
From: Percival, Tom
Sent: Friday, 4 September 2015 4:29 PM
To: Walter, Stephan
Subject: RE: Reminder: City and Northbourne UDF comments on consultant recommendations

Steph

To assist in progressing the recommendations, I can provide some preliminary observations:

1. CIVIC: Undertake plaza and sidewalk improvements at the Sydney and Melbourne buildings – note that the central plaza for Northbourne is within the proposed 'Russell Option' extension of the light rail project. If pursued by Government, this will incorporate a range of works in this plaza

Out of scope

We'll provide some more detailed comments on the document itself later in the month. Happy to discuss these further.

Tom

Tom Percival | Manager, Planning and Urban Design

ACT Government | **CapitalMetro**

T 02 6207 8688 | E tom.percival@act.gov.au

GPO Box 158, Canberra ACT 2601

www.capitalmetro.act.gov.au

 Please consider the environment before printing this e-mail.

From: Walter, Stephan

Sent: Thursday, 3 September 2015 5:11 PM

To: Cantamessa, Cindy; Jones, David; Lopa, Liz; McGlenn, Ian; McHugh, Ben; Roulston, David; Tennent, Simon; Williams, Cindy; Wood-Bradley, Ian; Yates, Brooke; Pillig, Carl; Allen, Christine; Cilliers, George; Gianakis, Steven; Jurcevic, Suzanne; Kaucz, Alix; Keirnan, Catherine; Kugathas, Kuga; Mackenzie, Stuart; McFarlane, Trina; Moore, Fiona; Oswald, Petra; Quirk, Mike; Swain, Alastair; Walter, Stephan; Kennedy, Floyd; Finlay, Jennifer; Valdivia, Jamie; Percival, Tom; Bathgate, Brian; Glennon, Chris; Hill, Diana

Subject: Reminder: City and Northbourne UDF comments on consultant recommendations

Colleagues,

Thank you to those who attended last week's presentation on the City and Northbourne urban design framework.

As most are aware the scope of the consultant's draft is very broad, with potential to impact on many areas of government work.

At last week's meeting **we asked you to provide comment on the short term actions and recommendations made by the consultant identified in the handout by tomorrow 4 September.** Any strategic insight into delivery of the proposals are also welcome.

If you wish to make more detailed comments on the framework report you have until 25 September.

regards

Stephan Walter | Ba Arch (Hons)

Strategic Planning | Major Projects and Transport

Environment and Planning Directorate | A.C.T Government

☎ (02) 6207 7141 | ✉ stephan.walter@act.gov.au | Monday-Thursday

Level 3 Dame Pattie Menzies House | GPO Box 158 Canberra ACT 2601

Please consider the environment before printing this e-mail

ENVIRONMENT AND PLANNING DIRECTORATE

MINISTER FOR PLANNING INFORMATION BRIEF

TOPIC: Capital Metro Northbourne Avenue Corridor - Impact track assessment

Talking Points

Development applications

- Two separate development applications (DA's) for Capital Metro's Light Rail have been lodged with the planning and land authority:
 - an impact track application for Stage 1 from Gungahlin to the City which follows the completion of the environmental impact statement (EIS) for Stage 1, and
 - a merit track application for Stage 2 from the City to Russell.
- The planning and land authority is only responsible for assessing development on Territory land. Work on designated land, such as Northbourne Avenue, is approved by the National Capital Authority.
- Both development applications will be available for public comment for 15 working days from 28 October 2015 to 18 November 2015.
- The DA documentation delineates between Territory land and designated land.
- The DA process is the next step in providing the community with a thorough understanding of this important project, including the next stage of the Light Rail to Russell.
- The planning and land authority is responsible for independently assessing and deciding the two separate development applications.
- Decisions on both applications are expected before Christmas.
- As these applications are currently under assessment, there is no further information I can provide at this time.

If asked about Stage 2

- Most of Stage 2 is located on designated land. The National Capital Authority is responsible for giving works approval on designated land.

Environmental Impact Statement

- On 20 August 2014, I declared the impact track to be applicable to Stage 1 of the Light Rail under the *Planning and Development Act*.
- This was due to the uncertainty of impacts and the unique nature of the project in a Canberra context.
- The impact track declaration meant Capital Metro Agency was required to prepare an environmental impact statement (EIS) for the project and conduct a thorough investigation of project impacts.
- This is a major infrastructure project for Canberra and the EIS is an important part of the statutory planning process. It allows a thorough investigation of project impacts.
- The Draft EIS was available for public comment from 20 June 2015 to 17 July 2015. 59 comments were received from the public during this period. These comments are available on the planning authority's website.
- All comments received during this period have been addressed by Capital Metro Agency in a revised EIS. The planning and land authority has accepted the revised EIS and provided me with an assessment report confirming that the authority is satisfied the EIS addresses the matters in the scoping document and public representations.
- Based on the advice of the planning authority, I have decided to take no further action in relation to the EIS which means that the EIS process is now complete.
- The assessment report and revised EIS is available on the Environment and Planning Directorate's website.
- The EIS process is an information gathering exercise, not an approvals process.

Key information

- Stage 1 of the Capital Metro will link the Gungahlin town centre to Civic with light rail facilities to be constructed in the central median of existing roadways. The indicative route will travel along Northbourne Avenue, the Federal Highway, Flemington Road and Hibberson Street.
- Stage 2 of the Capital Metro will link the City with Russell.
- As required by the *Planning and Development Act* the EIS investigated the potential impacts of the proposal on the environment, including impacts such as noise, traffic, ecological impacts and impacts to heritage.
- Submission of a DA for Stage 1 is expected to be on or around 21 October 2015.

- A DA decision on Stage 1 is due on 30 December 2015. A DA decision on Stage 2 is due on 29 December 2015. Decisions on both DA's are likely before Christmas.
- A third development application is also expected within the coming months for some additional construction compounds and other ancillary works for Stage 1 which are outside the scope of the EIS.

Inter-related policies

- Capital Metro Bill
- Draft Territory Plan Variation 327
- Capital metro delivery (CMA)

Other Directorates, stakeholders and clients

- Capital Metro Agency

Key milestones

- 20 August 2014, impact track declared for Stage 1
- 20 June 2015 to 17 July 2015, Draft EIS for Stage 1 publicly notified
- 7 October 2015 – Minister for Planning take no action on EIS for Stage 1 – EIS complete
- 26 October 2015 – additional information provided for Stage 1 extending the decision date by 1 day.
- 14 October 2014, scoping document finalised for stage 1
- 7 September 2015 – revised EIS for Stage 1 accepted by planning authority
- 23 October 2015 – Stage 1 and Stage 2 DA's lodged.

Media coverage / Consultation activities

Emerging (hot) issues

- The Capital Metro proposal is regularly publicised in the local and national media.

Media coverage of significance

- There has been recent media around the Capital Metro EIS for Stage 1. Articles have been published in The Canberra Times.
- There has been a large number of published letters to the editor regarding the Capital Metro project.

Media releases

- A media release was made on the 20 June 2015 to publicise the release of the Draft EIS for Stage 1.
 - A media release was made on the 15 October 2015 announcing the completion of the EIS process for Stage 1.
-

ENVIRONMENT AND PLANNING

ANNUAL AND FINANCIAL REPORT HEARING BRIEF

TOPIC: Light Rail EIS and development applications

Talking Points

Light Rail Stage 1 and Stage 2 – development applications

- Two separate development applications (DA's) for Capital Metro's Light Rail were lodged with the planning and land authority on 23 October 2015:
 - an impact track application for Stage 1 from Gungahlin to the City which follows the completion of the environmental impact statement (EIS) for Stage 1, and
 - a merit track application for Stage 2 from the City to Russell.
- The planning and land authority is only responsible for assessing development on Territory land. Work on designated land, such as Northbourne Avenue, is approved by the National Capital Authority.
- The DA documentation delineates between Territory land and designated land.
- The DA process is the next step in providing the community with a thorough understanding of this important project, including the next stage of the Light Rail to Russell.
- Both development applications were available for public comment for 15 working days from 28 October 2015 to 18 November 2015.
- 13 comments were received for Stage 1 and 9 comments were received for stage 2 within this time. All comments will be considered by the planning authority as part of the DA assessments.
- Key issues raised include amenity, tree removal, traffic and transport efficiency, pedestrian access, patronage, safety, business impacts, oversize vehicle access and meeting the objectives of the Territory Plan. A number of representations also provided support for the proposal.
- The planning and land authority is responsible for independently assessing and deciding the two separate development applications.
- Statutory decision time on Stage 1 is 30 December 2015 if representations are received, and Stage 2 on 29 December 2015. However, the planning and land authority will seek to finalise assessment of the DAs by Christmas 2015.
- As these applications are currently under assessment, there is no further information I can provide at this time.

If asked about Stage 2 and an EIS

- The Stage 2 application does not require an EIS as there are no significant environmental impacts or other triggers under the legislation.
- Most of Stage 2 is located on designated land, for example Constitution Avenue. The National Capital Authority is responsible for giving works approval on designated land.

Light Rail Stage 1 – Environmental Impact Statement

Cleared by: Jim Corrigan

Ext: 73520

Action officer: George Cilliers

Ext: 76804

Correct and accurate as at: 11/11/15

Page 1 of 2

- Based on the advice of the planning authority, on 7 October 2015 I decided to take no further action in relation to the EIS for Stage 1 which completed the EIS process.
 - This followed a thorough assessment of all project impacts by Capital Metro, and an independent assessment by the planning authority in the form of an assessment report.
 - The assessment report and revised EIS is available on the Environment and Planning Directorate's website.
 - The EIS process is an information gathering exercise, not an approvals process.
-

Background

Capital Metro Agency is responsible for delivery of the Territory's light rail transport system.

Stage 1 of the Capital Metro will link the Gungahlin town centre to City with light rail facilities to be constructed in the central median of existing roadways.

Stage 2 of the Capital Metro will link the City with Gungahlin using London Circuit and Constitution Avenue.

An EIS was required for Stage 1 due to the uncertainty of impacts and the unique nature of the project in a Canberra context. The same kind of impacts aren't expected for Stage 2, which is mostly located on designated land. An EIS is not required for Stage 2.

The Draft EIS for Stage 1 was available for public comment from 20 June 2015 to 17 July 2015. 59 comments were received from the public during this period. These comments are available on the planning authority's website.

Key issues raised in the public consultation on the EIS include loss of car parking in the City (in particular on London Circuit near the Magistrates Court), tree selection and removal and integration of the light rail with other public transport modes.

All comments received during this period were addressed by Capital Metro Agency in a revised EIS. The planning and land authority accepted the revised EIS and provided you with an assessment report confirming that the authority is satisfied the EIS addresses the matters in the scoping document and public representations.

The DA process is not an opportunity to revisit the environmental impacts of the project for Stage 1 as these were considered by the EIS, and is limited to an assessment of the proposal under the *Planning and Development Act 2007* and Territory Plan 2008.

Environment and Planning
Directorate

Russell Extension Modelling

Traffic Network Impact of Canberra
Light Rail Russell Extension

DocRef

Issue | 23 November 2015

This report takes into account the particular instructions and requirements of our client.

It is not intended for and should not be relied upon by any third party and no responsibility is undertaken to any third party.

Job number 245830

Arup
Arup Pty Ltd ABN 18 000 966 165



Arup
Level 4, 108 Wickham Street
Fortitude Valley
QLD 4006
GPO Box 685 Brisbane QLD 4001
Australia
www.arup.com

ARUP

Document Verification

ARUP

Job title		Russell Extension Modelling		Job number	
				245830	
Document title		Traffic Network Impact of Canberra Light Rail Russell Extension		File reference	
Document ref		DocRef			
Revision	Date	Filename	Russell Extension Modelling Report - [REDACTED]		
Draft 1	22 Oct 2015	Description	First draft		
			Prepared by	Checked by	Approved by
		Name	Sch 2.2(a)(ii)		
		Signature			
Issue	23 Nov 2015	Filename	002_Russell Extension Modelling Report.docx		
		Description			
			Prepared by	Checked by	Approved by
		Name	Sch 2.2(a)(ii)		
		Signature			
		Filename			
		Description			
			Prepared by	Checked by	Approved by
		Name			
		Signature			
		Filename			
		Description			
			Prepared by	Checked by	Approved by
		Name			
		Signature			
Issue Document Verification with Document					
<input checked="" type="checkbox"/>					

Contents

	Page	
1	Introduction	1
2	Model Calibration	2
2.1	Approach	2
2.2	RMSE / Scatter plot	2
2.3	GEH Statistic	3
2.4	Link Flow	4
2.5	Strengths and weaknesses	4
3	Impact Assessment	6
3.1	Future network scenarios	6
3.2	Traffic network impacts	6
4	Conclusion	17

Appendices

Appendix A

Model Plots

1 Introduction

Arup was commissioned by the ACT Government’s Environment and Planning Directorate (EPD) to undertake an assessment of the traffic network impacts associated with the proposed turn restrictions on the intersections south of Barry Drive / Northbourne Avenue and priority planning associated with the Russell Extension light rail project. The assessment utilised the previously developed North Canberra AIMSUN model to undertake mesoscopic modelling of the sub-area shown in Figure 1.

The purpose of this summary report is to outline the transport modelling process and the outcomes of the modelling analysis. To understand the potential traffic impacts, the study has investigated the distribution of traffic with the traffic model. The study considered used two 2031 scenarios; a Base scenario, which includes ‘do minimum’ network upgrades/changes; and a Russell Extension scenario, which includes Canberra Light Rail Stage 1 extended from Alinga Street to the proposed Russell terminus.

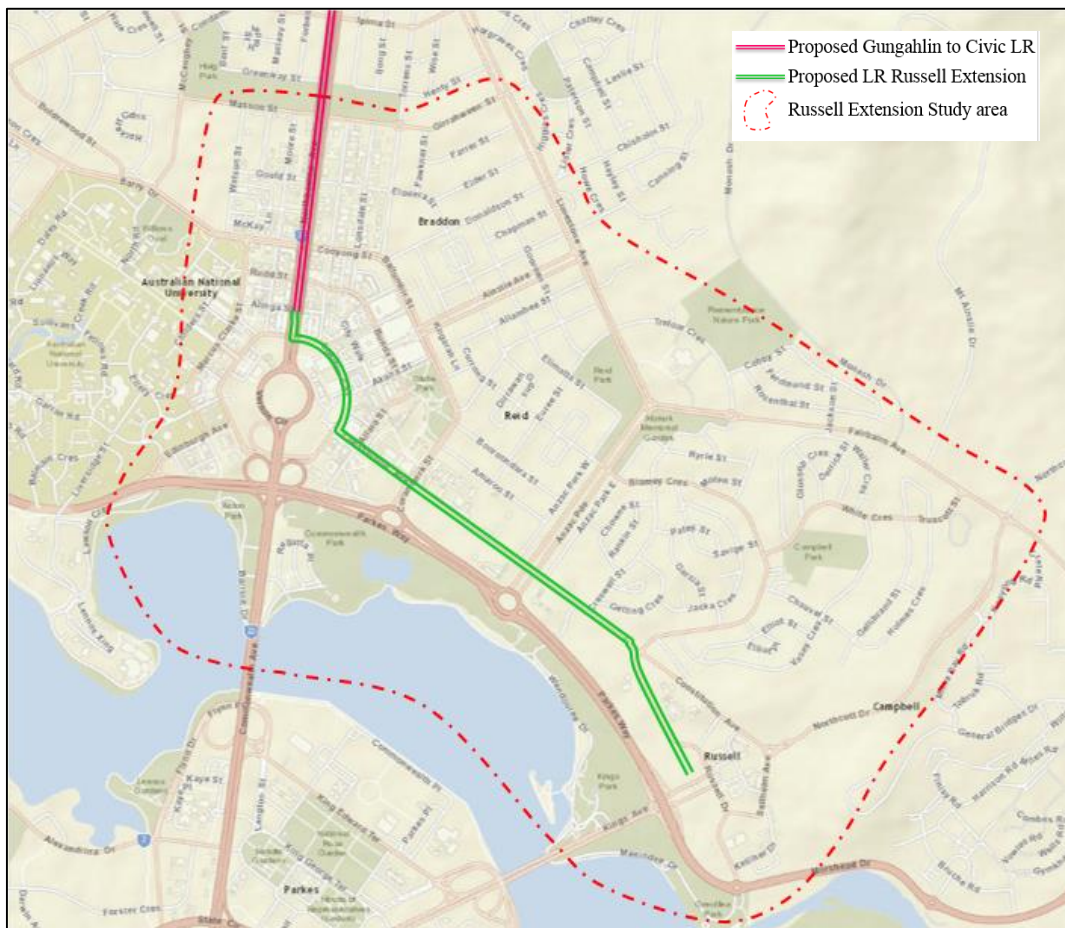


Figure 1 Study area

2 Model Calibration

2.1 Approach

The North Canberra AIMSUN Model (NCAM) is a meso-scopic traffic assignment model developed to inform the City and Northbourne Urban Renewal Strategy. NCAM covers North Canberra and parts of Gungahlin and is considered a large network mesoscopic model appropriate to inform a strategic transport study. To assess the more localised impacts of the proposed Russell light rail extension it was necessary to review the calibration in the area of the project and improve the calibration if necessary.

The model was cordoned around the Russell Extension alignment, with a traffic demand matrix traversal taken from the North Canberra AIMSUN model. The model calibration was undertaken for the AM peak hour, 8:00am to 9:00am, using manual and automated counts from 2014 and 2015. The AIMSUN model was split into four 15 minute periods with a 15 minute warm-up.

The network and zone loading points were updated based on aerial photography, google street view and a site visit along Constitution Avenue. Some modification was made to traffic signal timings within the subarea to release further demand to match counts.

The bus network was reviewed against the network schematic provided by TAMS as part of the City and Northbourne Urban Renewal Strategy.

A static matrix adjustment was undertaken to adjust the demand to better reflect the counts in 15 minute intervals. The model was calibrated and validated against a mesoscopic simulation of the demand produced from the static matrix adjustment.

Three sets of calibration criteria were used in the calibration process; RMSE and scatter plot, GEH statistic on turns and links, and link flows.

2.2 RMSE / Scatter plot

The root mean square error (RMSE) is used to evaluate the entire network. It is defined as:

$$\%RMSE = \frac{\sqrt{\frac{\sum (q_{\text{model}} - q_{\text{obs}})^2}{\text{Number of Counts} - 1}}}{\left[\frac{\sum q_{\text{obs}}}{\text{Number of counts}} \right]} \times 100$$

Where q is the traffic flow. The RMSE value should generally be less than 30%.

The RMSE was calculated to be 25.4% the model meets the criteria for the RMSE.

Figure 2 compares the surveyed and modelled volumes as a scatter plot. It shows that the line of best fit has a coefficient of 1.0 (between 0.9 and 1.1 is considered

acceptable based on industry standard) and an r-squared value greater than 0.95. The model meets the calibration criteria for a scatter plot comparison.

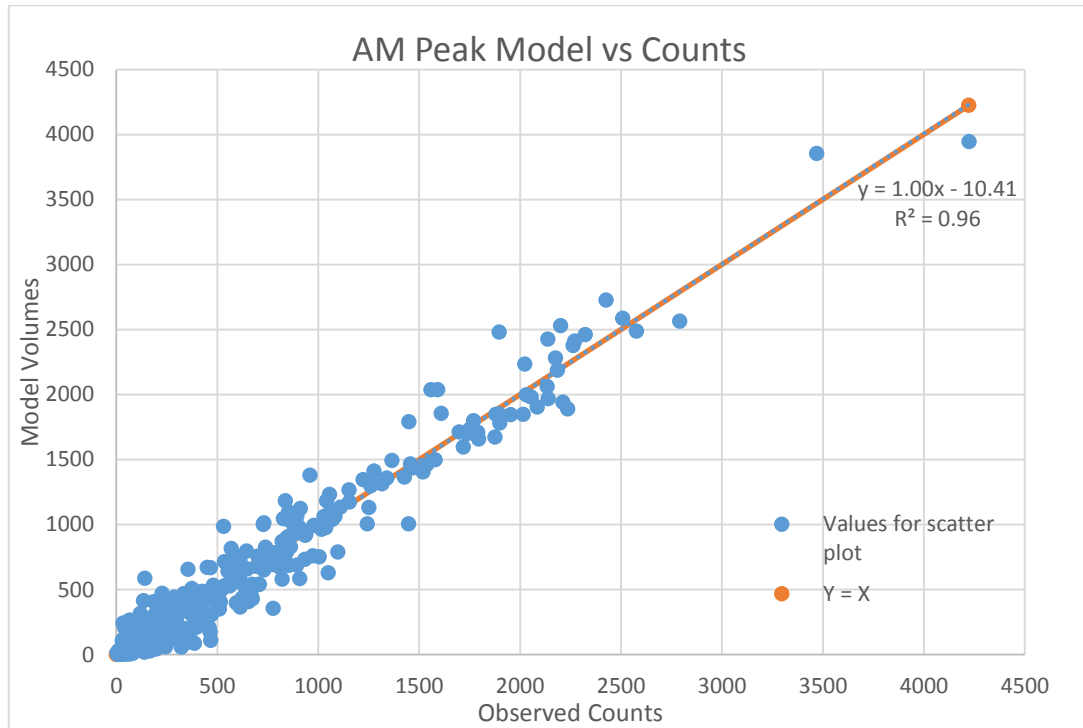


Figure 2 S Calibration criteria 2 - R2 Scatter plot

2.3 GEH Statistic

The GEH statistic was used to evaluate the calibration of individual link and turn flows. Compared to a comparison of absolute or relative difference between modelled flows and observed counts, the statistic makes allowances for the scale of the flows and differences.

Generally for a local area project model the acceptable calibration results using the GEH statistic requires a:

- GEH value of less than 5 for more than 85% of cases;
- GEH value of less than 10 for 100% of cases;

The GEH statistic is defined as

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

Where M is the model estimated volumes and O is the observed volume.

Table 1 shows that the model does not fully meet the calibration criteria. Whilst the calibration of the model was improved during the estimation process, there are some locations where there are differences between modelled and observed flows which do not fully meet the calibration targets. Our assessment has considered these differences when interpreting the results. For example the traffic assignment

is low in some locations along Constitution Avenue but these have been compared to volumes prior to the recent upgrade construction works along Constitution Avenue which were generally higher than current volumes.

Table 1 Calibration criteria 3 - GEH statistic

	GEH - Turns		GEH - Section		GEH - Combined	
	<5	<10	<5	<10	<5	<10
Eligible Counts	221	221	234	234	455	455
Counts failing	92	25	104	25	196	50
Counts passing	129	196	130	209	259	405
% Passing	58%	89%	56%	89%	57%	89%

2.4 Link Flow

The link flows calibration criteria is based on Austroads “*The use and application of microsimulation traffic models*” where for individual link flows the following needs to be true for greater than 85% of cases.

- within 100 veh/h for flow < 700 veh/h
- within 15% for 700 < flow <2700 veh/h
- within 400 veh/h for flow >2700 veh/h

Table 2 below shows a summary of the calibration of the Russell extension subarea. It indicates that it is meeting the criteria for links with high traffic volumes. However, it does not meet the criteria for links with flows under 2700 trips.

Table 2 Link flow statistic

	Link Flow		
	< 700	>700 <2700	>2700
Eligible Counts	145	86	3
Counts failing	53	29	0
Counts passing	92	57	3
% Passing	63%	66%	100%

2.5 Strengths and weaknesses

This section summarised the strength and weaknesses of the model calibration.

Strengths

- Responded well to a sensitivity test of increase in demand by 10% (improvement in validation)
- Model results are producing sensible re-distribution of trips due to turn bans and increased delay.

Weaknesses

- Limited improvement to calibration due to time constraints. The model achieved the R^2 scatter plot criteria across the wider network.
- Low modelled volumes compared to counts on Constitution Avenue and London Circuit
- High modelled volumes compared to counts on Vernon Circuit.

These strengths and weaknesses have been considered when interpreting the model for this study, particularly in relation to predicted redistribution of traffic.

3 Impact Assessment

3.1 Future network scenarios

To assess the potential impact on traffic distribution of traffic management measures associated with implementing the Russell Extension light rail option, the study investigated two 2031 scenarios:

- Base Case scenario, which is a do minimum scenario incorporating expected network upgrades as shown in Figure 3
- Russell Extension scenario, builds on the Base Case with the addition of light rail and its proposed impacts on the road network, as shown in Figure 4.

The signal phasing assumed for Russell Extension was based on the Capital Metro light rail VISSIM Model. A limitation of the AIMSUN meso-scope model is it lacks the ability use advanced signal logic. To cater for light rail operations within this scenario, taking into account the limitations, the average LRV phase length was taken from the Canberra light rail VISSIM model and inserted into each cycle to provide a representative value.

3.2 Traffic network impacts

The network wide forecast 2031 morning peak hour traffic volumes for the Base Case are shown in Figure 5 with the predicted change in traffic flows caused by the Russell Extension illustrated in Figure 6 (red indicates an increase and blue a decrease in flows for the Russell Extension scenario compared to the Base Case). It illustrates the impact on traffic distribution caused by management measures associated with the Russell Extension in 2031 compared to a Base Case scenario. Figure 6 illustrates that the impacts are dispersed, with a redistribution across a range of local and collector streets. The following sections provide further commentary on the predicted impacts and Appendix A contains detailed plots of the network wide flows with labels.

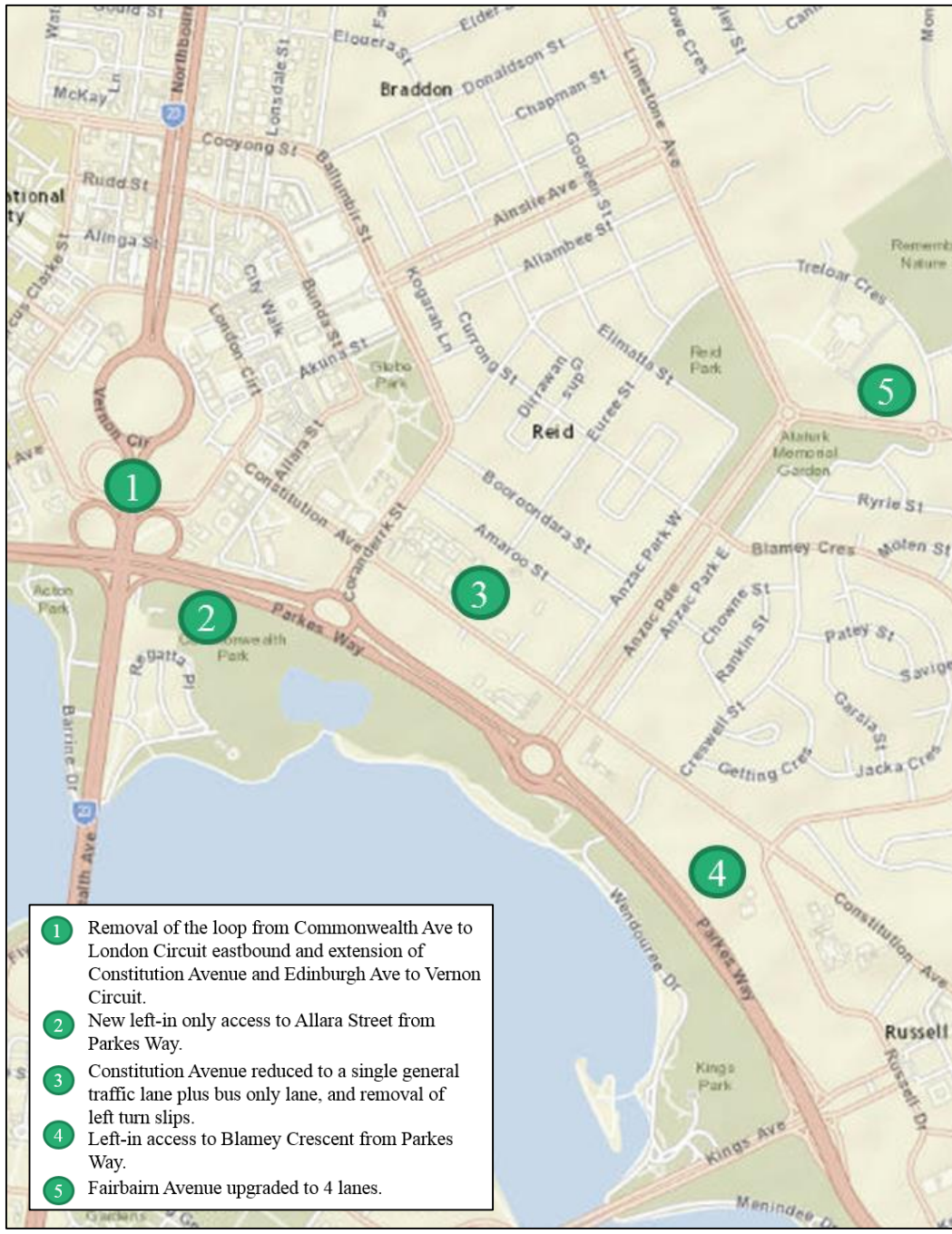


Figure 3 Do minimum proposed network

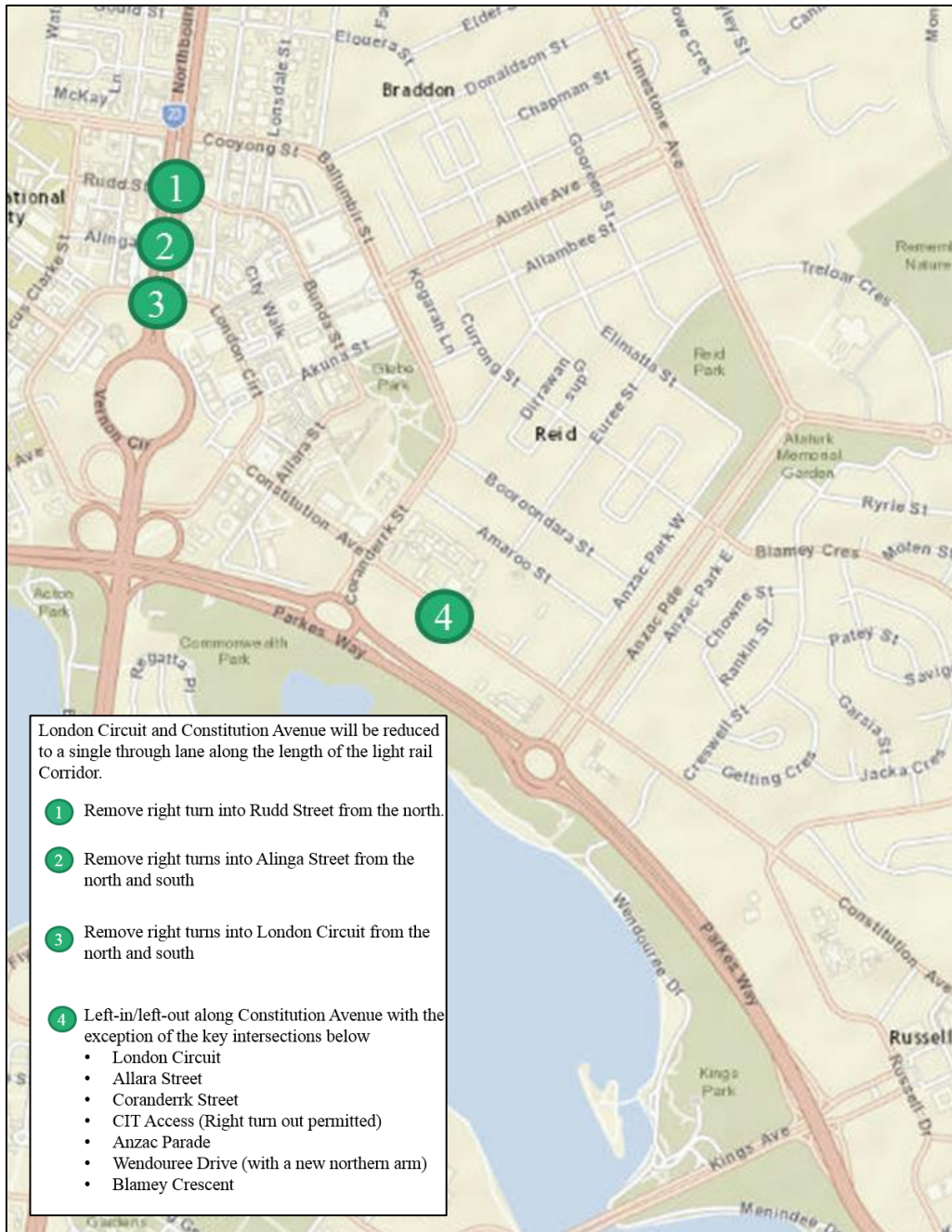


Figure 4 Russell extension proposed network

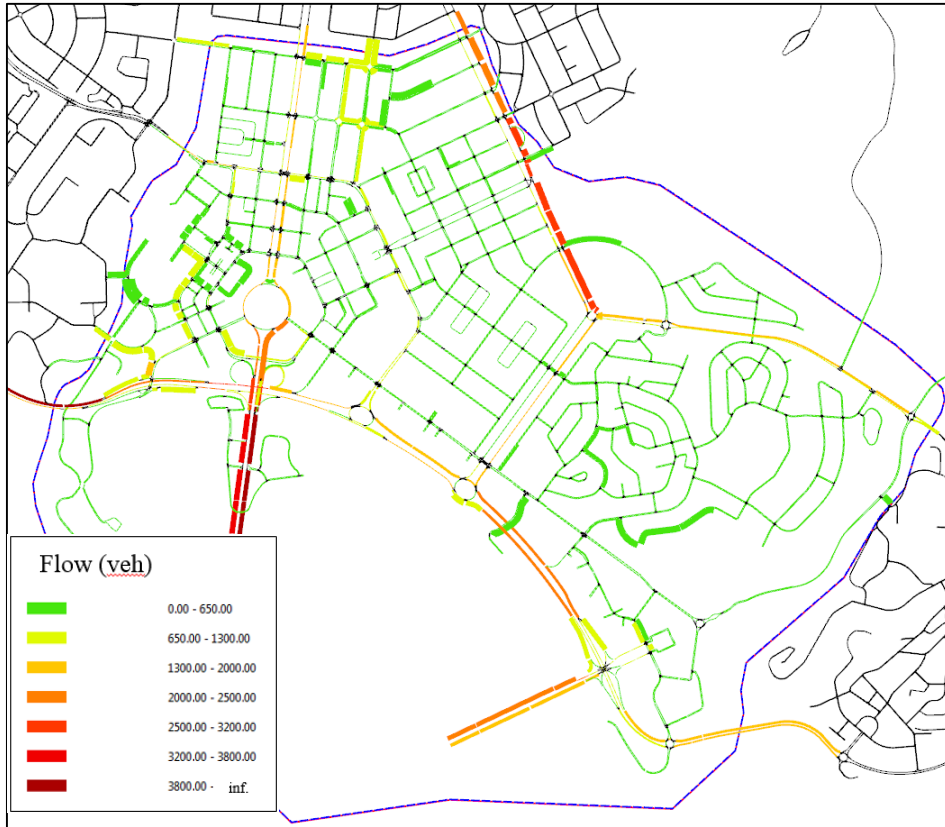


Figure 5 Base Case (Do Minimum): Network wide traffic flows

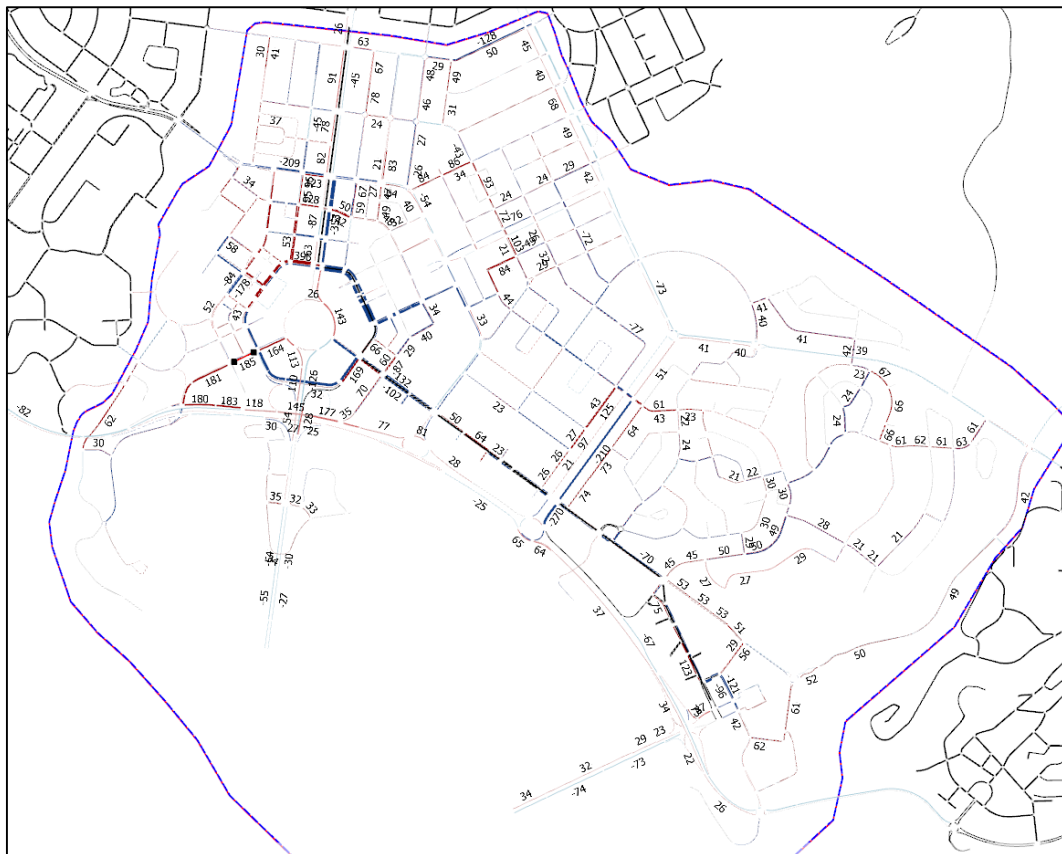


Figure 6 Base Case vs Russell Extension: Difference plot (veh/hr)

3.2.1 Northbourne Avenue

The banning of turning movements on Northbourne Avenue would constrain localised movements in the City. The right turn restrictions on Northbourne Avenue are predicted to result in reduced traffic volumes between Barry Drive and London Circuit. This is consistent with the objectives of the City and Northbourne Urban Renewal Strategy that seeks to improve the environment for pedestrians and public transport users in this area to better bind the city together.

The right turn restrictions and intersection delays associated with the light rail along Northbourne Avenue causes traffic to divert around the west of the City, using Marcus Clarke Street and Moore Street. In principle this is consistent with the City and Northbourne Urban Renewal Strategy, where Marcus Clarke Street was identified as a key distributor road to carry traffic around the city.

Table 3 shows the traffic flows and differences between the Base Case and Russell Extension scenarios for key road sections, with Figure 7 showing the traffic flow differences.

In summary, the difference plot shows the following:

- Reduced flows southbound on Northbourne Ave south of Barry Dve of 260 to 440 vph
- Increased flows westbound on Barry Dr to Moore St due to increased right-turn from Northbourne Ave
- Increased flows southbound on Moore St and West Row south of Barry Dr of 100 to 220 vph
- Increased flows southbound on Marcus Clarke St of 100 to 200 vph
- Increased flows eastbound on Rudd St approaching Northbourne Ave of 130 vph
- Increased flows on Bunda St approaching Northbourne Ave of 140 vph

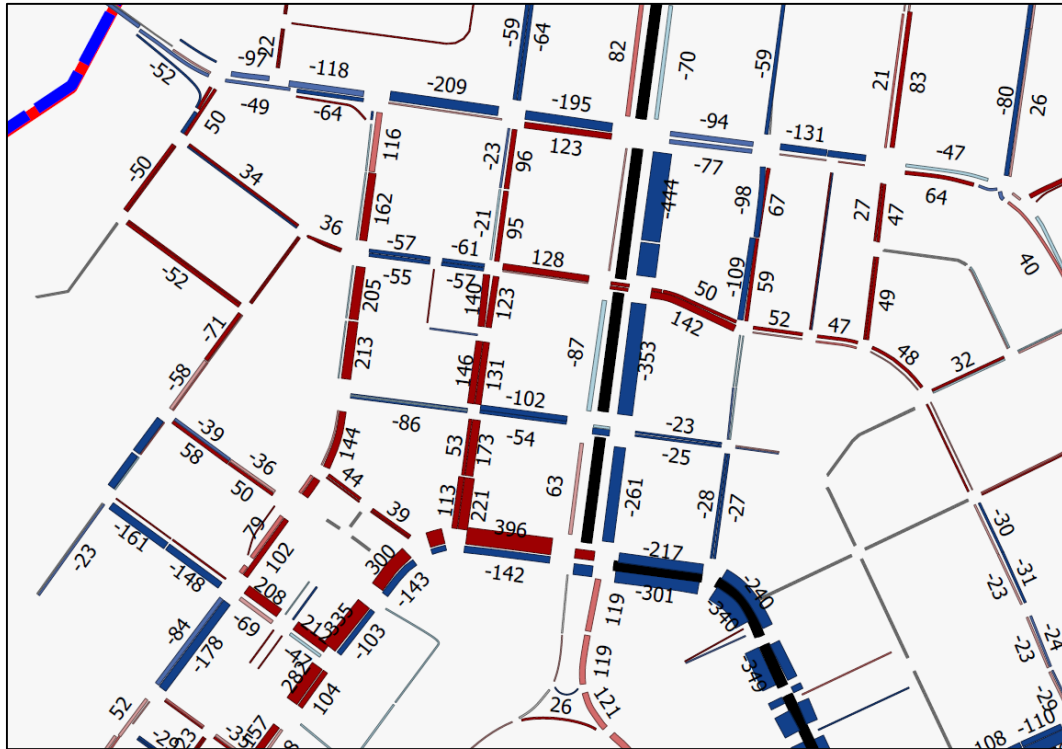


Figure 7 Flow difference plot: Base Case vs Russell Extension

Table 3 Traffic flows changes in the vicinity of Northbourne Ave

Location	Direction	Base Case	Russell Extension	Difference	
				Absolute	Relative
Northbourne Avenue					
South of Barry Drive	(southbound)	1733	1289	-444	-26%
South of Bunda Street	(southbound)	1836	1483	-353	-19%
North of London Circuit	(southbound)	1839	1578	-261	-14%
Marcus Clarke Street					
South of Rudd Street	(southbound)	863	1068	205	24%
South of Barry Drive	(southbound)	1030	1146	116	11%
Moore Street					
North of London Circuit	(southbound)	325	546	221	68%
North of London Circuit	(northbound)	343	456	113	33%
Rudd Street / Bunda Street					
West of Northbourne Ave	(eastbound)	289	417	128	44%
East of Northbourne Ave	(eastbound)	354	403	49	14%
East of Northbourne Ave	(westbound)	209	351	142	68%
West of Northbourne Ave	(westbound)	341	350	9	3%

3.2.2 London Circuit

There is forecast to be reductions of traffic volumes along some sections of London Circuit due to the reduction in traffic capacity (i.e. reduction in number of lanes) along the north-east quadrant of the Circuit. There are also predicted to be increase and decreases in traffic volumes on other sections of the Circuit due to redistribution caused the reduction in capacity as well as the introduction of turn restrictions along Northbourne Avenue.

Table 4 shows the traffic flows and differences between the Base Case and Russell Extension scenarios for key road sections, with Figure 8 showing the traffic flow differences.

In summary, the difference plot shows the following:

- Decreased flows in the anti-clockwise direction around London Circuit of 100 to 360 vph, generally on all sections of the Circuit
- Decreased flows on London Circuit clockwise between Northbourne Ave and Akuna St of 100 to 300 vph
- Increased flows on Vernon Circle of around 140 vph due to additional traffic accessing the Edinburgh Ave and Constitution Ave connections
- Increased flows using a route via Edinburgh Ave-Parkes Way-Allara St of around 180 vph. Figure 9 illustrates how vehicle routes are altered to use this route by showing vehicle routes from an origin located in West Row travelling to the east of London Circuit.

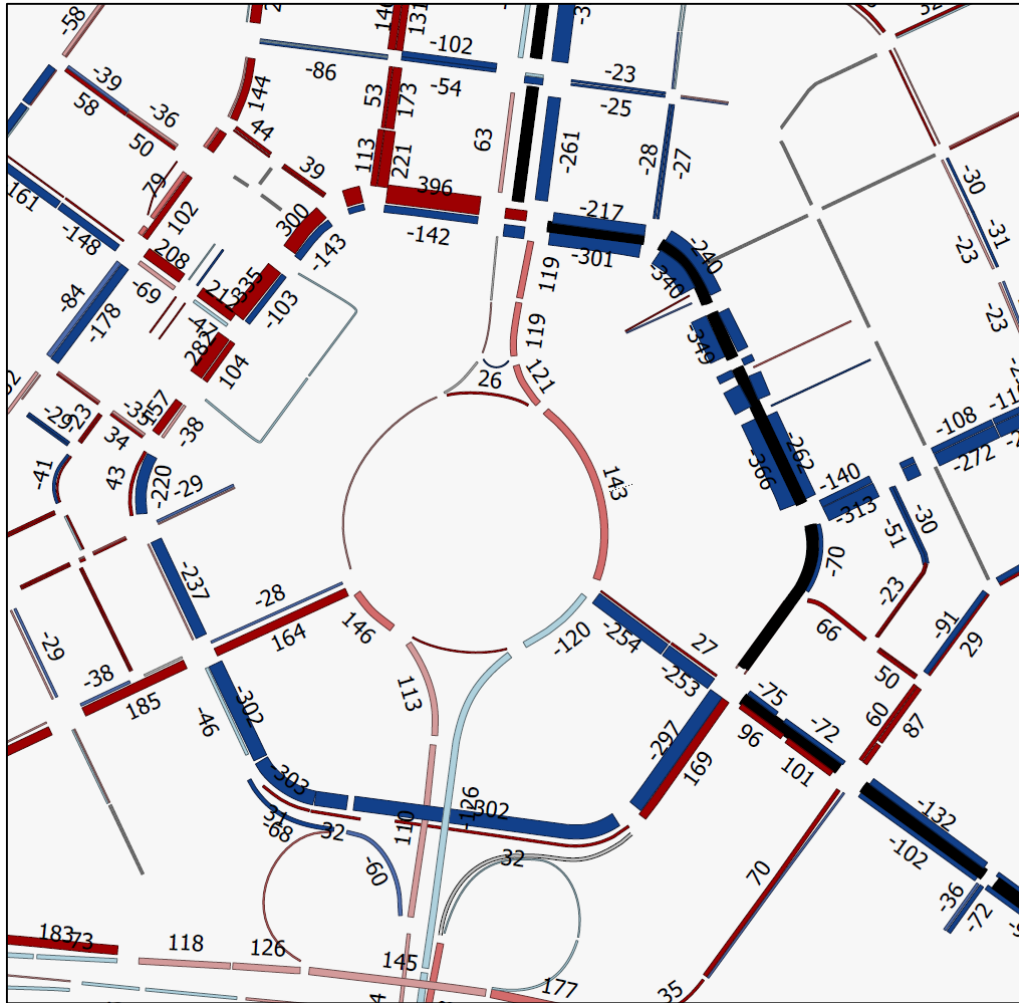


Figure 8 Difference plot: Base Case vs Russell Extension

Table 4 Traffic flows changes in the vicinity of London Circuit

Location	Direction	Base Case	Russell Extension	Difference	
				Absolute	Relative
London Circuit					
East of Northbourne Ave	(eastbound)	518	301	-217	-42%
East of Northbourne Ave	(westbound)	442	141	-301	-68%
West of Northbourne Ave	(eastbound)	210	606	396	189%
West of Northbourne Ave	(westbound)	446	304	-142	-32%
Vernon Circle					
East of Northbourne Ave	(eastbound)	1814	1957	143	8%
Constitution Avenue extension					
East of Vernon Circle	(westbound)	797	544	-253	-32%
Edinburgh Avenue extension					
West of Vernon Circle	(westbound)	183	347	164	90%
Akuna Street					
West of London Cct	(northbound)	421	281	-140	-33%
West of London Cct	(southbound)	526	213	-313	-60%

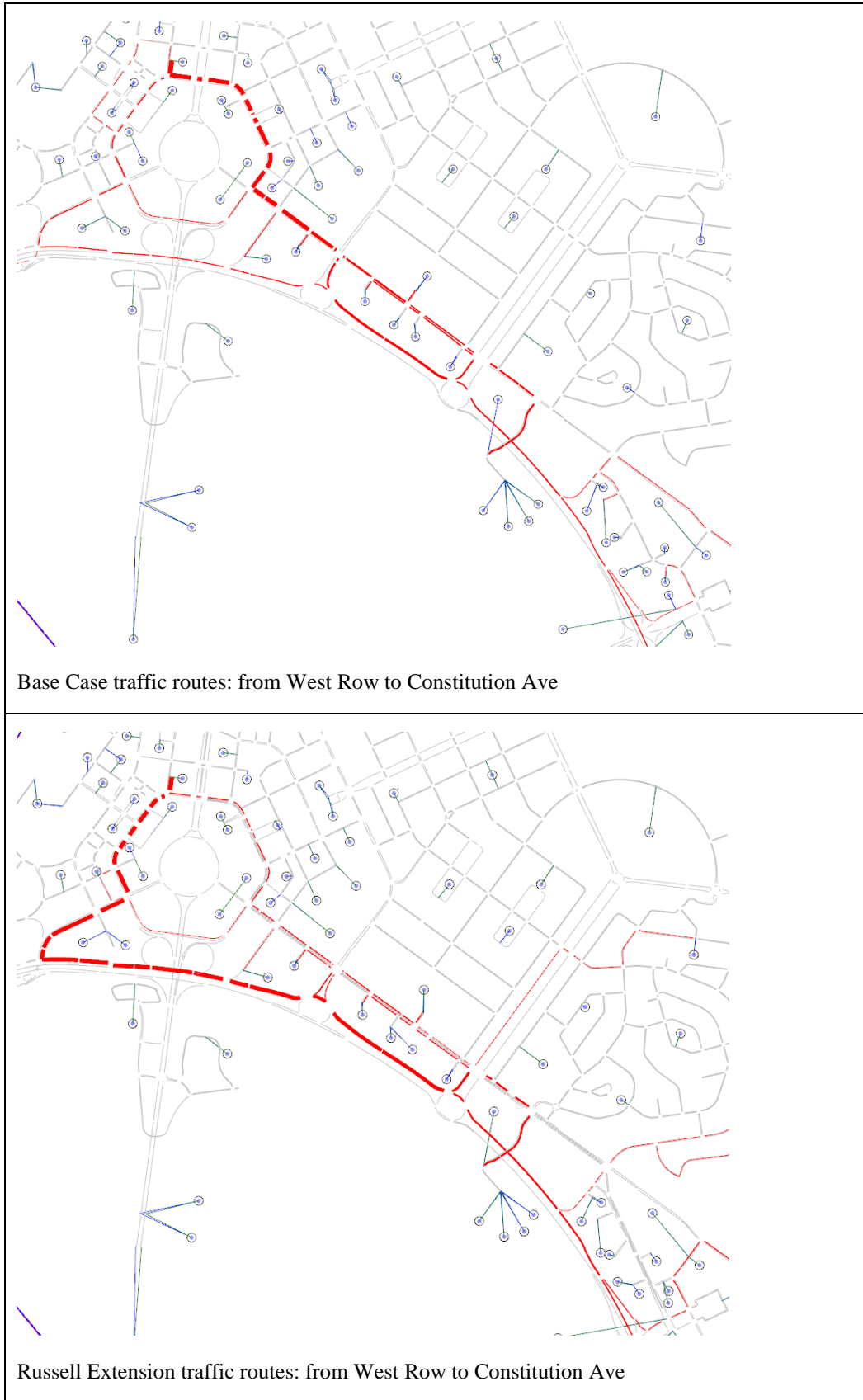


Figure 9 Base Case vs Russell Extension: traffic re-distribution

3.2.3 Constitution Avenue

There is forecast to be some reduction of traffic volumes on Constitution Avenue due to the increased delays from LRV signal phase insertion. Also, there is generally a reduction available traffic capacity due to road geometry constraints due to the light rail line.

The modelling results generally predict a decrease along Constitution Avenue of between 50 and 130vph. Some sections of Constitution Ave experience increased flows due to different access arrangements caused by restricting access to left-in, left-out in some locations. Notably, Constitution Ave eastbound increases by around 50 vph on approach to CIT due to the removal of right-turn access from the east.

There is forecast to be a reduction of traffic volumes on Anzac Parade with increased volumes on service roads and other local roads. The redistribution is a result of increased delays on approach to Constitution Avenue. Some of this traffic redistributes to the service roads either side of Anzac Parade. Northcott Drive also experiences some increase in traffic as a result of the redistribution.

Table 5 shows the traffic flows and differences between the Base Case and Russell Extension scenarios for key road sections, Figure 10 showing the traffic flow differences.

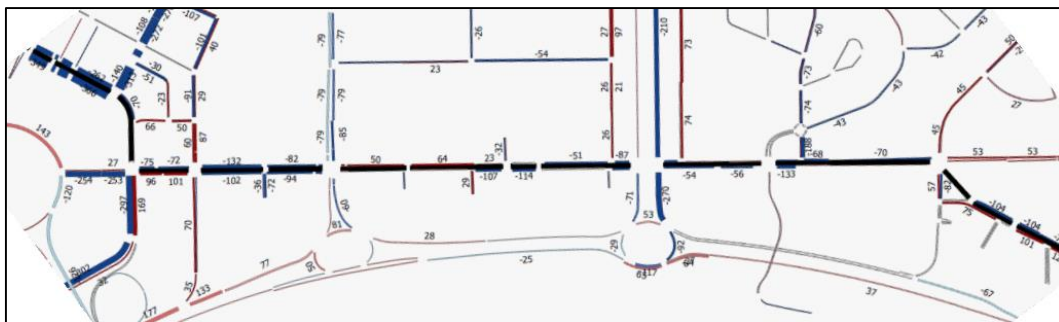


Figure 10 Difference plot: Base Case vs Russell extension

Table 5 Traffic flows changes in the vicinity of Constitution Ave

Location	Direction	Base Case	Russell Extension	Difference	
				Absolute	Relative
Constitution Avenue					
East of London Circuit	(eastbound)	217	145	-72	-33%
East of Allara Street	(eastbound)	400	268	-132	-33%
East of Coranderrk Street	(eastbound)	203	253	50	25%
West of CIT	(eastbound)	187	251	64	34%
East of CIT	(eastbound)	228	251	23	10%
West of Anzac Parade	(eastbound)	332	331	-1	0%
East of Anzac Parade	(eastbound)	264	213	-51	-19%

East of London Circuit	(westbound)	486	587	101	21%
East of Allara Street	(westbound)	428	326	-102	-24%
East of Coranderrk Street	(westbound)	248	229	-19	-8%
West of CIT	(westbound)	248	229	-19	-8%
East of CIT	(westbound)	502	395	-107	-21%
West of Anzac Parade	(westbound)	109	55	-54	-50%
East of Anzac Parade	(westbound)	516	402	-114	-22%
Anzac Avenue					
North of Constitution Ave	(northbound)	445	458	13	3%
North of Constitution Ave	(southbound)	1361	1151	-210	-15%
Anzac Park (west)					
North of Constitution Ave	(northbound)	38	64	26	68%
Anzac Park (east)					
North of Constitution Ave	(southbound)	101	175	74	73%

4 Conclusion

An assessment of the potential traffic network impacts caused by proposed traffic management measures associated with implementing light rail to Russell was undertaken. Overall, the traffic management measures are predicted to divert some traffic away from the corridor as capacity and road space is prioritised toward light rail. It is predicted that 200-500 vehicles would divert from Northbourne Avenue, London Circuit and Constitution Avenue, redistributing across a range of alternative routes.

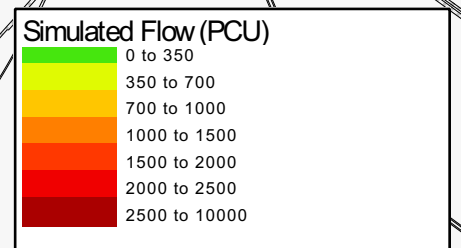
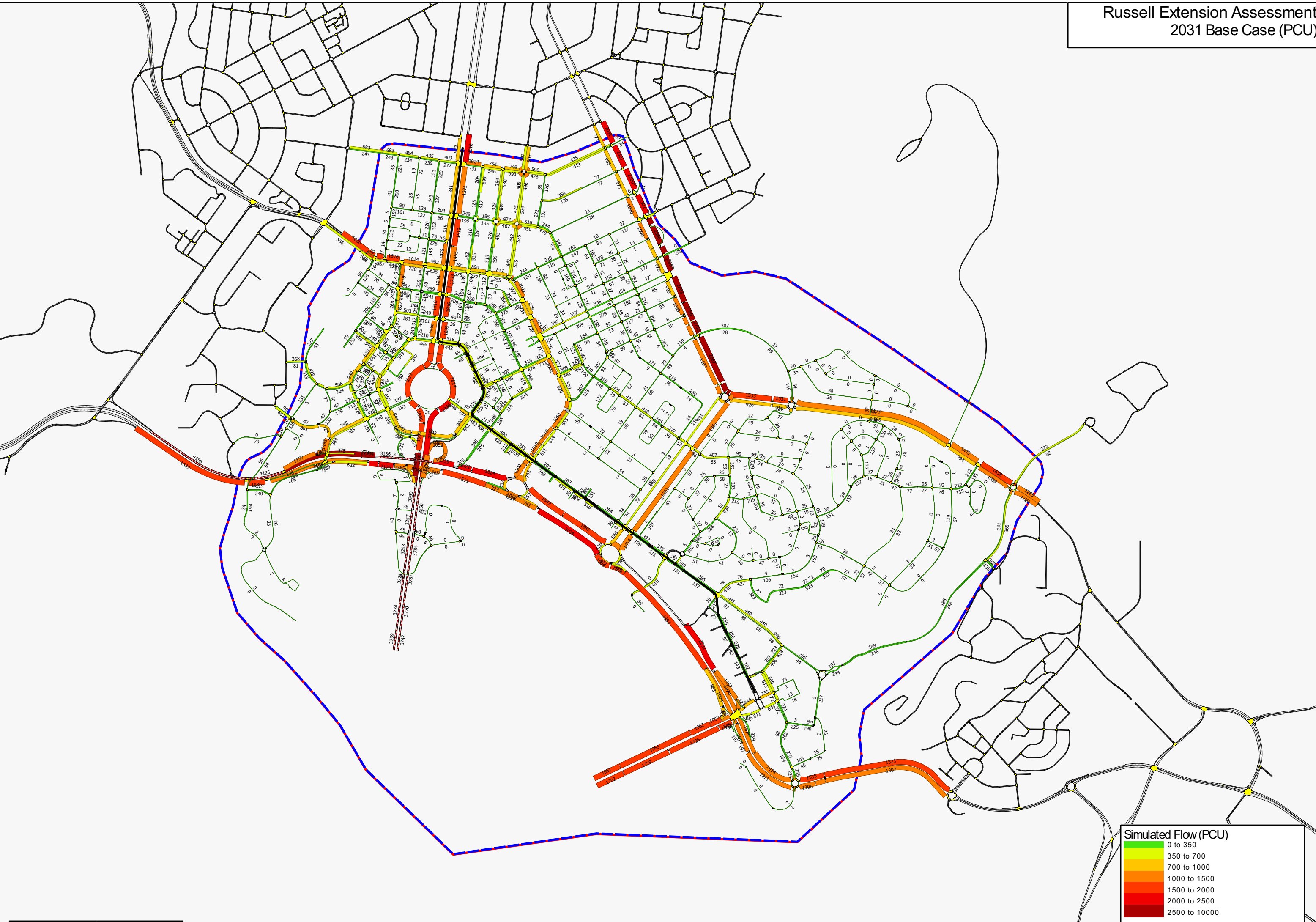
There is forecast to be more traffic using Marcus Clarke Street and Moore Street to access City West, reinforcing the objectives of the Northbourne Urban Renewal Strategy to use Marcus Clarke Street to distribute traffic to the City. The extension of Edinburgh Ave to Vernon Circle plays a role in facilitating the redistribution of traffic, as does Parkes Way, Allara Street and the western section of London Circuit.

The implementation of light rail will also reduce capacity for traffic crossing the corridor. The modelling forecasts modest reductions (around 200 veh/h) in volumes travelling eastbound in the morning peak along Barry Drive-Coranderrk Street and southbound along Anzac Parade.

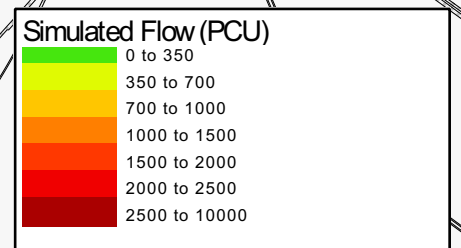
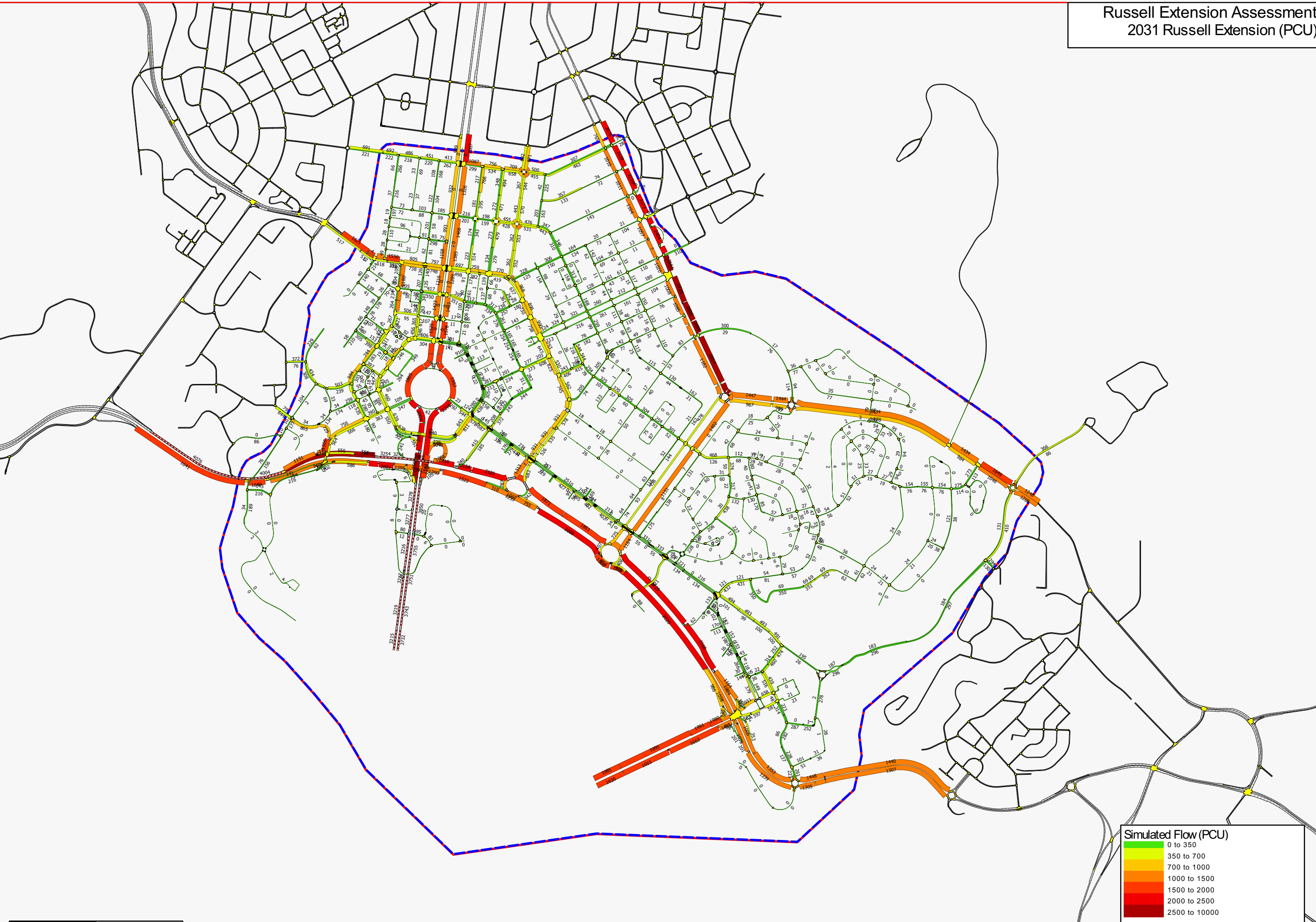
Planning for upgrading of Parkes Way and the potential future local distributor road network adjacent to Parkes Way was not taken into account in this assessment as its planning is in the early stages of development. However, it should be noted that these future road network enhancements could help to further facilitate traffic impacts of the Russell Extension light rail.

Appendix A

Model Plots



1000 m



1000 m

ENVIRONMENT AND PLANNING DIRECTORATE

MINISTER FOR PLANNING AND LAND MANAGEMENT INFORMATION BRIEF

TOPIC: Transport Canberra - Light Rail Network

Talking Points

- The ACT Government is planning for Canberra's transition to a significant world city. Canberra needs a modern public transport system that can easily adapt to serve a growing and changing city. The Light Rail Network plan sets the infrastructure vision and strategy for delivering this.
 - Canberra's population is projected to increase significantly over the next two decades from 390,000 to over 500,000. With the highest car dependency of any Australian capital city, our growing population will mean more cars on our roads and more congestion.
 - Government is meeting these challenges through building an integrated transport network where light rail, buses, active travel, freight, parking and land use all contribute to delivering a vision for a connected, liveable and prosperous place to live and work.
 - The Light Rail Network plan considers how to build demand for a future light rail network, informed by government's objectives for urban renewal in centres and transport corridors.
 - Community consultation is an important aspect of this project. The Light Rail Network plan was released on 26 October 2015 for community input. This stage of Public consultation closed on the 11 December 2015.
 - Initial analysis of community responses indicates strong support for the Parliamentary Triangle, City to Woden and Eastern Connection options.
 - All consultation data will be carefully assessed and considered by the Government, along with expert studies and other research, when determining the future stage of the Light Rail Network
-

Key information

- The Light Rail Network investigates potential extensions to Capital Metro Stage 1 connecting key centres and corridors, including Russell, Canberra Airport, the Parliamentary Triangle, Kingston, Woden, Erindale, Tuggeranong, Belconnen, Kippax and Molonglo.

- The Light Rail Network considers demand-driving opportunities for a future light rail network and what complementary land use and transport policy settings may be required to support future investment in rapid transit corridors.
- Targeted stakeholder consultation was undertaken in 2014 with the Canberra Airport, NCA, industry organisations, peak bodies and community councils, which is informing the development of the Light Rail Network Plan.
- A Consultation Outcomes Report is currently being developed. The Report will inform decisions regarding the future stages of the Light Rail Network.

Inter-related policies

- Capital Metro delivery (CMA)
- Transport for Canberra implementation
- Transport Canberra

Other Directorates, stakeholders and clients

- Capital Metro Board
- NCA
- CMTEDD
- CMA
- TAMS

Key milestones

- Consultation Outcomes Report complete – March 2016
- Cabinet consideration of community consultation outcomes and next steps – May 2016

Government reporting and financial commitments

Election commitment Parliamentary agreement Major projects Budget funding
 National program (COAG) Chief Minister roundtable Strategic priorities Other.....

Media coverage / Consultation activities

Emerging (hot) issues

- Light rail related issues attract significant media attention.
- The Light Rail Network plan was launched on Monday 26 October 2015.
- Community consultation on the Light Rail Network commenced at launch and continued until 11 December 2015.
- A Consultation Outcomes Report is currently being prepared.

Media coverage of significance

3 May 2015 The Canberra Times reported that a Canberra Airport representative claimed a future airport link would be included as a potential option for stage two for the light rail project.

3 May 2015 A Canberra Times Q&A with architect Glen Dowse noted that urban renewal benefits to the city could be achieved with or without light rail.

4 May 2015 Stephen Byron, Managing Director of Canberra Airport confirmed on 2CC

- Radio Canberra that Canberra Airport has received no guarantee from the Government that light rail will link up with the Canberra Airport.
- 6 May 2015 An opinion article in Canberra Times urged the major parties to come clean on light rail costs.
- 8 May 2015 The Canberra Times reported on the investigations surrounding the possible Capital Metro extension to Russell. Several letters to the editor conveyed both opposition and support to Light Rail and called for community involvement.
- 17 May 2015 The Canberra Times reports that in 2014/15, the ACT Government spent more on inner city infrastructure than that of Tuggeranong and Belconnen combined. Tuggeranong Community Council president said Canberra's south had been forgotten. Opposition leader Jeremy Hanson claimed there was less money available for capital works because of the Government's light rail commitments.
- 18 May 2015 The Canberra Times reported on SGS Economics work highlighting the growing concentration of jobs in the city centre.
- 1 July 2015 The Canberra Times article referenced the future light rail network of Canberra and questioned the suitability of the line going south.
- 5 July 2015 A Canberra Times Q&A session with University of Canberra professor noted that over the next 50 years the city will require infrastructure to support it becoming a denser more sustainable city.
- 7 July 2015 A visiting research fellow at ANU questioned whether Canberra should be looking to other transport technologies rather than light rail.
- 13 July 2015 Editorial in the Canberra Times highlighted the need to consider a future transport solution beyond roads.
- 16 July 2015 2CC radio reported that when Tony Abbott was asked about funding to the successful Gold Coast light rail route, Abbott used the ACT Government as an example of how public transport should be funded through his Government's asset recycling scheme.
- 30 Aug 2015 Canberra Times article that technology for Canberra's light rail could be superseded by self-driving cars before construction, based on a study by Canberra-based computer programmer and large data expert Kent Finch.
- 31 Aug 2015 Canberra Times article by Alex White, secretary of UnionsACT, in support of light rail in Canberra, saying it will keep Canberra wages high and unemployment down.
- 18 Sep 2015 Canberra Time article that union polling shows 55% support for light rail.
- 03 Oct 2015 Canberra Times article announcing that Minister Shane Rattenbury rules out light rail between Queanbeyan and the ACT until a Canberra-wide network is complete and subject to NSW or federal government funding.
- 18 Oct 2015 Canberra Times article on the survey they conducted on light rail, with more than 7,000 people participating. 49% of respondents thought that Canberra needs light rail. 49% of respondents supported a possible extension to Russell, suggesting there is support to extend the network.
- 19 Oct 2015 Canberra Times article that claims that light rail is an election vote changer, with 70 per cent of people participating in their survey indicating it would influence their vote at the 2016 election.
- 20 Oct 2015 Canberra Times article that Opposition Leader Jeremy Hanson will do

- everything he can to stop light rail in Canberra.
- 26 Oct 2015 2CC, 666 and 104.7 radio and the Canberra Times announced that a light rail network plan for Canberra has been released for public comment. The ACT Minister for Planning, Mick Gentleman, was interviewed by Mark Parton on 2CC radio.
- 4 Nov 2015 Canberra Times article about the Innovative Cities, Innovative Minds conference
- 18 Nov 2015 Canberra Times article indicating that light rail could improve public health if planned properly. The article highlights the views of Mark Fenton, a leading US academic.
- 22 Dec 2015 Canberra Times article about ACT Light Rail submission to the Government advocating that the second stage of the network should link Parliament House.

Media releases

29 April 2014 – Minister Corbell – announcement of successful consultant for Light Rail Master Plan

19 Oct 2015 – Minister Corbell – Comprehensive surveys show sustained support for light rail in Canberra

26 Oct 2015 – Minister Barr – launch of the Light Rail Network plan public consultation

Further information

Key decision briefs



Ministerial correspondence to Opposition MLAs

Freedom of Information request for all documents relating to light rail

Correct at: **May 2016****For public release (except where noted)****ENVIRONMENT AND PLANNING DIRECTORATE****MINISTER FOR PLANNING AND LAND MANAGEMENT
INFORMATION BRIEF****TOPIC: Transport Canberra - Light Rail Network**

Talking Points

- The ACT Government is planning for Canberra's transition to a significant world city. Canberra needs a modern public transport system that can easily adapt to serve a growing and changing city. The Light Rail Network plan sets the infrastructure vision and strategy for delivering this.
 - Canberra's population is projected to increase significantly over the next two decades from 390,000 to over 500,000. With the highest car dependency of any Australian capital city, our growing population will mean more cars on our roads and more congestion.
 - Government is meeting these challenges through building an integrated transport network where light rail, buses, active travel, freight, parking and land use all contribute to delivering a vision for a connected, liveable and prosperous place to live and work.
 - The Light Rail Network plan considers how to build demand for a future light rail network, informed by government's objectives for urban renewal in centres and transport corridors.
 - Community consultation is an important aspect of this project. The initial analysis of community responses indicates strong support for the City to Woden, Parliamentary Triangle and City to Canberra Airport options.
 - The Light Rail Network community consultation outcomes report will be released shortly to report back to the community on the key messages from the consultation.
 - These key messages, along with expert studies and other research, will be considered by the Government when determining future stages of the Light Rail Network.
-

Key information

- The Light Rail Network investigates potential extensions to Capital Metro Stage 1 connecting key centres and corridors, including Russell, Canberra Airport, the

Correct at: **May 2016**

For public release (except where noted)

Parliamentary Triangle, Kingston, Woden, Erindale, Tuggeranong, Belconnen, Kippax and Molonglo.

- The Light Rail Network considers demand-driving opportunities for a future light rail network and what complementary land use and transport policy settings may be required to support future investment in rapid transit corridors.
- Targeted stakeholder consultation was undertaken in 2014 with the Canberra Airport, NCA, industry organisations, peak bodies and community councils, which is informing the development of the Light Rail Network Plan.
- A Consultation Outcomes Report is currently being developed. The Report will inform decisions regarding the future stages of the Light Rail Network.

Inter-related policies

- Capital Metro delivery (CMA)
- Transport for Canberra implementation
- Transport Canberra

Other Directorates, stakeholders and clients

- Capital Metro Board
- NCA
- CMTEDD
- CMA
- TAMS

Key milestones

- Consultation Outcomes Report complete – March 2016
- Cabinet consideration of community consultation outcomes and next steps – May 2016

Government reporting and financial commitments

Election commitment Parliamentary agreement Major projects Budget funding
 National program (COAG) Chief Minister roundtable Strategic priorities Other.....

Media coverage / Consultation activities

Emerging (hot) issues

- Light rail related issues attract significant media attention.
- The Light Rail Network plan was released for public consultation on Monday 26 October 2015 and ran for 6 weeks until 11 December 2015.
- A Consultation Outcomes Report is currently being prepared.
- In February 2016, the Government announced the winning consortia, Canberra Metro, to build and operate Stage 1 between City and Gungahlin.

Media coverage of significance

3 May 2015 A Canberra Times Q&A with architect Glen Dowse noted that urban renewal benefits to the city could be achieved with or without light rail.
 4 May 2015 Stephen Byron, Managing Director of Canberra Airport confirmed on 2CC

Correct at: **May 2016****For public release (except where noted)**

- Radio Canberra that Canberra Airport has received no guarantee from the Government that light rail will link up with the Canberra Airport.
- 8 May 2015 The Canberra Times reported on the investigations surrounding the possible Capital Metro extension to Russell.
- 17 May 2015 The Canberra Times reports that in 2014/15, the ACT Government spent more on inner city infrastructure than that of Tuggeranong and Belconnen combined. Tuggeranong Community Council president said Canberra's south had been forgotten. Opposition leader Jeremy Hanson claimed there was less money available for capital works because of the Government's light rail commitments.
- 1 July 2015 The Canberra Times article referenced the future light rail network of Canberra and questioned the suitability of the line going south.
- 5 July 2015 A Canberra Times Q&A session with University of Canberra professor noted that over the next 50 years the city will require infrastructure to support it becoming a denser more sustainable city.
- 16 July 2015 2CC radio reported that when Tony Abbott was asked about funding to the successful Gold Coast light rail route, Abbott used the ACT Government as an example of how public transport should be funded through his Government's asset recycling scheme.
- 30 Aug 2015 Canberra Times article that technology for Canberra's light rail could be superseded by self-driving cars before construction.
- 31 Aug 2015 Canberra Times article by Alex White, secretary of UnionsACT, in support of light rail in Canberra, saying it will keep Canberra wages high and unemployment down.
- 18 Sep 2015 Canberra Time article that union polling shows 55% support for light rail.
- 03 Oct 2015 Canberra Times article announcing that Minister Shane Rattenbury rules out light rail between Queanbeyan and the ACT until a Canberra-wide network is complete and subject to NSW or federal government funding.
- 18 Oct 2015 Canberra Times article on the survey they conducted on light rail, with more than 7,000 people participating. 49% of respondents thought that Canberra needs light rail. 49% of respondents supported a possible extension to Russell, suggesting there is support to extend the network.
- 19 Oct 2015 Canberra Times article that claims that light rail is an election vote changer, with 70 per cent of people participating in their survey indicating it would influence their vote at the 2016 election.
- 20 Oct 2015 Canberra Times article that Opposition Leader Jeremy Hanson will do everything he can to stop light rail in Canberra.
- 26 Oct 2015 2CC, 666 and 104.7 radio and the Canberra Times announced that a light rail network plan for Canberra has been released for public comment. The ACT Minister for Planning, Mick Gentleman, was interviewed by Mark Parton on 2CC radio.
- 18 Nov 2015 Canberra Times article indicating that light rail could improve public health if planned properly. The article highlights the views of Mark Fenton, a leading US academic.
- 22 Dec 2015 Canberra Times article about ACT Light Rail submission to the Government advocating that stage two of the network should link Parliament House.

Correct at: **May 2016**

For public release (except where noted)

- 2 Feb 2016 Canberra Times article highlighting the announcement of Canberra Metro to build Stage 1 between City and Gungahlin. The article also provides details on the Spanish designed trams that will run on the network.
- 2 Feb 2016 An article in the Political ACT highlights that Alistair Coe will cancel light rail contracts regardless of the cost involved.
- 17 Feb 2016 Canberra Times article highlighting that Canberra's light rail project is on Infrastructure Australia's national priority list.
- 22 Feb 2016 Canberra Times article focusing on the Russell extension of Capital Metro Stage 1 and how the ACT Government is seeking Federal Government funding.
- 21 Mar 2016 Canberra Times article about the planned removal of trees along Northbourne Avenue ahead of the construction of Stage 1 Capital Metro.
- 23 Mar 2016 Canberra Times article indicating that Chief Minister Barr announced that the government has shelved a possible extension of the light rail to Russell until after the October election.
- 5 Apr 2016 Canberra Times article on the Grattan Institute's report which criticised the Light Rail Stage 1 Business Case suggesting that the Government substantially over-estimated the economic benefits of the project.
- 5 Apr 2016 Canberra Times article highlighting the Government's release of two independent expert reviews on the light rail business case which concluded it was sound, robust and provided a reasonable estimate of its impact.

Media releases

29 April 2014 – Minister Corbell – announcement of successful consultant for Light Rail Master Plan

19 Oct 2015 – Minister Corbell – Comprehensive surveys show sustained support for light rail in Canberra

26 Oct 2015 – Minister Barr – launch of the Light Rail Network plan public consultation

Further information

ENVIRONMENT AND PLANNING DIRECTORATE
MINISTER FOR PLANNING AND LAND MANAGEMENT
INFORMATION BRIEF

TOPIC: Light Rail Network

Talking Points

- A citywide Light Rail Network plan was released for community feedback in late 2015, which was developed in response to a Parliamentary Agreement that identified the need for a Canberra-wide Light Rail Master Plan.
- The “Keeping Canberra Moving: What you have told us” report released in July 2016 reported back to the community the findings of the consultation on the Light Rail Network plan. Almost 900 people participated in the consultation. The top preferences for the next stage of the network identified from the consultation were Woden/Mawson, the Parliamentary Triangle, the Airport and Belconnen.
- On 21 July, the Government released four possible next stages of light rail for Canberra, based on the four most popular routes from consultation. The Government is currently undertaking pre-feasibility studies on these corridors.
- The pre-feasibility studies are being undertaken as a part of a variation to the Light Rail Master Plan contract. The Chief Minister has previously indicated a commitment to extend light rail to the next stage.
- A light rail network cannot be built overnight, and must be done in a multi-stage approach. This is similar to building road networks over time.
- Canberra’s population is projected to increase significantly over the next two decades from 390,000 to over 500,000. With the highest car dependency of any Australian capital city, our growing population will mean more cars on our roads and more congestion unless we change how we move around the city.
- The Government is addressing this challenge by investing in an integrated transport network. Under the integrated transport network, light rail, buses, walking, cycling, freight, roads, parking and land use will all contribute to delivering a vision for a connected, liveable and prosperous place to live and work.

- Bus rapid transport will complement and build demand for the light rail network, while buses will provide vital feeder services to support the rapid public transport network.

Walking and cycling networks will also be enhanced as part of the integrated network, improving access to transport hubs, town centres and other key destinations.

Inter-related policies

- Capital Metro delivery (CMA)
- Transport for Canberra implementation
- Transport Canberra

Other Directorates, stakeholders and clients

- Capital Metro Board
- TCCS
- NCA
- CMTEDD

Key milestones

- Consultation Outcomes Report complete – March 2016
- Cabinet consideration of community consultation outcomes and next steps – May 2016

Government reporting and financial commitments

Election commitment Parliamentary agreement Major projects Budget funding
 National program (COAG) Chief Minister roundtable Strategic priorities Other.....

Media coverage / Consultation activities

Emerging (hot) issues

- Light rail related issues attract significant media attention.
- “Keeping Canberra Moving” was launched on 21 July 2016 and provides a summary of the outcomes of community consultation of the draft Light Rail Network. The government also announced the pre-feasibility studies for Woden/Mawson, Parliamentary Triangle, the Airport and Belconnen corridors.
- In February 2016, the Government announced the winning consortia, Canberra Metro, to build and operate Stage 1 between City and Gungahlin.

Media coverage of significance

- 17 May 2015 The Canberra Times reports that in 2014/15, the ACT Government spent more on inner city infrastructure than that of Tuggeranong and Belconnen combined. Tuggeranong Community Council president said Canberra's south had been forgotten. Opposition leader Jeremy Hanson claimed there was less money available for capital works because of the Government's light rail commitments.
- 30 Aug 2015 Canberra Times article that technology for Canberra's light rail could be superseded by self-driving cars before construction.
- 03 Oct 2015 Canberra Times article announcing that Minister Shane Rattenbury rules out light rail between Queanbeyan and the ACT until a Canberra-wide network is complete and subject to NSW or federal government funding.
- 18 Oct 2015 Canberra Times article on the survey they conducted on light rail, with more than 7,000 people participating. 49% of respondents thought that Canberra needs light rail. 49% of respondents supported a possible extension to Russell, suggesting there is support to extend the network.
- 19 Oct 2015 Canberra Times article that claims that light rail is an election vote changer, with 70 per cent of people participating in their survey indicating it would influence their vote at the 2016 election.
- 20 Oct 2015 Canberra Times article that Opposition Leader Jeremy Hanson will do everything he can to stop light rail in Canberra.
- 26 Oct 2015 2CC, 666 and 104.7 radio and the Canberra Times announced that a light rail network plan for Canberra has been released for public comment. The ACT Minister for Planning, Mick Gentleman, was interviewed by Mark Parton on 2CC radio.
- 18 Nov 2015 Canberra Times article indicating that light rail could improve public health if planned properly. The article highlights the views of Mark Fenton, a leading US academic.
- 22 Dec 2015 Canberra Times article about ACT Light Rail submission to the Government advocating that stage two of the network should link Parliament House.
- 2 Feb 2016 Canberra Times article highlighting the announcement of Canberra Metro to build Stage 1 between City and Gungahlin. The article also provides details on the Spanish designed trams that will run on the network.
- 2 Feb 2016 An article in the Political ACT highlights that Alistair Coe will cancel light rail contracts regardless of the cost involved.
- 17 Feb 2016 Canberra Times article highlighting that Canberra's light rail project is on Infrastructure Australia's national priority list.
- 22 Feb 2016 Canberra Times article focusing on the Russell extension of Capital Metro Stage 1 and how the ACT Government is seeking Federal Government funding.
- 21 Mar 2016 Canberra Times article about the planned removal of trees along Northbourne Avenue ahead of the construction of Stage 1 Capital Metro.
- 23 Mar 2016 Canberra Times article indicating that Chief Minister Barr announced that

- the government has shelved a possible extension of the light rail to Russell until after the October election.
- 5 Apr 2016 Canberra Times article on the Grattan Institute's report which criticised the Light Rail Stage 1 Business Case suggesting that the Government substantially over-estimated the economic benefits of the project.
- 5 Apr 2016 Canberra Times article highlighting the Government's release of two independent expert reviews on the light rail business case which concluded it was sound, robust and provided a reasonable estimate of its impact.
- 7 June 2016 Canberra Times articles on the budget, which included that Chief Minister Andrew Barr committed to showing Canberrans the full plan for stage two prior to the October election.
- 7 June 2016 Canberra Times article about Chief Minister Andrew Barr saying the Territory can afford light rail.
- 21 July 2016 Canberra Times and City News articles about possible Canberra light rail extensions to build in the next term of government
-

Media releases

- 29 April 2014 – Minister Corbell – announcement of successful consultant for Light Rail Master Plan
- 19 Oct 2015 – Minister Corbell – comprehensive surveys show sustained support for light rail in Canberra
- 26 Oct 2015 – Minister Barr – launch of the Light Rail Network plan public consultation
- 27 Oct 2015 – Minister Barr – Transport Canberra: one agency, one ticket, one network
- 22 Feb 2016 – Minister Gentleman – Light Rail Network opportunities highlighted by Tucson Business Community
- 22 Mar 2016 – Minister Barr – Russell to be considered as part of stage two of light rail network
- 21 July 2016 – Minister Fitzharris and Minister Gentleman – Canberrans have their say on future of public transport
- 21 July 2016 – Alistair Coe MLA – Light rail extensions: Billions of dollars for slower transport
-

Further information

Sch 1 1.6

Sch 1 1.6

Ministerial correspondence to Opposition MLAs

Freedom of Information request for all documents relating to light rail