DICKSON CENTRE
Consultation report

NOVEMBER 2010

ACT Planning & Land Authority

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Abbreviations and acronyms

ACT	Australian Capital Territory
ACTPLA	ACT Planning and Land Authority
The Framework Report	The Dickson Centre Urban Planning and Design Framework Report
The Planning Project	The Dickson Centre Planning Project
LDA	Land Development Agency
LAPS	Land and Property Services
TAMS	Territorial and Municipal Services

Introduction

This consultation report provides an outline of the consultation process undertaken as part of the Dickson Centre Planning Project. It includes the approach taken to the consultation as well as the outcomes. The report provides a summary of responses to issues raised and addresses how these comments have been considered and addressed in developing the Framework Report and the Dickson Centre Master Plan.

The consultations were undertaken between August 2009 and September 2010.

This report should be read in conjunction with the:

- Framework Report - which presents the issues and recommendations developed through consideration of issues, community consultation and research, and
- Master Plan Report - which presents the Dickson Centre Master Plan. The master plan was originally presented as the concept plan in the Framework Report but has been amended slightly to take into consideration comments from the community. The master plan is reflective of the principles and key actions outlined in the Framework Report. The master plan places these principles and key actions in a graphical format which shows what the Dickson Centre could look like in the future.

ACTPLA initiated and led this project. Purdon Associates were engaged to complete the consultation, research and Dickson Centre Urban Planning and Design Framework Report phases of the project.

Consultation objectives and context

The purpose of consultation was to ensure all groups and individuals within the community were informed about the proposal to review planning of the Dickson Centre, and the potential development of a second supermarket, and had an opportunity to have a say.

It is important to note that multi faceted consultation and research activities provided input into the Framework Report. Hence, not every comment received will be directly reflected in this report and the Master Plan Report.

Highest priority was given to the outcomes of the community workshops as many issues and trade-offs were debated in groups and joint directions were suggested. It is also worth noting that in many instances comments received contradicted other comments and consideration of all the issues and feedback was undertaken to develop the final master plan.

In the time between completion of the Framework Report and its release for community comment, the Government announced the release of a supermarket site in the Dickson Centre. A parking strategy was subsequently developed to address parking issues during and after the construction of the new supermarket and was included in the Framework Report as an addendum.

The consultation process was designed to provide the most valuable input within the project timeframes and budgetary constraints.

The specific objectives of the consultations were to:

- engage stakeholders with an interest in the Dickson Centre
- identify key issues important to the community which needed to be addressed as part of the research for the project
- identify community attitudes towards the type and form of development that might occur at the centre
- identify potential adverse impacts that should be addressed and ways to minimise these
- bring differing viewpoints in the community together and deliberate priorities to achieve balanced outcomes, and
- disseminate as widely as possible the information being considered in the development of the Framework Report.

Consultation methodology

Engagement with the community
Engaging with the community was a major part of the Dickson Centre Planning Project and was undertaken in three stages.

Stage 1 focused on presenting information to the community and seeking feedback on issues affecting the centre and developing a centre vision.

Stage 2 asked the community to develop and comment on plans and ideas which addressed issues facing the centre identified in Stage 1. The information and outcomes from Stage 1 and 2 were used to produce the Dickson Centre Urban Planning and Design Framework Report.

Stage 3 saw the release of the Dickson Centre Urban Planning and Design Framework Report to the public for four weeks. People were invited to lodge submissions on the report.

Stages 1 and 2 of the consultation process were undertaken by the project consultants, Purdon Associates, while stage 3 was undertaken by ACTPLA.

A summary of the overall approach is outlined below:

Promotion of the consultations:

- ACTPLA webpage
- two (2) project newsletters letterbox dropped to all businesses within the centre and suburbs surrounding the centre
- direct mailing of a copy of the newsletters to all lease holders
- hanging of posters in the centre to advise of events and that the Framework Report was available for comment
- advertisements in the community noticeboard section of the Canberra Times
- advertisements in the Northside Chronicle, and
- creation of a mailing list from all consultation events and those who registered their interest on the project website. For each major event an email was sent to all of those on the mailing list.

Opportunity for input:

- two workshops with members of the community and key business and community stakeholders
- two community information displays
- web based surveys and comments, and
- the Framework Report was placed on the project webpage and hard copies were put in the Dickson Library and at the ACTPLA shop front. Written submissions were invited via post, email and hand delivery.

Engagement with Government

In the early phase of the Dickson Centre Planning Project it was identified that a number of government agencies had interests in the Dickson Centre. Thus, a technical working group was established and included the following agencies and departments.

- ACTPLA Development Policy Section
- ACTPLA Development Services
- ACTPLA Infrastructure Policy Section
- CMD ArtsACT - ACT Cultural Council
- CMD Business & Industry Development
- TAMS ACT Library and Information Services
- TAMS PCL Design and Development
- TAMS Transport Planning and Strategy

This group met four (4) times. These meetings were run by Purdon Associates in conjunction with ACTPLA. The key purpose of the group was to:

- ensure effective communication between Government agencies regarding the projects
- identify project issues and stakeholders
- advise the group of any work relevant to the project
- discuss work undertaken by specialist consultants
- review and comment on the Framework Report, and
- ensure information about the project was taken back to each agency.

Engagement with lessees/tenants of major parcels of land in the Dickson Centre

Purdon Associates either met with or spoke over the phone with the following lessees/tenants of major parcels of land. They were advised of what was proposed by the Framework Report for their site and what opportunities existed for input.

Organisation	Lessees / tenant	Block and Section
Amalgamated Investments Corporation Pty Ltd	Lessee	Block 29 (6) and 30 (7)Section 32
Baptist Memorial Church	Lessee and tenant	Block 1 Section 30
Chung Yee	Lessee	Block 4 Section 33
Coles (with Perrins and Riverview Group)	Possible tenant	Block 2 Section 32
Vincenzo Damiano	Lessee	Block 10 Section 30
Macquarie Bank	Lessee	Block 31 Section 30
McDonalds	Lessee and tenants	Block 24 Section 30
Perrins	Lessee	Block 2 Section 32 and Blocks 4, 6, 15 and 16 Section 34
Woolworths	Tenant	Block 31 Section 30
Kmart (Coles)	Possible tenant	Unknown
John Notaras	Lessee	Block 4 Section 30

First stage of consultation

The overall aim of the first stage was to:

- present information to the community
- seek community input on issues affecting the centre, and
- develop a centre vision.

Vision workshop
A vision workshop was held on Tuesday 25 August 2009 at Dame Pattie Menzies House. The workshop was open to lessees, business owners, local residents, community organisations and anyone with an interest in the centre. Over 80 people attended.

At this workshop the project approach was discussed. Small table groups were then asked to answer the following questions:

- What are the three words that describe Dickson to you?
- What do you value most about Dickson? What are its strengths?
- What are the main problems with Dickson?
- If your hopes were realised, what would be different about Dickson in five to ten years?
- How, if at all, should the 2003 Vision for the Dickson suburb be changed?
- What is your favourite place in Dickson?
- What are the centre's strengths and weaknesses?

Participants were also asked to imagine how they hoped the centre would be different in five to ten years. The aspirations emerging from the conversations held over these questions had much in common and the ideas were subsequently formulated into a vision for the centre. From here the consultants, Purdon Associates, with ACTPLA, worked towards collating this information and creating the following draft vision for the centre:

Dickson centre will be a vibrant, progressive and safe hub with a diversity of services and amenities for the local and wider community: a place where people live, work and socialise (play).

This vision was subsequently refined as a result of further consultation.

First community information display
The first community information session was held on 8 September 2009 from 5-7pm at the Dickson shopping centre.

The results of the vision workshop were presented at a community information display set up outside an entrance to the Dickson Woolworths. It was attended by over 100 people shopping at the centre during the display period.

The purpose of the information display was to test the outcomes of the vision workshop with the wider community, in particular the draft vision.

Members of the community were generally aware of the planning project. They were very interested to receive feedback from the workshop and to provide their own comment about the future of the centre.

Attendees strongly supported the findings of the vision workshop and added their own insights about the centre. The comments from this display were used to refine the vision for the centre to:

Dickson Centre will be a multicultural, progressive and safe hub with a diversity of services and amenities for the local and wider community: a place where people live, work and socialise (play).

Web based surveys and comments
In addition to face-to-face consultation events, members of the community could also participate by completing a survey on the internet or sending a written submission.

Ninety-two (92) surveys were received and the results can be seen in Appendix 1.

Key Messages
The messages from the community that came out of Stage 1 consultations were:

- Improve public spaces and facilities
- Retain the range and diversity of services
- Address the conflict between pedestrian areas and vehicles
- Increase the amount of parking, possibly in a structure or basement
- Develop additional supermarket space
- Retain diversity and role of the centre as an entertainment hub

Favourite places identified by participants

Major Issues
Major Issues Identified in Stage 1 Consultations were:

Access

- Poor access across Northbourne Avenue
- Pedestrian access – pool and surrounding area
- Congested intersections
- Connection to surrounding area
- Access for people with mobility disabilities

Traffic and parking

- Congested intersections
- Through traffic
- Lack of parking
- Short-stay parking
- Lighting in parking areas
- Staff parking

Public transport

- Need better public transport
- Need a bus interchange
- Buses should travel along Challis Street

Open space and public areas

- Lack of a focal point – meeting place
- Little green space in the centre
- Need children's play area
- Landscape quality poor
- Sullivan's Creek Wetlands

Safety

- Retail core unsafe at night
- Bicycle path unsafe
- Lighting

Character of the centre

- Has a village atmosphere
- Open centre – keep
- Not a mall – small scale
- Entertainment – food
- Inconsistent appearance
- Make centre busier

Building height

- Taller buildings in the centre
- Medium/high density residential on the edge
- Overshadowing and solar orientation

Second stage of consultation

The second stage of consultation asked the community to develop and comment on plans and ideas which addressed the issues identified in stage 1.

Design workshop

A design workshop was held on Thursday 24 September 2009 at the Dickson Tradies Club. The workshop was open to lessees, business owners, local residents, community organisations and anyone with an interest in the centre. Over 60 people attended.

Attendees worked in small groups of six to eight people to develop plans for the centre. The workshop saw the groups first undertake a site analysis of the centre. Next they worked on developing plans which addressed matters such as heights, density, supermarket locations and pedestrian connections etc. Eight plans were produced as a result of group work and five plans were prepared by individuals. The results of each group were presented at the end of the workshop.

Common themes were drawn from these plans. After the workshop, these themes and the urban design principles were further developed by the project team.

Second community information display

The results of the design workshop, in particular the themes and urban design principles, were presented at a community information display held on 20 October 2009 from 5-7pm outside an entrance to the Dickson Woolworths. It was attended by approximately 200 people shopping at the centre during the display period.

The display presented the themes and urban design principles identified through the design workshop. Options for future development, prepared by Purdon Associates, were also presented.

Attendees commented on these options, themes and principles, indicating their support or otherwise. There was general support for the draft principles.

Comments from the community on these draft principles were used to refine them further to develop the five themes and strategies which underpin the vision for the Dickson Centre. These themes and strategies can be seen in the table below.

Theme 1	Theme 2	Theme 3	Theme 4	Theme 5
Facilitating growth, change and diversity	**Improving connections**	**Enhance the public realm**	**An appropriate built form**	**Sufficient parking**
Strengthen the retail core	Improve connections to the centre	Create a linear open space	Locate higher buildings on the edges	A flexible approach to meeting needs
Encourage residential development	Improve permeability in the centre	Better streetscapes	Maintain lower scale to street	Tailor parking to centre requirements
Balance residential and entertainment uses	Support public transport	A landscaped entry	Reinforce active frontages	Replace displaced public parking
Require pedestrian generating uses at ground level		Create a stronger sense of place	Maintain character of retail core	Maximise on-street parking
Make sites available for community facilities		Integrate Dickson Drain into the centre's public realm	Maintain strong frontages	Improve parking management
Allow the centre to grow		Establish a safe public realm		
		Maintain the public realm		

Web based surveys and comments

In addition to face to face consultation events, members of the community were again able to participate to the process through completing a survey on the internet or by sending a written submission.

Nine survey submissions were received and the results can be found in Appendix 2.

Key messages
The depth of understanding of the issues and the number of ideas from the community helped to guide the Framework Report. The community generally supported the themes and urban design principles.

Key messages were:

- Improve public spaces and facilities including open areas and lighting.
- Retain the range and diversity of services available.
- Address the conflicts between pedestrian areas and vehicles, possibly by separation through closing streets to create pedestrian malls and increased public areas.
- Increase the amount of parking, possibly in a structure or basement.
- It is recognised that an additional supermarket should be developed, provided that it is not at the expense of local centres in north Canberra.
- The diversity and role of the centre as an entertainment hub should be retained.

The design workshop analysis of plans prepared by the community can be found as Appendix 3.

Issues and outcomes from the technical working group

The technical working group discussed:

- outcomes of community consultation
- traffic issues
- car parking issues
- land release
- provision of green space
- noise issues
- potential residential locations
- bus movement through the centre
- pedestrian connections
- appropriate heights for the centre
- implementation methods

Third stage of consultation

With the vision, themes and urban design principles, developed in conjunction with the community, Purdon Associates were able to develop strategies and recommend actions aimed at ultimately achieving the vision. These were all described in the Framework Report which was released to the community on 27 August 2010. The Framework Report was placed on the project webpage and copies placed in the Dickson Library and the ACTPLA shop front.

The opportunity to comment closed on 24 September 2010. Twenty-seven submissions were received in total. Requests for extension of time were not granted and late submissions (1) are not included.

Key messages

Support

- Framework report represented views of community and contained appropriate proposals.
- Second supermarket on Block 21 Section 30 supported by a large majority.
- Mixed use development as proposed would lead to a more vibrant centre.
- Proposed buildings heights considered appropriate.
- Proposed pedestrian connections, laneways and the central pedestrian spine are good for the centre.

Concerns

- Framework report was overly focussed on delivering a second supermarket site and missed opportunities to deliver other important improvements to the centre.
- Parking strategy was not well considered.
- Adverse impact of a multi storey carpark on Block 19 Section 30.
- Opportunities to activate the Antill Street frontage missed.
- Location of the loading dock in relation to the above point and associated traffic impacts to the centre and amenity impacts to the residents opposite.
- Community facilities are not well integrated with the centre and the suggestion this area, to the east of the project area, should be included.
- Existing traffic issues in the Dickson area not sufficiently addressed and will worsen with the proposed actions.
- Noise – proximity of residential to clubs and bars.
- Opportunities to provide better connections to surrounding suburbs for pedestrians and cyclists missed.

Trade-offs

- Agreed that a good public realm was needed but framework needs to provide more guidance to achieve this.
- While a second supermarket was generally supported there was concern that smaller supermarkets in the catchment would suffer.
- Pedestrian and cyclist connections are important and supported but there was concern the framework did not provide the most optimum solutions to this.
- Improvements to Dickson Place contained in the report were missed by several respondents and seen as having a high priority.
- Development is supported, however an appropriate and high quality built form needs to be delivered.

A summary of submitter comments received and the ACT Government's response can be found in Appendix 4.

Exclusion issues

Matters raised that are outside the scope of the project have been referred to the relevant agencies for consideration.

Most of these issues related to existing traffic conditions, pedestrian and cycle access to the centre, public transport and the safety of the cycle path along the drain. These have been referred to TAMS.

The desire for a community/ business based group which drove the improvements and management of the centre was also raised. ACTPLA is investigating models for this in order to make recommendations; however, implementation is outside the role of ACTPLA.

Other raised issues which are outside the scope of the study include the potential for a retail incubator at the centre, make up of retail, behaviours of cyclists and the creation of a business and community reference group.

Outcomes of the submissions

The submissions assisted in the identification of issues which required further consideration in the preparation of the master plan.

The Master Plan report will be presented to the ACT Legislative Assembly Cabinet. The Master Plan report contains the Dickson Centre Master Plan. The master plan was originally presented as the concept plan in the Framework Report. The master plan has been amended slightly to take into consideration the comments from the community. The master plan shows what the Dickson Centre could look like in the future.

Following the consideration and approval of the Master Plan report ACTPLA will prepare a draft implementation plan for government consideration and approval. The implementation plan will outline in detail the actions necessary to effect change in the Dickson Centre in accordance with the master plan. The implementation plan will outline:

- where further investigation is required
- capital works which should be implemented by government, or as a requirement as part of development, and
- details of what should be included in a precinct code as proposed by the Framework Report.

Variation to the Territory Plan – Consultation

The draft variation to the Territory Plan, which will be developed as a result of this report, is required to be publically notified. Opportunity for comment will be provided at that time.

Appendix 1

1st webpage survey

Appendix 2

2nd webpage survey

Appendix 3

Analysis of plans prepared by the community at the design workshop

Appendix 4

Submitter comments on the Framework Report

Submitter comments		ACT Government's response
General comments - Supporting		
24	I've just had a quick read through the vision for the Dickson Centre Planning Project... In summary, I love it.	Nine submissions specifically supported the report and three disagreed. In general people were in support of growth in the Dickson Centre and of the development of a second supermarket, provided the quality of design was high and the public realm was improved. It is also noted that there is need to outline more clearly the design and development issues beyond the supermarket issue.
23	The major part of the planning report has dealt thoroughly with the core area of the Dickson centre and has come up with appropriate and exciting proposals that appear to have community support,	
22	I was very impressed by the plan especially the potential new pedestrian routes through the blocks on Woolley Street and to the drain and pedestrian bridges across it.	
20	Just reviewed the Dickson Centre Urban Planning and Design Framework Report Plan. Looks good.	
19	In general I am in agreement with the frame work report and the recent action to release another supermarket site.	
25	I think that supermarket and related parking on blocks 21 and 19 are popular decisions and the associated pedestrian precinct would be a useful early development	
7	We also support the consolidation and intensification of residential and smaller scale independent retail development in the centre.	
15	Would like to convey endorsement of the recommendations of the report	
13	Endorse the recommendations of the Framework as a way forward in re-energising and renewing one of the prime group centres in the ACT	
General comments - Opposing		
21	Your so-called discussion paper is a tissue of inventions to support your firm intentions to "develop" and ruin inner Canberra with facilities that are nothing more than a poor excuse for over density and a compensation for not providing adequate facilities in the new outer suburbs.	
7	Unfortunately, we are unimpressed and our hopes have been disappointed. The proposed Urban Planning and Design Framework lacks insight, logic, imagination and is heavily skewed toward considerations for the second supermarket.	
7	The proposed Framework seems to us to be fundamentally focussed on developing the second supermarket while managing the interests of the existing one, at the expense of a fully thought through and	

	thoroughly evidenced plan for the Dickson Centre.	
Community consultation process		
	The Framework Reports does not resemble the outcomes of the community consultation.	Highest priority was given to the outcomes of the community workshops as they reflect integrated views of diverse members of the community. The workshops outlined areas of improvement which were considered in the Framework Report process. On the whole submissions were in favour of the process and outcomes. The input from those who did take advantage of the many opportunities to contribute to the process is appreciated. Although it would be good to see more involvement, the participation rate was similar or better to that experienced on other projects. There will be opportunity to comment on the draft variation to the Territory Plan when it is released for comment.
21	Those who attended community consultation opposed any development at the Dickson shops and said that they all liked the shops, the walkways, the cafes as they are now and nobody wanted a second supermarket.	
12	It is pretty pointless to submit the report for public comment almost a year after the "consultations" started and several months after the location of the "centrepiece", the new supermarket site, was announced.	
7	We urge ACTPLA to re-engage with the community so that there is opportunity for further reflection and refinement of the proposed Framework.	
3	Two workshops totalling fewer than 150 people do not constitute extensive community consultation in my opinion.	
3	I trust that ACTPLA will engage in a further round of consultation when the precinct code is prepared and look forward to being more closely involved then.	
Project scope		
23	Failing of the report is its limited scope. The redevelopment of the area between Dickson Pool and the playing fields (Rosevear and Hawdon Place) is surely essential to consider as part of the study. This area is a wasteland of underdevelopment mainly due to its inappropriate zoning which allows only uses for which there is little demand. Building height and area restrictions are also low for an area close to a major group centre where there is no existing housing to adversely affect. Present development is a mishmash of abandoned buildings, carparks, and scattered single and two storey buildings, and the whole area has an air of neglect. Four or five storey apartment development, with perhaps a few taller buildings, would be a more appropriate use of this land.	Dickson suburb has five different precincts, which include the community precinct and the commercial and retail hub. The Dickson Centre Planning Project focused on the commercial and retail hub but included the area between Cowper Street, Rosevear Place, Antill Street and the Dickson drain so that the connections from the commercial and retail hub and the community precinct could be improved. Unfortunately further consideration of the remainder of the community precinct was outside the scope of this project.
26	While the Dickson Centre might be considered to go from Cowper St across to Badham Street, there is a possibility to extend right across to Northbourne Avenue. This may help with transport issues. Consider extending/ relocating the	

	Dickson centre across to Northbourne Avenue.	
Cyclist links		
9	Dickson is used by many cyclists and the use of bikes should be encouraged. There needs to be adequate end of trip facilities such as bike racks.	The Framework Report proposed the preparation of a precinct code for the centre. This would include provisions for appropriate and well sited end of trip facilities for cyclists.
26	Bicycle parking/ racks should be located on the outskirts of the centre	
Pedestrian links		
24	In particular the ideas relating to pedestrian links/arcades/laneways are great – they encourage people to spend more time 'ambling' through Dickson or walking/riding through there instead of rushing from point to point via car.	The community response has been strongly in favour of the proposed pedestrian links. The feedback also tells us further improvements are needed to connect the centre to the surrounding suburbs for pedestrians and cyclists. The Framework Report proposed the preparation of a precinct code for the centre. This precinct code if prepared will consider the inclusion of pedestrian links. The implementation plan will also consider recommendations to TAMS for capital works.
	Strengthen connections that encourage pedestrian and cycle movement and public transport usage	
20	I really like the shared zones aspect and I'm happy with the thought and planning around pedestrian, cycle, and vehicle.	
24	Need to be careful when designing laneways i.e. some laneways in Manuka work while others don't. Laneways actually need to lead from one point to another and character needs to be retained.	
	Concerns about providing north-south pedestrian links from the Centre to the Dickson Drain as there is limited passive surveillance to the Dickson Drain.	
7	Although acknowledging the existing form of the Centre, the proposed pedestrian spine (Figure 7) fails to address the actual pedestrian traffic flow of residents. That is to say it leads to the Dickson Drain and does not provide suitable connectivity to residents entering from nearby.	
26	Consideration should be given to covering in the centre walkways, and providing wind barriers around the edges.	
27	ACTPLA needs to ensure that there is very good customer pedestrian access from the new supermarket to the pharmacy.	
13	Setbacks for the widened pedestrian link to the east of Section 34 Block 16 which connects the new pedestrian bridge across the Dickson Drain to Cape street should be shared equally between blocks 16 and 28.	
8	Improvements to the existing open air and inward focussed pedestrian environment of the centre is supported and is essential and unique character of the Dickson Centre. Improvements to legibility and visibility of pedestrian routes in the vicinity of McDonalds is supported.	
8	The proposed mid block pedestrian	

	connections increase permeability and access throughout the centre and are supported.	
Centre edges		
23	The Centre turns its back on Antill Street and consequently is difficult to recognise as a shopping centre from main approach routes. A consistent built edge along the Antill Street frontage should be promoted.	The report does allow for a mix of residential fronting Antill Street. This could have been expressed more clearly in the report. Connecting the centre to the surrounding suburbs is an important consideration in the next stages of design of the Dickson Centre.
4	We endorse the spatial and non-spatial principles, however we note that they omit to mention the importance of protecting the symbiotic relationship between the centre and adjacent residential area.	
Supermarket		
3	competition by smaller supermarkets in the catchment may be worsened rather than improved - the Centre will exert more gravity locating two major supermarkets next door to each other will not maximise the foot traffic that benefits small traders - separating anchors is the normal practice	The community expressed overall support for the supermarket but identified that more consideration was needed on the location of the loading zone, impacts to smaller supermarkets in the catchment and impacts on small retail in the centre. The design details of the loading bay will be considered further as part of the land release of Block 21 Section 30. Most respondents recognised that in order to thrive, group centres must cater for weekly shopping needs. Smaller scale retail outlets require adequate supermarket shopping opportunities to draw shoppers to the centre, enabling access a significant customer base.
12	The "consultation", and in particular the comments by the Chief Planning Executive, constrained the process far too much.	
7	We recognise and need for a second supermarket in Dickson, and we understand the implications this has for the use of the Dickson Centre, especially regarding traffic generation and car-parking.	
12	No consideration seems to have been given to locating the new supermarket on the present Dickson library site.	
11	I am writing to object to another supermarket at Dickson. In my view, it would be better to build in Watson. This area is growing and so a supermarket there would be more convenient for residents and would also service future demand.	
10	Support the initiative for the development of a second supermarket	
7	There is no discussion of the economics of how small scale local businesses may or may not be beneficially impacted upon by the retail strategy proposed for the centre. Indeed, virtually all discussion about future retail development focusses upon maximising attractiveness for the new supermarket while minimising disruption to Woolworths, with no demonstrated understanding of the small scale retail economics	

	of the centre.	
7	The location of the new supermarket and its potential to increase retail traffic to existing retailers is questionable. The proposed location suggests that existing retail areas could suffer as there is no linkage to these. The supermarkets will be located close to each other and relatively separate from existing retail, limiting or even discouraging through traffic to other parts of the centre.	
6	Proposed location of the new supermarket loading dock is not supported as semi trailers will sit and idle their diesel engines at all hours of the day and night. Residential amenity will be greatly reduced. Instead could the loading dock be located closer to the Shell service station on Badham Street where petrol tankers already use a purpose built service road to access the service station? This will have the added benefit of removing semi trailers from the congested area around Dickson Library and Dickson Health Centre.	
23	The truck loading bay should be located within the site, with the service road discharging into Badham Street through the short stay carpark, instead of onto Antill Street.	
7	The Framework should consider alternative locations or configurations for the Woolworths loading bay, including a design option that creates a shared delivery area for both supermarkets. Heavy vehicle traffic into the centre will double once the second supermarket is established. This should be directed to a single, safely managed area.	
27	The building of this second supermarket and parking appears to have many positive consequences for existing business proprietors including a much greater customer base.	
Building heights		
23	The building height should also be substantially increased.	In general building heights proposed within the centre were considered appropriate by respondents. However, several respondents did suggest high limits should be considered.
26	Consider a tall building in the area that will be visible from a distance.	
23	… proposing a consistent built edge along Antill Street. Five or six storey mixed-use buildings with design guidelines similar to those adopted in the Braddon commercial zone master plan would probably be appropriate here.	
13	Higher development along the southern side of Section 34 would provide a frame for the centre and have no deleterious overshadowing impact. Higher densities will assist in achieving sustainable and affordable urban development. Height	

	limits on Section 34 should be increased to 10 storeys.	
15	Understand the principle of stepping down from Northbourne avenue but do not consider that it should be rigidly applied at the expense of increasing residential density in the centre. Advantages in allowing for taller buildings to the southern edge of the centre - up to 10 storeys	
8	In order to encourage redevelopment the proposed increases in height are supported	
Retail – General		
10	Believe the report places undue emphasis on the need to strengthen the retail core – no opportunities exist for some new retail proposals in the core	Feedback raises the issue that further consideration of restrictions on development of retail may be required prior to development of the precinct code as recommended by the Framework Report.
10	Retail floor area restrictions have resulted in no new development within the retail core and prevented retail outlets from locating at nearby non-core areas – not addressed in this study and may have the effect of undermining the recommendation for high density residential land at Dickson Centre	
Cape Street extension		
22	I like the extension of Cape Street at both ends but also wondered if it could be extended across the drain to meet Cowper St to provide another access point and lessen traffic at the awkward intersection of Cowper Street, Dickson Place, bridge over the drain and the bike path.	The extension of Cape Street to Cowper Street for vehicular traffic was considered, however was not included for two key reasons: ▪ The traffic arrangements in the framework aim to keep significant traffic to the edges rather than through the core of the centre ▪ The extension of Cape Street to Cowper Street would provide a route to Northbourne Avenue from residential areas impacting on traffic volumes around the centre. Development of the Cape Street to Northbourne Avenue connection is a long term strategic objective. Such development would not occur until the redevelopment of Block 4 Section 33. ACTPLA does not have a record of a development being approved for block 4 Section 33
14	Development approval is been gained for the redevelopment of Block 4 Section 33 which would be adversely impacted on by the extension of Cape street to Northbourne Avenue.	
Dickson Place		
7	The current state of Dickson Place (a neglected poorly lit service area and busy transit route with no passive surveillance at night time) and the lack of treatment of it in the proposed Framework will mean this will remain an area of poor amenity and danger. This is exacerbated by the fact that Dickson Place is the location of the loading bay for Woolworths. As a primary route into the centre for local residents Dickson Place is currently a poor corridor	The report does make a number of recommendations to improve Dickson Place, however, these could be more clearly outlined in the report. The report encourages development of blocks within the retail core along Dickson Place as a priority including active frontages to Dickson Place. The report also recommends that Block 20 Section 34 (existing car park) be amalgamated with any redevelopment of Blocks

	for community access its centre. The Framework should more directly address improvements to Dickson Place.	28 and 29 Section 34 providing an opportunity to transform Dickson Place from a service road to an address road.
22	Accessing from Hackett mostly use Dickson Place. Anything to address the eyesore of Dickson Place's north side would be great.	
7	The master plan proposes the eventual development of a small open space at the intersection of Dickson Place and Badham Street. While this small pocket of open space makes sense because it is close to the heart of the centre, it's amenity would be questionable because it is opposite the Woolworths loading bay where several large trucks per day try to manoeuvre. These trucks have to negotiate extremely tight movements in this vicinity, often need to use traffic islands and surrounding footpaths for extra space. The noise from the loading bay and the generally amenity of it would not be in harmony with the proposed open space.	
Traffic		
3	Circulation due to reduced parking has not been accounted for in the consultant's report. Traffic existing nearby residential areas and travelling in the vicinity of the centre will be delayed by heavily congested traffic loads at particular times and will need consideration and management traffic speeds will be affected and traffic calming measures may be needed overflow parking into nearby areas and the pool parking will produce friction and may reduce the number of pool patrons and divert other centre users.	The consultation process has highlighted concerns the community has with traffic in the Dickson area. Some of these issues can be addressed through new development and the requirements for developers to address potential traffic impacts, and others are able to be addressed by further investigation and capital works. Further investigation and capital works issues will be referred to TAMS for consideration.
8	Pick up, set down and taxi pick up is still needed for the existing supermarket. Removal of these would present an unfair advantage to the new supermarket.	
7	The expected increase in traffic as part of further development of the centre requires fundamental issue to be addressed.	
7	Inclusion of road amendments linking the proposed community facilities at the eastern point of the centre will provide additional traffic "bottle necks" at an intersection where there is already poor visibility and access for entering traffic (Antill St / Cowper St / access to surface car parking).	
5	The road network around the Dickson Group Centre will have to be upgraded in the short term.	

	Redevelopment proposed on such a scale will necessitate costly public measures for road and transportation infrastructure to cater for the new retail, supermarket facilities, and local residential population increases in Dickson and Lyneham.	
Car parking - General		
12	For the rest, I remain very concerned that insufficient surface parking has been made available and the result will be that there will be a spill over into residential streets in Downer and Dickson.	A number of submissions have raised concerns with the proposed parking solutions. The next stage of the process will include a detailed car parking study. In order to obtain development approval for any increased development of sites within the centre traffic issues are required to be investigated and addressed. As with all redevelopment work in centres, disruption and short term impacts on tenants can be expected during construction.
5	The planning and design framework proposed to increase the residential population on the periphery of the retail by about 1000. If this projection becomes to fruition, the consequences for congestion in such a small space are truly frightening. For starters car parking will still have to be provided – even though fossil fuel depletion will make this mode of transportation a possible fossil in its own right by 2030.	
13	Recommend that the parking for residential development also be adjusted in recognition of sustainable and affordable development	
13	Endorse the actions to strengthen the retail core with respect to parking, including a parking fund and a parking bank.	
8	Privatising carparking on the new site leaves issues such has operating hours and fees at the discretion of the lessee and has risks for the viability of existing supermarket and the centre generally.	
8	New six storey developments could significantly increase demand for car parking from new residents and employees. The final parking strategy will need to be adequately resolved prior to approving more intensive forms of development at the Dickson Centre.	
3	During construction there will be significant economic impacts on local businesses due to lack of nearby parking, noise, dust, and unsightly temporary works – this needs careful consideration … any background studies should be made publicly available to ensure that there is full understanding of the reasoning and rationale.	
Multi storey car park		

3	If a multi-storey carpark replaces the existing surface parking as proposed, shoppers will be forced to push their trolleys across a non- smooth surface for a considerable distance and then take a lift to upper levels	Six submitters are unhappy with the proposal for a multi-storey car park. The car parking strategy in the Framework Report recommends a multi- storey car park to ensure the centre is able to remain accessible and continue to function during the construction phase and to ensure all car parks removed as part of development are replaced.
8	Carpark is the furthest distance from Woolworths and presents logistic concerns particularly for the elderly and less mobile who need to push trolleys a greater distance and negotiate lift access.	
8	The multi level carpark has a shortfall of 84 spaces if it is to replace the existing on block 21.	
21	Nobody wanted an underground or multilevel carpark of any kind.	
8	Any reduction in the current levels of convenient and available spaces would be detrimental to the continued operation of Woolworths. The proposed multi level carpark is not supported as an alternative to at grade parking available on either block 21 Section 30 or Block 20 Section 34	
19	I am not however in favour of the concept of an above ground multi-storey on Block 19. My concerns are that it along with the new supermarket building will "enclose" the central area in such a way as to change the nature of Dickson completely. There will effectively be a wall around the existing Dickson centre that will block visual access into and out of the centre. While the existing car parks are far from visually satisfying they do not block the view. I accept that additional parking is necessary if there is to be an expansion of the centres trade and during construction of the supermarket/parking. If multistorey parking has to be the answer it would be better at the swimming pool parking area or 1/2 storey underground in front of the tradies.	
7	The parking strategy in the Addendum is an afterthought, not a strategy, and apart from a passing reference to the report's recommendation to retain Block 19 Section 30 for surface car-parking, bears no connection to the rest of the proposed Framework. This is so transparently a rushed attempt to appease the temporary car-parking concerns of Woolworths that it simply can't be taken seriously. It brings the intent, sincerity and merits of the planning process and its outcomes into question, undermining our confidence in the entire document.	
7	The parking strategy is in conflict with all	

	other car-parking advice in the report. It demonstrates a lack of substantive understanding of and commitment to ideas raised elsewhere in the document such as the establishment of car-parking banks. It makes absolutely no attempt to demonstrate its relationship to carparking across the entire centre.	
7	In a shallow acknowledgement of the current scale of the centre in and around Block 19 Section 30, the parking strategy makes reference to the need for 'very specific requirements'. a. The first has nothing to do with scale or the amenity b. The second is actually only just a general requirement of a height limit, and a very general statement about the 'eventual construction' of retail on the western and southern ground floor edges. c. The third requirement simply makes it clear that the only purpose of the multi-level car park on Block 19 Section 30 is to replace the 153 car-parking spaces temporarily lost to Woolworths. d. The fourth requirement surrenders the new multi-level car-park to the ACT Government. Again this has nothing to do with scale or amenity. e. The fifth requirement requires the Block 21 Section 30 car-park to meet parking demand generated by the new supermarket and associated retail, allocates some (but not all) of the replacement parking required as a consequence of the site's development, and, bizarrely, is required to meet car-parking generated by 'future retail' at the proposed multi-storey car-park on Block 19 Section 30. Block 19 Section 30 is one of the Dickson Centre's prime north-facing blocks. It offers the potential for so much more that a permanent three storey car-park designed to address a temporary carparking issue. It is surrounded by small scale, low rise development and offers the opportunity to enhance the public realm considerably if its development is designed appropriately.	
6	I have calculated that by building multi level carparks on Blocks 19 and 21 in Dickson, you will need to remove in excess of 50 mature trees, you will greatly reduce	

	available open space, you will create more motor vehicle traffic congestion, more overshadowing of sunny public space, you will basically ruin the character of this part of Dickson Shops.	
Noise		
16	Excess noise has a major impact on the people that live in the surrounding area. And it's the responsibility of government to look after the most vulnerable people that cannot fight for this issue. Noise pollution can cause such enormous damage and heartbreak in the community. There should be no development that allows excess noise to take place, unless there is consideration and compensation for the people that live in the existing property surrounding. The issue that prospective Dickson residents could be warned online about the impact of living near a bustling entertainment precinct should only be consider if the developers and government were required to paid and retro fit all existing property with thicker glass and sound insulation.	The precinct code as recommended by the Framework Report will provide recommendations on appropriate noise attenuation and appropriate separation of noisy venues. Further investigation into successful models employed elsewhere will be undertaken in the development of the precinct code.
The Dickson drain		
25	As a user of the Dickson Creek footpath I welcome developments consistent with other Creek landscaping but until Cape St redevelopment is available I am a bit concerned that security and pollution cannot be improved without lighting and oversight from upper level residential development	Works to improve the Dickson Drain and make it more attractive to existing and potential users need to be addressed through a number of actions. These actions are made up of capital works such as lighting, which can be implemented at any time budget is available, and future development which will be required to overlook the drain.
18	We have concerns about the proposed pedestrian crossing over the drain in the vicinity of the Daramalan College. It is not clear what issues these are intended address	
Residential development		
5	The plans provided have the potential for congestion, noise, overshadowing and increased criminal behaviour arising from redevelopments on the periphery of the retail core. This will be facilitated by changes to the new Dickson Centre Precinct Code by zoning parcels of commercial land to allow higher order mixed uses. The 'immortals' (the young) and ACTPLA planners may view such redevelopment as 'progress'. Those slightly more advanced in age might tend to disagree, and think that the current mix of retail, commercial and public facilities provided in the Dickson Group Centre is vibrant enough, without eight storey mixed	The overwhelming response from the community was that increased residential development is supported, but that issues such as traffic, parking and noise needed to be carefully considered.

	use developments towering over existing infrastructure.	
10	Commend the report for its analysis of the need for residential development.	
Green space		
9	I would like to stress the importance of a big park with equipment being required in the proposed park area. There are no parks with play equipment in the area and there are many children that visit Dickson shops everyday.	Open space is recommended in the north west corner of Block 20 Section 34. The green space could not be expected to be favoured as a seating and respite location as raised. However, the small pocket of space could be utilised for tree planting, improving the microclimate and visual amenity of the area and providing a small 'city lung' space to sequester carbon dioxide and remove air pollutants.
7	The master plan proposes development of a small open space at the intersection of Dickson Place and Badham Street. While this small pocket of open space makes sense because it is close to the heart of the centre, it's amenity would be questionable because it is opposite the Woolworths loading bay where several large trucks per day try to manoeuvre. These trucks have to negotiate extremely tight movements in this vicinity, often need to use traffic islands and surrounding footpaths for extra space. The noise from the loading bay and the generally amenity of it would not be in harmony with the proposed open space.	
Bus station		
7	As a matter of sound planning principle, the Framework should not, under any circumstances, be finalised until the final location and format of the proposed bus interchange is known. The bus interchange will have a fundamental impact on pedestrian movement and retail prospects in the centre. One would expect that the co-location of the second supermarket with or in very close proximity to the bus interchange should be a fundamental consideration.	TAMS are considering the location of a bus interchange on Challis Street and advise feasibility planning for such a facility will be undertaken this financial year as part of the Northbourne Avenue bus and cycle way priority study.
	Nobody wanted a bus interchange in Challis St, or a road through from Cowper St.	
18	The proposal to have the bus interchange in Challis St would add congestion to this area rather than decrease it.	
8	The proposed bus station on Challis street is likely to provide increased benefits to retail businesses in Dickson and less demand for long stay carparking, freeing parking for customers.	
Daramalan College – Bus and car parking		
18	Daramalan College has limited space available for staff, student and visitor parking. To resolve the problem, it is requested that you consider enclosing the open stormwater drain that is located along the	The college is outside the study area and parking for the college has not been considered as part of this report. We note, however, that this issue has been raised with TAMS separately.

	northern boundary of the College between the College and the Dickson shops and runs between Cowper and Challis Streets. The covered stormwater drain area could be used for community parking out of school hours providing a valuable community resource.	
General centre maintenance		
7	There has been a recent history of minimal expenditure on the development and maintenance of the public realm in the centre. Infrastructure is rarely upgraded or maintained. The streets are rarely cleaned and graffiti is poorly managed. Some of the proceeds raised from the release of blocks for development should be reserved for the development and maintenance of the public realm in the centre. Failing to take the one-off opportunity presented by releasing the remaining public land in Dickson will simply mean that many of the public realm improvements proposed by the Framework are unlikely to ever happen because they will never be funded.	Comments related to maintenance of the centre will be forwarded to the relevant area of TAMS. A condition of sale and development of blocks within the centre will be the improvement of adjacent public realm space.
Community facilities		
7	The Concept Plan proposes placing new community uses away from the core of the centre, to the extremities of it, north of the swimming pool. These uses would be quite disconnected from the main centre and thus potentially difficult to access by users who may be visiting the centre for other reasons. New community uses could be co-located within or surrounding green open space on Block 19 Section 30.	Community input throughout the process did not highlight a need to reconsider relocation of community facilities. The benefits of locating some high use community facilities with the retail core could be further considered. However, this use must be weighed against the high demand for retail space within the core.
Supermarket policy		
5	The policy to increase the number of full line supermarkets in Canberra is deeply flawed. Increasing competitiveness in Dickson will not in the long term achieve substantially lower prices. There a number of reasons for this: As Australia's climate changes and the total costs of production and supply rise due to resource depletion (chiefly water, soil fertility, fossil fuels, skills and human labour), prices will inevitably rise in a non-linear fashion. There should be more emphasis placed on increasing local production and distributive systems for local producers. Increasing competition to accommodate one or two extra larger-scale players will not make a great deal of difference. It will hurt the smaller retailers currently operating in local shopping centres (Watson, Hackett, Ainslie	In formulating its supermarket competition policy the ACT Government acknowledges there are a number of international and national factors, outside of its control, that may impact on supermarket competition and prices in the ACT. The Government's policy seeks to address the price and non-price factors that are within its control. These include increasing the supermarket competition and diversity in group centres such as Dickson. The introduction of additional supermarkets will increase the competitive dynamics in the Dickson catchment. It should be noted that any existing public car parking lost to new development must be replaced.

	and Lyneham), although they may pick up more trade from the vulnerable frail and elderly components of the community. Any savings associated with increased competition has to be offset against the economic and social costs of additional supermarket facilities (land and parking). Parking costs will increase dramatically.	
Infrastructure		
5	There will also be a need to upgrade ACTEWAGL infrastructure at public expense to cater for extensive redevelopment.	There are a number of capital works actions identified which will be referred to the relevant agency for consideration. Any sites that are subject to land release will also require developers to complete certain public realm improvements.
4	Given the extent of change proposed, there is considerable scope for the government to enhance the public realm	
Safety		
3	Safety and security are of primary importance to the existing local community and warrant a full social impact assessment.	Unfortunately funds are not available to undertake a full social impact assessment. However, a precinct code will be prepared for the Dickson Centre. This precinct code will include CPTED (Crime Prevention Through Environmental Design) principles.
Increased development rights/ developable land		
3	The projected development capacity (total GFA) does not appear to have been calculated for the centre as a whole but is a vital piece of information.	Overall community response has been in support of the proposed growth in the centre. Even though the recommendations in the Framework Report may see the centre grow, the centre will still provide services consistent with a group centre. The purpose of group centres are to serve groups of nearby suburbs and to incorporate a wide range of shopping, community, recreation and business facilities. The set backs required for Block 4 Section 34 are being considered more closely for the precinct code.
3	The group centre role of Dickson appears to be changing to something more akin to town centre status, which will have implications for the city as a whole.	
13	A setback of 6m for Block 4 Section 34 from the boundary of Block three results in the loss of a sizeable amount of developable land.	

DICKSON CENTRE
master plan

MARCH 2011

ACT Planning & Land Authority

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Table of contents

Abbreviations and acronyms

ACT	Australian Capital Territory
ACTPLA	ACT Planning and Land Authority
The framework report	The Dickson Centre Urban Planning and Design Framework Report
The planning project	The Dickson Centre Planning Project
Master plan	The Dickson Centre Master Plan

Executive summary

The Dickson Centre Master Plan presents a framework which will guide development and redevelopment of the centre in the coming decades in a manner consistent with the desires of the community and stakeholders as expressed during the consultation process and captured in the vision shown below.

The Dickson centre vision

Dickson centre will be a multicultural, progressive and safe hub with a diversity of services and amenities for the local and wider community: a place where people live, work and socialise (play).

The Dickson Centre Master Plan is presented on pages 8 to 21.

The master plan has been informed by the Dickson Centre Planning Project (August 2009 to September 2010).

Key actions to achieve the master plan include:

- Preparation of a precinct code (introduced through a Territory Plan variation) which specifies land use, height and design details which will encourage development and redevelopment and ensure that the principles outlined in the master plan are achieved.
- Undertaking investigation and documentation to allow the release of key sites for new development, including Block 19 Section 30, for Block 20 Section 34, part Block 20 Section 30 and Block 21 Section 30 for release for new development including retail anchors.
- Allowing, through a precinct code, development on Section 32, 34 and 31 to go to six storeys.

Introduction

Purpose of the master plan

The purpose of the master plan is:

- to present a framework which will guide development and redevelopment of the centre in the coming decades in a manner consistent with the desires of the community and stakeholders as expressed during the consultation process
- to ensure that which works in the centre is retained and enhanced and to seize and create opportunities to further improve the centre, and
- to provide certainty for the community, lessees and tenants about how the centre can develop and redevelop.

The Dickson Centre Planning Project

The master plan has been informed by the Dickson centre planning project which started in August 2009 and finished in September 2010. It included extensive background research and consultation with the community, lessees and other stakeholders and culminated in the creation of the Dickson Centre Urban Planning and Design Framework (the framework). The framework presented a vision and a way forward for the Dickson centre in light of background research and consultation.

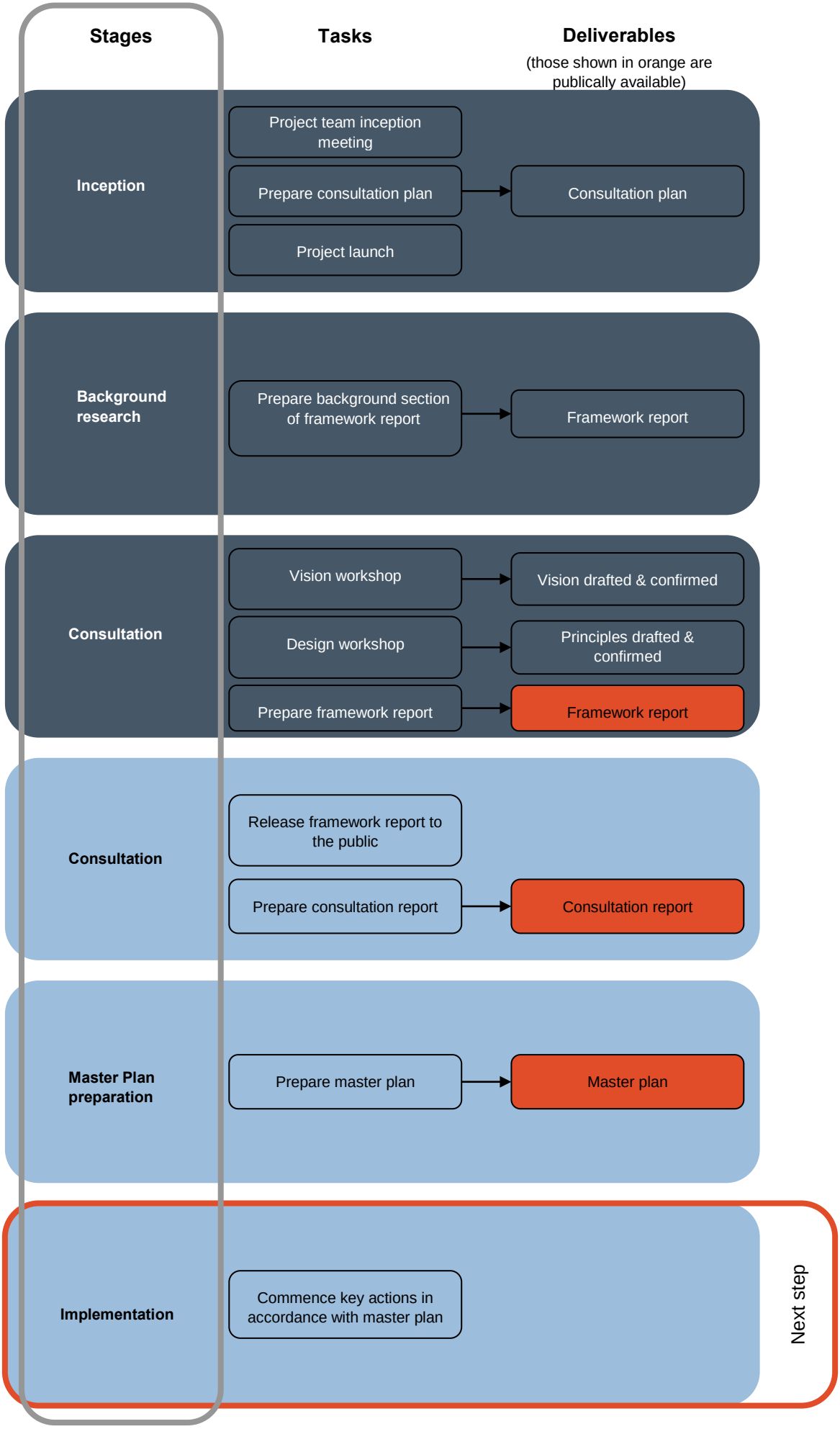
The planning project was undertaken in response to the changes in population, demographics, development pressures in the centre and findings from current research that identified additional supermarket space was required in inner north Canberra.

The ACT Planning and Land Authority initiated and led the planning project. A planning consultant was engaged to complete background research, consultation and the framework report.

The diagram on the following page outlines the key stages of the development of the framework report, its relationship to the master plan and what happens next. All publicly available documents can be found on the planning project webpage at:

http://www.actpla.act.gov.au/topics/significant_projects/planning_studies/dickson_centre_planning_project

A full description of the planning project's methodology can be found in Appendix A.


Stages
Tasks
Deliverables
(those shown in orange are publically available)
Inception
Project team inception meeting
Prepare consultation plan
Consultation plan
Project launch
Background research
Prepare background section of framework report
Framework report
Consultation
Vision workshop
Vision drafted & confirmed
Design workshop
Principles drafted & confirmed
Prepare framework report
Framework report
Consultation
Release framework report to the public
Prepare consultation report
Consultation report
Master Plan preparation
Prepare master plan
Master plan
Implementation
Commence key actions in accordance with master plan
Next step

WHAT MAKES DICKSON SPECIAL?

Dickson yesterday

In the late 1950s and early 1960s, following the establishment of the National Capital Development Commission, detailed planning and design commenced for a centre at Dickson.

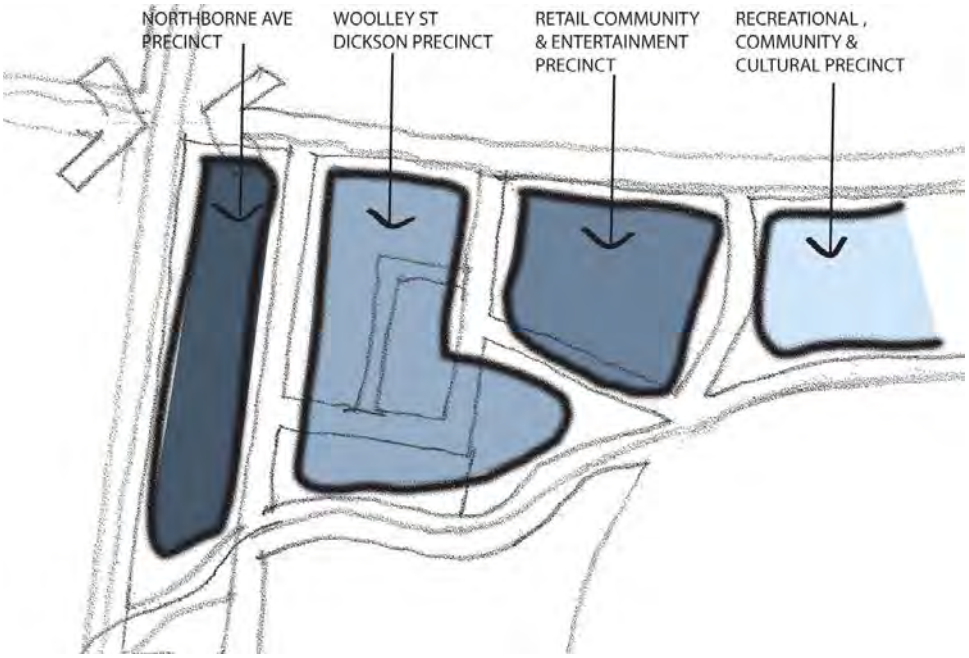
Notwithstanding that Dickson was to be a retail centre, much of the centre was developed as a service trades area.

Dickson centre – 1968

Dickson today

The place – urban character

The Dickson centre consists of four precincts as shown in the diagram below. Each precinct has its own distinct built form and public realm which makes it unique. Each precinct is described over the page, with relevant comments from consultation shown in the boxes.



Northbourne Avenue precinct

- Primarily large freestanding office buildings set within landscaping and surface parking areas.
- Generates much of the centre's daytime population and activity.
- Large areas of unused space around the buildings.

Woolley Street precinct

- The scale of development is larger than the retail core precinct which reflects the subdivision pattern.
- The road and pedestrian networks run north to south and east to west which clashes with the road and pedestrian network of the retail core which runs on an angle.
- Blocks are large and typically square with a similar depth to frontage ratio.
- Parking is on-street either as angled or parallel parking.

Retail core precinct

- Physical character is virtually unchanged; in forty years, there has been no major upgrade to the buildings.
- Typically low scale development with two storey buildings dominant and a few single or three storey buildings.
- Strip shopping, not a shopping mall.
- Set within a pedestrian precinct that consists of courtyards and connecting walkways.
- Buildings are built to all boundaries and shops typically address courtyards. Consequently frontages are generally active.
- Blocks are typically rectangular. Most blocks have been developed with smaller shops creating the fine grained built form and scale that is typical of the retail core.
- Roads are located on the edges and provide access to the parking areas.

"Like that it is open [i.e. not a mall]."

"Large pedestrian areas are fantastic."

Recreation and community precinct

- This precinct is characterised by freestanding buildings of varying scale and design within a landscape setting.
- Apart from the open space within the swimming pool complex, the public realm consists mainly of parking and left over spaces between the parking areas and buildings. In general these spaces do not relate to the adjacent buildings and sense of place is limited.

The people – community and business

In addition to the distinct built form and public realm that is found in each precinct, each also has a character which is a result of the people who use the centre, being the business owners and community.

Northbourne Avenue precinct

- The office uses generate much of the centre's daytime population and activity which supports entertainment and retail functions in the centre.

"Dickson is the logical location to develop retail and commercial premises as an alternative to Civic."

Woolley Street precinct

- Composed mostly of entertainment venues such as restaurants and bars with some retail and office space.
- Generates much of the centre's night time activity.
- Relaxed feel.
- Diverse, lots of variety.
- Good on street car parking.
- Wide streets.

"The character relates to its 'Chinatown' status in Canberra and the alternative nature of the area."

"The character of Dickson as a restaurant hub is very valuable."

"The best thing about Dickson group centre is the lively atmosphere that has developed over recent years ... and the 'humble jumble' feeling of all the businesses especially in Woolley Street."

Retail core precinct

- Small traders with large supermarket at core.
- Friendly feel amongst businesses.
- Comfortable and familiar, home away from home.
- Small community – see people you know, familiarity.
- Community feel and support.
- Variety of businesses means it is a multi trip centre.
- Generates much of the centre's day time activity.

Recreation and community precinct

- Provides convenient facilities for community.
- Facilities such as the swimming pool and child care attract much day time activity.

THE DICKSON CENTRE MASTER PLAN

Master plan area

The aerial photograph below shows the expanded area considered as part of the planning project. However, the key area affected by this master plan is outlined in orange.

Dickson centre vision

Dickson centre will be a multicultural, progressive and safe hub with a diversity of services and amenities for the local and wider community: a place where people live, work and socialise (play).

To enable the vision to be achieved, eight planning and design principles will be applied to the centre. These principles and how they will be applied to the centre are described on pages 11 to 18. The processes to achieve the desired planning outcomes are explained here:

Territory Plan variation – precinct code

Development in the ACT is regulated through the Territory Plan, which shows where development can go and what type of development we and our neighbours can build.

The Territory Plan can be changed through a process called a Territory Plan variation. This is a statutory process which includes consultation and when complete can alter the range of land uses permissible on a site and/or changes the development controls applicable to a site.

Specific changes for an area (or precinct) can be introduced into the Territory Plan through a precinct code.

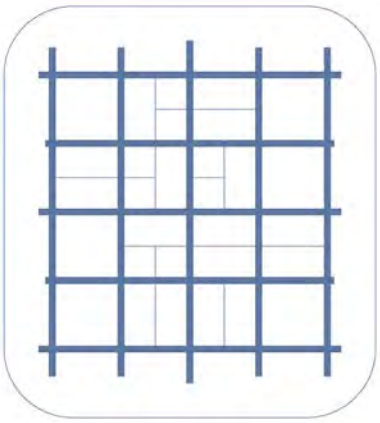
It is proposed to establish a precinct code for the Dickson centre to ensure a number of the principles are achieved.

Land release

A number of blocks within the Dickson centre, mainly surface car parks, are owned by the ACT Government. This land can be released to interested parties through an auction, tender/expression of interest or direct sale process. A deed of agreement will be placed on any land to be released which may include off site works requirements such as paving and landscaping and replacement car parking that contributes to the public realm of the centre.

Capital works

Improvements to the public realm or community assets and infrastructure can be implemented through capital works undertaken by the government.



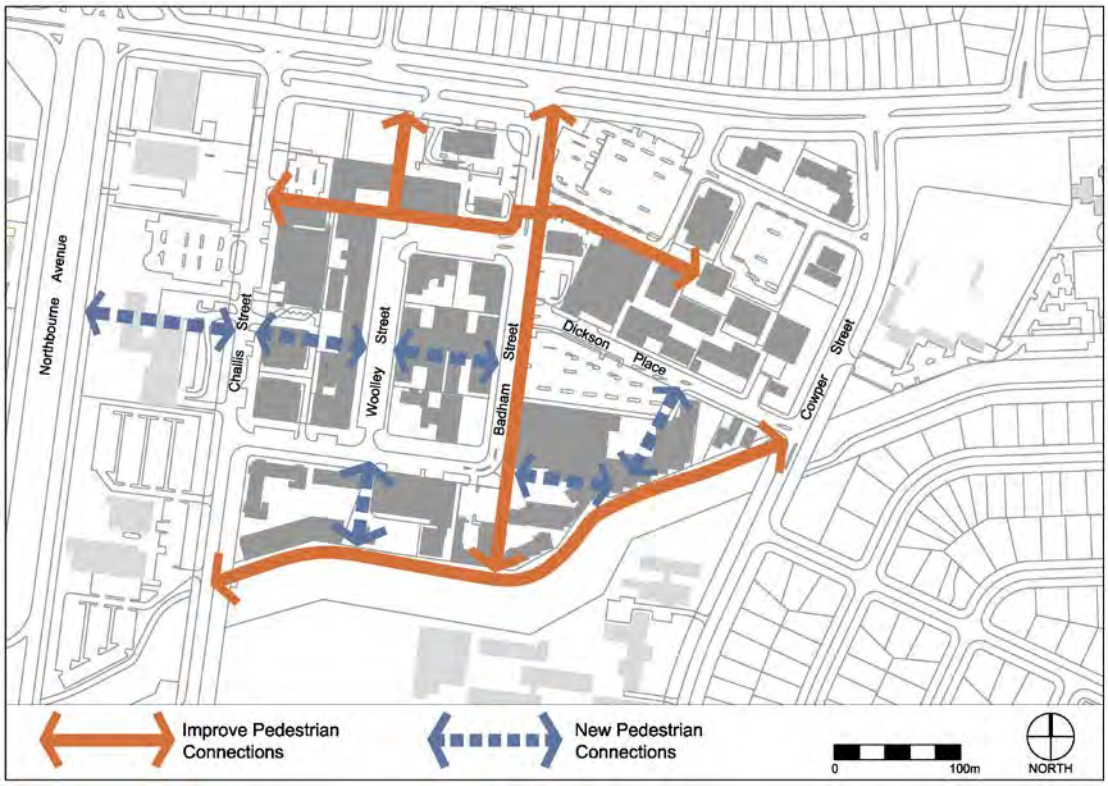
Planning and design principle

Permeable

Centres depend on the ability of people to move around easily, safely and comfortably. Permeable centres offer a choice of routes and facilitate social interaction. Walkability will be maximised when route choices occur frequently.

Applying the principle

- The proposed precinct code will include provisions for the 'new pedestrian connections' shown in the diagram below by increasing development rights for affected blocks and requiring the pedestrian connection as part of redevelopment.
- Release Block 19 Section 30 (existing car park between library and church) for the purposes of retail development (including supermarket). Conditions of release will require the development to address the east-west pedestrian connection.
- The proposed precinct code will allow for residential development on sections adjoining the pedestrian route to encourage passive surveillance.
- The proposed precinct code will require that any redevelopment/development fronting the northern east to west pedestrian connection shown in the diagram below will have active uses on the ground floor i.e. retail and entertainment.
- The proposed precinct code will allow for additional residential development overlooking the public realm through the centre, again increasing passive surveillance.



Planning and design principle

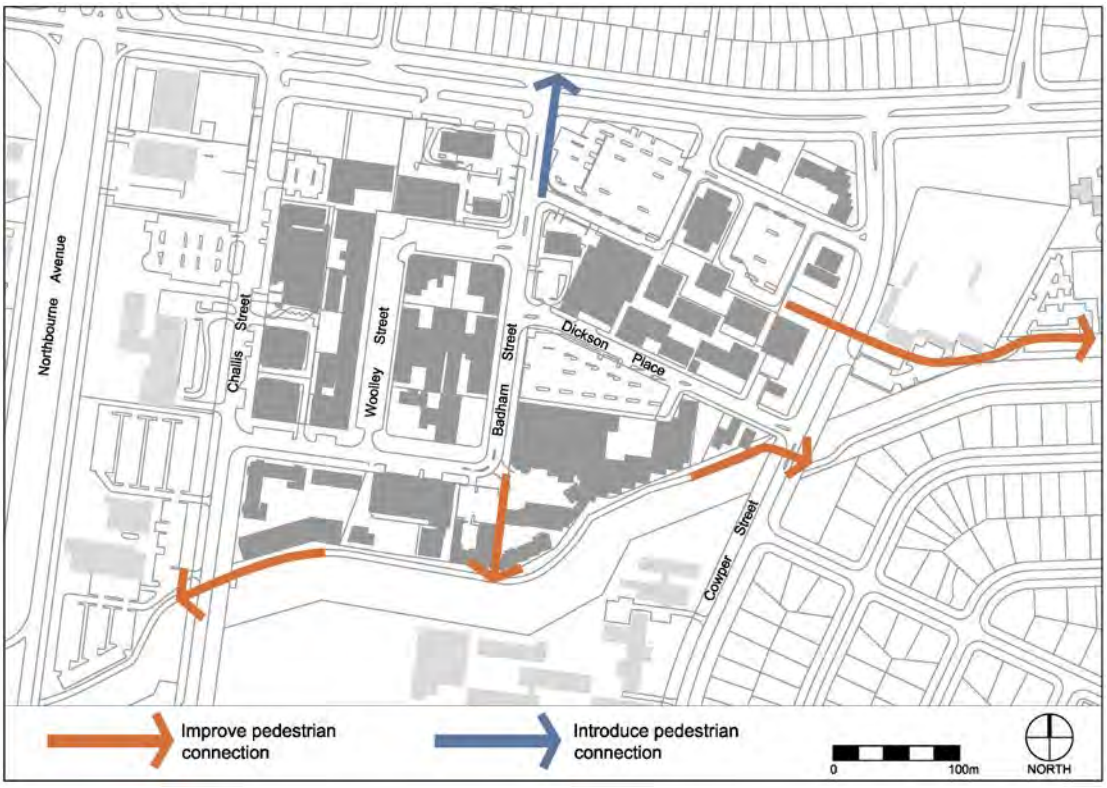
Connected

Successful centres are well linked to the surrounding area and accessible from their catchment.

The quality of connections both through the centre and to the surrounding area need to be of high quality.

Applying the principle

- Capital works projects will be required to improve the quality of pedestrian connections as shown on the diagram below. At each connection pedestrians should have priority.



Planning and design principle

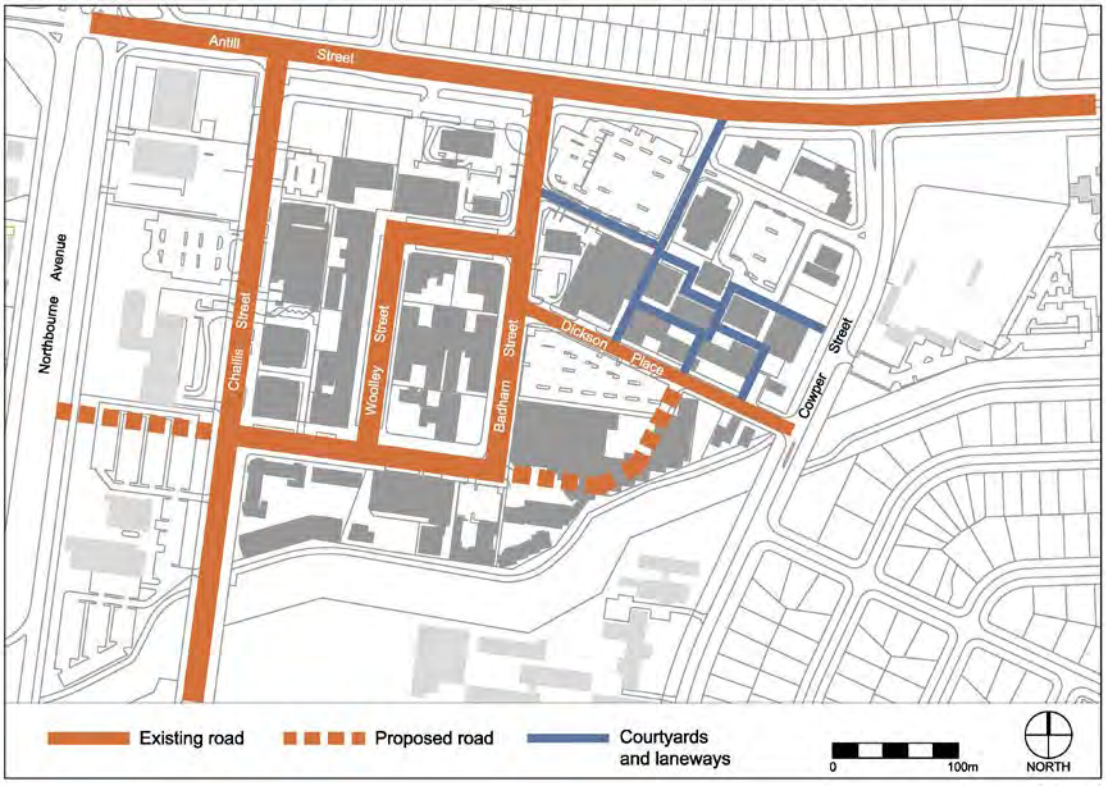
Character

The clashing grid street pattern is distinctive to the Dickson centre and maximises frontage opportunities and access. This geometry is to be retained.

The contrasting scale, grain and pedestrian environments of the Dickson centre are to be reinforced. The fine grain and low scale of the retail core precinct is to be retained, the 'Chinatown' experience of Woolley Street promoted and new development along Northbourne Avenue will reflect the larger commercial/office development.

Applying the principle

- The proposed precinct code will ensure all new development respects the centre's geometry.
- The proposed precinct code will only allow three storeys for most of the retail core precinct and six storeys for the Woolley Street precinct to ensure the scale and grain of each precinct is maintained.



Planning and design principle

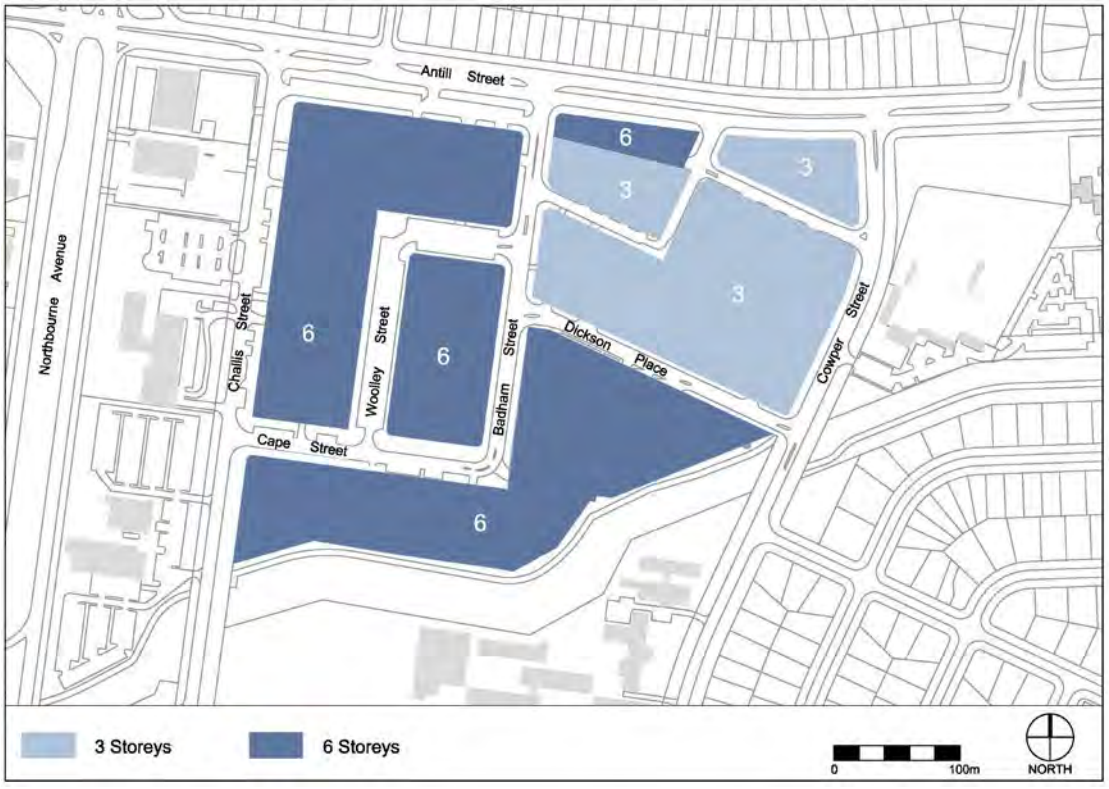
Building height

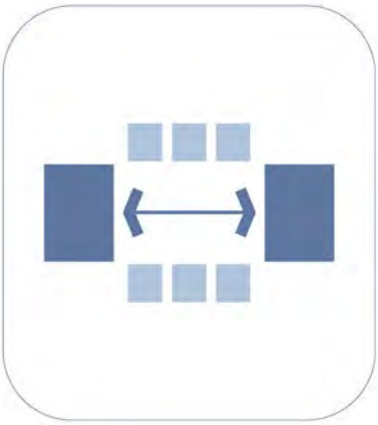
Buildings will transition in height from the Northbourne Avenue corridor, as a major approach route, through the centre and down to the adjacent suburban areas.

The building heights will reflect the types of uses envisaged for the different precincts.

Applying the principle

- The proposed precinct code will include provisions to increase heights to six storeys for the blocks and sections shown in the diagram below.
- The proposed precinct code will allow only three storeys in the retail core precinct to ensure the character of the area is maintained.





Planning and design principle

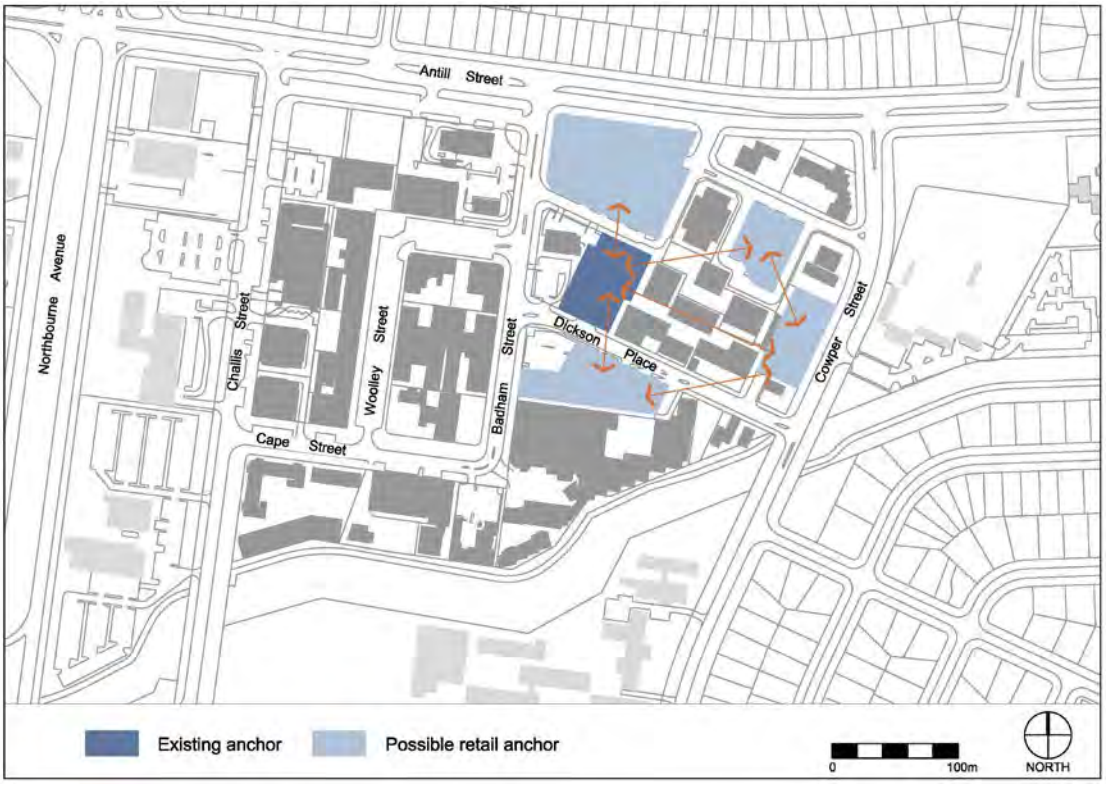
Anchors

Large scale and specialist retailers are important anchors as they can attract large numbers of people to and through a centre.

Anchors should be located to maximise pedestrian movement past specialty/small scale retailing.

Applying the principle

- Allow for Block 19 Section 30 to be released for major retail development (including a supermarket) with basement car parking.
- Consider the release of Block 21 Section 30 for major retail development with potential residential development along Antill Street.
- Encourage contiguous development with the 'Tradies Club' on Block 20 Section 34 to be released for mixed use development, including major retail, to add to the activation of the centre.
- Investigate the potential to consolidate part Block 20 Section 30 with Block 10 Section 30 (Harris Scarfe store) to allow for establishment of a major retail anchor.



Planning and design principle

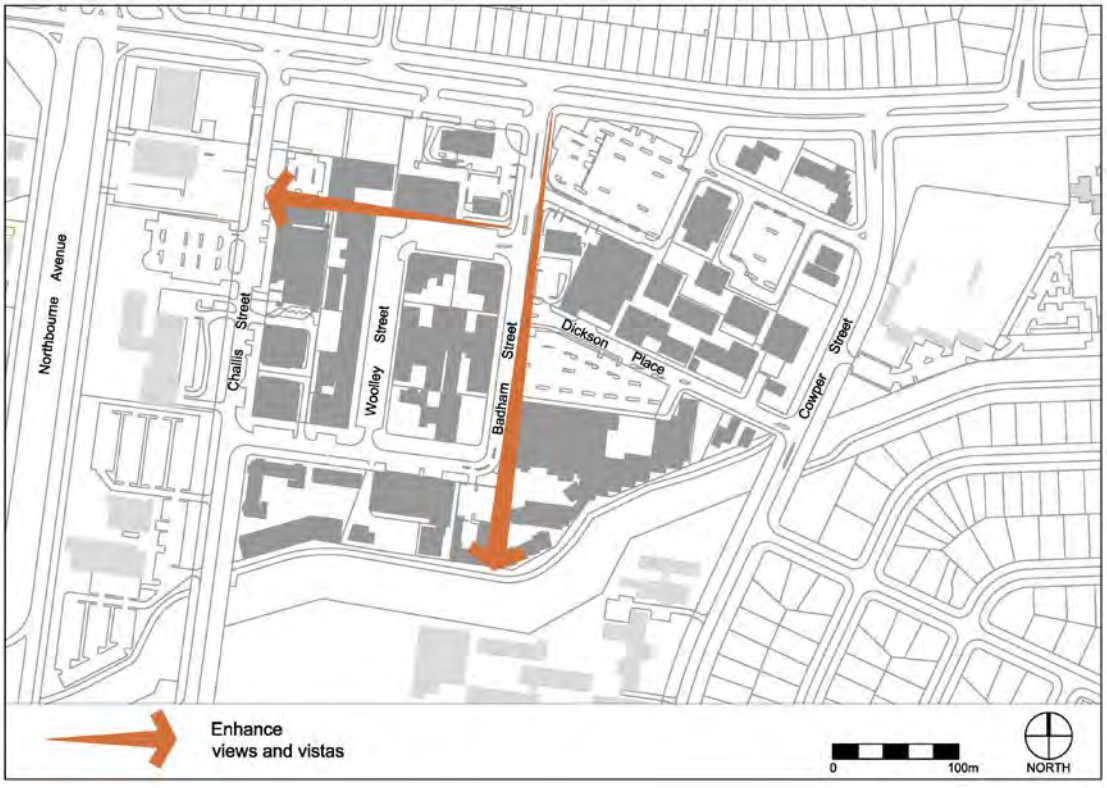
Views and vistas

Views and vistas along recognisable routes promote legibility, ease of movement and a sense of connection. Defining vistas into and out of the centre will reinforce the 'sense of place' and the role the centre plays as a meeting place for the community.

Aligning buildings along routes facilitates safety and reinforces the vista.

Applying the principle

- The proposed precinct code will require that development/redevelopment along the view lines shown in the diagram below are setback and oriented so that views are not obstructed.



Planning and design principle

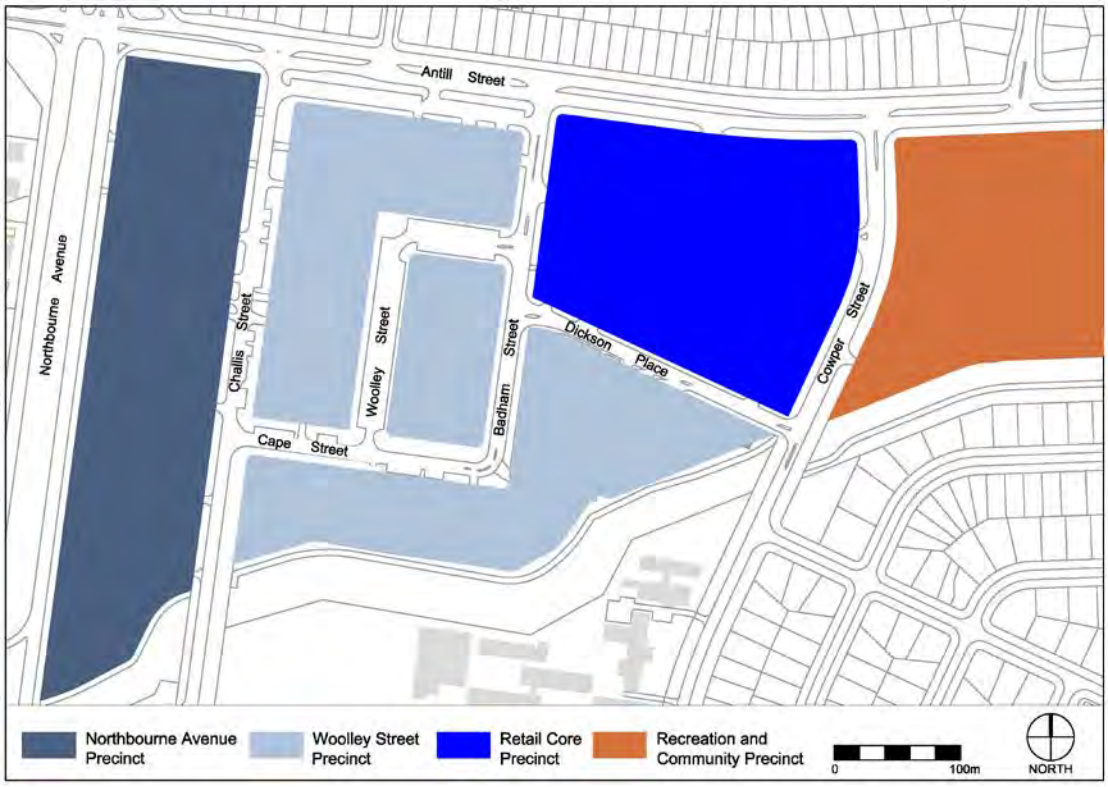
Reinforce precincts

The Dickson centre has quite discernable precincts that are derived from the land uses and the consequent building footprints and scales. These distinctive precincts are to be enhanced by introducing a range of land uses compatible with the character of the precinct.

Reinforcing the precincts with compatible uses creates greater diversity while minimising conflicts between uses.

Applying the principle

- Land release will focus on allowing retail anchors in the retail core precinct which will add to its vibrancy.
- The proposed precinct code will require that blocks facing Woolley Street have active uses on the ground floor such as restaurants and entertainment.
- Residential uses are proposed to be included in redevelopment in the service trades area. These developments are to consider design/construction techniques and the incorporation of office/commercial uses at the first floor level to minimise the conflict between residential and entertainment uses.
- Development of the ACT Government owned car parks provide the potential to add to the mix of uses and vibrancy of the Dickson centre.



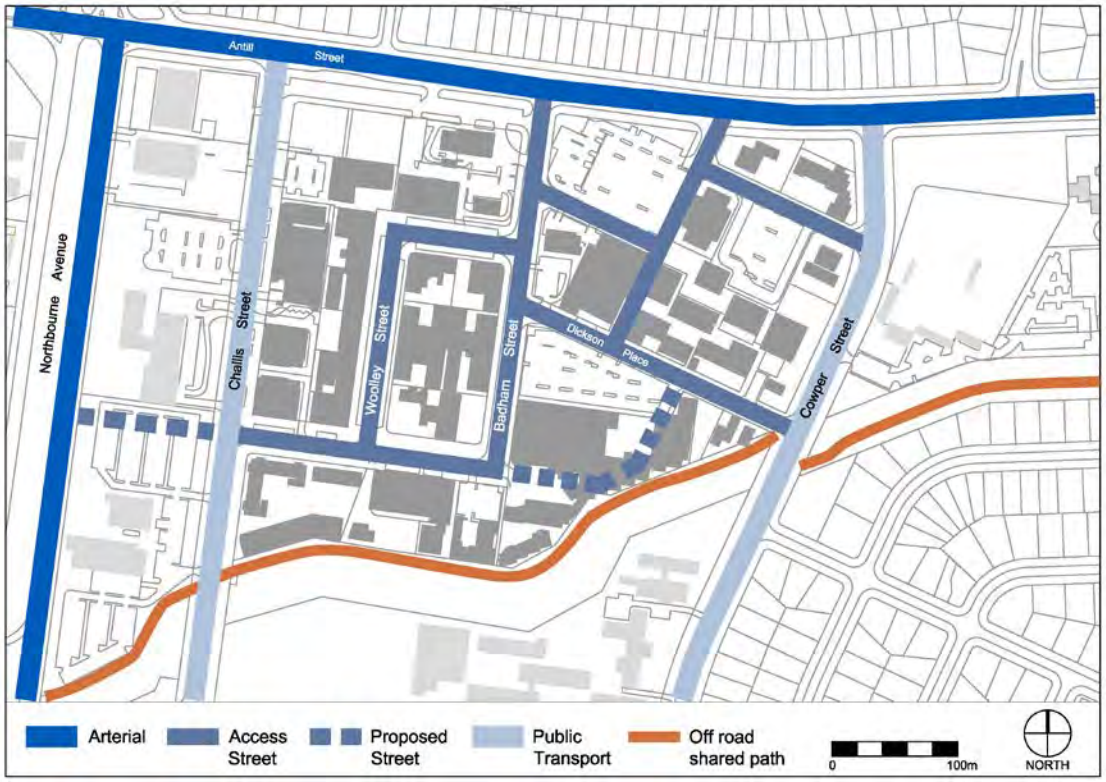
Planning and design principle

Circulation

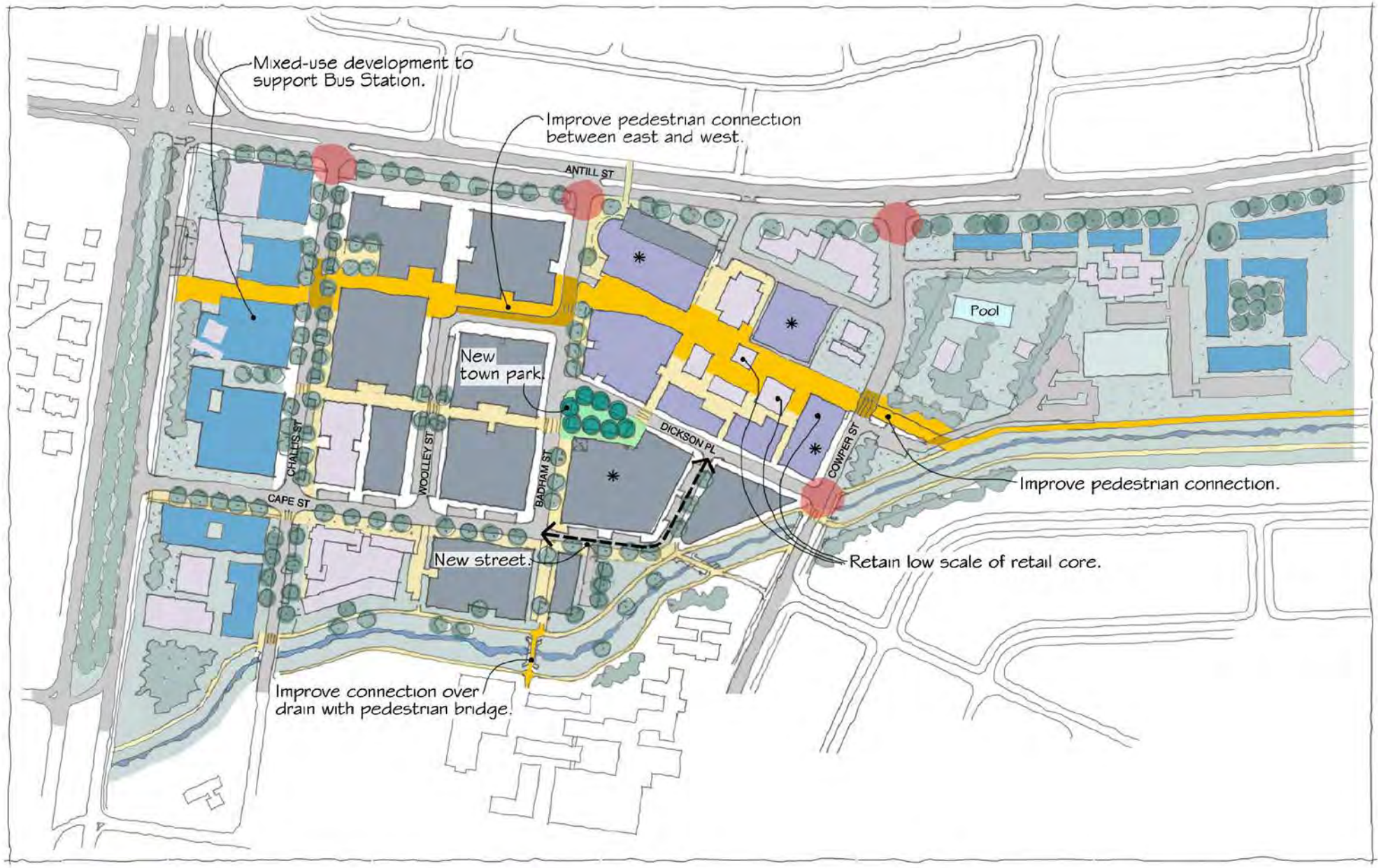
To help keep the Dickson centre permeable for pedestrians and generally more accessible, public transport stops and interchanges are to be improved, and through traffic minimised.

Applying the principle

- By keeping streets narrow, allowing on street car parking and giving pedestrians priority at intersections, through traffic will be discouraged.
- Off street car parking should be in basements and short term car parking should be located on street.
- Service and delivery vehicles are to be discouraged from accessing the centre during peak times.
- Public transport facilities will be enhanced and provided to both east and west sides of the centre to improve access while minimising the introduction of further traffic in the centre.
- The main cyclist route to the centre will be kept adjacent to the storm water channel, however, improving the permeability of the centre will make the centre more accessible for cyclists from this route.
- The proposed precinct code will require that the proposed roads shown in the diagram below are required as blocks and sections develop/redevelop. These roads maintain the centre's geometry while increasing permeability and connectivity.


Antill Street
Northbourne Avenue
Challis Street
Woolley Street
Badham Street
Dickson Place
Cowper Street
Arterial
Access Street
Proposed Street
Public Transport
Off road shared path
0
100m
NORTH

MASTER PLAN


Mixed-use development to support Bus Station.
Improve pedestrian connection between east and west.
ANTILL ST
Pool
New town park.
CHALLIS ST
WOOLLEY ST
BADHAM ST
DICKSON PL
COWPER ST
CAPE ST
Improve pedestrian connection.
New street.
Retain low scale of retail core.
Improve connection over drain with pedestrian bridge.
New Buildings up to 3 storeys high.
Existing Buildings.
* Allow for large retail anchor.
New Buildings up to 6 storeys high.
New Buildings, height to be determined.
Improve landscaping to centre entrances.

Next steps

The key actions which need to be undertaken to commence implementation of the master plan are:

- Prepare precinct code which specifies land use, height and design details which will encourage development and redevelopment and ensure that it achieves the principles outlined in the master plan.
- Undertake investigation and documentation to allow the release of key sites for new development, including Block 19 Section 30, for Block 20 Section 34, part Block 20 Section 30 and Block 21 Section 30 for release for new development including retail anchors.
- Identify and prepare capital works proposals for public realm and infrastructure improvements for consideration of the Government in subsequent budgets.

APPENDICES

Appendix A - methodology

Pivotal in producing this master plan were the project team, consultation and background research.

Project team

ACTPLA was the agency tasked with initiating and leading the Dickson centre planning project.

ACTPLA engaged a planning consultant to coordinate the initial phases of the Dickson centre These initial phases included consultation, research and production of the framework report.

ACTPLA then released the framework report out to the public for comment and completed the consultation report and the master plan.

Dickson Centre Planning Project		
1	Dickson centre planning project launched	August 2009
2	Consultation	August – October 2009
3	Research	August – December 2009
4	Dickson Centre Urban Planning and Design Framework completed	March 2010
5	Dickson Centre Urban Planning and Design Framework to Government	May-July 2010
6	Dickson Centre Urban Planning and Design Framework released for public comment	September – October 2010
7	Consultation report completed	November 2010
8	Master plan completed	February 2011
9	Master plan to Government for approval	March 2011

Consultation

The views received through the consultation and submission processes have been considered in finalising the master plan. As part of consultation the project team engaged:

- the community (including lessees, business owners, local residents and community organisations)
- key government stakeholders
- lessees/tenants of major parcels of land in the Dickson centre.

Details of how each of these groups was engaged can be found in the Dickson Centre Consultation Report which is on the planning project webpage at:

http://www.actpla.act.gov.au/topics/significant_projects/planning_studies/dickson_centre_planning_project

Background research

The following research was undertaken by the planning consultant:

- background research about the history of the centre and the way it currently operates
- broad market assessment of development opportunities
- review of current retail assessments
- traffic and parking assessment
- urban design assessment
- review of previous planning studies and other policies affecting the centre (details of studies and policies reviewed can be found in Appendix B).

Appendix B – documents reviewed

Studies and policies reviewed as part of planning project background research:

Document:	Produced by:	Date:
ACT Commercial Centres and Industrial Areas Floorspace – summary report	Barbara Davis and Associates and ACTPLA	July 2007
ACT Retail Study – extracts	IBECON	2007
ACT Supermarkets ACT Commercial Centres and Industrial Areas Floorspace Inventory	ACTPLA	July 2007
Community Consultation and Cultural Profile Report	Susan Conroy	April 1998
Dickson Neighbourhood Plan	ACTPLA	July 2003
Dickson Section Master Plan	ACTPLA	August 2003
Dickson Urban Design Capacity Study	SKCM	2003
Traffic and Parking Assessment – Part of Dickson Urban Design Capacity Study	Maunsell Australia Pty Ltd (Canberra office)	October 2003
Draft Dickson Central Area Planning Study (to inform Dickson Central Area Planning Study and Urban Design Code)	ACTPLA	October 2005
Draft Dickson Central Area Planning Study and Master Plan, Precinct Code	ACTPLA	10 February 2006
Mixed use in Canberra: Dickson - presentation to policy committee	ACTPLA	7 July 2005
Retail Capacity Assessment – Dickson Town Centre Urban Design Study	SKCM and SGS Economics & Planning	6 November 2003
Reflecting Dickson: a summary – Moving towards the Dickson Neighbourhood Plan	ACT Planning and Land Management (PALM)	November 2002
Revealing Dickson – Moving closer towards the Dickson Neighbourhood Plan	ACT Planning and Land Management (PALM)	January 2003
Safe Routes Community Plan	Bell Planning Associates	Prior to 2000
Street tree planting	ACT Government	None provided
Survey – Dickson – Business and Employee Survey	Forbes Mason & Associates Pty Ltd	2002

Project Name:	Dickson Precinct Traffic and Parking Study
Project Number:	3002303
Report for:	ESDD

PREPARATION, REVIEW AND AUTHORISATION

Revision #	Date	Prepared by	Reviewed by	Approved for Issue by
0	18/06/2012	[redacted]		
1	11/07/2012			
2	24/07/2012			

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Dickson Precinct Traffic and Parking Study – Final Report

For: ESDD

JULY 24, 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 approximately 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 Guidelines.*

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)

TABLE OF CONTENTS

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.

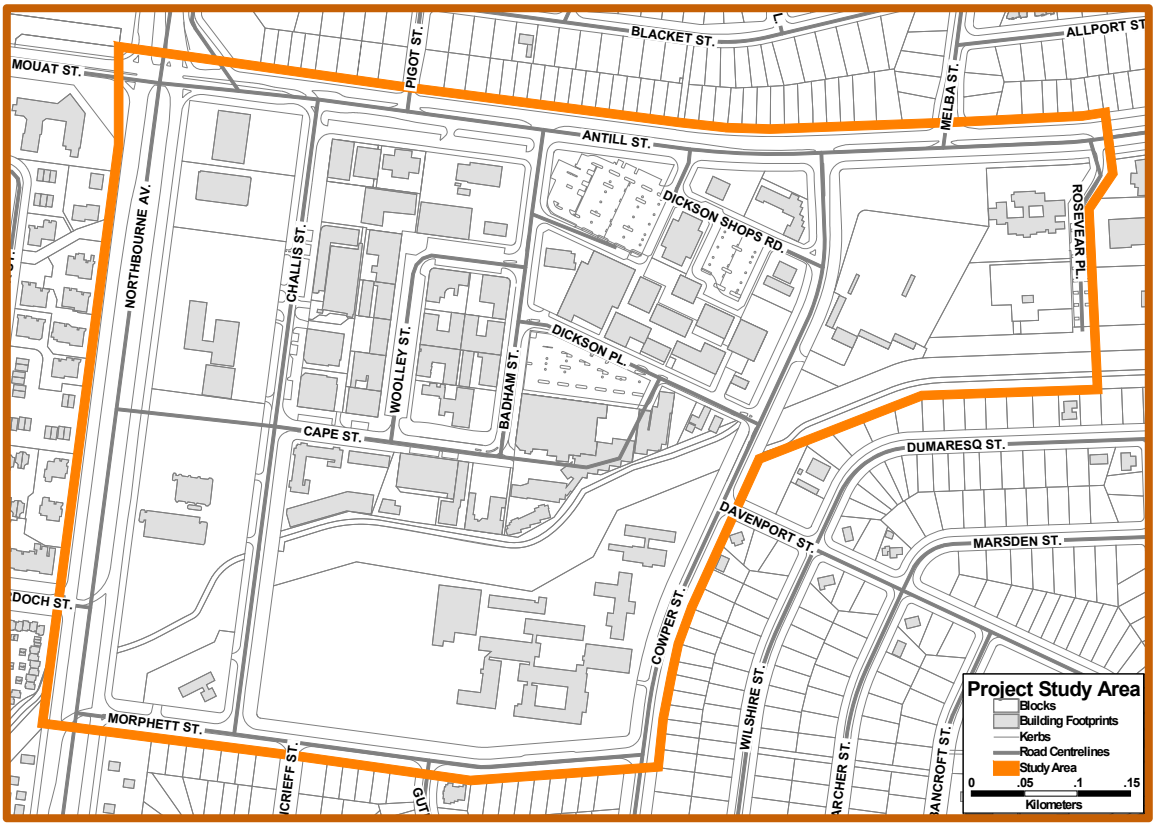

Figure 1: Project Study Area

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.

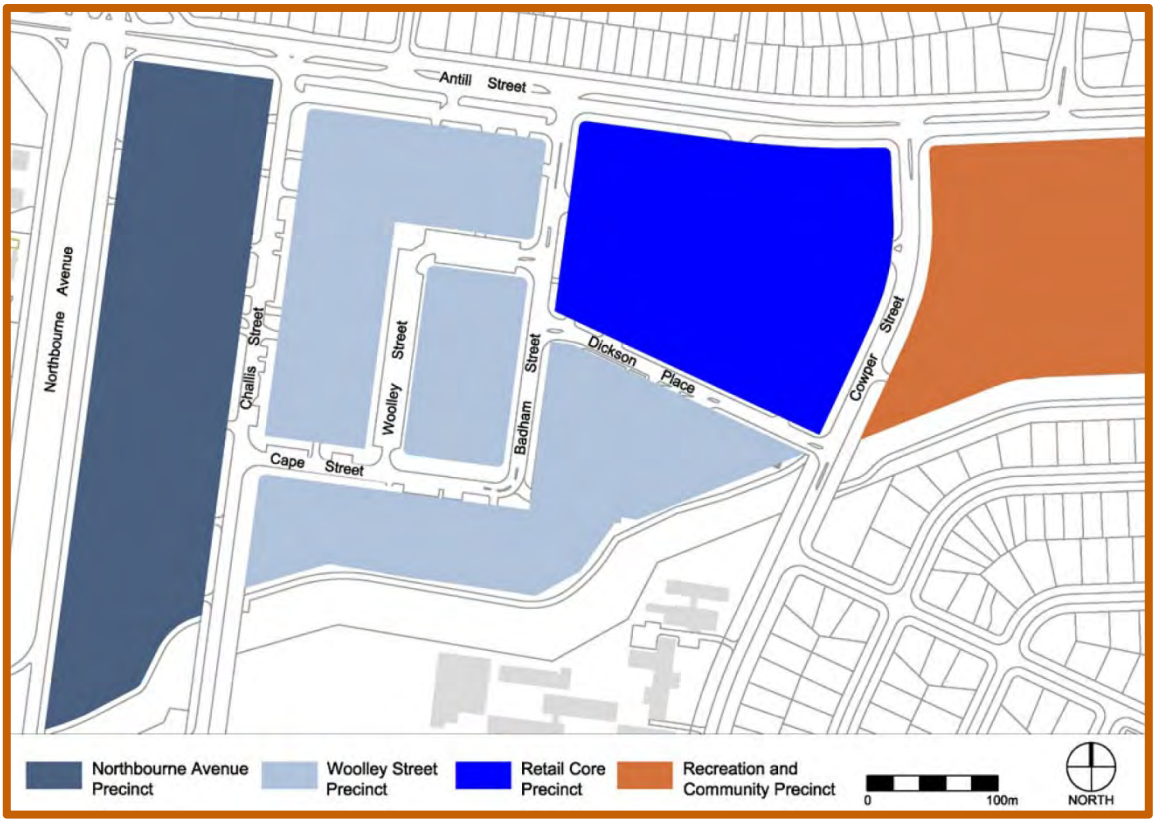

Figure 2: Dickson Precincts (Source: Dickson Master Plan, p19)

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.

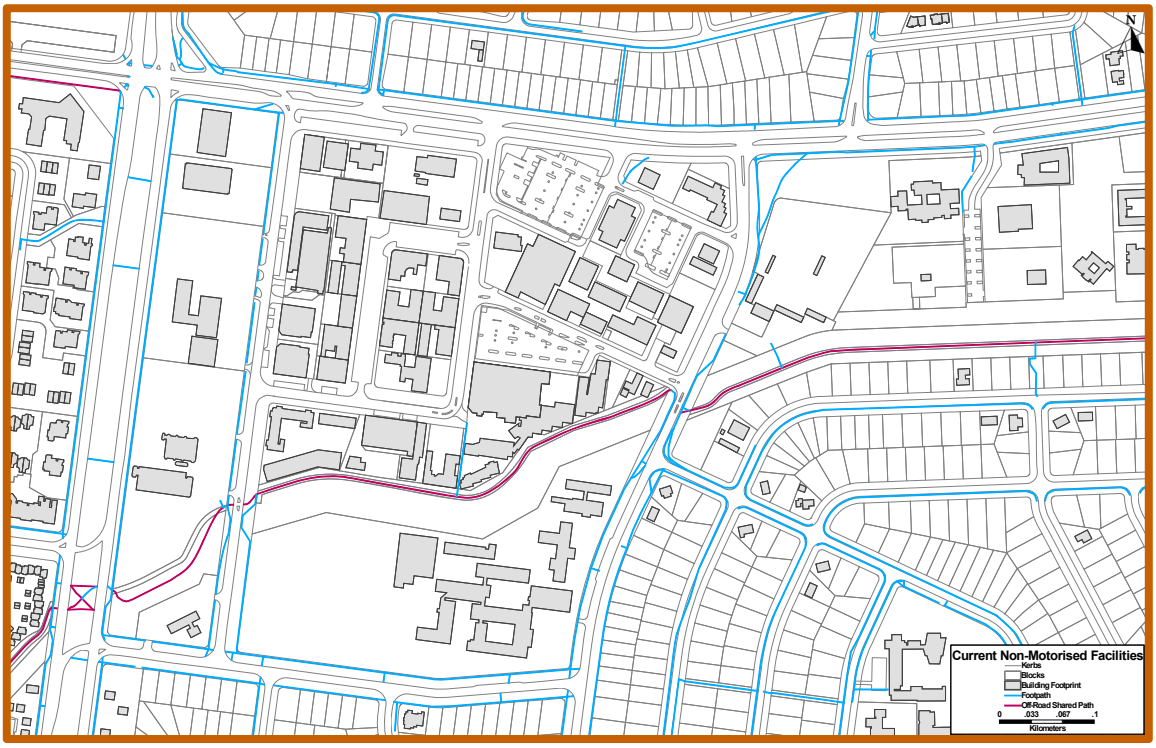

Figure 3: Dickson Precinct Pedestrian and Cyclist Paths

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)
- Comment removed

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.

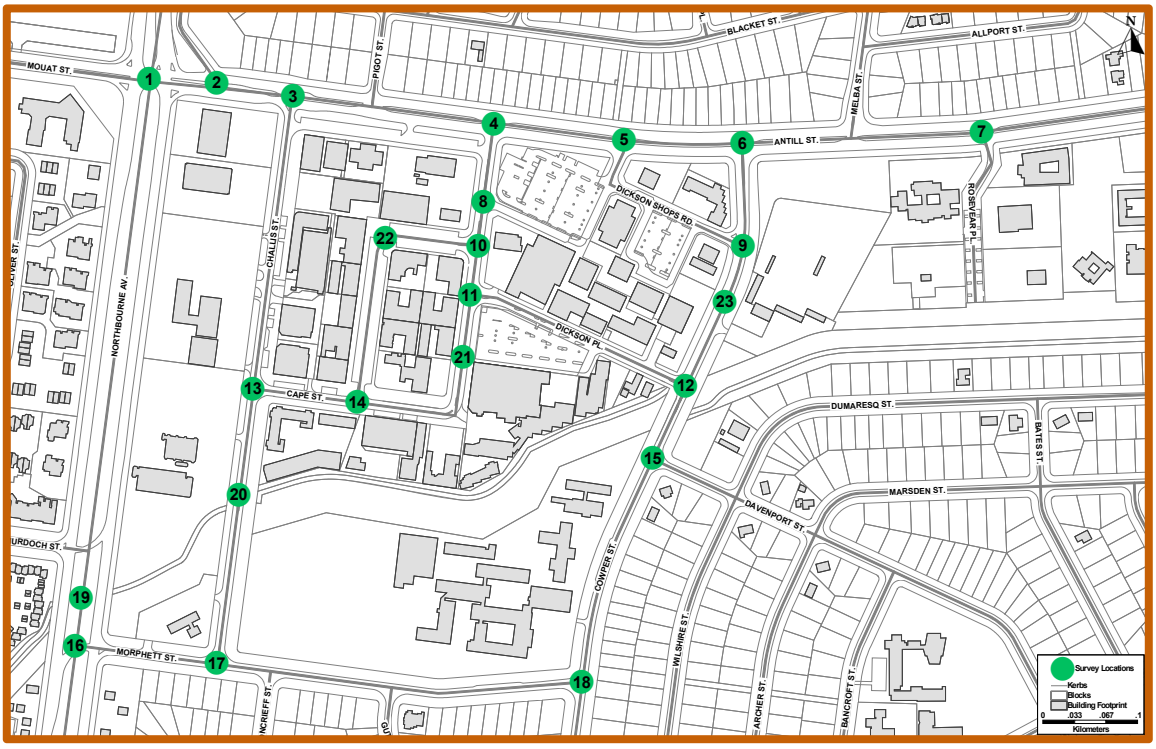

Figure 4: Pedestrian and Cyclist Survey Locations

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.

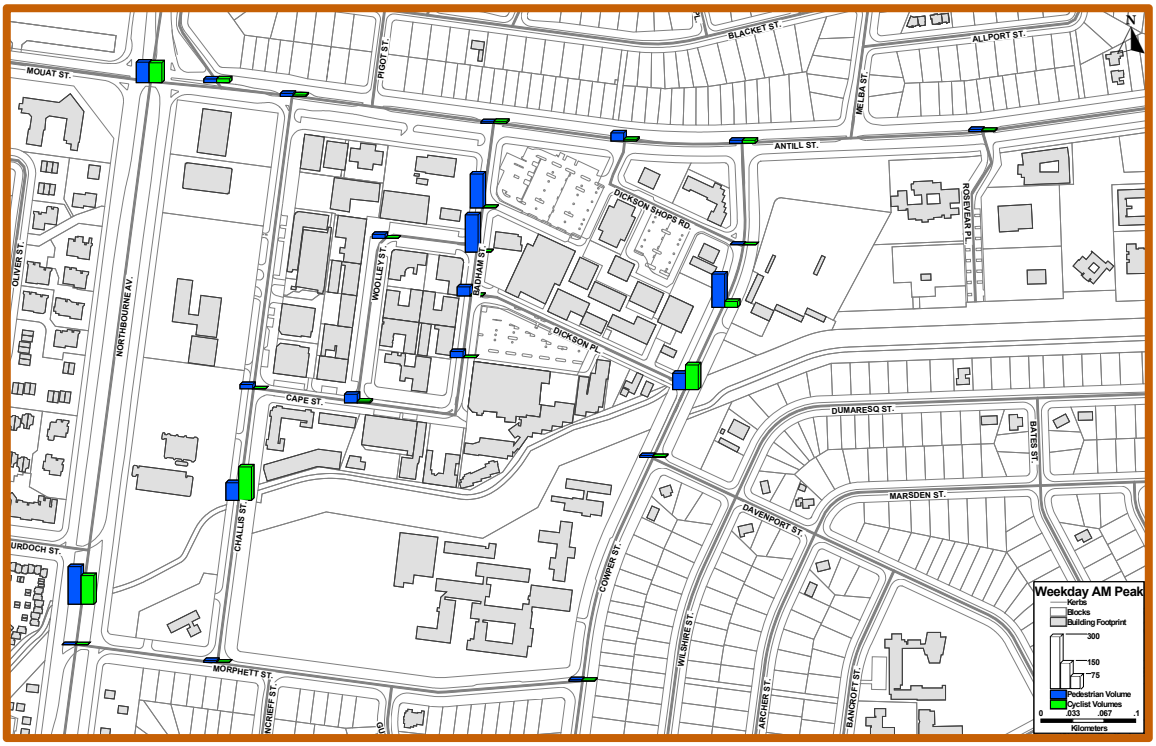

Figure 5: Pedestrian and Cyclist Survey Summary (Weekday AM Peak)

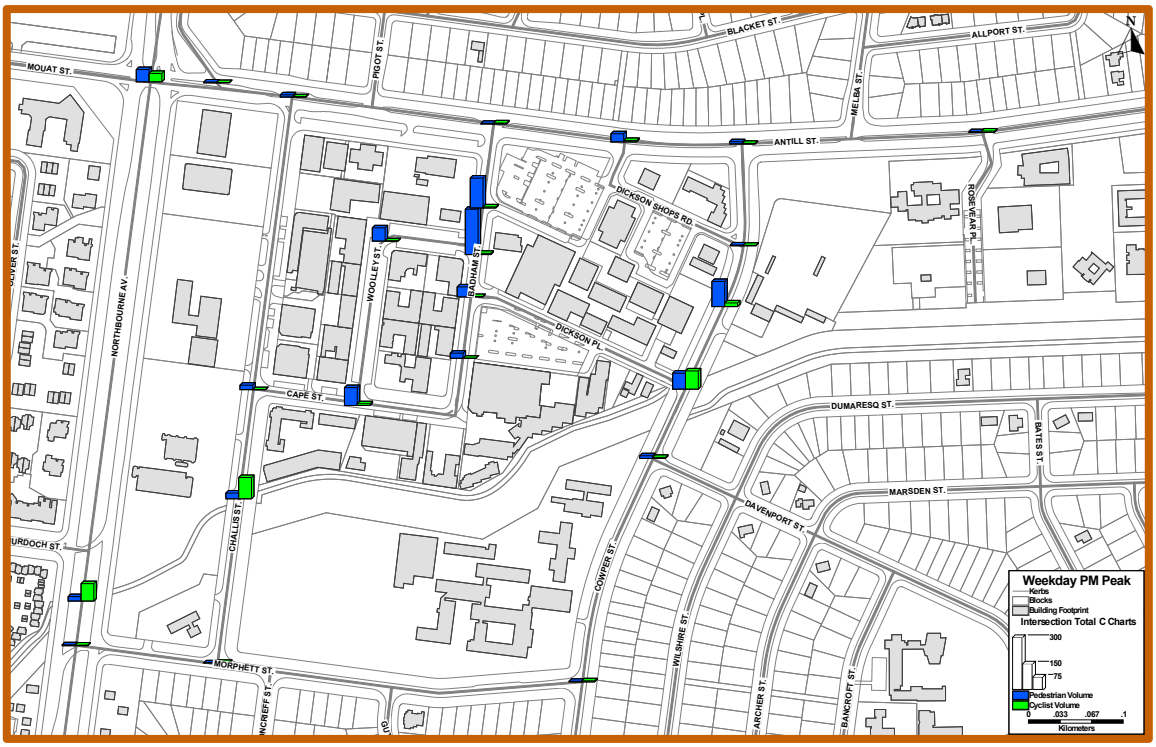

Figure 6: Pedestrian and Cyclist Survey Summary (Weekday PM Peak)

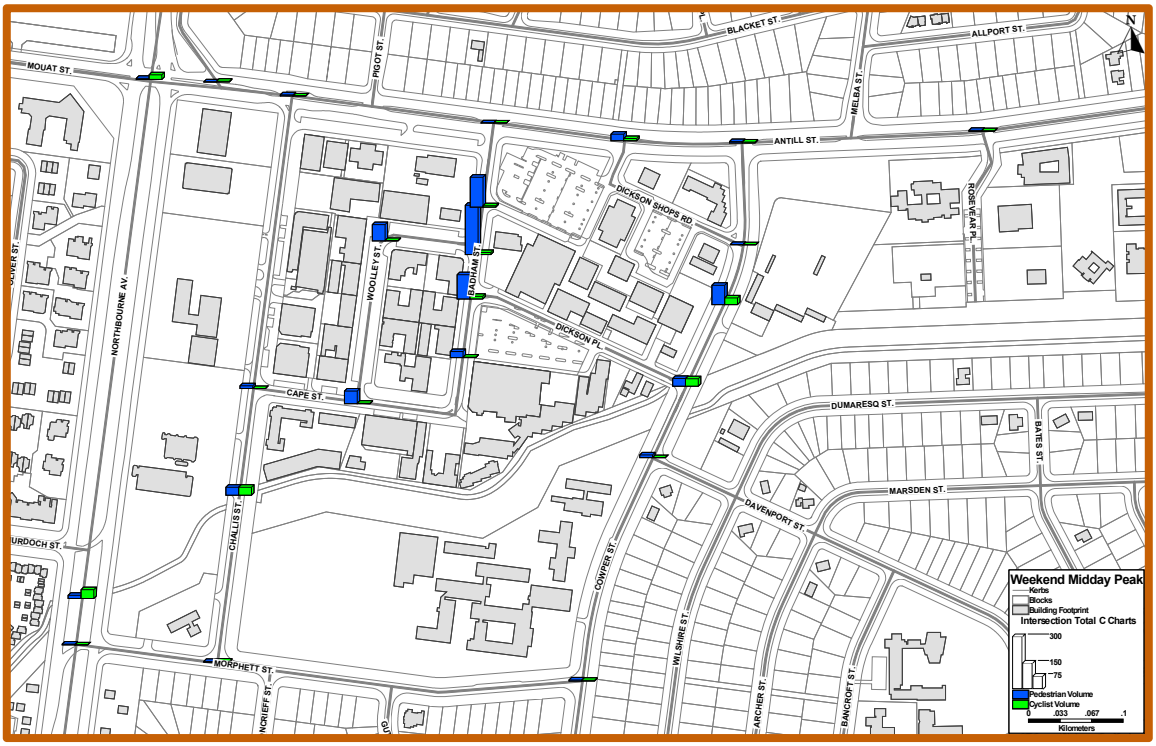

Figure 7: Pedestrian and Cyclist Survey Summary (Weekend Mid-day Peak)

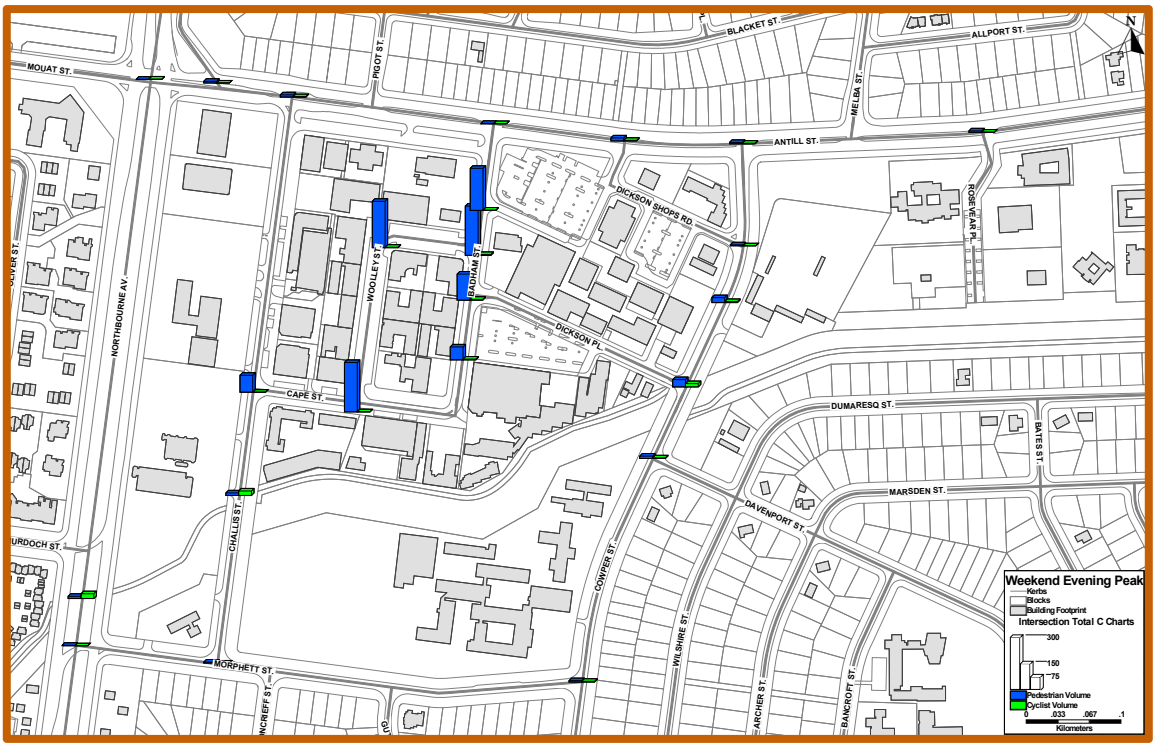

Figure 8: Pedestrian and Cyclist Survey Summary (Weekend Evening Peak)

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.

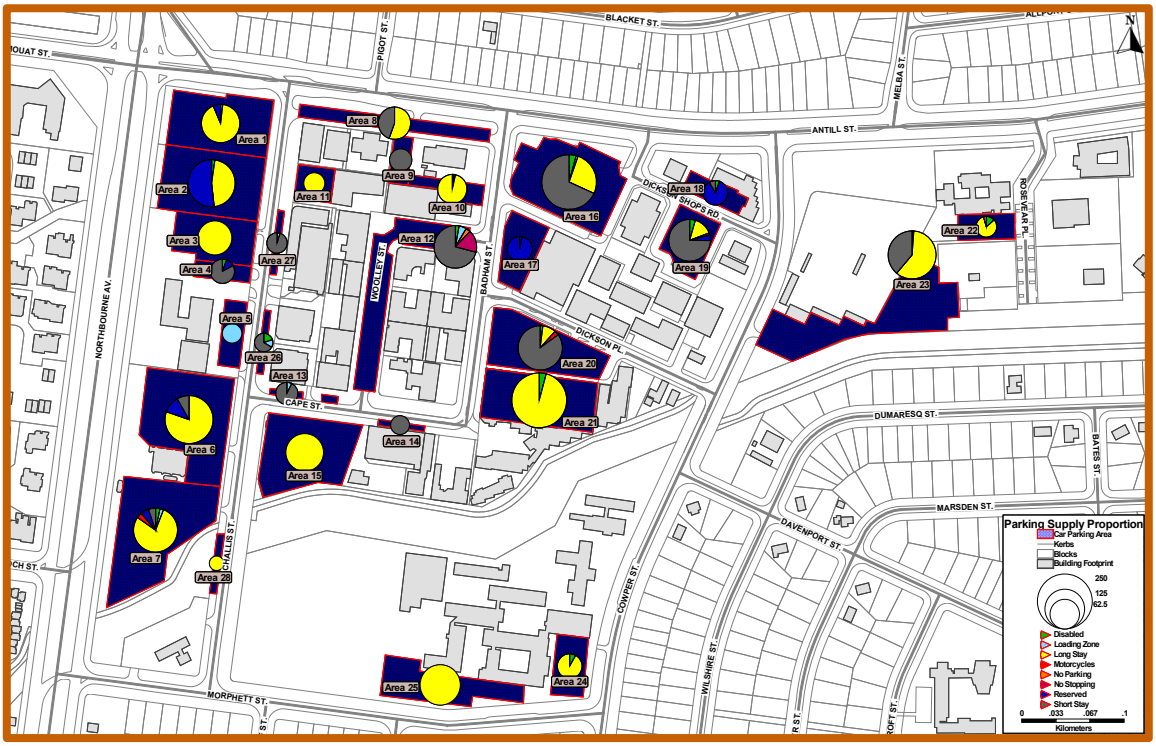

Figure 10: Current Parking Supply at each Location Based on Restrictions

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 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 approximately 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'.

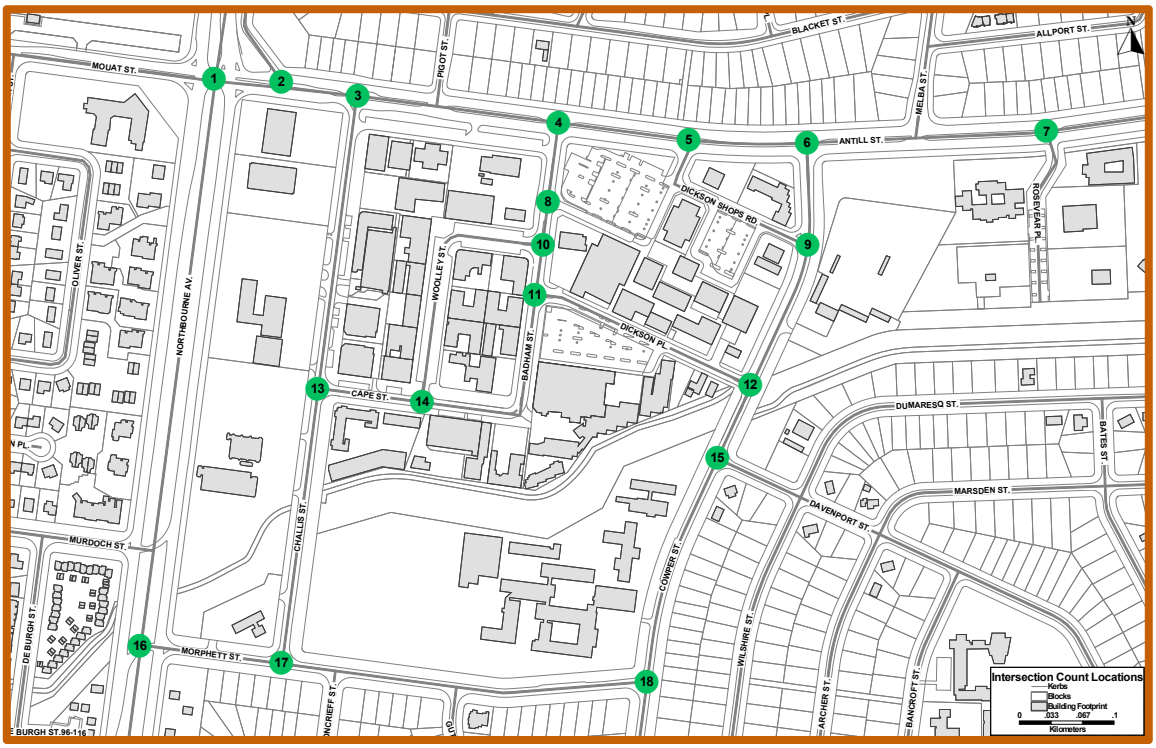

Figure 15: Intersection Count Survey Locations

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.

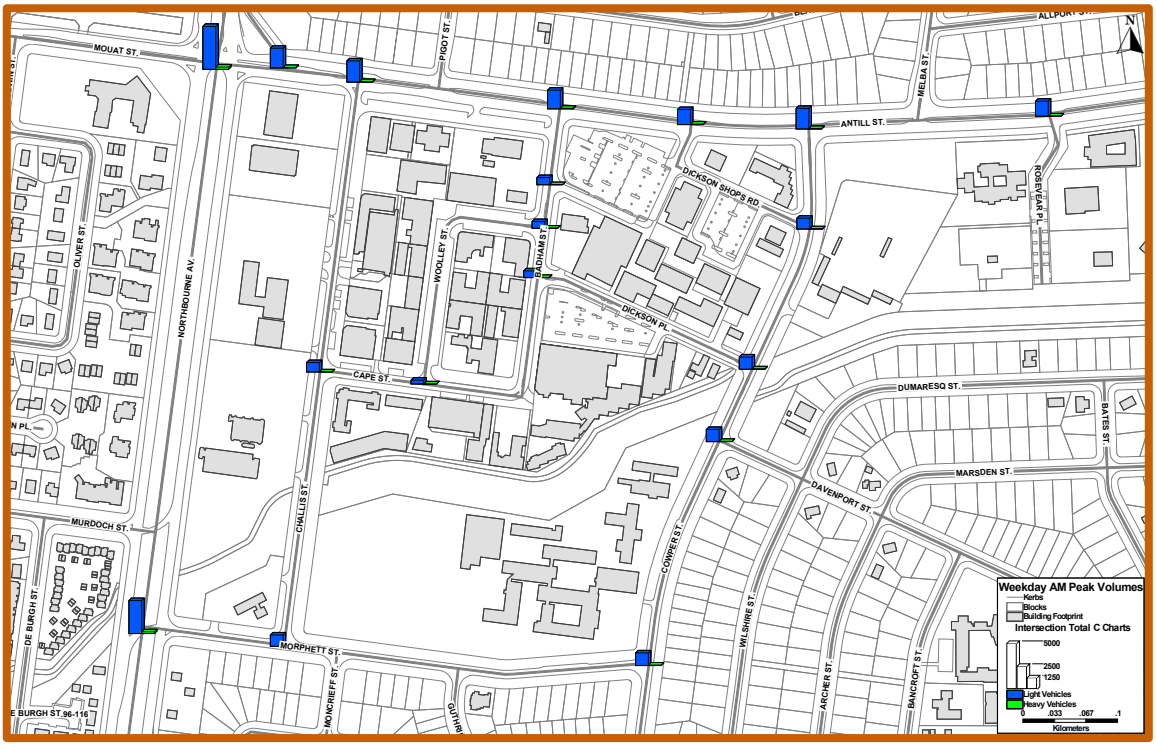

Figure 16: Intersection Survey Summary (Weekday AM Peak)

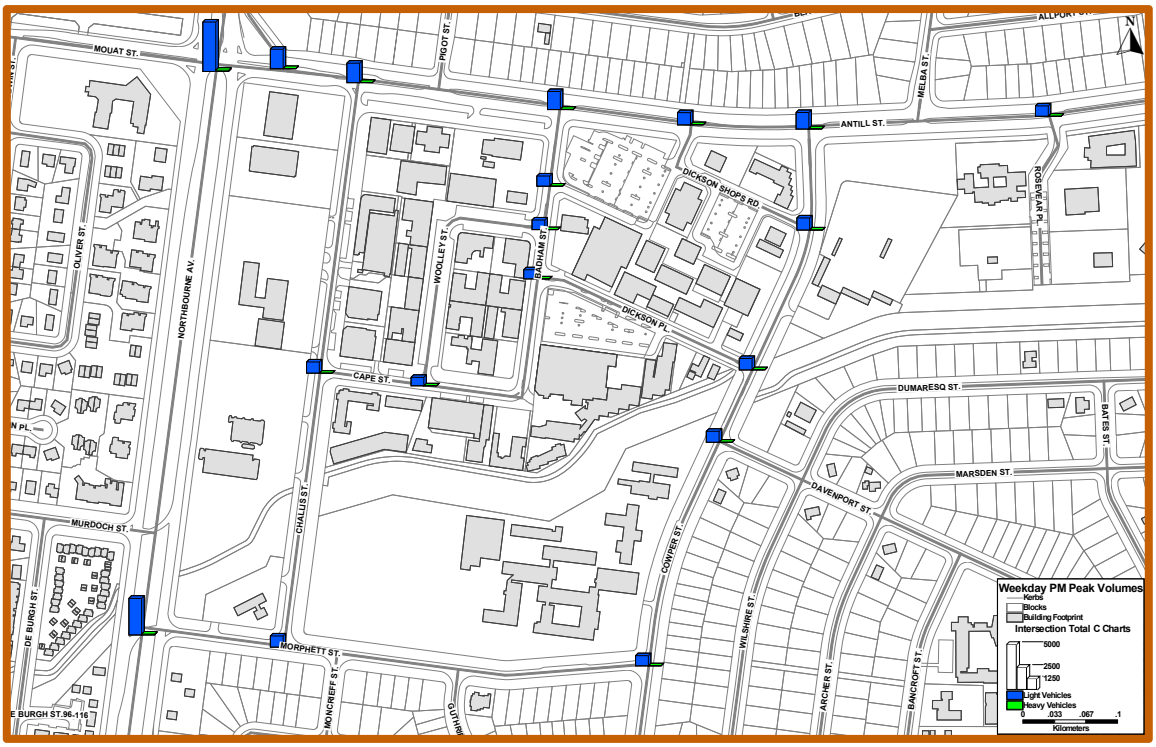

Figure 17: Intersection Survey Summary (Weekday PM Peak)

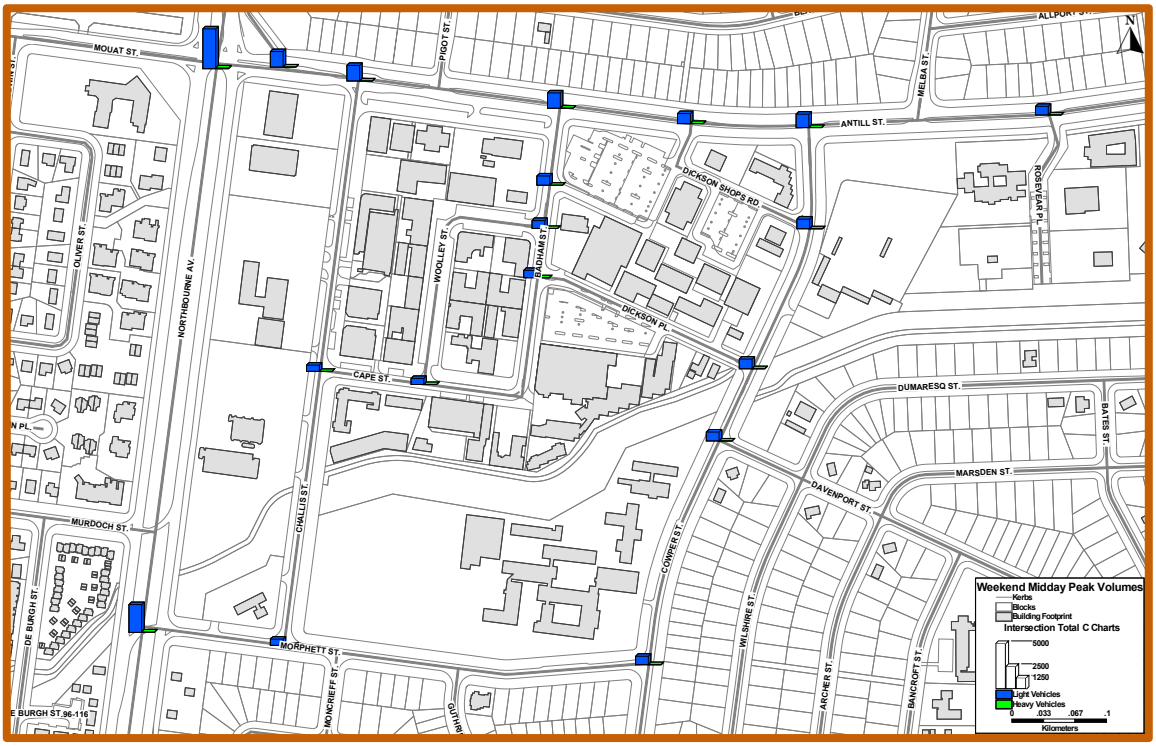

Figure 18: Intersection Survey Summary (Weekend Mid-day Peak)

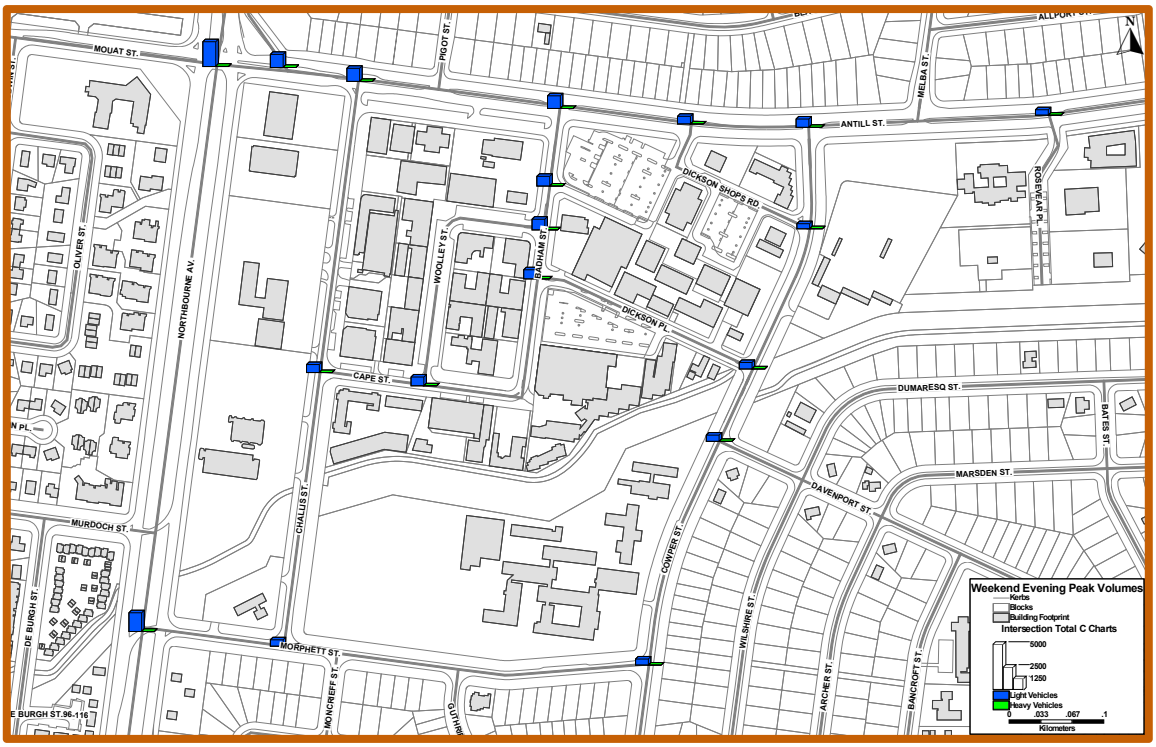

Figure 19: Intersection Survey Summary (Weekend Evening Peak)

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*.

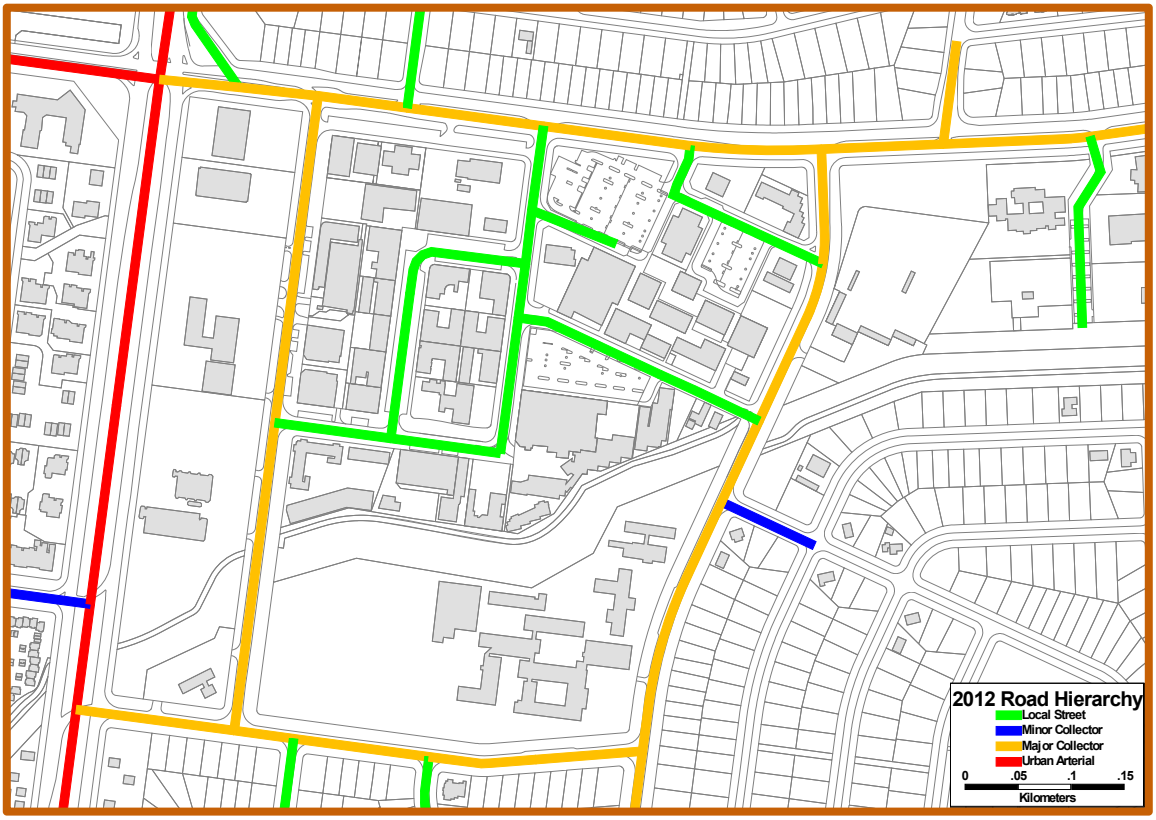

Figure 20: Study Area Road Network and Hierarchy (Source: TAMSD)

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.

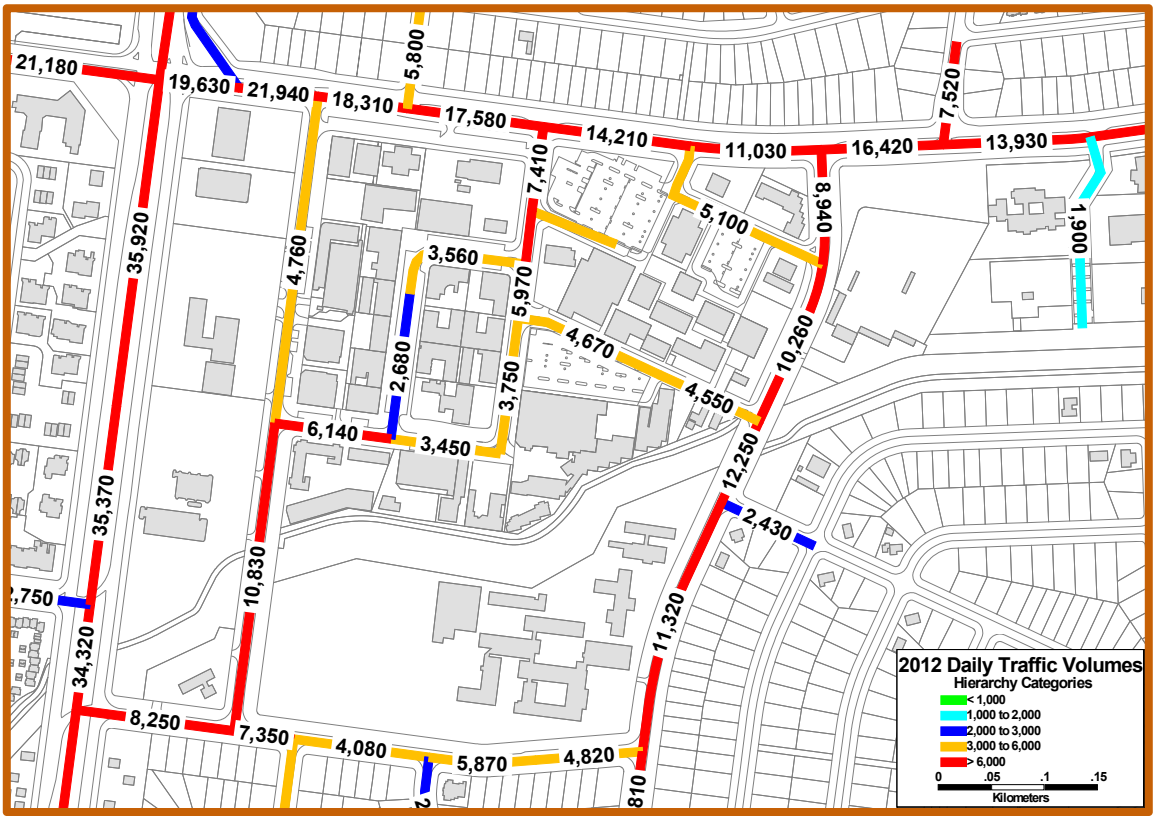

Figure 21: Daily Weekday Vehicles per Day – 2012

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.

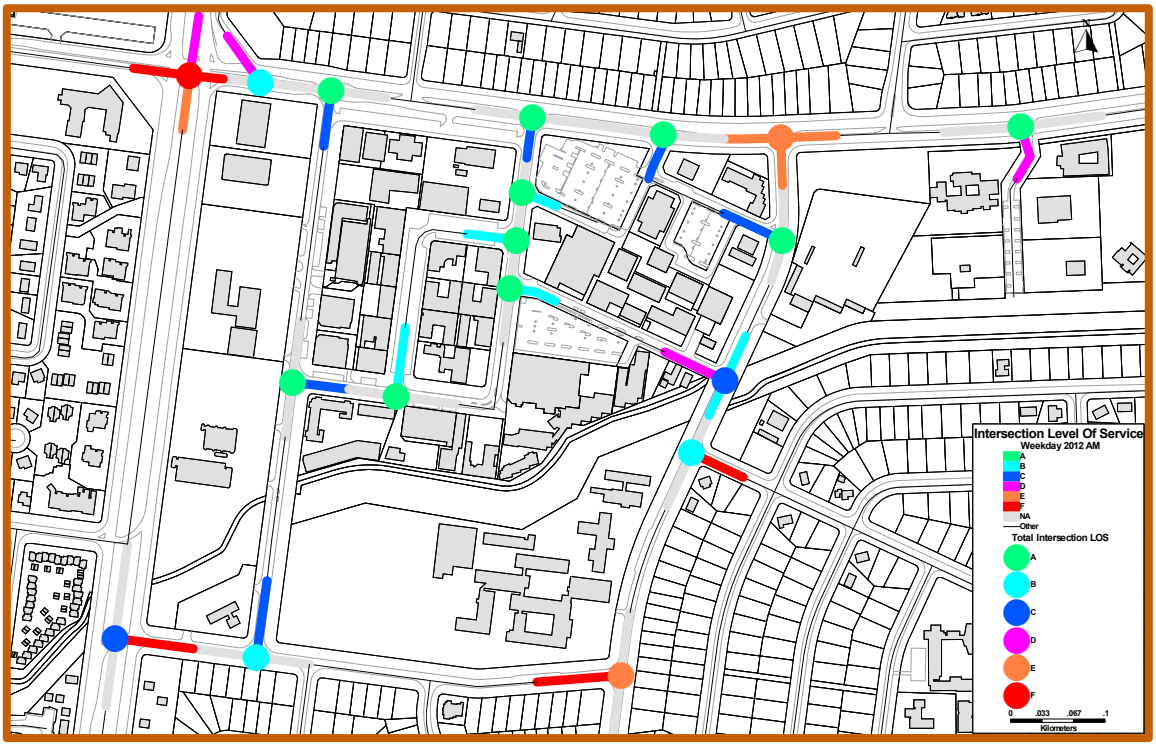

Figure 22: Intersection Level of Service – 2012 Weekday AM Peak

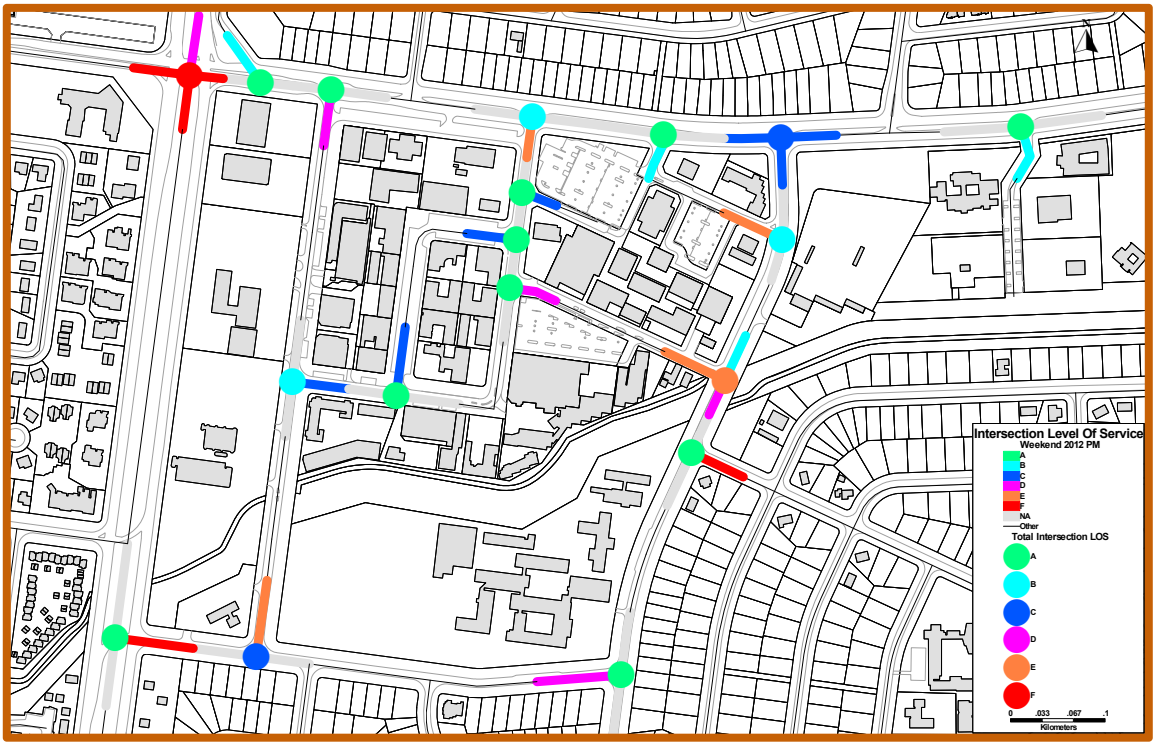

Figure 23: Intersection Level of Service – 2012 Weekday PM Peak

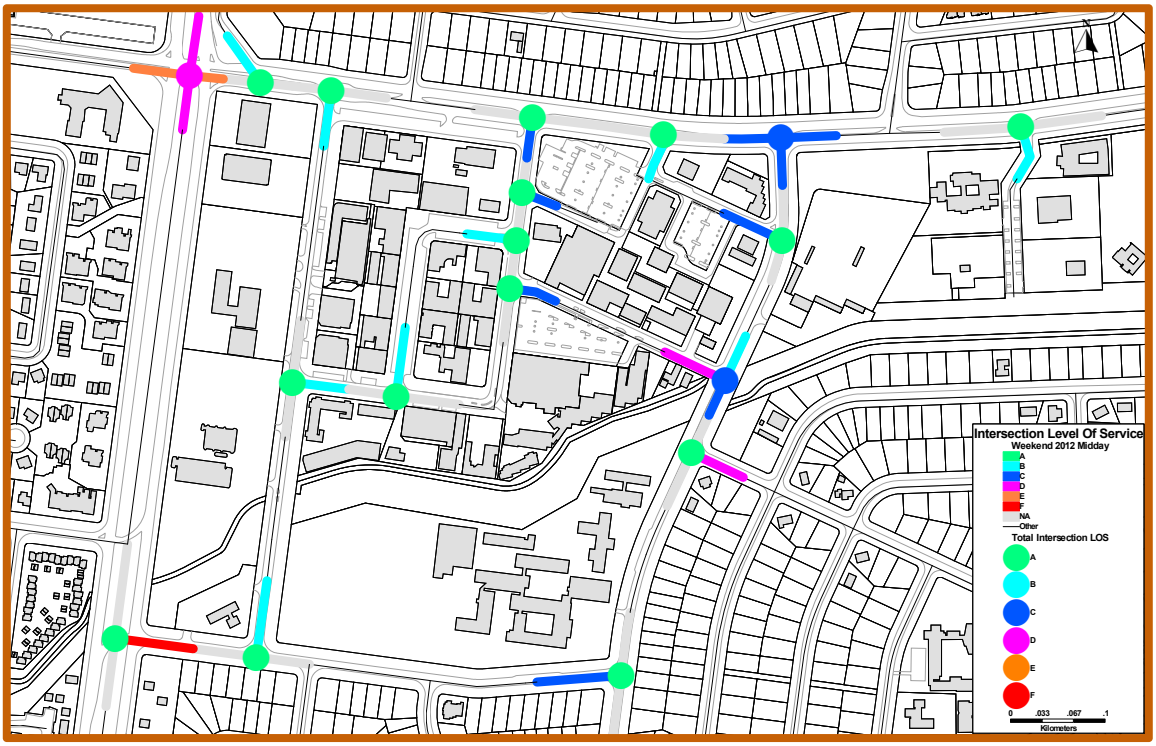

Figure 24: Intersection Level of Service – 2012 Weekend Midday Peak

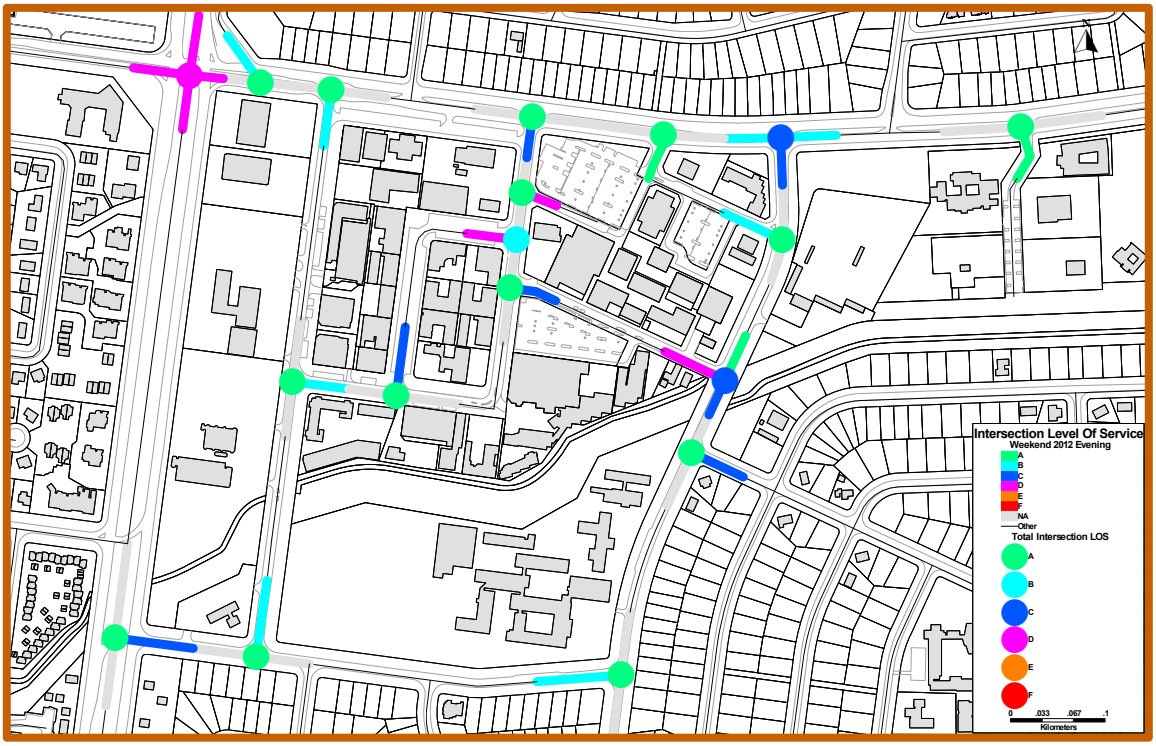

Figure 25: Intersection Level of Service – 2012 Weekend Evening Peak

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.

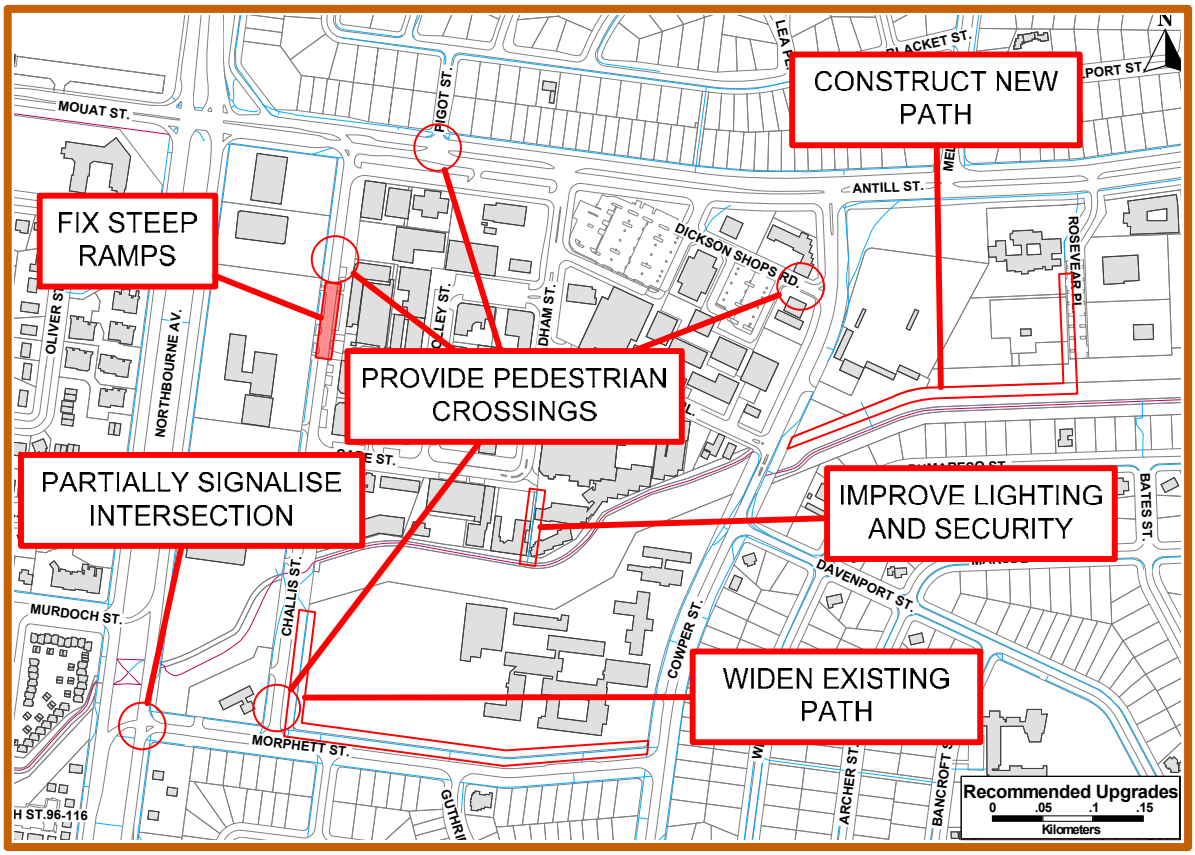

Figure 26: Recommended Upgrades in 2012

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, the *ACT Parking and Vehicular Access General Code* require replacement of the existing parking capacity and an additional 326 parking spaces, as shown in *Development Traffic Assessment Report for Block 19 and 21, Dickson Shops, Dickson, ACT* (Brown Consulting, June 2011). The following section discusses a brief review of the parking analysis 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* states that Commercial C – Group Centres should have short term parking within 200 metres, while long stay parking should be within 400 metres. 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.

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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.

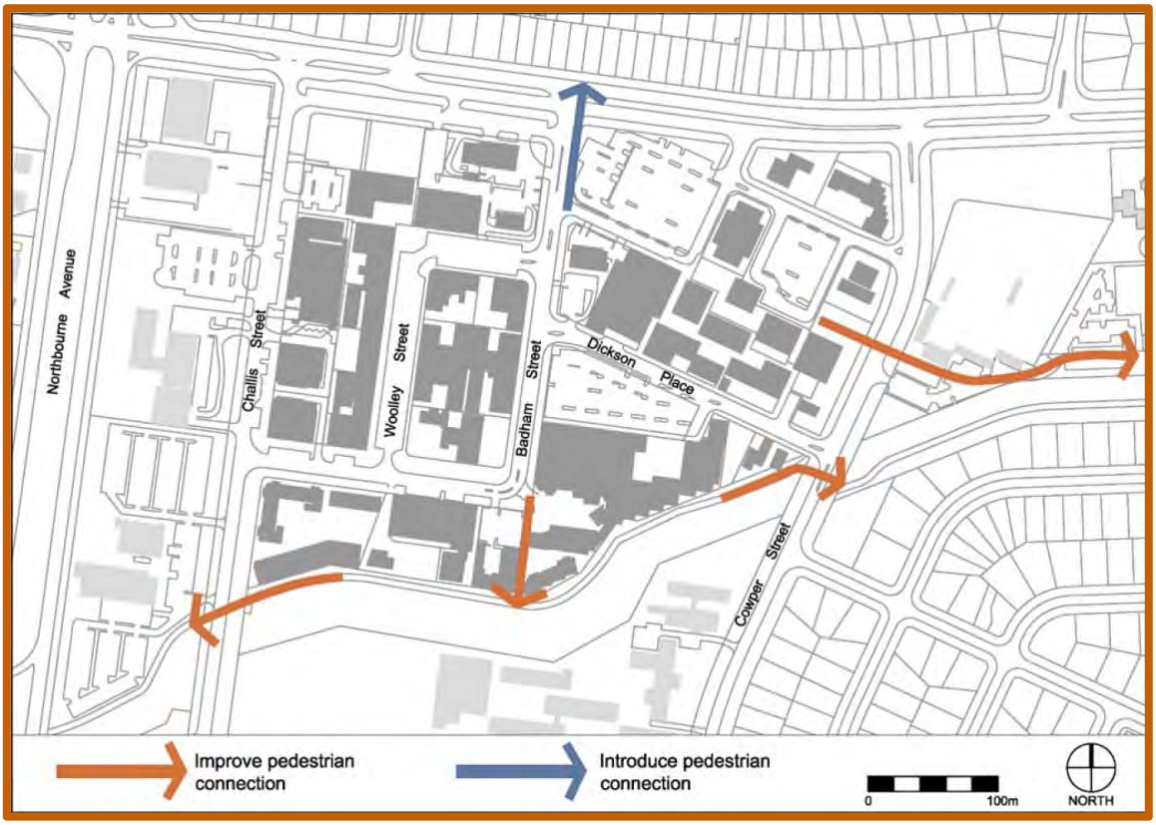

Figure 27: External Pedestrian Access (Source: Dickson master plan)

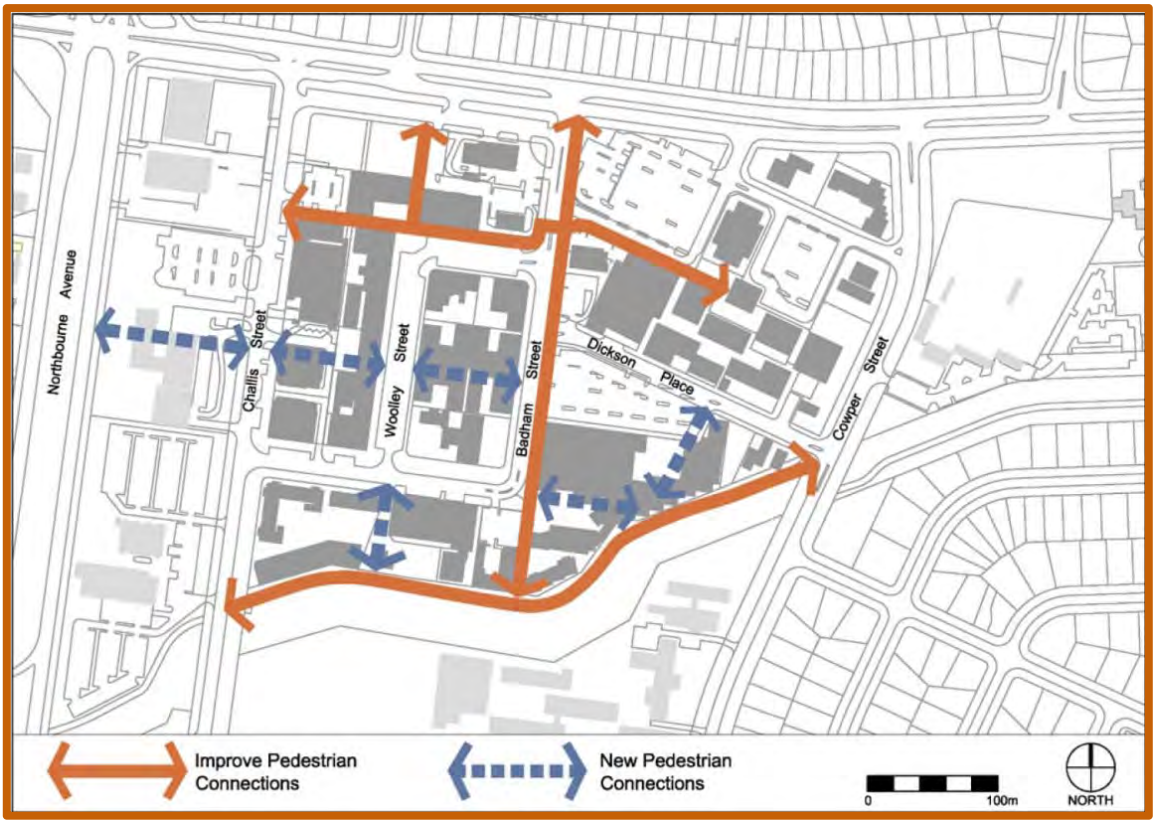

Figure 28: Internal Pedestrian Access (Source: Dickson master plan)

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 Guidelines 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.

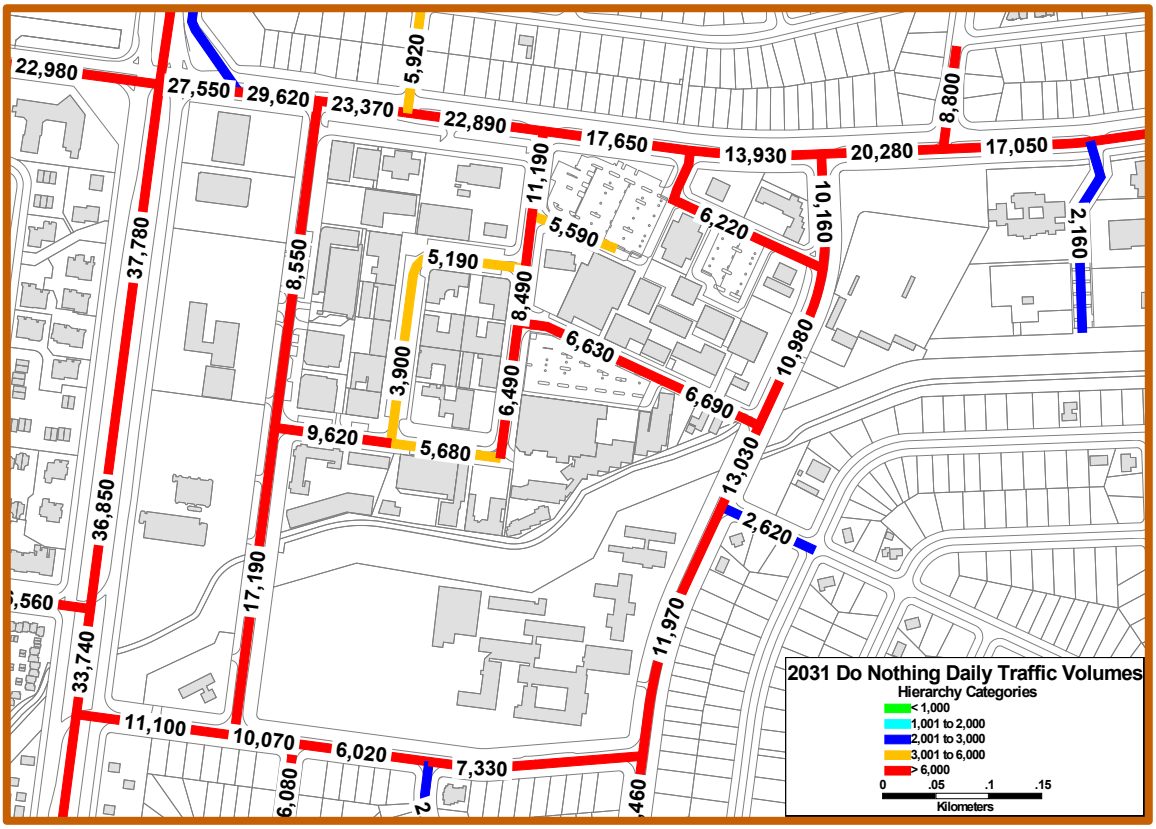

Figure 29: Predicted Vehicles per Day – 2031 Without Master Plan

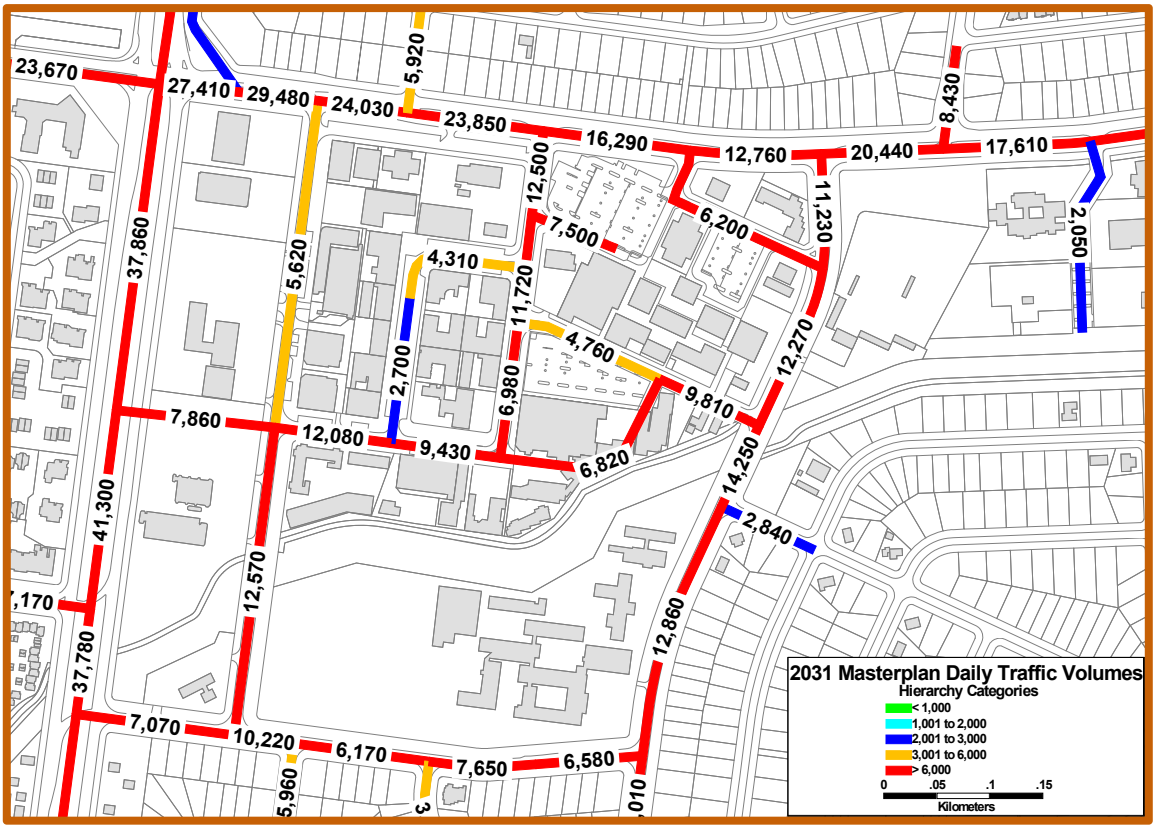

Figure 30: Predicted Vehicles per Day – 2031 With Master Plan

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.

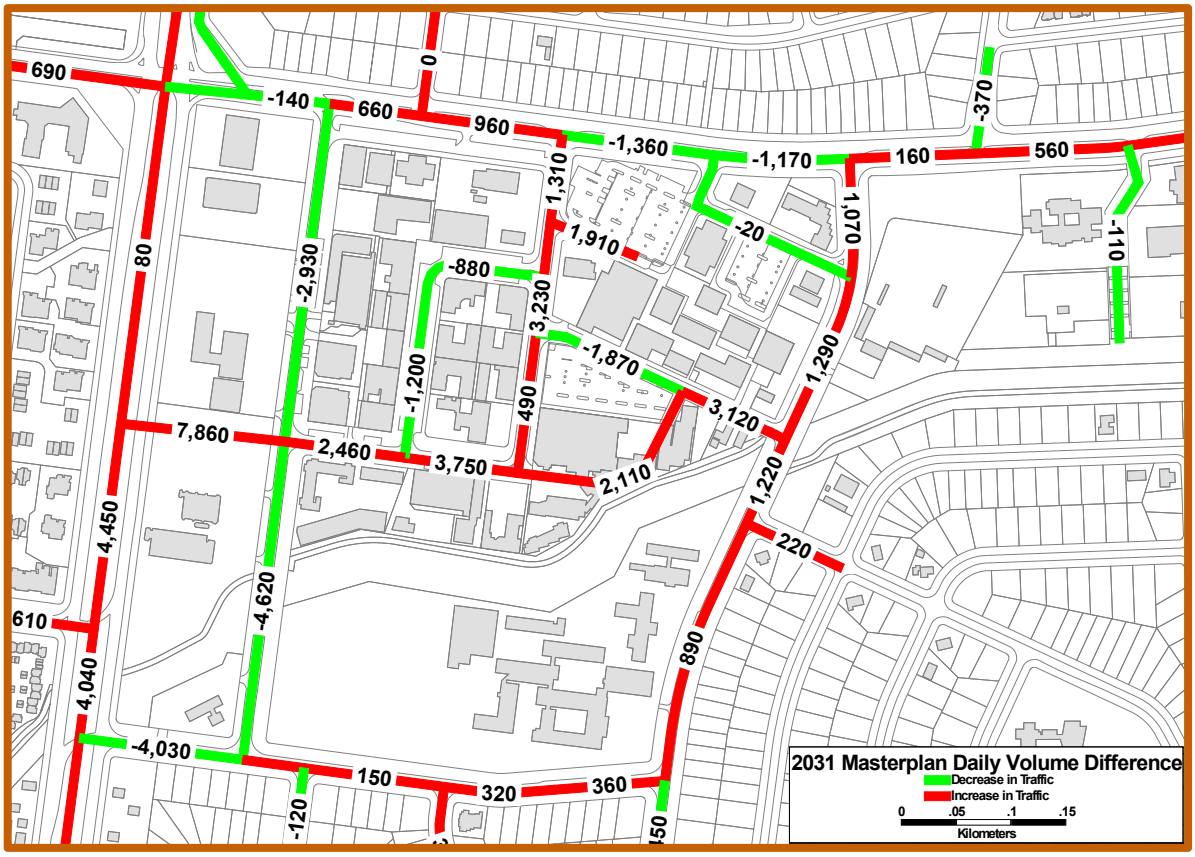

Figure 31: Daily Traffic Differences in 2031 after Master Plan Implementation

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.

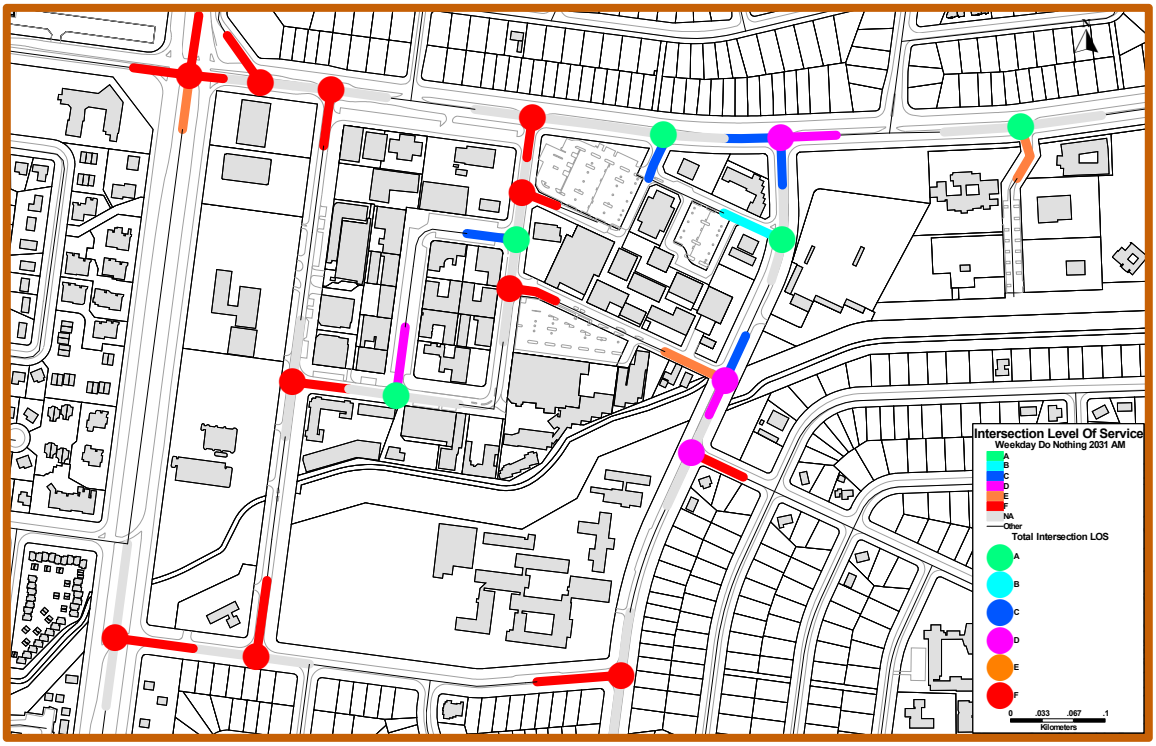

Figure 32: Intersection Level of Service – 2031 Do Nothing Weekday AM Peak Period

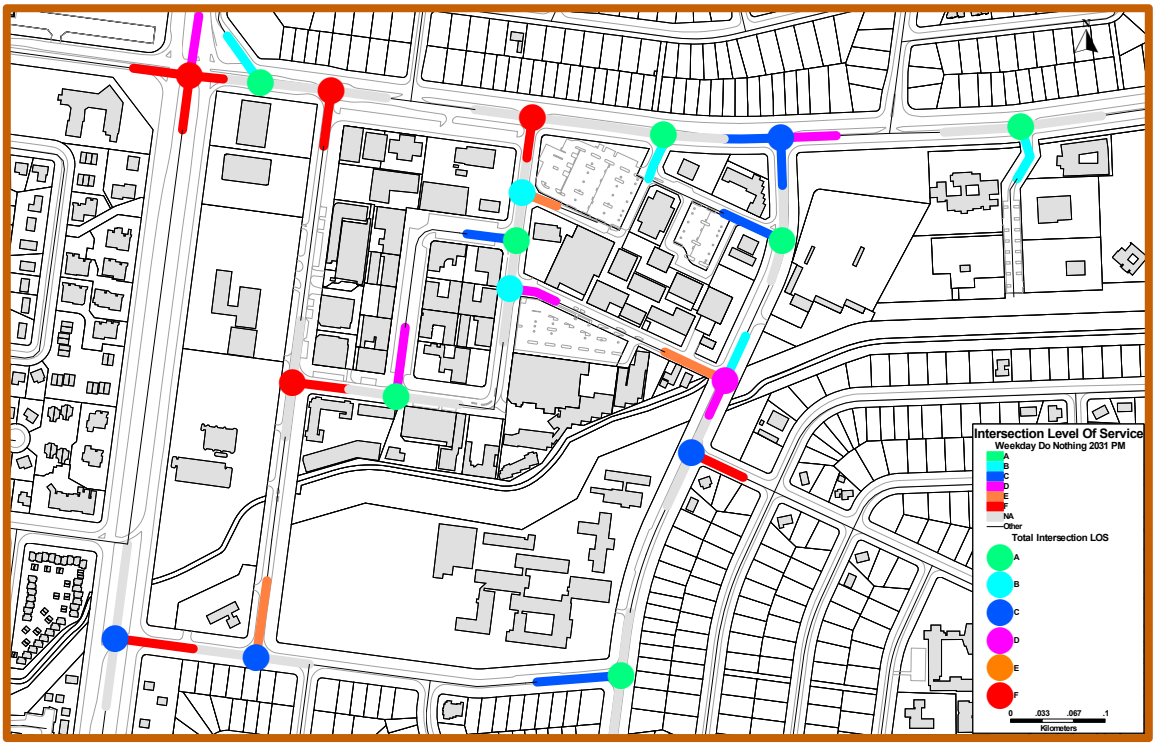

Figure 33: Intersection Level of Service – 2031 Do Nothing Weekday PM Peak Period

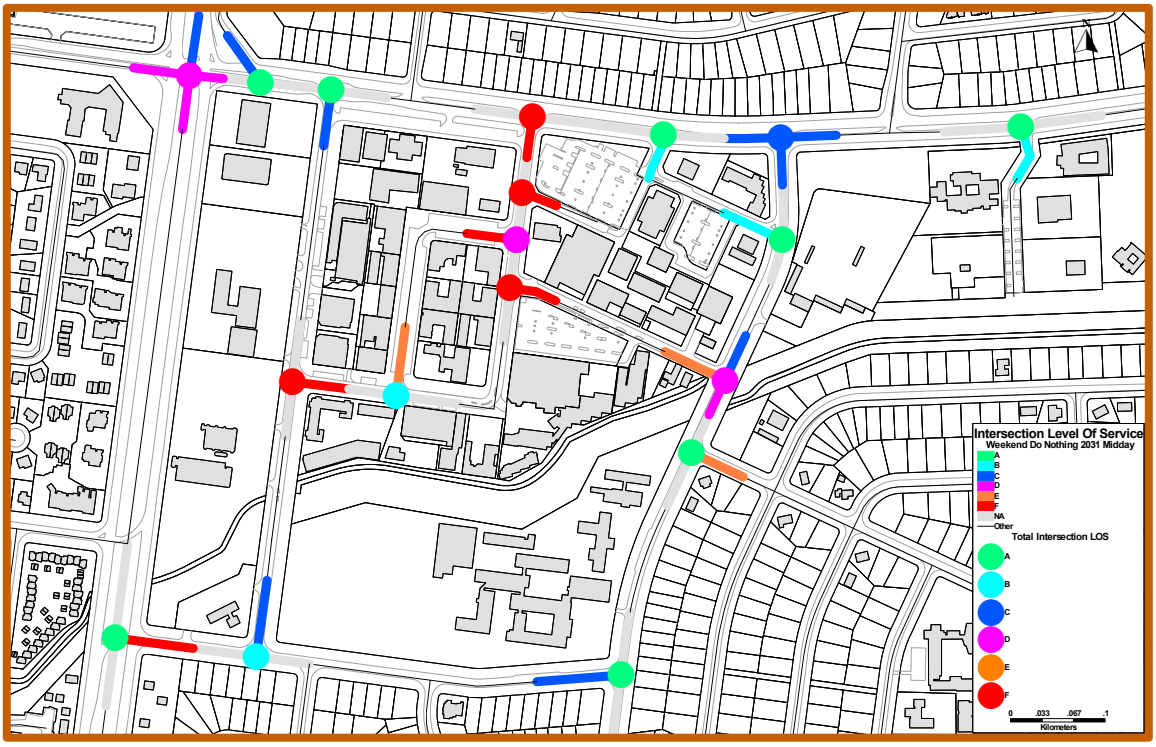

Figure 34: Intersection Level of Service – 2031 Do Nothing Weekend Midday Peak

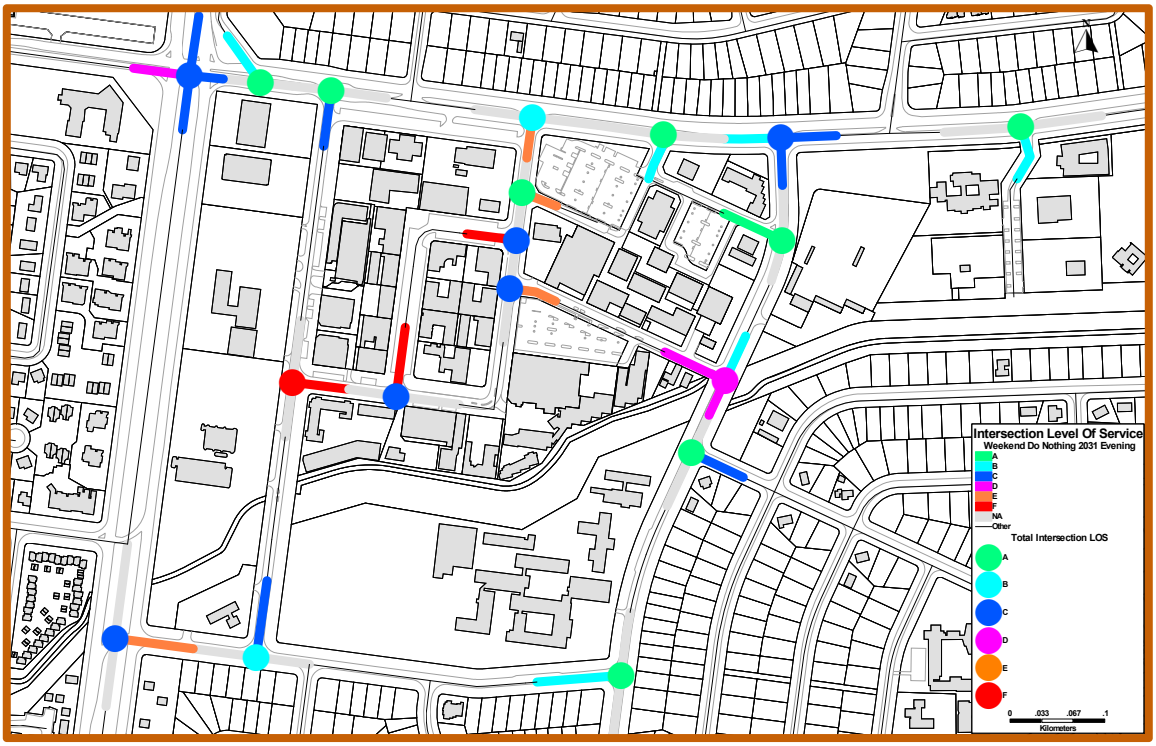

Figure 35: Intersection Level of Service – 2031 Do Nothing Weekend Evening Peak

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.

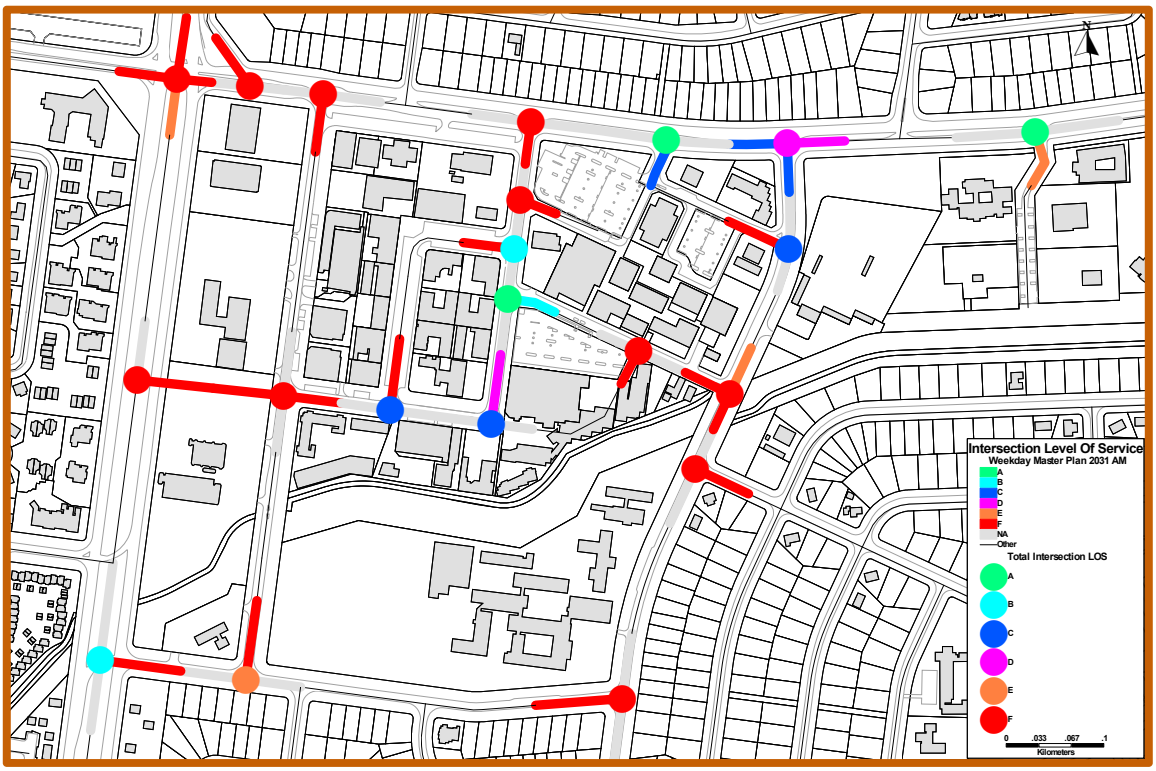

Figure 36: Intersection Level of Service – 2031 Master Plan Weekday AM Peak Period

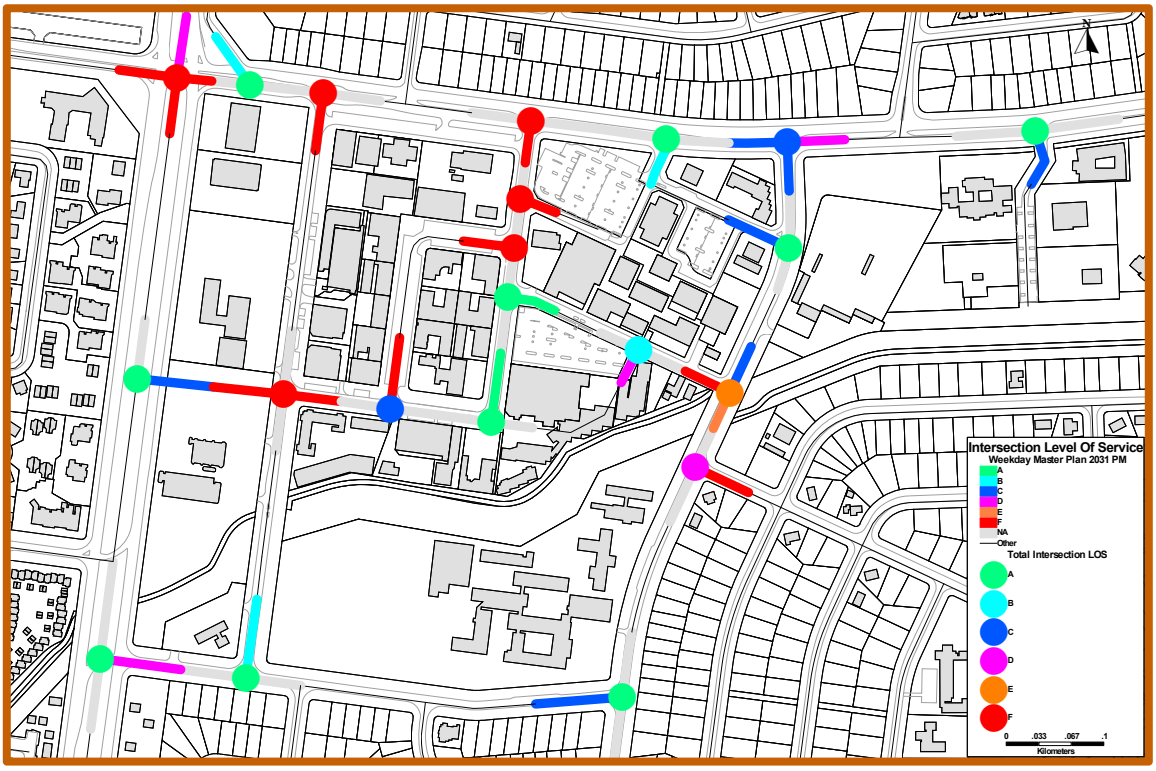

Figure 37: Intersection Level of Service – 2031 Master Plan Weekday PM Peak Period

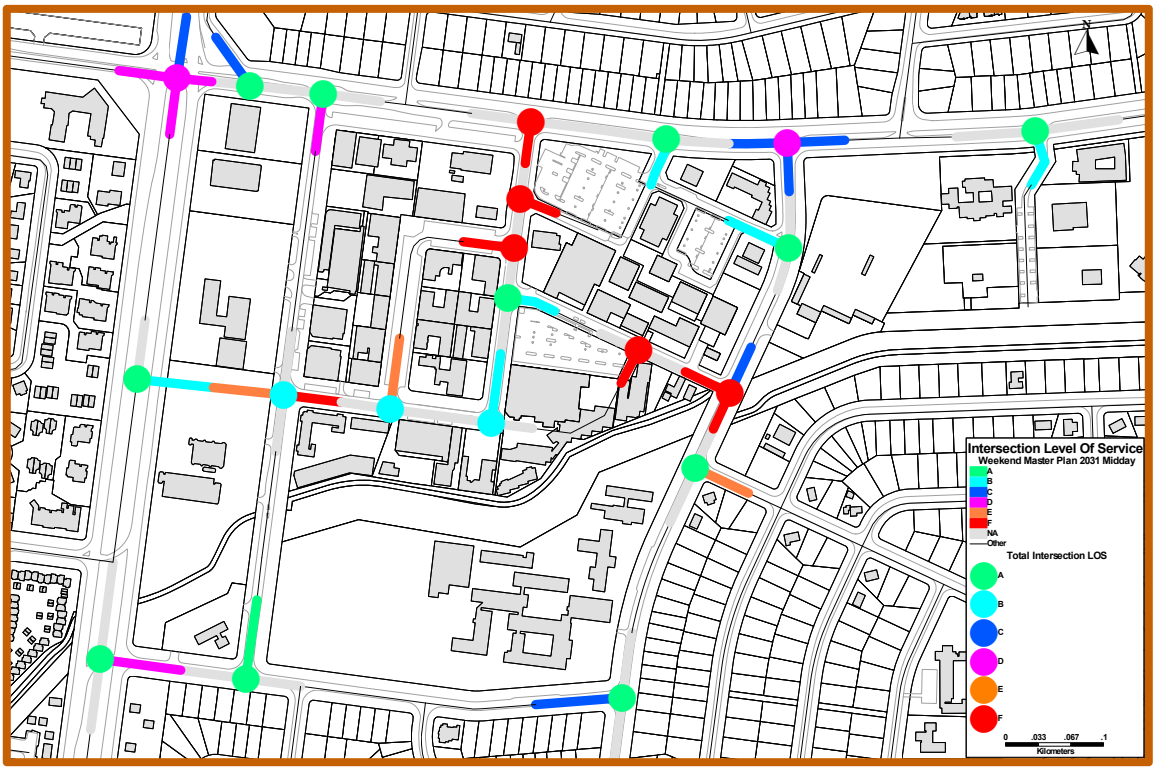

Figure 38: Intersection Level of Service – 2031 Master Plan Weekend Midday Peak Period

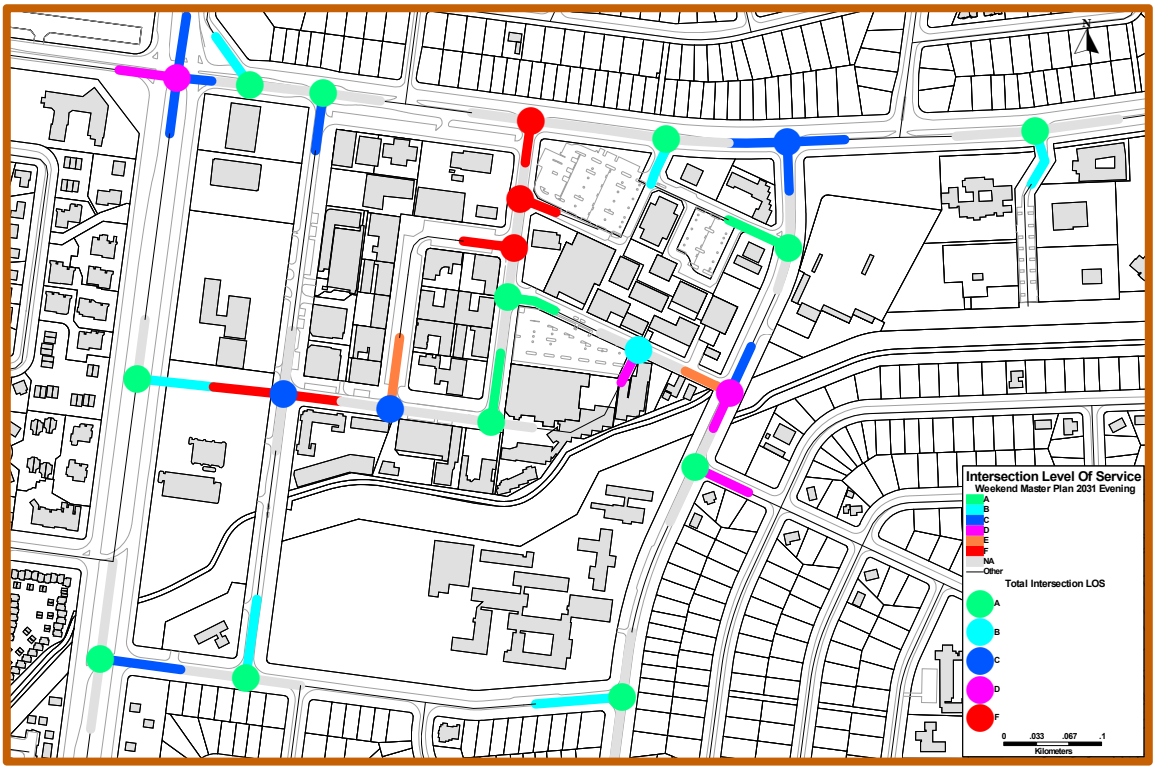

Figure 39: Intersection Level of Service – 2031 Master Plan Weekend Evening Peak Period

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.

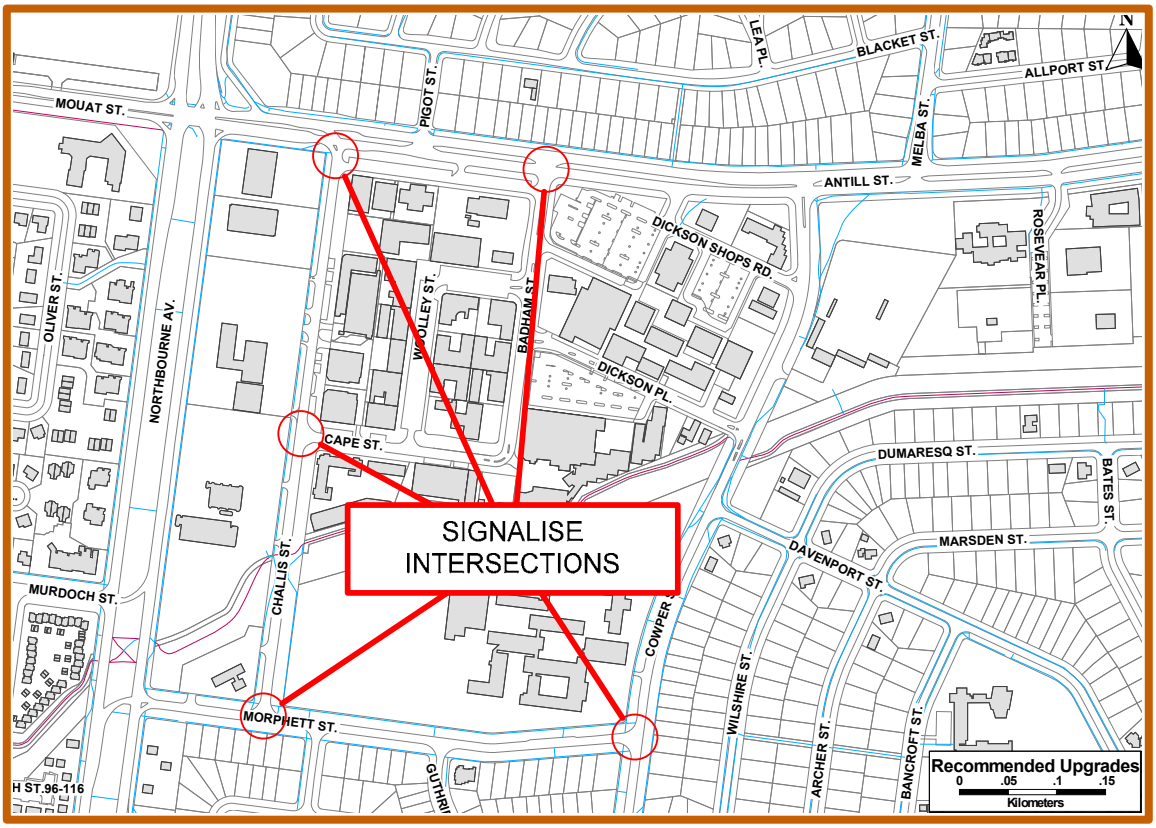

Figure 40: Recommended Upgrades for the 2031 Master Plan Scenario

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.

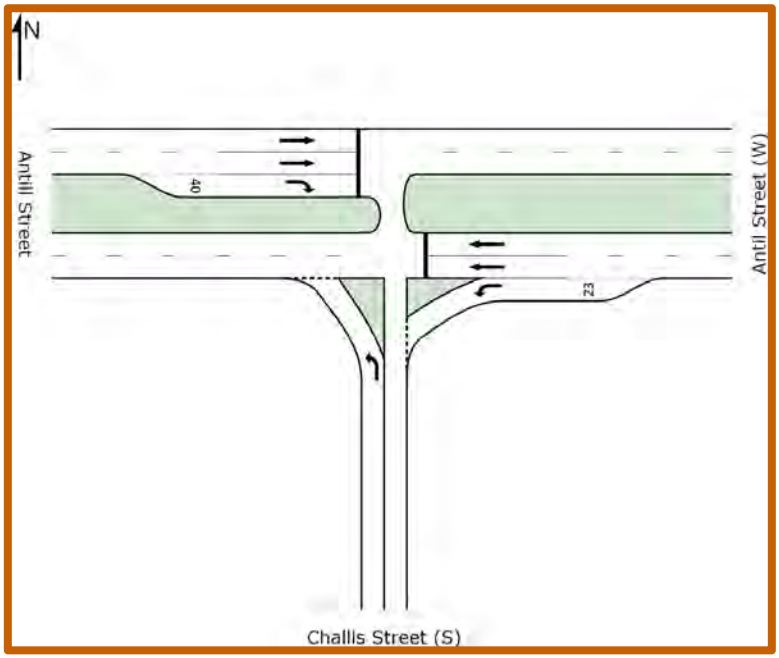

Figure 41: Recommended Layout for the Intersection of Antill Street and Challis Street

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.

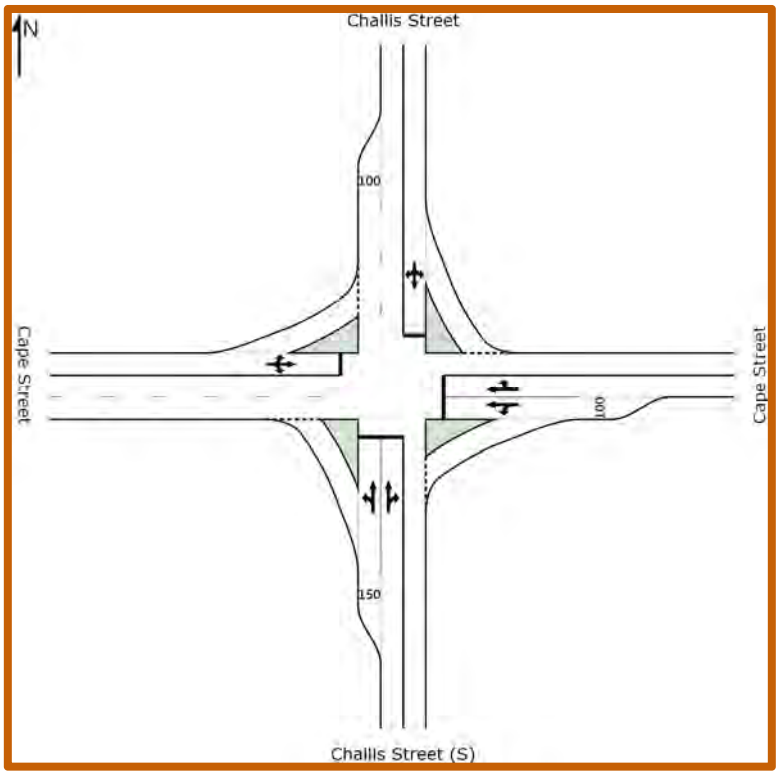

Figure 42: Recommended Layout for the Intersection of Challis Street and Cape Street

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.

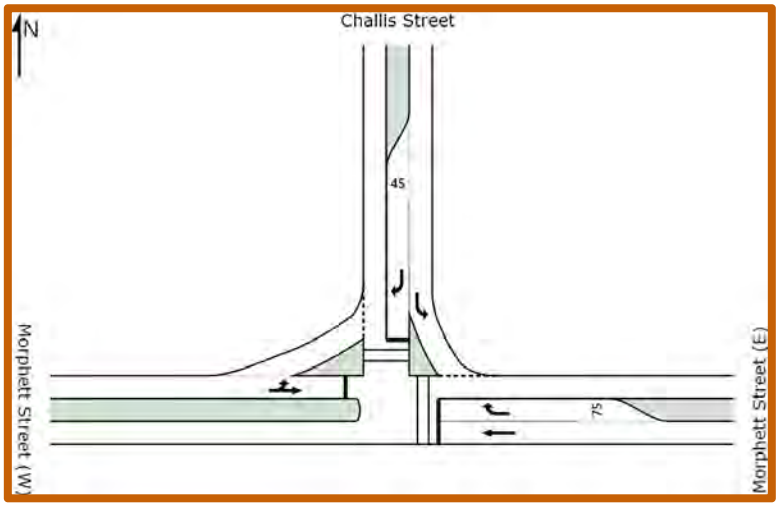

Figure 43: Recommended Layout for the Intersection of Morphett Street and Challis Street

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.

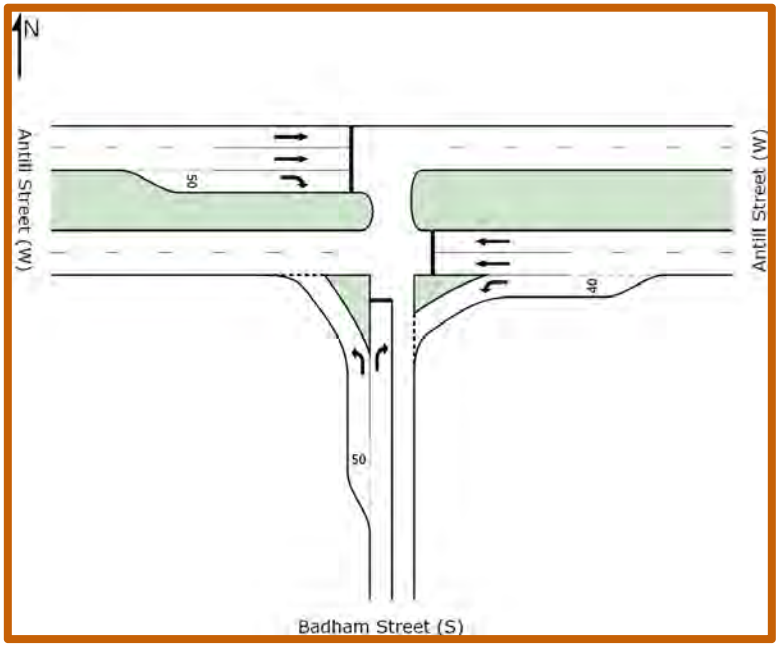

Figure 44: Recommended Layout for the Intersection of Antill Street and Badham Street

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

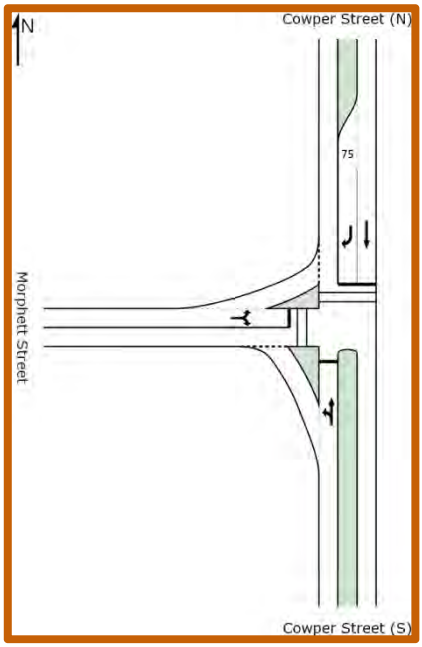

Figure 45: Recommended Layout for the Intersection of Morphett Street and Cowper Street

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.

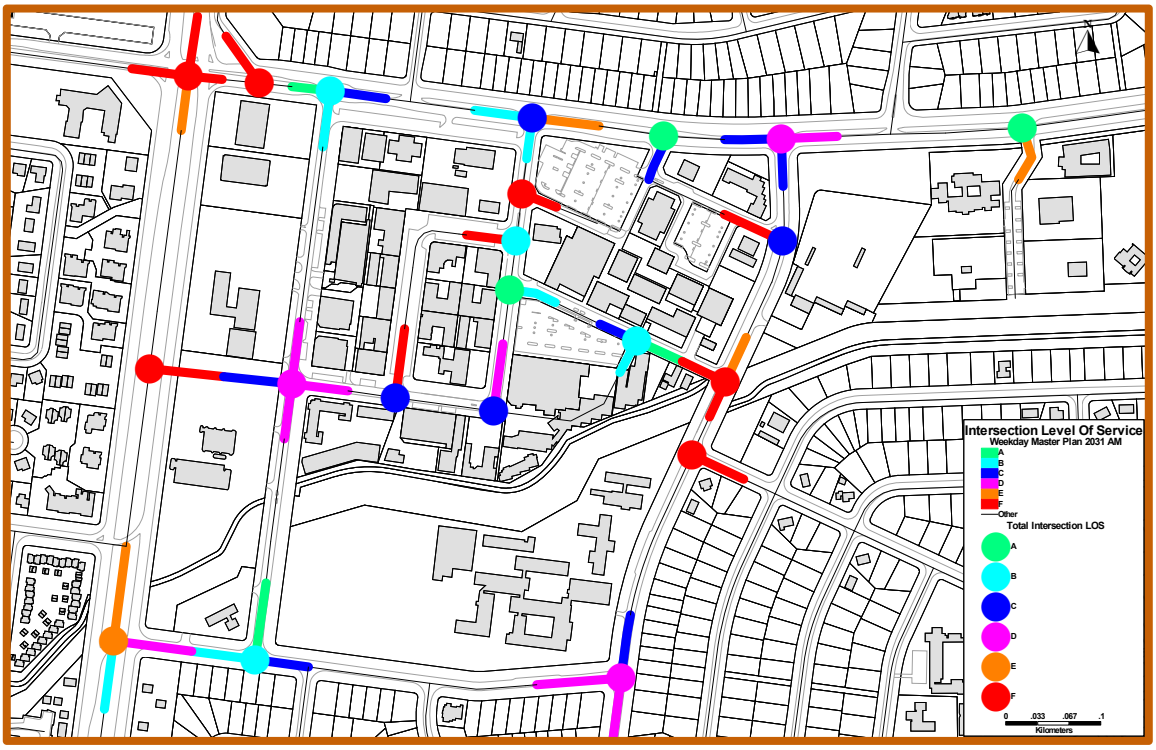

Figure 46: Intersection LOS – 2031 Master Plan Weekday AM Peak Period (With Upgrades)

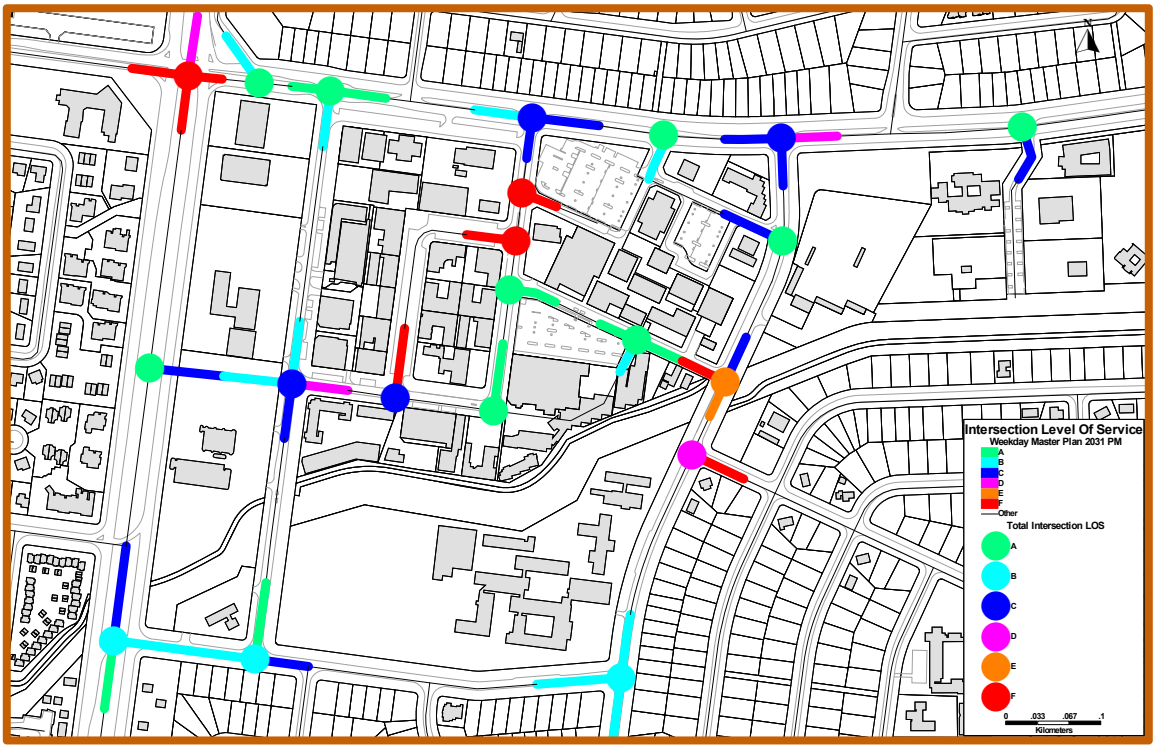

Figure 47: Intersection LOS – 2031 Master Plan Weekday PM Peak Period (With Upgrades)

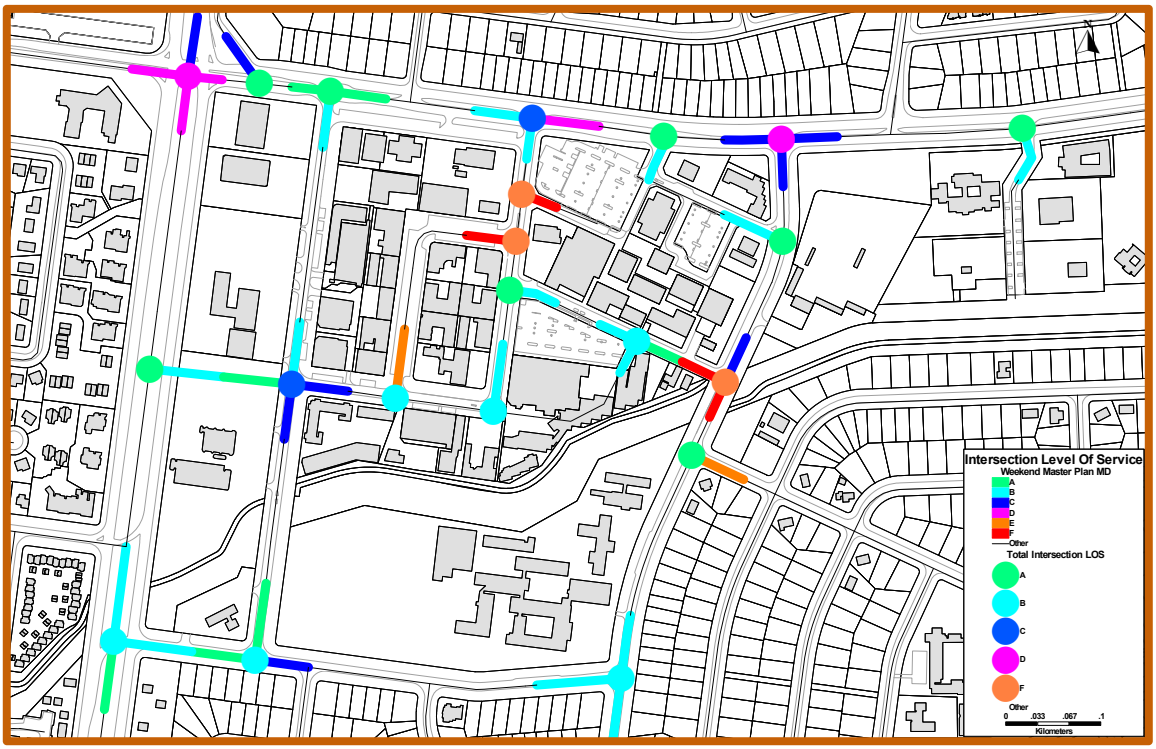

Figure 48: Intersection LOS – 2031 Master Plan Weekend Midday Peak Period (With Upgrades)

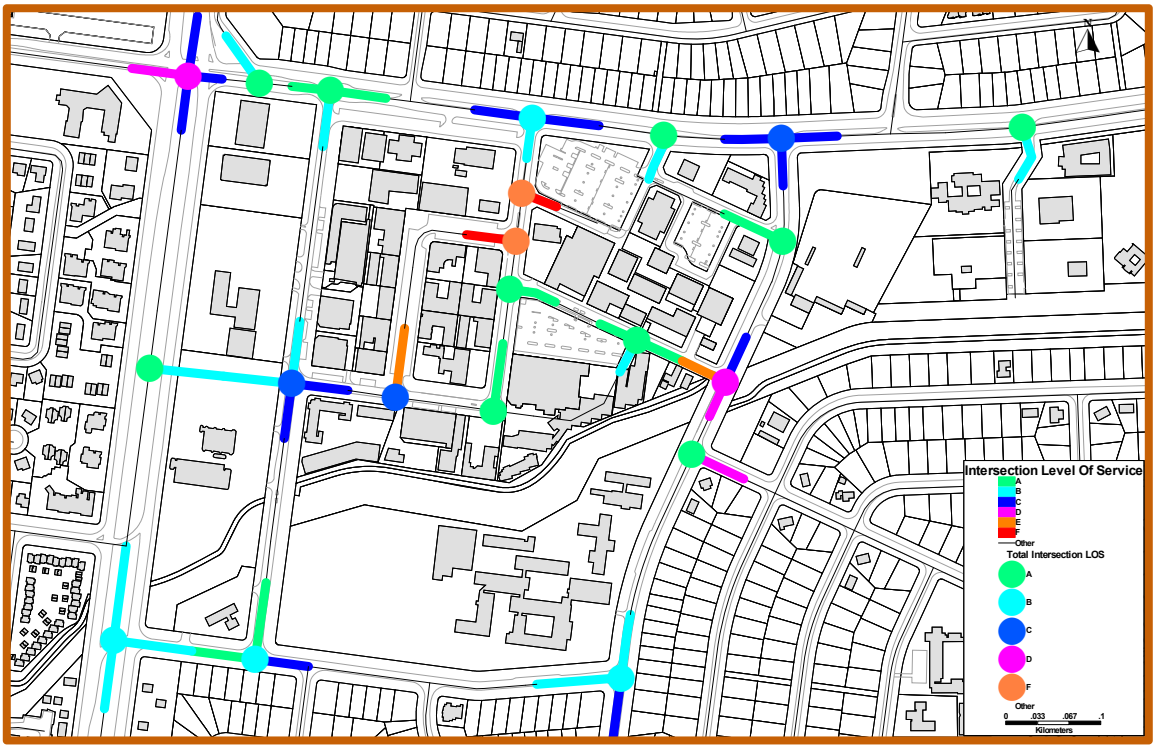

Figure 49: Intersection LOS – 2031 Master Plan Weekend Evening Peak Period (With Upgrades)

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 guidelines.

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 guidelines. 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