access to Dickson from the suburbs to the north)
- Signalise the intersection of Morphett Street and Cowper Street (also recommended to improve pedestrian safety around Daramalan College)

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1 INTRODUCTION

1.1 Background

Dickson Group Centre is one of the larger and more active group centres in Canberra and a master plan for the centre has been recently developed (May 2011). This master plan redefines building heights and the layout of the group centre in the longer term, which then allows for increased development in the area.

There have been concerns that the increased development and changes to the layout will have a negative impact on transport and parking in the area. The aim of this project is to assess the impacts of the proposed master plan and to develop options to address these impacts. In addition, the current public transport proposals for Dickson and the Northbourne Avenue corridor will be integrated with the future options for Dickson.

1.2 Objectives

The following are the main objectives of this study:

- Integrate transport into the Dickson Master Plan and consider the current public transport planning projects underway in the area
- Develop integrated parking and transport network provisions for the next 30 years (assuming that the Dickson Master Plan is implemented)
- Investigate the effects of the master plan developments on transport in and around the Dickson Group Centre and develop solutions if required
- Determine if and where road improvements will be required to address the increased development in the group centre
- Determine if changes need to be made to the Dickson Master Plan to address potential parking and transport impacts

1.3 Study Area

The study area for this project is shown in *Figure **1***. The study area includes the group centre and is bounded by Antill Street, Northbourne Avenue, Morphett Street, Cowper Street and Rosevear Place.

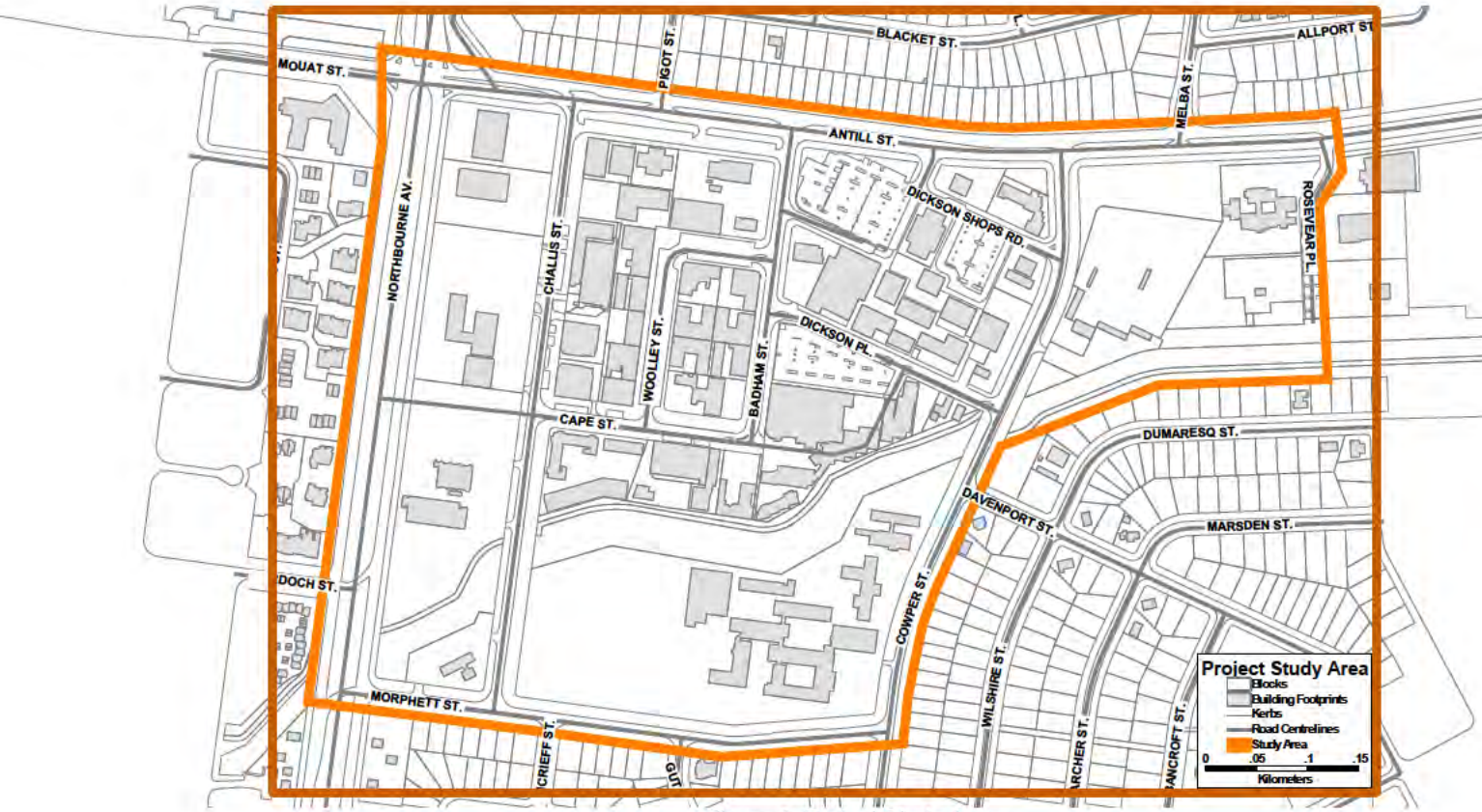

Figure 1: Project Study Area

2 REVIEW OF RELEVANT BACKGROUND REPORTS

SMEC has reviewed previous reports relating to traffic and parking in Dickson. These reports and a brief description of each are listed below:

- Dickson Master Plan, ACTPLA, May 2011
- Dickson Group Centre Temporary Parking Areas, Brown Consulting, May 2011
- Development Traffic Assessment Report for Block 19 and 21, Dickson Shops, Dickson, ACT, Brown Consulting, June 2011
- Dickson Group Centre Parking Utilisation Study, Brown Consulting, August 2011
- Dickson Temporary Car Parks, SMEC, August 2011

The Dickson master plan, developed by ACTPLA (now ESDD) is the primary background document for this study. The master plan examines the current situation and makes long term recommendations for the development of the precinct. The Dickson master plan also defines a number of sub-precincts in Dickson as shown in *Figure* **2**. These precinct names will be used in this study to refer to the relevant areas.

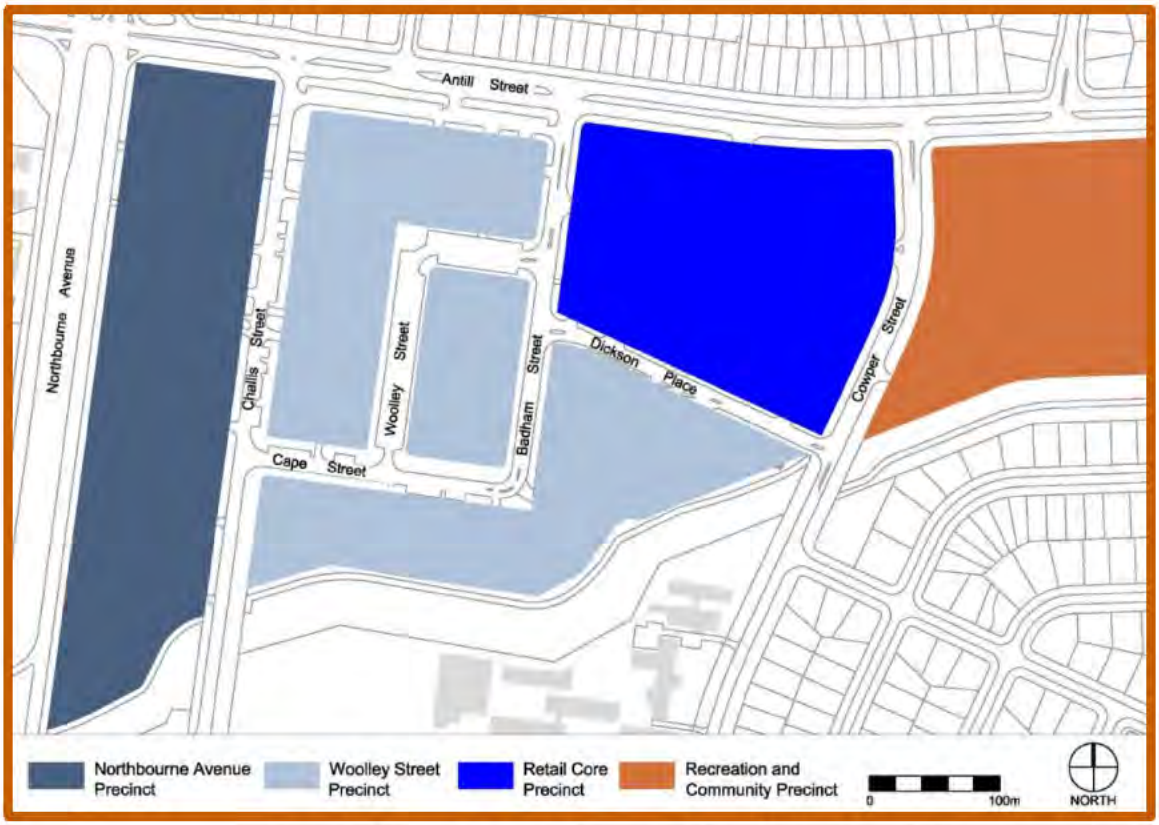

Figure 2: Dickson Precincts (Source: Dickson Master Plan, p19)

In May 2011, Brown Consulting undertook a brief examination of the Dickson area to determine if there were suitable areas able to be used for temporary car parking while redevelopment of existing car parks was underway. They found that there were a number of areas available and recommended further investigations into the following sites:

- Formal on-street parking on Antill Street
- An extension of the existing aquatic centre car park to the east
- A new parking area to the north of the aquatic centre
- Temporary parking on the old ACTAB site

These recommendations were examined in more detail in a later study by SMEC.

Brown Consulting conducted a traffic assessment report for the proposed developments on Block 19 and Block 21, which are currently open air car parks. This assessment found that the current car parks operate at, or slightly over, capacity during the main shopping peak, which is during the middle of the day on a Saturday. The conclusions of the study stated that the development is not expected to have a significant effect on traffic operations in the Dickson Group Centre. In addition, the development will cause a slight shortfall in parking provision, which is expected to lead to overspill of parking demand into adjacent areas.

In August 2011, a parking utilisation study for the Dickson Precinct was undertaken by Brown Consulting. This study found that there was significant spare parking capacity in the Dickson centre at all times, with utilisation rates of 51%-74% on weekdays and 40%-51% on weekends.

Also in August 2011, SMEC undertook concept design of four of the temporary parking areas suggested by Brown Consulting in May 2011. The concept design process included an investigation into existing drainage, vegetation and services. The designs produced included details of car park surface treatments, drainage, access, landscaping, lighting, impacts on vegetation and pedestrian connectivity. In addition, preliminary cost estimates for each of the four car parks were estimated.

3 EXISTING CONDITIONS

A number of investigations on the existing conditions in and around the Dickson Group Centre were conducted, which include the following:

- Examination of pedestrian and cycle network connectivity and condition
- Survey of pedestrian and cycle volumes
- Survey of parking supply and utilisation
- Survey of traffic volumes
- Micro-simulation modelling
- Intersection analysis

Currently, Dickson has a mixture of land use including office, commercial and entertainment. As these land uses have different peak times in terms of traffic generation, the surveys and analyses were conducted over four peak periods to gain a thorough understanding of the existing transport and parking conditions. The four peak periods specified by the client were:

- Weekday AM peak (7:00AM-10:00AM)
- Weekday PM peak (4:00PM-6:00PM)
- Weekend Mid-day peak (11:00AM-1:00PM)
- Weekend Evening peak (6:00PM-8:00PM)

The following sections provide detailed discussions of the investigations outlined above.

3.1 Pedestrian and Cycle Network

The pedestrian and cycle network assessment was based on a site inspection of Dickson Precinct and a desktop assessment of the pedestrian and cycle survey results.

*Figure **3*** shows the existing cycle and pedestrian path network within Dickson, based on GIS information obtained from TAMSD. A site inspection was carried out on 19 March 2012, which focused on identifying potential infrastructure and safety issues for pedestrians and cyclists.

Figure 3: Dickson Precinct Pedestrian and Cyclist Paths

3.1.1 Pedestrian and Cyclist Safety Assessment

Pedestrian Safety

The precinct is generally safe for pedestrians to move around with pedestrian crossings or signalised crossings on most pedestrian desire lines. However, there are some areas where pedestrian safety at road crossings should be considered:

- Safer access across Challis Street at the intersection with Morphett Street would improve safety for students accessing Daramalan College by walking along Morphett Street
- A second pedestrian crossing of Challis Street near the Telstra Building would benefit office building occupants accessing the Dickson business area (construction of a crossing in this location began after the site inspection was carried out)
- A formal pedestrian crossing on Antill Street near the Pigot Street intersection would provide better access from the subdivision area north of Dickson (in the short term only as signals will be provided at Challis Street in the long term)

The footpaths around Daramalan College are 1.2m wide concrete paths, 2.0m wide paths should be considered to allow groups to access them. In addition, they are narrow for a mix of pedestrian and bicycling use.

There is anecdotal evidence that the pedestrian crossing on Challis Street, just north of Daramalan College, is a regular accident site. No specific issues at this location were noted during the site visit. If there are persistent safety issues at this crossing, it is recommended that a raised pedestrian crossing be installed. This will increase the visibility of the crossing point and also force drivers to slow down as they approach.

Off-Road Bicycle Safety

There is a shared path running in a generally east-west direction to the south of Dickson that is used regularly by cyclists and pedestrians. There are three access points into Dickson from this path:

- Along Challis Street footpath
- Along Cowper Street footpath
- Footpath connection to Badham Street

Some paths on Challis Street, Badham Street, Cowper Street, Dickson Place and Antill Street are narrow and not suitable for shared usage by pedestrians and cyclists. The paved areas within the shopping areas have 90-degree blind corners and are not suitable for cycling.

On-Road Bicycling

There are no formal on-road cycle lanes marked within the Dickson Group Centre except for Northbourne Avenue. The internal streets have a lot of turning vehicles accessing intersections and car parking areas as well as reversing out of 90-degree on-street parking bays. The area is not considered to be a safe environment for on-road cycling under the current traffic control scheme.

Bus Services

The Dickson Group Centre has bus stops around the perimeter on Northbourne Avenue, Antill Street and Cowper Street. The maximum walking distance between the bus stops and employment/shops is approximately 600m across the precinct. An internal bus interchange would reduce that distance to less than 400m.

Lighting

All streets have street lighting and most public car parking areas have adequate lighting. The pedestrian areas through the shopping area have pedestrian style lighting. The regional shared path has been provided with lighting recently. The only pedestrian area to rely on ambient light is the path extension from Badham Street to the shared path on the south side of the precinct. This path is constrained by fences either side and has no passive security opportunity and provides a moderate security risk for users late at night.

Infrastructure Quality

The internal paths and crossings are in good condition with evidence of maintenance. Some concrete paths, both inside the precinct and on the perimeter are narrow for two way pedestrian/cycle use. Future path widening of these paths will improve the amenity.

3.1.2 Pedestrian and Cyclist Infrastructure Assessment

Path Widths

Concrete path widths outside the central retail area are generally 1.2m wide. Pedestrian traffic in some areas, particularly around Daramalan College would benefit from 2.0m wide paths to allow simultaneous bicycle and pedestrian access.

Morphett Street - Challis Street Intersection

Students cross Challis Street at the intersection when walking along the Morphett Street northern path. There is risk of conflict between turning vehicles and pedestrians. A controlled crossing should be considered.

Challis Street

During the AM peak, traffic generally formed platoons allowing adult pedestrians breaks in traffic to cross safely without traffic control.

Students accessing Daramalan College were observed to use the pedestrian crossing adjacent to the storm drain and access the college through a side gate.

Pedestrian movements appear to be low in the morning.

Movements may increase between the office blocks and food outlets during lunch break. A pedestrian crossing near the Telstra Building may be warranted.

Two steep pedestrian ramps were noted north of Dame Pattie Menzies House that are too steep for wheel chair access. These ramps are located at each end of the row of shops between Dame Pattie Menzies House and Antill Street. There is a footpath that runs adjacent to the ramps but this is often blocked by cars parking with their wheels against the kerb and their noses over the footpath.

Dickson Place

There is a pedestrian crossing from the shopping plaza area to the car park that requires pedestrians to share the area with circulating vehicles. The footpath adjacent to Dickson Place south has trees blocking access.

There is a paved walkway at the south-eastern end of the shopping plaza (approximately 40 metres west of the intersection with Cowper Street) that would provide a safer crossing if a pedestrian crossing was provided. However, a crossing at this location may have a negative impact on the operation of the intersection of Dickson Place and Cowper Street, which already provides a signalised pedestrian crossing, due to potential queuing caused by the crossing if pedestrian volumes are high.

Rosevear Place

There is no direct access from the area south of the storm drain, including the shared path, to the businesses in Rosevear Place.

There is a pedestrian path at the northern end of Rosevear Place. Pedestrians share the road with vehicles accessing car parks at the southern half of the road.

There is no formal path between the southern end of Rosevear Place and the swimming pool complex.

Cowper Street

There are four formal crossing points provided along Cowper Street, two are signalised and two are pedestrian crossings.

Dickson Shops Road has no pedestrian crossing close to the intersection with Cowper Street.

Antill Street

There are signalised pedestrian crossings at Cowper Street and another near the Dickson Library providing access to the north-east. The next signalised intersection is at Northbourne Avenue.

Pedestrian access across Antill Street from Pigot Street and to Challis Street is uncontrolled

Northbourne Avenue

There are pedestrian crossings at the Antill Street signalised intersection and a signalised pedestrian crossing at the shared path crossing near Morphett Street.

There are two uncontrolled mid-block crossing points with concrete paths in the median.

General Observations

Pedestrian access between Woolley Street, Badham Street and the car parks and plaza area are good with formal pedestrian crossings on desire lines. The condition of paths is generally good in this area.

3.1.3 Pedestrian and Cyclist Volumes

Figure ***4*** shows the locations where pedestrian and cyclist count surveys were conducted. Note that the locations are mostly the same as the intersection count survey locations discussed later in this report, except for some pedestrian crossings. As discussed earlier, four peaks were identified by the client and the surveys were conducted for those peaks.

Figure 4: Pedestrian and Cyclist Survey Locations

Figure 5 to *Figure* ***8*** show summaries of the pedestrian and cyclist survey for each peak period. The blue bars represent the total pedestrian movements through a location while the green bars represent the total cyclist movements through the location.

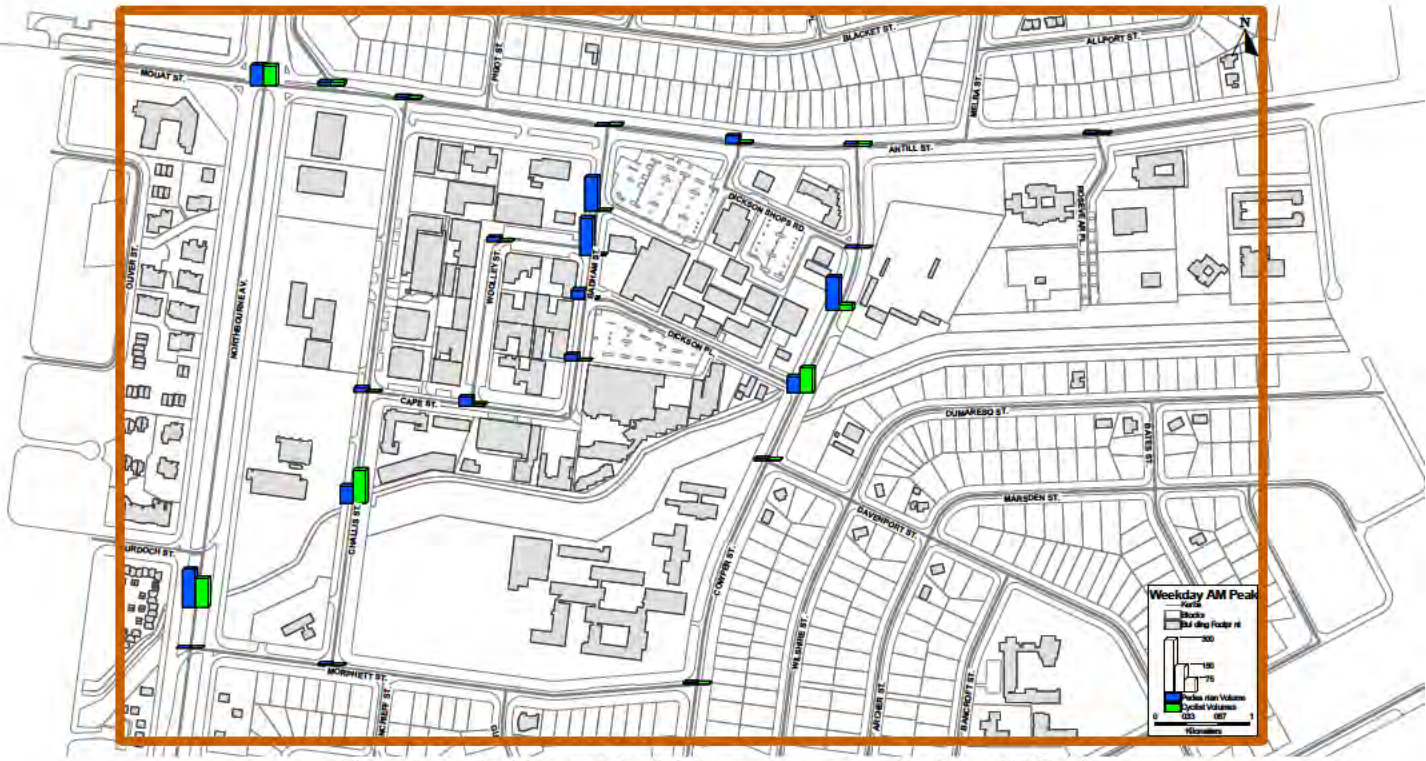

Figure 5: Pedestrian and Cyclist Survey Summary (Weekday AM Peak)

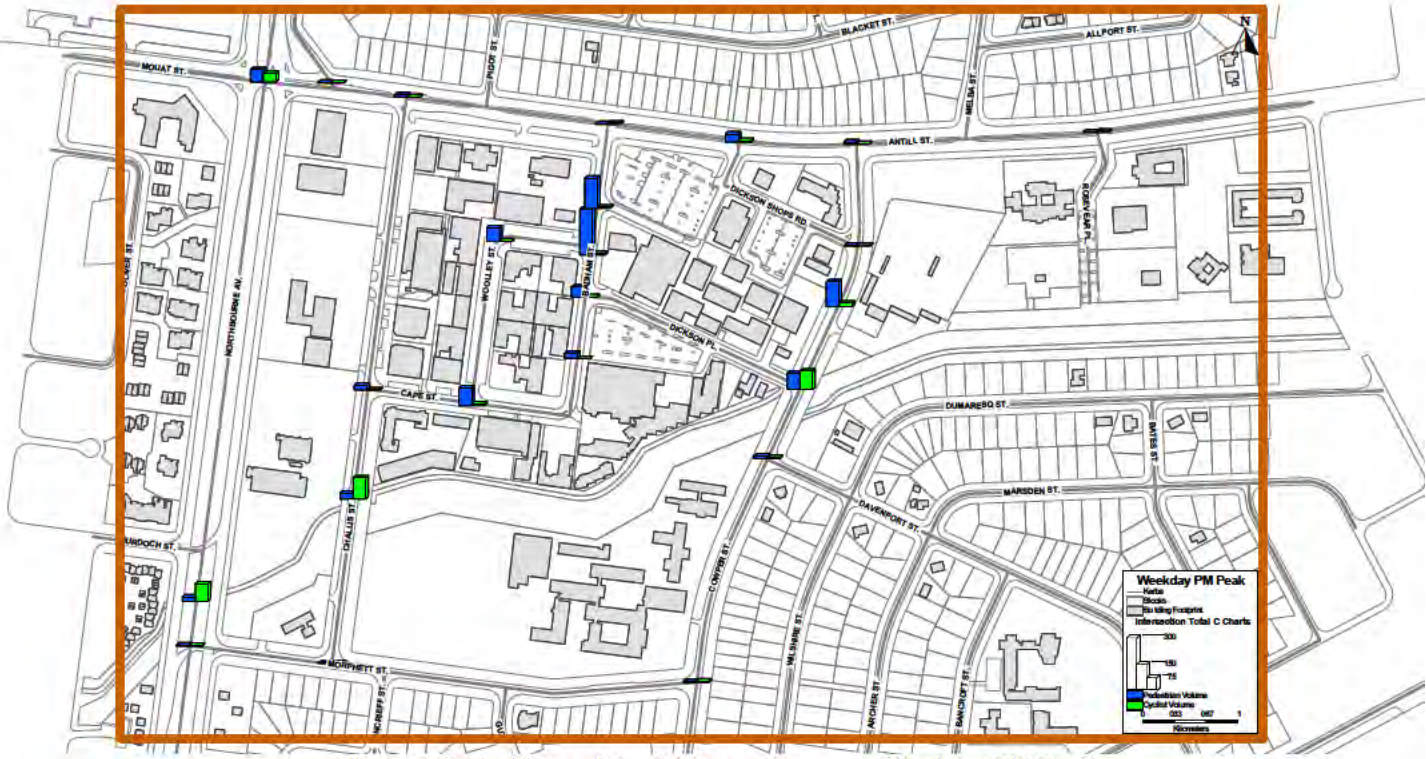

Figure 6: Pedestrian and Cyclist Survey Summary (Weekday PM Peak)

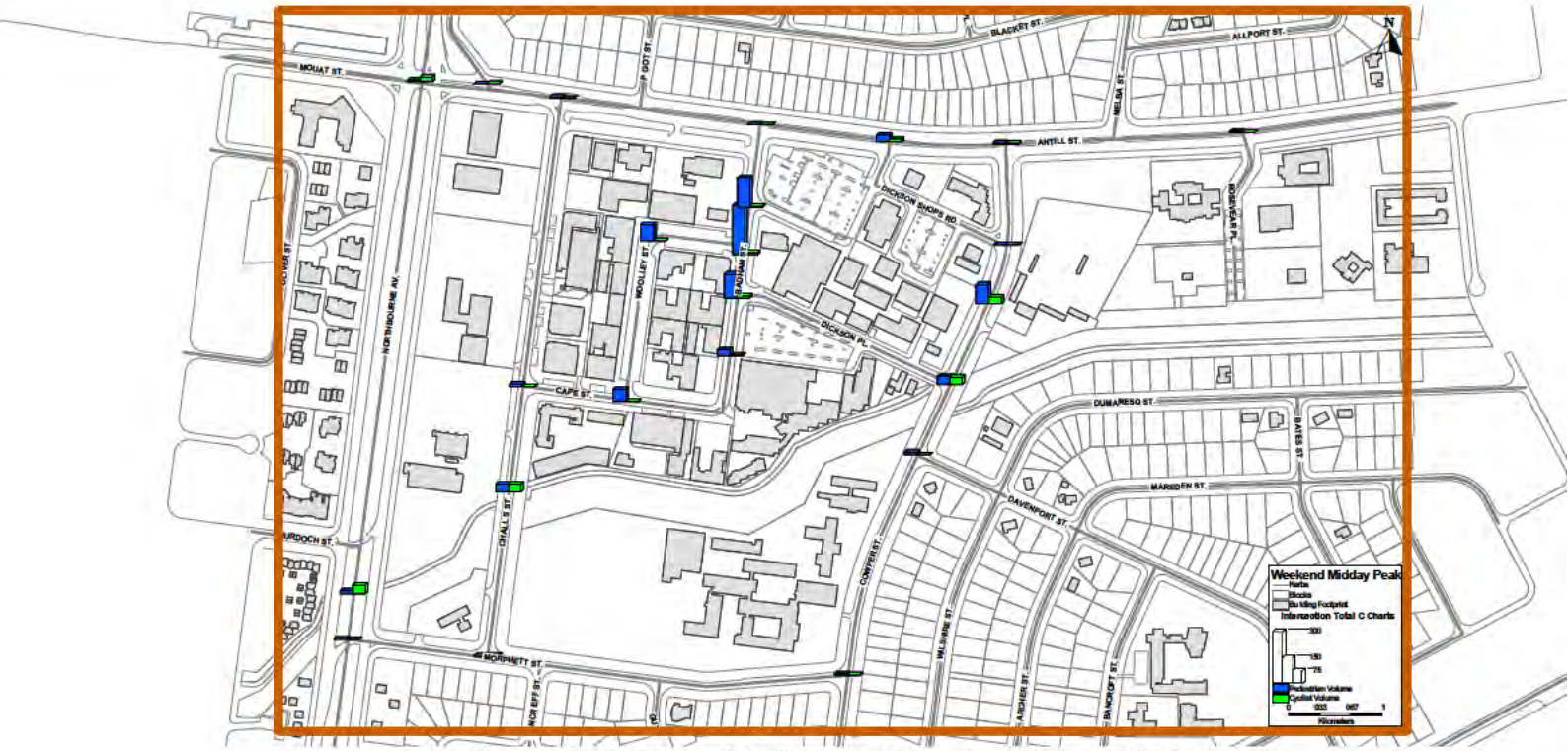

Figure 7: Pedestrian and Cyclist Survey Summary (Weekend Mid-day Peak)

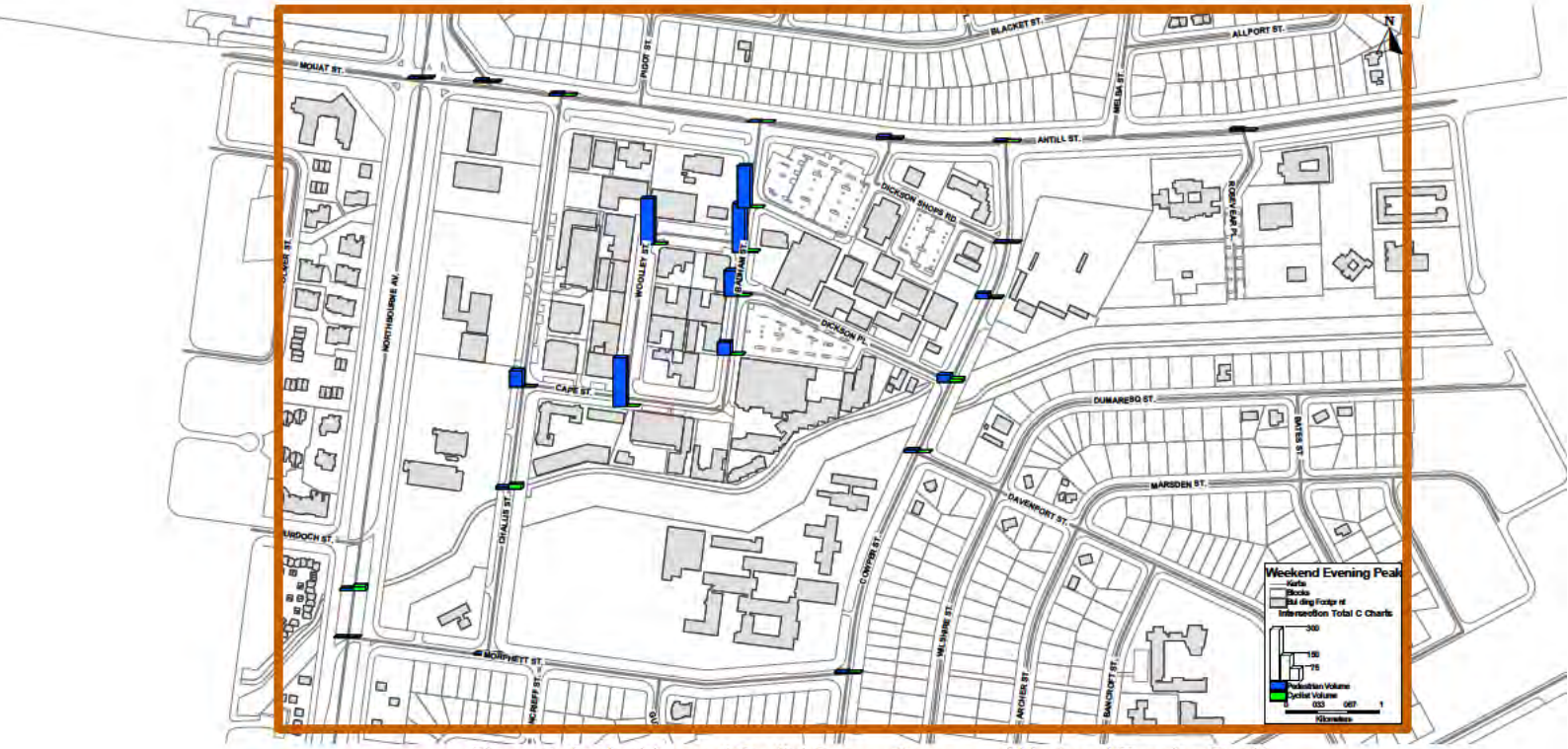

Figure 8: Pedestrian and Cyclist Survey Summary (Weekend Evening Peak)

*Table **1*** shows a summary of the volumes presented in the preceding figures.

Table 1: Summary of Pedestrian and Cyclist Survey (2 Hour Peak Period)

Location (Intersection)	Weekday AM		Weekday PM		Weekend AM		Weekend PM	
	Peds	Cycles	Peds	Cycles	Peds	Cycles	Peds	Cycles
1	117	113	70	48	7	27	2	3

Location (Intersection)	Weekday AM		Weekday PM		Weekend AM		Weekend PM	
	Peds	Cycles	Peds	Cycles	Peds	Cycles	Peds	Cycles
2	21	22	4	2	1	4	10	0
3	17	8	13	2	7	0	12	2
4	9	11	4	6	1	0	3	2
5	46	10	46	8	37	13	17	3
6	17	17	13	4	8	6	8	4
7	13	7	3	7	6	4	8	1
8	193	3	171	6	171	8	240	2
9	3	0	4	2	2	0	5	0
10	213	3	259	8	295	13	334	7
11	52	3	58	3	139	15	149	5
12	93	141	91	104	45	43	42	19
13	25	0	26	0	15	0	96	0
14	49	10	102	10	72	2	305	1
15	11	6	16	7	16	0	13	3
16	0	0	6	4	5	0	2	0
17	11	1	0	3	5	6	5	0
18	9	5	4	7	7	5	8	4
19	215	164	25	99	18	50	13	27
20	101	191	33	121	46	46	14	25
21	35	0	29	0	35	3	74	4
22	23	2	76	2	93	2	265	3
23	190	34	143	21	110	38	28	6
Total	**1,463**	**751**	**1,196**	**474**	**1,141**	**285**	**1,653**	**121**

These figures and table show that Badham Street and the northern section of Cowper Street are utilised heavily by pedestrians during all four peak periods of the survey, except for Cowper Street in the weekend evening peak. Cape Street and Woolley Street are also heavily used by pedestrians during all peaks with the exception of the weekday AM peak period.

The shared path north of Daramalan College carries a significant number of cyclists and pedestrians at the crossings with Cowper Street, Challis Street, and Northbourne Avenue, mainly during the weekday peaks. The shared path tends to have more cyclists than pedestrians during both weekday peak periods and is likely to be used primarily by commuters. During the weekend peak periods, this path is utilised considerably less than during the weekday peak periods.

3.2 Parking Assessment

The parking assessment was based on a parking utilisation survey which was conducted during the same four peak periods specified for the pedestrian and cyclists count surveys. *Figure* ***9*** shows the location of the parking areas that were surveyed. It is noted that the surveys do not include the structured car park to the north of Dame Pattie Menzies House (on Challis Street) or the on-street parking areas on Antill Street. Previous studies in Dickson indicate that the capacity of the on-street parking area on Antill Street could hold up to 62 cars if it was properly marked. In its current unmarked state, it has a capacity of 44 cars. Utilisation of this area peaks at 64% during the week and 27% on weekends. The structured car park on Challis Street has a capacity of 329 vehicles, including 4 disabled spaces (data provided by ESDD). No previous utilisation data is available for this car park.

The weather during the survey periods was mainly fine and there was no rainfall recorded on the weekday surveyed. There was heavy rain recorded after 7:00pm on the weekend day surveyed. This may have had some impact on the evening parking utilisation survey.

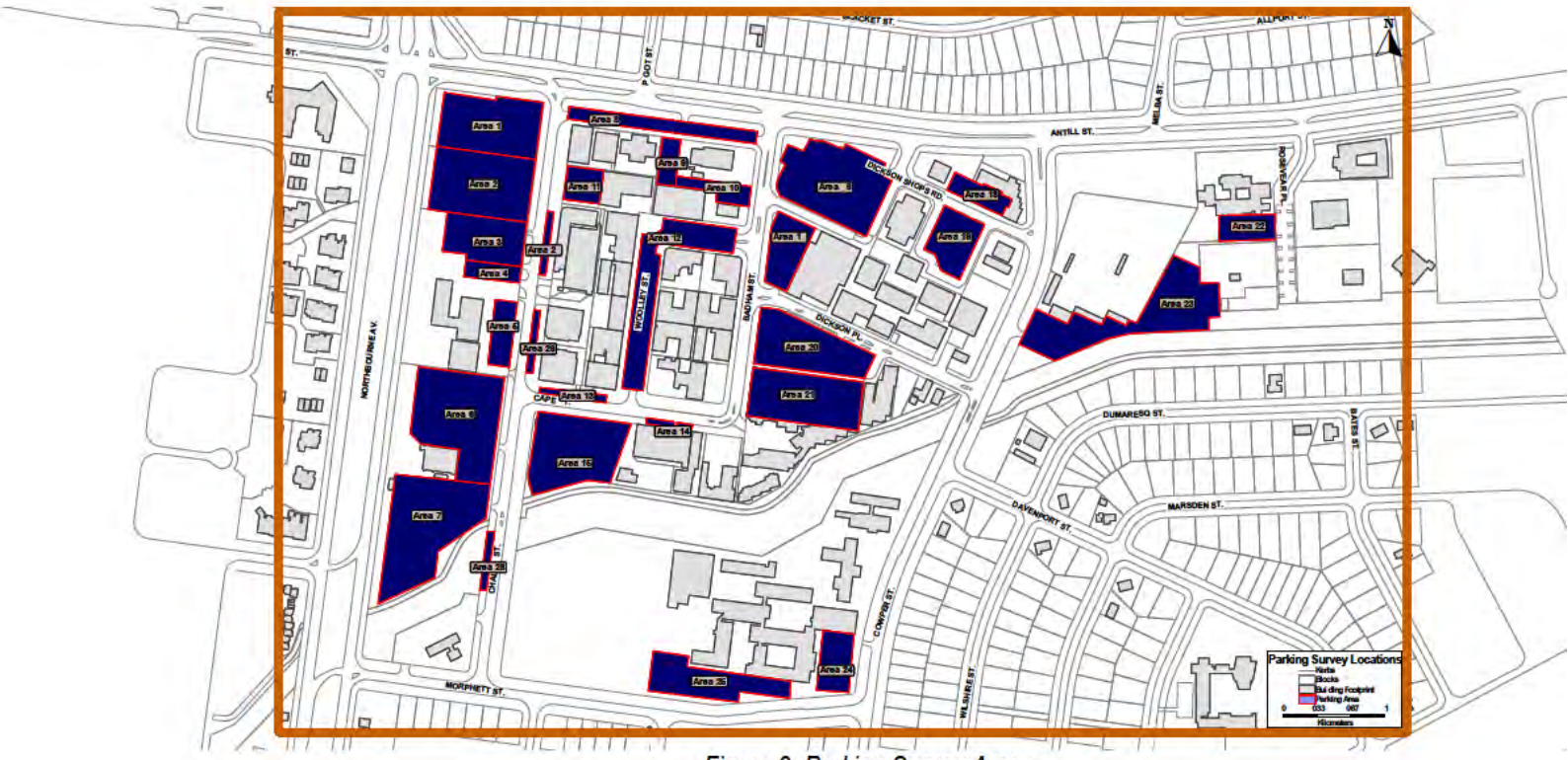

Figure 9: Parking Survey Areas

Figure ***10*** shows the proportion of parking allocations and parking restrictions in each area. It can be seen that Dickson Precinct has a significant number of long term parking spaces, mainly associated with the Northbourne Avenue Precinct, followed by short term parking. Parking spaces are well distributed throughout the precinct, with the majority of the short term parking located closer to the commercial areas.

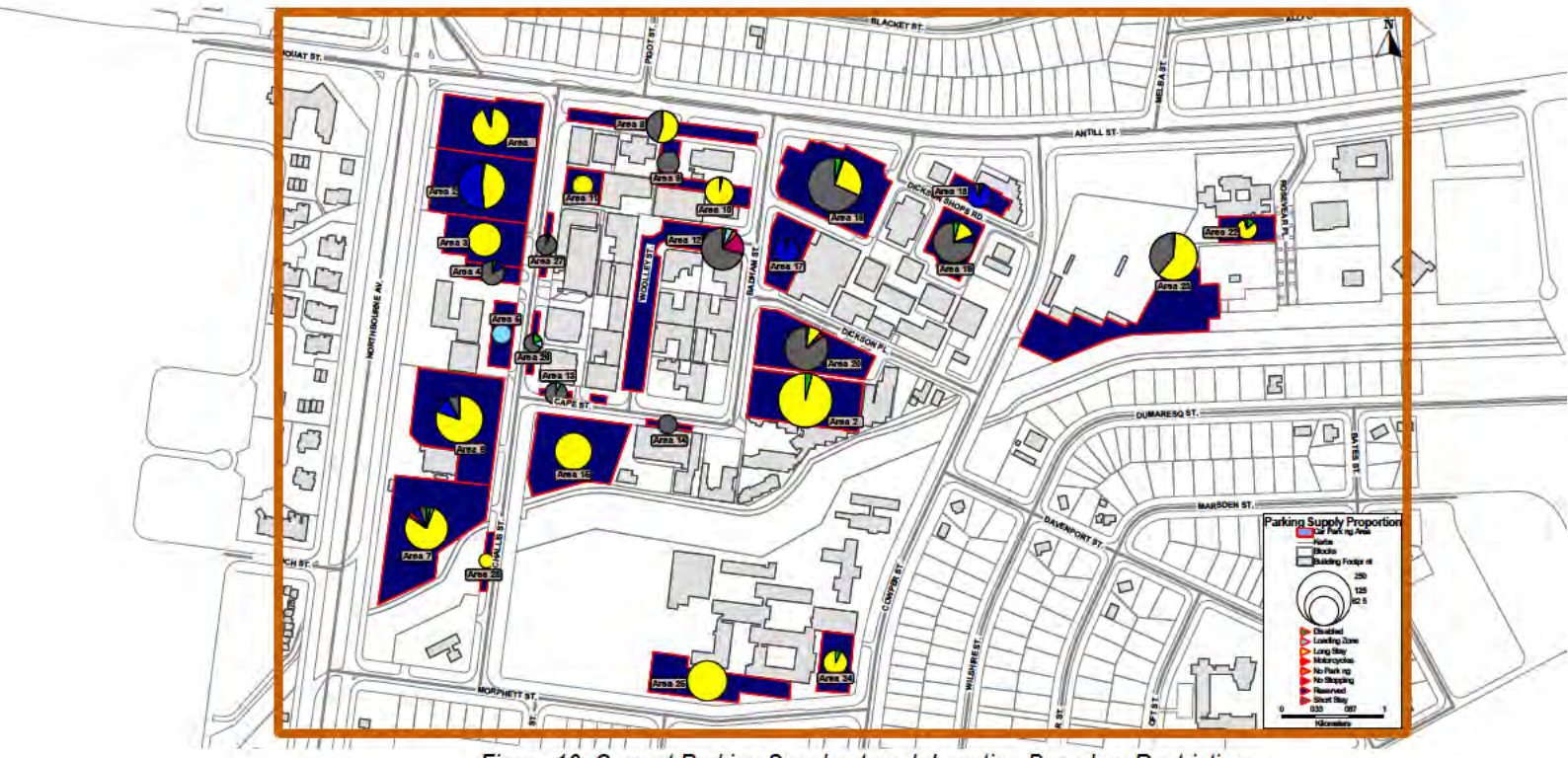

Figure 10: Current Parking Supply at each Location Based on Restrictions

*Figure **11*** to *Figure **14*** provide a summary of the parking utilisation survey.

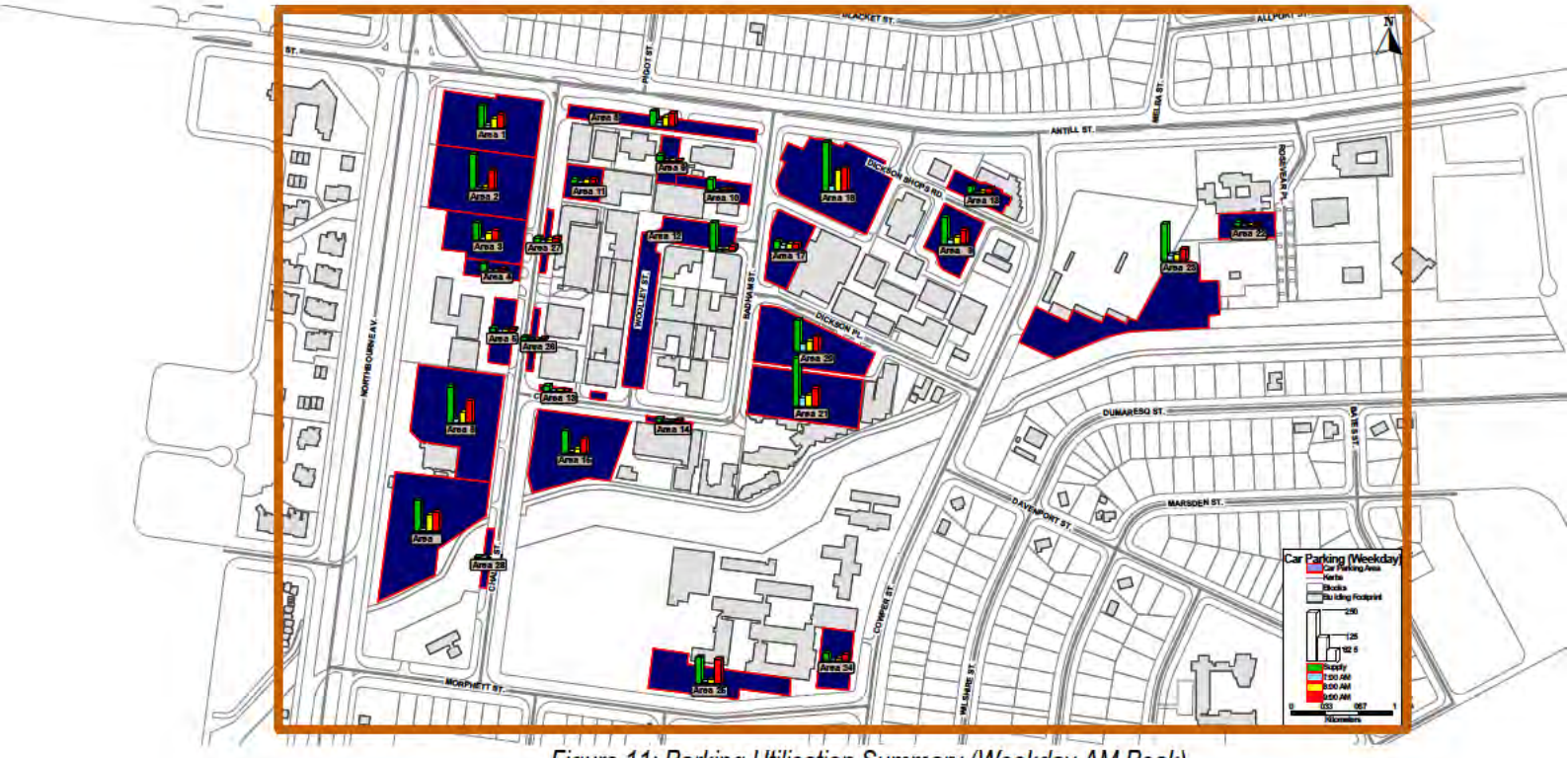

Figure 11: Parking Utilisation Summary (Weekday AM Peak)

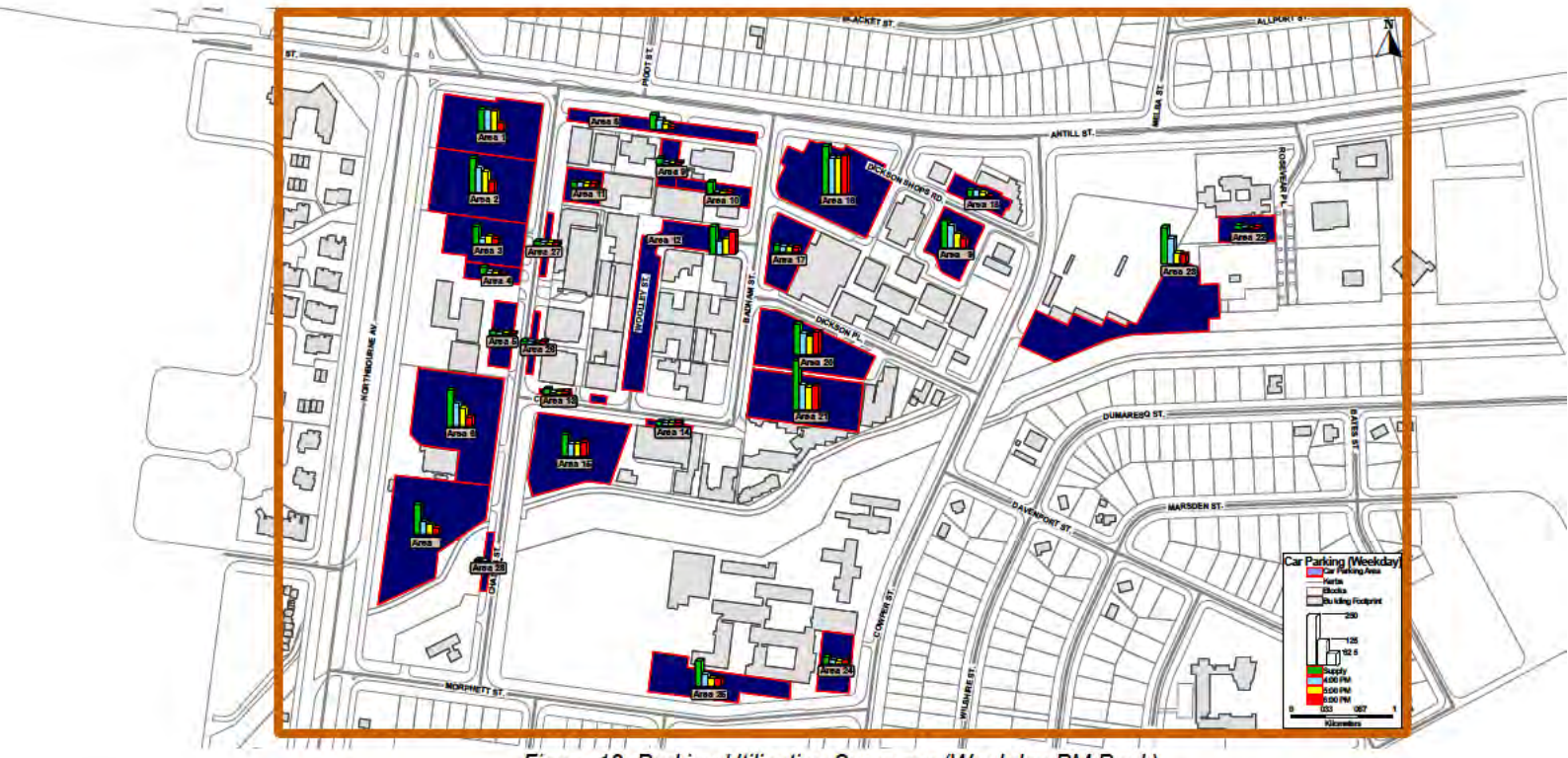

Figure 12: Parking Utilisation Summary (Weekday PM Peak)

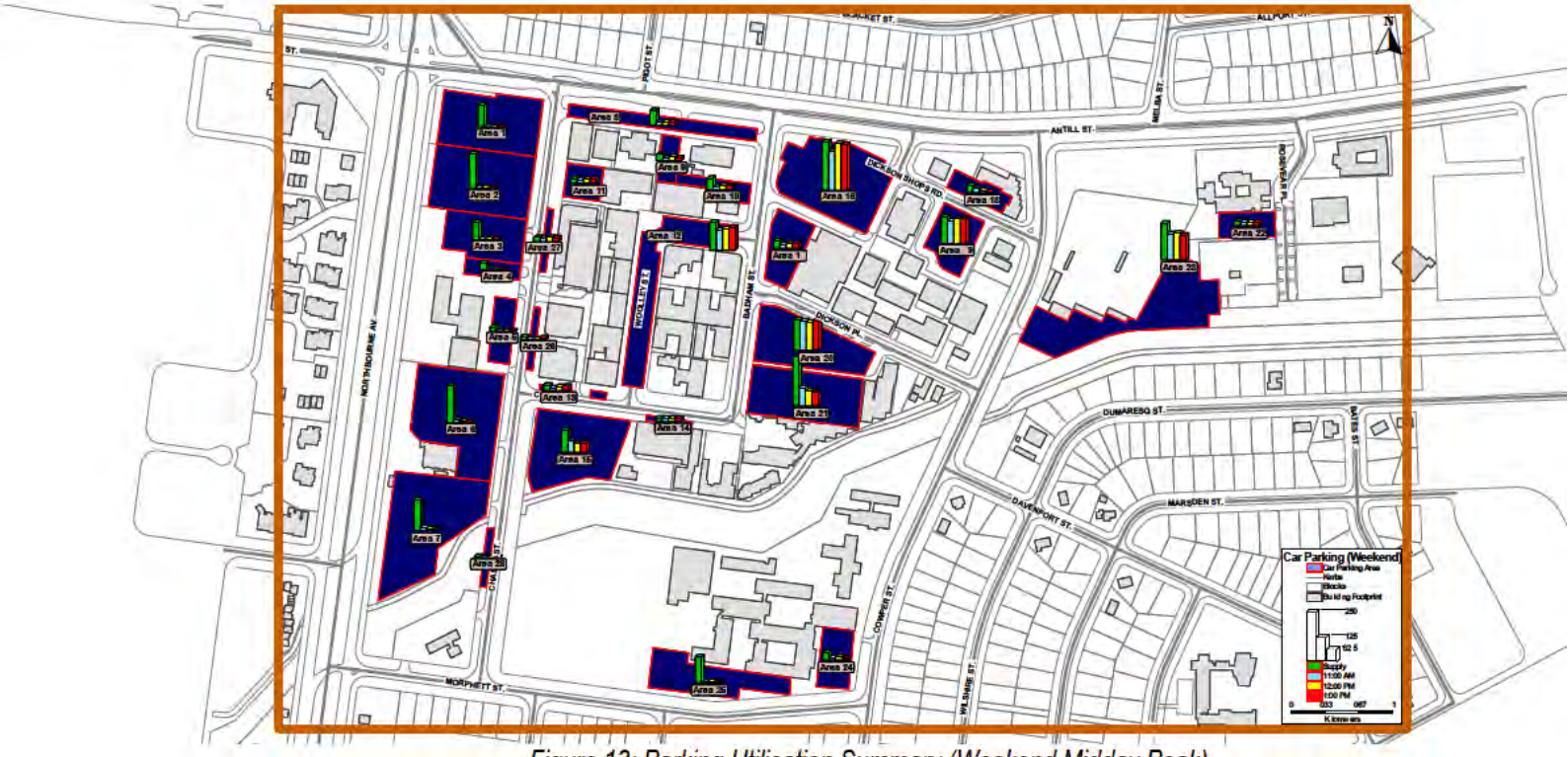

Figure 13: Parking Utilisation Summary (Weekend Midday Peak)

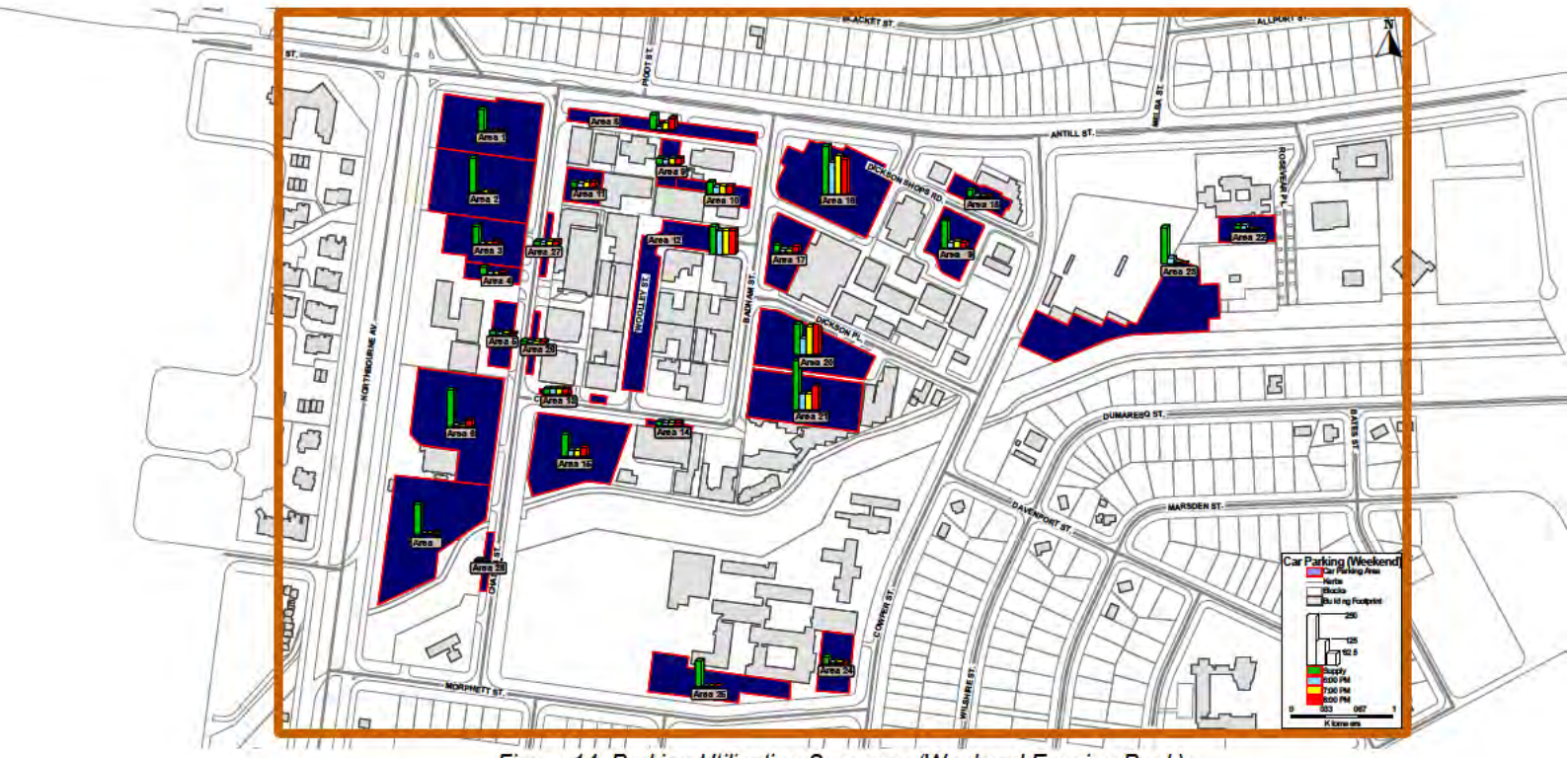

Figure 14: Parking Utilisation Summary (Weekend Evening Peak)

The figures shown above indicate areas where there is expected to be high demand for parking and which time period that demand occurs in. *Table **2*** shows the actual supply and demand for each of the parking areas in each of the time periods surveyed.

Table 2: Summary of Parking Utilisation Survey for the Dickson Precinct

Location (Parking Area)	Supply	Thursday, 16 February 2012						Weekend, 18 February 2012					
		7:00	8:00	9:00	16:00	17:00	18:00	11:00	12:00	13:00	18:00	19:00	20:00
1	111	15	47	69	107	100	43	2	1	1	0	0	1
2	176	11	15	95	129	107	53	6	6	3	6	4	6
3	87	6	37	49	27	37	27	4	3	3	1	0	10
4	35	0	0	11	16	11	0	0	0	0	1	2	10
5	20	0	10	12	14	12	8	0	0	0	5	12	7
6	183	20	55	114	116	94	48	12	5	3	8	9	30
7	151	12	79	95	63	48	33	13	9	4	3	4	9
8	74	21	46	64	49	30	15	14	18	19	12	33	57
9	30	0	2	3	14	7	9	12	18	13	24	29	29
10	58	0	3	6	8	11	15	14	21	20	36	40	41
11	25	7	21	24	24	22	20	18	21	23	20	24	25
12	141	13	11	25	63	78	110	103	109	115	117	121	121
13	27	1	2	0	12	14	17	14	19	21	26	27	26
14	18	3	2	8	16	17	17	17	17	17	17	17	17
15	110	7	23	72	65	65	72	54	42	47	29	32	44
16	242	23	102	116	182	180	191	195	233	228	159	193	177
17	38	21	25	28	32	27	23	19	22	24	17	15	31

Location (Parking Area)	Supply	Thursday, 16 February 2012						Weekend, 18 February 2012					
		7:00	8:00	9:00	16:00	17:00	18:00	11:00	12:00	13:00	18:00	19:00	20:00
18	36	0	13	23	32	24	2	20	11	5	5	1	1
19	135	21	36	72	112	69	44	113	123	124	26	32	27
20	154	35	52	74	107	91	114	147	141	147	80	141	149
21	244	46	57	93	127	115	117	91	74	66	79	82	117
22	22	2	6	10	12	8	15	19	17	18	22	0	0
23	183	27	31	58	129	55	46	130	134	124	31	7	2
24	37	1	11	32	20	16	19	11	15	9	11	10	4
25	129	9	17	120	64	41	39	3	5	2	2	2	3
26	15	0	2	8	11	4	11	3	3	10	9	12	13
27	21	3	15	21	19	17	13	17	21	19	19	21	21
28	7	3	7	7	4	1	0	0	0	0	0	0	0
Total	**2,509**	**307**	**727**	**1,309**	**1,574**	**1,301**	**1,121**	**1,051**	**1,088**	**1,065**	**765**	**870**	**978**
		12%	**29%**	**52%**	**63%**	**52%**	**45%**	**42%**	**43%**	**42%**	**30%**	**35%**	**39%**

Table ***2*** shows that the total utilisation of parking in Dickson is relatively low, peaking at 63% at 4:00 PM on a weekday. However, the parking demand is not evenly distributed and there are a number of parking areas operating close to capacity, which are indicated in red in the table. A number of these parking areas are small (Areas 9, 11, 13, 14, 22, 27 and 28) and excess demand for these areas is likely to be met in adjacent sites. However, large areas such as Areas 1, 16, 19, and 20 that are operating close to capacity indicates that there are likely to be large numbers of vehicles circulating and searching for space.

A number of car parks in Dickson are access controlled and are not accessible to the public. These controlled car parks include Areas 1, 2, 3, 6, 7, 24 and 25. While 24 and 25 are not controlled, they are used by Daramalan College and are too far from the Dickson Centre to be used by people travelling to Dickson. Area 3 has its boom gates removed after workday business hours and on weekends and becomes publicly accessible. However, it is not heavily utilised in the weekend peaks.

As mentioned earlier, the DPMH structured car park and Antill Street on-street car parking areas were not surveyed. These areas would add 391 spaces to the supply in Dickson but the utilisation of these areas is not known.

Table ***3*** shows a summary of the supply and utilisation for private and publicly accessible parking areas in Dickson.

Table 3: Summary of Public and Private Parking for the Dickson Precinct

Type	Supply	Thursday, 16 February 2012						Weekend, 18 February 2012					
		7:00	8:00	9:00	16:00	17:00	18:00	11:00	12:00	13:00	18:00	19:00	20:00
Private	874	74	261	574	526	443	262	51	44	25	31	29	63
Utilisation		8%	30%	66%	60%	51%	30%	6%	5%	3%	4%	3%	7%
Public	1,635	233	466	735	1,048	858	859	1,000	1,044	1,040	734	841	915

Type	Supply	Thursday, 16 February 2012						Weekend, 18 February 2012					
		7:00	8:00	9:00	16:00	17:00	18:00	11:00	12:00	13:00	18:00	19:00	20:00
Utilisation		14%	29%	45%	64%	52%	53%	61%	64%	64%	45%	51%	56%

This table shows that the private parking demand peaks at 66% at 9:00am on a weekday. This peak may change if the utilisation of the offices in the Northbourne Precinct changes. The current utilisation is not known. The DPMH structured car park would add 329 spaces to the private supply, presumably with a similar utilisation as the other private car parks in the area.

On the weekend, the private parking is almost completely empty as these car parks serve offices and Daramalan College, which are not typically used on the weekend. The publicly accessible parking demand peaks at 64%. This demand is reached during both the weekday PM and the weekend midday peak periods.

From *Table* **2** and the earlier figures, two disparate groups with demand for parking were identified, namely:

- Commuters and students
- Shoppers and diners

These two groups are discussed in more detail in the following sections.

3.2.1 Commuter and Student Parking

The parking survey shows that the parking areas in the Northbourne Avenue precinct, between Challis Street and Northbourne Avenue, (Areas 1-7 with exception of Area 5) and Daramalan College (Areas 24 and 25) appear to be mainly used by commuters and students. These parking areas share a similar pattern of parking utilisation for each peak period of the parking survey.

During the AM peak period these parking areas have their highest utilisation, increasing between 7:00 AM and 9:00 AM. During the PM peak period they are progressively emptied as commuters and students go home. During both weekend peak periods these parking areas have near zero utilisation.

It is noted that most of the parking areas west of Challis Street are gated, and are currently underutilised. The parking survey shows that the untimed parking spaces in Areas 1 to 7 are only 62% utilised by 9:00 AM on weekdays. This is the highest utilisation rate recorded for these parking areas during any of the four peak periods.

The non-gated untimed parking spaces near Challis Street (Areas 8, 11 and 28) have near 100% utilisation by 9:00 AM on weekdays. Moreover, these parking areas empty during the PM peak period in the same pattern as the gated parking areas west of Challis Street, and it is assumed that these parking areas are primarily used by commuters that do not have access to the gated parking areas.

It is also noted that the paid parking Area 15 had only 65% utilisation by 9:00 AM on a weekday, which was its highest utilisation in any surveyed peak. Thus, it appears that there is no immediate need for additional parking for commuters along the western side of Dickson. However, the relatively low utilisation of the gated parking areas and the high utilisation of the non-gated car parks suggest that better management of the parking in this area may be of some benefit.

The parking survey conducted did not allow for the identification of which land use drivers from each car park were accessing. If it is the case that workers in buildings with gated car parks are using non-gated car parks, they should be encouraged to use the gated parking areas. This will ease utilisation of the untimed parking areas along Challis Street where time restrictions could then be applied to provide more opportunities for customer access to the adjacent commercial centre.

3.2.2 Shopping and Dining Parking

The parking areas in the Woolley Street Precinct and Retail Core Precinct tend to be heavily utilised during the PM peak, and are also heavily used during both weekend peak periods.

Demand is distributed across these two precincts fairly evenly during the weekend midday peak period with some spare capacity in Areas 8, 15 and 21. There is also some spare capacity in Area 23.

During the weekend evening peak period, demand is centred more on Woolley Street itself. There is now some spare capacity in Areas 19 and 23. Area 15 remains underutilised in this time period as well.

3.3 Traffic Assessment

3.3.1 Traffic Count Surveys

*Figure **15*** shows the locations of the surveyed intersections as part of this study. A total of 18 intersections were surveyed, three of which (Intersections 1, 6 and 12) are signalised, while the rest are priority controlled. Vehicles were classified as either 'Light' or 'Heavy'.

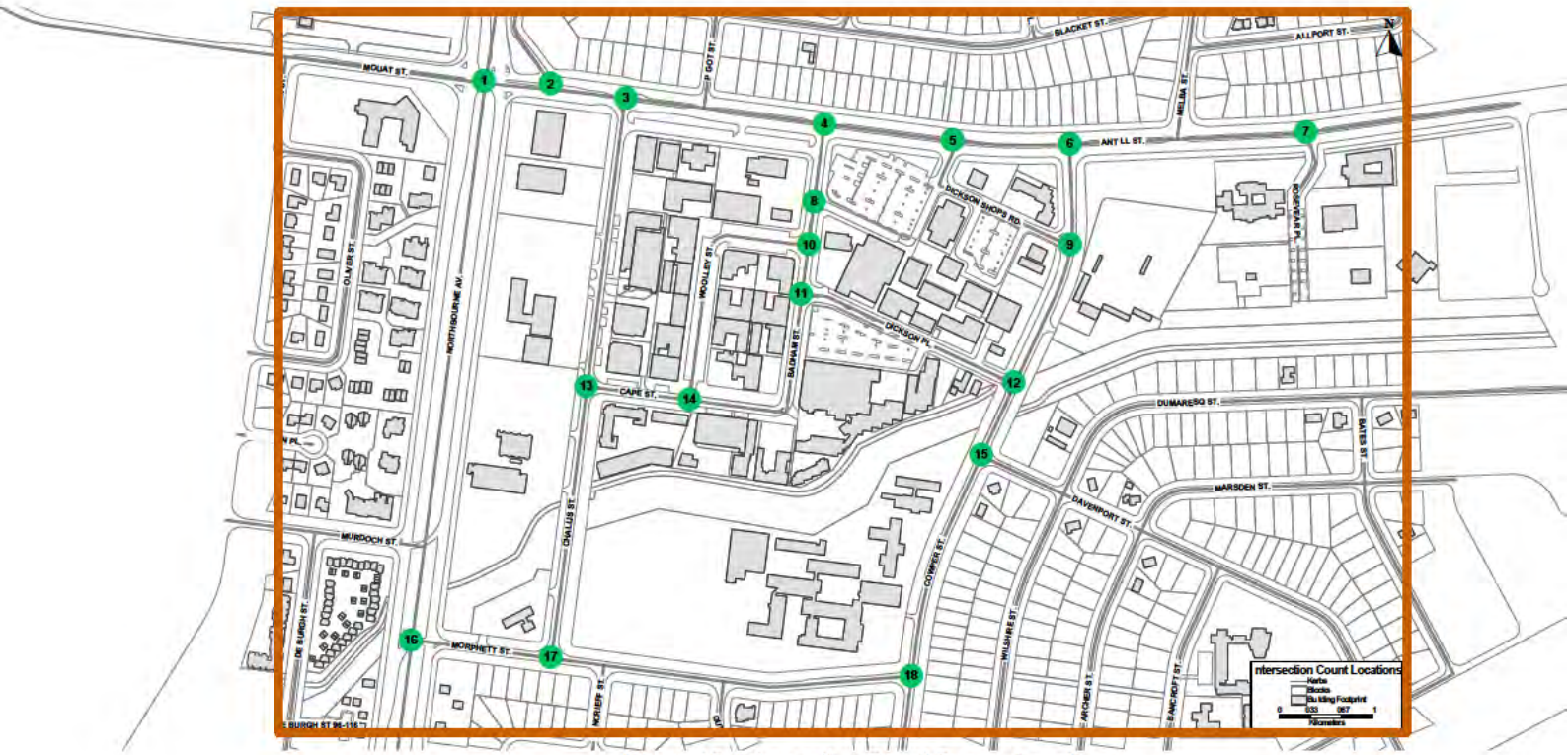

Figure 15: Intersection Count Survey Locations

Figure 16 to ***Figure 19*** show summaries of the traffic survey. The volumes shown at each location are the total volumes passing through that site for the relevant two-hour peak period.

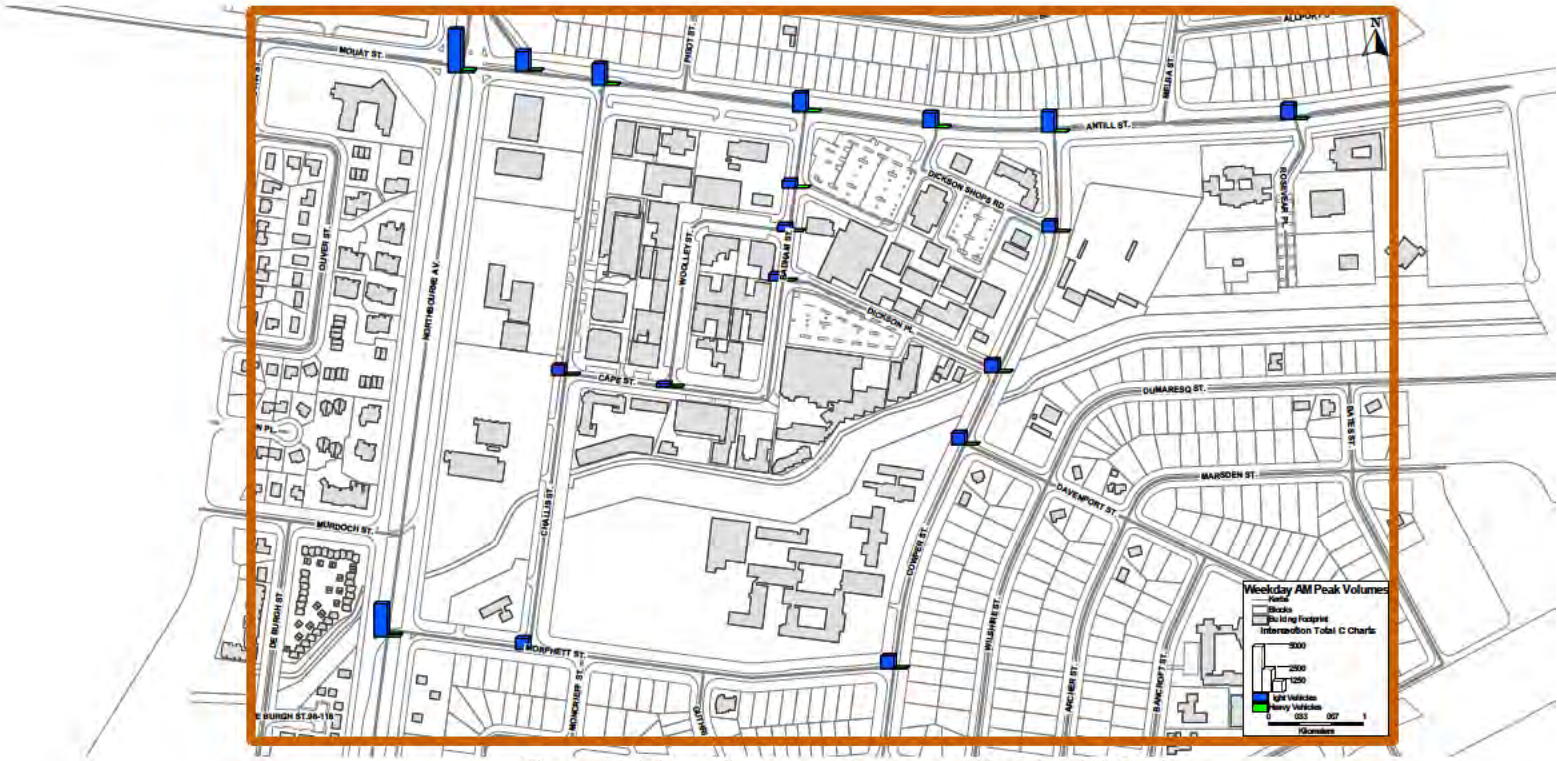

Figure 16: Intersection Survey Summary (Weekday AM Peak)

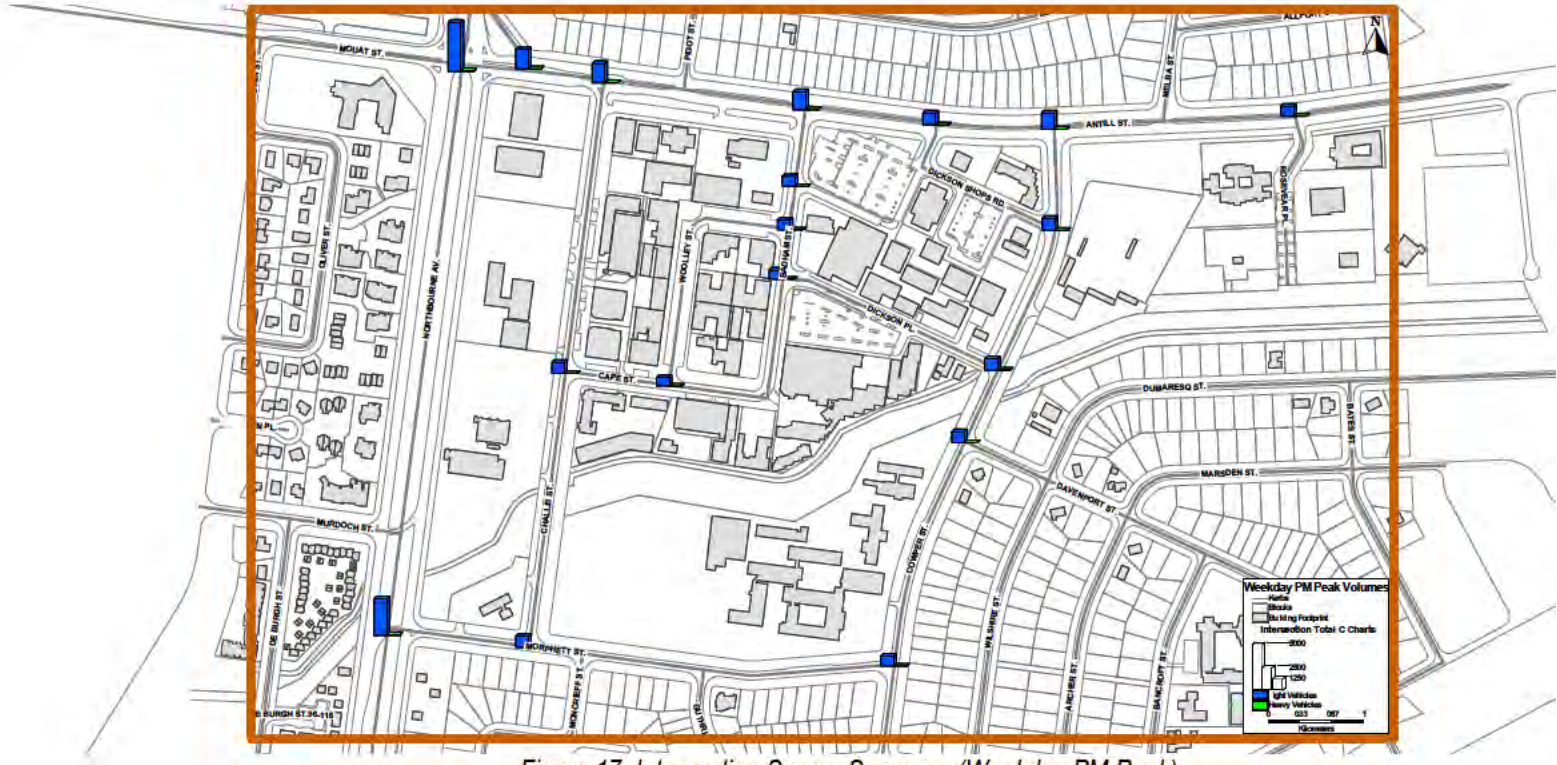

Figure 17: Intersection Survey Summary (Weekday PM Peak)

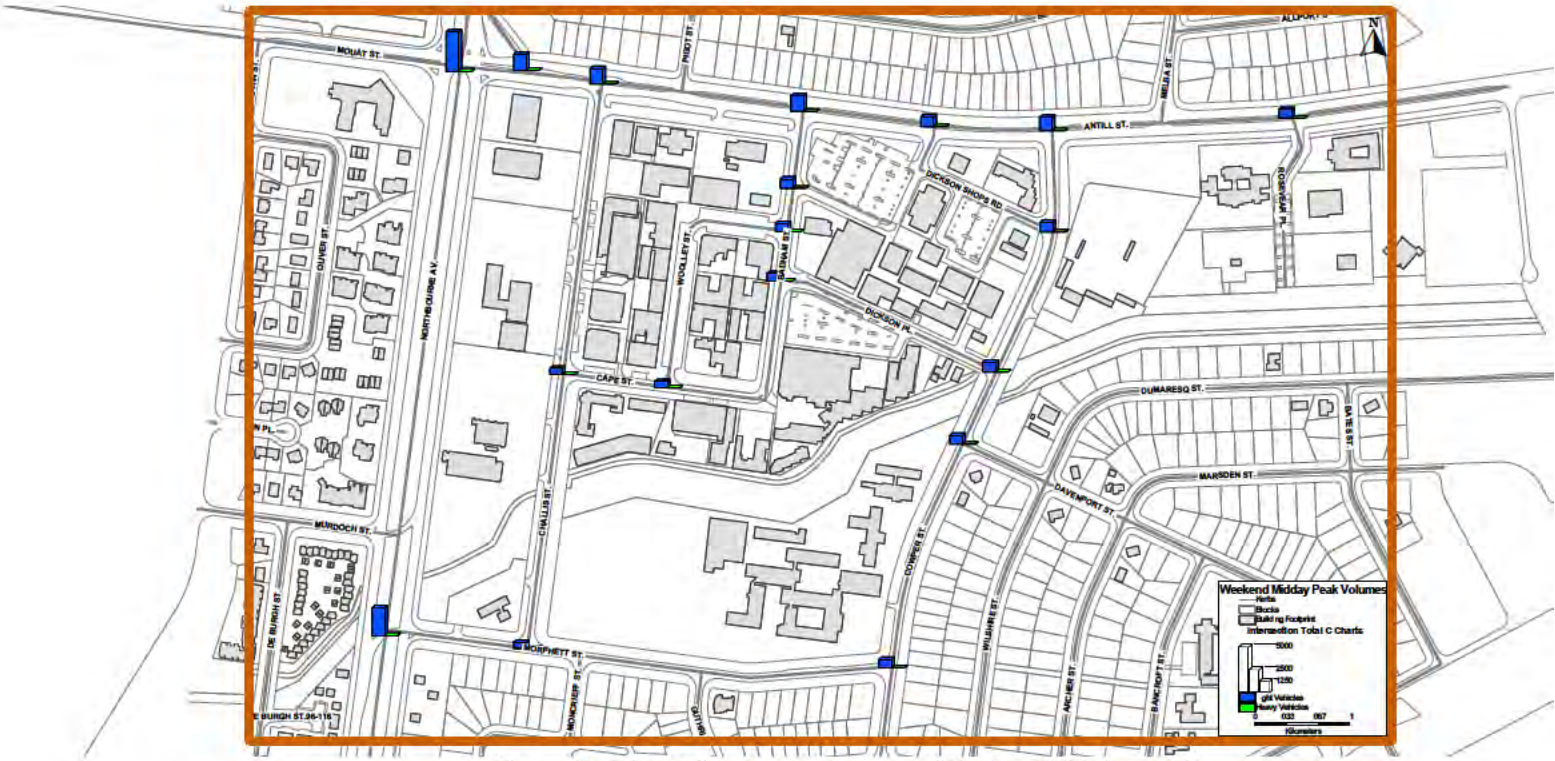

Figure 18: Intersection Survey Summary (Weekend Mid-day Peak)

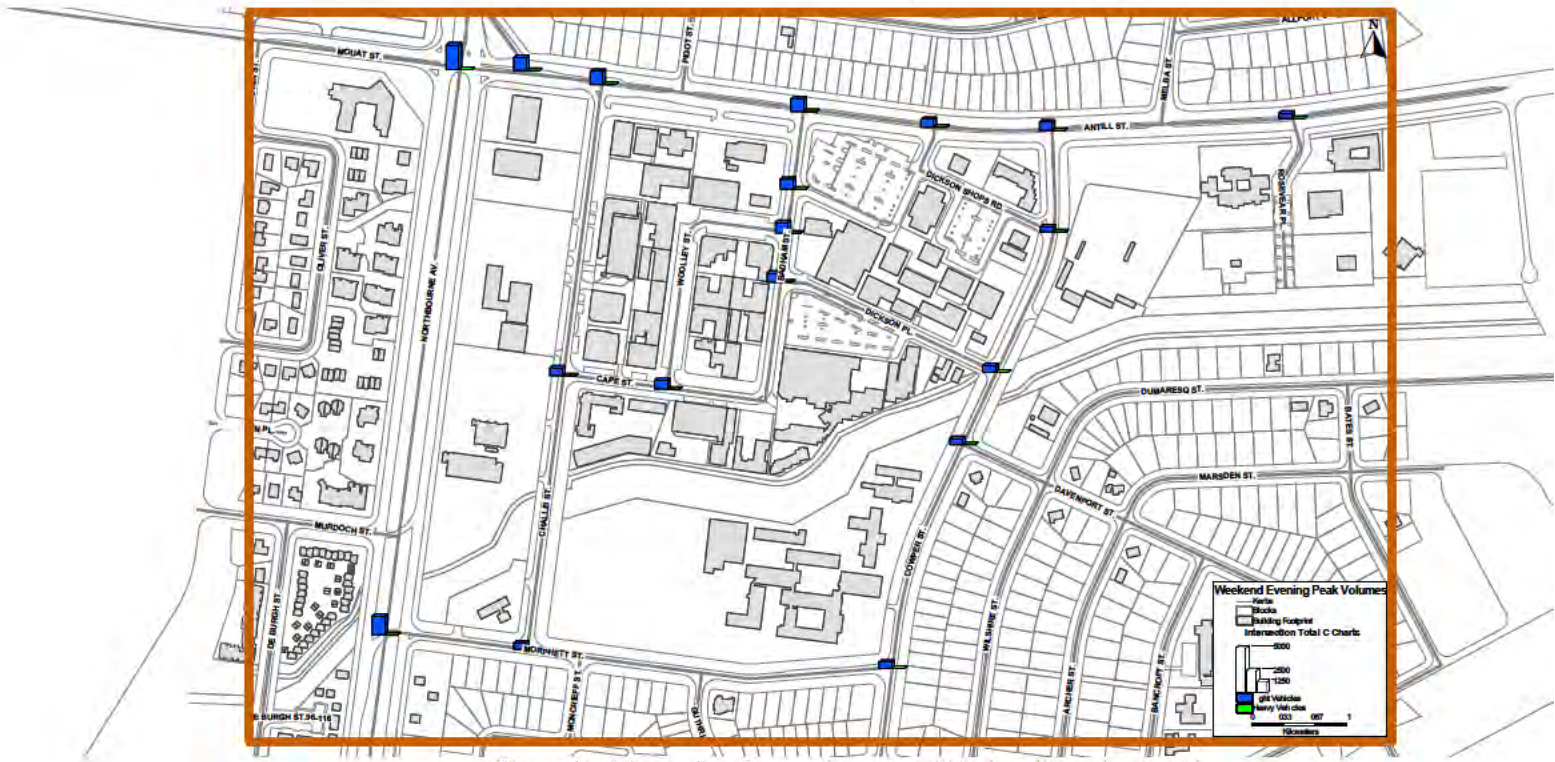

Figure 19: Intersection Survey Summary (Weekend Evening Peak)

Table ***4*** shows a summary of the results presented in the previous figures.

Table 4: Summary of Light and Heavy Vehicle Survey (2 Hour Peak Period)

Location (Intersection)	Weekday AM		Weekday PM		Weekend AM		Weekend PM	
	Light	Heavy	Light	Heavy	Light	Heavy	Light	Heavy
1	4,690	244	5,402	138	4,351	85	2,708	26

Location (Intersection)	Weekday AM		Weekday PM		Weekend AM		Weekend PM	
	Light	Heavy	Light	Heavy	Light	Heavy	Light	Heavy
2	2,161	61	2,125	36	1,695	13	1,428	9
3	2,332	75	2,135	38	1,716	15	1,440	9
4	2,035	63	1,983	37	1,677	12	1,385	8
5	1,639	54	1,347	36	1,110	11	836	4
6	2,252	66	1,811	43	1,458	15	916	7
7	1,646	35	1,135	14	944	6	595	2
8	786	19	1,113	7	1,013	3	1,081	5
9	1,181	36	1,338	25	1,066	12	553	7
10	728	19	1,052	7	868	3	1,168	6
11	748	23	1,006	6	809	3	1,001	4
12	1,334	43	1,262	26	1,068	13	706	6
13	1,027	18	1,237	3	672	4	881	1
14	423	11	922	1	658	3	963	2
15	1,338	39	1,198	17	983	10	675	3
16	3,603	188	4,022	107	3,042	59	2,034	20
17	1,248	28	1,218	4	670	5	695	1
18	1,388	47	1,112	25	931	7	655	3
Total	**30,559**	**1,069**	**31,418**	**570**	**24,731**	**279**	**19,720**	**123**

These figures and table show high traffic volumes on Northbourne Avenue and Mouat Street/Antill Street in all peak periods. These roads, together with the roads surrounding the core of the Dickson precinct (i.e. Cowper Street and Morphett Street), carry the largest amount of traffic during weekday peak periods. The western and northern boundaries of the Dickson precinct experience their highest volumes during the PM peak, whilst the southern and eastern boundaries of the Dickson precinct experience their highest volumes during the AM peak, possible due to the location of Daramalan College.

During the weekend peaks, the internal roads of Dickson Precinct (e.g. Badham Street and Dickson Place) carry more traffic during the evening peak than the midday peak period, as shown in *Figure **18*** and *Figure **19***. The opposite trend is seen on the external roads during the two weekend peaks.

Northbourne Avenue carries most of the heavy vehicles with more than 150 heavy vehicles during the AM peak period but this is only a small proportion of the total traffic volume.

3.3.2 Micro-simulation Modelling Calibration Results

Micro-simulation models for the four peak periods were developed for the assessment of the Do Nothing and master plan scenarios. Below is a summary of the process and the calibration results.

Origin – Destination (OD) matrix estimation was performed using Paramics Estimator V6, with input from intersection turn counts conducted as part of this study. Estimator generates an OD matrix by iteratively adjusting a previous OD matrix to provide a trip pattern that more closely matches the supplied count data.

The accuracy of OD matrix estimation is gauged by the GEH statistic, which compares the modelled (M) volumes to the counted (C) volumes. It has the effect that as C increases, the allowable difference as a proportion of C decreases. The GEH statistic is given by the equation:

$$GEH = \sqrt{\frac{2(M-C)^2}{M+C}}$$

Where:

M : traffic volume estimated by the model
C : actual (real-world) traffic volume

Where possible, the GEH for 85% of the estimated volumes should be less than 5, and ideally no estimated volumes should have a GEH greater than 10. The resulting GEH statistics from the calibration of the base network model for each peak period are shown in *Table **5***. In the micro-simulation modelling tasks done for this study, the estimated matrices were optimised in terms of its GEH as far as practical. Whilst there are a few GEH values above 10, they have been assessed individually and are considered acceptable.

Table 5: Summary of Paramics Estimation Results

Peak Period	Average GEH	GEH<5	5<=GEH<10	10<=GEH
Weekday AM Peak	1.81	182 (93%)	11 (6%)	2 (1%)
Weekday PM Peak	2.04	177 (91%)	17 (9%)	1 (1%)
Weekend MD Peak	2.11	177 (91%)	14 (7%)	4 (2%)
Weekend EV Peak	2.29	174 (89%)	16 (8%)	5 (3%)

The seed values that determine the release pattern of vehicles in the model were selected for each peak period based on the lowest GEH value for turning movements.

Table 6: Seed Values Selected for Each Peak Period

Peak Period	Seed Value
Weekday AM Peak	7771
Weekday PM Peak	2849
Weekend MD Peak	5321
Weekend EV Peak	28

3.3.3 Road Network Hierarchy Assessment

The road network in the study area, along with the hierarchy, is shown in *Figure* ***20***.

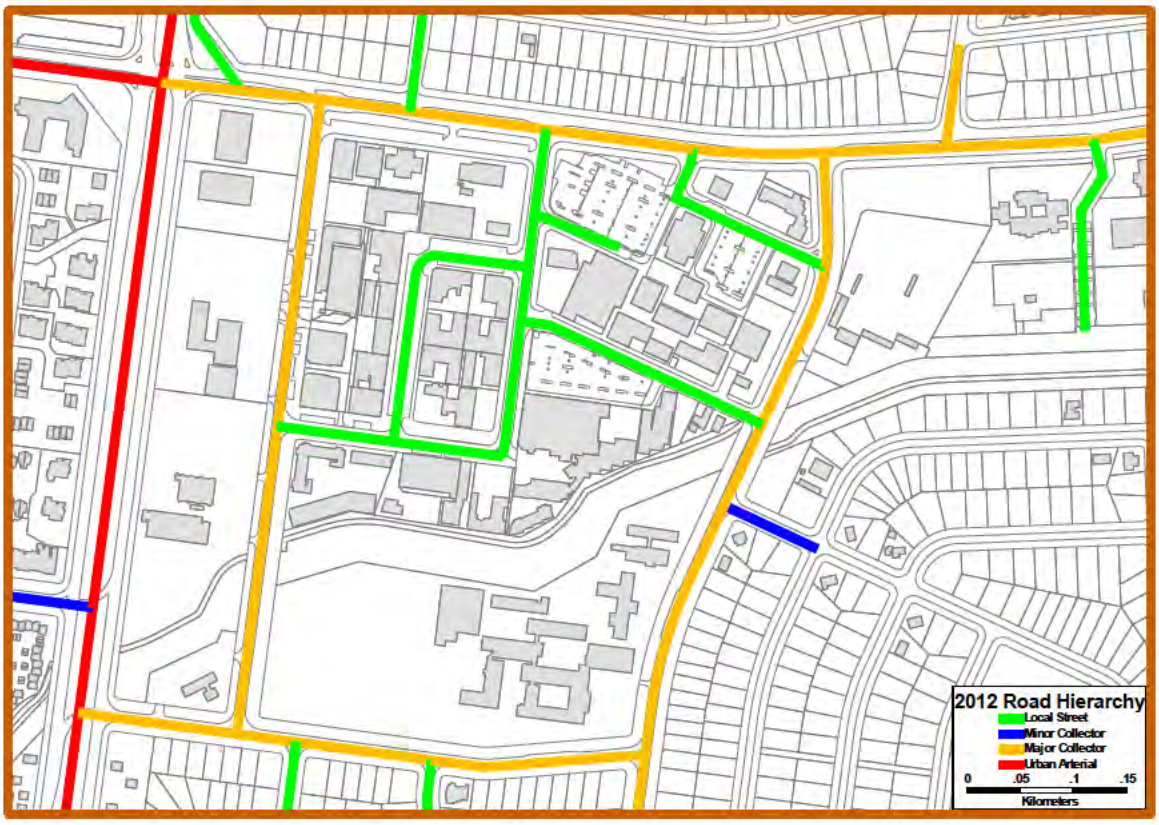

Figure 20: Study Area Road Network and Hierarchy (Source: TAMSD)

One of the criteria used by the ACT Residential Subdivision Code to define the road hierarchy is the average daily traffic in vehicles per day (vpd). This classification has been reproduced in *Table* ***7***.

Table 7 Classification of Roads in Hierarchy

Road Classification	Indicative Traffic Volume (vpd)
Local Access	0-1000
Local Access C	1001-2000
Minor Collector	1000-3000
Major collector	3000-6000

Source: ACT Residential Subdivision Code

Figure 21 provides an indication of daily weekday traffic volumes in 2012. These volumes were calculated by taking the AM and PM peak volumes from the micro-simulation modelling outputs and assuming a peak factor of 10% to determine the daily flow.

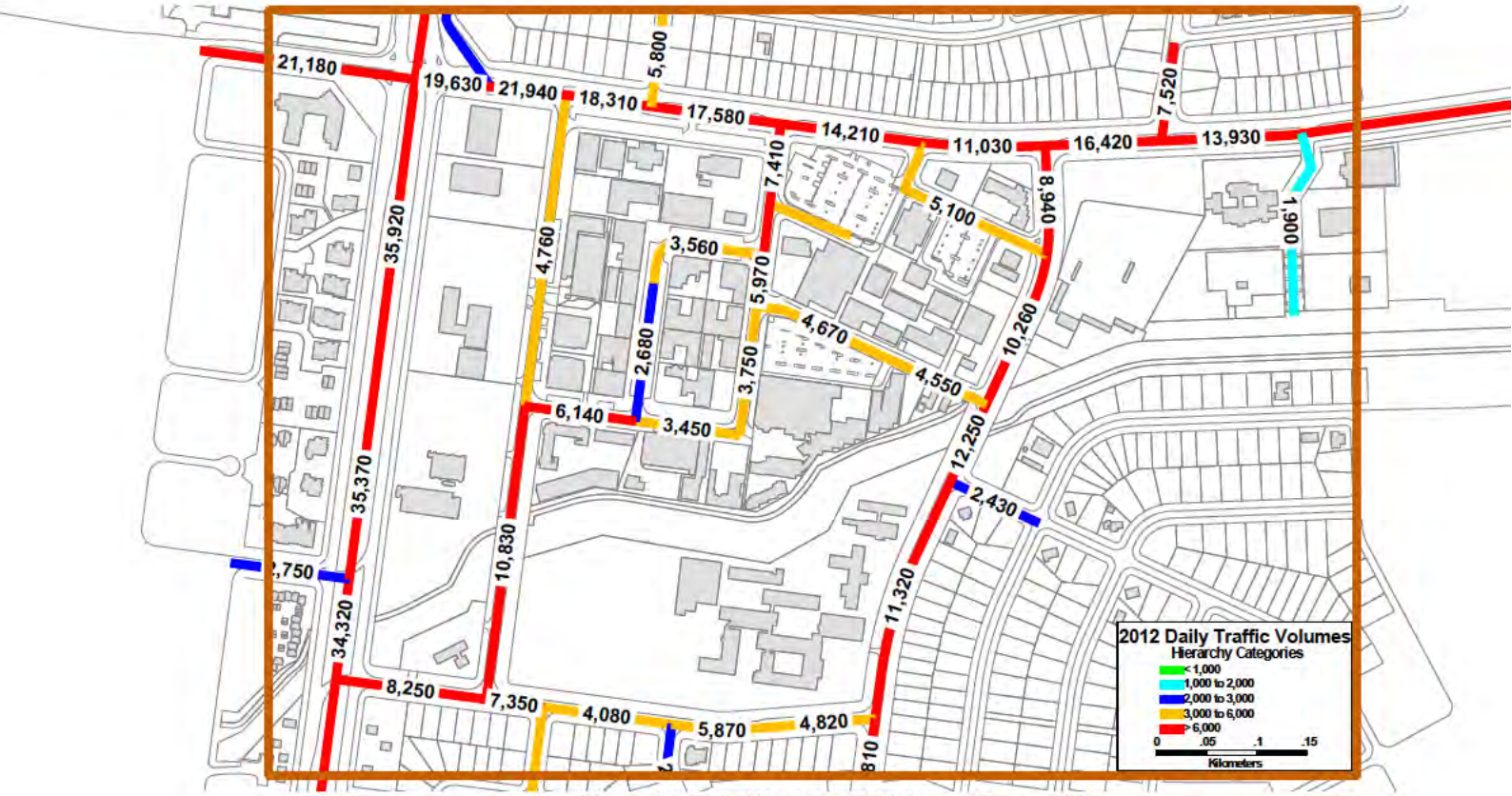

Figure 21: Daily Weekday Vehicles per Day – 2012

Figure 21 shows that, in 2012, the volumes on most roads are not appropriate for the classified road hierarchy. In particular, Antill Street, Cowper Street and Challis Street appear to have volumes that are not appropriate for their classification.

3.3.4 Intersection Analysis

Intersection analysis was conducted using SIDRA Intersection. Intersection performance measures such as Level of Service (from delay and degree of saturation) and queue length at the specified key intersections within the study area provided a quantitative basis on the performance of these major junctions in the four peak periods analysed. The Highway Capacity Manual (HCM) criteria for the evaluation of intersection Level of Service (LoS) are given in Table 8.

Table 8: HCM Level of Service Criteria (Average Control Delay D in Seconds)

Level of Service	Signalised/Roundabout	Stop/Give Way	Colour
A	D < 10s	D < 10s	
B	10s ≤ D < 20s	10s ≤ D < 15s	
C	20s ≤ D < 35s	15s ≤ D < 25s	
D	35s ≤ D < 55s	25s ≤ D < 35s	
E	55s ≤ D < 80s	35s ≤ D < 50s	
F	D ≥ 80s	D ≥ 50s	

Source: Highway Capacity Manual 2000, Exhibit 16-2 (p.16-2) and 17-2 (p.17-2)

The following 21 intersections were analysed:

- Northbourne Avenue - Antill Street / Mouat Street
- Northbourne Avenue Service Road - Antill Street
- Antill Street - Challis Street
- Antill Street - Badham Street
- Antill Street - Dickson Shops Access Road
- Antill Street - Cowper Street
- Antill Street - Rosevear Place
- Badham Street - Dickson Shop Access Road
- Cowper Street - Dickson Shop Access Road
- Badham Street - Woolley Street
- Badham Street - Dickson Place
- Cowper Street - Dickson Place
- Challis Street - Cape Street
- Cape Street - Woolley Street
- Cowper Street - Davenport Street
- Northbourne Avenue - Morphett Street
- Morphett Street - Challis Street
- Cowper Street - Morphett Street

Consistent with the survey periods, these intersections were modelled for the weekday AM, weekday PM, weekend midday and weekend evening peak periods. *Figure* ***22*** through *Figure* ***25*** show a graphical representation of the modelled performance of each intersection for each peak period in 2012. Detailed intersection analysis results for the current situation are shown in Appendix A.

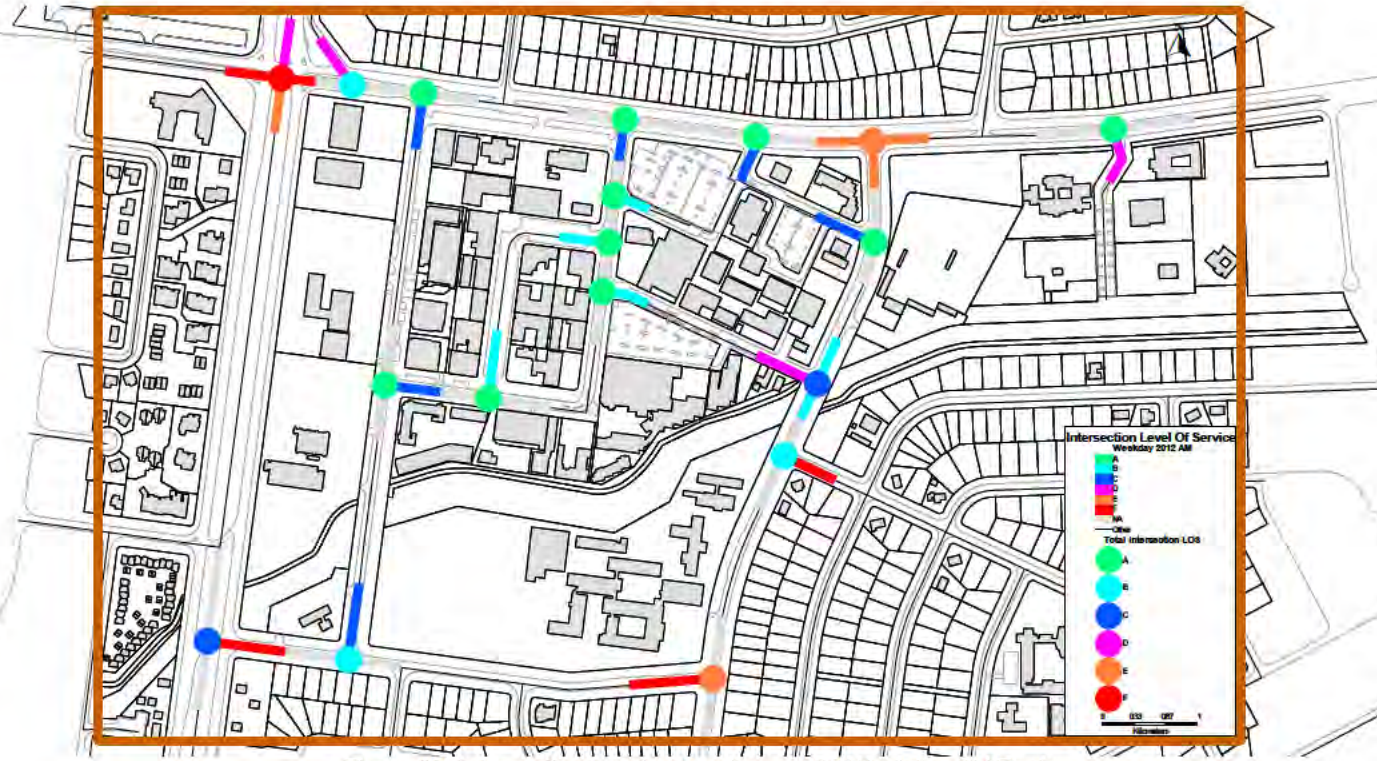

Figure 22: Intersection Level of Service – 2012 Weekday AM Peak

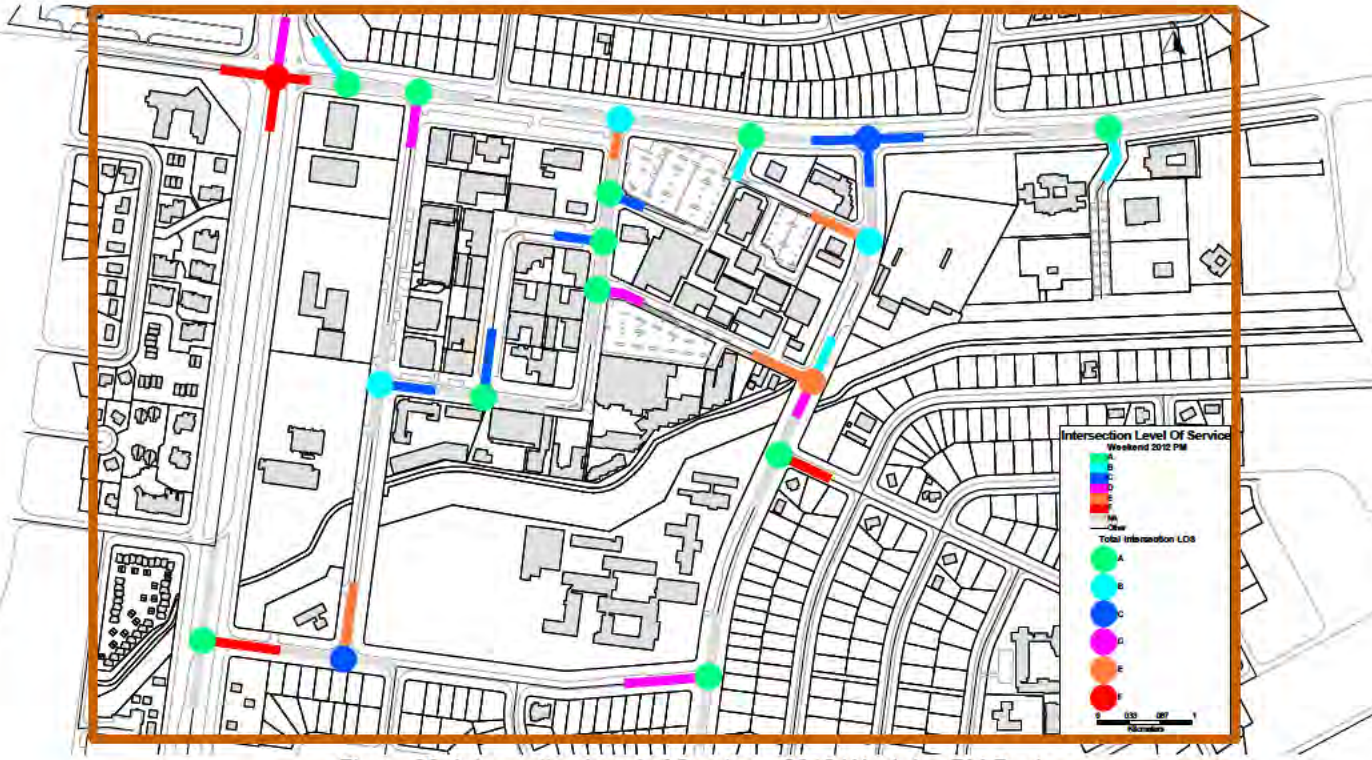

Figure 23: Intersection Level of Service – 2012 Weekday PM Peak

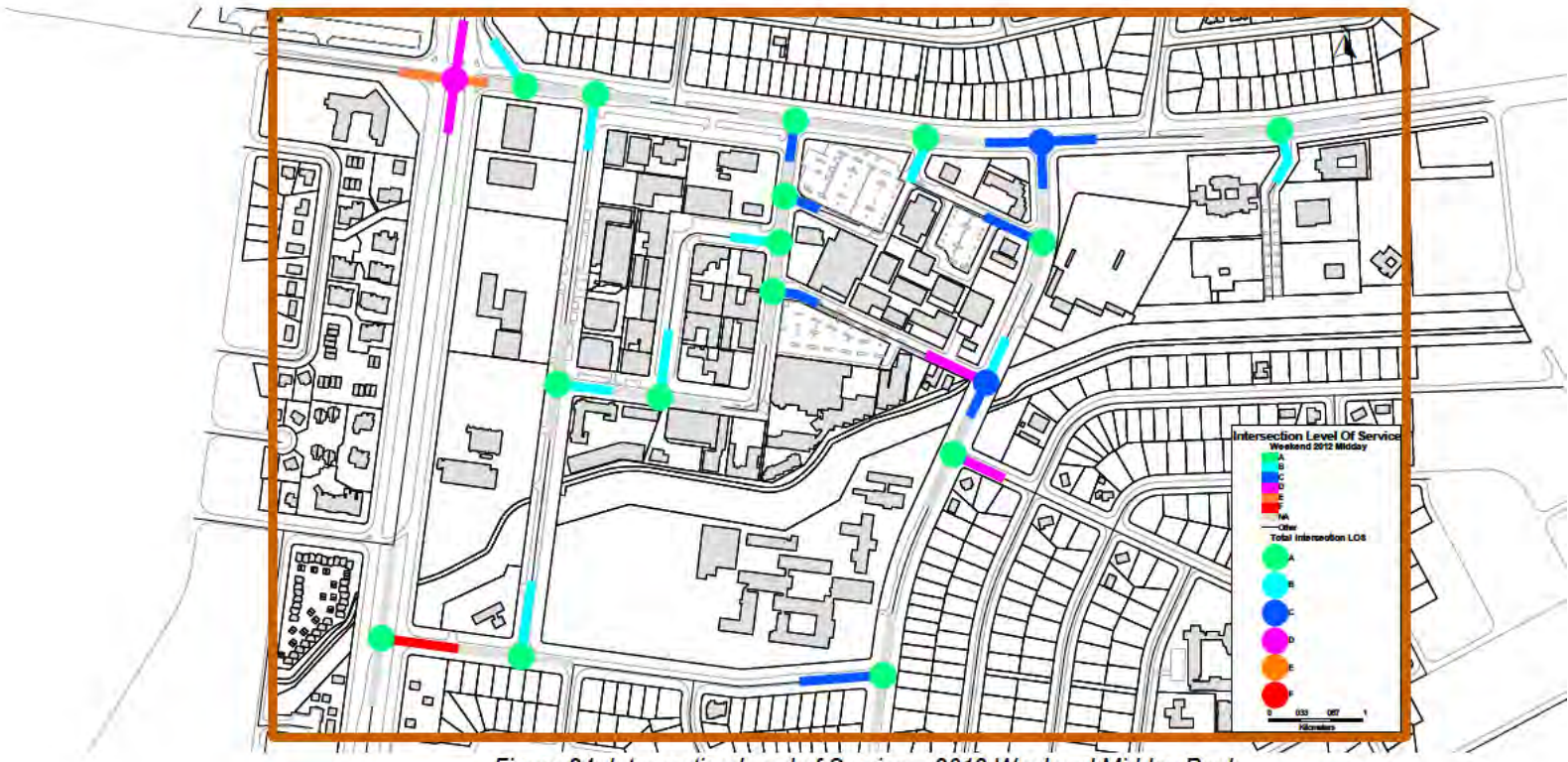

Figure 24: Intersection Level of Service – 2012 Weekend Midday Peak

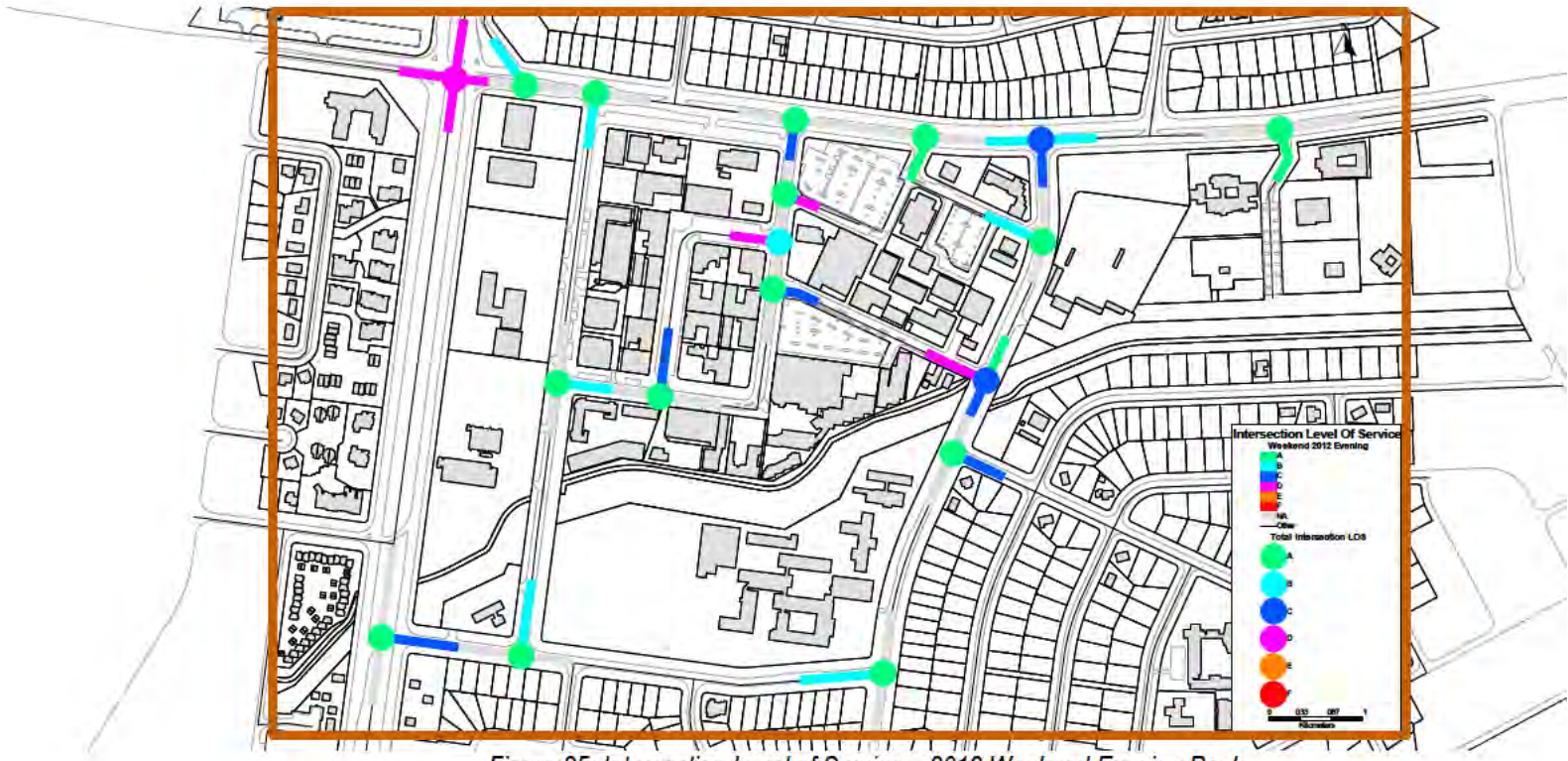

Figure 25: Intersection Level of Service – 2012 Weekend Evening Peak

The results of the intersection analysis show that there are some areas of concern in the current network, especially in the weekday AM and PM peaks. In the weekday AM peak, the intersection of Northbourne Avenue with Mouat Street and Antill Street is expected to operate at LoS F, with both Mouat Street and Antill Street operating at LoS F. In addition, the following roads are expected to operate at LoS F:

- Morphett Street, at its intersection with Northbourne Avenue

- Morphett Street, at its intersection with Cowper Street
- Davenport Street, at its intersection with Cowper Street

In the weekday PM peak, the following locations are expected to operate at LoS F:

- Intersection of Northbourne Avenue with Mouat Street and Antill Street, on Northbourne Avenue (northbound), Mouat Street and Antill Street approaches
- Morphett Street, at its intersection with Cowper Street
- Davenport Street, at its intersection with Cowper Street

During the weekend midday peak, the only area operating at LoS F is Morphett Street, at its intersection with Northbourne Avenue.

There are no intersections or approaches to intersections operating at LoS F in the weekend evening peak period.

3.4 Summary of Existing Issues and Potential Solutions

Figure ***26*** shows the recommended changes in the Dickson Precinct to address the identified issues in the current situation.

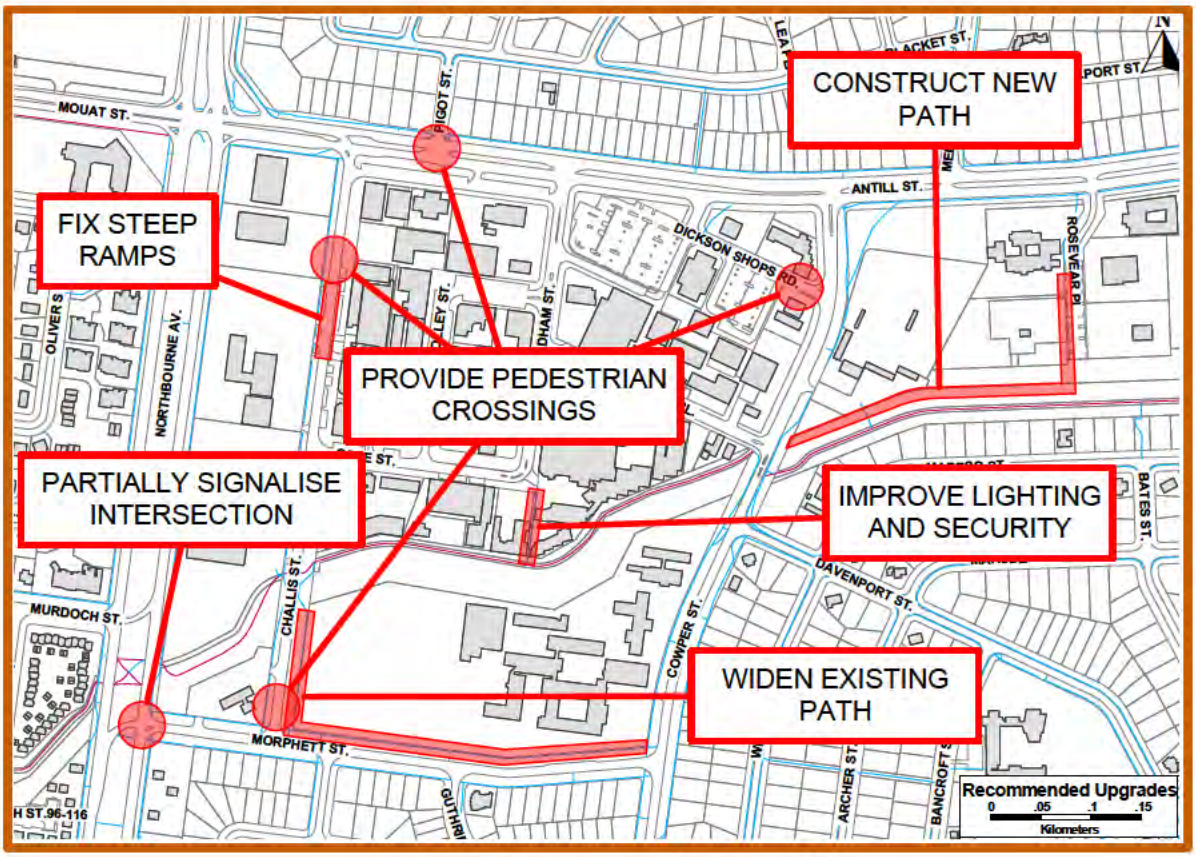

Figure 26: Recommended Upgrades in 2012

These recommendations are discussed in more detail in the following sections.

3.4.1 Pedestrian and Cyclist Facilities

The following changes to the existing pedestrian and cyclist facilities, based on the site inspection, are recommended:

- Provide a pedestrian crossing on Challis Street near its intersection with Morphett Street

- Provide a pedestrian crossing on Challis Street near the Telstra Building
- Provide a pedestrian crossing on Antill Street near its intersection with Pigot Street in the short term
- Provide a pedestrian crossing on Dickson Shops Road close to the intersection with Cowper Street
- Widen the 1.2m concrete paths around Daramalan College to 2.0m wide
- Provide better lighting on the path extension from Badham Street to the shared path to the south of the precinct to improve security
- Ensure pedestrian ramps along Challis Street have appropriate steepness for wheelchair access.
- Construct a new pedestrian/cyclist path connection from north of Rosevear Place to shared path to the south and swimming pool

3.4.2 Car Parking

The analysis of the car parking supply and utilisation has shown that there appears to be sufficient car parking capacity in Dickson for current operations. However, the car parking is not evenly utilised across the centre. It is recommended that appropriate signage be implemented to direct drivers to car parks that are shown to be underutilised in this study. The large car parks that are currently underutilised are:

- Dickson pool car park (this is likely to be variable with weather and season)
- Surface car park on the southern side of Dickson Place
- Underground car park underneath Dickson Tradies Club

Better signage, along with the upgrades to the pedestrian facilities presented above, should allow more efficient usage of current parking facilities.

3.4.3 Road Network and Intersections

The following changes to the existing road network and intersections are recommended to address current performance issues:

- Partial signalisation of the intersection of Northbourne Avenue and Morphett Street

This signalisation would only affect the eastern (southbound) carriageway of Northbourne Avenue. The signals would need to be linked to the existing signalised pedestrian crossing immediately to the north to ensure efficient operation.

These signals would also allow safe crossing of Morphett Street for pedestrians and off-road cyclists travelling north or south along the eastern side of Northbourne Avenue.

While the intersection analysis results indicate that the intersection of Northbourne Avenue with Antill Street and Mouat Street is currently operating at Level of Service F in both the AM and PM peak periods, it is recommended that the *Gungahlin to City Transitway Feasibility Study* (currently in progress) investigate options to improve the performance at this location. That study is expected to recommend significant changes to Northbourne Avenue to address transit operations and is better placed to make recommendations about this intersection.

4 ASSESSMENT OF MASTER PLAN

The proposed master plan developments have been discussed here in two stages. The first is the short term plan to develop Blocks 19 and 21 into two new supermarkets with supporting specialty retail shops. The predicted traffic impact of this development has already been assessed by Brown Consulting in 2011 and the outcomes of that assessment are reviewed here. An in depth analysis, which would essentially duplicate work already undertaken, has not been carried out.

The second stage of the assessment is the long term master plan options, assumed to be implemented by 2031. A more detailed analysis of the long term has been carried out, including traffic modelling and an indicative forecast of future parking requirements.

4.1 Analysis of Short Term Plan

Brown Consulting has already conducted an in depth analysis of the impact of an indicative level of development for the proposed supermarket sites, which found that the developments were not expected to have a significant impact on traffic operations in the area.

Based on the indicative level of development assumed by Brown Consulting and the *ACT Parking and Vehicular Access General Code* parking provision requirements, an extra 326 parking spaces would be required. Additionally, replacement of the existing spaces removed by the development would be required. The following section discusses a brief review of the parking analysis shown in *Development Traffic Assessment Report for Block 19 and 21, Dickson Shops, Dickson, ACT* (Brown Consulting, June 2011) based on more recent parking utilisation surveys carried out for this project.

4.1.1 Short Term Parking Requirements During Construction

The Dickson master plan indicates that parking Areas 16 and 19 are expected to be redeveloped with supermarkets and supporting specialty shops. These parking areas are located in Block 21 and Block 19, respectively.

Table ***9*** shows the existing utilisation of the parking Areas 16 and 19 (Blocks 21 and 19). It should be noted that parking areas in the Retail Core Precinct are currently near capacity during the weekday PM peak and weekend midday peak periods. Car parking areas operating at very high utilisation levels typically have a large number of cars circulating repeatedly searching for spaces, which could potentially lead to traffic congestion issues.

Table 9 Summary of Parking Utilisation Survey for Parking Areas 16 and 19

Location	Supply	Thursday, 16 February 2012						Weekend, 18 February 2012					
		7:00	8:00	9:00	16:00	17:00	18:00	11:00	12:00	13:00	18:00	19:00	20:00
Area 16 (Block 21)	242	23	102	116	182	180	191	195	233	228	159	193	177
Area 19 (Block 19)	135	21	36	72	112	69	44	113	123	124	26	32	27
Total	**377**	**44**	**138**	**188**	**294**	**249**	**235**	**308**	**356**	**352**	**185**	**225**	**204**
		12%	**37%**	**50%**	**78%**	**66%**	**62%**	**82%**	**94%**	**93%**	**49%**	**60%**	**54%**

Table ***9*** shows that Block 21 has a total of 242 parking spaces and block 19 has a total of 135 parking spaces (including taxi zone and motorcycle parking areas). This table also shows that the peak parking demand of Areas 16 and 19 is 356 vehicles and occurs at 12:00 PM on weekends, which is the same as the adjacent parking areas in the Retail Core Precinct.

Temporary removal of either of these parking areas will put significant parking pressure on adjacent parking areas and the surrounding road network as consumers search for parking spaces, so this demand should be met through the use of adjacent parking areas and temporary car parks.

It is expected that some of the parking demand from Areas 16 and 19 will be absorbed by the adjacent parking areas during the construction period. After construction is complete, the developments are expected to replace the existing parking supply and provide whatever additional capacity is required by the new development. The *ACT Parking and Vehicular Access General Code* requires that, in Commercial 'C' areas in Group Centres like Dickson, short stay parking may be provided on-site or within 200 metres of a development, while long stay parking may be provided on-site or within 400 metres of a development. The dispensation to allow provision of parking off-site depends on there being spare capacity in existing publicly provided parking spaces, whether on-street or off-street. Therefore, the most likely existing parking areas to be utilised are Areas 8, 9, 10, 12, 17 (McDonalds 30 minute parking), 18, 20 and 23. While Area 12 is in a location that makes it possible to be utilised, its on-street nature is likely to make it less attractive to supermarket shoppers who often use trolleys to transport goods to their cars. *Table* ***10*** shows the number of unused parking spaces in nearby parking areas. It is also noted that demand for parking in Area 23 is likely to be seasonal. The parking surveys were conducted in February and the area is approximately 65% utilised during the weekend midday peak. During winter, when the Aquatic Centre is closed, there is likely to be less demand in this area.

Table 10: Available Parking Space in Areas near Blocks 19 and 21

Parking Area	Thursday, 16 February 2012						Weekend, 18 February 2012					
	7:00	8:00	9:00	16:00	17:00	18:00	11:00	12:00	13:00	18:00	19:00	20:00
Area 8	53	28	10	25	44	59	60	56	55	62	41	17
Area 9	30	28	27	16	23	21	18	12	17	6	1	1
Area 10	58	55	52	50	47	43	44	37	38	22	18	17
Area 12	128	130	116	78	63	31	38	32	26	24	20	20
Area 17	17	13	10	6	11	15	19	16	14	21	23	7
Area 18	36	23	13	4	12	34	16	25	31	31	35	35
Area 20	119	102	80	47	63	40	7	13	7	74	13	5
Area 23	156	152	125	54	128	137	53	49	59	152	176	181
Total Available Spaces	**597**	**531**	**433**	**280**	**391**	**380**	**255**	**240**	**247**	**392**	**327**	**283**

Based on the available parking spaces around Blocks 19 and 21, it appears that Block 19 (which contains 135 parking spaces) can be redeveloped without the need to provide additional parking during construction. However, appropriate signage must be used to redirect users to the parking areas they should use while construction is underway.

If the development of Block 21 (which contains 242 parking spaces) can be staged, additional temporary parking spaces may not be required. If staging is not possible for Block 21, it is recommended to provide temporary parking spaces as close to Area 16 as is feasible.

It is noted that there will be an increase in circulating traffic caused by drivers looking for free spaces in highly utilised parking areas. To reduce this impact it is recommended to install temporary signs directing drivers to alternative parking areas (particularly for Area 23). It is expected that this work will be conducted as part of the temporary traffic management plan.

4.2 Analysis of Long Term Master Plan

The impacts of the master plan developments on transport operations in Dickson were assessed, regarding:

- Pedestrian and cycle network
- Car parking requirements
- Road hierarchy
- Intersection level of service

These investigations are discussed further in the following sections.

4.2.1 Pedestrian and Cycle Network

Figure 5 to *Figure* ***8*** show that Dickson appears to have significant east-west pedestrian and cyclist movements. However, the main north-south movements occur on Northbourne Avenue only. This is likely to be due to lack of appropriate pedestrian crossings on Antill Street and Morphett Street. It is noted that the one signalised crossing at the intersection of Antill Street and Dickson Shops Road carries relatively less pedestrian and cyclists compared to the other crossing facilities surrounding Dickson. For the long term scenario it is recommended to increase the north-south permeability of the precinct by improving the crossing facilities that provide access to the centre of Dickson. This can be achieved by signalising the Antill Street – Badham Street intersection, and improving access from Badham and Cape Streets to the shared path north of Daramalan College. In addition, pedestrian access from the south can be improved by signalising the intersection of Morphett Street and Challis Street and continuing the paved path on the western end of Daramalan College.

The master plan proposes several external connections to the surrounding area as shown in *Figure* ***27*** . These external connections are consistent with the recommendations made above. Similarly, the master plan proposes new internal links and improvements to the existing links as shown in *Figure* ***28***. The new east-west internal links will allow better access to Challis Street, which will be very important if the planned major bus station is located along this street.

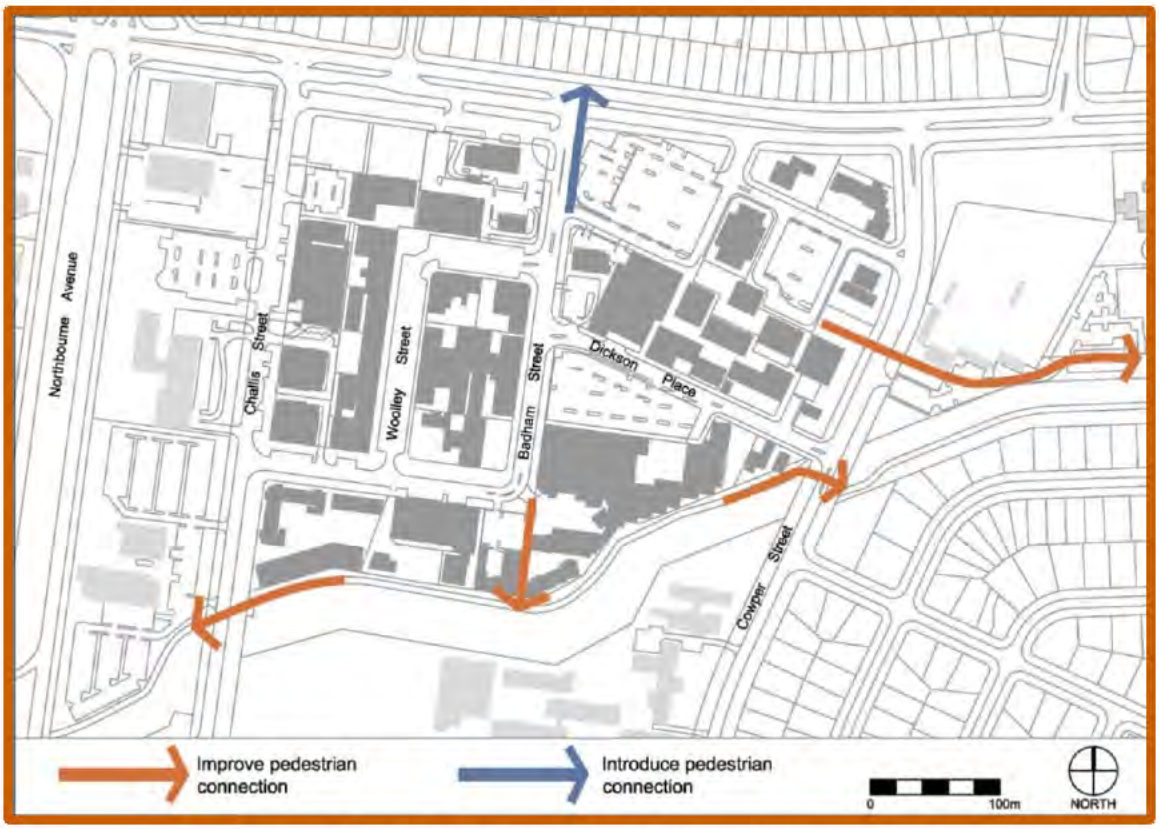

Figure 27: External Pedestrian Access (Source: Dickson master plan)

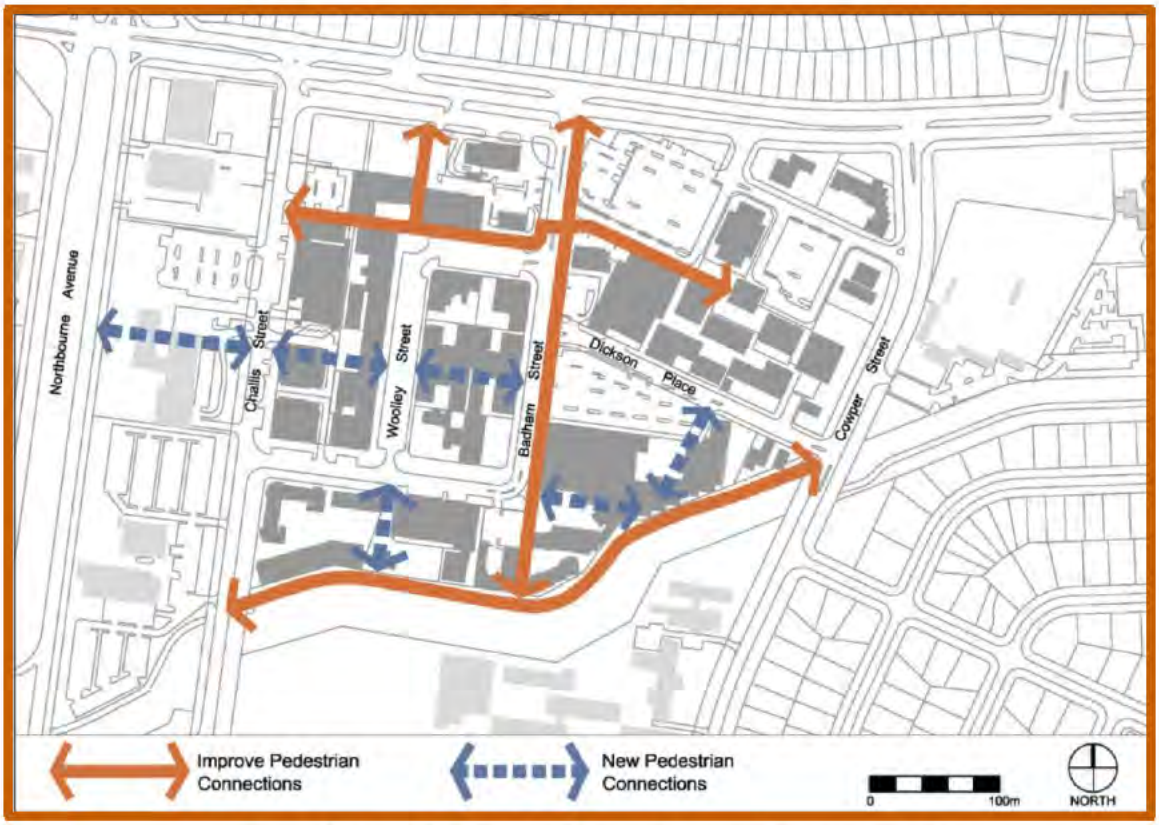

Figure 28: Internal Pedestrian Access (Source: Dickson master plan)

4.2.2 Long Term Parking Requirements

The master plan does not include enough details regarding the proposed land use to conduct an accurate assessment of the number of parking spaces required in the future.

However, a basic assessment has been carried out based on the indicative changes in land use shown in *Table **11***.

Table 11: Indicative Future Land Use in Dickson

Land Use	2016	2021	2031 (Without Master Plan)	2031 (With Master Plan)
Population	101	250	280	1,890
Employment	2,880	3,306	3,329	4,590
Retail Space (m²)	31,945	34,130	36,000	40,800

Using current parking provision rates and making assumptions about residential unit occupancy and employment rates per square metre of commercial development, the Dickson Group Centre is expected to require approximately the number of parking spaces shown in *Table **12***.

Table 12: Indicative Future Parking Requirements in Dickson

Land Use	2012	2016	2021	2031 (Without Master Plan)	2031 (With Master Plan)
Population	-	90	220	250	1,670
Employment	-	1,440	1,650	1,660	2,300
Retail Space (m²)	-	1,600	1,710	1,800	2,040
Total	**2,509**	**3,130**	**3,580**	**3,710**	**6,010**

Based on rates from the ACT Parking and Vehicular Access General Code and assumptions about residential unit occupancy and employment rates.

This is an increase to nearly 2.5 times the current supply if the master plan is implemented. It is assumed that the parking associated with population (residential) and employment will be contained within individual developments and will not be publicly accessible. The parking associated with retail development should be accessible to the general public.

The large increase in vehicles entering and exiting the Dickson Precinct to use this parking may have a significant impact on the performance of the road network and intersections in and around Dickson.

It is also noted that the 2031 scenario without the master plan (i.e. the do nothing scenario) includes some development and population, employment and retail space are all expected to increase. The master plan allows for higher levels of development, especially in residential and employment numbers.

4.2.3 Road Network Hierarchy Assessment

*Figure **29*** and *Figure **30*** show that the indicative road hierarchies (based only on traffic volumes) in 2031, both with and without master plan scenarios, are very similar.

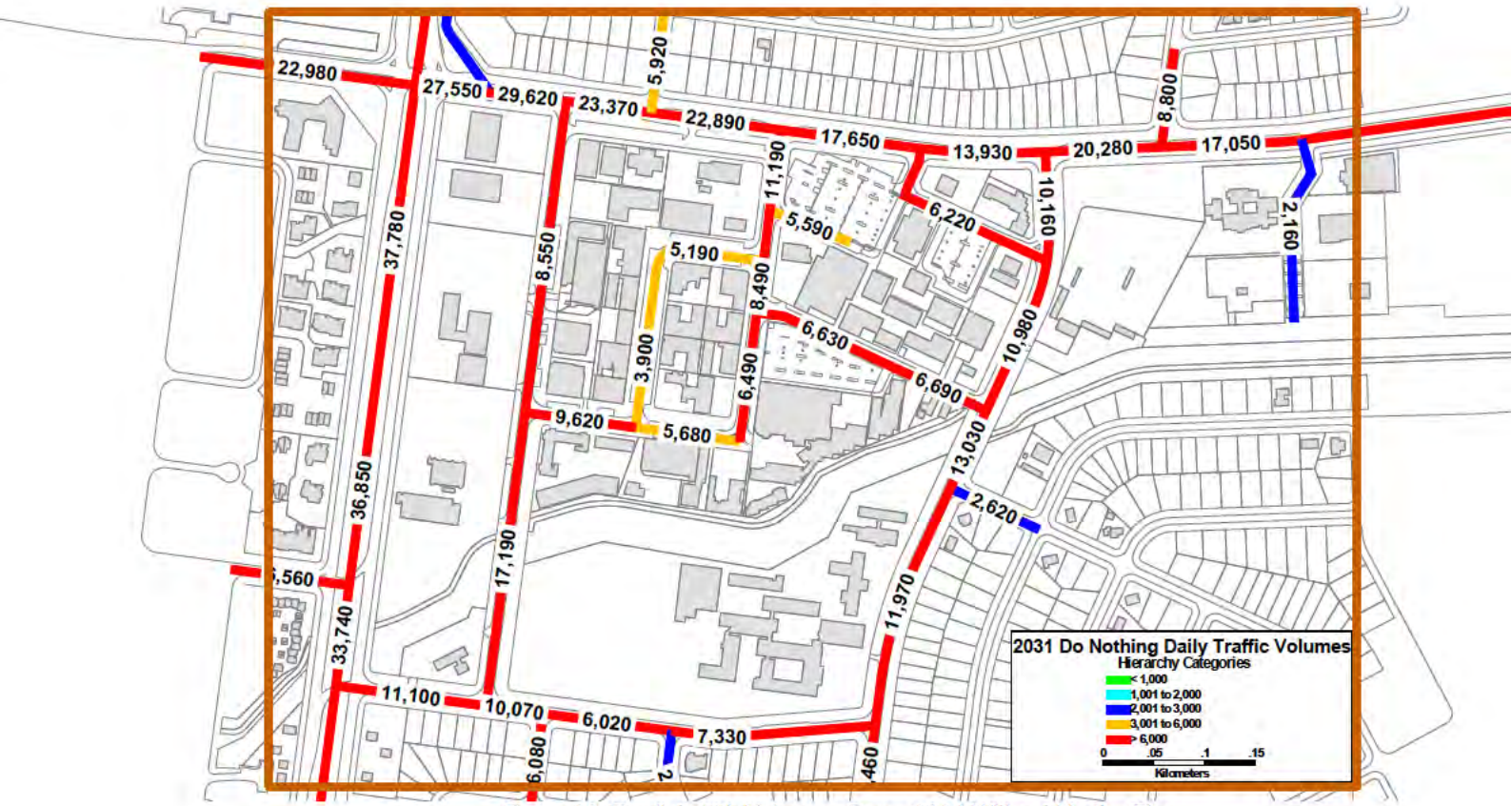

Figure 29: Predicted Vehicles per Day – 2031 Without Master Plan

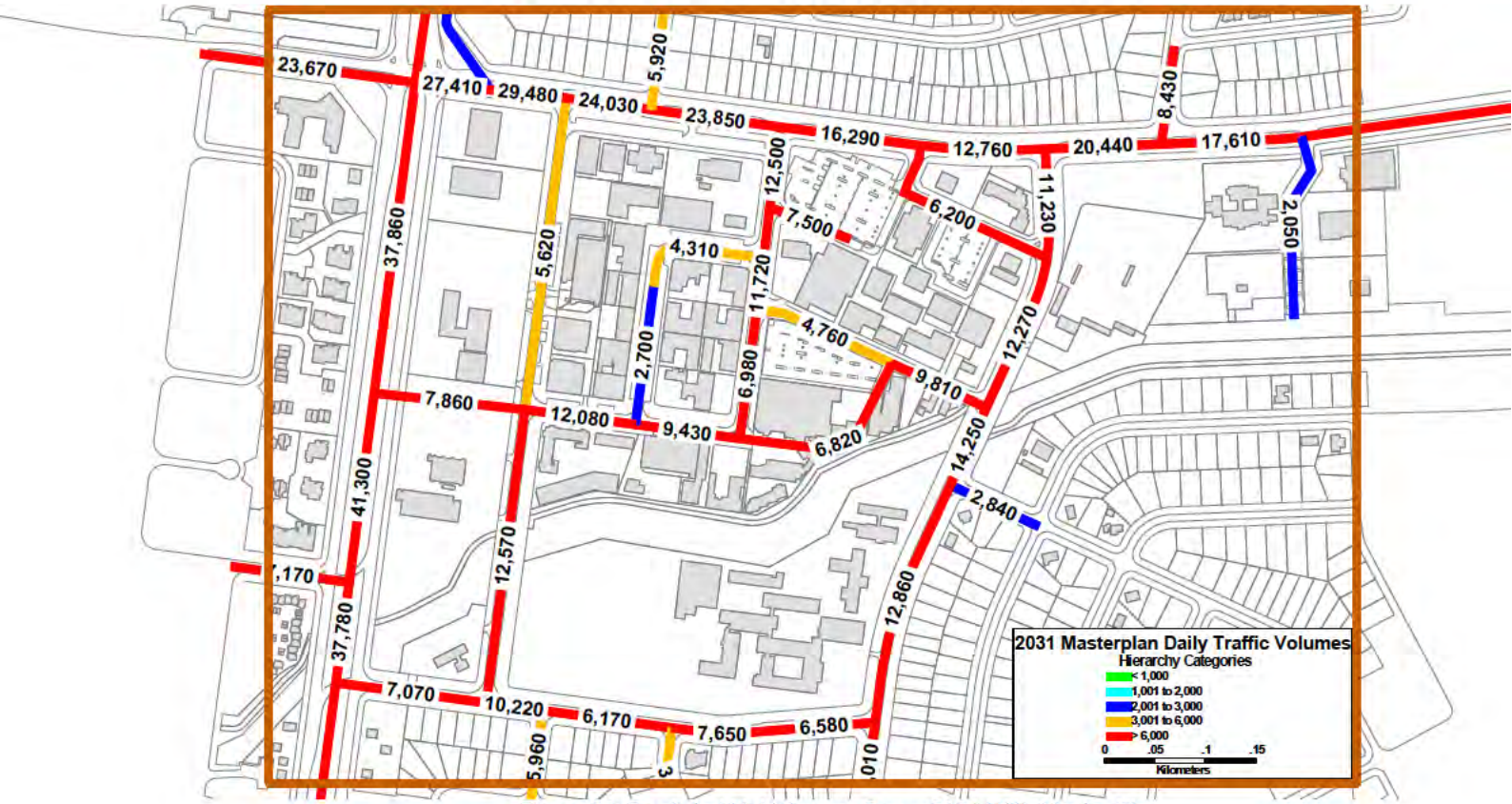

Figure 30: Predicted Vehicles per Day – 2031 With Master Plan

Figure **29** shows that even in the do nothing scenario, there is expected to be an increase in development and thus, an increase in traffic.

Cape Street Extension, east of Badham Street, is expected to carry approximately 6,800 vehicles per day. West of Challis Street, Cape Street Extension is expected to carry

7,800 vehicles per day, which places it in the arterial category, based on traffic volumes. However, the daily traffic volumes shown here are indicative and the code allows for some flexibility in road hierarchy planning. It is recommended that Cowper Street and Antill Street be upgraded to arterial roads while Cape Street and Badham Street should become major collectors. Challis Street and Morphett Street are likely to remain as major collectors.

*Figure **31*** shows the expected differences in daily traffic volumes in 2031 if the master plan is implemented.

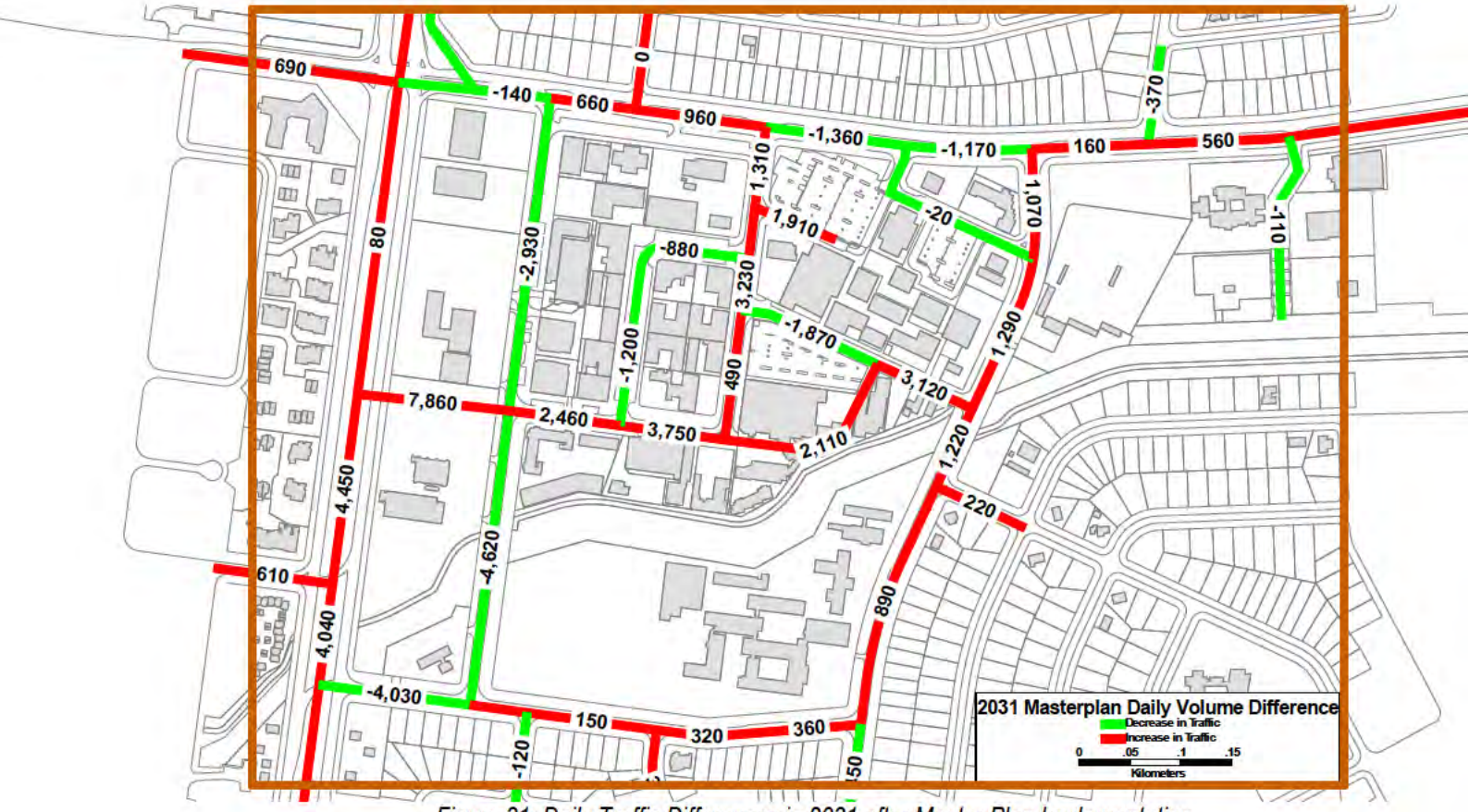

Figure 31: Daily Traffic Differences in 2031 after Master Plan Implementation

The major reductions in traffic are on Challis Street and Morphett Street. This is mainly due to the Cape Street extension to Northbourne Avenue. Similarly, there is a reduction on Antill Street between Cowper Street and Badham Street which appears to be due to the extension of the eastern end of Cape Street to Dickson Place. Small increases in traffic are noted on Mouat Street, Antill Street (east of Cowper Street) and Murdoch Street.

While access arrangements appear to be appropriate for the proposed hierarchy, as more traffic travels on Dickson Place, Badham Street and Cape Street, the access arrangements to developments on these streets may need to be reconsidered. Of particular note are the:

- Woolworths loading dock at the western end of Dickson Place
- 90 degree parking on Cape Street

These facilities may not be appropriate for the relatively high volumes of traffic expected on these roads.

4.2.4 Intersection Analysis

In addition to the 21 intersection that were analysed in Section 3.3.4, the following three intersections, related to the extension of Cape Street at both the eastern and western ends, were analysed for the master plan scenario:

- Northbourne Avenue - Cape Street
- Cape Street - Badham Street
- Dickson Place - Cape Street

Again, these intersections were modelled for the weekday AM, PM and Weekend mid-day and evening peak periods using volumes taken from the micro-simulation modelling. ***Figure 32*** through ***Figure 35*** show a graphical representation of the expected performance of each intersection for each of the four peak periods in 2031, assuming that the master plan developments do not go ahead. Detailed intersection analysis results for the future scenarios are shown in Appendix A.

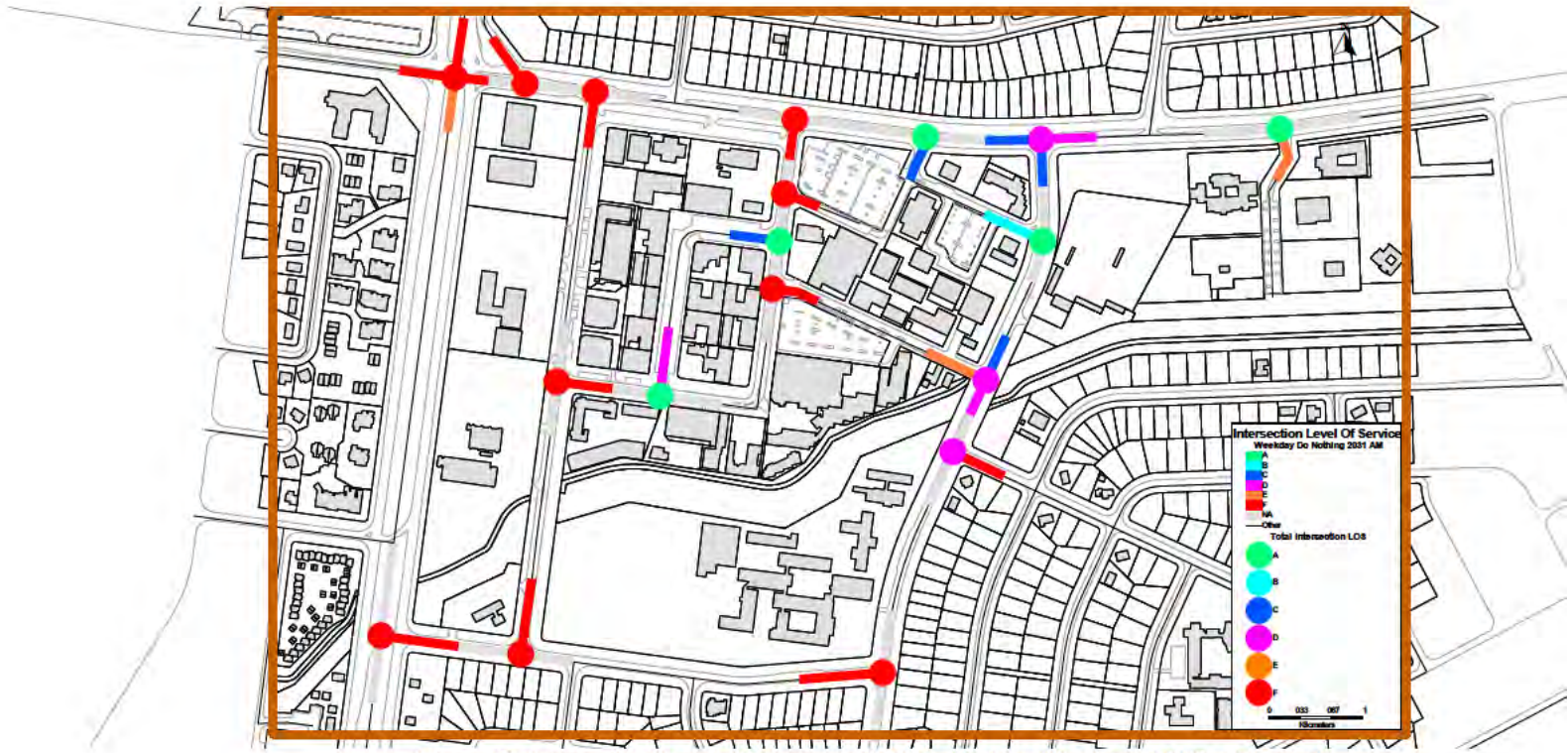

Figure 32: Intersection Level of Service – 2031 Do Nothing Weekday AM Peak Period

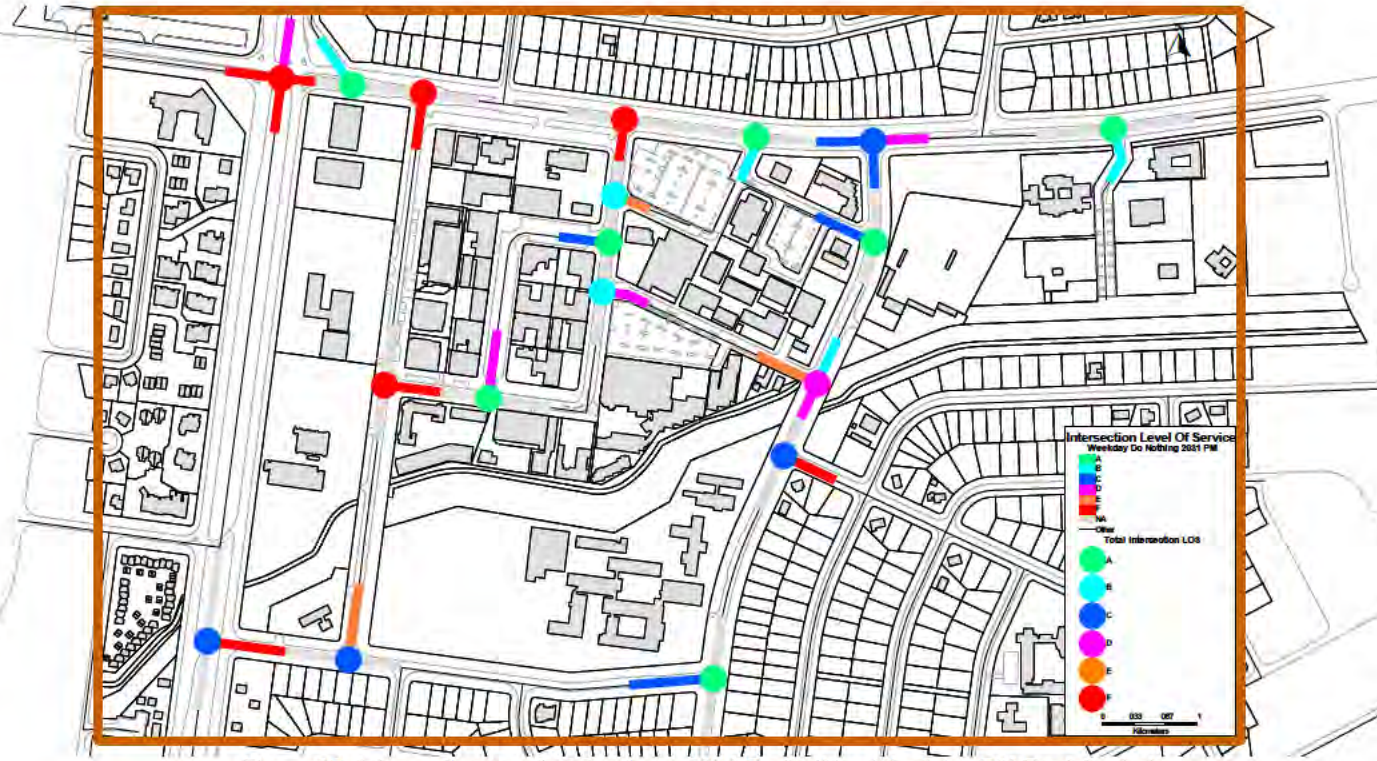

Figure 33: Intersection Level of Service – 2031 Do Nothing Weekday PM Peak Period

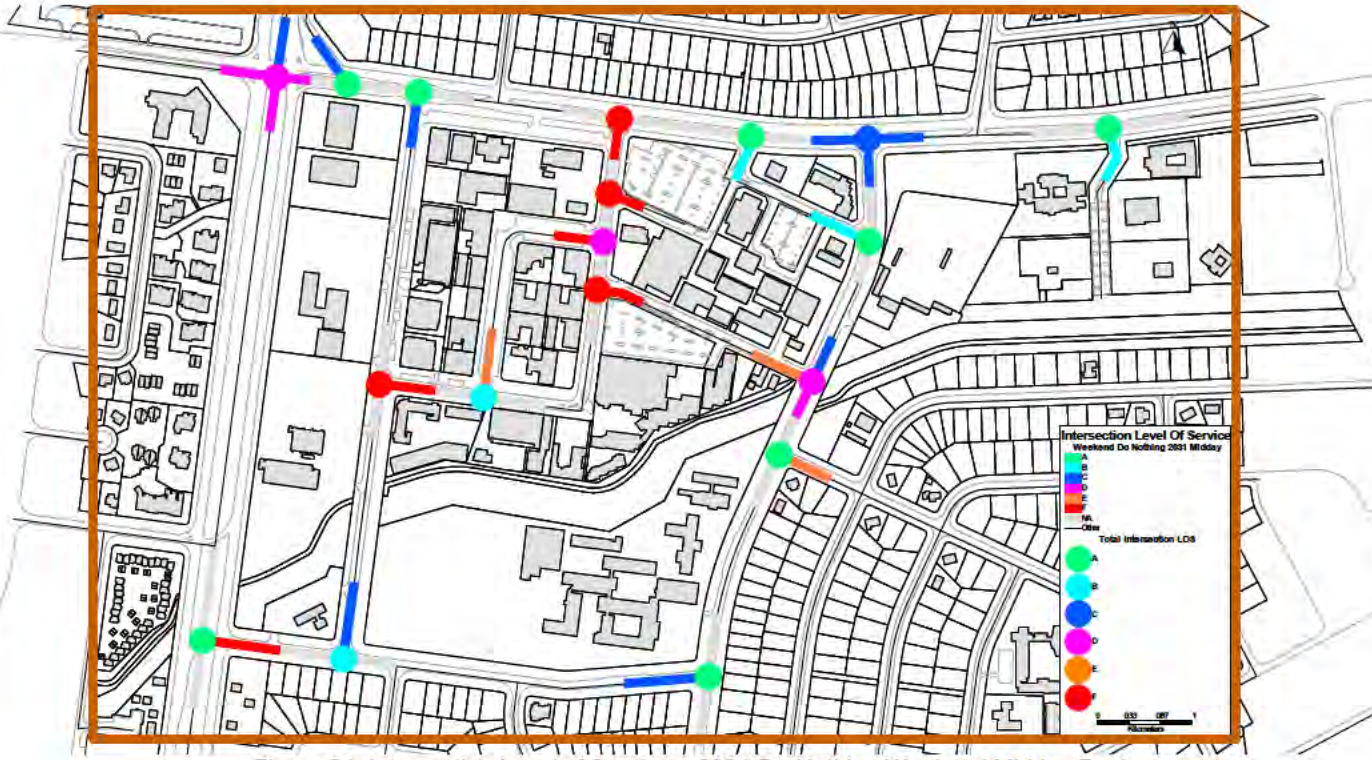

Figure 34: Intersection Level of Service – 2031 Do Nothing Weekend Midday Peak

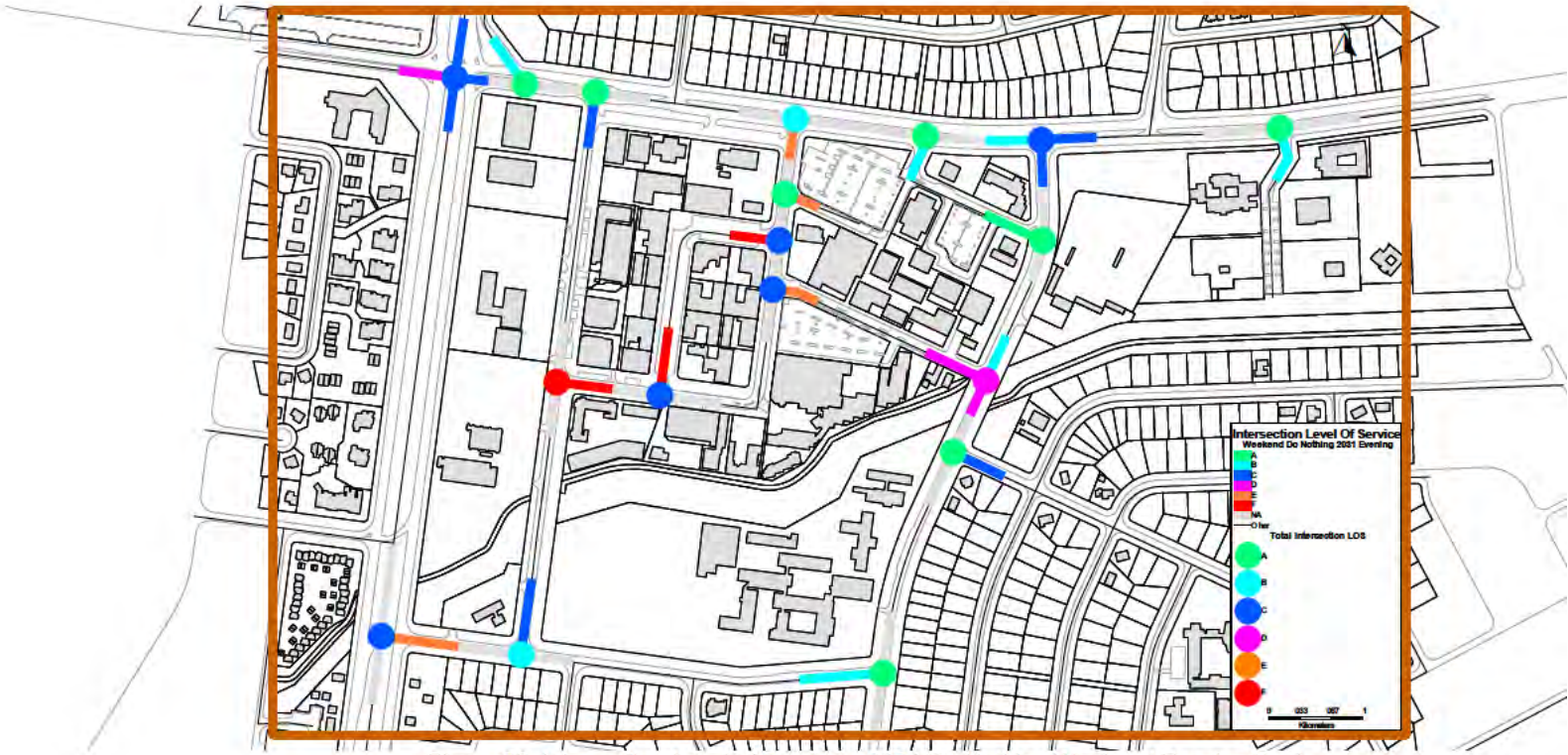

Figure 35: Intersection Level of Service – 2031 Do Nothing Weekend Evening Peak

From the preceding figures, it can be seen that there are a number of intersections and links that are expected to operate at Level of Service F without the master plan developments. The intersections include:

- Northbourne Avenue – Antill Street / Mouat Street (AM and PM peaks)
- Northbourne Avenue – Morphett Street (AM peak)
- Antill Street – Northbourne Avenue Service Road (AM peak)
- Antill Street – Challis Street (AM and PM peaks)
- Challis Street – Cape Street (AM, PM, weekend midday and weekend evening peaks)
- Challis Street – Morphett Street (AM peak)
- Antill Street – Badham Street (AM, PM and weekend midday peaks)
- Badham Street – Dickson Shops Road (AM and weekend midday peaks)
- Badham Street – Dickson Place (AM and weekend midday peaks)
- Cowper Street – Morphett Street (AM peak)

In addition to these intersections, the following roads are expected to operate at Level of Service F:

- Davenport Street, at its intersection with Cowper Street (AM and PM peaks)
- Morphett Street, at its intersection with Northbourne Avenue (PM and weekend midday peaks)
- Woolley Street, at its intersection with Badham Street (weekend midday and weekend evening peaks)
- Woolley Street, at its intersection with Cape Street (weekend evening peak)

The operation of these intersections worsens in the future for two reasons. The first is that, even in the do nothing scenario, there is expected to be development in Dickson, as discussed in Section 4.2.2. The second reason is that the traffic growth has been taken

from a strategic model that includes all of Canberra. As development occurs in other parts of Canberra, traffic along major roads across Canberra is expected to increase.

Figure ***36*** through *Figure* ***39*** show a graphical representation of the expected performance of each intersection for each of the four peak periods in 2031, assuming that the master plan developments go ahead. Detailed intersection analysis results for the future scenarios are shown in Appendix A.

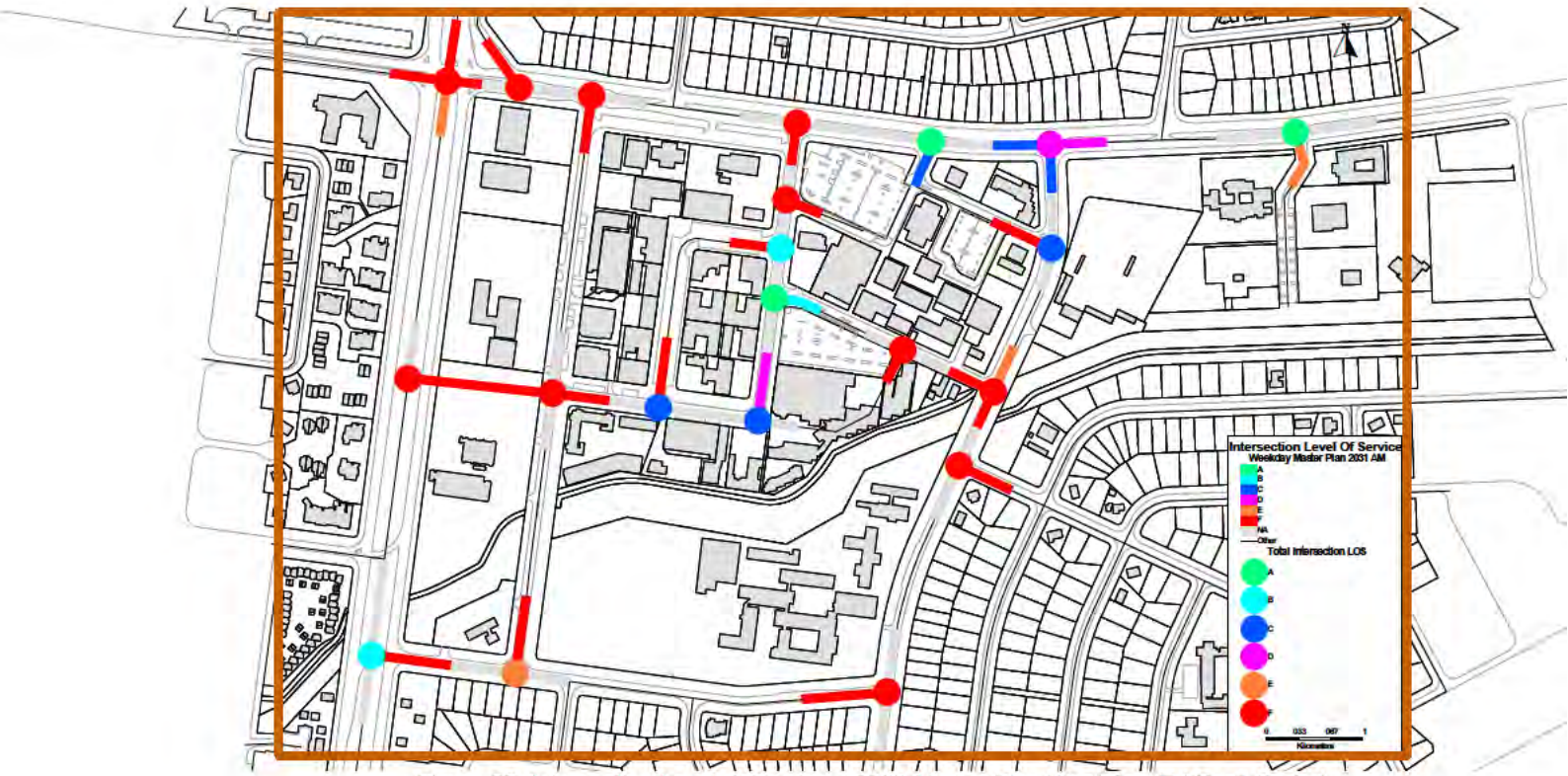

Figure 36: Intersection Level of Service – 2031 Master Plan Weekday AM Peak Period

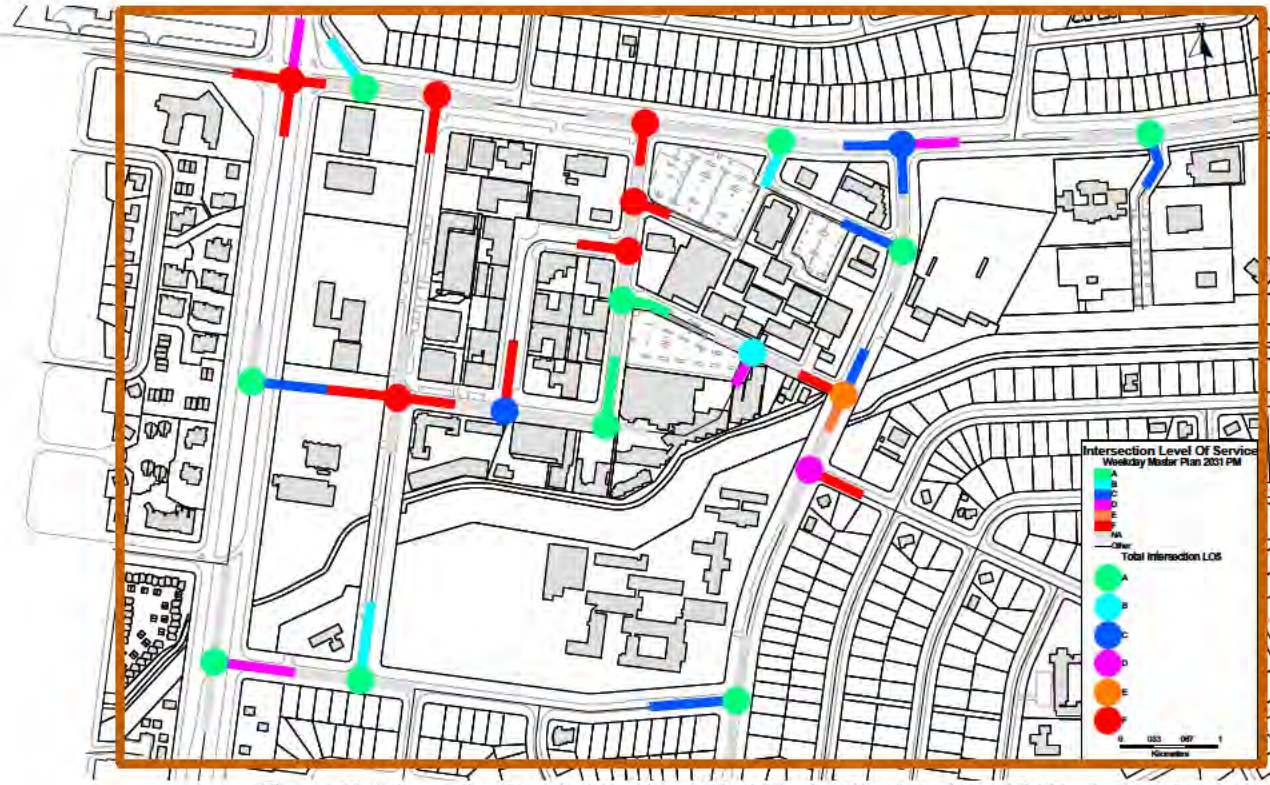

Figure 37: Intersection Level of Service – 2031 Master Plan Weekday PM Peak Period

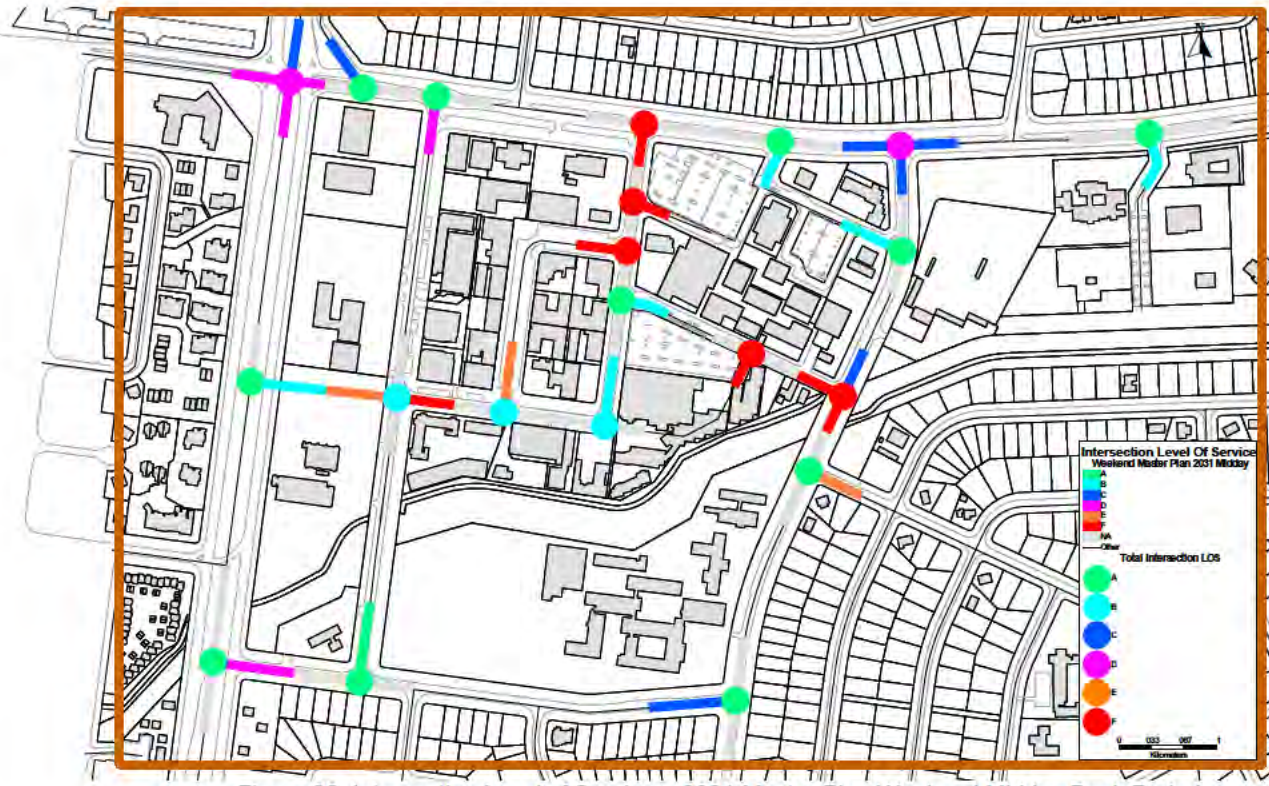

Figure 38: Intersection Level of Service – 2031 Master Plan Weekend Midday Peak Period

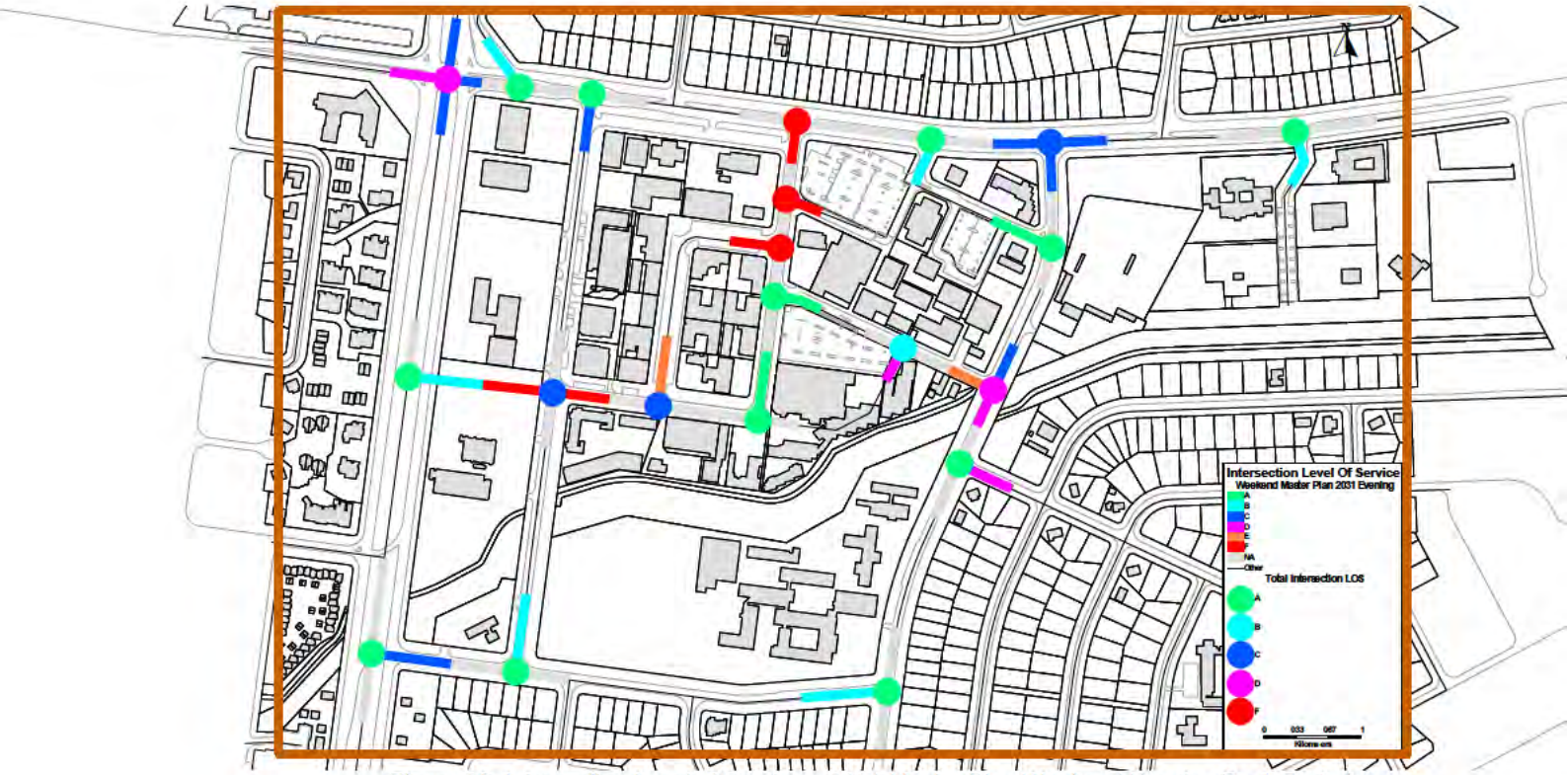

Figure 39: Intersection Level of Service – 2031 Master Plan Weekend Evening Peak Period

From the preceding figures, it can be seen that there are a number of intersections and links that are expected to operate at Level of Service F if the master plan developments are implemented. The intersections include:

- Northbourne Avenue – Antill Street / Mouat Street (AM and PM peaks)
- Antill Street – Northbourne Avenue Service Road (AM peak)
- Antill Street – Challis Street (AM and PM peaks)
- Challis Street – Cape Street (AM, PM and weekend evening peaks)
- Antill Street – Badham Street (AM, PM, weekend midday and weekend evening peaks)
- Badham Street – Dickson Shops Road (AM, weekend midday and weekend evening peaks)
- Badham Street – Woolley Street (PM, weekend midday and weekend evening peaks)
- Cowper Street – Dickson Place (AM and weekend midday peaks)
- Cowper Street – Davenport Street (AM peak)
- Cowper Street – Morphett Street (AM peak)

In addition to these intersections, the following roads are expected to operate at Level of Service F in 2031 if the master plan is implemented:

- Morphett Street, at its intersection with Northbourne Avenue (AM and weekend midday peaks)
- Challis Street, at its intersection with Morphett Street (AM peak)
- Woolley Street, at its intersection with Badham Street (weekend midday peak)
- Woolley Street, at its intersection with Cape Street (AM and PM peaks)
- Dickson Place, at its intersection with Cowper Street (PM peak)

- Dickson Shops Road, at its intersection with Cowper Street (AM peak)
- Davenport Street, at its intersection with Cowper Street (PM peak)

Recommendations to address these performance issues are presented in the following sections.

4.3 Summary of Issues Found and Potential Solutions

A number of recommendations have been made to allow the implementation of the master plan. These relate to:

- Pedestrian and cyclist facilities
- Car parking
- Road network and intersections

These recommendations are shown in *Figure* ***40*** and discussed in the following sections.

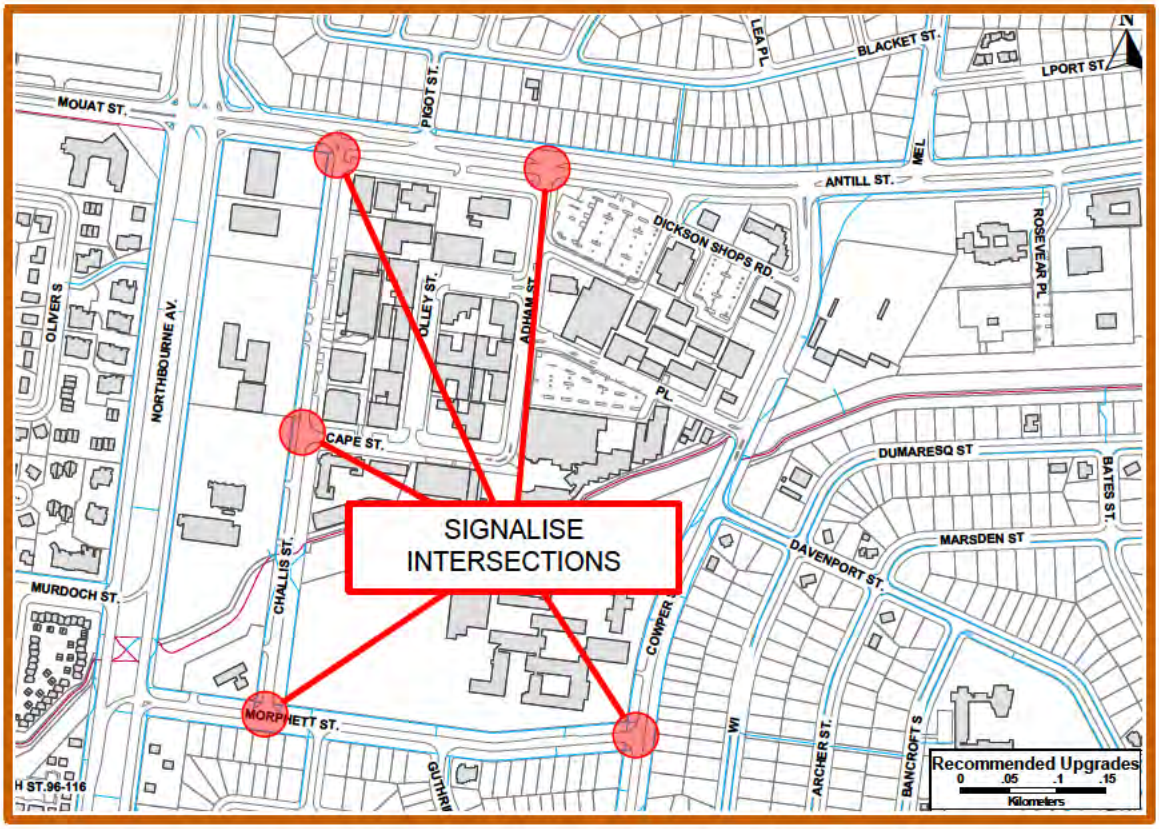

Figure 40: Recommended Upgrades for the 2031 Master Plan Scenario

Figure ***41*** through *Figure* ***45*** show the recommended layouts for the intersection upgrades shown in *Figure* ***40***. Signalisation of these intersections is recommended over any other intersection upgrade. The intersections will not operate at an acceptable level of service if they remain priority controlled. Converting them to roundabouts, while providing some level of traffic calming, would take additional space and would not cater well to pedestrians. The midblock capacities of the roads appear to be sufficient and no major widening is required. The only widening required is additional turning lanes at the intersections, as shown in the figures below.

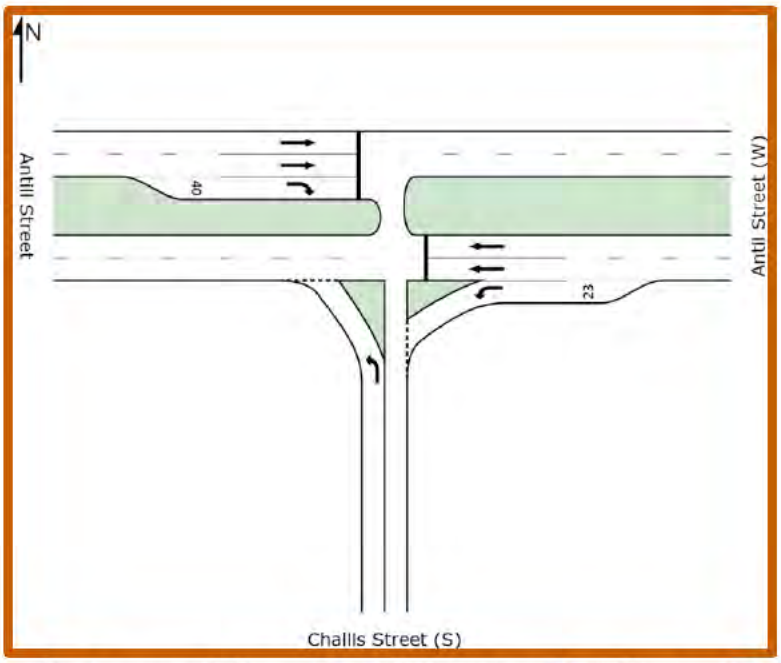

Figure 41: Recommended Layout for the Intersection of Antill Street and Challis Street

The recommended intersection Antill Street and Challis Street retains the existing footprint and number of lanes on each approach. The signalisation will allow better access and egress to and from Challis Street for cars and pedestrians without unduly delaying traffic on Antill Street.

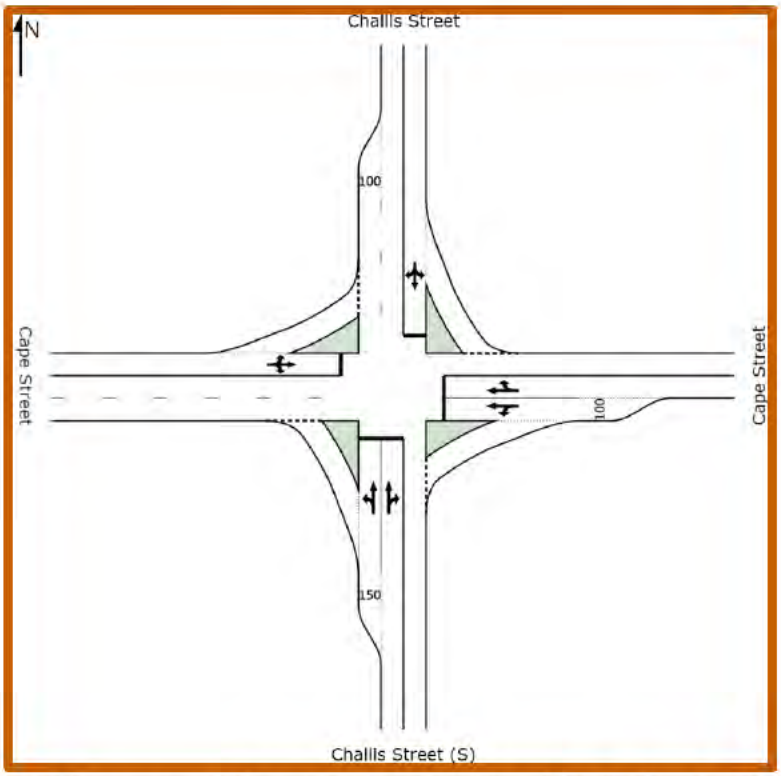

Figure 42: Recommended Layout for the Intersection of Challis Street and Cape Street

The intersection of Challis Street and Cape Street is proposed to be upgraded to a four-way intersection in the master plan. Four-way priority controlled intersections tend to perform poorly and this is no exception. Signalising this intersection improves the traffic performance and has the additional benefit of improving pedestrian accessibility. Converting this intersection to a roundabout is not recommended because of the pedestrian accessibility issues a roundabout would create.

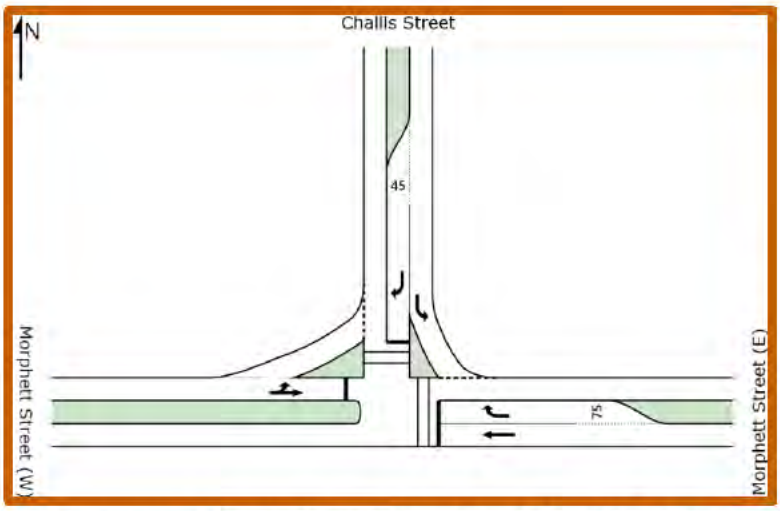

Figure 43: Recommended Layout for the Intersection of Morphett Street and Challis Street

The intersection of Morphett Street and Challis Street is also recommended to be signalised. This allows access and egress to and from Challis Street without overly delaying traffic on Morphett Street. As with the other intersections, pedestrian accessibility is important, especially this close to Daramalan College. The signals here will increase the safety for students walking and cycling to school.

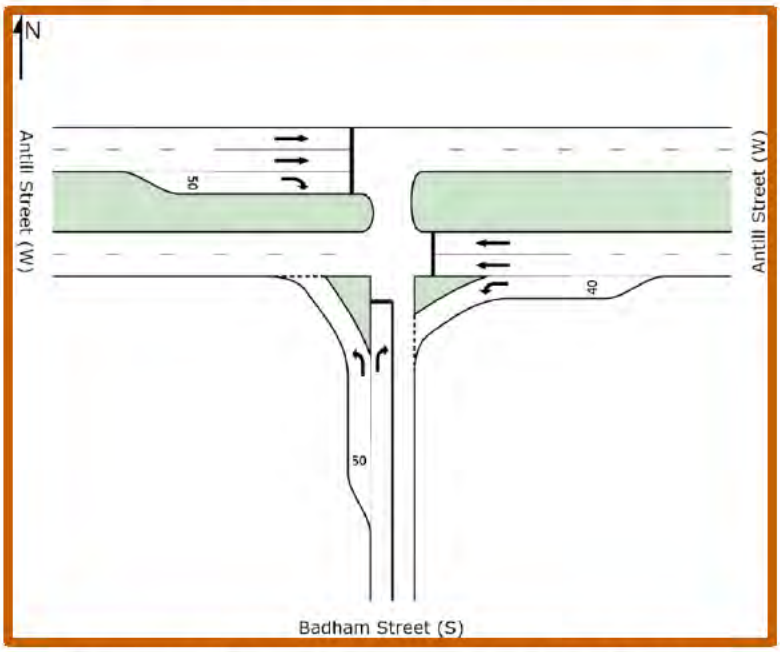

Figure 44: Recommended Layout for the Intersection of Antill Street and Badham Street

Signalising the intersection of Antill Street and Badham Street will allow better access to and from the central part of the Dickson Centre.

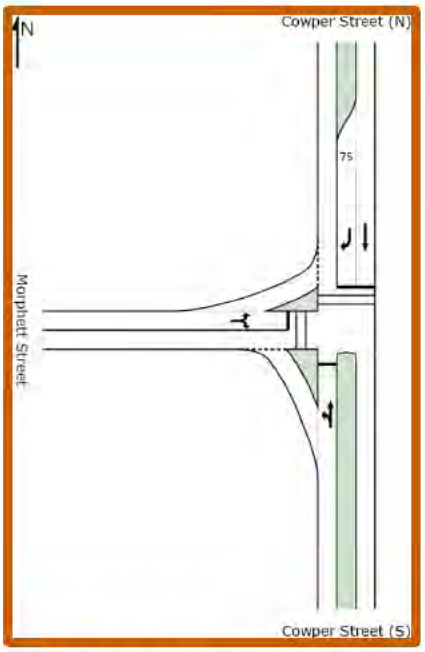

Figure 45: Recommended Layout for the Intersection of Morphett Street and Cowper Street

Signalising the intersection of Morphett Street and Cowper Street is expected to improve the traffic performance and also allow students to access Daramalan College much more safely than the current layout.

Figure ***46*** through *Figure* ***49*** show the intersection levels of service for the four peak periods in 2031, assuming that the master plan and the recommended intersection layouts presented above are implemented.

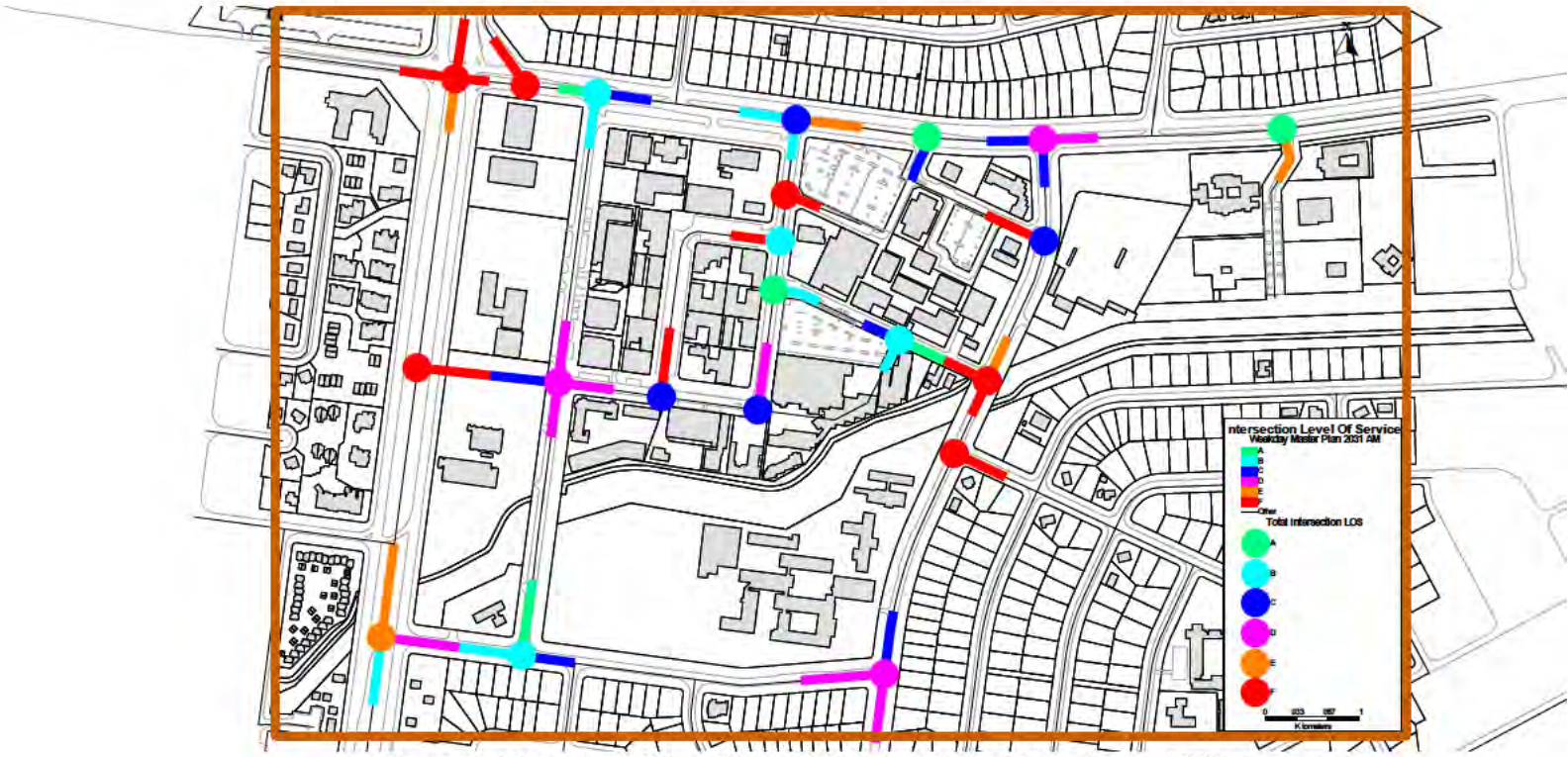

Figure 46: Intersection LOS – 2031 Master Plan Weekday AM Peak Period (With Upgrades)

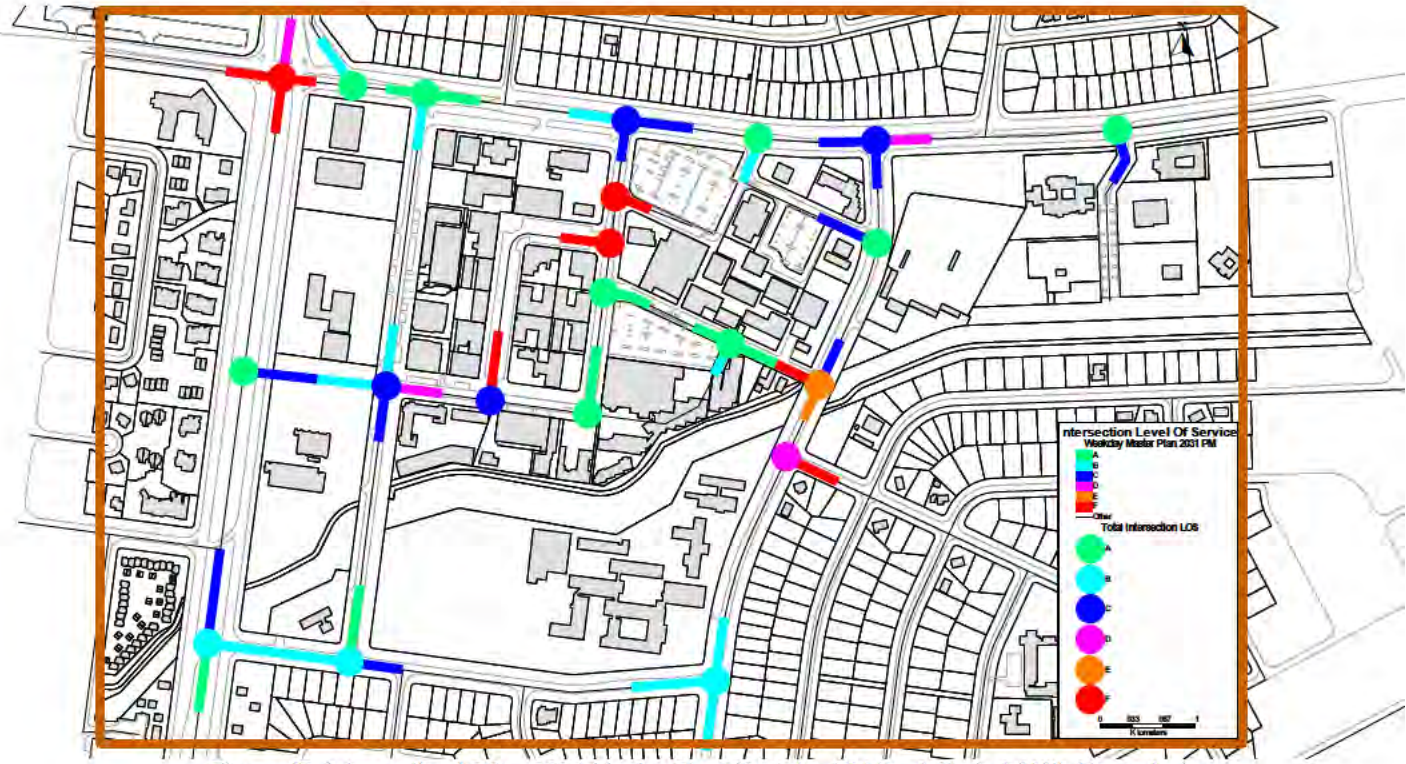

Figure 47: Intersection LOS – 2031 Master Plan Weekday PM Peak Period (With Upgrades)

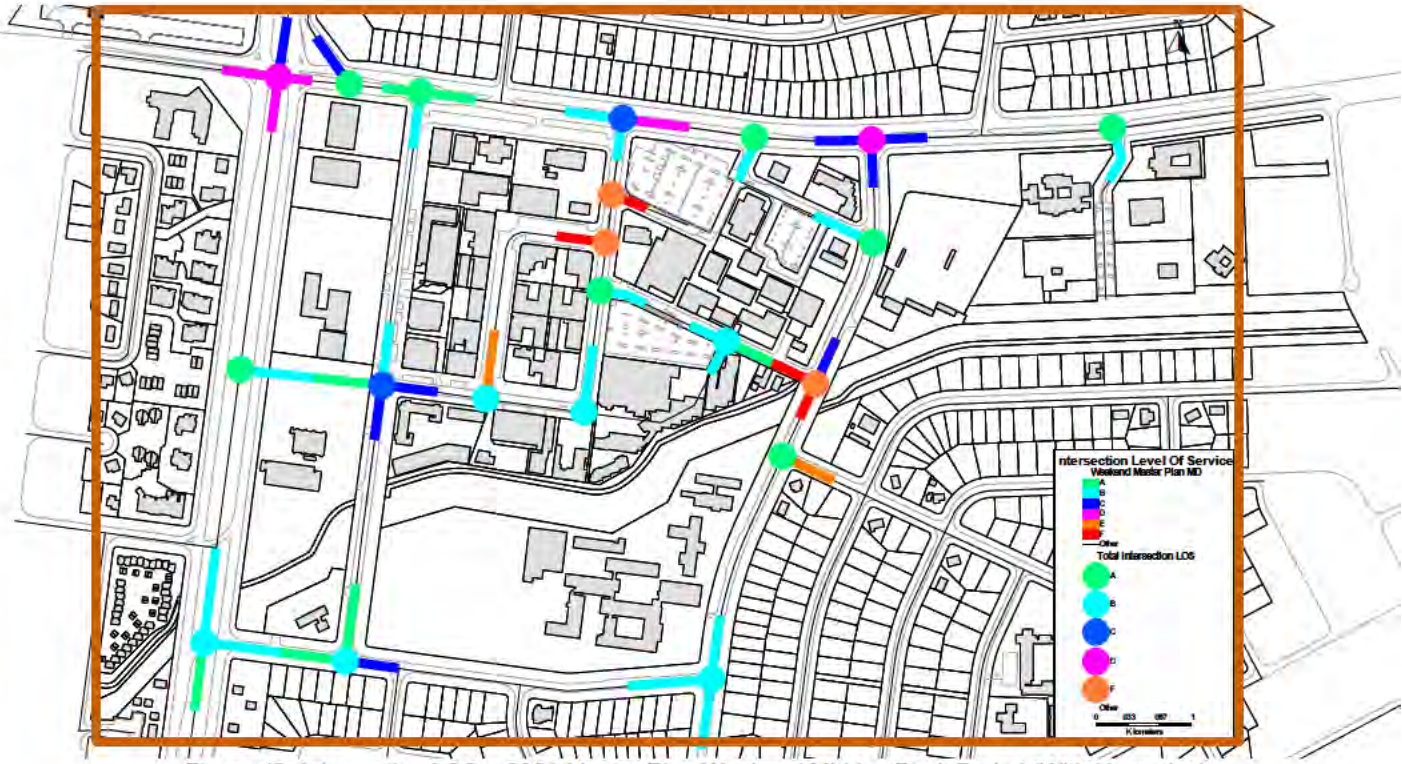

Figure 48: Intersection LOS – 2031 Master Plan Weekend Midday Peak Period (With Upgrades)

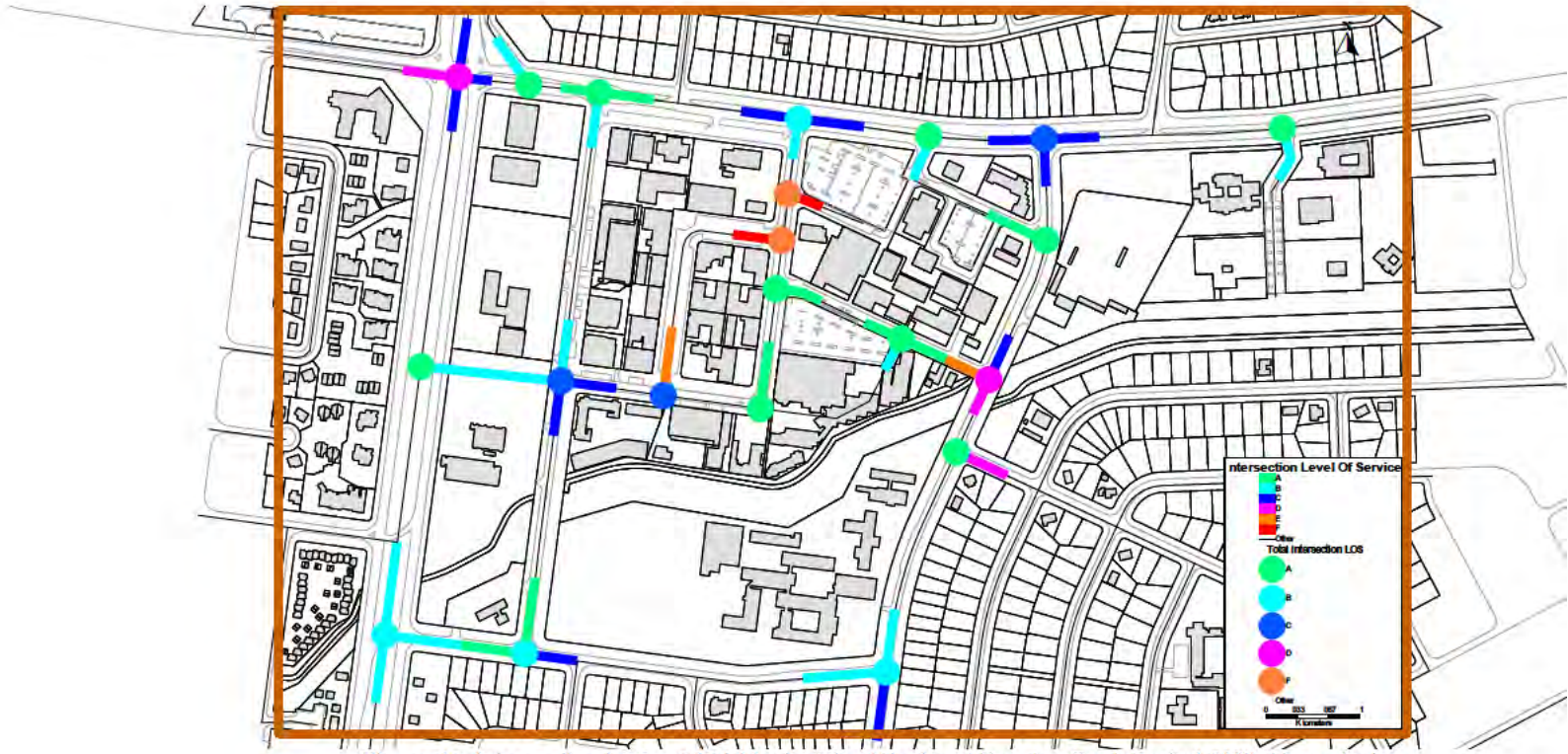

Figure 49: Intersection LOS – 2031 Master Plan Weekend Evening Peak Period (With Upgrades)

Table ***13*** summarises the differences in levels of service due to the recommended intersection upgrades.

Table 13: Comparison of Levels of Service (2031)

Intersection	LOS (Master Plan)				LOS (With Upgrades)			
	AM	PM	MD	EV	AM	PM	MD	EV
Antill Street – Challis Street	F	F	A	A	B	A	A	A
Antill Street – Badham Street	F	F	F	F	C	C	C	B
Challis Street – Cape Street	F	F	B	C	D	C	C	C
Northbourne Avenue – Morphett Street	B	A	A	A	E	B	B	B
Challis Street – Morphett Street	E	A	A	A	B	B	B	B
Morphett Street – Cowper Street	F	A	A	A	D	B	B	B
Dickson Place – Cape Street Extension	F	B	F	B	B	A	B	A

From *Table* ***13***, it can be seen that the recommended upgrades provide a benefit in nearly all cases. An apparent exception to this is the intersection of Northbourne Avenue and Morphett Street, which has a worse overall level of service. While the overall level of service has worsened, delays on Morphett Street itself have decreased from LOS F to LOS D in the weekday AM peak and from LOS D to LOS B in all other peaks. However, southbound traffic on Northbourne Avenue is slightly delayed, going from no delay in any peak to LOS E in the AM peak and LOS B in other peaks. There is no impact on northbound traffic at this intersection.

It is noted that there are some intersections that are expected to perform poorly, especially inside the Dickson precinct. No recommendations have been made for these intersections at this stage as the focus has been on the performance of the surrounding arterial and collector road network. Intersection performance inside the centre will need to be assessed in more detail as the master plan developments are implemented over the next 20 years and details such as car park entry/exit locations and capacities are known.

4.3.1 Pedestrian and Cyclist Facility Improvements

The following improvements to the pedestrian and cyclist facilities are recommended:

- Providing north/south external links into Dickson by signalising the intersection of Antill Street and Badham Street
- Improving pedestrian safety at the intersection of Morphett Street and Challis Street (preferably by signalisation)
- Improving pedestrian safety at the intersection of Morphett Street and Cowper Street (preferably by signalisation)

Provide new pedestrian connections inside Dickson Precinct as shown in the master plan (*Figure* ***28***). It is assumed that these internal links will be developed as the surrounding buildings are further developed.

4.3.2 Car Parking Options

It is recommended to develop the proposed supermarkets and associated retail facilities on Blocks 19 and 21 in stages. If possible, Block 21 should also be developed in stages. By leaving some of the parking area undisturbed it is possible to for the adjacent parking areas to provide the additional parking spaces needed during the construction phase.

The master plan does not include enough details regarding the proposed land use to accurately predict the number of parking spaces required in the future. However, a brief assessment indicates that the requirement for parking is likely to rise from approximately 2,500 in 2012 to approximately 6,000 in 2031. All proposed developments should meet the parking requirements set out in the *ACT Parking and Vehicular Access General Code* or whichever code is relevant at the time of development.

In the future, it may be possible to reduce the parking requirements by considering dual use or shared parking. Dual use parking, referred to in Brown Consulting (2011), is where a number of land uses share a parking area. Users are able to visit more than one land use without requiring a second car parking space. This sharing of parking spaces has already been taken into account in the requirements of the ACT general code.

4.3.3 Road Network and Intersection Options

The analysis of the road network and intersection performance has identified a number of locations where the level of service is expected to be poor or unacceptable. These locations are on arterial roads around the Dickson precinct and also on local streets inside the precinct. At this stage in the process, it is considered appropriate to make recommendations to improve the level of service on the arterials roads while the local streets can tolerate a higher delay. In addition, the operation of some of the local streets is highly dependent on the location of access to future parking areas, which is not yet known.

It is recommended that the following changes to intersections are made to address identified performance issues:

- Signalisation of the following intersections:

- Antill Street and Challis Street
- Challis Street and Cape Street
- Challis Street and Morphett Street
- Antill Street and Badham Street (also recommended to improve pedestrian access to Dickson from the suburbs to the north)
- Morphett Street and Cowper Street (also recommended to improve pedestrian safety around Daramalan College)

5 COST ESTIMATES

The analysis of the current situation and the long term master plan has revealed a number of transport related issues that need to be addressed to enable the proposed developments to proceed. The indicative cost estimates have been calculated for each of the changes recommended in Sections 3.4 and 4.3 and these estimates are presented in the following sections.

5.1 Cost of Recommendation for Current Issues

The costs of the recommendations to address current identified issues have been estimated and are presented in *Table **14***.

Table 14: Estimated Cost of Recommended Upgrades – Current

Recommendation	Estimated Cost
Pedestrian crossing on Challis Street near Morphett Street	$3,800
Pedestrian crossing on Challis Street near the Telstra Building	$3,800
Pedestrian crossing on Antill Street near Pigot Street	$3,800
Pedestrian crossing on Dickson Shops Road close to Cowper Street	$3,800
Widen the concrete paths around Daramalan College to 2.0m	$155,000
Provide better lighting on the path extension from Badham Street to the shared path to the south	$6,600
Ensure pedestrian ramps along Challis Street have appropriate steepness for wheelchair access	$67,000
Construct a new pedestrian/cyclist path connection from Rosevear Place to the shared path to the south	$70,000
Signalise the intersection of Morphett Street with the southbound carriageway of Northbourne Avenue	$120,100
Subtotal	**$433,900**
Contingency (40%)	$173,560
GST (10%)	$43,390
Total	**$650,850**

5.2 Cost of Long Term Recommendations

The costs of the recommendations to address issues in the long term have been estimated and are presented in *Table **15***.

Table 15: Estimated Cost of Recommended Upgrades – Long Term

Recommendation	Estimated Cost
Signalise the intersection of Antill Street and Challis Street	$140,300
Signalise the intersection of Challis Street and Cape Street	$186,100
Signalise the intersection of Challis Street and Morphett Street	$129,500
Signalise the intersection of Antill Street and Badham Street (also recommended to improve pedestrian access to Dickson)	$148,500
Signalise the intersection of Morphett Street and Cowper Street (also recommended to improve pedestrian safety around Daramalan College)	$138,000
Subtotal	**$742,400**
Contingency (40%)	$296,960
GST (10%)	$74,240
Total	**$1,113,600**

6 CONCLUSIONS

The current and future transport operations in Dickson have been assessed and it was found that a small number of upgrades to existing facilities are required, both now and in the future to allow the full development of the master plan.

6.1 Immediate/Short Term Recommendations

The current operation of the transport network in Dickson was assessed and found to be generally good. However, addressing the following improvements should be prioritised in the short term:

- Pedestrian and cyclist infrastructure and safety:
  - Provide a pedestrian crossing on Challis Street near its intersection with Morphett Street
  - Provide a pedestrian crossing on Challis Street near the Telstra Building
  - Provide a pedestrian crossing on Antill Street near its intersection with Pigot Street (short term only)
  - Provide a pedestrian crossing on Dickson Shops Road close to the intersection with Cowper Street
  - Monitor the safety of the pedestrian crossing on Challis Street north of Daramalan College and construct a raised pedestrian crossing if required
  - Widen the 1.2m concrete paths around Daramalan College to 2.0m wide
  - Provide better lighting on the path extension from Badham Street to the shared path to the south of the precinct to improve security
  - Ensure pedestrian ramps along Challis Street have appropriate steepness for wheelchair access.
  - Construct a new pedestrian/cyclist path connection from north of Rosevear Place to shared path to the south and swimming pool
- Car parking operations:
  - Implement better signage to inform users about the location of parking areas that are currently underutilised
- Road network and intersections
  - Signalise the intersection of Morphett Street with the southbound carriageway of Northbourne Avenue. The northbound carriageway would remain as it is.

These recommendations are expected to improve the transport operations and safety in Dickson in the short term.

Also in the short term, the proposed capacity of the car parks provided as part of the development of Blocks 19 and 21 needs to be consistent with the ACT general code. Initial estimates by Brown Consulting place the additional car parking requirements at 326 spaces, in addition to the existing 359 spaces that will need to be replaced by any new development.

It is recommended that the development of Blocks 19 and 21 be staged to reduce the impact on parking supply in Dickson. Block 19 may be able to be developed without provision of significant temporary car parking but the development of Block 21 is expected to require temporary parking to be provided during construction.

6.2 Long Term Recommendations

In the long term, the transport demands in Dickson are expected to increase significantly, both with and without the implementation of the master plan. A number of recommendations have been made to allow implementation of the master plan and these should be implemented as required. These recommendations include:

- Pedestrian and cyclist infrastructure and safety:
  - Provide north/south external links into Dickson by signalising the intersection of Antill Street and Badham Street
  - Improve pedestrian safety at the intersection of Morphett Street and Challis Street (preferably by signalisation)
  - Improve pedestrian safety at the intersection of Morphett Street and Cowper Street (preferably by signalisation)
- Car parking operations:
  - Implement an area wide parking strategy to efficiently plan parking for future developments
- Road network and intersections:
  - Signalise the intersection of Antill Street and Challis Street
  - Signalise the intersection of Challis Street and Cape Street
  - Signalise the intersection of Challis Street and Morphett Street
  - Signalise the intersection of Antill Street and Badham Street (also recommended to improve pedestrian access to Dickson from the suburbs to the north)
  - Signalise the intersection of Morphett Street and Cowper Street (also recommended to improve pedestrian safety around Daramalan College)

APPENDIX A 2012 (EXISTING) SIDRA RESULTS

APPENDIX B 2031 DO NOTHING SIDRA RESULTS

APPENDIX C 2031 MASTERPLAN SIDRA RESULTS

APPENDIX D 2012 (RECOMMENDED) SIDRA RESULTS

APPENDIX E 2031 MASTERPLAN (RECOMMENDED) SIDRA RESULTS

APPENDIX F COST ESTIMATES

High Quality Consulting and Development Solutions

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dickson group centre
urban planning framework
review
project quality plan

(Draft 27/07/09)


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BROWN
CONSULTING

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1. Introduction

1.1 Background

ACTPLA has commissioned a review of the urban planning framework for the Dickson group centre.

Dickson centre was developed in the mid-1960s and is in 2007 had a gross floor area of approximately 12,500m^2 of commercial space in the core and nearly 40,000m^2 of commercial space in the service trades area making it one of the largest group centres in the city.

The centre consists of a core that is primarily single storey buildings, most of which are original. The buildings in the core are oriented towards pedestrian areas and squares. As a consequence the core is inwardly focused. The service trades area which has metamorphosed in recent years into a restaurant, cafe and food centre, while still retaining some traditional service trades activities is oriented around a few streets and has limited pedestrian connections to the retail core. There is also a range of community facilities in the centre including the library, clubs, community meeting spaces and child care facilities. The main heritage building is the library.

The centre is bounded by roads and parking areas. The roads adjacent to the core provide access to parking areas or are service areas for the shops which back onto them. In general the roads within the service trades area provide the main connections to surrounding areas and the wider road network. Public parking is either on-street or in several publicly owned car parks distributed across the centre. The main features of the public realm include the pedestrian areas within the core and a pedestrian area in the north-western sector of the centre.

Dickson centre has for many years been a successful centre and while meeting the needs of residents, workers and visitors in its catchment, it has also served a wider population in Belconnen and Gungahlin partly in response to the lag in the provision of retail facilities in those districts and also because of its central location. More recently it has met the needs of an increasing and different population in north Canberra generated by residential redevelopment and the release of areas such as North Watson.

This project seeks to integrate future directions for the public realm, generally unleased land and the private realm, generally leased land. This includes a concern for the built form but also with the interaction between buildings and public spaces.

1.1.1 Opportunities

There has been considerable interest in redevelopment of the centre. Woolworths has sought for many years to increase its floorspace, the Tradies Club are understood to have large land holdings they are interested in developing and at least one major banking institution has also examined potential opportunities. These groups need to be actively involved in the project.

The surface car parks provide opportunities to increase commercial space as well as to increase living opportunities within the centre. The mix of uses will affect the vibrancy of the centre as well as its capacity to counter retail competition from Braddon, City and the Gungahlin and Belconnen town centres.

In various discussions about Dickson the view has been expressed that the two sections (core and service trades'area) should be better integrated and that improved connections would achieve this. On the other hand it could be argued that the centre is two sub-centres and that there is limited need for interaction between them: one is an entertainment destination and the other meets convenience shopping needs. It will be important to tease out different perspectives on the same issue as part of the consultations and centre analysis before rushing to formulate solutions.

One of the factors that distinguishes Dickson from other centre is the presence of Chinatown; one of the most vibrant parts of the centre and a focus for the metropolitan area and not just

North Canberra. It is reasonable to anticipate that this area will be highly valued and that it will be important to ensure that its character is retained.

The spatial plan will influence redevelopment opportunities, including the balance between redevelopment of privately leased land and unleased Territory land. This issue will have to be sensitively handled.

The brief calls for a review of suitable sites for a major new supermarket. With the exception of Civic, supermarket retailing in North Canberra is dominated by the Dickson Woolworths. The study will review all potential sites/opportunities for new supermarket opportunities in Dickson.

There are weaknesses in the existing retail structure: parking provision is limited, there is limited choice of food (supermarket) retailing, there are few green areas, the interface between buildings and spaces could be improved and the main retail centre is removed from the main 'eat' street with poor connections.

1.2 Purpose

This document outlines the project management plan (PMP) to guide the review. It establishes the objectives of each stage of the review, outlines the detailed methodology, timeframes, responsibilities and deliverables. It also includes the consultation strategy.

1.3 Project Objectives

The broad aims of this project are to:

- develop a framework to guide urban planning and urban design decisions that foster sustainable redevelopment and development in the Dickson group centre; and
- identify if there is a need for any variations to the Territory Plan to support the abovementioned urban planning framework.

In addition the objectives for the urban planning framework are to:

- encourage development and redevelopment that set benchmarks in sustainable design;
- encourage public realm improvements that set benchmarks in sustainable design;
- determine how DIckson can best continue its development as a destination and not just a centre which services the local community;
- facilitate increased connectivity and improved circulation for pedestrians and cyclists within and through Dickson including to the group centre and to key features, in particular public transport facilities;
- determine how the role of public transport can improve in Dickson;
- identify sufficient car parking provision to maintain accessibility while minimising additional congestion; and
- encourage mixed use development.

1.4 Key Deliverables

The project deliverables include:

- Project Quality Plan
  - ❖ Consultation Strategy
- Research Findings
  - ❖ Background research
  - ❖ Analysis
  - ❖ Vision
  - ❖ Community/agency consultation
  - ❖ Presentation material, including material for webpage
- Design and Urban Planning Framework

- Opportunities and constraints for supermarket site
- Preferred supermarket site
- Urban planning framework
- Implementation
  - variations to the Territory Plan
  - development control drawings
  - land release opportunities
  - policies to inform more detailed design

2. Methodology

The project is to be undertaken in two stages and the methodology is summarised in Figure 1. The first stage involves analysis of the centre and its context and the formulation of a vision for the future of the centre based on consultation with the broad community. The second stage includes development of an urban planning framework and assessment of the opportunities to for a supermarket and redevelopment of the centre. Both stages will be supported by extensive community consultation using diverse techniques.

Figure 1: Methodology

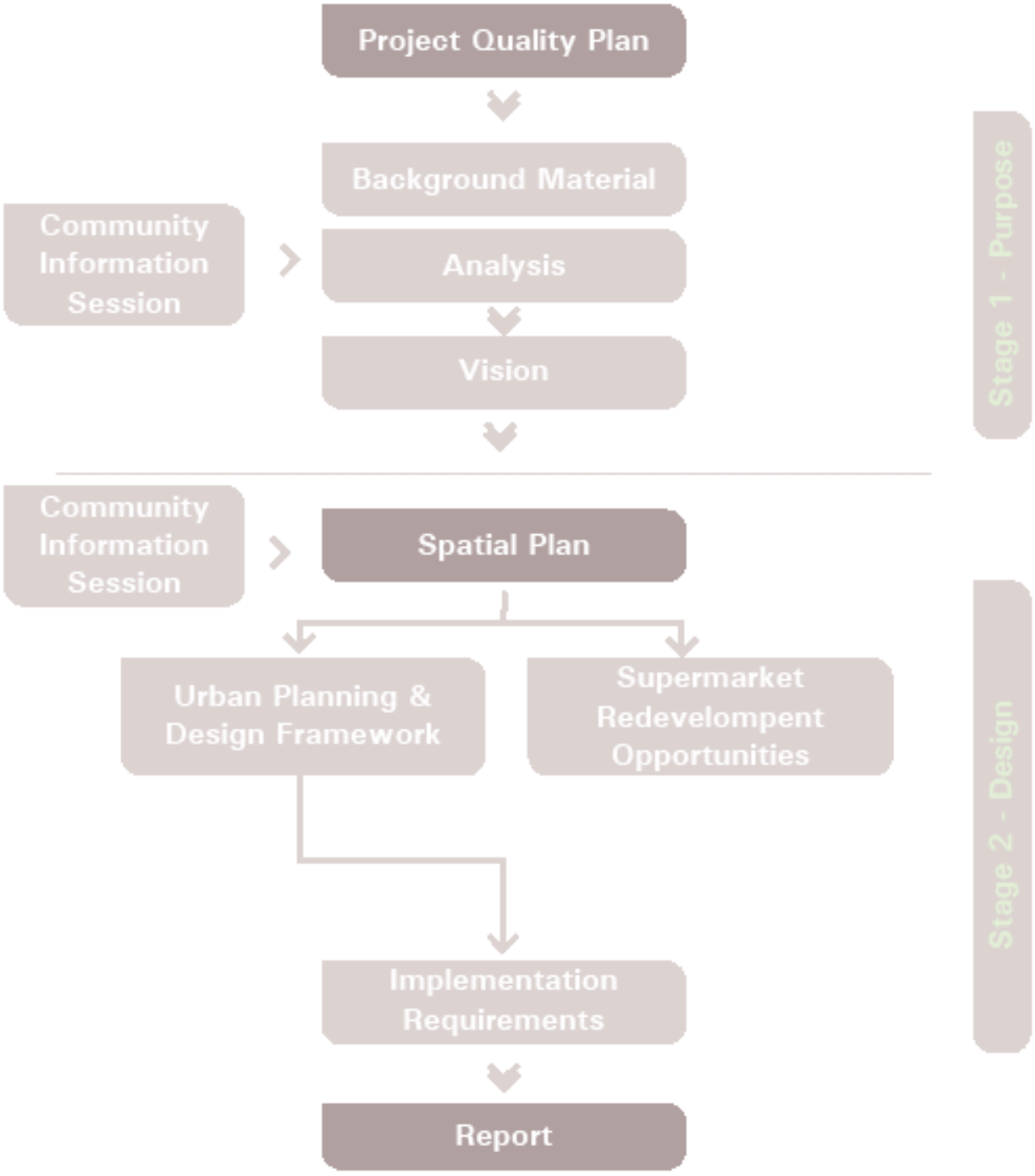

Table 1: Summary of Allocation of Tasks

TASK	Purdon	CSA	Enviro Links	Brown	Cap Val
Project Management	✓✓				
Community Consultation	✓✓	✓		✓	
Stage 1 - Prepare					
Review existing material	✓✓	✓	✓	✓	
Planning framework	✓✓				
Land use patterns/structure	✓✓				
Built form and open space		✓✓	✓✓		
Physical condition	✓	✓✓			
Infrastructure				✓✓	
Movement				✓✓	
Property market	✓				✓✓
Demographics and lifestyle	✓✓				
Accessibility and amenity	✓	✓✓			
Land ownership	✓✓				
Heritage	✓	✓✓			
Environmental assets	✓✓	✓			
Cultural provision and identity	✓✓	✓	✓		
Proposed developments	✓✓				
Analysis					
Built form and structure	✓	✓✓			
Constraints and opportunities	✓✓	✓	✓	✓	
Surrounding areas	✓✓				
Key issues	✓✓	✓	✓	✓	
Confirm Vision	✓✓	✓	✓		
Stage 2 - Design					
Development Framework	✓✓	✓✓			
Supermarket Assessment	✓✓	✓	✓	✓	✓
Urban Planning Framework	✓✓	✓✓	✓	✓	
Implementation	✓				
Reporting (Deliverables)	✓✓	✓✓	✓	✓	✓

3. Project Establishment and Project Management

Outcome:	An agreed methodology, milestones, outcomes and responsibilities
	Ongoing management of project in accordance with management plan.
Deliverable:	Project Quality Plan, including consultation strategy.

3.1 Project Management

Purdons will have consultant management responsibility. Chris Purdon (CP) will be Project Director and Trevor Fitzpatrick (TF) will be the Project Manager and the primary point of contact between project team and the client.

CP and TF will concurrently co-ordinate the project including but not limited to:

- preparation of the project quality plan in conjunction with the client and the project team
- implementation and monitoring of the plan, in conjunction with the client
- manage the project budget and contractual responsibilities
- monitoring and review of the project quality plan to ensure timeframes in the brief are met
- ensuring that the quality of deliverables meets and exceeds expectations.
- introducing exception reporting if required where unforeseen circumstances could potentially affect timeframes or other aspects of the review

Activity	**Project Quality Plan**	
Deliverable	Written document	
Timing	Draft Project Plan	27/7/09
	Final PQP	31/7/09
Primary Responsibility	Purdons	
Other Inputs	CSA	
Consultant QA	Reviewed by Project Director	
Client QA	Reviewed by Client, feedback incorporated into Final PQP.	

3.1.1 Inception Meeting

The inception meeting to be attended by key team members will:

- review, amend and agree on the draft Project Quality Plan
- discuss community consultation
- establish working arrangements
- provide copies of all relevant documents and any other relevant material and details of stakeholders/contacts
- clarify arrangements for communication with the client and establish working arrangements
- discuss other key issues and factors of concern/interest.

Following this meeting the draft Project Quality Plan will be finalised and will be the basis for subsequent project monitoring.

Activity	**Inception meeting (1st Project Meeting)**
Deliverables	Draft Project Quality Plan
Timing	Tuesday 7 July 2009
Primary Responsibility	Purdons

Other Inputs	CSA, Brown
Client QA	Notes and actions confirmed at 2nd Project Meeting

3.1.2 Project Co-ordination Meetings

The Project Co-ordination meetings (project meetings) will be the main formal mechanism (in addition to ongoing email & telephone contact with the client) to ensure that the project quality plan is implemented and contractual responsibilities are met.

Activity	**Project Co-ordination meetings**
Deliverable	Meeting notice by email (with Agenda) Notes of each meeting with Action Plan
Timing	Meetings to be held fortnightly with notice 1 week in advance Meeting notes distributed within 2 days of meeting
Primary Responsibility	Purdons
Other Inputs	CSA, Brown Consulting
Consultant QA	Notes reviewed by Project Director
Client QA	Notes of meetings confirmed at following meeting.

3.1.3 Consultant Team Management

CP and TF will co-ordinate the inputs of the consultant team including but not limited to:

- clarifying roles, responsibilities and outputs within the consultant team
- coordination of the project team including regular team meetings
- regularly communicating, including meetings, with the client
- working with the client to achieve a successful outcome

Purdons will chair team meetings and other meetings as required and be responsible for preparing notes of meetings.

Activity	**Consultant team meetings**
Deliverable	Notes of each meeting with actions
Timing	Meetings to be held (generally) fortnightly, with notice 1 week in advance Meeting Notes distributed within 2 days of meeting
Primary Responsibility	Purdons
Other Inputs	CSA, Brown, Capital Valuers, Enviro Links
Consultant QA	Notes reviewed by Project Director
Client QA	N/A.

3.2 Reporting

Reporting includes the project management activities outlined above and the presentation of reports, plans and other graphic material as noted throughout this plan.

4. Project Stage 1 – Background Research

Outcome:	Detailed understanding of the context, including the surrounding area, centre characteristics and identity, opportunities and constraints and a vision for the centre.
Deliverables:	Report documenting the findings of the background research, the centre analysis and the statement of the vision.

4.1 Data Review and Research

4.1.1 Review of Background Information

The background information to be reviewed includes:

- Territory Plan
- ABS census data and CMD population projections (produced by Access Economics)*
- retail inventory detailed results*
- future retail requirements (source information in brief)*
- results of the IBECON modelling and any more recent modelling*
- LDA land release program
- previous studies of Dickson*
- supermarket policy*
- relevant planning reports for Dickson or the surrounding areas*.

* *To be provided by ACTPLA*

Activity	**Background Research**
Deliverables	Report on centre context outlining key issues
Timing	Draft - 14 August 2009 Final – 31 August 2009
Primary Responsibility	Purdons/ACTPLA
Other Inputs	CSA,
Consultant QA	Notes reviewed by Project Director
Client QA	Notes and actions confirmed at following Project Meeting

4.1.2 Surrounding Area Context

The context for the centre and an urban planning and design framework will be examined to identify potential impacts and implications in relation to:

- locational characteristics of the area
- existing and proposed developments
- employment growth.

Activity	**Surrounding Area Development**
Deliverables	Report on centre context
Timing	Draft - 14 August 2009 Final 31 August 2009
Primary Responsibility	Purdons
Other Inputs	CSA, Brown
Consultant QA	Notes reviewed by Project Director
Client QA	Notes and actions confirmed at following Project Meeting

4.1.3 Traffic Related Research

Background research to include:

- liaison with Roads ACT to obtain SCATS data, EMME/2 outputs, two-way midblock counts and crash history records for the past 5 years within and adjacent to the study area
- review of relevant traffic and parking studies*
- mapping the existing and future ACTION bus routes (through consultation with ACTION).

Activity	**Traffic Research**
Deliverables	Inclusion in report on context, including key issues
Timing	Draft - 14 August 2009
	Final – 31 August 2009
Primary Responsibility	Brown
Other Inputs	Purdon
Consultant QA	Notes reviewed by Project director
Client QA	Notes and actions confirmed at following Project Meeting

4.2 Analysis

This element will use the information collected to build a detailed understanding of the centre, its strengths and weaknesses and future requirements and opportunities.

4.2.1 Centre Assessment

This assessment will be based on the documentation of the centre characteristics to identify:

- the pedestrian network
- permeability and legibility
- leased/unleased land
- land use
- parking provision
- accessibility
- community safety
- open space
- scale
- amenity and character
- urban structure
- existing services
- traffic movement and capacity
- public transport
- built form and massing
- development intensity
- public realm and landscape
- heritage
- relationship to surrounding areas.

The outcome would be a series of plans identifying the key elements of the centre and identification of the elements that contribute to the character of the group centre.

The assessment will enable documentation of the constraints and opportunities. The assessment will also identify issues that should be addressed in the planning framework including building height, future desired character, future built form and massing, and approaches to parking provision, taking into account sustainability requirements. The locational assessment would identify potential locations for a supermarket(s).

The final element of the centre assessment involves the consideration of the strengths and weaknesses of the centre and in particular the factors that contribute to its success and popularity.

Activity	**Centre Assessment**
Deliverables	Plans and report of centre assessment and opportunities and constraints;
Timing	Draft - 14 August 2009

	Final – 31 August 2009
Primary Responsibility	CSA
Other Inputs	Purdons, Brown
Consultant QA	Team discussion of implications
Client QA	ACTPLA to review and comments to be incorporated

4.2.2 Traffic Analysis

The traffic analysis will focus on the immediate road network and will will:

- identify non-private vehicular transportation mode constraints and outline opportunities, from small scale pedestrian crossing treatments through to potential shared zones.
- consider the adequacy of existing on and off street parking provisions based on the unrestrained demand and consider additional short stay restrictions
- review the safety of existing pedestrian / cyclist crossing and midblock treatments

The analysis will highlight the existing situation based on a review of available data and identify areas requiring further investigations but will not undertake those investigations.

Activity	**Traffic Assessment**
Deliverables	Traffic report as input to analysis of centre
Timing	Draft – 14 August 2009
	Final – 31 August 2009
Primary Responsibility	Brown
Other Inputs	Purdon
Consultant QA	Draft Traffic report reviewed by Project Director
Client QA	Draft Traffic Report reviewed by Client, feedback incorporated into Final Report

4.2.3 Vision

The key outcome of the first round of community consultations (refer Section 6) confirmation/refinement of the current vision statement for the Dickson centre and principles that will underpin the spatial plan.

Activity	**Updated Vision Statement**
Deliverables	Vision statement confirmation, including principles for spatial plan, input to Phase 2
Timing	18 August 2009
Primary Responsibility	Purdons
Other Inputs	CSA, Brown, ACTPLA
Consultant QA	Testing/modification with Workshop participants
Client QA	Feedback from Workshop

5. Project Stage 2 – Design

Outcome:	Three dimensional spatial plan showing the future intentions for the centre in visual and in written form representing the vision for the centre and the results of the various investigations. Urban planning and design framework and other activities necessary to support progressive implementation of the plan by various stakeholders. Planning principles including sustainable urban design principles.
Deliverables:	Report and plans documenting the urban planning and urban design framework and the implementation requirements.

5.1 Spatial Plan

The centre analysis undertaken in Stage 1 and the vision will form the basis for the development of a spatial plan for the options for the centre that will identify

- development opportunities
- building massing and form
- active frontages
- pedestrian connections
- vehicular movement routes
- parking opportunities
- underutilisation of road infrastructure
- the location and role of open space and public realm treatment.

The options will be assessed to establish which best meets the vision (and addresses other issues). The preferred option would be refined to become the spatial plan for the centre and would be the basis for the urban planning and design framework. The spatial plan will be a three dimensional plan that provided an indication of possible proposals for the development of blocks, spaces, streets and the landscape.

Activity	**Spatial Plan**
Deliverables	Options for future development (plans, perspectives, 3D model) Spatial Plan (preferred option - plans, perspectives, 3D model))
Timing	Draft – 11 September 2009 Final - 25 September 2009
Primary Responsibility	CSA, Purdon
Other Inputs	Brown
Consultant QA	Draft plans/perspectives/written statement reviewed by Project Director
Client QA	Draft plans/statement reviewed by Client, feedback incorporated into Final Report

5.2 Supermarket Site Selection

Alternative sites for a supermarket in Dickson will be assessed using the following (as agreed) criteria:

- accessibility to the catchment
- availability of land
- co-location opportunities
- impact on the retail hierarchy

The purpose of this broad strategic assessment would be to determine if the Dickson Group Centre is the preferred location.

Assuming that the preferred location is Dickson, the project will identify alternative sites for a new supermarket based on the estimated retail floorspace requirements identified in Stage 1. The alternative sites will be assessed in terms of:

- site suitability and availability
- access opportunities
- infrastructure availability
- traffic and pedestrian impacts, including temporary parking
- impacts on surrounding uses
- integration with the balance of the centre
- site development potential
- consistency with the vision and design directions
- capacity to contribute to maximising the character and role of the centre

The assessment will identify a preferred site.

The deliverables from this component of the project will incorporated into the urban planning framework and final report. They will include reporting on the proposed location of the supermarket, its size and any specific urban planning or urban design considerations.

Task	**Dickson Supermarket Selection**
Deliverables	Draft Report/plans/sections
Timing	Draft - 2 October 2009
	Final – 30 October 2009
Primary Responsibility	Purdon
Other Inputs	CSA, Brown Consulting, Capital Valuers
Consultant QA	Plans and draft report reviewed by Project Director
Client QA	Plans and draft report reviewed by Client, feedback incorporated into Final Report

5.3 Urban Planning Framework

An integrated urban planning and urban design framework will be developed that includes the public realm and leased and unleased land within the centre.

The planning framework will be based on the findings in previous parts of the project and will be consistent with the vision developed in conjunction with the community. It will include both graphic and written material aimed at clearly expressing the guidelines for future development of the centre. The vision and a statement of principles and objectives would underpin and form part of the framework.

Activity	**Urban Planning Framework**
Deliverables	Report/plans/guidelines
Timing	Draft - 9 October 2009
	Final – 30 October 2009
Primary Responsibility	Purdon
Other Inputs	CSA, Brown Consulting, Enviro Links
Consultant QA	Draft report reviewed by Project Director
Client QA	Draft Report reviewed by Client, feedback incorporated into Final Report

5.3.1 Implementation

The project will also identify the steps required to implement the urban planning framework including advice on:

- Variations to the Territory Plan
- Land Release Opportunities

- Other Development Opportunities
- Capital Works

Task	Implementation Advice
Deliverables	Input to final report
Timing	Draft - 16 October 2009 Final – 30 October 2009
Primary Responsibility	Purdon
Other Inputs	CSA, Brown, Capital Valuers
Consultant QA	Draft report reviewed by Project Director
Client QA	Draft Report reviewed by Client, feedback incorporated into Final Report

6. Communications and Consultation Strategy

Outcome:	Involvement of the broad community in the development of the urban planning framework based on a community oriented vision.
Deliverables:	Input into the various research, analysis and planning activities.

6.1 Principles

The aims and objectives of the strategy, the key messages, stakeholders, and issues are to be clearly defined. The overall intention is that consultation be relevant to the study objectives and that all relevant stakeholders are engaged.

The community consultations and communication will be based on the following principles:

- the role purpose and objectives of each consultation activity consultation will be clearly explained to participants
- a consistent approach to the role, expressed by all team members will be adopted
- the consultation process will be open, transparent and accessible
- the consultation process will be advertised and promoted using various mechanisms
- the community will have different ways to become involved other than attending meetings
- participation will be valued though providing feedback to participants
- information required to inform stakeholders will be readily available
- the existence of different views will be acknowledged
- aspects of the project where technical considerations will be important are to be identified.

The role of the consultations, will be to provide involve the community (in the broadest sense) in the consultation process. ACTPLA and the Government will balance the potentially competing views of different stakeholders.

6.2 Technical Working Group

6.2.1 Establishment

A Technical Working Group will be established to provide input to and response on the development of the urban planning framework and associated issues. It will meet three times, ideally with the same agency representatives.

Representatives of the following agencies/sections of government should participate:

Activity	**Establish Technical Working Group**
Deliverables	Group to provide input and feedback to project
Timing	Personnel to be nominated by 31 July 2009 (refer to program below)
Primary Responsibility	ACTPLA
Other Inputs	Purdons

6.2.2 1st Working Group Meeting

The purpose of the initial meeting is to:

- brief the working group about the project, including timeframe and approach
- brief the working group on the analysis to date
- identify any specific issues or investigations they are undertaking in the centre and the surrounding areas
- other relevant information. The meeting would be facilitated by Purdons and attended by the consultant team.

Activity	**1st Technical Working Group**
Deliverables	**Discussion of study and issues**
Timing	6 August 2009 (refer detailed program below
Primary Responsibility	Purdons
Other Inputs	CSA, Brown
Consultant QA	Presentation reviewed by Project Director
Client QA	Presentation reviewed by Client, feedback incorporated into presentation prior to Workshop Discussion of any implications arising from meeting

Work Program – 1st Technical Working Group:

Action	Responsibility	Timing	Status
Identify technical working group membership	ACTPLA	29 July	
Approach relevant sections /agencies	ACTPLA	31 July	
Arrange first working group meeting			
Book venue (North bld)	ACTPLA	By 28 July	
Invite participants	Purdons	31 July	
Review presentation material	Purdons/ACTPLA	4 August	
Conduct working group meeting	Purdons	6 August	

6.3 2nd Working Group Meeting

The second workshop will review the findings of Phase 1. The workshop would be facilitated by Purdons and attended by the consultant team.

The issues to be addressed will include:

- the findings of the centre analysis and implications
- public comment and its application to the project
- moving forward.

Activity	**2nd Technical Working Group**
Deliverables	Presentation of directions/discussion of implications

Timing	27 August 2009 (refer to detailed program below)
Primary Responsibility	Purdons
Other Inputs	CSA, Brown
Consultant QA	Presentation reviewed by Project Director
Client QA	Presentation reviewed by Client, feedback incorporated into presentation prior to Workshop

Work Program – 2nd Technical Working Group:

Action	Responsibility	Timing	Status
Arrange second working group meeting	Purdons	w/b 17 August	
Book venue (North bld)	ACTPLA	w/b 10 August	
Invite participants	Purdons	w/b 17 August	
Review presentation material	Purdons/ACTPLA	Project M'ting (20 August)	
Conduct working group meeting	Purdons	27 August	

6.3.1 3rd Working Group Meeting

The second workshop will consider and test the findings of Stage 2. The workshop would be facilitated by Purdons and attended by the consultant team.

Activity	3rd **Agency workshop**
Deliverables	Presentation of directions/discussion of implications
Timing	22 October 2009
Primary Responsibility	Purdons
Other Inputs	CSA, Brown
Consultant QA	Presentation reviewed by Project Director
Client QA	Presentation reviewed by Client, feedback incorporated into presentation prior to Workshop

Work Program – 2nd Technical Working Group:

Action	Responsibility	Timing	Status
Arrange second working group meeting	Purdons	w/b 6 October (@ project meeting)	
Book venue (North bld)	ACTPLA	w/b 6 October	
Invite participants	Purdons	w/b 12 October	
Review presentation material	Purdons/ACTPLA	Project M'ting (20 October)	
Conduct working group meeting	Purdons	22 October	

6.4 General Communications

Communications support the consultation program and enable information about the project and the centre to be widely distributed and to raise awareness. The following tasks are involved:

- establish a webpage on the ACTPLA website
  - information the planning and consultation processes
  - information to be made available at consultations
  - timing of consultations
  - opportunities to provide input/comment
  - outcomes of consultations
  - recent media releases
- identify communicators – all media to be handled through ACTPLA

Activity	**General Communications**
Actions	Design webpage
	Agree site plan
	Prepare content
	Load on ACTPLA site
Deliverables	Webpage on ACTPLA website
Timing	To be established by w/b 3 August 2009
Primary Responsibility	ACTPLA
Other Inputs	CSA to design project badging
	Consultants to provide relevant information throughout

6.5 Stage 1 - Community Consultations

A workshop will be held in each stage. Participants will be identified using the following approaches:

- invitations community organisations in the area whose members may have an interest in the future of Dickson
- advertising via the Community Noticeboard
- advertising via the ACTPLA website
- notices in windows in Dickson shops
- newsletters delivered to the immediate residential areas

The workshops will be interactive with participants using plans and other graphic material to express their views in addition to notes of the workshops.

It is not proposed initially to restrict the numbers and a venue to hold about 60 people will be identified.

6.5.1 *Vision Workshop*

The purpose of the vision workshop will be to:

- discussion of the project and proposed approach
- review and confirm the existing vision statement
- review centre context analysis
- develop principles from the vision.

Activity	**Vision Workshop**
Actions	**Refer to following table**
Deliverables	Outline of project approach Discussion/refinement of existing vision for Dickson Context and Issues – results of initial analysis Principles from vision
Timing	18 August 2009
Primary Responsibility	Purdons
Other Inputs	CSA, Brown
Client QA	Attendance at vision workshop

Work Program - Vision Workshop

Action	Responsibility	Timing	Status
Book venue	Purdons	w/b 27 July	
Draft advertisements	ACTPLA / Purdons	w/b 27 July	
Identify invitees (community groups)	ACTPLA with input from Purdons	w/b 27 July	
Invite community participants	Purdons??	w/b 27 July	
Agree distribution area	ACTPLA (prepared by Purdons)	w/b 27 July	
Write newsletter	ACTPLA	w/b 3 Aug	
Distribute newsletter	Purdons	w/b 3 Aug	
Place posters	Purdons	w/b 3 Aug	
Place advertisements in Community Noticeboard	ACTPLA	8 Aug, 15 Aug	
Monitor RSVPs	Purdons	Ongoing	
Prepare agenda	Purdons	w/b 10 Aug	
Prepare presentation material and agree	Purdons/CSA/ACTPLA	w/b 10 Aug	
Arrange/brief facilitators	ACTPLA/Purdons	w/b 10 Aug	
Arrange refreshments	ACTPLA?	w/b 10 Aug	
Conduct workshop	Purdons facilitate Project team + ACTPLA as table facilitators	18 Aug 09	

6.5.2 *Community Information Session*

The Community Information Display will be a drop-in session at the end of stage 1 and will be held at Dickson. It will present the results of the 1st stage research, including the vision statement.

Attendees will have the opportunity to view plans of the results to date and will be able discuss these with the consultant team and client representatives. Participants will be asked to provide feedback to enable the consultant team to review and, if appropriate, amend the vision statement and refine the assessment.

Task	**1st Community Information Display**
Actions	Refer to table below
Deliverables	Display Plans; Newsletters; Advertisements; Display material
Timing	25 August 2009
Primary Responsibility	Purdons
Other Inputs	CSA, Brown
Consultant QA	All Display material reviewed by Project Director, Newsletters delivered by private contractor (not commercial pamphlet deliverer)
Client QA	Display Plans & Newsletter reviewed and agreed by Client, Advertisements placed by Client

Work Program – 1st Community Information Display

Action	Responsibility	Timing	Status
Decide venue/timing	Purdons	w/b 27 July	
Prepare advertisements	ACTPLA	w/b 27 July	
Place advertisement	ACTPLA	For 15 & 22 Aug	
Prepare newsletters	Purdons	w/b 3 Aug	
Distribute newsletters	Purdons	16 Aug	
Prepare presentation material	Purdons/CSA/Browns	w/b 17 Aug (after w'shop)	
Arrange display equipment	Purdons	w/b 17 Aug	
Design feedback sheet	Purdons	w/b 17 Aug	
Agree material/feedback sheet	ACTPLA	w/b 17 Aug	
Conduct Display	Project team + ACTPLA	25 Aug	

6.6 Stage 2 - Community Consultations

6.6.1 Design Workshop

The design workshop will review the spatial plan development and its translation into the urban planning and urban design framework.

Participants would either a combination of people who attended the vision workshop and people who have not previously participated in a workshop, including people who expressed an interest at the first information session or responded to any of the advertising.

Activity	**Design Workshop**
Action	Refer to table below
Deliverables	Testing of spatial plan options
Timing	15 September 2009

Primary Responsibility	Purdons
Other Inputs	CSA, Brown
Client QA	Attendance at meeting

Work Program – Design Workshop

Action	Responsibility	Timing	Status
Book venue	Purdons	w/b 27 July	
Write newsletter	ACTPLA	w/b 24 Aug	
Agree distribution area	ACTPLA (prepared by Purdons)	w/b 24 Aug	
Distribute newsletter	Purdons	30 Aug	
Place posters	Purdons	30 Aug	
Identify invitees (community groups)	ACTPLA with input from Purdons	w/b 31 Aug	
Invite community participants	Purdons??	w/b 31 Aug	
Place advertisements in Community Noticeboard	ACTPLA	5 & 12 Sept	
Monitor RSVPs	Purdons	Ongoing	
Prepare agenda	Purdons	w/b 7 Sept	
Prepare presentation	Purdons/CSA	w/b 7 Sept	
Prepare presentation material	Purdons/CSA	w/b 7 Sept	
Agree presentation/agenda	ACTPLA	w/b 7 Sept	
Arrange/brief facilitators	ACTPLA/Purdons	w/b 7 Sept	
Arrange refreshments	ACTPLA?	w/b 7 Sept	
Conduct workshop	Purdons facilitate Project team + ACTPLA as table facilitators	15 Sept	

6.6.2 Community Information Display

The final activity will be a community information session at Dickson that will present the results of spatial planning, including interactivity, 3-D modelling which will be set up on a computer as part of the display so that participants can test different approaches and review those already developed. Participants will be asked to provide feedback that the consultant team will incorporate into the final report.

Activity	**Community Information Display**
Action	Refer to table below
Deliverables	Display Plans; Newsletters; Advertisements
Timing	20 October
Primary Responsibility	Purdons
Other Inputs	CSA, Brown
Consultant QA	All Display material reviewed by Project Director, Newsletters delivered by private contractor (not commercial pamphlet deliverer)
Client QA	Display Plans & Newsletter reviewed and agreed by Client, Advertisements placed by Client

Work Program – 2nd Community Information Display

Action	Responsibility	Timing	Status
Decide venue/timing	Purdons	w/b 27 July	
Prepare advertisements	ACTPLA	w/b 31 Aug	
Place advertisement	ACTPLA	For 10 & 17 October	
Prepare newsletters	Purdons	w/b 5 Oct	
Distribute newsletters	Purdons	11 Oct	
Prepare presentation material	Purdons/CSA/Browns	w/b 12 Oct (after w'shop)	
Arrange display equipment	Purdons	w/b 12 Oct	
Design feedback sheet	Purdons	w/b 12 Oct	
Agree material/feedback sheet	ACTPLA	w/b 12 Oct	
Conduct workshop	Project team + ACTPLA	20 Oct	

6.7 Feedback

Participants of the various consultation activities will receive feedback from the consultations. This will occur via the webpage.

Task	Feedback to Consultation Participants
Deliverables	Web page Information
Timing	Following each consultation event
	To be posted on wepage within 10 working days of event
Primary Responsibility	ACTPLA
Other Inputs	Purdons, CSA
Consultant QA	
Client QA	

6.8 Calendar

A separate calendar of key events has been prepared and should be read in conjunction with this project quality plan.