INFRASTRUCTURE COMMITTEE MEETING

AGENDA

16 MAY 2017

Your attendance is required at a meeting of the Infrastructure Committee to be held in the Council Chambers, 232 Bolsover Street, Rockhampton on 16 May 2017 commencing at 12.30pm for transaction of the enclosed business.

CHIEF EXECUTIVE OFFICER
9 May 2017

Next Meeting Date: 20.06.17

Please note:

In accordance with the *Local Government Regulation 2012*, please be advised that all discussion held during the meeting is recorded for the purpose of verifying the minutes. This will include any discussion involving a Councillor, staff member or a member of the public.

TABLE OF CONTENTS

1 OPENING

2 PRESENT

Members Present:

Councillor A P Williams (Chairperson)
The Mayor, Councillor M F Strelow
Councillor R A Swadling
Councillor N K Fisher
Councillor C E Smith
Councillor C R Rutherford
Councillor M D Wickerson

In Attendance:

Mr M Crow – Acting General Manager Regional Services (Executive Officer)
Mr E Pardon – Chief Executive Officer

3 APOLOGIES AND LEAVE OF ABSENCE

4 CONFIRMATION OF MINUTES

Minutes of the Infrastructure Committee held 18 April 2017

5 DECLARATIONS OF INTEREST IN MATTERS ON THE AGENDA

6 BUSINESS OUTSTANDING

6.1 BUSINESS OUTSTANDING TABLE FOR INFRASTRUCTURE COMMITTEE

File No:	**10097**
Attachments:	**1. Business Outstanding Table**
Authorising Officer:	**Evan Pardon - Chief Executive Officer**
Author:	**Evan Pardon - Chief Executive Officer**

SUMMARY

The Business Outstanding table is used as a tool to monitor outstanding items resolved at previous Council or Committee Meetings. The current Business Outstanding table for the Infrastructure Committee is presented for Councillors' information.

OFFICER'S RECOMMENDATION

THAT the Business Outstanding Table for the Infrastructure Committee be received.

BUSINESS OUTSTANDING TABLE FOR INFRASTRUCTURE COMMITTEE

Business Outstanding Table

Meeting Date: 16 May 2017

Attachment No: 1

Date	Report Title	Resolution	Responsible Officer	Due Date	Notes
21 June 2016	Webber Park Preliminary Drainage Investigation	THAT Council take the following action: a) proceed to preliminary design and cost estimating for Stages 1B and 1A of the Webber Park Drainage Scheme; b) include the Webber Park Drainage Scheme in the Stormwater Project Prioritisation process and list for consideration for future capital budgets; c) enter into discussions with members of the public directly impacted by the proposed Webber Park Drainage Scheme; and d) advise interested residents of the results of the preliminary investigation and the actions being undertaken in accordance with the recommendations above.	Martin Crow	05/07/16	AECOM are currently progressing the preliminary design works. The Webber Park drainage scheme has been prioritised and stages 1A and 1B have been included in the forward works program. Preliminary discussions have taken place with the Bluebirds Sports Club management representatives. A draft planning report has been provided to Council Officers to review. A consultation strategy is to be developed on finalisation of the planning report.

19 July 2016	Updated Fitzroy River Flood Mapping	THAT Council: 1. Adopt the attached Fitzroy River Flood Maps; 2. Incorporate the attached Fitzroy River Flood Maps into the proposed Major Amendment of the Rockhampton Region Planning Scheme; 3. Review planning and development controls in the North Rockhampton Flood Management Area during the proposed Major Amendment of the Rockhampton Region Planning Scheme; 4. Make the attached Fitzroy River Flood Maps available on Council's web site and communicate them to the Insurance Council of Australia; and, 5. Recognise the North Rockhampton Flood Management Area in Council's Flood Searches and Planning and Development Certificates.	Angus Russell	02/08/16	Awaiting adoption of major amendment by Council to implement revised mapping and planning controls. Maps are available on Council's website. Insurance Council has been contacted but awaiting return of nominated liaison officer before sending mapping to them. NR flood management area recognised in flood searches through manual correction. Automation to be pursued in future. Not available in planning certificates until major amendment is completed.
16 August 2016	Updated Splitters Creek Flood Modelling	THAT Council: 1. Adopt the Splitters Creek Flood Maps as attached to the report; 2. Incorporate the Splitters Creek Flood Maps attached to the report into the proposed Major Amendment of the Rockhampton Region Planning Scheme; and 3. Make the Splitters Creek Flood Maps available on Council's website and communicate changes to the Insurance Council of Australia.	Angus Russell	30/08/16	Awaiting adoption of major amendment by Council to implement revised mapping and planning controls. Maps are available on Council's website. Insurance Council has been contacted but awaiting return of nominated liaison officer before sending mapping to them. NR flood management area recognised in flood searches through manual correction. Automation to be pursued in future. Not available in planning certificates until major amendment is completed.

18 October 2016	Somerset Road Drainage	THAT Council proceed with negotiating the acquisition of land outlined in this report.	Angus Russell	01/11/2016	Both Council and DTMR have obtained property valuations and are currently discussing differences. Preliminary discussions have been held with Powerlink in relation to co-use of the electricity easement for the proposed detention basin. Negotiations are continuing with TMR with respect to the acquisition of the land.
14 February 2017	Transport and Main Roads Project Update	THAT Council invite the Department and Main Roads to an upcoming Council meeting to present on projects within the Rockhampton Region.	Martin Crow	28/02/2017	Arrangements have been made for TMR representatives to attend the Council meeting on 23rd May 2017.
14 March 2017	Bus Stops Compliance with Disability Discrimination Act 1992	THAT the update on the Bus Stop Disability compliance program be received; and THAT an additional report be presented to the Infrastructure Committee on the Bus Stop Shelters program and its implementation.	David Bremert	28/03/2017	Subject to Council budget process.

7 PUBLIC FORUMS/DEPUTATIONS

Nil

8 OFFICERS' REPORTS

8.1 ROAD SAFETY STRATEGY REVIEW 2017

File No:	**5252**
Attachments:	**1. Road Safety Action Plan** **2. Road Safety Data Analysis 2011-2015**
Authorising Officer:	**Martin Crow - Manager Engineering Services** **Peter Kofod - General Manager Regional Services**
Author:	**Stuart Harvey - Coordinator Strategic Infrastructure**

SUMMARY

This report contains a progress report from the Rockhampton Regional Road Safety (3E) Committee on the implementation of the Rockhampton Regional Road Safety Strategy 2012 – 2022 for the period concluding April 2017. It also highlights future priority areas for action based on a revised crash profile.

OFFICER'S RECOMMENDATION

THAT the progress report from the Rockhampton Regional Road Safety (3E) Committee for the period concluding April 2017 be received.

COMMENTARY

The *Rockhampton Regional Road Safety Strategy 2012 – 2022* outlines the shared road safety priorities under the four elements of the 'Safe System' model (which is the nationally accepted framework for road safety delivery):

- Safe road users;
- Safe roads and roadsides;
- Safe speeds; and
- Safe vehicles.

This progress report (as at April 2017) comprises two sections: (i) a report card against the Action Plan for local road safety delivery; and (ii) a revised crash profile to ensure that future road safety delivery aligns with known crash trends.

The Action Plan (report card), see Road Safety Action Plan attached, describes the steps to be taken by the Regional Road Safety (3E) Committee and partner agencies (ie. Media, community groups, etc.) to address the regional priorities identified in the Strategy. The Plan captures the following information:

- Strategy item (under each of the four 'Safe System' elements);
- Localised actions (with the lead agency specified);
- Priority (high, medium, low);
- Timeframe for delivery (short, medium or long-term);
- Intermediate and outcome measures (how delivery and impact will be measured); and
- Evaluation (Report card) – a field for the Regional Road Safety (3E) Committee to document performance at a process and outcome level periodically.

The 'Intermediate and Outcome Measures' and 'Evaluation (Report Card)' has been populated by the Regional Road Safety (3E) Committee to reflect progress towards the implementation of the actions within the Strategy as at April 2017.

This Action Plan is intended to be a "living document" which can be presented to any level of government or the community at any time, thus achieving our transparency objective and minimising reporting.

The updated crash profile report (see Road Safety Data Analysis 2011-2015 attached) reviews the crash data from 2011-2015 to understand any changes to the crash profile within the region. Comparisons are made between the profile in the RRC area and state wide averages, as well as a comparison to the previous data analysis period (2005-2010). Based on these comparisons, recommendations are made with regards to the focus of future road safety delivery in the area ensuring that it aligns with ongoing and emerging issues.

The initial data profiling (data from 2005-2010) underpinning the development of the strategy examined both 'all crashes' and 'serious injury crashes'. Subsequent changes to reporting processes, means that less serious crashes (property damage only) are no longer reported to police. Therefore, the current review examines 'serious injury' crashes only.

BACKGROUND

Rockhampton Regional Council adopted the *Rockhampton Regional Road Safety Strategy 2012 – 2022* in November 2012 and associated Action Plan in June 2013. The Strategy outlines shared road safety priorities for stakeholder agencies based on consultation, a comprehensive analysis of crash trends, and an understanding of local transport needs.

The Strategy also provides a governance framework that increases the strategic focus of the Regional Road Safety (3E) Committee to better facilitate cross-agency decision-making and delivery in the road safety domain.

This report provides an update on implementation against the Action Plan, as well as an updated crash profile to inform future priority areas.

PREVIOUS DECISIONS

Rockhampton Regional Council adopted the *Rockhampton Regional Road Safety Strategy 2012 – 2022* in November 2012 and the associated Action Plan in June 2013.

BUDGET IMPLICATIONS

Initial funding for the road safety strategy was shared between the Roads Alliance (through the Department of Transport and Main Roads) and the Rockhampton Regional Council as the member Council of the Rockhampton Regional Road Group. This project was allocated funding in previous budgets.

RISK ASSESSMENT

The Rockhampton Regional Council Road Safety Strategy 2012 – 2022 will assist Council and State Government Departments in their partnership approach to reduce the number of casualty and fatality crashes within the Rockhampton Regional Council area.

CORPORATE/OPERATIONAL PLAN

The development of the Road Safety Strategy clearly supports the Community Plan Action Link 1.1.1 Prioritise road safety in the Region which is outlined in the Rockhampton Regional Council Corporate Plan 2012-2017.

The Rockhampton Regional Council 2012-2013 Operational Plan requires the development of a Regional Road Safety Strategy within Action 3.1.1.8.

CONCLUSION

This report includes a progress update on the Road Safety Action Plan, a subsequent analysis of crash data and revised crash profile for the period of 2010-2015. The report illustrates the aspects of the strategy that the Regional Road Safety Committee (3E) have progressed, the issues requiring further focus and any new road safety issues that have been identified and need to be addressed.

ROAD SAFETY STRATEGY REVIEW 2017

Road Safety Action Plan

Meeting Date: 16 May 2017

Attachment No: 1

ROCKHAMPTON REGIONAL COUNCIL

ROAD SAFETY ACTION PLAN

ROADSAFETY

IPWEAQ

Rockhampton Regional Council

Queensland Government

COMMUNITY PARTNERSHIP PROGRAM
INITIATIVE SUPPORTED BY THE ROADS ALLIANCE

May 2017

Introduction

Rockhampton Regional Council (RRC) adopted the Rockhampton Regional Road Safety Strategy 2012 – 2022 in November 2012. The development of the Road Safety Strategy is central to RRC's Corporate and Operational Plans and formalises the partnership between state and local government in their joint quest to reduce road trauma.

The Strategy recently received a commendation at the National Local Government Awards for 'Excellence in Road Safety' and has support from all levels of government and community. Committed to a "one network" philosophy, it outlines shared road safety priorities for stakeholders in the region based on consultation, a comprehensive analysis of crash trends, and an understanding of local transport needs.

In line with the nationally accepted framework for road safety delivery, priorities are tabled in the Strategy under each of the four elements of the 'Safe System' model:

- Safe road users;
- Safe roads and roadsides;
- Safe speeds; and
- Safe vehicles.

Based on international best practice, the Strategy also provides a governance framework that increases the strategic focus of the Regional Road Safety (3E) Committee to better facilitate cross-agency decision-making and delivery in the road safety domain.

While the primary aim of the Strategy is to reduce road trauma by 30 percent, in line with the National target; it is hoped that through evidence-based action and resource allocation, the intermediate measures will be achieved as precursors to road trauma reduction.

This Action Plan describes the steps to be taken by the Regional Road Safety (3E) Committee and partner agencies over the coming years to address the regional priorities identified in the Strategy. The Plan captures the following information:

- Strategy Item - under each of the four 'Safe System' elements;
- Localised Actions - with the lead agencies specified;
- Priority - high, medium, low;
- Timeframe for Delivery - short, medium or long-term;
- Intermediate and Outcome Measures - how delivery and impact will be measured; and
- Evaluation (Report Card) - a field for the Regional Road Safety (3E) Committee to document performance at a process and outcome level at six-monthly intervals.

Rather than developing several Action Plans throughout the life of the Strategy, this will be a "living document" which can be presented to any level of government or the community at any time, thus achieving our transparency objective and minimising reporting.

Abbreviations

RRC – Rockhampton Regional Council

TMR – Transport and Main Roads

QPS – Queensland Police Service

PCYC – Police Citizen's Youth Club

LIAG – Liquor Industry Accord Group

CARRS-Q – Centre for Accident Research & Road Safety - Queensland

Legend

High Priority

Medium Priority

Low Priority

SAFE ROAD USERS

	Strategy Items	Actions (Agencies)
1	Ongoing road safety education focusing on key causal factors in road crashes. Initial priority areas include: • Sharing the road (pedestrians, motorcyclists, cyclists, wide loads); • 50km/h urban default speed limit compliance; • Basic give way and stop compliance. • Dangers of the Fatal 5 (fatigue, alcohol, speed, seatbelts, distraction) and proven strategies to reduce risk.	Develop and deliver public education campaigns addressing primary contributors to crashes in the region through appropriate media to maximise exposure with target road user groups. (TMR, QPS, RRC, Media) Identify and capitalise on opportunities to increase awareness and promote safe road user behaviours at local community events and through customer service outlets. (All Agencies)
2	Engaging young road users in the development and marketing of road safety initiatives for their peers.	Partner with relevant local media to work with local youth to capture their road safety ideas and develop them into mainstream campaigns - based on a "mates protecting mates" philosophy shown to have positive results in other areas of health promotion with youth. (TMR, PCYC, Schools, Media) Explore the utility of using social media to market positive road safety attitudes and behaviours to youth. (RRC ,TMR)
3	Linking disadvantaged youth with community networks to support them through the licensing process.	Deliver tailored road safety and licensing sessions for at-risk and disadvantaged youth on a monthly basis. (TMR, PCYC, Job Network Agencies) Trial a Learner Driver Mentor Program and capitalise on other local opportunities/networks to improve access to supervised driving experience for at-risk youth to support them through the Graduated Driver Licensing Process. (TMR, PCYC, Job Network Agencies, Local Volunteer Groups)
4	Supporting legislation and local enforcement strategies to address illegal behaviours (eg. hooning, drink/drug driving, speeding, etc.).	Interrogate data across agencies and utilise local intelligence to better inform enforcement scheduling targeting illegal road user behaviours. (QPS, TMR) Deliver an overt and covert enforcement problem targeting problem behaviours and scheduled in accordance with best practice specific and general deterrence principles. (QPS, TMR) Trial innovative enforcement technologies to target specific road user, user groups and behaviours. (QPS, TMR)
5	Promoting alternative transport options (eg. public transport, courtesy buses, taxis) to minimise exposure at high-risk times for alcohol-related crashes.	Develop a strategy to market the availability of public and vendor-provided transport options through licensed premises. (LIAG, RRC, TMR)
6	Linking Seniors networks with appropriate road safety information sources.	Deliver road safety information sessions to Seniors through local pensioner forums/networks. (All Agencies) Disseminate transport and road safety related information to Seniors through local media and customer service outlets. (All Agencies)
7	Working in partnership with industry to increase fleet and heavy vehicle safety and compliance with Chain of Responsibility legislation.	Systematically distribute educational information and legislative changes regarding compliance, fatigue management and other road safety issues through industry and commercial networks. (TMR) Develop and deliver tailored road safety and compliance education sessions (including Chain of Responsibility obligations) to industry and large commercial fleets. (TMR)

Priority	Time frames	Intermediate and Outcome Measures	Evaluation (Report Card)
	Short term Short term	• Road safety education priorities identified based on regional crash profile. • Annual media schedule developed and implemented. • Increased road safety promotion through community events and customer service outlets.	• Continued implementation of the '50k in My Street' wheelie bin sticker program in residential streets with a known speed issue supported by local promotion of the urban default limit. • Regular media releases from QPS and DTMR to coinside with statewide 'Join the Drive' Campaigns. Additional branding opportunities being explored through RRC and TMR's social media networks. • Active cross-agency involvement in Fatality Free Friday, Queensland Road Safety Week and other statewide campaigns (for example, Back to School).
	Medium term Medium term	• Increased engagement of youth in local road safety delivery. • Increased road safety promotion through social media.	• TMR road safety campaign launched through Cusomter Service Centres - photo competition encouraging social media using hashtags at key holiday periods - #StaysafeonCQroads. • Targetted enforcement strategies implemented at key holiday and peak travel times. • School-based road safety sessions delivered by TMR subject to capacity. • 'Join the Drive' resource kit developed for impmentation through local government networks by early 2017.
	Short term Long term	• Road Safety & Learner Licensing workshops delivered through PCYC network. • Learner Driver Mentor Programs implemented and patronised.	• Road Safety & Learner Licensing workshops delivered monthly as per schedule with PCYC (pass rate > 80% with more than 200 participants annually). • 'Driving to Engage' Learner Driver Mentor Program continues to operate with a target audience of single parents.
	Medium Term Short Long term	• Enforcement targetted at high risk times, locations and behaviours.	• Increased focus on drug testing based on emerging trends (for example, OPS Operation Stopper conducted between Friday 16/12/16 to Saturday 17/12/16 involving RBT/license check/car check/drug testing). • Increased focus on joint operations between QPS and TMR compliance (e.g Operation Firefox, where both agencies and the federal immigration department targeted unlicensed driving among itinerant workers).
	Long term	• Public transport and courtesy bus catchment areas identified and actively promoted as a drink driving countermeasure.	• Courtesy bus use promoted locally as an option through 'Join the Drive' branding but alcohol management at licensed venues largely being manged through liquor licensing policy.
	Medium term Medium term	• Increased awareness among seniors regarding road rules information and medical reporting requirements.	• QPS undertaking a proactive role in educating elderly drivers or drivers affected by medical conditions of their obligations to inform the Medical Condition Reporting Unit at TMR. • TMR and QPS present to seniors forums on request, subject to availability. • Nomad Afternoon Teas (NATer sessions) are periodically conducted with tourists at rest areas focusing on safe towing, sharing the road with heavy vehicles, fatigue management and trip planning.
	Medium term Medium term	• Industry-based education delivered on fatigue management, Chain of Responsibility legislation and incoming National Heavy Vehicle Regulator (NHVR) requirements.	• Local TMR Compliance Officers and RRC and LSC representatives trained in the new NHVR requirements. • Roadside 'Truckie Toolbox Talks' and industry workshops strategically being held throughout Central Queensland as an education strategy.

SAFE VEHICLES

	Strategy Items	Actions (Agencies)
1	Ensuring safety is a primary consideration in vehicle choice for local and state government fleets, with a view to these vehicles filtering into the mainstream fleet.	Review current purchasing policy across government agencies regarding fleet vehicle choice and influence decision-makers to ensure that safety is a primary consideration. (All Agencies)
2	Adopting best practice fleet management policy in local and state government.	Identify best practice fleet management policy through credible research and practitioner sources. (TMR) Positively influence fleet management policy across local and state government departments and their partner agencies. (All Agencies)
3	Supporting enforcement to increase compliance with road worthiness requirements for both light and heavy vehicles.	Review current compliance enforcement regimes undertaken by TMR and QPS to determine processes working well and opportunities for improvement (TMR, QPS) Improve the scheduling of compliance enforcement by developing a delivery model that: (i) is informed by relevant available data (crash trends, vehicle movements, local intelligence); (ii) is based on proven specific and general deterrence principles; and (iii) capitalises on cross-agency opportunities (joint operations). (TMR, QPS)
4	Promoting the ANCAP system to the public to influence vehicle choice and purchasing.	Develop and deliver a public awareness campaign designed to educate motorists on the ANCAP system (vehicle safety ratings) and promote safe vehicle choice and purchasing. (RACQ, TMR, RRC, Media)

Priority	Time frames	Intermediate and Outcome Measures	Evaluation (Report Card)
	Medium term	• Optimal fleet safety purchasing policy in place across local and state government agencies.	• Fleet safety purchasing policies in accordance with ANCAP best practice.
	Long term Long term	• Optimal fleet safety management practices in place across local and state government agencies.	• Not progressed to date. TMR currently developing a series of road safety toolbox talks to be disseminated through partner agencies including RRC.
	Short term Medium term	• Increased use of local data and industry intelligence to inform enforcement initiatives. • Cross agency compliance operations conducted targetting high risk behaviours.	• Traffic volumes and daily profiles, including speed compliance data, being used to inform enforcement scheduling to improve heavy vehicle compliance. Targetted joint QPS-TMR operations are scheduled on a monthly basis focusing on known or emerging trends. • TMR Compliance Officers regularly conducting industry safety information sessions based on local intelligence generated through partner agencies.
	Medium term	• Media article developed on safe vehicle choice for local dissemination.	• RACQ continue to play the lead role in promoting safe vehicle choice and purchasing through the media and associated networks. TMR's 'Join the Drive' resource kit also provides information on safe vehicle choice.

SAFE ROADS AND ROADSIDES

	Strategy Items	Actions (Agencies)
1	Prioritising road safety audits at locations with previous crash history and sections of the network with greatest potential risk (identified through Netrisk) to inform 'fit-for-purpose' treatments.	Identify sites/locations on the network with a crash history (using the Road Safety Interactive Mapping tool) or potential risk (using Netrisk) to determine local priorities for road safety audits. (TMR, RRC) Conduct road safety audits of priority sites/locations and analyse 'crash nature' (DCA codes) to inform appropriate treatments. (TMR, RRC)
2	Conducting road safety audits at the design phase of projects to ensure networks adequately warn, inform, guide, control and forgive road users.	Road Safety Audits to be incorporated into the design stages of capital projects. (RRC, TMR) Consider pedestrians and cyclists in each stage of the design process in infrastructure developments. (RRC, TMR) Evaluate completed projects to assess effectiveness and safety improvements. (RRC, TMR)
3	Improving intersection and street-scape design to increase compliance with the urban default speed limit and give way and stop controls.	Identify intersections on the network with a with a trend of 'hit angle' and 'rear end' crashes and investigate treatments to improve give way and speed compliance. (RRC,TMR) Progressively implement Council's 'Living Streets' retrofitting policy to separate carriageways, reduce lane width and increase connectivity. (RRC)
4	Continuing commitment to 'Complete Streets' which aims to reduce speeds and accommodate all modes in residential areas through innovative street-scaping, road design and appropriate infrastructure.	Progressively implement the statewide 'Complete Streets' program to ensure that all residential developments consider future transport safety, capacity and amenity needs, including public transport access, separation of modes, traffic calming and control. (RRC) Information to be shared with developers regarding transport and safety requirements for proposed developments. (RRC, TMR)
5	Encouraging sustainable transport by prioritising pedestrians and cyclists in the design process (eg. Principal Cycle Network Plan) and increasing protection for vulnerable road users at high-risk locations (ie. schools, licensed premises).	Implement Council's 'Active Transport Plan' and TMR's 'Principal Cycle Network Plan' which identify streets on which pedestrian and cyclist facilities need to be incorporated into future Capital Works programs. (RRC, TMR) Provide protection for pedestrians and cyclists at high-risk locations through separation of modes. (RRC, TMR) Promote active transport modes in areas characterised by congestion, as alternative to additional infrastructure. (RRC, TMR)
6	Striving for consistency in pavement marking and signage across the entire network.	Identify and share inconsistencies in linemarking, signage and other infrastructure treatments and retrofit accordingly. (RRC, TMR) Identify and share best practice and changes to standards to address deficiencies in the network. (TMR, RRC) Increase collaboration to improve consistency between agencies in relation to customer requests for infrastructure treatments. (All Agencies)
7	Maintaining road shoulders and providing appropriate clear zones.	Maximise shoulders and clear zones on high speed roads, particularly at sites with a history of 'run off road' crashes. (TMR, RRC)
8	Exploring opportunities for industry to support infrastructure development.	Identify and capitalise on any opportunities for industry to support infrastructure works (eg. the development and maintenance of rest areas and stopping places) and/or road safety delivery. (eg. Driver Reviver program) (TMR, RRC, Industry)
9	Maintaining rest areas and stopping places as a fatigue countermeasure.	Ensure amenities and roadside signage for rest areas are adequately maintained to encourage patronage. (TMR, RRC) Explore the possibility of upgrading and promoting stockpile sites and other informal stopping places as rest areas for heavy vehicles. (TMR) Audit the network to ensure that 3-2-1 guidepost reflectors are located to guide heavy vehicle drivers to stopping places and rest areas. (TMR) Coordinate Driver Reviver and explore the possibility of expanding the programs to include Tourist Information centres as proxy sites. (TMR, RRC)

Priority	Time frames	Intermediate and Outcome Measures	Evaluation (Report Card)
 	Short term Medium term	• Sites/locations identified and prioritised for investigation. • Sites investigated for appropriate treatments. • Sites treated. • Evaluation (time series).	• Blackspot, Safer Roads Sooner and Bridge Renewal Program funding submissions continue to be informed by regular crash profiling and cross-agency intelligence. • Road safety audits continue to be conducted at fatal crash sites and 'crash clusters' to identify appropriate treatments (with BCR calculations) to inform funding submissions and future works program planning.
	Long term Medium term Medium term	• Design procedures modified. • Evaluation process developed and tested.	• Increased emphasis on road safety auditing prior to the commencement of major projects (for example, North Street bicycle lanes). • Development Assessments examined by both state and local government with a focus on catering for vulnerable road users.
	Medium term Long term	• Sites investigated for appropriate treatments. • Pilot sites evaluated. • Policy adopted. • Suitable streets identified for future implementation.	• Current investigation on effectiveness of existing blackspot funded intersections to be completed by RRC staff. Information will inform future applications. • Implementation of CBD revitalisation project and street scaping manual to increase connectivity and amenity in the CBD. • Current investigation into costs associated with implementing street scaping projects in wide residential streets.
	Long term Medium	• Complete streets checklist developed. • Info sheet and checklist developed.	• Continued push with developers to adopt Complete Streets typologies and employ LATM treatments in new developments. • Continued promotion of best practice for public transport facilities in new developments.
	Long term Medium term Long term	• Council endorsement of draft PCNP. • TMR finalisation of PCNP. • TMR funding for cycling infrastructure outside of SEQ. • High risk sites for pedestrians and cyclists identified.	• RRC and TMR have developed a PCNP and have prioritised particular routes and cycling corridors throughout the Rockhampton region. The routes classified as very high priority have been analysed and concept designs have been developed for inclusion in future submissions. • RRC have developed a 10 year Capital Works Program Cycleway beginning in 2016. Moores Creek Road (Yaamba Road to Norman Road) and Norman Road (Yeppoon Road to Moores Creek Road) are scheduled for 2016 - 2017 financial year. • Councils Active Transport Plan has been completed and is pending Council endorsement. This plan outlines a strategy to address future footpath and cycleway construction needs
	Medium term Medium term Medium term	• Inconsistencies identified and treated accordingly.	• Inconsistencies in line marking, signage and infrastructure treatments continue to be shared through the Regional Road Safety (3E) Committee. • Joint decision-making and correspondence continue to be provided through the 3E Committee to ensure consistency and reduce duplication. • RRC to progress review of CMDG D1 Road Design standards to ensure best practice is adopted for future development. • Recent implementation of vehicle-activated queing signage to reduce rear-end crashes on both bridges. • Implementation of the Yeppen controflow crossing to improve access from the south of Rockhmapton in a flood event and associated diversions.
	Long term	• Potential hazards minimised on high speed roads.	• Continued commitment to maintain clear zones to meet minimum visibility standards on high speed roads. • Wide Centreline Treatment implemented at locations with a history of 'head-on' crashes and integrated into widening and maintenance upgrades where appropriate. Early evaluations are showing positive crash reductions.
	Long term	• Industry engaged to support local infrastructure works to increase safety.	• Rest Areas & Stopping Places (RASP) Master Plan developed through a partnership between TMR and the Road Accident Action Group (RAAG) - joint government and industry sponsorship has resulted in several key freight routes servicing RRC area. • Driver reviver continues to operate on school and public holidays at the Yaamba rest area (north of Rockhampton).
	Short term Long term Medium term Long term	• Improved fatigue management and promotion of the rest area opportunities on the regional network.	• TMR currently auditing amenities at designated rest areas across the CQ network for upgrade/improvement. • TMR, in partnership with RAAG, have identified informal stockpile sites which are suitable as stopping places with minimal works. • 3-2-1 reflectors being rolled out across the Central Queensland network to highlight rest areas for heavy vehicles. • Alternative delivery models for Driver Reviver being investigated by TMR to increase involvement from the industry and tourism sectors.

SAFE SPEEDS

	Strategy Items	Actions (Agencies)
1	Adopting a cross-agency approach (through the 3E governance model) to ensure coordination of enforcement, education and engineering approaches to speed management and the setting of consistent and forgiving speed limits.	Increase local focus on effective speed management (in line with the National direction) and reintegrate Speed Management Advisory Committee (SMAC) processes into both the strategic and operational workings of the 3E Committee. (RRC, TMR, QPS)
2	Reducing speed limits in areas with high levels of pedestrian and cyclist activity.	Proactively review the network to identify sections overrepresented by speed-related crashes for possible treatment or speed limit reduction. (RRC, TMR) Identify and trial low-cost speed management treatments at suitable locations in rural and urban environments. (RRC, TMR, ARRB) Identify areas/precincts with a demonstrated crash history and/or high levels of exposure for pedestrians or cyclists for possible treatment. (TMR, RRC) Create a speed zone hierarchy which reflects the usage, condition and function of the network, including lower speed limits in CBD areas to reduce both the incidence and severity of crashes involving vulnerable road users. (RRC) Develop and run a sustained media campaign to raise community awareness of the urban and rural default speed limits and the importance of 'driving to the conditions' - *See also SAFE ROAD USERS*. (RRC, TMR)
3	Encouraging community acceptance of, and compliance with, urban and rural speed limits.	Identify and treat (where possible) sites where the environment is not congruent with the posted or recommended speed. (RRC, TMR)
4	Trialling technologies in the Region to support compliance with speed restrictions, including at road works sites.	Identify and trial innovative initiatives from other jurisdictions designed to increase knowledge of, and compliance with, speed requirements. (RRC, TMR) Conduct a program of applied research in the region to determine context-specific approaches to improve speed compliance and safety in roadworks sites (eg. signage configurations and layouts, end of queue technologies). (TMR, CARRS-Q) Continue the Volunteers in Police Speed Awareness Program to raise community awareness of reduced speed limits in school zones, identify signage deficiencies and inform enforcement scheduling. (QPS, TMR, Education Authorities) Identify schools with poor speed compliance for treatment under the State Government's Enhanced Signage Election Commitment. (TMR, RRC, Education Authorities)

Priority	Time frames	Intermediate and Outcome Measures	Evaluation (Report Card)
	Short term	• Speed Management Advisory Committee (SMAC) re-established.	• Speed Management Advisory Committee functions continues to be incorporated in 3E strategic business.
    	Medium term Long term Short term Medium term Short term	• Increased emphasis on Speed Limit Reviews. • Low cost speed management treatments trialled at appropriate locations. • Lower speed limits implemented in areas of high pedestrian and cyclist activity.	• Speed limit reviews continue to be conducted in the region in response to community enquiries and observations re: the geometry - reductions resulted in many cases supported by strong rationale. • Shared zone implemented as part of Riverbank Revitalisation on Quay Street from Fitzroy Street to William Street. Proposed design will create a pedestrian friendly environment and 20km speed limit will apply to support vulnerable road users.
	Long term	• Local network congruent with posted speed limits.	• Inconsistencies between speed limit and road environment/ function are identified through the 3E process with speed limits and traffic calming reviewed accordingly.
   	Long term Medium term Short term Medium term	• Multi-agency approaches and technologies trialled to improve speed compliance in high-risk areas.	• New TMR Guideline introduced providing a suite of recommendations to improve safety in roadworks zones. • Flashing lights program continues to be implemented in schools across Rockhampton and Livingstone Councils on a priority basis. • '50K in My Street' Wheelie Bin Sticker Project rolled out in selected RRC streets to remind drivers of the general urban default speed limit. A noticeable change in 85th% speed and percentage of vehicles exceeding the speed limit was recorded in streets where there was a large number of residents participating in the project. • Volunteers in Police Speed Awareness Program operates twice weekly to raise awareness of school zones and inform enforcement scheduling and Safe School Travel (SafeST) treatments.


NEXT
10km

ROAD SAFETY STRATEGY REVIEW 2017

Road Safety Data Analysis 2011-2015

Meeting Date: 16 May 2017

Attachment No: 2

ROCKHAMPTON REGIONAL COUNCIL

ROAD SAFETY STRATEGY

Data Analysis 2011- 2015

ROAD SAFETY

IPWEAQ

Rockhampton Regional Council

Queensland Government

COMMUNITY PARTNERSHIP PROGRAM
INITIATIVE SUPPORTED BY THE ROADS ALLIANCE

May 2017

The Challenge

Our population has grown and we own more vehicles; yet over the last 30 years the Queensland road toll has more than halved. This has been achieved through the successful implementation of evidence-based road safety policy and countermeasures targeting at-risk road users and behaviours (see Figure 1). Despite this, the estimated annual cost of road fatalities and injuries to the Queensland economy is $3.4 billion and the associated physical and emotional impacts are also immense. While fatality rates continue to steadily decrease, progress in reducing the number of serious injuries has not. Approximately 94 people are seriously injured on Australian roads each day.

The internationally recognised 'Safe System' approach requires "shared responsibility" and increased coordination across all elements of the transport system. Operationally, the 'Safe System' approach calls for a balanced system of safe speeds, safe roads and roadsides, safe vehicles and safe road users (see Figure 2). Small speed reductions have the greatest potential to reduce the severity of crashes. Research conducted by the World Health Organisation (WHO) highlighted that a 2km/h reduction in speed at 60km/h results in 9.7% reduction in fatal and serious injury crashes. Similarly, a 2km/h reduction at 100km/h results in a 5.9% reduction in fatal and serious injury crashes.

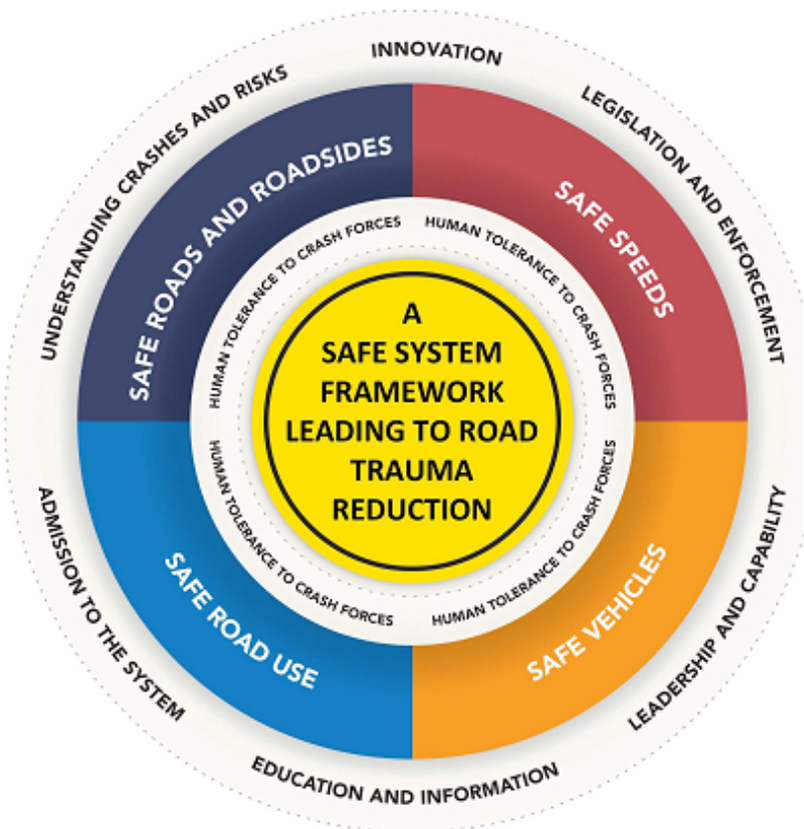


Figure 1: The 'Safe System' Model

Our network and road use

The total road network length for the Rockhampton Regional Council area is approximately 1978km excluding state-controlled roads (of which 840km are sealed). In addition, the Region has over 48km of designated cycle ways and 202km of pedestrian pathways.

Like the rest of the state, 92 percent of households own at least one vehicle, however, a significantly higher proportion of residents in our region rely on a vehicle to get to/from work (71.4%) compared to the state as whole (66.0%). Our heavy reliance on vehicles, coupled with the fact that two major highways (the Bruce and Capricorn) traverse the region, and are major freight routes for the mining and construction industry, presents particular road safety challenges for the region.

DATA SCOPE AND ANALYSIS

Road safety priorities tabled in the original Road Safety Strategy were informed by a comprehensive analysis of all crashes in the Rockhampton Regional Council area (including Livingstone Shire Council) for a period 01 January 2004 to 31 December 2010. Subsequent to this time, changes in the crash reporting process to Queensland Police Service have resulted in the omission of less serious crashes (property damage only) from official datasets. As such, the current data analysis exercise utilised 'serious injury' crashes only. Serious injury crashes are defined as crashes resulting in a fatality and/or hospitalisation.

The following crash profile draws on both causative data to pinpoint at-risk road users and crash data to highlight the dynamics and causal factors contributing to crash involvement. Comparisons with Queensland trends have been made to identify issues which are of particular importance to this region, as well as against historical trends.

Please note – the following data summary provides a snapshot only of 'who', 'what', 'where', 'when' and 'why' of serious road crashes in the region. A more detail breakdown of the crash profile can be obtained on request through the Regional Road Safety (3E) Committee.

Based on these comparisons, recommendations are made for the focus of future road safety delivery in the area to align with ongoing and emerging issues.

For data summary tables relating to contributing factors, the percentages are sometimes greater than 100% as there could be multiple factors at play.

THE TREND

In comparison to the crash data between the 1st January 2011 and the 31st December 2015, the number of serious injury crashes in the Rockhampton Regional Council area is trending downwards (see Figure 1).

The data shows the number of serious injury crashes in the Rockhampton Regional Council area has decreased from 173 in 2011 to 143 in 2015, while serious injury crashes for the entire state has decreased from 5242 to 5222 during the same period. The number of total crashes has had a large decrease from 2011, where 352 total crashes were recorded in the Region in 2011 and 257 total crashes was recorded in 2015.

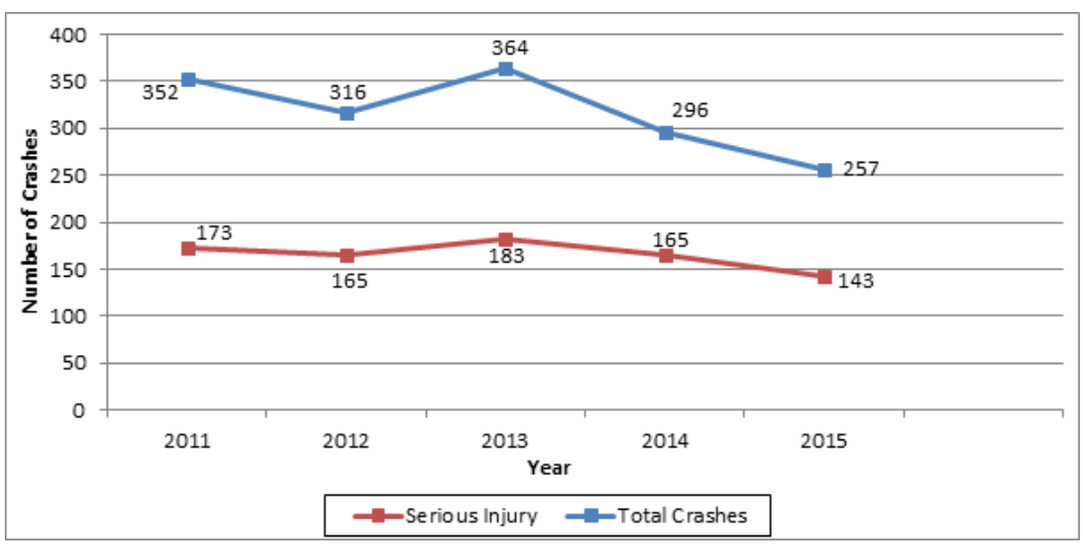


Figure 2: Trends for all crashes and serious injuries in the Rockhampton Regional Council Area, 2011 - 2015.

WHO? - At-risk road users

- Males are still the dominate sex involved in crashes in the region. Recent analysis shows that there are a higher proportion of female driver crashes in the region compared to State average (39.3% RRC, 35.9% QLD). There has also been an increase in number of crashes involving female drivers since the previous data profile (39.3% 2011 - 2015, 35.1% 2005 - 2010).
- Young drivers in the Rockhampton region between the ages of 16 to 24 years, remain a high-risk group with crashes involving young drivers above the State average (35.2% RRC, 31.9% QLD). Although young drivers continue to be a high risk – group, drivers aged between 30 and 39 years have been identified as the majority –group from the crash profile (18.9% 30 – 39 years old, 11.8% 16 – 20 years old, and 10.5% 21 – 24 years old).
- The crash profile for the Rockhampton Region follows the Queensland trend for vulnerable road user crashes. There has been a slight reduction since the previous crash profile for percentage of cyclist crashes (2.8% 2011 - 2015, 3.4% 2005 - 2010).
- The crash profile shows that the region has a higher percentage of heavy vehicle crashes compared to the State average (6.3% RRC, 5.6% QLD), but has remained constant with previous crash profile (6.3% 2005 -2010 RRC crash profile).

Table 1: Profile of units and at-risk populations

WHO?			
Description	**2011 -2015 RRC**	**2011 - 2015 State**	**2005 - 2010 RRC/LSC**
Mostly car/wagon crashes	64.1%	60.1%	59.9%
Heavy vehicle crashes	6.3%	5.6%	6.3%
Utility/panel van	15.2%	15.2%	16.3%
% males in crashes	60.7%	64.1%	64.9%
Young drivers (16 - 24 years)	35.2%	31.9%	36.3% (17-19 years)
Number pedestrian crashes	4.7%	4.2%	5%
Number of bicyclists crashes	2.8%	2.6%	3.4%

WHAT? – Crash nature

- The crash profile has shown that the Rockhampton Regional Council area has a serious issue with intersection related crashes (23% RRC, 13.2% QLD for intersections – from adjacent approaches). This crash profile follows the trend of the previous crash profile and enforces the need for further intersection management.
- A reduction in the percentage of 'hit object' crashes is shown in comparison to the previous crash profile (19.3% 2011 - 2015, 24.3% 2005 - 2010), but an increase in rear – end crashes is shown (16.4% 2011 - 2015, 10.7% 2005 - 2010).
- The current crash profile has shown the percentage of multi-vehicle crashes has increased since the previous crash profile and is far above the State average (58.7% 2011 - 2015, 49.3% 2005 - 2010, and 49.3% QLD). This is also reflected in the large percentage of angle crashes (36.1% RRC, 27.7% QLD).
- The crash profile has shown that the Rockhampton Region has more 'Hit Pedestrian' crashes in comparison to the State average (7.1% RRC, 6.6% State).

Table 2: Profile of crash nature

WHAT?			
Description	**2011 -2015 RRC**	**2011 - 2015 State**	**2005 - 2010 RRC/LSC**
% of multi-vehicle crashes	58.7%	50.6%	49.3%
% of single-vehicle crashes	32.8%	41.3%	42.2%
% of hit pedestrian crashes	7.1%	6.6%	7.2%
Common Crash Types			
• Angle	36.1%	27.7%	32.2%
• Hit object	19.3%	26.2%	24.3%
• Rear-end	16.4%	15%	10.7%
• Overturned	7.1%	6.4%	10.4%
intersection from adjacent approaches	23%	13.2%	17.7%

WHERE? – Crash locations

- The proportion of crashes occurring on locally-controlled roads (48.6%) versus state-controlled roads (51.4%) demonstrates more crashes are occurring on state – controlled roads in the Region. This shows a decrease in the number of crashes on locally – controlled roads since 2010 (51.3% 2005 – 2010).
- The percentage of crashes at intersections is large compared to the state (46.8% RRC, 39.2%), hence justifying again the need for improved intersection management. Cross – section intersections are shown as the major contributor to intersection crashes (27.3% RRC, 13.3% QLD), whereas crashes on T – intersections are less prominent (16.2% RRC, 19.3% QLD).
- In terms of traffic control, crashes were more likely to occur at 'operating traffic signals' (14.7% 2011 – 2015 RRC, 12.8% QLD, 9.5% 2005 – 2010 RRC) and less likely to occur at a 'roundabout' (2.9% 2011 – 2015 RRC, 3.8% QLD, 4.8% 2005 – 2010 RRC), demonstrating local problems with compliance and intersection layout.
- A geographical analysis of crashes on local government- controlled roads indicates that serious crashes were more likely to occur on wide roads, with some pedestrian activity, and where compliance with the 50km/h default speed limit in built up areas is poor.

Table 3: Profile of crash locations by roadway feature

WHERE?			
Description	**2011 -2015 RRC**	**2011 - 2015 State**	**2005 - 2010 RRC/LSC**
Crashes on locally controlled road	48.6%	52.4%	51.3%
Crashes at intersections	46.8%	39.2%	38.8%
Crashes located on T-intersections	16.2%	19.3%	13.6%
Crashes located on cross-intersection	27.3%	13.3%	19.8%
Crashes located on level road	84.3%	72.4%	79.4%
Crashes located on straight road	79.4%	72.5%	79.2%
In terms of traffic control, crashes were less likely to occur at 'operating traffic signals' and more likely to occur at a 'give way sign' or 'stop signs', demonstrating local problems with compliance with the basic tenets of the give way rule and the need for increased education and enforcement.			
Crashes were more likely to occur at:			
Intersection - roundabout	2.9%	3.8%	4.8%
Bridge, causeways	2.6%	1.7%	2.7%
Operating traffic lights	14.7%	12.8%	9.5%

WHEN? – Temporal characteristics

- The majority of crashes occurred on weekdays (76.9%) with slightly more crashes recorded on Thursdays and Fridays, possibly reflecting local demographics and travel patterns. This shows a slight increase in weekday crashes compared to previous crash profile (70.4%).
- The proportion of serious injury crashes occurring late at night or early morning (9pm – 4am) has decreased in the region since 2010 (17.1% 2005 – 2010 RRC, 12.5% 2011 – 2015 RRC). The crash profile also shows that the Rockhampton Region has fewer late night or early morning crashes in comparison with the State average (13% QLD).
- The afternoon peak for serious crashes has shifted from 4pm – 6pm to 2pm – 4pm between analysis periods; with the morning peak for serious crashes also shifting from 10am – 12pm to 8am – 10am. The morning peak has shifted to time periods that coincide with drivers travelling to work and school drop off times. The afternoon peak has altered from drivers travelling home from work to school pick up times. This crash profile demonstrates a need for improvement in school drop off/ pick up safety. Crashes are still occurring in the peak; however the crash profile is more closely aligned with school pick up and drop off times.
- Crashes were relatively evenly spread across all quarters of the year with the highest proportion in May (10.7%) and lowest proportion in December (4.5%).

The temporal profile of crashes (time of day, day of week and month of year) for the Rockhampton Regional Council area differs from the state trend.

Table 4: Profile of crashes by month, day of week and time of day

WHEN?			
Description	**2011 -2015 RRC**	**2011 - 2015 State**	**2005 - 2010 RRC/LSC**
Peak crash time of day	2pm - 4pm (15.5%) 8am - 10am (14.3%) 4pm - 6pm (13.1%) 6pm - 8pm (11.6%)	2pm – 4pm (14.5%) 4pm – 6pm (14.4%) 8am – 10am (11.4%) 10am – noon (11.2%)	4pm - 6pm (15.2%) 10am - noon (11.9%) 8am – 10am (11.2%) 2pm - 4pm (10.6%)
Peak crash day of week	Thursday (16.6%) Friday (16.2%) Tuesday (15.5%) Wednesday (15.4%)	Friday (16.1%) Saturday (14.9%) Wednesday (14.5%) Thursday (14.4%)	Friday (17.6%) Saturday (16.7%) Thursday (15.6%) Monday (13.2%)
Peak month of year	May (10.7%) July (9.7%) October (9.3%) November (9.3%)	May (9.4%) July (9.1%) August (9.1%) April (8.5%)	May (10.4%) July (9.6%) October (9.3%) November (9.1%)
% of crashes on weekdays	76.9%	72.3%	70.4%
Proportion of crashes occuring late at night (9pm - 4am)	12.5%	13%	17.1%

WHY? – Causal factors

- Driver behaviour related crashes in the Rockhampton Regional Council area remains consistent with State average (62.53% RRC, 59.61% QLD). Crashes related to drivers failing to give way or stop at a stop sign has not only remained above the State average (23.7% RRC, 14.8% QLD), but has increased since 2010 (13.8% 2005 – 2010 RRC).
- Driver fatigue related crashes has decreased since 2010 (6% 2011 – 2015 RRC, 10.5% 2005 – 2010 RRC) and the Rockhampton Regional Council area is less likely to have fatigue related crashes compared to State (6% RRC, 7.3% QLD).
- In 4% of serious injury crashes in the Region, the casualties were not restrained, compared to 4.8% for the state. The previous crash profile showed that 8.5% of serious crashes were not restrained, demonstrating an improvement in seatbelt compliance since 2010. To ensure good compliance is maintained, restraint promotion must remain a priority.
- Compliance with helmet laws among crash victims in the Region was relatively high for both motorcyclists (92.9% RRC, 95.4% QLD) and cyclists (84.6% RRC, 88.7% QLD). A comparison with the previous crash profile has shown a decrease in helmet compliance since 2010, reiterating the need for helmet compliance to remain as a priority.
- The crash profile shows that the Rockhampton Region has fewer crashes involving alcohol or drugs then the State average (14.7% RRC, 15.6% QLD).
- The crash profile showed that the Rockhampton Region has more crashes related to environmental factors compared to state average (16.7% RRC, 23.7% QLD), but fewer crashes related to vehicle defects (1% RRC, 2.3% QLD).

Table 5: Key comparisons between current RRC and state trends

WHY?			
Description	**2011 -2015 RRC**	**2011 - 2015 State**	**2005 - 2010 RRC/LSC**
% of driver behavioural crashes	62.53%	59.61%	-
Crashes involving drivers failing to give way or stop	23.7%	14.8%	17.8%
Crashes involving fatigued drivers	6%	7.3%	10.5%
% of crash causalities that were not restrained	4%	4.8%	8.5%
Compliance with helmet laws - Motorcyclists	92.9%	95.4%	96.7%
Compliance with helmet laws - Bicyclists	84.6%	88.7%	89.6%

Table 6: Profile of contributing factors to better understand causation

WHY?							
Crash - contributing factors	**2011**	**2012**	**2013**	**2014**	**2015**	**Total**	**%**
Alcohol/drug related	13	20	26	8	18	85	14.7%
Drink driving - Illegal BAC	11	12	16	5	9	53	9.2%
Drink walking - pedestrian any BAC	1	1	2	1	1	6	1.0%
Fatigue related	8	6	5	8	8	35	6.0%
Speed related - Driver	6	4	5	4	6	25	4.3%
Fail to give way or stop	32	19	29	39	18	137	23.7%
Disobey traffic light/sign	6	4	8	8	3	29	5.0%
Disobey road rules - Other	52	45	54	50	46	247	42.7%
Distracted	13	16	17	15	17	78	13.5%
Other driver conditions	23	19	21	15	11	89	15.4%
Total driver related causes	165	146	183	153	137	784	
Drivers/rider (aged 16 to 24 years)	50	38	44	42	30	204	35.2%
Drivers/riders (aged 60 years or over)	29	23	20	34	23	129	22.3%
Unlicensed driver/riders	8	13	6	11	9	47	8.1%
Unregistered motor vehicles	2	6	5	4	4	21	3.6%
Atmospheric conditions	2	2	2	0	0	6	1.0%
Rain/wet/slippery conditions	6	5	5	4	3	23	4.0%
Road condition	5	9	10	8	5	37	6.4%
Lighting condition	3	5	6	9	4	27	4.7%
Total road related causes	16	21	23	21	12	93	
Total vehicle defect related crashes	0	0	2	1	3	6	1.0%
Heavy freight vehicles	16	7	18	8	5	54	9.3%
Motorcycles/mopeds	15	13	14	10	19	71	12.3%
Motorcycles	12	12	14	10	18	66	11.4%
Mopeds	3	1	0	0	1	5	0.9%
Buses	4	1	4	2	0	11	1.9%
Total vehicle type related crashes	50	34	50	30	43	207	
Total serious crashes	128	109	125	125	92	579	

Analysis of crash profile

Based on the crash profile summary above, it is evident that there has been a crash reduction in the region. This could be partly a product of local road safety initiatives stemming from the development of the strategy document. For example, there has been a slight reduction in vulnerable road user crashes, where investments have been made in cycle ways and footpaths since 2011.

Also, there has been a slight reduction in the number of youth crashes, where Hot FM workshops and other road safety campaigns have been implemented in recent years. Since 2011, TMR has increased their focus on fatigue management and the development and promotion of rest areas, which may be reflected in the reduction in fatigue related crashes locally.

The Queensland Police Service has recently conducted programs to counter drug and alcohol driving in the region. Programs such as 'Operation Stopper', which involves road side breath tests, licence checking, vehicle checking and drug testing, may reflect the Rockhampton Region having fewer crashes involving alcohol or drugs in comparison to the state average. Crashes at intersections remain a serious issue in the region. On local government-controlled roads, these crashes generally involve two vehicles travelling from adjacent approaches and occur mostly on cross–intersections.

An increase in crashes on signalised intersections has been identified through the crash profile, while fewer roundabout crashes are shown. Based on this, increased focus on intersection management through the 3Es - Education, Enforcement and Engineering - is essential to reducing road trauma in the region.

Recommendations

Based on the review of the crash profile for the Rockhampton Regional Council area and comparisons with the State average and historic crash profile data, a number of ongoing and emerging road safety issues have been identified. Specifically, Rockhampton Region needs increased focus on the following:

- Intersection management,
- Young drivers,
- Exploring behaviour and interactions between road users at peak times, and
- Driver behaviour, including use of personal protective equipment.

The Rockhampton Region has a serious issue with intersection crashes in all formats. Crashes at cross – intersections are significantly higher in the region and are more likely to occur at 'give way' or 'stop' signs, highlighting further need for increased emphasis on compliance with the basic tenets of the give way rule. Further to this, improved sight distance and compliance with the 50km/h default speed limit in built up areas, particularly on approaches to intersections, should be investigated through engineering treatments.

This crash profile has shown that young drivers remain a high- risk group in terms of road safety. To continue the downwards trend of young driver involvement in crashes in the Rockhampton region, emphasis should be on continuing to implement such measures as the Hot FM workshops and other road safety campaigns mentioned in the Road Safety Action Plan, to improve young driver safety. Innovative use of social media could be a catalyst for future improvements with this group.

The crash profile has shown that a high percentage of serious crashes is occurring during the school drop off and pick up times, as well as drivers travelling to work. Increased focus around school drop off and pick up times is essential and further actions to those already mentioned in the Road Safety Action Plan need to be developed.

Based on the crash profile, the main driver behaviour issues in the Rockhampton Region consist of drivers failing to give way or stop at a stop sign, and motorists/bicyclists failing to wear a helmet. Increased focus on driver education and compliance remains a road safety priority for the region. Similar initiatives to those implemented for seatbelt compliance may need to be introduced.

Regional Road Safety Priority Matrix

SAFE ROAD USERS

- Ongoing road safety education focusing on key causal factors in road crashes. Initial priority areas include, sharing the road (pedestrians, cyclists, motorcyclists, wide loads), 50km/h urban default speed limit compliance, basic give way and stop compliance, and dangers of the Fatal 5 (fatigue, alcohol, speed, seatbelts, distraction) and proven strategies to reduce risk.
- Engaging young road users in the development and marketing of road safety initiatives for their peers.
- Linking disadvantaged youth with community networks to support them through the licensing process.
- Supporting legislation and local enforcement strategies to address illegal behaviours (eg. hooning, drink/drug driving, speeding, etc.).
- Promoting alternative transport options (eg. public transport, courtesy buses, taxis) to minimise exposure at high-risk times for alcohol-related crashes.
- Linking Seniors networks with appropriate road safety information sources.
- Working in partnership with industry to increase fleet and heavy vehicle safety and compliance with Chain of Responsibility legislation.

SAFE VEHICLES

- Ensuring safety is a primary consideration in vehicle choice for local and state government fleets, with a view to these vehicles filtering into the mainstream fleet.
- Adopting best practice fleet management policy in local and state government.
- Supporting enforcement to increase compliance with road worthiness requirements for both light and heavy vehicles.
- Promoting the ANCAP system to the public to influence vehicle choice and purchasing.

SAFE ROADS AND ROADSIDES

- Prioritising road safety audits at locations with previous crash history and sections of the network with greatest potential risk (identified through *Netrisk*) to inform 'fit-for-purpose' treatments.
- Conducting road safety audits at the design phase of projects to ensure networks adequately warn, inform, guide, control and forgive road users.
- Improving intersection and streetscape design to increase compliance with the urban default speed limit and give way and stop controls.
- Continuing commitment to 'Complete Streets' which aims to reduce speeds and accommodate all modes in residential areas through innovative street-scaping, road design and appropriate infrastructure.
- Encouraging sustainable transport by prioritising pedestrians and cyclists in the design process (eg. Principal Cycle Network Plan) and increasing protection for vulnerable road users at high-risk locations (ie. schools, licensed premises).
- Striving for consistency in pavement marking and signage across the entire network.
- Maintaining road shoulders and providing appropriate clear zones.
- Exploring opportunities for industry to support infrastructure development.
- Maintaining rest areas and stopping places as a fatigue countermeasure.

SAFE SPEEDS

- Adopting a cross-agency approach (through the 3E governance model) to ensure coordination of enforcement, education and engineering approaches to speed management and the setting of consistent and forgiving speed limits.
- Reducing speed limits in areas with high levels of pedestrian and cyclist activity.
- Encouraging community acceptance of, and compliance with, urban and rural speed limits.
- Trialling technologies in the Region to support compliance with speed restrictions, including at road works sites.


NEXT
10km

8.2 QUAY LANE AND PILBEAM THEATRE CAR PARK CONFIGURATION

File No:	**191**
Attachments:	**1. Quay Lane Widening** **2. Pilbeam Theatre Car Park Reconfiguration**
Authorising Officer:	**Martin Crow - Manager Engineering Services** **Peter Kofod - General Manager Regional Services**
Author:	**Stuart Harvey - Coordinator Strategic Infrastructure**

SUMMARY

Upon the commencement of the construction of the Gallery Apartments in Quay Lane, concerns have been raised to Council regarding the road configuration and traffic management processes in both Quay Lane and the Pilbeam Theatre car park. Officers have investigated a design for both Quay Lane and the Pilbeam Theatre car park that aims to address these issues and has been put forward to Council for consideration.

OFFICER'S RECOMMENDATION

THAT Council endorse the concept design for Quay Lane and the Pilbeam Theatre car park and allocate the required funds for construction in the 2018/19 Capital Budget.

COMMENTARY

In 2015 Council was approached by the business owners in the area regarding the proposed and approved developments in and around the Pilbeam Theatre, and the traffic issues that may arise as a result of these developments. Council officers have met with stakeholders from the Tannarchy Centre, Pilbeam Theatre, Rockhampton Art Gallery and Quest apartments to gain an understanding of issues encountered in this vicinity.

Council understands the following as the main traffic management issues related to the current and future development in this area:

- The width of the laneway is 5.5m and is the primary and secondary access for developments along Victoria Parade.
- Heavy vehicles, loading and unloading sets into the Pilbeam Theatre block the laneway and do so for several hours at a time. They also require some space to store the shipping containers in which the sets are stored.
- Vehicles are utilizing the access and parking easement for the Tannarchy Centre, and the Pilbeam Theatre car park as a shortcut through to Quay Lane and the properties that have their accesses onto the lane
- The implementation of paid parking in the Pilbeam Theatre site has relocated vehicles to park on street or on private property
- Pedestrian Safety for people crossing Quay Lane from the Theatre to the Car park

Officers have taken these issues into consideration and have developed concept plans (attached) that aim to address and mitigate the traffic concerns raised. The attached drawings illustrate the changes to the laneway and car park configuration. The Laneway widening has been shown as a separable portion as this work relates directly to the works conditioned on the Gallery Apartments. The Pilbeam Theatre Car park reconfiguration shows the full works proposed. The significant changes are detailed below:

- The lane has been widened to 7m along the Pilbeam theatre car park frontage (from Cambridge Street to the Tannarchy Centre property boundary). This will cater for the forecasted increase in traffic volumes and vehicle movements associated with the proposed development and the car park.

This widening requires some resumption of Council land for road reserve (see Quay Lane Widening attachment). Whilst council are performing works in the laneway it is proposed to perform a laneway reconstruction on the existing cross section as it is currently in a poor condition

- Car park access points onto Bolsover Street have been reduced from 5 uncontrolled accesses to 1 uncontrolled access (facilitated by a channelized right turn lane) and 1 left in, left out access. These works were performed to condense the accesses in the interests of safety for drivers and for better traffic management at this site.
- Car park access points onto Quay Lane will all remain, with the exception of Aisle 1, which will be closed to reduce the opportunity for vehicles to rat run through the car park.
- Provision for a heavy vehicle set down area at the Pilbeam Theatre car park allows a 19m articulated truck to load and unload without causing significant impact to parking. It also allows for short term storage of shipping containers used for storing sets. Whilst trucks are loading and unloading, a traffic management plan will be implemented whereby vehicles accessing Quay Lane will be directed through the Pilbeam Theatre car park.
- A raised crossing point will be constructed on Quay Lane to increase pedestrian safety by slowing vehicles on the lane and providing an obvious crossing point to and from the Pilbeam Theatre and Art Gallery.

The design mitigates most of the issues raised by businesses, however the two outstanding concerns are vehicles parking on-street and vehicles using the Tannarchy Centre easement for access to Quay Street.

Since the implementation of paid parking at the Pilbeam Theatre car park, vehicles have dispersed into the surrounding on-street parking and onto private land. Strategic Infrastructure is undertaking a review of the parking restrictions on Bolsover Street and will consult with businesses on changing restrictions to encourage parking turnover. Vehicles parking on private property is a flow on effect from implementing paid parking at the Pilbeam Theatre car park, however the management of this parking is not Council's responsibility. This is to be managed by the property owners.

The issue of vehicles using the Tannarchy Centre easement for access to Quay Lane still remains. There is concern that this will be used as a 'rat run' from Bolsover Street to the Quest Apartments and the new Gallery Apartments. Options, including prohibiting access from the easement to the lane, have been considered however as waste and delivery vehicles utilise the easement for access to Quay lane, it cannot be completely prohibited.

With this in mind, it is proposed to install double sided "No Entry" signs with a supplementary "Trucks Excepted" plate where the easement borders on Quay Lane. This would be an enforceable sign that would not negatively impact the businesses that accept deliveries on Quay Lane however prohibit vehicles from rat running through the Tannarchy Centre easement. As part of the implementation of these signs, communication with the relevant residents/ business owners will occur.

BACKGROUND

In 2015 Council was approached by the business owners in the area regarding the proposed and approved developments in and around the Pilbeam Theatre, and the traffic issues that may arise as a result of these developments.

The Tannarchy centre has a 10m easement for parking on the 42-46 Bolsover Street site. There are several other easements on this site including an easement at the end of Quay Lane for the Quest apartment's rear access.

There is currently an approved development on the 42-46 Bolsover Street site however this application will lapse in July 2017. Within the plans for the approved development, access to Quay Lane is limited to service vehicles only.

PREVIOUS DECISIONS

Nil

BUDGET IMPLICATIONS

$95,000 will be collected in infrastructure contributions upon completion of the Gallery Apartments development. This contribution has been taken to widen Quay Lane to 7 metres.

$500,000 has been included in the 2018/19 Draft Budget to reconstruct Quay lane and reconfigure the Pilbeam Theatre car park. This item is included in the draft budget for Council's consideration.

STAFFING IMPLICATIONS

Nil

RISK ASSESSMENT

There is a risk that the proposed treatments to the laneway and the Pilbeam Theatre Car Park may not completely mitigate the issues raised by businesses at the Tannarchy Centre and that 'rat running' may still occur through the easement on 42-46 Bolsover Street.

CORPORATE/OPERATIONAL PLAN

3.1.1 Consult on, advocate, plan, deliver and maintain a range of safe urban and rural public infrastructure appropriate to the Region's needs, both present and into the future.

CONCLUSION

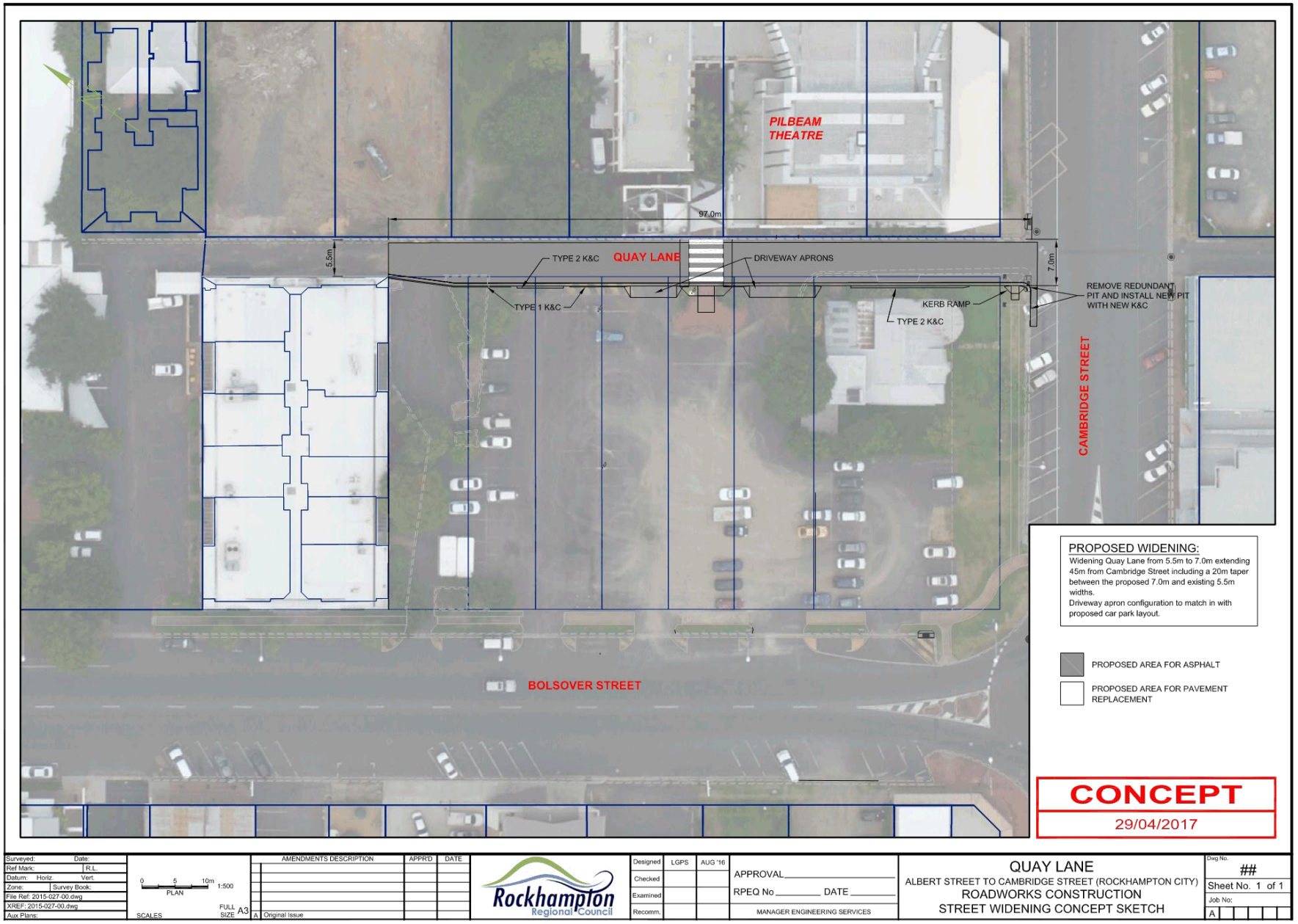
Concerns have been raised to Council regarding the road configuration and traffic management processes in both Quay Lane and the Pilbeam Theatre car park. Officers have investigated a design for both Quay Lane and the Pilbeam Theatre car park and present this design to Council for endorsement.

QUAY LANE AND PILBEAM THEATRE CAR PARK CONFIGURATION

Quay Lane Widening

Meeting Date: 16 May 2017

Attachment No: 1

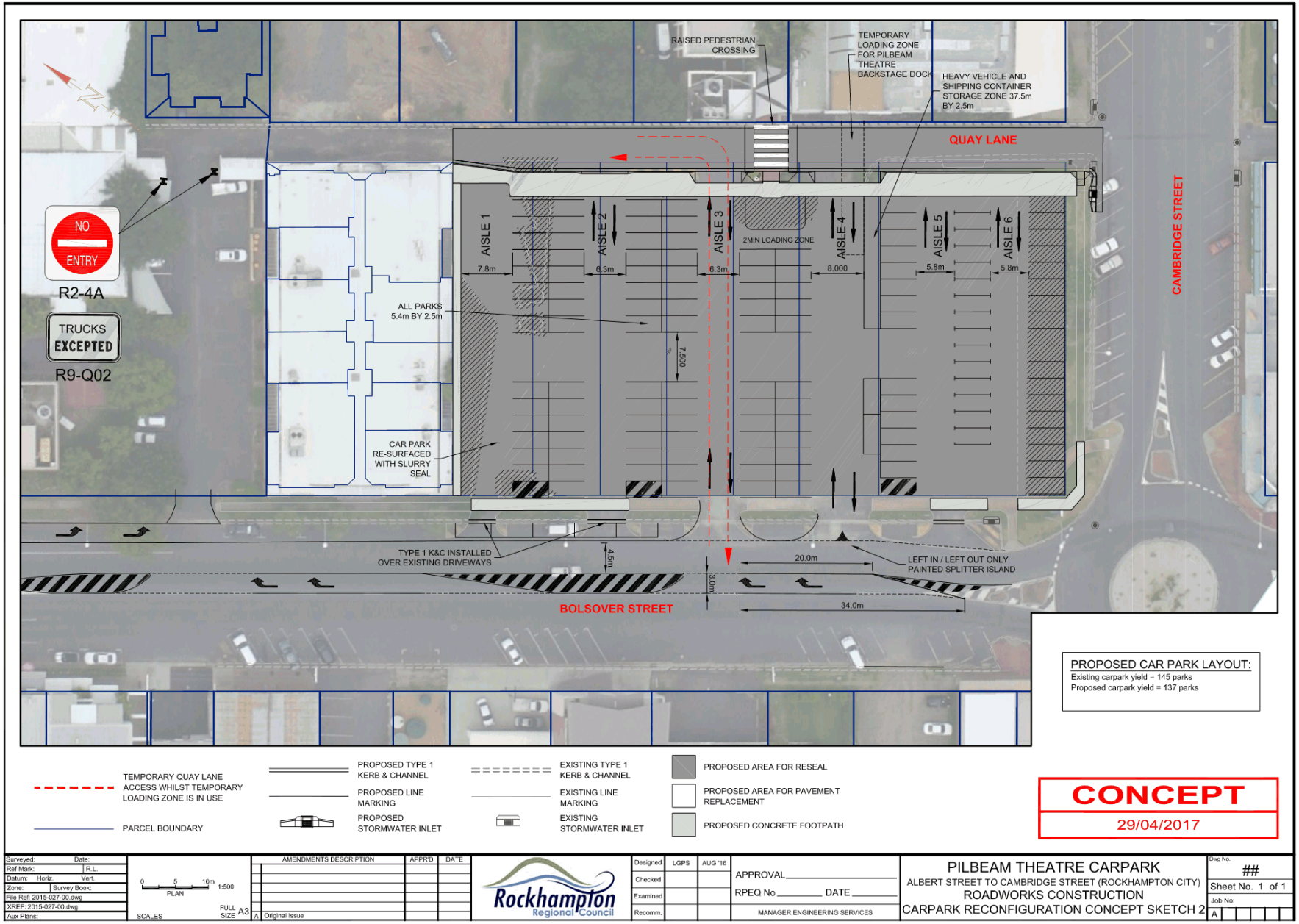

PILBEAM THEATRE
97.0m
5.5m
TYPE 2 K&C
QUAY LANE
DRIVEWAY APRONS
7.0m
REMOVE REDUNDANT PIT AND INSTALL NEW PIT WITH NEW K&C
TYPE 1 K&C
KERB RAMP
TYPE 2 K&C
CAMBRIDGE STREET
BOLSOVER STREET
PROPOSED WIDENING:
Widening Quay Lane from 5.5m to 7.0m extending 45m from Cambridge Street including a 20m taper between the proposed 7.0m and existing 5.5m widths.
Driveway apron configuration to match in with proposed car park layout.
PROPOSED AREA FOR ASPHALT
PROPOSED AREA FOR PAVEMENT REPLACEMENT
CONCEPT
29/04/2017
Surveyed: Date:
Ref Mark: R.L.
Datum: Horiz. Vert.
Zone: Survey Book:
File Ref: 2015-027-00.dwg
XREF: 2015-027-00.dwg
Aux Plans:
0 5 10m
PLAN
1:500
SCALES
FULL SIZE A3
AMENDMENTS DESCRIPTION
APPR'D
DATE
A Original Issue
Rockhampton Regional Council
Designed LGPS AUG '16
Checked
Examined
Recomm.
APPROVAL
RPEQ No DATE
MANAGER ENGINEERING SERVICES
QUAY LANE
ALBERT STREET TO CAMBRIDGE STREET (ROCKHAMPTON CITY)
ROADWORKS CONSTRUCTION
STREET WIDENING CONCEPT SKETCH
Dwg No. ##
Sheet No. 1 of 1
Job No:
A

QUAY LANE AND PILBEAM THEATRE CAR PARK CONFIGURATION

Pilbeam Theatre Car Park Reconfiguration

Meeting Date: 16 May 2017

Attachment No: 2


RAISED PEDESTRIAN CROSSING
TEMPORARY LOADING ZONE FOR PILBEAM THEATRE BACKSTAGE DOCK
HEAVY VEHICLE AND SHIPPING CONTAINER STORAGE ZONE 37.5m BY 2.5m
QUAY LANE
CAMBRIDGE STREET
NO ENTRY
R2-4A
TRUCKS EXCEPTED
R9-Q02
AISLE 1
AISLE 2
AISLE 3
AISLE 4
AISLE 5
AISLE 6
2MIN LOADING ZONE
7.8m
6.3m
6.3m
8.000
5.8m
5.8m
ALL PARKS 5.4m BY 2.5m
7.500
CAR PARK RE-SURFACED WITH SLURRY SEAL
TYPE 1 K&C INSTALLED OVER EXISTING DRIVEWAYS
4.5m
3.0m
20.0m
LEFT IN / LEFT OUT ONLY PAINTED SPLITTER ISLAND
34.0m
BOLSOVER STREET
PROPOSED CAR PARK LAYOUT:
Existing carpark yield = 145 parks
Proposed carpark yield = 137 parks
TEMPORARY QUAY LANE ACCESS WHILST TEMPORARY LOADING ZONE IS IN USE
PARCEL BOUNDARY
PROPOSED TYPE 1 KERB & CHANNEL
PROPOSED LINE MARKING
PROPOSED STORMWATER INLET
EXISTING TYPE 1 KERB & CHANNEL
EXISTING LINE MARKING
EXISTING STORMWATER INLET
PROPOSED AREA FOR RESEAL
PROPOSED AREA FOR PAVEMENT REPLACEMENT
PROPOSED CONCRETE FOOTPATH
CONCEPT
29/04/2017
Surveyed: Date:
Ref Mark: R.L.
Datum: Horiz: Vert.
Zone: Survey Book:
File Ref: 2015-027-00.dwg
XREF: 2015-027-00.dwg
Aux Plans:
SCALES
0 5 10m 1:500
PLAN
FULL SIZE A3
AMENDMENTS DESCRIPTION APPRD DATE
A Original Issue
Rockhampton Regional Council
Designed LGPS AUG '16
Checked
Examined
Recomm.
APPROVAL
RPEQ No DATE
MANAGER ENGINEERING SERVICES
PILBEAM THEATRE CARPARK
ALBERT STREET TO CAMBRIDGE STREET (ROCKHAMPTON CITY)
ROADWORKS CONSTRUCTION
CARPARK RECONFIGURATION CONCEPT SKETCH 2
Dwg No. ##
Sheet No. 1 of 1
Job No:
A

8.3 WARD AND SPENCER STREET TRAFFIC SAFETY ANALYSIS

File No: 5252

Attachments:
1. Ward and Spencer Street Traffic and Safety Analysis
2. Option 3 - Overall Linemarking Plan

Authorising Officer: Martin Crow - Manager Engineering Services
Peter Kofod - General Manager Regional Services

Author: Stuart Harvey - Coordinator Strategic Infrastructure

SUMMARY

This report details the traffic safety analysis performed for the areas bounded by Ward Street, Spencer Street, Jessie Street and Upper Dawson Road. The analysis aims to address the concerns raised, through a petition, by residents in the area. The report investigates traffic data, crash data and study area and provides recommendations to Council.

OFFICER'S RECOMMENDATION

THAT Council endorse Option C to improve intersection sight distance at the identified intersections, and to remark parking spaces on Jessie Street as detailed in Option 3 Overall Linemarking Plan.

COMMENTARY

In December 2016 Council were presented with a petition from residents within the Ward Street and Spencer Street area regarding speeding vehicles and concerns for safety. The petition requested an investigation into the area and called for Local Area Traffic Management (LATM) solutions. Council officers have performed a traffic and safety analysis for the area bounded by Ward Street, Upper Dawson Road, Spencer Street and Jessie Street to address the concerns raised by residents (Attached: Traffic and Safety Analysis).

Traffic counting tubes were installed for two weeks at 5 locations throughout the study area to gain an appreciation of vehicle volumes, classifications and speeds on these streets. The data from these counters was analysed and formed a significant component of the report.

Analysis of the road classification and current volumes was performed for all the streets where the traffic counters were installed. This enabled officers to determine if the roads were operating above their functional capacity, as determined through the figures in the CMDG and the planning scheme. The table below shows the counted volumes and capacities of the roads analysed and it can be seen that none of the roads counted exceed their functional capacities. Even with the additional Mater Hospital development traffic, the roads are well within their functional capacity.

Road	From	To	Road Hierarchy	Functional Capacity	ADT	%HV	ADT + Mater
Upper Dawson Rd	Church St	Prospect St	Urban Sub-Arterial	10,000vpd	8853vpd	2.8%	8923vpd
Ward St	Upper Dawson Rd	Henry St	Minor Urban Collector	3,000vpd	1043vpd	5.3%	1078vpd
Ward St	Dagmar St	Jessie St	Minor Urban Collector	3,000vpd	1092vpd	4.4%	1127vpd
Spencer St	Upper Dawson Rd	Henry St	Minor Urban Collector	3,000vpd	1863vpd	6.1%	1898vpd
Spencer St	Boldeman St	Craiglee St	Minor Urban Collector	3,000vpd	1738vpd	4.8%	1773vpd

Analysis of the speed data was also performed to understand the speed profile for vehicles in the study area. The speed data highlights a general compliance with the posted speed limit. The 85th% speed is the speed at which 85% of recorded vehicles are travelling at or under. The data in the table below shows that the 85th% speed is lower than the posted speed at the count locations at 12 Ward St and 3 Spencer Street. At the secondary locations, further west, the count data indicates an 85th% speed only slightly higher than the posted speed limit. This data indicates substantial compliance with the posted speed limit.

Road	From	To	Location	Posted Speed Limit	85th% Speed	85th% Speed School Hours	Mean Speed	15km Pace	% in 15km Pace
Upper Dawson Rd	Church St	Prospect St	Opposite 103	60km/h	58 km/h	NA	52.4 km/hr	45-60	81.98
Ward St	Upper Dawson Rd	Henry St	Opposite 12	50 km/h	46.8 km/h	44.3 km/hr	39.4 km/hr	33-48	70.9
Ward St	Dagmar St	Jessie St	Opposite 22	50 km/h	51.1 km/h	NA	42.9 km/hr	39-51	67.0
Spencer St	Upper Dawson Rd	Henry St	Opposite 3	50 km/h	45.4 km/h	41.4 km/hr	37.6 km/hr	31-46	68.5
Spencer St	Boldeman St	Craiglee St	Opposite 21	50 km/h	54.7 km/h	NA	45.4 km/hr	39-54	59.2

The crash data for the study area was also analysed to understand any existing issues or highlight any areas for further investigation. Data obtained for the period from 2010-2017 indicated that there have been 7 crashes within the study area. The details of those crashes are shown in the table below however it is evident that most of these crashes are a result of driver error.

Location	Crash Date	Crash Type	Crash Cause
Spencer St North	October 2014	601 – Hit Parked Car	Undue Care and Attention
Spencer St South	June 2012	406 – Vehicle Leaving Driveway	Failure to Give Way
Upper Dawson Road	July 2015	703 – Left of carriageway hit object	No headlights on vehicle.
Ward Street / Jessie St	March 2010	308- Right Turn Side Swipe	Improper U-turn
Ward Street West	June 2014	001 – Pedestrian hit from right	Driver Conditions - Miscellaneous
Ward St / Henry St	December 2012	103 – Left and Through	Disobey Give way. Over Prescribed concentration of Alcohol
Ward St / Upper Dawson Rd	February 2016	003 – Pedestrian hit from left	Improper U-turn. Over prescribed concentration of alcohol.

The crash data did however highlight the need to investigate the sight distance at each intersection as this may have been a contributor to some of the crashes.

Given the traffic data above and the site investigations at various intersections, the following options are presented to council.

OPTION A: Do Nothing

Analysis of the traffic volumes indicate that there are no greater volumes of vehicles on Ward Street or Spencer Street than is generally expected for a Minor Urban collector road. Speed analysis has indicated that there is a general compliance with the speed limit and vehicles are not excessively speeding, in either direction or during school times. The incidences of speeding raised by residents appear to be isolated hooning events and this can be regulated by the Queensland Police Service. The crash data can be largely discounted as crashes were predominantly driver error related and infrastructure did not contribute to the crashes in these locations. As the main issue raised by residents was speeding, and the data highlights that vehicles are largely compliant, the Do Nothing option is a valid option.

OPTION B: One Way Configuration

A one way configuration would have Spencer Street one way in the Western direction, Ward Street in the Eastern direction, Jessie Street one way in the Northern Direction and Henry Street as two way traffic. This essentially forms a loop around the Mater Hospital for vehicles.

A one way configuration would improve some of the sight distance issues at intersections, as parking restrictions could be changed to improve sight triangles and intersections would have less conflicting movements. A one way configuration would also benefit the Jessie Street section from Ward to Spencer Street as it currently presents some parking issues due to reduced vehicle maneuverability.

A one way configuration however is likely to increase vehicles speeds on these streets. Currently, with two way traffic and parking either side of the road, vehicles are forced to slow down as lanes are narrower and the speed environment feels compressed. In the event that a one way configuration was implemented, vehicles would have a 6m, one way lane. This will cause drivers to increase their speed as their carriageway is significantly wider and there are less conflict points..

Furthermore the implementation of one way configuration will have a significant impact on residents, hospital traffic, traffic to the botanical gardens and school traffic. It will likely increase traffic volumes on Ward Street as a greater volume of vehicles currently use Spencer Street. As speeding was highlighted as a perceived issue for residents it is not recommended to implement an option that would increase vehicle speeds.

OPTION C: Improve Intersection Sight Distance

Analysis of the intersections highlighted some potential issues with regards to sight distances being impeded by parked vehicles on either side of the road. It is proposed to remove some parking spaces on the western approach to the Ward St / Henry Street intersection and the Spencer St / Henry Street intersection. This will increase sight distance to the closest lane, reducing the potential for conflict for vehicles on the minor leg. The Henry Street legs have been highlighted for this treatment as they are the two legs with a larger volume of traffic on them, as a result of St Peter School traffic.

The intersections of Ward Street / Upper Dawson road, and Spencer Street / Upper Dawson road were found to have sufficient sight distance. However it is proposed to mark the regulatory 10m no standing lines on the corners of each intersection and extend the Southern no standing line at the Ward St / Upper Dawson road intersection. In addition to this, continuity lines will be implemented through the intersection to allow vehicles to encroach into the intersection further and increase their sight distance.

The intersections of Jessie Street / Ward Street and Jessie Street / Spencer Street will also have continuity lines implemented through the intersection to improve sight distance.

The implementation of these yellow lines will impact the total number of parking spaces within the study area.

To mitigate the impact of these treatments, it is proposed to reconfigure the parking on Jessie Street. By reconfiguring the parking on Jessie Street, officers can increase the total parking yield in the study area whilst rectifying some inconsistencies in the line marking treatment.

OPTION D: Implement Local Area Traffic Management

The option as raised by the residents was to implement Local Area Traffic Management (LATM) throughout both Ward and Spencer Streets. As per Council's LATM policy and procedure, once a request is received from a resident, quantitative evidence is collected before being presented to the 3E Committee. The 3E committee analyse the data and then decide whether an LATM treatment or another treatment should be progressed further. The data collected at the several locations on Ward and Spencer Street highlights that there is not a speeding issue in these streets and those incidences of speeding raised by residents are isolated. The traffic data was presented to the 3E committee and it was unanimously decided that LATM is not required due to the general compliance with the speed limit. For these reasons this option was not pursued any further.

BACKGROUND

Over the past few years, Rockhampton Regional Council have received complaints regarding speeding vehicles and traffic in Ward Street. In October 2016 Rockhampton Regional Council received a petition from residents in the areas surrounding Ward Street and Spencer Street, regarding speeding vehicles and concerns for pedestrians.

The petition states that *"The reason for this petition is due to the speeds of vehicles come up and doing along Ward and Spencer Street. There have been two serious accidents along Ward St, the result involving a pedestrian being seriously injured. The second incident involved a two vehicle accident on the intersection of Ward and Henry Street, both involved speed. Other smaller accidents have occurred on the exit of Ward onto Upper Dawson Road due to poor visibility. Aids to assist in exiting Ward St onto Upper Dawson Rd should also be investigated due to the number of small accidents as vehicles exiting Ward St onto Upper Dawson Road due to reduced visibility of cars parked along Upper Dawson Rd next to St Peters School."*

The petition was signed by:

- 6 residents in Upper Dawson Road
- 13 residents in Henry Street
- 7 residents in Ward Street
- 11 residents in Spencer Street
- 4 residents in Boldeman Street

Under Council's current Local Area Traffic Management Policy and Procedure, a community request is raised by residents, quantitative evidence is obtained and the issue is raised with the 3E committee before further action is taken. Upon review and recommendation from the 3E committee to proceed with LATM, consultation with the residents occurs before options are developed and brought to Council for budgetary approval. Once budgetary approval is gained, consultation with directly affected residents occurs to ensure there is support before implementation begins.

PREVIOUS DECISIONS

At an ordinary Council meeting on 13 December 2016 a petition was put forward to Council from residents in the Ward and Spencer Street area. Council resolved:

THAT the petition requesting traffic safety in Ward and Spencer Streets be received and that a report be prepared for the Infrastructure Committee.

BUDGET IMPLICATIONS

The proposed treatments recommended by officers in OPTION 3 can be covered under Council's 2016/17 Traffic and Road Safety Minor Capital Works Program.

STAFFING IMPLICATIONS

Nil

RISK ASSESSMENT

There is a risk that any one of the safety issues identified by the public could cause an incident. There is also a risk that a poorly placed and designed LATM could increase risk and cause an accident.

CORPORATE/OPERATIONAL PLAN

3.1.1 Consult on, advocate, plan, deliver and maintain a range of safe urban and rural public infrastructure appropriate to the Region's needs, both present and into the future.

CONCLUSION

In response to a petition from residents in the Ward Street and Spencer Street area, a traffic and safety analysis was performed to identify and mitigate any safety issues in this location. The analysis and recommendations are presented to Council for review and endorsement.

WARD AND SPENCER STREET TRAFFIC SAFETY ANALYSIS

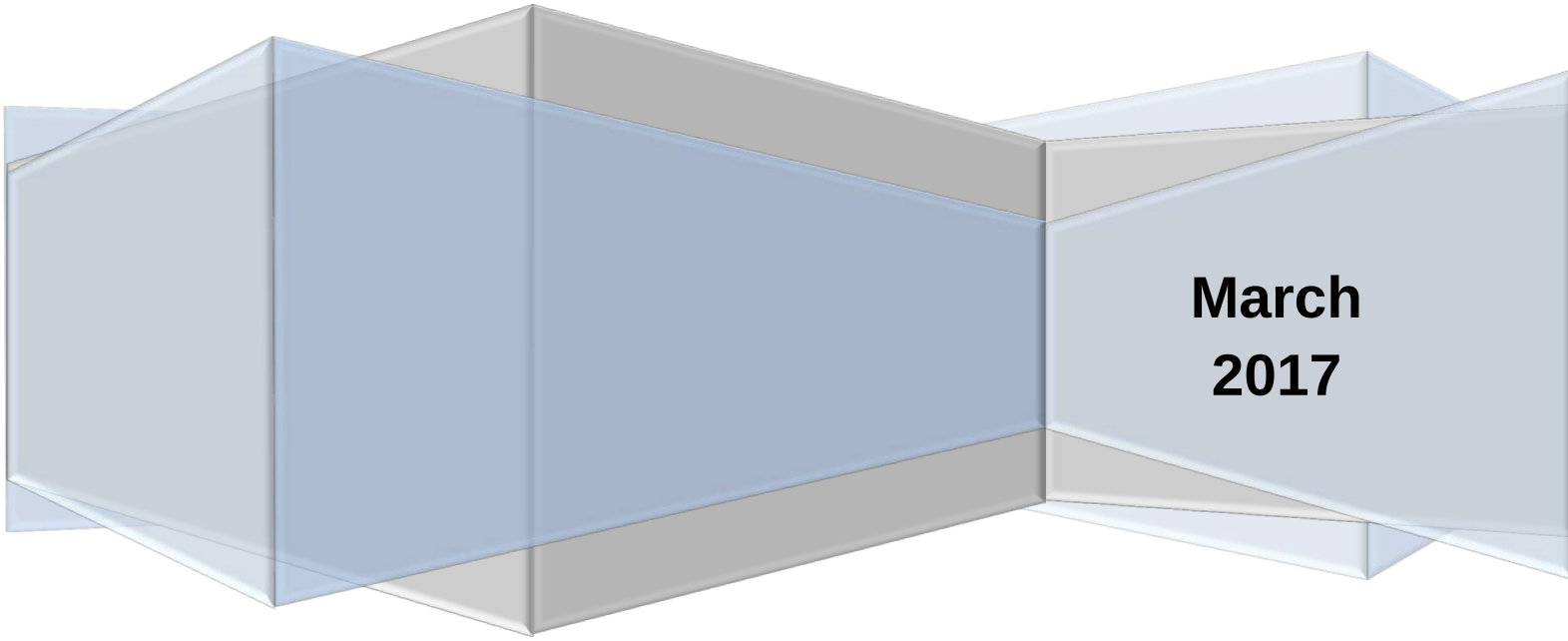
Ward and Spencer Street Traffic and Safety Analysis

Meeting Date: 16 May 2017

Attachment No: 1

Traffic and Safety Analysis

Ward Street and Spencer Street – The Range



March 2017

Table of Contents

Document Control

Author	**Stuart Harvey** *(Coordinator Strategic Infrastructure)*	All Versions	11/04/2017
Checked	**Martin Crow** *(Manager Engineering Services)*	Version 1	02/05/2017

Acronyms

ADT	Average Daily Traffic
AGRD	Austroads Guide to Road Design
DTMR	Department of Transport and Main Roads
HV	Heavy Vehicle
LV	Light Vehicle
LOS	Level of Service
MGSD	Minimum Gap Sight Distance
MUTCD	Manual of Uniform Traffic Control Devices
SISD	Safe Intersection Sight Distance
85th% Speed	85th percentile speed

1. Background Information

Over the past few years, Rockhampton Regional Council have received complaints regarding speeding vehicles and traffic in Ward Street. In October 2016 Rockhampton Regional Council received a petition from residents in the areas surrounding Ward Street and Spencer Street, regarding speeding vehicles and concerns for pedestrians.

The petition requested *"[LATM devices] at the entrance in the middle and at the exit of Ward and Spencer Streets in the area around St Peters School to physically reduce the speed of traffic passing through the area."*

The petitioners *"aim is to increase the safety for children at St Peters and for local residents. It will reduce entry and exit speeds which will enable pedestrians to safely cross the roads at both Spencer and Ward St along Upper Dawson Road. By reducing the speed along both these roads it will increase safety for local residents on exiting and entering their property and will also increase the safety for their children."*

The petition states that *"The reason for this petition is due to the speeds of vehicles come up and doing along Ward and Spencer Street. There have been two serious accidents along Ward St, the result involving a pedestrian being seriously injured. The second incident involved a two vehicle accident on the intersection of Ward and Henry Street, both involved speed. Other smaller accidents have occurred on the exit of Ward onto Upper Dawson Road due to poor visibility. Aids to assist in exiting Ward t onto Upper Dawson Rd should also be investigated due to the number of small accidents as vehicles exiting Ward St onto Upper Dawson Road due to reduced visibility of cars parked along Upper Dawson Rd next to St Peters School."*

The petition was signed by

- 6 residents in Upper Dawson Road
- 13 residents in Henry Street
- 7 residents in Ward Street
- 11 residents in Spencer Street
- 4 residents in Boldeman Street

This Traffic and Safety Analysis aims to investigate the concerns raised by the residents in their petition, investigate the safety issues in this area, analyse the impact of development at the Mater Hospital and propose recommendations.

2. Existing Road Environment

In order to understand any potential safety issues in this area, the current road environment needs to be analysed. This process involved site inspections, measurements, survey and traffic counts to properly analyse the area.

Figure 1: Study Area

Figure 1 highlights the analysis area raised by residents in the petition, and defines the area being investigated.

2.1 Road Classification

The road classification and description has been split into the various roads mentioned in the petition. Details of the road and its characteristics are detailed below:

Upper Dawson Road:

Upper Dawson Road is classified in the Rockhampton Planning Scheme Road hierarchy as an Urban Sub-Arterial Road. Urban Sub-Arterial roads are roads whose main function is to perform as the principal arteries for through traffic and freight movements across urban areas. They form the primary local road network and link main districts of the urban area. Roads of this particular classification are expected to have traffic volumes of 6,000 – 10,000 vehicles per day.

Upper Dawson Road was originally constructed before the CMDG standards were developed and as a result it has a unique cross section that varies in width and also allows direct property access. Upper Dawson Road, in the vicinity of Ward and Spencer Street, has a 12m carriageway with two through lanes and parking within the shoulder. Despite it's different cross section, Upper Dawson Road functions as an Urban Sub Arterial Road, carrying significant volumes of traffic and acts as the diversion for the National Highway in times of flood.

Upper Dawson Road has parking spread sporadically throughout its length however in the location of Ward and Spencer Streets, due to the St Peter's School, there is a demand for parking on street. There are several bus routes that use Upper Dawson Road.

Ward Street:

Ward Street is classified as a Minor Urban Collector and is described as a road whose main function is to collect and distribute traffic from local areas to the wider road network (can

include access to abutting properties). Minor Urban Collectors are expected to have traffic volumes of 751-3,000 vehicles per day. Ward Street has a significant carriageway width for a minor urban collector and has a pavement width of 10m (the current standard is 7.5m).

Due to the location of Ward Street, in proximity to both the Mater Hospital and St Peter's School, there is a significant demand for on street parking. Parallel parking bays are specifically marked to maximise parking yield in this area. At the southern end of Ward Street there is a significant amount of no-standing yellow lines prohibiting parking in the section between Upper Dawson Road and Henry Street. The school bus, for St Peter's School, currently uses Ward Street for pick-up and drop-off of passengers. It is also used as an ambulance route for the Mater Hospital.

Henry Street:

Henry Street is classified as a residential urban access street. The defined function of this type of road is to provide access to residences and properties; or provide exclusively for one activity or function. Urban Access Streets are expected to have volumes of 250-750 vehicles per day.

Henry Street, from Ward Street to Penlington Street, has a carriageway width of 10m with little or no on street car parking. This is likely due to the residential environment in this section. The section of Henry Street between Ward and Spencer Street is significantly different due to its proximity to St Peter's School. The pavement width is approximately 12m with indented sections on the western side to facilitate on street parking and an indented set down zone on the eastern side for pick up and drop off of students.

Spencer Street

Spencer Street is classified as a Minor Urban Collector and is described as a road whose main function is to collect and distribute traffic from local areas to the wider road network (can include access to abutting properties). Minor Urban Collectors are expected to have traffic volumes of 751-3,000 vehicles per day. Spencer Street has a significant carriageway width for a minor urban collector and has a pavement width of 10m.

Due to the location of Spencer Street, in proximity to both the Mater Hospital and St Peter's School, there is a significant demand for on street parking. Parallel parking bays are specifically marked to maximise parking yield in this area.

Spencer Street is also the primary route for vehicles wishing to visit the Rockhampton Botanical Gardens. As a result, this road is used a through route for a range of vehicle classifications.

Jessie Street:

Jessie Street is classified as a Minor Urban Collector and is described as a road whose main function is to collect and distribute traffic from local areas to the wider road network (can include access to abutting properties). Minor Urban Collectors are expected to have traffic volumes of 751-3,000 vehicles per day.

Jessie Street has an unusual configuration where there is both 90degree angle parking and parallel parking in close proximity to one another. The travelled lane width is approximately 6m which is known to make the vehicle swept paths in this location difficult. Due to road width, the 90 degree parking spaces are shorter than usual causing vehicles to overhang the pedestrian footpath.

2.2 Current Traffic Volumes

To gain an understanding of the traffic volumes, vehicle classifications and speeds in this study area, Council Officers installed traffic counting tubes at 4 locations on Spencer and Ward Street. Due to their short length, traffic counting tubes were not installed on Jessie or Henry Streets. Upper Dawson Road is counted on a yearly basis and so a specific count was not performed for this investigation. The figure below shows the locations of the traffic counters.

Figure 2: Traffic Count Locations

Traffic counting tubes were installed for the duration of 17 February – 03 March 2017 for Ward Street and Spencer Street locations. The Upper Dawson Road count was installed from 27 January – 10 February 2017. The following is the summary of the data obtained.

Road	From	To	Location	ADT	%HV	AM Peak	AM Volume	PM Peak	PM Volume
Upper Dawson Rd	Church St	Prospect St	Opposite 103	8853vpd	2.8%	8.00-9.00	751vph	15.00-16.00	774vph
Ward St	Upper Dawson Rd	Henry St	Opposite 12	1043vpd	5.3%	8.00-9.00	98vph	15.00-16.00	101vph
Ward St	Dagmar St	Jessie St	Opposite 22	1092vpd	4.4%	8.00-9.00	104vph	15.00-16.00	102vph
Spencer St	Upper Dawson Rd	Henry St	Opposite 3	1863vpd	6.1%	8.00-9.00	215vph	15.00-16.00	193vph
Spencer St	Boldeman St	Craiglee St	Opposite 21	1738vpd	4.8%	8.00-9.00	160vph	15.00-16.00	160vph

Table 1: Overall Traffic Volume and Peak Period Data

Table 1 gives an overview of the average daily traffic, percentage of heavy vehicles and the AM and PM peak periods. Table 2 below shows the speed data associated with each of the count locations in Table 1, highlighting the 85th percentile speed. This is the speed at which 85% of vehicles are travelling at or under. This is considered to be the best representation of speed in a traffic count.

Road	From	To	Location	Posted Speed Limit	85th% Speed	85th% Speed School Hours	Mean Speed	15km Pace	% in 15km Pace
Upper Dawson Rd	Church St	Prospect St	Opposite 103	60km/h	58 km/h	NA	52.4 km/hr	45-60	81.98
Ward St	Upper Dawson Rd	Henry St	Opposite 12	50 km/h	46.8 km/h	44.3 km/hr	39.4 km/hr	33-48	70.9
Ward St	Dagmar St	Jessie St	Opposite 22	50 km/h	51.1 km/h	NA	42.9 km/hr	39-51	67.0
Spencer St	Upper Dawson Rd	Henry St	Opposite 3	50 km/h	45.4 km/h	41.4 km/hr	37.6 km/hr	31-46	68.5
Spencer St	Boldeman St	Craiglee St	Opposite 21	50 km/h	54.7 km/h	NA	45.4 km/hr	39-54	59.2

Table 2: Overall Speed data for the sites in Table 1

Direction specific traffic data was also analysed to determine if there is an issue with vehicles travelling at high speeds in one particular direction, for example to the hospital. East is defined as the direction towards Upper Dawson Road and west is the direction away from Upper Dawson Road.

Road	From	To	Direction	Posted Speed Limit	85th% Speed	Mean Speed	15km Pace	% in 15km Pace
Ward St	Upper Dawson Rd	Henry St	East	50 km/h	48.2	41.2	34-49	71.54
			West	50 km/h	45.0	37.8	31-46	72.83
Ward St	Dagmar St	Jessie St	East	50 km/h	50.8	43.0	36-51	69.81
			West	50 km/h	51.5	43.1	36-51	64.03
Spencer St	Upper Dawson Rd	Henry St	East	50 km/h	47.2	39.6	34-49	68.67
			West	50 km/h	42.1	35.8	29-44	75.86
Spencer St	Boldeman St	Craiglee St	East	50 km/h	54.7	45.3	39-54	57.90
			West	50 km/h	55.1	45.8	39-54	60.39

Table 3: Direction specific speed data for Ward and Spencer Street.

Full details of the Traffic Count data can be found in Appendix A.

2.3 Mater Hospital Generated Traffic

The Mater hospital currently has an approved development application for the extension of existing facilities at their site on 31 Ward Street. The proposed extension will see a cardiology, and oncology facility at the site. It will be located on the existing site footprint.

The approved Traffic Impact Assessment calculates an increase in traffic generation of 50-70vehicles per day. As the proposed development is positioned within the middle of the existing hospital site, it can be expected that traffic will be evenly distributed amongst both Ward and Spencer Street. This would increase the volume on both streets by 35 vehicles per day in a worst case scenario analysis.

2.4 Crash History in the Study Area

To gain a comprehensive understanding of the crash history in this study area, Council officers investigated the crash data for this hospital area in Webcrash. Webcrash is a mapping based program that is linked to the Police and DTMR traffic accident databases. The data included in Webcrash includes, but isn't limited to:

- Date of crash
- Road Details
- Crash Details
- Time of Day,
- Weather conditions
- Contributing circumstances
- Severity of crash

Data was obtained for the 7 year period from 2017 – 2010[1]. The usual analysis period is 5 years however all this was extended to 7 to gain a full appreciation of potential issues in the area. The data obtained from Webcrash is crash data that is reported to the authorities; it does not include near misses or un-reported crashes. These are considered to be anecdotal and, although they will be noted, they cannot be included in a crash analysis. The crash data obtained from Webcrash for the Hospital area can be seen in Figure 3 below.

Figure 3: Location of crashes 2010-2017.

[1] The Department of Transport and Main Roads (TMR) WebCrash system reports on the following crash data - fatal to 31 December 2016, hospitalisation to 30 September 2016, medical treatment to 30 September 2016, minor injury to 30 September 2016 and property damage only to 31 December 2010. Around 10% to 15% of non-fatal crash records for 1 July 2012 to 31 December 2014 are incomplete and unavailable. Data Analysis are addressing the issues to resolve this problem as soon as possible.

In 2010-2017 there have been 7 reported crashes. To understand each individual crash, the crash reports were investigated. It found the following crashes and crash causes.

Location	Crash Date	Crash Type	Crash Cause
Spencer St North	October 2014	601 – Hit Parked Car	Undue Care and Attention
Spencer St South	June 2012	406 – Vehicle Leaving Driveway	Failure to Give Way
Upper Dawson Road	July 2015	703 – Left of carriageway hit object	No headlights on vehicle.
Ward Street / Jessie St	March 2010	308- Right Turn Side Swipe	Improper U-turn
Ward Street West	June 2014	001 – Pedestrian hit from right	Driver Conditions - Miscellaneous
Ward St / Henry St	December 2012	103 – Left and Through	Disobey Give way. Over Prescribed concentration of Alcohol
Ward St / Upper Dawson Rd	February 2016	003 – Pedestrian hit from left	Improper U-turn. Over prescribed concentration of alcohol.

Table 4: Crash Data Details 2010-2017

3. Analysis of Data

The data obtained during the traffic counting period has been assessed against Local and State Government standards with regards to volumes and traffic speeds.

3.1 Volumes:

Analysis of the data against the functional capacities stated in the planning scheme highlight that all of the roads considered in this study are below their functional capacity (Table 5). Even with the additional traffic generated from changes at the Mater Hospital these roads are within their functional capacity. Analysis of the increase in traffic caused by the Mater Hospital on all streets results in a maximum of 3% increase to the total traffic on each street. This is not considered as a significant increase to traffic volumes.

Road	From	To	Road Hierarchy	Functional Capacity	ADT	%HV	ADT + Mater
Upper Dawson Rd	Church St	Prospect St	Urban Sub-Arterial	10,000vpd	8853vpd	2.8%	8923vpd
Ward St	Upper Dawson Rd	Henry St	Minor Urban Collector	3,000vpd	1043vpd	5.3%	1078vpd
Ward St	Dagmar St	Jessie St	Minor Urban Collector	3,000vpd	1092vpd	4.4%	1127vpd
Spencer St	Upper Dawson Rd	Henry St	Minor Urban Collector	3,000vpd	1863vpd	6.1%	1898vpd
Spencer St	Boldeman St	Craiglee St	Minor Urban Collector	3,000vpd	1738vpd	4.8%	1773vpd

Table 5: Comparison of ADT against functional capacities

It was observed that both Ward Street and Spencer Street did have a number of heavy vehicles movements on the street. This is likely caused by the bus stops on Ward Street, and the proximity to both the Botanic Gardens and Mater Hospital. It is important to understand that the percentage of heavy vehicles is a percentage of the total number of vehicles and thus explains why Upper Dawson Road has a smaller percentage of heavy vehicles than Ward and Spencer St.

3.2 Speed Data:

The speed data across the various streets was analysed in detail to gain an understanding of the speed profile, and highlight any speeding issues during the count period. The speed data highlights a general compliance with the posted speed limit. The 85th% speed is the speed at which 85% of recorded vehicles are travelling at or under. The data in Table 2 shows that the 85th% speed is lower than the posted speed at the count locations at 12 Ward St and 3 Spencer Street. At the secondary locations further west, the count data indicates an 85th% speed only slightly higher than the posted speed limit. This data indicates substantial compliance with the posted speed limit. The 15km pace indicates the spread of data counted

during this two week period. It shows the lower and higher limits of the majority of speed data and the percentage in pace indicates the percentage of vehicles that lie in this 15km range. The 15km pace for all count locations is shown in Table 2 and shows that the spread of data is within what would normally be expected for a 50km/hr speed zone. The Manual of Uniform Traffic Control Devices (MUTCD) Part 4 gives the expected data range and percentage in pace for each speed limit. When comparing the obtained speed data with the Figure 4 below, we can see that the 50km/hr speed limit is appropriate and speeds are within the expected range for this posted speed.

Additionally, a check was made to see if vehicles are complying with the school zone speed limit of 40km/hr. Of the two sites that were located within the school zone, the 85th% speeds were within 4km/hr of the posted speed limit. It was interesting to note that the vehicle speeds were higher in Ward Street school zone than Spencer Street school zone. This is likely attributed to the wider carriageway due to the prohibition of parking on one side of the road.

Table C1 SPEED DATA TEST RANGES*

Criteria	Existing Speed Limit (km/h)							
	40	50	60	70	80	90	100	110
Mean speed	32 – 43	41 – 53	49 – 63	59 – 72	69 – 80	79 – 89	89 – 97	99 – 106
Upper limit of 15 km/h pace	36 – 49	46 – 59	56 – 69	66 – 79	76 – 89	86 – 98	96 – 106	105 – 114
Percentage within pace	>60	>60	>60	>60	>60	>60	Urban >54 Rural <45	>40

*Note: For speed data obtained using the suggested speed bin ranges from Table G2, or for individually collected speed data.

Figure 4: Extract from MUTCD Part 4 - Speed data Ranges.

Council officers have been anecdotally informed that vehicles may be speeding in one particular direction, down towards Upper Dawson Road and that this might not be picked up in the speed data for both directions. To analyse this, the speed data for each direction at each count location was split to investigate directional speeds. Table 3 shows the directional speeds for each count location and highlights that vehicle speeds in both directions are similar. There is only a slight difference in directional speed with the maximum difference being 5km for Spencer Street, opposite 3 Spencer Street.

Overall the data collected in this location indicates a majority compliance with the speed limit. Due to the compliance with the existing speed limit there seems to be little advantage to reducing the speed limit in these locations. It is likely that the presence of on street parking on both sides of the road causes drivers to moderate their speed better than in other residential streets where there is not much on street parking.

3.3 Crash Data:

The crash data obtained for the hospital area gave some insight into potential issues in the surrounding streets. Of the 7 crashes identified in the data, two can be excluded as they relate to driving under the influence of alcohol and this is seen to be the cause of these

crashes rather than any infrastructure issues. The 601 crash can also be excluded as it was a result of driving with undue care and attention. This is also a driver error crash where infrastructure is not a causal factor in the crash.

Of the crashes that occurred, a majority of the crashes were the result of improper turns or failing to give way. These are recurring crash types throughout the region. The crash at the intersection of Jessie Street and Ward Street appeared to be a vehicle performing a U-turn, to head east, within the intersection and entering the road while a vehicle was heading east. This resulted in a side swipe crash with a motorcycle. The other crash of note was a vehicle exiting the hospital driveway on Spencer Street, the vehicle failed to give way to vehicles on Spencer Street. The third crash was a vehicle and a pedestrian crash on Ward Street near the Mater Hospital entrance. It is unclear as to what happened at this crash however the circumstance is identified as Driver conditions Miscellaneous. This infers that the crash was the result of driver behaviour rather than existing road infrastructure. The final crash was on Upper Dawson Road and involved a vehicle driving off the carriageway and into an object. The cause of this is attributed to the driver not having their headlights on.

There was a crash identified in the resident petition at the intersection of Ward St and Henry St however this was not recorded in Webcrash. There has also been a recent crash on Spencer Street near the Mater Hospital. The cause of this crash has not yet been reported.

Analysis of the crash data from Webcrash highlights potential issues with the sight distance at intersections in this area.

4. Analysis of Intersections

As discovered in the crash data, and raised by the residents in the petition, investigation of the sight distance at intersections within this study area is required. Site investigations and desktop investigations were performed at the following intersections:

- Ward St / Henry St
- Ward St / Upper Dawson Rd
- Spencer St / Henry St
- Spencer St / Upper Dawson Rd

These intersections were assessed against the sight distance criteria for an existing urban intersection. It is important to note that intersections in urban areas are unlikely to the meet the Safe Intersection Sight Distance requirements. However this is considered acceptable due to the low volume of vehicles and the low speed limits applied to urban streets. Due to the large volume of on street parking in this hospital area, sight distance at intersections can be restricted. To understand the available sight distance, Council Officers visited the site and performed sight distance measurements. Detail of the sight distance analysis can be seen in Appendix B however a summary is provided below. In the analysis below, Minimum Gap Sight Distance has been analysed and with proposed works to ensure this sight distance is achievable. Minimum Gap Sight distance is represented by the Green line in each of the figures.

Ward Street / Henry Street:

The intersection of Ward St and Henry St experiences a larger volume of vehicles than most residential intersections due to the St Peters school drop off zone. This drop off zone extends along the St Peters frontage on Henry Street and parents are encouraged to queue in Henry Street in the section from Ward Street to Penlington Street. As a result, vehicles on the minor leg (Henry Street) are larger and this increases the likelihood of conflicting movements. Analysis of sight distance from Henry St looking east is considered to be acceptable due to the prohibition of parking and the location of the school bus stop. Sight distance looking to the West is impeded by the presence of parked cars. Sight triangles for minimum gap sight distance show that there are two parking spaces that restrict sight distance on the western side of Ward Street.

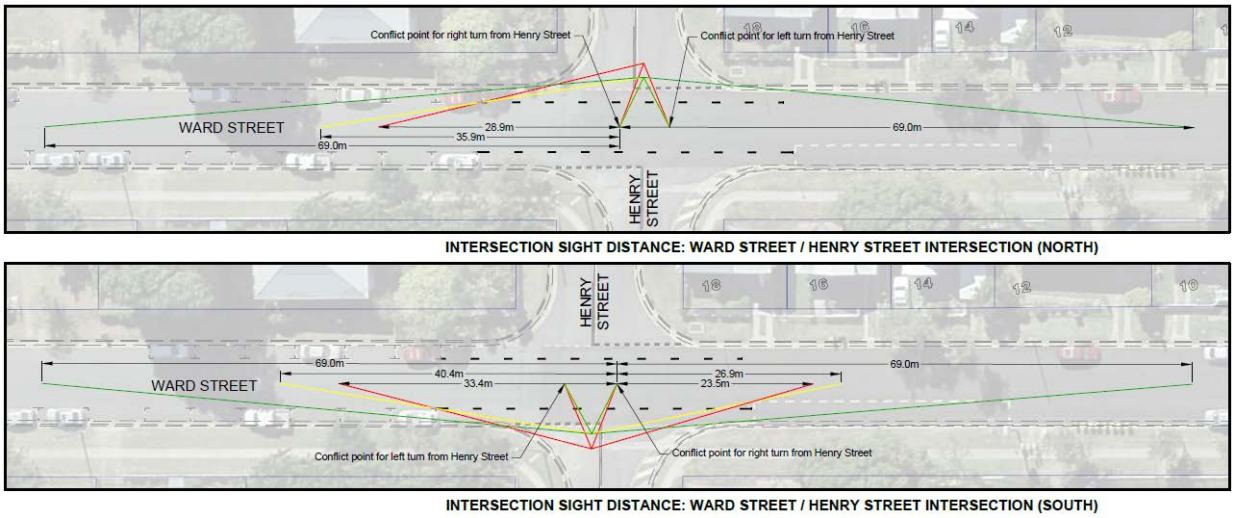


Figure 5: Sight distance at Henry Street / Ward Street intersection

The sight distance for the Northern leg of Henry Street, looking West, is impeded by parked vehicles. As these vehicles restrict sight distance from the closest travel lane, it is proposed that these two spaces are removed. This will increase sight distance for the vehicles queued in Henry Street on approach to the school set down zone.

The sight distance for the Southern leg of Henry Street, when looking to the west, is also impeded by parked vehicles, however, as the volumes performing this movement are significantly less than the Northern leg and, as the parked vehicles impede the sight distance for the far travelled lane, it is not proposed to remove any parking. In this situation, given the low speed and residential nature of the intersection, it is expected that vehicles will encroach into the intersection to improve their sight distance of the far lane before travelling through the far travelled lane.

Spencer Street / Henry Street:

The intersection of Spencer St and Henry St experiences a larger volume of vehicles than most residential intersections due to the St Peters school drop off zone. This drop off zone extends along the St Peters frontage on Henry Street and vehicles exit via Spencer Street. As a result, vehicles movements on the minor leg (Henry Street) are larger and this increases the likelihood of conflicting movements.

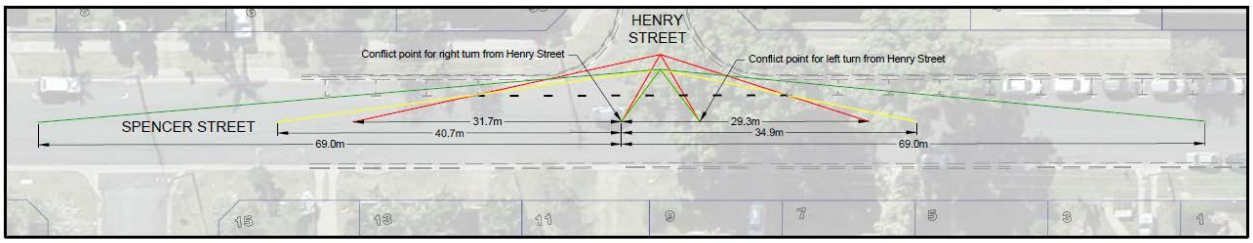


Figure 6: Sight distance at Henry Street / Spencer Street intersection

Sight distance looking to the West is impeded by the presence of parked cars. Sight triangles for minimum gap sight distance show that there are two parking spaces that restrict sight distance on the western side of Spencer Street. It is proposed to remove these spaces as they restrict sight distance from the closest travel lane. This will increase sight distance for vehicles exiting the school drop off zone.

The sight distance, when looking to the east, is also impeded by parked vehicles, however, as the parked vehicles impede the sight distance for the far travelled lane, it is not proposed to remove any parking. In this situation, given the low speed and residential nature of the intersection, it is expected that vehicles will encroach into the intersection to improve their sight distance of the far lane before performing their turning movement.

The sight distances calculated for these intersections were calculated at 50km/hr design speed. It is important to note that when these volumes are at their largest, the posted speed is 40km/hr. This will mean that less sight distance is required during these periods.

Ward Street / Upper Dawson Road:

The intersection of Ward Street and Upper Dawson Road was also assessed as residents had raised concerns about the sight distance at these locations. Given the volumes of traffic on both Upper Dawson Road and Ward Street an assessment was performed to understand the available sight distance at this intersection. Sight distances were calculated for a design speed of 60km/hr.

Due to the lack of parking demand north of Ward Street, the available sight distance to the North of Ward Street was acceptable. There were no parked vehicles impeding the sight triangle however for consistency it is proposed to mark the standard 10m No Standing line from the Ward St intersection. The sight distance to the south of Ward Street is slightly impeded by parked vehicles at St Peters School. As Ward Street is a major connector for the Mater Hospital it is proposed to extend the current No Standing line to increase the sight distance for vehicles turning out of Ward Street.

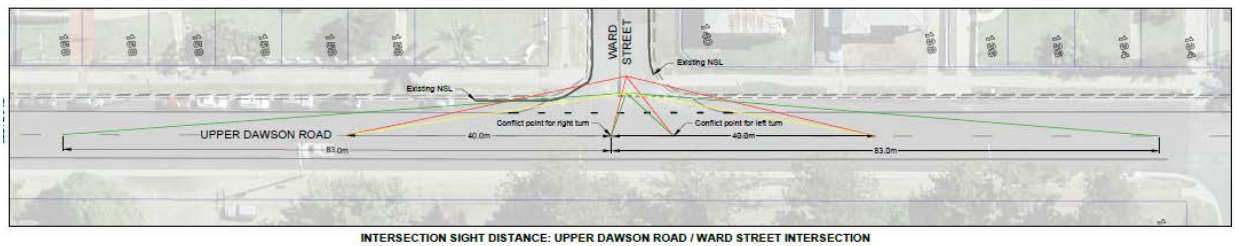


Figure 7: Sight distance at Ward Street / Upper Dawson Road Intersection

Spencer Street / Upper Dawson Road:

The intersection of Spencer Street and Upper Dawson Road was also assessed as residents had raised concerns about the sight distance at these locations. Given the volumes of traffic on both Upper Dawson Road and Spencer Street an assessment was performed to understand the available sight distance at this intersection. Sight distances were calculated for a design speed of 60km/hr.

Due to the lack of parking demand south of Spencer Street, the available sight distance to the south of Spencer Street was considered acceptable. There were no parked vehicles impeding the sight triangle however for consistency it is proposed to mark the standard 10m No Standing line from the Spencer St intersection. The sight distance to the North of Spencer Street is not impeded by parked vehicles at St Peters School due to the existing No Standing line prohibiting parking close to the intersection.

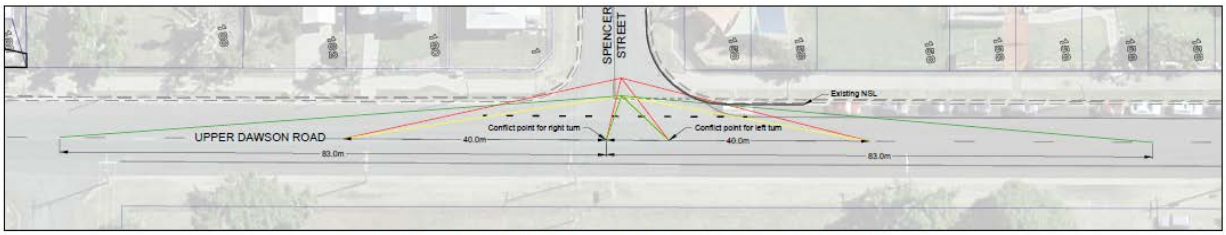


Figure 8: Sight distance at Spencer Street / Upper Dawson Road Intersection

It was noted during the site investigations that the use of a continuity line through the intersections, from edge line to edge line would increase sight distance for vehicles. With the installation of a continuity line, vehicles can encroach past the give way line without entering the conflict zone. By doing this, the vehicle significantly increases its sight distance. For these reasons it is proposed to implement continuity lines at Spencer and Ward Street intersections with Upper Dawson Road.

Jessie Street / Spencer Street:

The intersection of Jessie and Spencer Street is a fairly standard residential intersection. There is a larger volume on Jessie Street from Ward to Spencer Street as this is where the Doctors suites are located, and there is a higher volume of circulating traffic from both the Mater Hospital and Sisters of Mercy Benevolent Home. However these volumes are not condensed into a peak period like St Peters School; they are distributed throughout the day.

Analysis of sight distance from for the northern leg of Jessie St looking west is considered to be acceptable due to the prohibition of parking. The sight distance, when looking to the east, is impeded by parked vehicles, however, as the parked vehicles impede the sight distance for the far travelled lane, it is not proposed to remove any parking. In this situation, given the low speed and residential nature of the intersection, it is expected that vehicles will encroach into the intersection to improve their sight distance of the far lane before performing their turning movement.

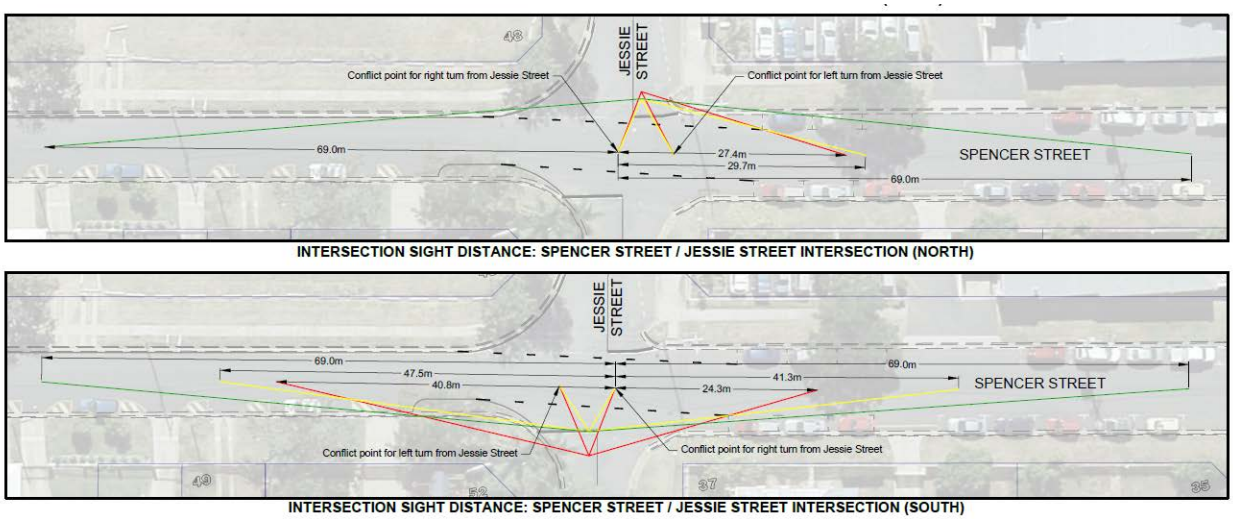


Figure 9: Sight distance at Jessie Street / Spencer Street Intersection

Analysis of sight distance from for the southern leg of Jessie St looking east is impeded by the presence of parked vehicles. This leg services the residential area and is understood to experience low volumes of traffic. In this instance it is not proposed to remove parking for this movement. The sight distance, when looking to the west, is impeded by parked vehicles, however, as there is a low occupancy in this area and the parked vehicles impede the sight distance for the far travelled lane, it is not proposed to remove any parking. In this situation, given the low speed and residential nature of the intersection, it is expected that vehicles will encroach into the intersection to improve their sight distance of the far lane before performing their turning movement.

It was noted during the site investigations that the use of a continuity line through the intersections, from the edges of the parking bays across the intersection, would increase sight distance for vehicles. With the installation of a continuity line, vehicles can encroach past the give way line without entering the conflict zone. By doing this, the vehicle significantly increases its sight distance.

Jessie Street / Ward Street:

The intersection of Jessie and Ward Street is a fairly standard residential intersection. There is a larger volume on Jessie Street from Ward to Spencer Street as this is where the Doctors suites are located, and there is a higher volume of circulating traffic from both the Mater Hospital and Sisters of Mercy Benevolent Home. However these volumes are not condensed into a peak period like St Peters School; they are distributed throughout the day.

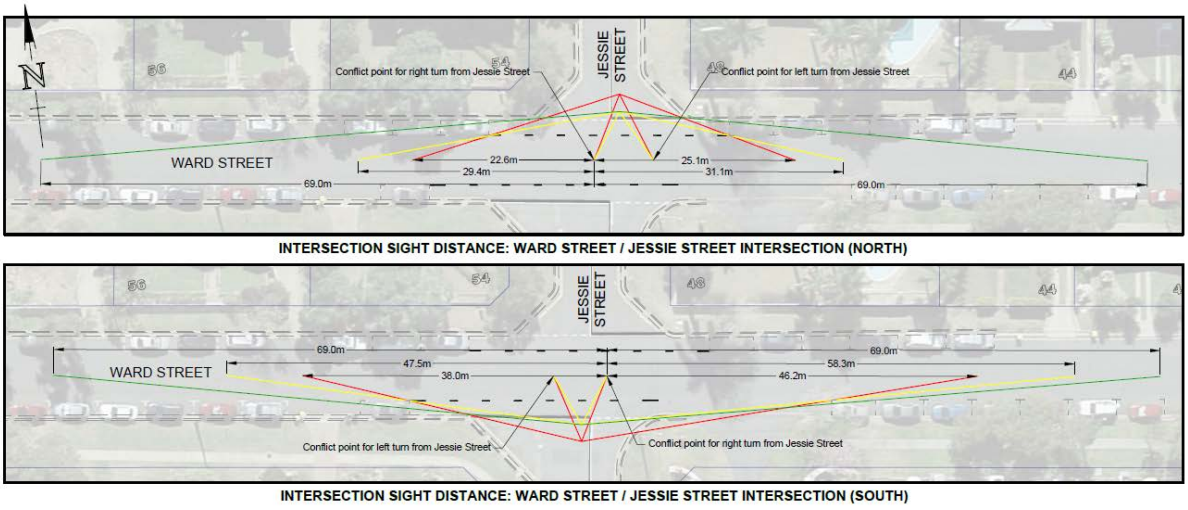


Figure 10: Sight distance at Jessie Street / Ward Street Intersection

Analysis of sight distance from for the southern leg of Jessie St looking east is considered to be acceptable due to the prohibition of parking and Mater Hospital Access driveway. The sight distance, when looking to the east, is impeded by parked vehicles, however, as the parked vehicles impede the sight distance for the far travelled lane, it is not proposed to remove any parking. In this situation, given the low speed and residential nature of the intersection, it is expected that vehicles will encroach into the intersection to improve their sight distance of the far lane before performing their turning movement.

Analysis of sight distance from for the northern leg of Jessie St looking west is impeded by the presence of parked vehicles. This leg services the residential area and is understood to experience low volumes of traffic. In this instance it is not proposed to remove parking for this movement. The sight distance, when looking to the east, is impeded by parked vehicles, however, as the parked vehicles impede the sight distance for the far travelled lane, it is not proposed to remove any parking. In this situation, given the low speed and residential nature of the intersection, it is expected that vehicles will encroach into the intersection to improve their sight distance of the far lane before performing their turning movement.

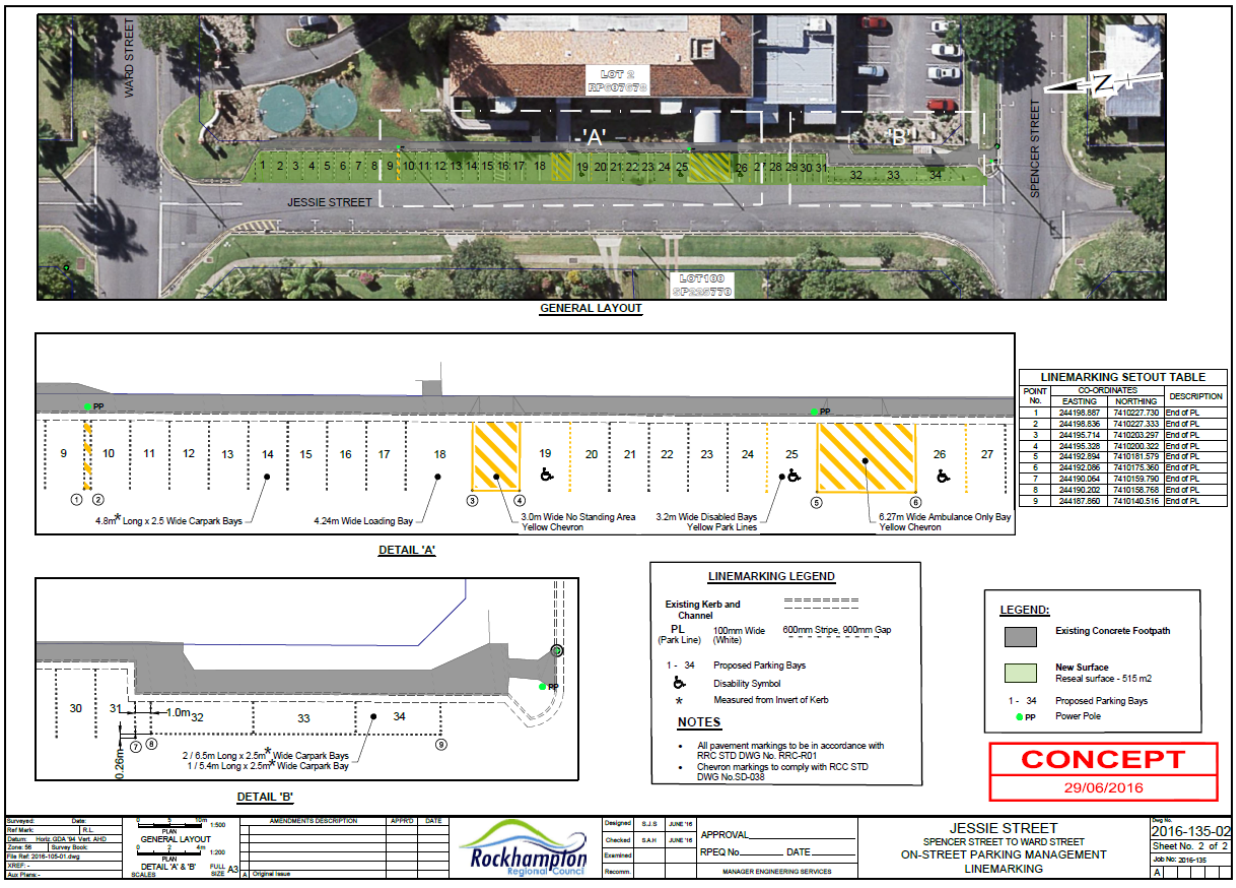
It was noted during the site investigations that the use of a continuity line through the intersections, from the edges of the parking bays across the intersection, would increase sight distance for vehicles. With the installation of a continuity line, vehicles can encroach past the give way line without entering the conflict zone. By doing this, the vehicle significantly increases its sight distance.

5. Jessie Street Parking

In the Road Classification Section above, the parking configuration in Jessie Street was raised as a potential issue. Council have received previous customer requests from residents and businesses in Jessie Street regarding the current parking arrangement. Jessie Street has both 90 degree angle parking and parallel parking, with only a 6m wide through carriageway. This presents some manoeuvrability issues as the distance required to comfortably drive into and out of a 90 degree parking spaces is greater than the 6m carriageway available. Furthermore, the current parking spaces are shorter than the

standard parking space, which results in vehicles overhanging the pedestrian footpath. There are issues with vehicles parking over the entrance to the Doctors suites on Jessie Street and some issues have been raised by disabled Patrons about suitable parking and ambulance access. Without removing a significant amount of parking on Jessie Street, it is difficult to resolve the short parking space issue. Implementation of wheelstops on the parking spaces will force vehicles to encroach into the through carriageway which raises some safety concerns and would require the removal of the parallel parking on one side of Jessie Street. Given the significant demand for parking spaces in this location this is not considered an appropriate solution. The current parking configuration, with regards to widths and manoeuvrability does not appear to be causing significant issues. The main issues raised to Council were about poorly marked parking spaces and no standing zones.

For these reasons it is proposed to remark the parking spaces on Jessie Street as per the plan in Figure 11 (Shown in full detail in Appendix D). This will not increase parking space lengths or manoeuvre distances however it will clarify the parking spaces, no standing zones, ambulance spaces and disabled parking bays in this location. This will improve access to the Doctors suites for all patients and, due to the removal of a defunct Bus Stop, will result in an increase of 5 parking spaces.



POINT No.	CO-ORDINATES EASTING	CO-ORDINATES NORTHING	DESCRIPTION
1	244198.887	7410227.730	End of PL
2	244198.836	7410227.333	End of PL
3	244195.714	7410203.297	End of PL
4	244195.328	7410200.322	End of PL
5	244192.894	7410181.579	End of PL
6	244192.086	7410175.360	End of PL
7	244190.064	7410159.790	End of PL
8	244190.202	7410158.768	End of PL
9	244187.860	7410140.516	End of PL

Figure 11: Concept Plan for Jessie Street Parking

6. Options Development

After reviewing the speed data, traffic volumes, parking arrangements and intersection configurations, several options have been developed for this study area. Discussion of these options and their benefits are detailed below.

5.1 Option A – Do Nothing

Option A is to Do Nothing. Analysis of the traffic volumes indicate that there are no greater volumes of vehicles on Ward Street or Spencer Street than is generally expected for a Minor Urban collector road. Speed analysis has indicated that there is a general compliance with the speed limit and vehicles are not excessively speeding on any of the surveyed streets, in either direction or during school times. The incidences of speeding raised by residents appear to be isolated hooning events and this can be regulated by QPS. The crash data can be largely discounted as crashes were predominantly driver error related and infrastructure did not contribute to the crashes in these locations. The available sight distance at each intersection is no different from any other intersection in the Allenstown and The Range area. Intersections are slightly impeded by parked vehicles, related to the hospital site, however due to the low speed environment it is considered appropriate for drivers to slightly encroach into the intersections, to increase their sight distance, before performing any turning movements. As the main issue raised by residents was speeding, and the data highlights that vehicles are largely compliant, the Do Nothing option is a valid option.

5.2 Option B – One Way Configuration

A one way configuration was investigated by Council officers as a possible traffic management option. A one way configuration would have Spencer Street one way in the Western direction, Ward Street in the Eastern direction, Jessie Street one way in the Northern Direction and Henry Street as two way traffic. This essentially forms a loop around the Mater Hospital for vehicles travelling in this area.

A one way configuration would improve some of the sight distance issues at intersections, as parking restrictions could be changed to improve sight triangles. Furthermore having a one way carriageway would allow vehicles to encroach into the carriageway more easily to improve sight distance and would have less points of conflict in the intersection. A one way configuration would also benefit the Jessie Street section from Ward to Spencer Street as it currently presents some parking issues due to reduced vehicle manoeuvrability.

A one way configuration however is likely to increase vehicles speeds on these streets. Currently, with two way traffic and parking either side of the road, vehicles are forced to slow down as lanes are narrower and the speed environment feels compressed. In the event that a one way configuration was implemented, vehicles would have a 6m, one way lane. This will cause drivers to increase their speed as their carriageway is significantly wider and there are less conflict points. As speeding was highlighted as a perceived issue for residents it is not recommended to implement an option that would increase vehicle speeds.

Furthermore the implementation of one way configuration will have a significant impact on residents, hospital traffic, traffic to the botanical gardens and school traffic. It will likely increase traffic volumes on Ward Street as a greater volume of vehicles currently use

Spencer Street. As there is not a speeding issue on these streets, and implementing this change will likely increase speeds, it is not worthwhile undertaking this option.

5.3 Option C – Improve Intersection Sight Distance

Analysis of the intersections highlighted some potential issues with regards to sight distances being impeded by parked vehicles on either side of the road. It is proposed to remove some parking spaces on the western approach to the Ward St / Henry Street intersection and the Spencer St / Henry Street intersection. This will increase sight distance to the closest lane, reducing the potential for conflict for vehicles on the minor leg. The Henry Street legs have been highlighted for this treatment as they are the two legs with a larger volume of traffic on them, as a result of St Peter School traffic. To implement this treatment, existing parking spaces will be blacked out and a yellow line will be extended through these excluded parking spaces.

The intersections of Ward Street / Upper Dawson road, and Spencer Street / Upper Dawson road were found to have sufficient sight distance with the current parking arrangements in this area. However to further clarify, it is proposed to mark the regulatory 10m no standing lines on the corners of each intersection and extend the Southern no standing line at the Ward St / Upper Dawson road intersection. In addition to this, continuity lines will be implemented through the intersection from edge line to edge line to allow vehicles to encroach into the intersection further and increase their sight distance.

The intersections of Jessie Street / Ward Street and Jessie Street / Spencer Street will not be altered from their current configuration with the exception of the implementation of continuity lines through the intersection. This will allow vehicles to encroach past the give way line, to improve their sight distance, before entering the conflict zone.

The implementation of these yellow lines will impact the total number of parking spaces within the study area. To mitigate the impact of these treatments, it is proposed to reconfigure the parking on Jessie Street. By reconfiguring the parking on Jessie Street, officers can increase the total parking yield in the study area whilst rectifying some spaces that deviate from the current standards.

5.4 Option D – Implement Local Area Traffic Management

The option as raised by the residents was to implement Local Area Traffic Management (LATM) throughout both Ward and Spencer Streets. The process of implementing a LATM scheme is significant and is not entered into lightly. As per Council's LATM policy and procedure, once a request is received from a resident, quantitative evidence is collected before being presented to the 3E Committee. The 3E committee analyse the data and then decide whether an LATM treatment or another treatment should be progressed further. The data collected at the several locations on Ward and Spencer Street highlights that there is not a speeding issue in these streets and those incidences of speeding raised by residents are isolated. The traffic data was presented to the 3E committee and it was unanimously decided that LATM is not required due to the general compliance with the speed limit (see Appendix C). For these reasons this option was not pursued any further.

7. Recommendation and Conclusion

After a thorough analysis and investigation into speeds, the road environment, and intersections around Ward Street and Spencer Street it is recommended that OPTION C, improving sight distance at intersections, is recommended to be implemented. The speed data highlights that there is not a continuous speeding issue in this location and the 3E committee agreed that LATM is not an acceptable solution. Interpretation of the crash data highlighted a possible issue with sight distance at some key intersections. Analysis of the intersections of Ward Street and Henry St, and Spencer St and Henry St showed some sight distance issues. OPTION C improves sight distance on the legs where traffic volumes are increased by school traffic. This results in the removal of 4 parking spaces however, if this work is combined with the proposed Jessie Street line marking, there is no net loss of parking spaces.

The intersections of Upper Dawson Road with Ward and Spencer Streets were also assessed. Analysis showed that sight distance at these intersections was acceptable except for the southern approach to the Ward St / Upper Dawson Rd intersection. With the proposed extension of the no standing line and the introduction of continuity lines at these intersections, sight distance is significantly improved. The intersections of Jessie Street / Ward Street and Jessie Street / Spencer Street will not be altered from their current configuration with the exception of the implementation of continuity lines through the intersection to improve sight distance.

It is proposed that the line marking treatments will mitigate identified issues at the intersections. These works can be completed under the current maintenance and operations budget. With these proposed works completed it is believed that the safety issues raised by residents will be improved.

References

Austroads 2010, *Austroads Guide to Road Design Part 4A – Unsignalised and Signalised Intersections,* Austroads Ltd, Sydney.

Austroads 2010, *Austroads Guide to Road Design Part 3 – Geometric Design,* Austroads Ltd, Sydney.

Qld Dept. of Transport and Main Roads 2003, *Manual of Uniform Traffic Control Devices Part 2 – Traffic Control Devices for General Use,* Queensland Government, Brisbane.

Qld Dept. of Transport and Main Roads 2015, *Manual of Uniform Traffic Control Devices Part 4 – Speed Controls,* Queensland Government, Brisbane.

Appendix A – Traffic Count Data

MetroCount Traffic Executive
Weekly Vehicle Counts (Virtual Week)

VirtWeeklyVehicle-698 -- English (ENA)

Datasets:

Site:	**[SLC_R_103] Upper Dawson Rd Nicholsen to Prospect opp 103**
Attribute:	Allenstown
Direction:	5 - South bound A>B, North bound B>A. **Lane:** 0
Survey Duration:	6:25 Friday, 27 January 2017 => 10:28 Friday, 10 February 2017,
Zone:	
File:	SLC_R_103 0 2017-02-10 1029.EC0 (Plus)
Identifier:	GT754ZW5 MC56-L5 [MC55] (c)Microcom 19Oct04
Algorithm:	Factory default axle (v4.05)
Data type:	Axle sensors - Paired (Class/Speed/Count)

Profile:

Filter time:	**7:00 Friday, 27 January 2017 => 10:00 Friday, 10 February 2017 (14.125)**
Included classes:	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13
Speed range:	10 - 160 km/h.
Direction:	North, East, South, West (bound), P = North
Separation:	Headway > 0 sec, Span 0 - 100 metre
Name:	Default Profile
Scheme:	Vehicle classification (ARClass10Split195)
Units:	Metric (metre, kilometre, m/s, km/h, kg, tonne)
In profile:	Vehicles = 125715 / 125925 (99.83%)

Weekly Vehicle Counts (Virtual Week)

VirtWeeklyVehicle-698
Site: SLC_R_103.0.1SN
Description: **Upper Dawson Rd Nicholsen to Prospect opp 103**
Filter time: **7:00 Friday, 27 January 2017 => 10:00 Friday, 10 February 2017**
Scheme: Vehicle classification (ARClass10Split195)
Filter: Cls(1 2 3 4 5 6 7 8 9 10 11 12 13) Dir(NESW) Sp(10,160) Headway(>0) Span(0 - 100)

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Averages 1 - 5	1 - 7
Hour									
0000-0100	18.5	17.0	23.5	24.5	27.5	49.5	36.0	22.2	28.1
0100-0200	12.0	14.0	16.5	15.5	15.5	28.0	33.5	14.7	19.3
0200-0300	8.5	13.0	11.5	12.5	15.0	24.0	23.5	12.1	15.4
0300-0400	17.0	12.0	11.0	11.5	13.5	17.0	15.0	13.0	13.9
0400-0500	45.5	38.0	42.5	43.5	40.5	21.5	20.5	42.0	36.0
0500-0600	135.0	130.5	123.0	134.5	136.5	69.0	51.5	131.9	111.4
0600-0700	341.0	333.5	339.5	346.5	326.5	168.0	98.0	337.4	279.0
0700-0800	543.5	559.0	553.0	532.5	520.0	268.0	190.5	539.6	456.9
0800-0900	**879.0**	**911.5**	**924.5**	**911.0**	**866.0**	434.5	270.5	**895.5**	**750.7**
0900-1000	574.5	627.5	628.0	619.0	544.7	524.5	433.0	593.8	563.1
1000-1100	578.5	600.0	584.0	594.0	622.5	**618.0**	524.5	595.8	588.8
1100-1200	582.5	576.0	589.0	627.5	657.0	615.5	**544.5**	606.4	598.9
1200-1300	590.5	589.0	575.5	622.5	659.0	**635.5**	**533.0**	607.3	600.7
1300-1400	607.0	563.0	577.5	592.0	633.5	593.5	486.0	594.6	578.9
1400-1500	686.0	688.0	744.5	713.5	687.5	501.0	493.0	703.9	644.8
1500-1600	**836.5**	**889.5**	**860.0**	**873.5**	**934.0**	514.0	511.5	**878.7**	**774.1**
1600-1700	767.5	787.5	803.0	791.0	786.0	488.0	492.0	787.0	702.1
1700-1800	775.0	809.5	806.0	806.5	819.5	447.5	455.0	803.3	702.7
1800-1900	494.5	547.0	592.5	561.0	620.0	384.5	376.5	563.0	510.9
1900-2000	312.0	366.0	364.0	376.0	378.0	311.0	244.0	359.2	335.9
2000-2100	209.0	220.5	241.5	248.5	253.5	220.0	162.5	234.6	222.2
2100-2200	123.0	152.5	147.0	178.5	175.0	189.5	108.5	155.2	153.4
2200-2300	83.5	94.5	80.5	100.0	124.5	146.5	71.5	96.6	

100.1									
2300-2400	46.0	50.0	59.5	56.5	115.5	85.0	48.5	65.5	
65.9									
Totals									
0700-1900	7915.0	8147.5	8237.5	8244.0	8349.7	6024.5	5310.0	8168.9	
7472.6									
0600-2200	8900.0	9220.0	9329.5	9393.5	9482.7	6913.0	5923.0	9255.3	
8463.1									
0600-0000	9029.5	9364.5	9469.5	9550.0	9722.7	7144.5	6043.0	9417.4	
8629.1									
0000-0000	9266.0	9589.0	9697.5	9792.0	9971.2	7353.5	6223.0	9653.3	
8853.2									
AM Peak	0800	0800	0800	0800	0800	1000	1100		
	879.0	911.5	924.5	911.0	866.0	618.0	544.5		
PM Peak	1500	1500	1500	1500	1500	1200	1200		
	836.5	889.5	860.0	873.5	934.0	635.5	533.0		

*** - No data.**

MetroCount Traffic Executive
Speed Statistics by Hour

SpeedStatHour-700 -- English (ENA)

Datasets:

Site:	**[SLC_R_103] Upper Dawson Rd Nicholsen to Prospect opp 103**
Attribute:	Allenstown
Direction:	5 - South bound A>B, North bound B>A. **Lane:** 0
Survey Duration:	6:25 Friday, 27 January 2017 => 10:28 Friday, 10 February 2017,
Zone:	
File:	SLC_R_103 0 2017-02-10 1029.EC0 (Plus)
Identifier:	GT754ZW5 MC56-L5 [MC55] (c)Microcom 19Oct04
Algorithm:	Factory default axle (v4.05)
Data type:	Axle sensors - Paired (Class/Speed/Count)

Profile:

Filter time:	**7:00 Friday, 27 January 2017 => 10:00 Friday, 10 February 2017 (14.125)**
Included classes:	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13
Speed range:	10 - 160 km/h.
Direction:	North, East, South, West (bound), P = North
Separation:	Headway > 0 sec, Span 0 - 100 metre
Name:	Default Profile
Scheme:	Vehicle classification (ARClass10Split195)
Units:	Metric (metre, kilometre, m/s, km/h, kg, tonne)
In profile:	Vehicles = 125715 / 125925 (99.83%)

Speed Statistics by Hour

SpeedStatHour-700
Site: SLC_R_103.0.1SN
Description: **Upper Dawson Rd Nicholsen to Prospect opp 103**
Filter time: **7:00 Friday, 27 January 2017 => 10:00 Friday, 10 February 2017**
Scheme: Vehicle classification (ARClass10Split195)
Filter: Cls(1 2 3 4 5 6 7 8 9 10 11 12 13) Dir(NESW) Sp(10,160) Headway(>0) Span(0 - 100)

Vehicles = 125715
Posted speed limit = 60 km/h, Exceeding = 9719 (7.73%), Mean Exceeding = 62.66 km/h
Maximum = 103.6 km/h, **Minimum** = 10.4 km/h, **Mean** = 52.4 km/h
85% Speed = 58.0 km/h, **95% Speed** = 60.8 km/h, **Median** = 52.9 km/h
15 km/h Pace = 45 - 60, **Number in Pace** = 103067 (81.98%)
Variance = 36.26, **Standard Deviation** = 6.02 km/h

Hour Bins (Partial days)

Time	Bin		Min	Max	Mean	Median	85%	95%	>PSL 60 km/h	
0000	393	0.3%	12.8	81.2	54.8	55.1	60.5	67.0	72	18.3%
0100	270	0.2%	24.7	79.4	54.8	54.4	61.6	66.2	61	22.6%
0200	216	0.2%	28.6	102.2	56.5	55.4	64.1	70.9	59	27.3%
0300	194	0.2%	31.0	103.6	56.7	56.2	62.6	67.7	48	24.7%
0400	504	0.4%	22.1	82.5	54.9	55.4	61.9	67.0	115	22.8%
0500	1560	1.2%	14.2	82.2	55.2	55.4	60.8	64.8	331	21.2%
0600	3906	3.1%	10.7	82.7	55.0	55.4	60.1	63.4	640	16.4%
0700	6853	5.5%	10.8	78.8	52.1	52.2	57.6	60.8	486	7.1%
0800	11260	9.0%	12.1	87.5	48.5	48.2	54.0	57.2	239	2.1%
0900	8447	6.7%	13.8	74.1	52.1	52.2	57.2	59.8	437	5.2%
1000	8243	6.6%	15.2	81.2	52.6	52.9	57.6	60.1	480	5.8%
1100	8384	6.7%	10.4	75.6	52.9	53.3	58.0	60.5	582	6.9%
1200	8410	6.7%	12.5	71.8	53.1	53.3	58.0	60.8	602	7.2%
1300	8105	6.4%	19.4	80.1	53.4	53.6	58.3	61.2	709	8.7%
1400	9027	7.2%	13.2	87.7	51.5	51.8	57.6	60.5	596	6.6%
1500	10838	8.6%	11.2	75.3	48.9	48.6	55.4	59.0	399	3.7%
1600	9830	7.8%	14.3	86.2	53.7	54.0	58.3	61.6	909	9.2%
1700	9838	7.8%	18.9	98.8	54.1	54.4	58.7	61.2	918	9.3%
1800	7152	5.7%	15.1	82.1	54.2	54.4	58.7	61.6	701	9.8%
1900	4702	3.7%	15.7	88.6	53.4	53.6	58.3	61.2	391	8.3%
2000	3111	2.5%	21.0	78.2	53.8	54.0	58.7	61.9	351	11.3%
2100	2148	1.7%	22.2	84.1	54.2	54.4	59.0	62.3	258	12.0%
2200	1402	1.1%	25.7	90.3	54.2	54.4	59.8	63.7	194	13.8%
2300	922	0.7%	18.7	85.8	54.5	54.7	59.8	64.1	141	15.3%
----	**125715**	**100.0%**	**10.4**	**103.6**	**52.4**	**52.9**	**58.0**	**60.8**	**9719**	**7.7%**

MetroCount Traffic Executive
Weekly Vehicle Counts (Virtual Week)

VirtWeeklyVehicle-94 -- English (ENA)

Datasets:

Site:	**[006951B] Ward St (Opp 22)**
Attribute:	The Range
Direction:	6 - West bound A>B, East bound B>A. **Lane:** 0
Survey Duration:	9:53 Friday, 17 February 2017 => 11:32 Friday, 3 March 2017,
Zone:	
File:	006951B 0 2017-03-03 1126.EC0 (Plus)
Identifier:	HP322J2T MC56-L5 [MC55] (c)Microcom 19Oct04
Algorithm:	Factory default axle (v4.05)
Data type:	Axle sensors - Paired (Class/Speed/Count)

Profile:

Filter time:	**10:00 Friday, 17 February 2017 => 11:00 Friday, 3 March 2017 (14.0417)**
Included classes:	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13
Speed range:	10 - 160 km/h.
Direction:	North, East, South, West (bound), P = East
Separation:	Headway > 0 sec, Span 0 - 100 metre
Name:	Default Profile
Scheme:	Vehicle classification (ARClass10Split195)
Units:	Metric (metre, kilometre, m/s, km/h, kg, tonne)
In profile:	Vehicles = 15371 / 15414 (99.72%)

Weekly Vehicle Counts (Virtual Week)

VirtWeeklyVehicle-94
Site: 006951B.0.1WE
Description: **Ward St (Opp 22)**
Filter time: **10:00 Friday, 17 February 2017 => 11:00 Friday, 3 March 2017**
Scheme: Vehicle classification (ARClass10Split195)
Filter: Cls(1 2 3 4 5 6 7 8 9 10 11 12 13) Dir(NESW) Sp(10,160) Headway(>0) Span(0 - 100)

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Averages 1 - 5	1 - 7
Hour									
0000-0100	7.0	5.0	6.5	2.5	1.5	3.0	6.0	4.5	4.5
0100-0200	1.0	2.0	1.0	3.0	2.5	0.5	1.0	1.9	1.6
0200-0300	0.5	0.5	1.0	0.5	1.0	3.0	0.5	0.7	1.0
0300-0400	3.0	2.5	2.0	2.5	2.5	0.5	1.5	2.5	2.1
0400-0500	2.5	1.5	2.5	3.5	4.0	2.0	1.5	2.8	2.5
0500-0600	13.5	18.5	16.5	18.5	11.5	10.0	4.5	15.7	13.3
0600-0700	51.0	55.0	50.0	57.5	48.5	22.5	13.5	52.4	42.6
0700-0800	56.5	62.5	71.0	77.5	32.0	23.0	19.5	59.9	48.9
0800-0900	**155.0**	**138.0**	**144.5**	**156.0**	75.0	38.5	24.5	**133.7**	**104.5**
0900-1000	98.0	95.5	112.0	93.0	48.0	45.5	41.0	89.3	76.1
1000-1100	110.5	101.0	118.5	102.5	64.0	**62.0**	**58.0**	96.1	86.5
1100-1200	88.5	85.0	111.0	95.5	**108.0**	55.5	51.5	97.6	85.0
1200-1300	87.5	87.5	91.5	100.5	97.5	**54.0**	47.5	92.9	80.9
1300-1400	88.0	85.5	85.5	88.5	84.0	43.5	34.0	86.3	72.7
1400-1500	93.5	97.0	99.5	103.0	95.0	52.0	**47.5**	97.6	83.9
1500-1600	**127.5**	**130.0**	**129.5**	**133.5**	**112.0**	48.0	34.0	**126.5**	**102.1**
1600-1700	95.5	91.5	112.0	109.0	74.5	41.0	42.0	96.5	80.8
1700-1800	79.0	90.5	95.0	87.0	90.5	46.0	36.5	88.4	74.9
1800-1900	44.0	51.5	56.0	62.0	60.0	40.5	35.0	54.7	49.9
1900-2000	26.0	38.0	29.5	33.0	36.0	31.0	22.5	32.5	30.9
2000-2100	16.0	26.0	11.0	18.0	25.0	18.0	11.0	19.2	17.9
2100-2200	8.5	12.5	12.0	12.0	11.5	16.5	4.5	11.3	11.1
2200-2300	9.5	12.5	13.5	12.5	17.0	13.5	10.0	13.0	

12.6								
2300-2400	4.0	4.5	5.5	6.0	7.5	9.5	3.0	5.5
5.7								
Totals								
0700-1900	1123.5	1115.5	1226.0	1208.0	940.5	549.5	471.0	1119.5
946.1								
0600-2200	1225.0	1247.0	1328.5	1328.5	1061.5	637.5	522.5	1234.9
1048.5								
0600-0000	1238.5	1264.0	1347.5	1347.0	1086.0	660.5	535.5	1253.4
1066.8								
0000-0000	1266.0	1294.0	1377.0	1377.5	1109.0	679.5	550.5	1281.5
1091.8								
AM Peak	0800	0800	0800	0800	1100	1000	1000	
	155.0	138.0	144.5	156.0	108.0	62.0	58.0	
PM Peak	1500	1500	1500	1500	1500	1200	1400	
	127.5	130.0	129.5	133.5	112.0	54.0	47.5	

*** - No data.**

MetroCount Traffic Executive
Speed Statistics by Hour

SpeedStatHour-754 -- English (ENA)

Datasets:

Site:	**[006951B] Ward St (Opp 22)**
Attribute:	The Range
Direction:	6 - West bound A>B, East bound B>A. **Lane:** 0
Survey Duration:	9:53 Friday, 17 February 2017 => 11:32 Friday, 3 March 2017,
Zone:	
File:	006951B 0 2017-03-03 1126.EC0 (Plus)
Identifier:	HP322J2T MC56-L5 [MC55] (c)Microcom 19Oct04
Algorithm:	Factory default axle (v4.05)
Data type:	Axle sensors - Paired (Class/Speed/Count)

Profile:

Filter time:	**10:00 Friday, 17 February 2017 => 11:00 Friday, 3 March 2017 (14.0417)**
Included classes:	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13
Speed range:	10 - 160 km/h.
Direction:	North, East, South, West (bound), P = East
Separation:	Headway > 4 sec, Span 0 - 100 metre
Name:	Default Profile
Scheme:	Vehicle classification (ARClass10Split195)
Units:	Metric (metre, kilometre, m/s, km/h, kg, tonne)
In profile:	Vehicles = 14698 / 15414 (95.35%)

Speed Statistics by Hour

SpeedStatHour-754
Site: 006951B.0.1WE
Description: **Ward St (Opp 22)**
Filter time: **10:00 Friday, 17 February 2017 => 11:00 Friday, 3 March 2017**
Scheme: Vehicle classification (ARClass10Split195)
Filter: Cls(1 2 3 4 5 6 7 8 9 10 11 12 13) Dir(NESW) Sp(10,160) Headway(>4) Span(0 - 100)

Vehicles = 14698
Posted speed limit = 50 km/h, Exceeding = 2820 (19.19%), Mean Exceeding = 54.58 km/h
Maximum = 95.1 km/h, **Minimum** = 10.4 km/h, **Mean** = 43.0 km/h
85% Speed = 51.1 km/h, **95% Speed** = 56.2 km/h, **Median** = 43.2 km/h
15 km/h Pace = 36 - 51, **Number in Pace** = 9813 (66.76%)
Variance = 70.63, **Standard Deviation** = 8.40 km/h

Hour Bins (Partial days)

Time	Bin		Min	Max	Mean	Median	85%	95%	>PSL 50 km/h	
0000	62	0.4%	14.4	88.4	46.2	44.3	54.4	61.2	14	22.6%
0100	22	0.1%	35.5	59.6	46.0	42.8	55.8	56.9	6	27.3%
0200	14	0.1%	34.2	59.6	46.1	44.3	54.7	56.5	3	21.4%
0300	29	0.2%	34.8	64.2	50.1	49.0	58.0	59.4	14	48.3%
0400	35	0.2%	26.0	64.7	49.2	47.9	55.8	63.0	13	37.1%
0500	183	1.2%	28.2	77.8	49.3	49.3	57.2	63.0	83	45.4%
0600	581	4.0%	14.2	74.2	49.0	49.0	57.2	62.3	268	46.1%
0700	667	4.5%	10.4	72.8	47.0	46.8	54.4	59.0	240	36.0%
0800	1371	9.3%	14.0	66.7	41.5	41.0	48.6	53.3	158	11.5%
0900	1012	6.9%	13.2	74.8	42.0	41.8	49.7	54.0	142	14.0%
1000	1233	8.4%	10.9	65.1	40.6	40.7	49.0	54.0	165	13.4%
1100	1130	7.7%	10.4	67.7	41.5	41.4	49.3	54.0	150	13.3%
1200	1080	7.3%	12.4	71.0	41.7	42.1	49.7	54.0	152	14.1%
1300	987	6.7%	12.0	79.5	42.7	42.8	50.4	55.1	161	16.3%
1400	1112	7.6%	12.2	95.1	41.8	41.8	49.3	54.4	155	13.9%
1500	1341	9.1%	11.1	64.9	40.4	40.3	48.6	52.9	158	11.8%
1600	1076	7.3%	10.8	92.3	44.3	44.3	51.5	56.2	232	21.6%
1700	999	6.8%	11.1	71.7	44.7	45.0	51.5	55.8	224	22.4%
1800	683	4.6%	11.1	70.5	45.3	45.7	52.9	56.9	197	28.8%
1900	424	2.9%	17.8	65.4	45.1	44.6	52.9	58.0	110	25.9%
2000	247	1.7%	12.2	75.6	44.7	44.3	52.2	57.6	62	25.1%
2100	154	1.0%	26.2	64.8	44.8	44.6	51.8	55.4	36	23.4%
2200	176	1.2%	15.2	67.3	46.7	47.2	55.1	59.4	58	33.0%
2300	80	0.5%	12.2	59.4	43.2	43.6	52.6	54.7	19	23.8%
----	**14698**	**100.0%**	**10.4**	**95.1**	**43.0**	**43.2**	**51.1**	**56.2**	**2820**	**19.2%**

MetroCount Traffic Executive
Speed Statistics by Hour

SpeedStatHour-751 -- English (ENA)

Datasets:

Site:	**[006951B] Ward St (Opp 22)**
Attribute:	The Range
Direction:	6 - West bound A>B, East bound B>A. **Lane:** 0
Survey Duration:	9:53 Friday, 17 February 2017 => 11:32 Friday, 3 March 2017,
Zone:	
File:	006951B 0 2017-03-03 1126.EC0 (Plus)
Identifier:	HP322J2T MC56-L5 [MC55] (c)Microcom 19Oct04
Algorithm:	Factory default axle (v4.05)
Data type:	Axle sensors - Paired (Class/Speed/Count)

Profile:

Filter time:	**10:00 Friday, 17 February 2017 => 11:00 Friday, 3 March 2017 (14.0417)**
Included classes:	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13
Speed range:	10 - 160 km/h.
Direction:	West (bound), P = East
Separation:	Headway > 4 sec, Span 0 - 100 metre
Name:	Default Profile
Scheme:	Vehicle classification (ARClass10Split195)
Units:	Metric (metre, kilometre, m/s, km/h, kg, tonne)
In profile:	Vehicles = 6898 / 15414 (44.75%)

Speed Statistics by Hour

SpeedStatHour-751
Site: 006951B.0.1WE
Description: **Ward St (Opp 22)**
Filter time: **10:00 Friday, 17 February 2017 => 11:00 Friday, 3 March 2017**
Scheme: Vehicle classification (ARClass10Split195)
Filter: Cls(1 2 3 4 5 6 7 8 9 10 11 12 13) Dir(W) Sp(10,160) Headway(>4) Span(0 - 100)

Vehicles = 6898
Posted speed limit = 50 km/h, Exceeding = 1426 (20.67%), Mean Exceeding = 55.00 km/h
Maximum = 95.1 km/h, **Minimum** = 10.4 km/h, **Mean** = 43.1 km/h
85% Speed = 51.5 km/h, **95% Speed** = 56.9 km/h, **Median** = 43.2 km/h
15 km/h Pace = 36 - 51, **Number in Pace** = 4417 (64.03%)
Variance = 81.23, **Standard Deviation** = 9.01 km/h

Hour Bins (Partial days)

Time	Bin		Min	Max	Mean	Median	85%	95%	>PSL 50 km/h	
0000	32	0.5%	14.4	88.4	46.8	45.4	53.6	59.8	8	25.0%
0100	8	0.1%	38.6	56.1	45.0	41.8	55.1	55.8	2	25.0%
0200	10	0.1%	34.2	59.6	47.3	45.0	56.5	59.4	3	30.0%
0300	21	0.3%	34.8	64.2	50.7	49.0	58.0	59.4	10	47.6%
0400	23	0.3%	36.9	53.1	46.5	46.1	49.3	51.5	3	13.0%
0500	80	1.2%	29.3	77.8	51.2	50.0	57.6	65.2	41	51.3%
0600	393	5.7%	14.2	74.2	49.8	50.0	58.3	63.0	200	50.9%
0700	341	4.9%	10.4	72.8	47.2	47.2	54.0	58.3	127	37.2%
0800	616	8.9%	14.0	66.7	42.1	41.8	49.7	54.4	88	14.3%
0900	550	8.0%	13.2	74.8	41.9	41.8	49.7	54.7	81	14.7%
1000	662	9.6%	10.9	65.1	40.0	40.3	48.6	53.6	85	12.8%
1100	529	7.7%	10.4	67.7	40.7	41.0	49.0	53.6	67	12.7%
1200	496	7.2%	12.4	67.7	41.2	41.8	49.7	54.0	68	13.7%
1300	446	6.5%	13.2	79.5	42.3	42.8	50.0	55.4	70	15.7%
1400	467	6.8%	13.5	95.1	42.2	42.1	49.3	55.8	65	13.9%
1500	648	9.4%	12.2	61.8	39.4	39.2	47.9	53.3	61	9.4%
1600	472	6.8%	13.0	70.6	44.7	45.0	51.8	57.6	113	23.9%
1700	405	5.9%	15.2	71.7	46.3	46.1	52.6	59.4	119	29.4%
1800	279	4.0%	15.4	68.8	45.6	46.4	54.0	58.3	93	33.3%
1900	157	2.3%	17.8	65.4	45.6	45.4	55.8	60.8	47	29.9%
2000	93	1.3%	12.2	75.6	44.8	44.3	52.9	56.5	22	23.7%
2100	50	0.7%	30.2	62.8	45.1	45.4	51.1	56.2	11	22.0%
2200	94	1.4%	15.2	67.3	47.8	47.5	56.5	59.4	34	36.2%
2300	26	0.4%	12.2	54.4	42.8	44.3	50.4	53.3	8	30.8%
----	**6898**	**100.0%**	**10.4**	**95.1**	**43.1**	**43.2**	**51.5**	**56.9**	**1426**	**20.7%**

MetroCount Traffic Executive
Speed Statistics by Hour

SpeedStatHour-752 -- English (ENA)

Datasets:

Site:	**[006951B] Ward St (Opp 22)**
Attribute:	The Range
Direction:	6 - West bound A>B, East bound B>A. **Lane:** 0
Survey Duration:	9:53 Friday, 17 February 2017 => 11:32 Friday, 3 March 2017,
Zone:	
File:	006951B 0 2017-03-03 1126.EC0 (Plus)
Identifier:	HP322J2T MC56-L5 [MC55] (c)Microcom 19Oct04
Algorithm:	Factory default axle (v4.05)
Data type:	Axle sensors - Paired (Class/Speed/Count)

Profile:

Filter time:	**10:00 Friday, 17 February 2017 => 11:00 Friday, 3 March 2017 (14.0417)**
Included classes:	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13
Speed range:	10 - 160 km/h.
Direction:	East (bound), P = East
Separation:	Headway > 4 sec, Span 0 - 100 metre
Name:	Default Profile
Scheme:	Vehicle classification (ARClass10Split195)
Units:	Metric (metre, kilometre, m/s, km/h, kg, tonne)
In profile:	Vehicles = 7800 / 15414 (50.60%)

Speed Statistics by Hour

SpeedStatHour-752
Site: 006951B.0.1WE
Description: **Ward St (Opp 22)**
Filter time: **10:00 Friday, 17 February 2017 => 11:00 Friday, 3 March 2017**
Scheme: Vehicle classification (ARClass10Split195)
Filter: Cls(1 2 3 4 5 6 7 8 9 10 11 12 13) Dir(E) Sp(10,160) Headway(>4) Span(0 - 100)

Vehicles = 7800
Posted speed limit = 50 km/h, Exceeding = 1394 (17.87%), Mean Exceeding = 54.15 km/h
Maximum = 92.3 km/h, **Minimum** = 10.8 km/h, **Mean** = 43.0 km/h
85% Speed = 50.8 km/h, **95% Speed** = 55.1 km/h, **Median** = 42.8 km/h
15 km/h Pace = 36 - 51, **Number in Pace** = 5396 (69.18%)
Variance = 61.25, **Standard Deviation** = 7.83 km/h

Hour Bins (Partial days)

Time	Bin		Min	Max	Mean	Median	85%	95%	>PSL 50 km/h	
0000	30	0.4%	28.4	70.8	45.5	44.3	54.4	61.9	6	20.0%
0100	14	0.2%	35.5	59.6	46.5	43.9	55.8	56.9	4	28.6%
0200	4	0.1%	39.4	47.3	43.1	41.8	43.6	47.2	0	0.0%
0300	8	0.1%	37.5	58.0	48.7	48.6	56.2	58.0	4	50.0%
0400	12	0.2%	26.0	64.7	54.5	54.4	63.0	63.7	10	83.3%
0500	103	1.3%	28.2	69.4	47.9	45.7	57.2	61.9	42	40.8%
0600	188	2.4%	18.5	69.9	47.4	47.2	54.4	59.0	68	36.2%
0700	326	4.2%	20.3	68.4	46.7	46.4	54.4	59.4	113	34.7%
0800	755	9.7%	16.6	63.5	41.1	40.7	47.5	52.6	70	9.3%
0900	462	5.9%	13.5	68.6	42.1	41.8	49.3	53.6	61	13.2%
1000	571	7.3%	14.0	64.2	41.3	41.0	49.0	54.0	80	14.0%
1100	601	7.7%	13.7	64.2	42.2	42.1	49.3	54.4	83	13.8%
1200	584	7.5%	15.2	71.0	42.1	42.5	49.7	54.0	84	14.4%
1300	541	6.9%	12.0	74.7	42.9	42.8	50.4	54.7	91	16.8%
1400	645	8.3%	12.2	65.9	41.4	41.4	49.3	54.0	90	14.0%
1500	693	8.9%	11.1	64.9	41.3	41.4	49.3	52.9	97	14.0%
1600	604	7.7%	10.8	92.3	44.0	43.9	51.1	54.7	119	19.7%
1700	594	7.6%	11.1	69.4	43.6	44.3	50.4	53.6	105	17.7%
1800	404	5.2%	11.1	70.5	45.1	45.4	52.2	55.8	104	25.7%
1900	267	3.4%	24.4	63.9	44.9	44.3	51.8	56.9	63	23.6%
2000	154	2.0%	19.8	68.6	44.6	44.3	51.8	57.6	40	26.0%
2100	104	1.3%	26.2	64.8	44.7	44.3	52.2	55.4	25	24.0%
2200	82	1.1%	21.8	66.7	45.4	45.7	52.9	58.3	24	29.3%
2300	54	0.7%	19.2	59.4	43.4	43.2	52.9	55.4	11	20.4%
----	**7800**	**100.0%**	**10.8**	**92.3**	**43.0**	**42.8**	**50.8**	**55.1**	**1394**	**17.9%**

MetroCount Traffic Executive
Weekly Vehicle Counts (Virtual Week)

VirtWeeklyVehicle-89 -- English (ENA)

Datasets:

Site:	**[006951A] Ward St (Opp 12)**
Attribute:	The Range
Direction:	6 - West bound A>B, East bound B>A. **Lane:** 0
Survey Duration:	9:32 Friday, 17 February 2017 => 11:44 Friday, 3 March 2017,
Zone:	
File:	006951A 0 2017-03-03 1138.EC0 (Plus)
Identifier:	K547VXZH MC56-6 [MC55] (c)Microcom 02/03/01
Algorithm:	Factory default axle (v4.05)
Data type:	Axle sensors - Paired (Class/Speed/Count)

Profile:

Filter time:	**10:00 Friday, 17 February 2017 => 11:00 Friday, 3 March 2017 (14.0417)**
Included classes:	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13
Speed range:	10 - 160 km/h.
Direction:	North, East, South, West (bound), P = East
Separation:	Headway > 0 sec, Span 0 - 100 metre
Name:	Default Profile
Scheme:	Vehicle classification (ARClass10Split195)
Units:	Metric (metre, kilometre, m/s, km/h, kg, tonne)
In profile:	Vehicles = 14677 / 14798 (99.18%)

Weekly Vehicle Counts (Virtual Week)

VirtWeeklyVehicle-89
Site: 006951A.0.1WE
Description: **Ward St (Opp 12)**
Filter time: **10:00 Friday, 17 February 2017 => 11:00 Friday, 3 March 2017**
Scheme: Vehicle classification (ARClass10Split195)
Filter: Cls(1 2 3 4 5 6 7 8 9 10 11 12 13) Dir(NESW) Sp(10,160) Headway(>0) Span(0 - 100)

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Averages 1 - 5	1 - 7
Hour									
0000-0100	4.5	4.5	5.0	1.5	1.0	3.0	5.0	3.3	3.5
0100-0200	1.0	1.5	1.0	2.5	2.0	1.0	1.5	1.6	1.5
0200-0300	0.5	0.5	1.0	0.5	1.0	1.5	0.5	0.7	0.8
0300-0400	3.0	2.5	2.0	2.5	2.5	0.5	1.5	2.5	2.1
0400-0500	2.5	2.0	3.0	3.5	3.5	2.0	1.5	2.9	2.6
0500-0600	14.5	17.5	16.5	16.0	13.0	9.0	4.0	15.5	12.9
0600-0700	49.5	54.5	50.5	51.5	45.5	24.0	14.0	50.3	41.4
0700-0800	57.5	61.5	66.0	73.0	44.0	20.0	19.0	60.4	48.7
0800-0900	**146.0**	**124.5**	**132.0**	**138.0**	75.5	37.0	30.5	**123.2**	**97.6**
0900-1000	90.0	83.0	102.5	87.5	48.5	46.0	44.5	82.3	71.7
1000-1100	95.5	85.5	97.5	84.0	57.7	**62.5**	**66.0**	81.6	77.0
1100-1200	80.5	76.5	92.0	83.0	**111.5**	51.0	58.5	88.7	79.0
1200-1300	83.0	80.0	90.5	82.0	92.0	50.0	**52.0**	85.5	75.6
1300-1400	76.0	81.0	82.0	83.5	83.0	46.0	40.0	81.1	70.2
1400-1500	83.5	94.5	91.5	100.5	85.5	**52.5**	49.5	91.1	79.6
1500-1600	**127.0**	**132.0**	**120.0**	**134.5**	**108.0**	47.0	36.0	**124.3**	**100.6**
1600-1700	94.5	90.0	107.0	105.5	76.5	40.5	41.0	94.7	79.3
1700-1800	78.5	98.5	95.0	95.0	81.5	48.5	33.5	89.7	75.8
1800-1900	42.5	49.0	54.5	62.0	57.5	37.5	34.0	53.1	48.1
1900-2000	24.5	32.0	31.5	33.0	29.5	28.0	24.5	30.1	29.0
2000-2100	15.0	25.5	11.5	16.5	26.5	18.0	12.5	19.0	17.9
2100-2200	9.0	11.0	12.5	11.0	12.5	15.0	4.5	11.2	10.8
2200-2300	9.5	12.5	11.0	11.5	15.0	13.5	10.0	11.9	

11.9								
2300-2400	4.5	3.5	6.0	4.5	6.5	9.0	2.0	5.0
5.1								
Totals								
0700-1900	1054.5	1056.0	1130.5	1128.5	921.2	538.5	504.5	1055.7
903.4								
0600-2200	1152.5	1179.0	1236.5	1240.5	1035.2	623.5	560.0	1166.3
1002.5								
0600-0000	1166.5	1195.0	1253.5	1256.5	1056.7	646.0	572.0	1183.2
1019.5								
0000-0000	1192.5	1223.5	1282.0	1283.0	1079.7	663.0	586.0	1209.7
1042.9								
AM Peak	0800	0800	0800	0800	1100	1000	1000	
	146.0	124.5	132.0	138.0	111.5	62.5	66.0	
PM Peak	1500	1500	1500	1500	1500	1400	1200	
	127.0	132.0	120.0	134.5	108.0	52.5	52.0	

*** - No data.**

MetroCount Traffic Executive
Speed Statistics by Hour

SpeedStatHour-760 -- English (ENA)

Datasets:

Site:	**[006951A] Ward St (Opp 12)**
Attribute:	The Range
Direction:	6 - West bound A>B, East bound B>A. **Lane:** 0
Survey Duration:	9:32 Friday, 17 February 2017 => 11:44 Friday, 3 March 2017,
Zone:	
File:	006951A 0 2017-03-03 1138.EC0 (Plus)
Identifier:	K547VXZH MC56-6 [MC55] (c)Microcom 02/03/01
Algorithm:	Factory default axle (v4.05)
Data type:	Axle sensors - Paired (Class/Speed/Count)

Profile:

Filter time:	**10:00 Friday, 17 February 2017 => 11:00 Friday, 3 March 2017 (14.0417)**
Included classes:	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13
Speed range:	10 - 160 km/h.
Direction:	West (bound), P = East
Separation:	Headway > 4 sec, Span 0 - 100 metre
Name:	Default Profile
Scheme:	Vehicle classification (ARClass10Split195)
Units:	Metric (metre, kilometre, m/s, km/h, kg, tonne)
In profile:	Vehicles = 6923 / 14798 (46.78%)

Speed Statistics by Hour

SpeedStatHour-760
Site: 006951A.0.1WE
Description: **Ward St (Opp 12)**
Filter time: **10:00 Friday, 17 February 2017 => 11:00 Friday, 3 March 2017**
Scheme: Vehicle classification (ARClass10Split195)
Filter: Cls(1 2 3 4 5 6 7 8 9 10 11 12 13) Dir(W) Sp(10,160) Headway(>4) Span(0 - 100)

Vehicles = 6923
Posted speed limit = 50 km/h, Exceeding = 254 (3.67%), Mean Exceeding = 53.30 km/h
Maximum = 80.1 km/h, **Minimum** = 10.1 km/h, **Mean** = 37.8 km/h
85% Speed = 45.0 km/h, **95% Speed** = 49.0 km/h, **Median** = 38.5 km/h
15 km/h Pace = 31 - 46, **Number in Pace** = 5042 (72.83%)
Variance = 60.88, **Standard Deviation** = 7.80 km/h

Hour Bins (Partial days)

Time	Bin		Min	Max	Mean	Median	85%	95%	>PSL 50 km/h	
0000	29	0.4%	14.2	80.1	39.1	40.0	45.0	48.6	1	3.4%
0100	11	0.2%	10.7	47.3	29.4	29.2	32.8	45.4	0	0.0%
0200	9	0.1%	28.2	49.2	38.8	39.6	46.4	49.0	0	0.0%
0300	21	0.3%	34.0	49.9	41.8	40.7	45.4	47.9	0	0.0%
0400	24	0.3%	32.1	45.2	37.1	36.0	40.3	43.2	0	0.0%
0500	82	1.2%	24.0	64.8	41.8	41.4	46.8	51.5	8	9.8%
0600	376	5.4%	19.2	70.8	42.1	42.5	49.0	53.3	43	11.4%
0700	354	5.1%	10.6	58.6	39.5	40.3	45.7	48.6	11	3.1%
0800	850	12.3%	10.2	60.4	33.8	34.2	40.7	44.6	10	1.2%
0900	499	7.2%	16.5	59.4	38.6	39.2	44.3	48.2	15	3.0%
1000	584	8.4%	14.5	58.2	37.5	37.8	43.9	47.2	9	1.5%
1100	490	7.1%	10.2	57.6	38.0	38.5	43.9	47.5	7	1.4%
1200	452	6.5%	14.4	58.8	39.2	39.6	45.7	49.3	19	4.2%
1300	427	6.2%	13.6	65.8	39.7	39.6	45.7	49.7	19	4.4%
1400	489	7.1%	12.3	62.8	37.6	37.4	44.3	48.6	16	3.3%
1500	648	9.4%	10.1	56.0	32.8	34.2	42.1	46.4	10	1.5%
1600	467	6.7%	13.2	62.5	39.6	40.0	45.7	49.7	23	4.9%
1700	456	6.6%	12.4	54.7	38.0	38.9	45.4	48.6	18	3.9%
1800	255	3.7%	12.4	60.9	39.9	40.3	46.4	50.8	18	7.1%
1900	150	2.2%	12.6	60.4	40.5	40.3	47.2	50.4	10	6.7%
2000	94	1.4%	20.7	57.8	39.8	39.2	46.1	52.6	10	10.6%
2100	51	0.7%	16.2	59.1	39.1	40.0	44.6	48.2	2	3.9%
2200	88	1.3%	28.2	56.4	40.6	40.7	46.4	51.1	5	5.7%
2300	17	0.2%	26.7	48.1	39.6	39.6	43.6	46.1	0	0.0%
----	**6923**	**100.0%**	**10.1**	**80.1**	**37.8**	**38.5**	**45.0**	**49.0**	**254**	**3.7%**

MetroCount Traffic Executive
Speed Statistics by Hour

SpeedStatHour-761 -- English (ENA)

Datasets:

Site:	**[006951A] Ward St (Opp 12)**
Attribute:	The Range
Direction:	6 - West bound A>B, East bound B>A. **Lane:** 0
Survey Duration:	9:32 Friday, 17 February 2017 => 11:44 Friday, 3 March 2017,
Zone:	
File:	006951A 0 2017-03-03 1138.EC0 (Plus)
Identifier:	K547VXZH MC56-6 [MC55] (c)Microcom 02/03/01
Algorithm:	Factory default axle (v4.05)
Data type:	Axle sensors - Paired (Class/Speed/Count)

Profile:

Filter time:	**10:00 Friday, 17 February 2017 => 11:00 Friday, 3 March 2017 (14.0417)**
Included classes:	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13
Speed range:	10 - 160 km/h.
Direction:	East (bound), P = East
Separation:	Headway > 4 sec, Span 0 - 100 metre
Name:	Default Profile
Scheme:	Vehicle classification (ARClass10Split195)
Units:	Metric (metre, kilometre, m/s, km/h, kg, tonne)
In profile:	Vehicles = 7088 / 14798 (47.90%)

Speed Statistics by Hour

SpeedStatHour-761
Site: 006951A.0.1WE
Description: **Ward St (Opp 12)**
Filter time: **10:00 Friday, 17 February 2017 => 11:00 Friday, 3 March 2017**
Scheme: Vehicle classification (ARClass10Split195)
Filter: Cls(1 2 3 4 5 6 7 8 9 10 11 12 13) Dir(E) Sp(10,160) Headway(>4) Span(0 - 100)

Vehicles = 7088
Posted speed limit = 50 km/h, Exceeding = 734 (10.36%), Mean Exceeding = 52.99 km/h
Maximum = 73.6 km/h, **Minimum** = 10.0 km/h, **Mean** = 41.2 km/h
85% Speed = 48.2 km/h, **95% Speed** = 52.2 km/h, **Median** = 41.8 km/h
15 km/h Pace = 34 - 49, **Number in Pace** = 5071 (71.54%)
Variance = 59.81, **Standard Deviation** = 7.73 km/h

Hour Bins (Partial days)

Time	Bin		Min	Max	Mean	Median	85%	95%	>PSL 50 km/h	
0000	19	0.3%	19.6	59.3	44.2	47.2	52.6	56.9	7	36.8%
0100	10	0.1%	17.7	52.7	41.3	43.6	51.1	52.6	2	20.0%
0200	2	0.0%	40.7	45.0	42.9	40.7	45.0	45.0	0	0.0%
0300	8	0.1%	36.0	52.5	45.8	46.8	50.0	52.2	2	25.0%
0400	12	0.2%	37.5	63.0	50.9	50.0	55.4	56.5	7	58.3%
0500	98	1.4%	28.2	59.3	44.7	45.0	51.8	55.4	25	25.5%
0600	190	2.7%	21.7	58.2	43.1	44.6	50.0	52.2	29	15.3%
0700	304	4.3%	12.8	60.2	42.3	43.2	50.4	55.1	52	17.1%
0800	432	6.1%	10.0	59.4	36.9	36.7	44.3	49.3	20	4.6%
0900	457	6.4%	10.4	62.7	40.2	40.7	47.2	50.4	29	6.3%
1000	520	7.3%	13.0	57.1	40.3	40.3	47.2	51.1	42	8.1%
1100	558	7.9%	10.3	60.9	41.1	41.4	48.2	52.2	49	8.8%
1200	561	7.9%	12.5	60.3	41.2	41.8	47.5	51.5	48	8.6%
1300	513	7.2%	11.4	61.0	42.7	42.8	49.0	52.6	64	12.5%
1400	558	7.9%	13.0	60.5	40.4	41.0	47.9	52.2	48	8.6%
1500	658	9.3%	10.0	62.4	38.0	39.2	46.4	50.4	44	6.7%
1600	593	8.4%	15.4	63.6	42.3	42.8	48.6	52.2	70	11.8%
1700	558	7.9%	11.9	73.6	41.8	42.5	47.9	51.8	49	8.8%
1800	403	5.7%	13.3	62.5	42.2	42.8	48.6	51.8	45	11.2%
1900	250	3.5%	23.5	65.4	43.9	44.6	50.0	54.7	40	16.0%
2000	154	2.2%	15.1	59.5	44.4	45.4	49.7	53.3	23	14.9%
2100	98	1.4%	29.6	63.4	44.5	44.6	50.4	52.9	19	19.4%
2200	77	1.1%	22.6	59.4	43.9	44.3	50.4	54.0	16	20.8%
2300	55	0.8%	17.6	55.5	41.9	43.9	48.2	50.0	4	7.3%
----	**7088**	**100.0%**	**10.0**	**73.6**	**41.2**	**41.8**	**48.2**	**52.2**	**734**	**10.4%**

MetroCount Traffic Executive
Speed Statistics by Hour

SpeedStatHour-91 -- English (ENA)

Datasets:

Site:	**[006951A] Ward St (Opp 12)**
Attribute:	The Range
Direction:	6 - West bound A>B, East bound B>A. **Lane:** 0
Survey Duration:	9:32 Friday, 17 February 2017 => 11:44 Friday, 3 March 2017,
Zone:	
File:	006951A 0 2017-03-03 1138.EC0 (Plus)
Identifier:	K547VXZH MC56-6 [MC55] (c)Microcom 02/03/01
Algorithm:	Factory default axle (v4.05)
Data type:	Axle sensors - Paired (Class/Speed/Count)

Profile:

Filter time:	**10:00 Friday, 17 February 2017 => 11:00 Friday, 3 March 2017 (14.0417)**
Included classes:	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13
Speed range:	10 - 160 km/h.
Direction:	North, East, South, West (bound), P = East
Separation:	Headway > 0 sec, Span 0 - 100 metre
Name:	Default Profile
Scheme:	Vehicle classification (ARClass10Split195)
Units:	Metric (metre, kilometre, m/s, km/h, kg, tonne)
In profile:	Vehicles = 14677 / 14798 (99.18%)

Speed Statistics by Hour

SpeedStatHour-91
Site: 006951A.0.1WE
Description: **Ward St (Opp 12)**
Filter time: **10:00 Friday, 17 February 2017 => 11:00 Friday, 3 March 2017**
Scheme: Vehicle classification (ARClass10Split195)
Filter: Cls(1 2 3 4 5 6 7 8 9 10 11 12 13) Dir(NESW) Sp(10,160) Headway(>0) Span(0 - 100)

Vehicles = 14677
Posted speed limit = 50 km/h, Exceeding = 997 (6.79%), Mean Exceeding = 53.06 km/h
Maximum = 80.1 km/h, **Minimum** = 10.0 km/h, **Mean** = 39.4 km/h
85% Speed = 46.8 km/h, **95% Speed** = 50.8 km/h, **Median** = 40.0 km/h
15 km/h Pace = 33 - 48, **Number in Pace** = 10403 (70.88%)
Variance = 63.25, **Standard Deviation** = 7.95 km/h

Hour Bins (Partial days)

Time	Bin		Min	Max	Mean	Median	85%	95%	>PSL 50 km/h	
0000	49	0.3%	14.2	80.1	41.2	41.4	51.1	56.9	8	16.3%
0100	21	0.1%	10.7	52.7	35.0	32.8	46.8	51.1	2	9.5%
0200	11	0.1%	28.2	49.2	39.6	40.7	45.0	46.4	0	0.0%
0300	29	0.2%	34.0	52.5	42.9	42.1	47.9	50.0	2	6.9%
0400	36	0.2%	32.1	63.0	41.7	37.8	51.8	55.4	7	19.4%
0500	181	1.2%	24.0	64.8	43.4	43.6	50.8	54.4	34	18.8%
0600	579	3.9%	19.2	70.8	42.5	42.8	49.0	52.9	74	12.8%
0700	682	4.6%	10.6	60.2	40.7	41.0	47.5	51.8	63	9.2%
0800	1367	9.3%	10.0	60.4	34.7	34.9	42.1	46.4	30	2.2%
0900	1004	6.8%	10.4	62.7	39.3	39.6	45.7	49.7	44	4.4%
1000	1155	7.9%	13.0	58.2	38.7	38.9	45.4	49.7	53	4.6%
1100	1106	7.5%	10.2	60.9	39.6	40.0	46.1	50.0	57	5.2%
1200	1059	7.2%	12.5	60.3	40.2	40.3	46.4	50.4	67	6.3%
1300	983	6.7%	11.4	65.8	41.2	41.4	47.9	51.5	85	8.6%
1400	1115	7.6%	12.3	62.8	39.0	39.2	46.4	50.4	64	5.7%
1500	1409	9.6%	10.0	62.4	35.1	36.0	45.0	49.0	54	3.8%
1600	1110	7.6%	13.2	63.6	40.9	41.4	47.9	51.5	93	8.4%
1700	1061	7.2%	11.9	73.6	40.0	40.7	46.8	50.8	67	6.3%
1800	674	4.6%	12.4	62.5	41.3	42.1	48.2	51.5	63	9.3%
1900	406	2.8%	12.6	65.4	42.6	42.8	49.0	52.2	50	12.3%
2000	251	1.7%	15.1	59.5	42.6	42.8	49.7	53.3	33	13.1%
2100	151	1.0%	16.2	63.4	42.6	43.6	49.3	52.6	21	13.9%
2200	166	1.1%	22.6	59.4	42.2	42.1	49.3	53.3	22	13.3%
2300	72	0.5%	17.6	55.5	41.3	42.5	47.9	49.7	4	5.6%
----	**14677**	**100.0%**	**10.0**	**80.1**	**39.4**	**40.0**	**46.8**	**50.8**	**997**	**6.8%**

MetroCount Traffic Executive
Weekly Vehicle Counts (Virtual Week)

VirtWeeklyVehicle-100 -- English (ENA)

Datasets:

Site:	**[006271B] Spencer St (Opp 21)**
Attribute:	The Range
Direction:	6 - West bound A>B, East bound B>A. **Lane:** 0
Survey Duration:	10:16 Friday, 17 February 2017 => 11:39 Friday, 3 March 2017,
Zone:	
File:	006271B 0 2017-03-03 1133.EC0 (Plus)
Identifier:	GT18X22M MC56-L5 [MC55] (c)Microcom 19Oct04
Algorithm:	Factory default axle (v4.05)
Data type:	Axle sensors - Paired (Class/Speed/Count)

Profile:

Filter time:	**11:00 Friday, 17 February 2017 => 11:00 Friday, 3 March 2017 (14)**
Included classes:	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13
Speed range:	10 - 160 km/h.
Direction:	North, East, South, West (bound), P = East
Separation:	Headway > 0 sec, Span 0 - 100 metre
Name:	Default Profile
Scheme:	Vehicle classification (ARClass10Split195)
Units:	Metric (metre, kilometre, m/s, km/h, kg, tonne)
In profile:	Vehicles = 24323 / 24479 (99.36%)

Weekly Vehicle Counts (Virtual Week)

VirtWeeklyVehicle-100
Site: 006271B.0.1WE
Description: **Spencer St (Opp 21)**
Filter time: **11:00 Friday, 17 February 2017 => 11:00 Friday, 3 March 2017**
Scheme: Vehicle classification (ARClass10Split195)
Filter: Cls(1 2 3 4 5 6 7 8 9 10 11 12 13) Dir(NESW) Sp(10,160) Headway(>0) Span(0 - 100)

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Averages 1 - 5	Averages 1 - 7
Hour									
0000-0100	8.0	3.5	7.0	3.5	5.5	8.5	7.0	5.5	6.1
0100-0200	0.5	1.5	0.5	4.0	2.5	7.5	9.5	1.8	3.7
0200-0300	1.0	2.0	1.5	1.0	2.5	2.5	0.0	1.6	1.5
0300-0400	2.0	0.5	0.0	1.5	0.5	2.0	1.0	0.9	1.1
0400-0500	11.5	9.5	7.0	7.5	7.0	5.5	5.0	8.5	7.6
0500-0600	20.5	29.0	26.5	28.0	31.0	14.0	13.0	27.0	23.1
0600-0700	72.5	66.0	62.5	66.5	68.5	89.0	58.5	67.2	69.1
0700-0800	104.5	128.0	112.0	118.0	78.5	60.5	59.0	108.2	94.4
0800-0900	**199.0**	**213.5**	**208.0**	**207.0**	115.5	100.5	74.5	**188.6**	**159.7**
0900-1000	146.0	144.0	159.5	158.0	72.0	84.0	109.0	135.9	124.6
1000-1100	130.5	155.0	157.5	159.0	69.5	112.5	111.0	134.3	127.9
1100-1200	129.5	139.0	165.0	156.0	**137.5**	**129.5**	**116.0**	145.4	138.9
1200-1300	134.0	138.5	134.5	134.0	128.5	**120.0**	**109.0**	133.9	128.4
1300-1400	128.5	129.5	126.0	126.0	128.5	110.0	91.0	127.7	119.9
1400-1500	150.0	156.5	169.5	159.0	155.5	92.0	99.0	158.1	140.2
1500-1600	**195.0**	**185.5**	**202.5**	**190.0**	**165.5**	89.5	90.0	**187.7**	**159.7**
1600-1700	153.0	137.0	141.0	157.5	117.5	91.0	81.0	141.2	125.4
1700-1800	134.0	144.5	147.5	118.0	117.0	93.5	77.5	132.2	118.9
1800-1900	66.5	80.0	84.0	86.5	75.0	54.0	43.5	78.4	69.9
1900-2000	47.5	46.0	51.0	50.0	43.0	40.5	30.0	47.5	44.0
2000-2100	34.5	28.0	30.5	29.5	38.5	29.5	22.0	32.2	30.4
2100-2200	10.0	22.0	17.5	25.0	24.0	24.0	9.0	19.7	18.8
2200-2300	10.0	12.5	13.0	14.5	21.5	21.5	8.5	14.3	14.5
2300-2400	5.0	9.5	8.5	9.5	11.0	16.0	7.5	8.7	9.6
Totals									
0700-1900	1670.5	1751.0	1807.0	1769.0	1360.5	1137.0	1060.5	1671.6	1507.9
0600-2200	1835.0	1913.0	1968.5	1940.0	1534.5	1320.0	1180.0	1838.2	1670.1
0600-0000	1850.0	1935.0	1990.0	1964.0	1567.0	1357.5	1196.0	1861.2	1694.2
0000-0000	1893.5	1981.0	2032.5	2009.5	1616.0	1397.5	1231.5	1906.5	1737.4
AM Peak	0800	0800	0800	0800	1100	1100	1100		
	199.0	213.5	208.0	207.0	137.5	129.5	116.0		
PM Peak	1500	1500	1500	1500	1500	1200	1200		
	195.0	185.5	202.5	190.0	165.5	120.0	109.0		

*** - No data.**

MetroCount Traffic Executive
Speed Statistics by Hour

SpeedStatHour-756 -- English (ENA)

Datasets:

Site:	**[006271B] Spencer St (Opp 21)**
Attribute:	The Range
Direction:	6 - West bound A>B, East bound B>A. **Lane:** 0
Survey Duration:	10:16 Friday, 17 February 2017 => 11:39 Friday, 3 March 2017,
Zone:	
File:	006271B 0 2017-03-03 1133.EC0 (Plus)
Identifier:	GT18X22M MC56-L5 [MC55] (c)Microcom 19Oct04
Algorithm:	Factory default axle (v4.05)
Data type:	Axle sensors - Paired (Class/Speed/Count)

Profile:

Filter time:	**11:00 Friday, 17 February 2017 => 11:00 Friday, 3 March 2017 (14)**
Included classes:	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13
Speed range:	10 - 160 km/h.
Direction:	West (bound), P = East
Separation:	Headway > 4 sec, Span 0 - 100 metre
Name:	Default Profile
Scheme:	Vehicle classification (ARClass10Split195)
Units:	Metric (metre, kilometre, m/s, km/h, kg, tonne)
In profile:	Vehicles = 9916 / 24479 (40.51%)

Speed Statistics by Hour

SpeedStatHour-756
Site: 006271B.0.1WE
Description: **Spencer St (Opp 21)**
Filter time: **11:00 Friday, 17 February 2017 => 11:00 Friday, 3 March 2017**
Scheme: Vehicle classification (ARClass10Split195)
Filter: Cls(1 2 3 4 5 6 7 8 9 10 11 12 13) Dir(W) Sp(10,160) Headway(>4) Span(0 - 100)

Vehicles = 9916
Posted speed limit = 50 km/h, Exceeding = 3294 (33.22%), Mean Exceeding = 55.69 km/h
Maximum = 103.8 km/h, **Minimum** = 10.5 km/h, **Mean** = 45.8 km/h
85% Speed = 55.1 km/h, **95% Speed** = 60.1 km/h, **Median** = 46.1 km/h
15 km/h Pace = 39 - 54, **Number in Pace** = 5988 (60.39%)
Variance = 88.97, **Standard Deviation** = 9.43 km/h

Hour Bins

Time	Bin		Min	Max	Mean	Median	85%	95%	>PSL 50 km/h	
0000	40	0.4%	25.3	63.4	44.9	44.6	55.1	60.1	14	35.0%
0100	26	0.3%	28.0	65.4	48.5	50.4	57.6	60.8	14	53.8%
0200	8	0.1%	31.3	73.2	50.9	47.2	57.2	73.1	4	50.0%
0300	4	0.0%	42.2	58.7	51.4	50.4	54.0	58.7	3	75.0%
0400	55	0.6%	14.8	67.9	50.3	51.1	61.2	65.2	32	58.2%
0500	186	1.9%	21.8	68.5	53.1	52.6	60.8	63.7	119	64.0%
0600	592	6.0%	10.7	81.6	51.1	51.5	59.0	64.8	355	60.0%
0700	701	7.1%	14.6	74.5	47.8	48.2	56.9	61.6	290	41.4%
0800	1142	11.5%	12.0	74.7	42.9	42.8	51.1	55.4	212	18.6%
0900	728	7.3%	10.5	78.5	43.5	43.9	53.6	59.0	196	26.9%
1000	698	7.0%	14.4	72.1	43.7	44.3	52.9	57.6	187	26.8%
1100	669	6.7%	13.9	74.8	44.3	44.6	53.3	59.0	172	25.7%
1200	664	6.7%	12.8	76.4	45.0	45.4	53.6	59.0	186	28.0%
1300	632	6.4%	14.2	74.5	44.1	45.0	53.3	58.0	164	25.9%
1400	780	7.9%	15.7	73.0	44.6	44.6	52.6	57.6	197	25.3%
1500	952	9.6%	12.3	77.6	42.9	42.8	51.5	57.6	197	20.7%
1600	617	6.2%	14.1	80.3	47.5	47.5	55.8	62.6	246	39.9%
1700	543	5.5%	15.3	74.9	49.5	50.0	57.6	62.6	273	50.3%
1800	347	3.5%	21.9	78.2	48.9	49.0	55.4	60.5	153	44.1%
1900	183	1.8%	20.4	68.4	48.7	49.7	56.2	60.1	88	48.1%
2000	120	1.2%	29.3	103.8	52.3	51.1	59.4	65.2	70	58.3%
2100	116	1.2%	15.9	72.2	50.8	51.1	59.4	66.2	64	55.2%
2200	82	0.8%	22.8	67.6	49.7	49.7	59.4	62.3	38	46.3%
2300	31	0.3%	24.0	72.3	52.2	51.8	61.9	67.3	20	64.5%
----	**9916**	**100.0%**	**10.5**	**103.8**	**45.8**	**46.1**	**55.1**	**60.1**	**3294**	**33.2%**

MetroCount Traffic Executive
Speed Statistics by Hour

SpeedStatHour-757 -- English (ENA)

Datasets:

Site:	**[006271B] Spencer St (Opp 21)**
Attribute:	The Range
Direction:	6 - West bound A>B, East bound B>A. **Lane:** 0
Survey Duration:	10:16 Friday, 17 February 2017 => 11:39 Friday, 3 March 2017,
Zone:	
File:	006271B 0 2017-03-03 1133.EC0 (Plus)
Identifier:	GT18X22M MC56-L5 [MC55] (c)Microcom 19Oct04
Algorithm:	Factory default axle (v4.05)
Data type:	Axle sensors - Paired (Class/Speed/Count)

Profile:

Filter time:	**11:00 Friday, 17 February 2017 => 11:00 Friday, 3 March 2017 (14)**
Included classes:	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13
Speed range:	10 - 160 km/h.
Direction:	East (bound), P = East
Separation:	Headway > 4 sec, Span 0 - 100 metre
Name:	Default Profile
Scheme:	Vehicle classification (ARClass10Split195)
Units:	Metric (metre, kilometre, m/s, km/h, kg, tonne)
In profile:	Vehicles = 12692 / 24479 (51.85%)

Speed Statistics by Hour

SpeedStatHour-757
Site: 006271B.0.1WE
Description: **Spencer St (Opp 21)**
Filter time: **11:00 Friday, 17 February 2017 => 11:00 Friday, 3 March 2017**
Scheme: Vehicle classification (ARClass10Split195)
Filter: Cls(1 2 3 4 5 6 7 8 9 10 11 12 13) Dir(E) Sp(10,160) Headway(>4) Span(0 - 100)

Vehicles = 12692
Posted speed limit = 50 km/h, Exceeding = 4102 (32.32%), Mean Exceeding = 55.64 km/h
Maximum = 96.4 km/h, **Minimum** = 10.2 km/h, **Mean** = 45.3 km/h
85% Speed = 54.7 km/h, **95% Speed** = 59.8 km/h, **Median** = 45.7 km/h
15 km/h Pace = 39 - 54, **Number in Pace** = 7349 (57.90%)
Variance = 90.60, **Standard Deviation** = 9.52 km/h

Hour Bins

Time	Bin		Min	Max	Mean	Median	85%	95%	>PSL 50 km/h	
0000	46	0.4%	24.3	77.8	51.9	51.8	59.8	67.3	30	65.2%
0100	26	0.2%	37.4	68.5	52.0	51.1	56.9	59.8	17	65.4%
0200	13	0.1%	36.2	66.7	53.7	55.4	62.6	65.2	10	76.9%
0300	11	0.1%	37.5	72.6	56.3	57.2	65.5	70.9	8	72.7%
0400	51	0.4%	31.5	86.4	55.1	56.2	62.6	64.1	39	76.5%
0500	135	1.1%	26.5	72.4	50.8	51.5	58.0	63.0	80	59.3%
0600	315	2.5%	13.2	88.1	51.3	51.5	58.7	64.1	194	61.6%
0700	535	4.2%	21.4	96.4	49.5	49.3	56.9	61.2	258	48.2%
0800	858	6.8%	12.5	78.6	44.5	44.3	52.6	56.9	211	24.6%
0900	872	6.9%	13.3	67.4	43.4	43.6	52.2	57.6	198	22.7%
1000	949	7.5%	12.1	73.7	41.3	41.0	51.5	56.2	185	19.5%
1100	1133	8.9%	15.1	77.2	42.6	43.2	52.2	56.5	255	22.5%
1200	1010	8.0%	10.2	80.3	43.2	43.6	52.9	58.3	245	24.3%
1300	943	7.4%	14.5	77.6	44.0	44.3	53.3	57.6	232	24.6%
1400	1030	8.1%	12.1	76.7	43.9	43.6	53.3	58.3	263	25.5%
1500	1087	8.6%	12.0	71.8	43.6	43.9	52.6	58.3	266	24.5%
1600	1020	8.0%	17.0	93.5	46.3	46.8	55.1	60.1	363	35.6%
1700	1012	8.0%	17.6	84.1	47.6	48.2	56.2	60.5	432	42.7%
1800	585	4.6%	16.7	73.8	48.0	48.6	56.5	60.5	255	43.6%
1900	409	3.2%	23.2	78.9	49.3	50.0	57.6	61.6	206	50.4%
2000	292	2.3%	24.7	77.4	50.2	50.4	59.0	65.2	151	51.7%
2100	143	1.1%	25.3	92.6	50.8	51.1	59.4	64.8	80	55.9%
2200	116	0.9%	29.7	74.8	52.6	52.2	61.6	65.5	67	57.8%
2300	101	0.8%	30.4	80.4	50.5	51.1	60.8	68.4	57	56.4%
----	**12692**	**100.0%**	**10.2**	**96.4**	**45.3**	**45.7**	**54.7**	**59.8**	**4102**	**32.3%**

MetroCount Traffic Executive
Speed Statistics by Hour

SpeedStatHour-755 -- English (ENA)

Datasets:

Site:	**[006271B] Spencer St (Opp 21)**
Attribute:	The Range
Direction:	6 - West bound A>B, East bound B>A. **Lane:** 0
Survey Duration:	10:16 Friday, 17 February 2017 => 11:39 Friday, 3 March 2017,
Zone:	
File:	006271B 0 2017-03-03 1133.EC0 (Plus)
Identifier:	GT18X22M MC56-L5 [MC55] (c)Microcom 19Oct04
Algorithm:	Factory default axle (v4.05)
Data type:	Axle sensors - Paired (Class/Speed/Count)

Profile:

Filter time:	**11:00 Friday, 17 February 2017 => 11:00 Friday, 3 March 2017 (14)**
Included classes:	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13
Speed range:	10 - 160 km/h.
Direction:	North, East, South, West (bound), P = East
Separation:	Headway > 4 sec, Span 0 - 100 metre
Name:	Default Profile
Scheme:	Vehicle classification (ARClass10Split195)
Units:	Metric (metre, kilometre, m/s, km/h, kg, tonne)
In profile:	Vehicles = 22608 / 24479 (92.36%)

Speed Statistics by Hour

SpeedStatHour-755
Site: 006271B.0.1WE
Description: **Spencer St (Opp 21)**
Filter time: **11:00 Friday, 17 February 2017 => 11:00 Friday, 3 March 2017**
Scheme: Vehicle classification (ARClass10Split195)
Filter: Cls(1 2 3 4 5 6 7 8 9 10 11 12 13) Dir(NESW) Sp(10,160) Headway(>4) Span(0 - 100)

Vehicles = 22608
Posted speed limit = 50 km/h, Exceeding = 7396 (32.71%), Mean Exceeding = 55.66 km/h
Maximum = 103.8 km/h, **Minimum** = 10.2 km/h, **Mean** = 45.5 km/h
85% Speed = 54.7 km/h, **95% Speed** = 60.1 km/h, **Median** = 45.7 km/h
15 km/h Pace = 39 - 54, **Number in Pace** = 13337 (58.99%)
Variance = 89.94, **Standard Deviation** = 9.48 km/h

Hour Bins

Time	Bin		Min	Max	Mean	Median	85%	95%	>PSL 50 km/h	
0000	86	0.4%	24.3	77.8	48.6	50.0	59.4	63.4	44	51.2%
0100	52	0.2%	28.0	68.5	50.3	51.1	56.9	60.8	31	59.6%
0200	21	0.1%	31.3	73.2	52.6	55.1	62.6	66.6	14	66.7%
0300	15	0.1%	37.5	72.6	55.0	54.0	65.5	70.9	11	73.3%
0400	106	0.5%	14.8	86.4	52.6	52.9	61.6	65.2	71	67.0%
0500	321	1.4%	21.8	72.4	52.1	52.2	59.8	63.7	199	62.0%
0600	907	4.0%	10.7	88.1	51.2	51.5	59.0	64.4	549	60.5%
0700	1236	5.5%	14.6	96.4	48.6	49.0	56.9	61.6	548	44.3%
0800	2000	8.8%	12.0	78.6	43.5	43.6	51.5	55.8	423	21.1%
0900	1600	7.1%	10.5	78.5	43.4	43.9	52.9	58.0	394	24.6%
1000	1647	7.3%	12.1	73.7	42.3	42.1	52.2	56.9	372	22.6%
1100	1802	8.0%	13.9	77.2	43.2	43.6	52.6	57.2	427	23.7%
1200	1674	7.4%	10.2	80.3	43.9	44.3	52.9	58.7	431	25.7%
1300	1575	7.0%	14.2	77.6	44.1	44.6	53.3	58.0	396	25.1%
1400	1810	8.0%	12.1	76.7	44.2	44.3	52.9	58.0	460	25.4%
1500	2039	9.0%	12.0	77.6	43.3	43.6	52.2	58.0	463	22.7%
1600	1637	7.2%	14.1	93.5	46.7	47.2	55.4	60.5	609	37.2%
1700	1555	6.9%	15.3	84.1	48.3	49.0	56.5	61.6	705	45.3%
1800	932	4.1%	16.7	78.2	48.3	48.6	56.2	60.5	408	43.8%
1900	592	2.6%	20.4	78.9	49.1	49.7	57.2	61.2	294	49.7%
2000	412	1.8%	24.7	103.8	50.8	50.8	59.0	65.2	221	53.6%
2100	259	1.1%	15.9	92.6	50.8	51.1	59.4	65.5	144	55.6%
2200	198	0.9%	22.8	74.8	51.4	50.8	60.1	64.8	105	53.0%
2300	132	0.6%	24.0	80.4	50.9	51.1	60.8	68.4	77	58.3%
----	**22608**	**100.0%**	**10.2**	**103.8**	**45.5**	**45.7**	**54.7**	**60.1**	**7396**	**32.7%**

MetroCount Traffic Executive
Weekly Vehicle Counts (Virtual Week)

VirtWeeklyVehicle-95 -- English (ENA)

Datasets:

Site:	**[006271A] Spencer St (Opp 3)**
Attribute:	The Range
Direction:	6 - West bound A>B, East bound B>A. **Lane:** 0
Survey Duration:	11:12 Friday, 17 February 2017 => 11:37 Friday, 3 March 2017,
Zone:	
File:	006271A 0 2017-03-03 1131.EC0 (Plus)
Identifier:	K369DQKG MC56-6 [MC55] (c)Microcom 02/03/01
Algorithm:	Factory default axle (v4.05)
Data type:	Axle sensors - Paired (Class/Speed/Count)

Profile:

Filter time:	**12:00 Friday, 17 February 2017 => 11:00 Friday, 3 March 2017 (13.9583)**
Included classes:	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13
Speed range:	10 - 160 km/h.
Direction:	North, East, South, West (bound), P = East
Separation:	Headway > 0 sec, Span 0 - 100 metre
Name:	Default Profile
Scheme:	Vehicle classification (ARClass10Split195)
Units:	Metric (metre, kilometre, m/s, km/h, kg, tonne)
In profile:	Vehicles = 25943 / 26105 (99.38%)

Weekly Vehicle Counts (Virtual Week)

VirtWeeklyVehicle-95
Site: 006271A.0.1WE
Description: **Spencer St (Opp 3)**
Filter time: **12:00 Friday, 17 February 2017 => 11:00 Friday, 3 March 2017**
Scheme: Vehicle classification (ARClass10Split195)
Filter: Cls(1 2 3 4 5 6 7 8 9 10 11 12 13) Dir(NESW) Sp(10,160) Headway(>0) Span(0 - 100)

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Averages 1 - 5	Averages 1 - 7
Hour									
0000-0100	6.0	2.5	5.5	3.0	5.5	6.0	5.5	4.5	4.9
0100-0200	0.5	1.5	0.5	3.5	2.0	7.5	9.0	1.6	3.5
0200-0300	1.0	2.0	1.5	1.0	3.0	2.5	0.0	1.7	1.6
0300-0400	2.0	0.5	0.0	1.5	1.0	2.0	1.5	1.0	1.2
0400-0500	15.0	9.0	8.5	8.0	9.0	5.0	6.0	9.9	8.6
0500-0600	25.0	29.0	30.0	26.0	34.5	15.0	13.5	28.9	24.7
0600-0700	74.5	62.0	62.0	60.0	65.5	85.0	58.5	64.8	66.8
0700-0800	112.5	137.5	114.0	126.0	84.5	69.5	58.0	114.9	100.3
0800-0900	**279.0**	**298.5**	**296.5**	**294.0**	**149.5**	107.5	80.0	**263.5**	**215.0**
0900-1000	156.0	139.0	156.5	150.5	75.5	91.0	112.0	135.5	125.8
1000-1100	126.0	147.0	146.5	149.5	71.0	112.0	**130.5**	128.0	126.1
1100-1200	139.0	138.0	152.0	146.5	132.0	**134.0**	124.0	142.6	138.4
1200-1300	130.5	133.5	134.5	133.0	130.0	**124.0**	**113.0**	132.3	128.4
1300-1400	120.5	127.5	133.5	131.0	125.0	116.0	93.5	127.5	121.0
1400-1500	163.5	178.5	172.0	164.5	161.0	96.5	96.0	167.9	147.4
1500-1600	**233.5**	**237.5**	**240.5**	**248.0**	**199.0**	96.5	92.5	**231.7**	**192.5**
1600-1700	160.5	144.0	143.5	163.0	120.0	95.5	87.0	146.2	130.5
1700-1800	137.5	156.0	156.5	129.5	127.0	95.5	80.5	141.3	126.1
1800-1900	71.5	87.5	90.0	95.5	79.5	62.5	50.0	84.8	76.6
1900-2000	51.0	50.0	58.0	54.0	46.5	41.0	30.5	51.9	47.3
2000-2100	34.0	28.5	32.5	30.5	43.0	32.0	23.5	33.7	32.0
2100-2200	10.5	22.5	18.5	26.5	22.0	24.0	9.0	20.0	19.0
2200-2300	10.0	14.0	13.5	15.5	20.5	24.5	9.5	14.7	

15.4								
2300-2400	5.0	11.0	9.0	9.5	10.5	16.5	8.5	9.0
10.0								
Totals								
0700-1900	1830.0	1924.5	1936.0	1931.0	1454.0	1200.5	1117.0	1816.2
1628.0								
0600-2200	2000.0	2087.5	2107.0	2102.0	1631.0	1382.5	1238.5	1986.6
1793.1								
0600-0000	2015.0	2112.5	2129.5	2127.0	1662.0	1423.5	1256.5	2010.3
1818.5								
0000-0000	2064.5	2157.0	2175.5	2170.0	1717.0	1461.5	1292.0	2057.9
1863.0								
AM Peak	0800	0800	0800	0800	0800	1100	1000	
	279.0	298.5	296.5	294.0	149.5	134.0	130.5	
PM Peak	1500	1500	1500	1500	1500	1200	1200	
	233.5	237.5	240.5	248.0	199.0	124.0	113.0	

*** - No data.**

MetroCount Traffic Executive
Speed Statistics by Hour

SpeedStatHour-763 -- English (ENA)

Datasets:

Site:	**[006271A] Spencer St (Opp 3)**
Attribute:	The Range
Direction:	6 - West bound A>B, East bound B>A. **Lane:** 0
Survey Duration:	11:12 Friday, 17 February 2017 => 11:37 Friday, 3 March 2017,
Zone:	
File:	006271A 0 2017-03-03 1131.EC0 (Plus)
Identifier:	K369DQKG MC56-6 [MC55] (c)Microcom 02/03/01
Algorithm:	Factory default axle (v4.05)
Data type:	Axle sensors - Paired (Class/Speed/Count)

Profile:

Filter time:	**12:00 Friday, 17 February 2017 => 11:00 Friday, 3 March 2017 (13.9583)**
Included classes:	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13
Speed range:	10 - 160 km/h.
Direction:	West (bound), P = East
Separation:	Headway > 4 sec, Span 0 - 100 metre
Name:	Default Profile
Scheme:	Vehicle classification (ARClass10Split195)
Units:	Metric (metre, kilometre, m/s, km/h, kg, tonne)
In profile:	Vehicles = 10304 / 26105 (39.47%)

Speed Statistics by Hour

SpeedStatHour-763
Site: 006271A.0.1WE
Description: **Spencer St (Opp 3)**
Filter time: **12:00 Friday, 17 February 2017 => 11:00 Friday, 3 March 2017**
Scheme: Vehicle classification (ARClass10Split195)
Filter: Cls(1 2 3 4 5 6 7 8 9 10 11 12 13) Dir(W) Sp(10,160) Headway(>4) Span(0 - 100)

Vehicles = 10304
Posted speed limit = 50 km/h, Exceeding = 106 (1.03%), Mean Exceeding = 52.96 km/h
Maximum = 67.1 km/h, **Minimum** = 10.0 km/h, **Mean** = 35.8 km/h
85% Speed = 42.1 km/h, **95% Speed** = 45.7 km/h, **Median** = 36.4 km/h
15 km/h Pace = 29 - 44, **Number in Pace** = 7817 (75.86%)
Variance = 46.15, **Standard Deviation** = 6.79 km/h

Hour Bins (Partial days)

Time	Bin		Min	Max	Mean	Median	85%	95%	>PSL 50 km/h	
0000	29	0.3%	32.2	49.6	40.1	38.9	43.6	46.4	0	0.0%
0100	24	0.2%	33.0	50.8	40.3	38.9	43.9	50.0	2	8.3%
0200	9	0.1%	30.9	50.5	41.3	42.8	48.6	50.4	1	11.1%
0300	6	0.1%	20.4	49.2	34.0	34.2	38.9	49.0	0	0.0%
0400	58	0.6%	24.3	47.3	37.9	37.8	41.4	43.9	0	0.0%
0500	208	2.0%	14.7	50.1	39.0	39.2	44.6	47.5	1	0.5%
0600	559	5.4%	11.8	57.7	39.1	39.2	43.9	47.9	11	2.0%
0700	725	7.0%	10.0	54.3	36.7	36.7	42.5	46.1	4	0.6%
0800	1146	11.1%	10.7	52.8	30.6	30.6	37.1	40.7	2	0.2%
0900	750	7.3%	10.3	54.5	35.5	35.6	41.8	44.6	6	0.8%
1000	724	7.0%	12.3	57.6	36.1	36.4	41.8	45.0	3	0.4%
1100	642	6.2%	12.0	55.7	36.3	36.7	42.5	45.7	8	1.2%
1200	703	6.8%	13.5	57.4	36.9	37.1	42.8	46.4	14	2.0%
1300	647	6.3%	14.4	50.7	36.7	37.1	42.1	45.4	1	0.2%
1400	896	8.7%	10.7	53.2	33.7	33.8	40.0	43.6	4	0.4%
1500	938	9.1%	10.7	62.8	32.7	33.1	39.6	43.6	6	0.6%
1600	651	6.3%	10.4	61.9	37.7	37.8	42.8	46.1	9	1.4%
1700	583	5.7%	15.1	54.7	38.2	38.5	43.9	47.2	8	1.4%
1800	408	4.0%	13.4	54.1	37.6	37.8	42.8	46.4	6	1.5%
1900	221	2.1%	13.7	55.3	38.1	37.8	43.2	46.4	6	2.7%
2000	132	1.3%	11.7	67.1	38.4	38.5	44.6	49.0	5	3.8%
2100	114	1.1%	16.9	60.1	40.3	40.0	45.7	49.7	6	5.3%
2200	91	0.9%	24.1	57.5	38.1	37.1	42.8	48.2	2	2.2%
2300	40	0.4%	24.8	50.3	40.4	40.3	44.3	49.0	1	2.5%
----	**10304**	**100.0%**	**10.0**	**67.1**	**35.8**	**36.4**	**42.1**	**45.7**	**106**	**1.0%**

MetroCount Traffic Executive
Speed Statistics by Hour

SpeedStatHour-764 -- English (ENA)

Datasets:

Site:	**[006271A] Spencer St (Opp 3)**
Attribute:	The Range
Direction:	6 - West bound A>B, East bound B>A. **Lane:** 0
Survey Duration:	11:12 Friday, 17 February 2017 => 11:37 Friday, 3 March 2017,
Zone:	
File:	006271A 0 2017-03-03 1131.EC0 (Plus)
Identifier:	K369DQKG MC56-6 [MC55] (c)Microcom 02/03/01
Algorithm:	Factory default axle (v4.05)
Data type:	Axle sensors - Paired (Class/Speed/Count)

Profile:

Filter time:	**12:00 Friday, 17 February 2017 => 11:00 Friday, 3 March 2017 (13.9583)**
Included classes:	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13
Speed range:	10 - 160 km/h.
Direction:	East (bound), P = East
Separation:	Headway > 4 sec, Span 0 - 100 metre
Name:	Default Profile
Scheme:	Vehicle classification (ARClass10Split195)
Units:	Metric (metre, kilometre, m/s, km/h, kg, tonne)
In profile:	Vehicles = 13521 / 26105 (51.79%)

Speed Statistics by Hour

SpeedStatHour-764
Site: 006271A.0.1WE
Description: **Spencer St (Opp 3)**
Filter time: **12:00 Friday, 17 February 2017 => 11:00 Friday, 3 March 2017**
Scheme: Vehicle classification (ARClass10Split195)
Filter: Cls(1 2 3 4 5 6 7 8 9 10 11 12 13) Dir(E) Sp(10,160) Headway(>4) Span(0 - 100)

Vehicles = 13521
Posted speed limit = 50 km/h, Exceeding = 987 (7.30%), Mean Exceeding = 52.85 km/h
Maximum = 74.8 km/h, **Minimum** = 10.2 km/h, **Mean** = 39.6 km/h
85% Speed = 47.2 km/h, **95% Speed** = 51.1 km/h, **Median** = 40.3 km/h
15 km/h Pace = 34 - 49, **Number in Pace** = 9285 (68.67%)
Variance = 65.99, **Standard Deviation** = 8.12 km/h

Hour Bins (Partial days)

Time	Bin		Min	Max	Mean	Median	85%	95%	>PSL 50 km/h	
0000	39	0.3%	32.2	60.7	43.3	42.5	49.0	51.8	6	15.4%
0100	25	0.2%	31.4	53.6	43.0	42.8	49.7	51.5	5	20.0%
0200	13	0.1%	28.3	54.6	45.8	47.2	49.3	50.0	2	15.4%
0300	11	0.1%	34.5	60.8	47.8	46.1	50.8	59.0	3	27.3%
0400	63	0.5%	16.6	58.2	43.3	43.6	48.6	51.5	8	12.7%
0500	134	1.0%	26.5	63.5	43.7	43.9	49.3	52.9	18	13.4%
0600	309	2.3%	13.8	70.0	44.5	45.0	50.4	53.3	56	18.1%
0700	597	4.4%	13.1	74.8	41.7	42.1	49.0	52.9	73	12.2%
0800	1462	10.8%	10.3	56.2	31.2	30.2	40.0	45.7	20	1.4%
0900	869	6.4%	14.8	58.9	39.8	40.0	46.4	50.0	47	5.4%
1000	885	6.5%	15.0	62.7	39.8	40.0	46.1	49.7	41	4.6%
1100	1019	7.5%	15.5	60.9	40.5	40.7	46.4	49.3	47	4.6%
1200	973	7.2%	16.8	64.6	41.7	41.4	48.2	51.8	92	9.5%
1300	941	7.0%	12.8	60.8	41.5	41.8	47.5	50.8	72	7.7%
1400	972	7.2%	12.1	56.3	38.9	39.6	46.4	50.4	61	6.3%
1500	1437	10.6%	10.2	60.6	34.5	34.6	44.3	48.6	46	3.2%
1600	1041	7.7%	11.9	61.3	41.9	42.1	48.2	52.2	104	10.0%
1700	1043	7.7%	15.5	67.5	42.8	43.2	48.6	51.8	108	10.4%
1800	603	4.5%	14.4	61.0	42.7	42.8	47.9	51.5	46	7.6%
1900	415	3.1%	16.4	61.1	42.2	42.1	48.6	51.8	40	9.6%
2000	301	2.2%	19.8	62.8	43.4	43.2	49.7	53.3	44	14.6%
2100	149	1.1%	12.0	65.6	42.8	43.6	48.2	51.5	14	9.4%
2200	121	0.9%	19.6	61.3	43.2	43.6	50.0	53.6	19	15.7%
2300	99	0.7%	27.4	65.2	43.5	43.2	49.7	52.6	15	15.2%
----	**13521**	**100.0%**	**10.2**	**74.8**	**39.6**	**40.3**	**47.2**	**51.1**	**987**	**7.3%**

MetroCount Traffic Executive
Speed Statistics by Hour

SpeedStatHour-97 -- English (ENA)

Datasets:

Site:	**[006271A] Spencer St (Opp 3)**
Attribute:	The Range
Direction:	6 - West bound A>B, East bound B>A. **Lane:** 0
Survey Duration:	11:12 Friday, 17 February 2017 => 11:37 Friday, 3 March 2017,
Zone:	
File:	006271A 0 2017-03-03 1131.EC0 (Plus)
Identifier:	K369DQKG MC56-6 [MC55] (c)Microcom 02/03/01
Algorithm:	Factory default axle (v4.05)
Data type:	Axle sensors - Paired (Class/Speed/Count)

Profile:

Filter time:	**12:00 Friday, 17 February 2017 => 11:00 Friday, 3 March 2017 (13.9583)**
Included classes:	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13
Speed range:	10 - 160 km/h.
Direction:	North, East, South, West (bound), P = East
Separation:	Headway > 0 sec, Span 0 - 100 metre
Name:	Default Profile
Scheme:	Vehicle classification (ARClass10Split195)
Units:	Metric (metre, kilometre, m/s, km/h, kg, tonne)
In profile:	Vehicles = 25943 / 26105 (99.38%)

Speed Statistics by Hour

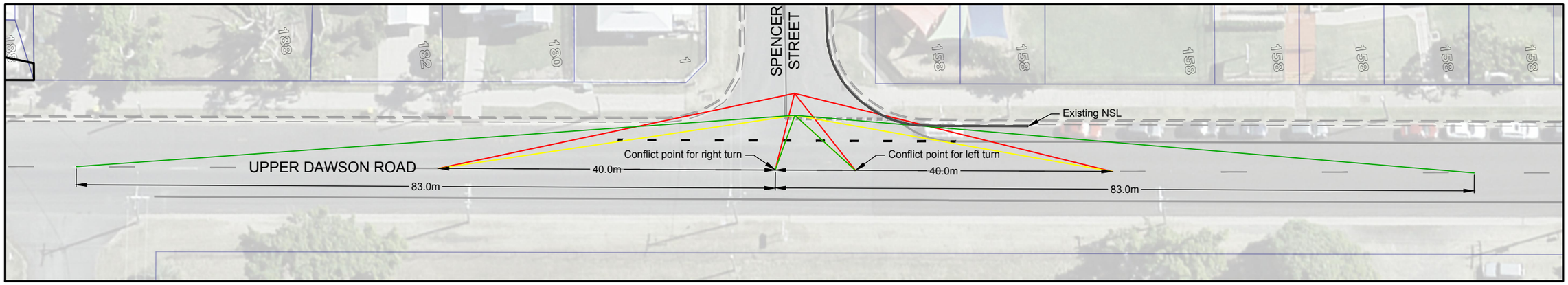
SpeedStatHour-97
Site: 006271A.0.1WE
Description: **Spencer St (Opp 3)**
Filter time: **12:00 Friday, 17 February 2017 => 11:00 Friday, 3 March 2017**
Scheme: Vehicle classification (ARClass10Split195)
Filter: Cls(1 2 3 4 5 6 7 8 9 10 11 12 13) Dir(NESW) Sp(10,160) Headway(>0) Span(0 - 100)

Vehicles = 25943
Posted speed limit = 50 km/h, Exceeding = 1098 (4.23%), Mean Exceeding = 52.86 km/h
Maximum = 74.8 km/h, **Minimum** = 10.0 km/h, **Mean** = 37.6 km/h
85% Speed = 45.4 km/h, **95% Speed** = 49.3 km/h, **Median** = 38.2 km/h
15 km/h Pace = 31 - 46, **Number in Pace** = 17770 (68.50%)
Variance = 61.36, **Standard Deviation** = 7.83 km/h

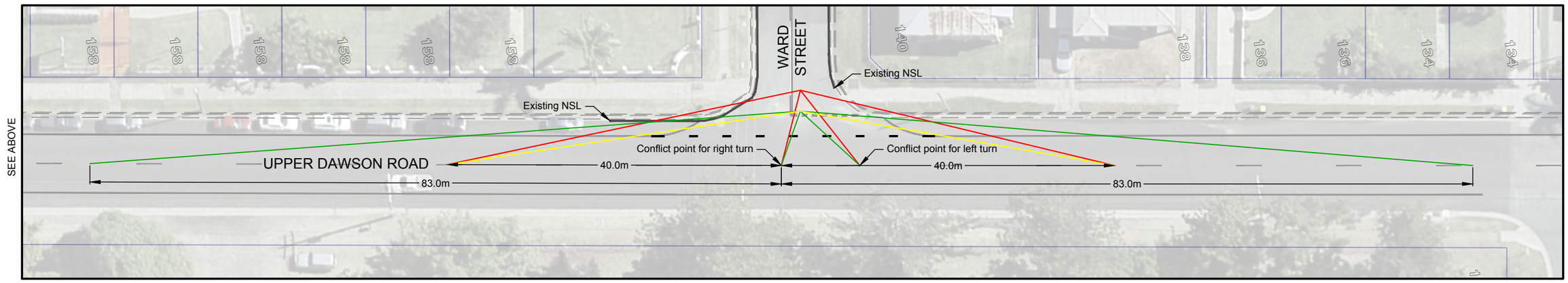
Hour Bins (Partial days)

Time	Bin		Min	Max	Mean	Median	85%	95%	>PSL 50 km/h	
0000	68	0.3%	32.2	60.7	41.9	41.0	47.2	51.5	6	8.8%
0100	49	0.2%	31.4	53.6	41.7	40.7	48.6	51.1	7	14.3%
0200	22	0.1%	28.3	54.6	44.0	46.1	49.3	50.4	3	13.6%
0300	17	0.1%	20.4	60.8	42.9	45.4	49.0	59.0	3	17.6%
0400	121	0.5%	16.6	58.2	40.7	40.0	46.8	50.0	8	6.6%
0500	346	1.3%	14.7	63.5	40.9	41.0	46.4	50.0	19	5.5%
0600	935	3.6%	11.8	70.0	40.8	40.3	47.2	50.8	67	7.2%
0700	1404	5.4%	10.0	74.8	38.8	38.5	45.7	50.4	78	5.6%
0800	3010	11.6%	10.2	56.2	30.7	30.2	38.2	43.6	23	0.8%
0900	1761	6.8%	10.3	58.9	37.7	37.8	44.3	48.2	53	3.0%
1000	1765	6.8%	12.3	62.7	37.8	38.2	44.3	48.2	44	2.5%
1100	1799	6.9%	12.0	60.9	38.7	38.9	45.0	48.2	55	3.1%
1200	1797	6.9%	13.5	64.6	39.5	39.6	46.1	50.4	106	5.9%
1300	1694	6.5%	12.8	60.8	39.4	39.2	45.7	49.3	73	4.3%
1400	2064	8.0%	10.7	56.3	36.1	36.0	43.9	48.6	65	3.1%
1500	2695	10.4%	10.2	62.8	33.3	33.1	42.1	47.2	52	1.9%
1600	1827	7.0%	10.4	61.9	40.1	40.0	46.4	50.8	113	6.2%
1700	1765	6.8%	15.1	67.5	40.9	41.0	47.2	50.8	117	6.6%
1800	1073	4.1%	13.4	61.0	40.5	40.7	46.4	49.7	53	4.9%
1900	662	2.6%	13.7	61.1	40.7	40.7	47.2	51.1	47	7.1%
2000	448	1.7%	11.7	67.1	41.8	41.8	48.6	52.9	49	10.9%
2100	266	1.0%	12.0	65.6	41.7	41.8	47.9	50.8	20	7.5%
2200	215	0.8%	19.6	61.3	41.0	40.3	47.5	52.6	21	9.8%
2300	140	0.5%	24.8	65.2	42.6	42.5	48.6	51.8	16	11.4%
----	**25943**	**100.0%**	**10.0**	**74.8**	**37.6**	**38.2**	**45.4**	**49.3**	**1098**	**4.2%**

Appendix B – Sight Distance Analysis



INTERSECTION SIGHT DISTANCE: UPPER DAWSON ROAD / SPENCER STREET INTERSECTION



INTERSECTION SIGHT DISTANCE: UPPER DAWSON ROAD / WARD STREET INTERSECTION

INTERSECTION SIGHT DISTANCE LINE LEGEND:

Stop Sign / Give Way Sign 40m @ 60 km/h

Stop Sign / Give Way Sign 40m @ 60 km/h with CL

Required MGSD (83m @ 60 km/h) with CL

Surveyed:	Date:	0 5 10m 1:500 DESCRIPTION	AMENDMENTS DESCRIPTION	DRAWN	APPR'D	DATE	Rockhampton Regional Council	Designed	SFV	MAR '17	WARD / SPENCER STREET	Dwg No.
Ref Mark:	R.L.							Checked			ST PETER'S SCHOOL (THE RANGE)	Sheet No. 04 of 04
Datum: Horiz.	Vert.							Examined			TRAFFIC MANAGEMENT	
Zone:	Survey Book:							Recomm.			INTERSECTION SIGHT DISTANCE	Job No:
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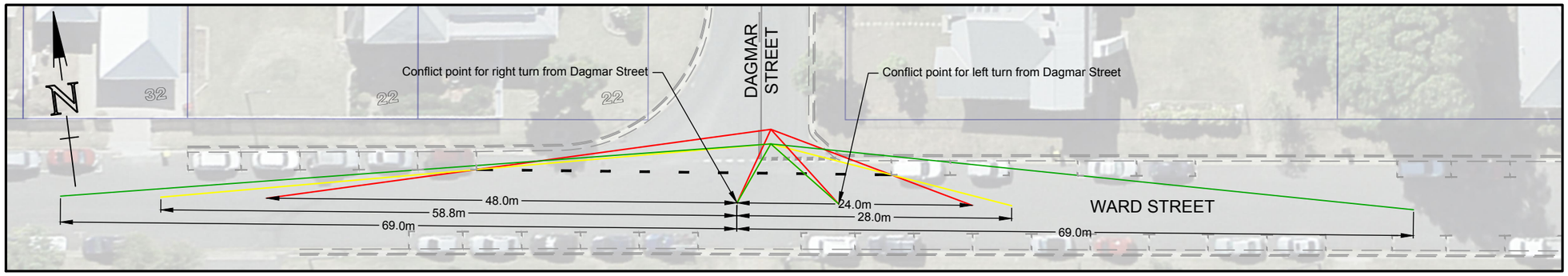

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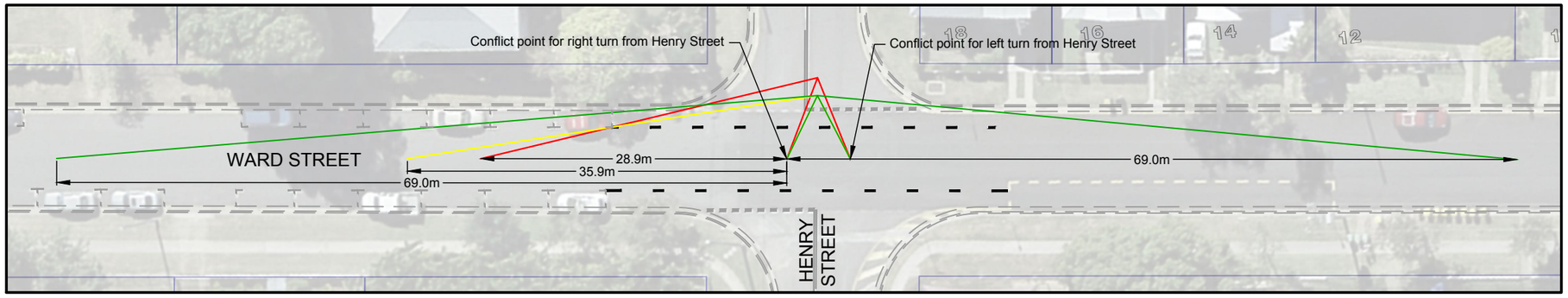

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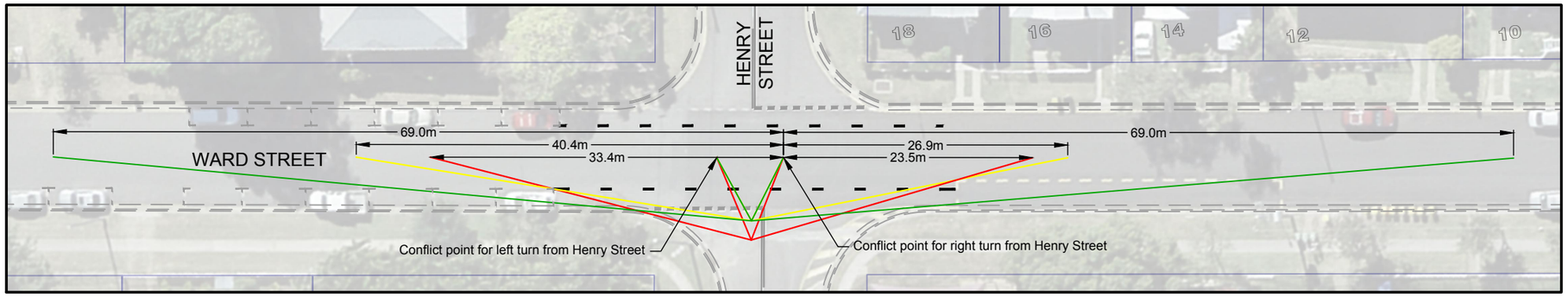

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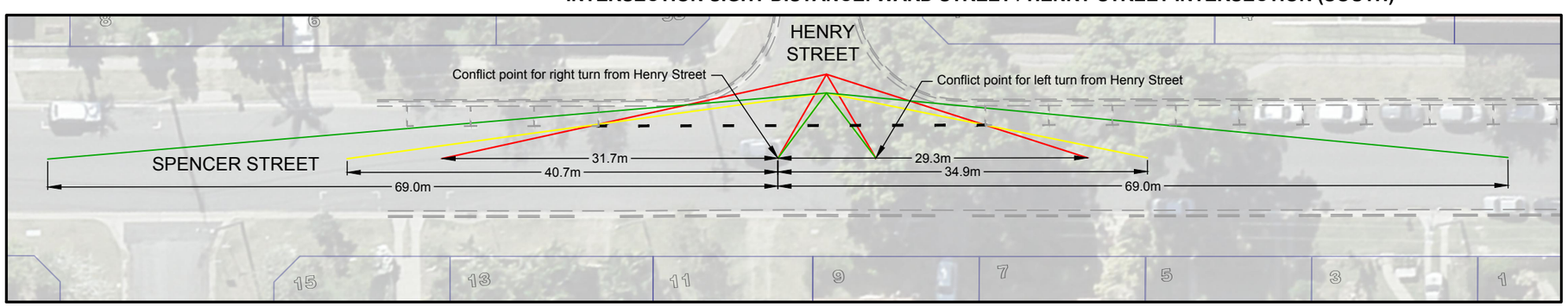

INTERSECTION SIGHT DISTANCE: SPENCER STREET / HENRY STREET INTERSECTION

INTERSECTION SIGHT DISTANCE LINE LEGEND:

- **Current Sight Distance**
- **Sight Distance with CL**
- **MGSD (69m @ 50 km/h) with CL**

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File Ref:			
XREF:			
Aux Plans:			

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FULL SIZE A3

	AMENDMENTS DESCRIPTION	DRAWN	APPR'D	DATE
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Rockhampton Regional Council

Designed	SFV	MAR '17
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APPROVAL _____
RPEQ No _____ DATE _____
MANAGER ENGINEERING SERVICES

WARD / SPENCER STREET
ST PETER'S SCHOOL (THE RANGE)
TRAFFIC MANAGEMENT
INTERSECTION SIGHT DISTANCE

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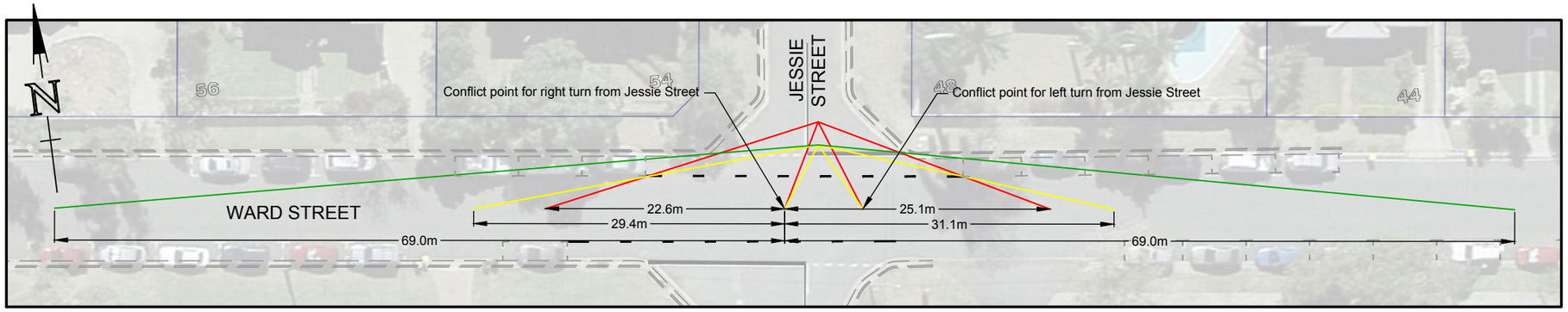

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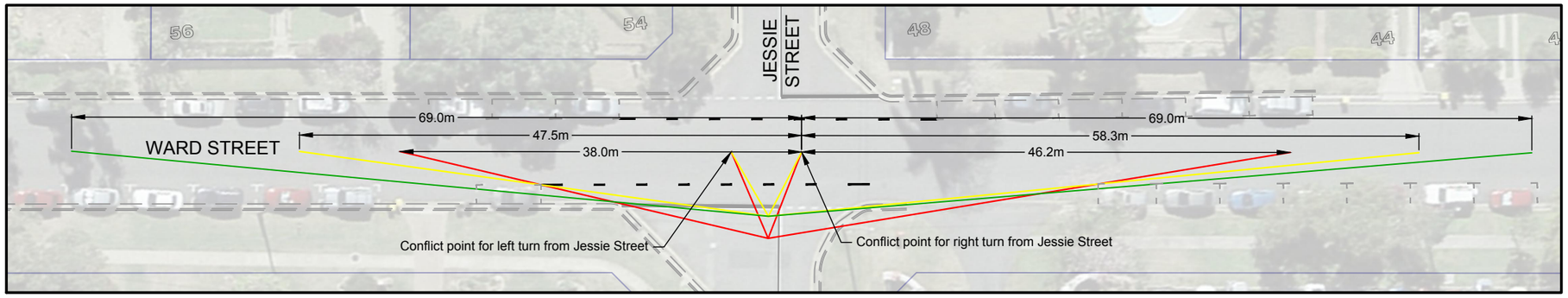

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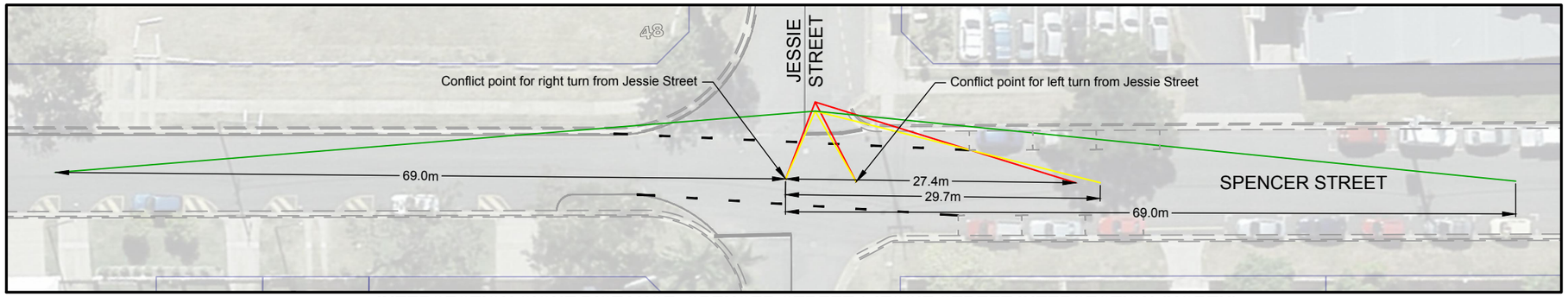

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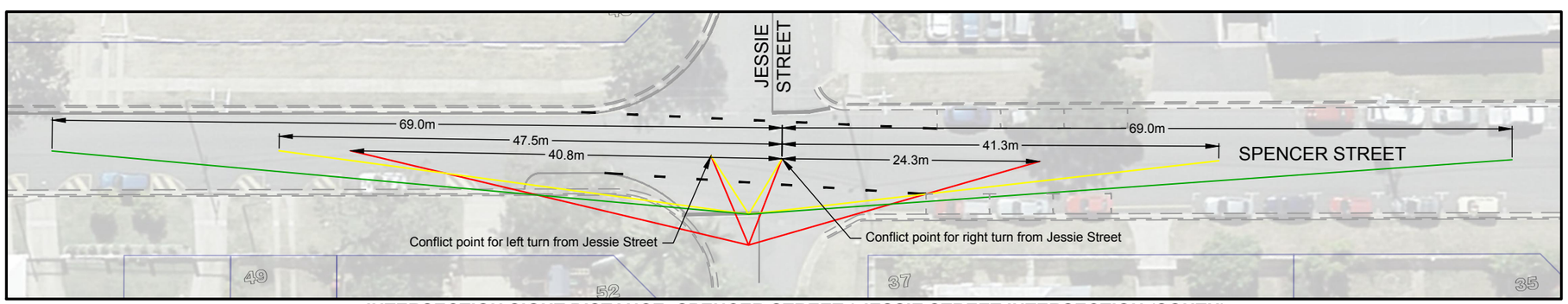

INTERSECTION SIGHT DISTANCE: SPENCER STREET / JESSIE STREET INTERSECTION (SOUTH)

INTERSECTION SIGHT DISTANCE LINE LEGEND:

- **Current Sight Distance** ———
- **Sight Distance with CL** ———
- **MGSD (69m @ 50 km/h) with CL** ———

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File Ref:			
XREF:			
Aux Plans:			

0 5 10m 1:500
DESCRIPTION
SCALES
FULL SIZE A3

	AMENDMENTS DESCRIPTION	DRAWN	APPR'D	DATE
A	Original Issue			

Rockhampton Regional Council

Designed	SFV	APR '17
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APPROVAL _____
RPEQ No _____ DATE _____
MANAGER ENGINEERING SERVICES

WARD / SPENCER STREET
MATER HOSPITAL (THE RANGE)
TRAFFIC MANAGEMENT
INTERSECTION SIGHT DISTANCE

Dwg No.
Sheet No. of
Job No:

Appendix C – 3E Committee Meeting Minutes

Minutes

Fitzroy District 3E Committee meeting, Operational March 2017

Date	Tuesday 14 March February 2017	**Time**	11am – 12:45pm
Place	DTMR Office, 31 Knight Street, Ground Floor Conference Room		
Chair	Jeff Van Nunen	**Minute taker**	Kath Ferguson

Attendees

DTMR	Jeff Van Nunen	QPS	Ewan Findlater
DTMR	Colleen Williams	RRC	Stuart Harvey
LSC	Michael Prior	RRC	Stuart Singer
LSC	Reece Sainsbury	RRC	James Goodman

Safety

- Building evacuation procedure and building amenities

Apologies

- DTMR – Dave Grosse, Peter Trim, Colin Edmonston, Kevin Oberg, Garry Patterson
- LSC – Phil McKone, Amal Meegahawattage, Madhave Karki
- QPS – Ray Pimm
- RRC – David Bremert

Approval of minutes from last meeting

- Approved via minutes

Actions from previous operational meetings

Officer	Action
Colin Edmonston (DTMR)	4/11/15: **Request for consistent school zone signage on Hill Street, Emu Park ACTION:** Colin to progress *Update 9/03/16:* Colin has sent a request to fix this signage. *Update 18/04/16:* In progress, Elliot to check wording on signage *Update 8/06/16:* Colin has sent a request to Artcraft for new signs with correct times. *Update 14/07/16:* Issue logged with Artcraft – plates to be updated when Artcraft next in region. *Update 6/10/16* School zone signage in Hartley Street now installed. The signage in Hill Street still needs to be updated. *Update 8/12/16:* Colin will be completing a site visit with Artcraft in January 2017. **Update:** New signs have been installed **close out**
Jeff Van Nunen (DTMR)	16/12/15: **Central Street, Mt Morgan**: Visibility issues at intersection of Morgan and Central Streets and also Dee and Central Streets. Colin advised that school zone has been approved for 40km/h zone flashing lights. **ACTION:** DTMR will investigate options for improving visibility *Update 9/03/16:* Best option appears to relocating the stop line on Morgan Street and possibly Dee Street. Stuart Harvey advised that RRC are reviewing a concept for treatments in Morgan Street and recommends that DTMR holds off on any works. Jeff talked about a truck parking outside service station, is this legal? Ewan advised that any vehicle over 7.5m long can only park there for 1 hour. The truck parking outside the service station is over 7.5m long. Jeff to arrange a discussion with the tow truck owner. *Update 8/06/16:* Ongoing. A site investigation is required to review the draft layout. Community consultation is required before any works *Update 14/07/16:* In progress – consultation still required. *Update 8/12/16:* In progress. Stuart advised that RRC are working on widening the centre median in Morgan Street. **ACTION:** Stuart to provide a copy of the plans to Jeff. **Update:** Progressing. RRC has had discussions with the contractor DTMR has engaged to do these works.
DTMR/RRC	*From strategic meeting 7/09/16:* **Signage:** Complaint received that there is a lack of signage through Rockhampton to direct travellers to the information centre. For southbound traffic the signage stops at Moores Creek Road. **ACTION:** DTMR to review consistency of signage. *Update 8/12/16:* In progress. Stuart advised that RRC are assessing current 'way finding' signage throughout Rockhampton. **Update:** Proposed works from contractor – follow A1. See Attachment A. Committee in agreeance with proposal. **ACTION:** Jeff to investigate extending nose of median to encourage a safe U Turn manoeuvre at Oswald Street intersection.
Colin Edmonston (DTMR) & Stuart Harvey (RRC)	*From strategic meeting 7/09/16:* Complaint received regarding pedestrian safety at Community Christian College **ACTION:** Colin and Stuart Harvey to talk to the Principal regarding SafeST issues. *Update 6/10/16:* Colin has spoken to the school Principal and a site visit will be completed when Stuart Harvey is available. *Update 8/12/16:* Site inspection completed and students are crossing the road near the busy intersection. Colin is investigating signage options on approach to the intersection advising of pedestrians and promotion within the school for pickups onsite where possible. **ACTION:** Colin and Stuart Harvey to discuss with the Principal in early 2017. **Update:** Colin and Local Member met with the Principal in February 2017. Flashing lights application pending for Ashney Street as part of current round. **Close out**

Officer	Action
Colleen Williams (DTMR) and RRC	6/10/16: **Main Street, Rockhampton:** Bus stop linemarking is required. **ACTION:** RRC to follow up *Update 8/12/16:* Vehicles associated with the school are parking at the spot and the bus provider has requested signage and linemarking to mark out the bus stop. Stuart advised that the bus provider advised RRC that there are only a few passengers using the stop. RRC decided that they would not stop the school utilising the space for only a minimal number of passengers throughout the day **ACTION:** Colleen to confirm numbers of passengers using the stop **Update:** Linemarking in Main Street is complete. **Close out**
Colin Edmonston (DTMR)	6/10/16: **Yeppoon High**: Students are not using the bus interchange, and instead are waiting at the school for the buses. The buses are adding to a congestion problem at the school. **ACTION:** TransLink to research for previous documentation regarding this bus interchange and any agreements from the schools. *Update 8/12/16:* TransLink provided the documentation. A site visit was completed by Colin and Elliot. Colin is proposing the school use the front of the school for vehicle pickups only with a single bus collection point at the Tabone Street interchange. **ACTION:** Colin to draft a reply to the school in conjunction with LCS advising of traffic management options. TransLink will receive a copy of this advice for their information. **Update:** No information to date
Kath Ferguson (DTMR)	6/10/16: **Woodbury Road/Mount Rae Road**: The warning signage is confusing and there is vegetation obscuring some signage. **ACTION:** Kath to progress *Update 8/12/16:* Jeff reviewed the site and is proposing to replace curve warning signs with intersection on curve warning signs. Also remove existing intersection warning signs. **Update:** works order submitted 19/01/17 to change signage as previously described. **Close out**
Jeff Van Nunen (DTMR)	8/12/16: **Neils Road, Yeppoon:** LSC are requesting a hydraulic design investigation for solution options to the two identified safety concerns for **Floodwater overtopping:** Storm water overtopping of Neils Road on the curve adjacent to the Yeppoon Racecourse. This is the Dowlings Road sub-catchment. This safety issue of particular concern as road users do not expect sheet flow at that non-sag elevation and being on a high speed curve. **ACTION:** Jeff to forward concerns to Manager (Delivery & Operations) and Manager (Project Planning & Corridor Management) for their consideration and action. **Update:** Email sent 23/01/2017 to DTMR Management. Response received from Manager (Project Planning and Corridor Management: "TMR have done a desktop hydraulic analysis in this area. There are no funds to upgrade or undertake any works. Water over the road issues may need to have signage reviewed to see if this can be improved to provide better warning signage." **Close out**

Officer	Action
Jeff Van Nunen (DTMR)	8/12/16: **Neils Road, Yeppoon:** LSC are requesting a hydraulic design investigation for solution options to the two identified safety concerns for **Flood levels:** Worsening of the flood levels due to the Neils Road embankment and culverts on Corduroy Creek floodplain. Extensive hydraulic modelling of Corduroy Creek and the Barmaryee Sports Complex drainage indicates significant worsening of the flood levels due to the Neils Road embankment and culverts on Corduroy Creek floodplain. This is a significant safety issue to road users and adjacent property owners. **ACTION:** Jeff to forward concerns to Manager (Delivery & Operations) and Manager (Project Planning & Corridor Management) for their consideration and action. **Update:** Email sent 23/01/2017 to DTMR Management. Response received from Manager (Project Planning and Corridor Management: "TMR have done a desktop hydraulic analysis in this area. There are no funds to upgrade or undertake any works. Water over the road issues may need to have signage reviewed to see if this can be improved to provide better warning signage." **Close out**
Colin Edmonston (DTMR) & Colleen Williams (DTMR)	8/12/16: **Emmaus Collage, North Rockhampton**: RRC has received a request from Emmaus Collage for school zone flashing lights on the service road. Discussion on the road environment and driver behaviour. The Committee will not support the installation of school zone flashing lights on Yaamba Road or the service road. **ACTION:** Colin to reply to Emmaus. **Update:** Request was actually for vehicle activated speed reduction signage in the Service Lane. Approved after consultation with DTMR Road Corridor Permit team. Site visit planned in March 2017 to confirm location of the sign. Colleen spoke about where students are crossing on the Service Lane. **ACTION:** Colleen to provide this information to Colin
Colin Edmonston (DTMR)	8/12/16: **Community Signage:** A number of requests for community signage directing traffic to schools in the area have been received by RRC and Colin. The guidelines advise not to use signage for schools. **ACTION:** Colin to discuss with David Jorgensen for a standard response **Update:** Relevant information forwarded to Stuart Harvey for response to Port Curtis School. **Close out**
RRC	8/12/16: **Hyde Street & Dean Street**: RRC received a complaint that there is a continuous white line in front of Hyde Street at this intersection, however, only a broken line in front of Venables & Crookshank. **ACTION:** RRC to investigate **Update:** Works order to change linemarking has been raised by RRC
All Committee members for consideration	*From strategic meeting 2/02/17* **School zone flashing lights:** Regional Priorities for the last round of school zone flashing lights has been opened. RRC suggested Depot Hill School (George and O'Connell Streets). Shift changes for businesses in the area coincide with school times. Christian College on Ashney Street, North Rockhampton and Glenmore Primary School on McLauchlin Street, North Rockhampton were other suggestions. **ACTION:** Committee members to send Colin nominations **Update:** New speed compliance data provided as part of regional submission for the current round of flashing lights. Discuss again when successful locations announced. **Close out**

Officer	Action
Colleen Williams (DTMR)	*From strategic meeting 2/02/17* **Mason Ave, Parkhurst School:** Complaint received from Rothery's Coaches that car parking across from the school is making turning out from the school by buses difficult. Suggestion that RRC change the parking directly out of the school to a bus zone. Alternatively install a no stopping zone opposite the access. Discussion on merits of both suggestions. **ACTION:** Colleen to arrange meeting with Rothery's, RRC and DTMR. **Update:** Meeting held and decision to remove one car park to allow school bus to exit the drop off area. **Close out**

Agenda item 1 Speed Management

- **Western Yeppoon – Byfield Road** Speed limit review.
  - **Background:** Speed limit review completed from the intersection with Farnborough Road to the end of the road. JVN advised that DTMR officers agree with the recommendations of this report. **Committee Decision:** Supports the speed changes as per the report AM: there is one section which was identified as inappropriate road geometry for 100km/h and it is one of the sections that has been dropped to 80km/h. Shouldn't there be a review to ensure that 80km/h is appropriate for this section? Agreed.
  - **ACTION:** JVN to progress. ***Update 4/03/15:*** geometry is yet to be investigated. **Update:** in progress
  - *Update 4/03/15:* Currently LSC will not support the speed change from 100km/h to 80km/h for section 2. This is due to suspected lack of compliance by road users. DTMR & QPS do agree with the change. Only a majority is required to reach a decision **ACTION:** JVN to progress ***Update 1/04/2015:*** JVN: Signage layout has been developed and is with KJO for review and RPEQ sign off. ***Update 15/07/15:*** Plans were completed to implement the speed changes as agreed by the speed management committee, however, LSC had an objection to the change, forcing TMR to go back and further review the proposed changes. TMR Officer Gavin Hill has requested that a more detailed review be completed with consideration to recent clearing as a result of cyclone Marcia and recent accident information.
  - *Update 5/08/15:* The road has deteriorated significantly and the speed has been reduced. EF will speak to LSC representatives to discuss enforcement of the speed reduction.
  - *Update 4/11/15:* QPS have completed patrols in the area and have not issued many infringement notices.
  - *Update 4/11/15:* LSC has installed a traffic count on Waterpark Road to monitor the speeds and volumes of the logging trucks. **ACTION:** Once collected Elliot to provide data to QPS and DTMR.
  - *Update 4/11/15:* Due to the high volume of heavy vehicles, the speed has been reduced to 80km/h. An investigation of the road will need to be completed after the timber clearing operation in Byfield is finished.
  - *Update 16/12/15* above action completed, **close out.** EF advised that the HQ Plantation are proposing fresh timber cutting which is outside the Special Cyclone Permit.

- *Update 9/03/16:* Elliot can provide traffic counts from Waterpark Road.
- *Update 18/04/16:* Colin advised that HQ Plantations log trucks seem to have slowed up considerably. Has there been any more talk regarding fresh timber cutting? If so, TMR would need to discuss with them the requirements for a new permit. Kevin advised that the haulage from Byfield by QP plantation has reduced from the previous 80 movements per day to between 16 and 24 movements per day. The current permit that was given under the disaster is up for review in May. It is likely that there will be a return to business as usual with no higher mass limit vehicles. The final outcome will be known after the May review.
- *Update 8/06/16:* speeds zones are being reconsidered by DTMR District Director (Fitzroy) following request from LSC. Discussion on HQ Plantation working in the area. **ACTION:** Colin to forward to Elliot DTMR's response to HQ Plantation's request to extend permit.
- *Update 14/07/16:* Speed Limit Review and subsequent comments with District Director for decision.
- *Update 8/12/16:* The District Director (Fitzroy) and Mayor of Livingstone Shire held a meeting regarding this road section and have made an alternate proposal for the speed zones – splitting Segment 1 into 80km/h & 90km/h zones and resuming Segment 2 at 100km/h. Ewan commented that frequent changes in speed make it difficult to enforce and confuse/frustrate drivers. He also noted that compliance with the 80km/h arrangement post-Marcia has been good. **ACTION:** The revised Speed Management Committee recommendation to be tabled to the District Director (Fitzroy) for consideration. *See Attachment A*.
- *Update 2/02/17 Strategic Meeting:* Jeff went through the email with approval from A/District Director (Fitzroy) dated 20/01/17 following email from Chairman of the 3E Committee. See Attachment A. Jeff went through the details of the proposed speed changes:
    - **80km/h** Farnborough Rd intersection (chge 18.8km) and north of Woodbury Treatment Plant (chge 22.5km)
    - **90km/h** north of Woodbury Treatment Plant to Upper Stoney Creek (chge 29.4km)
    - **100km/h** Upper Stoney Creek to Red Rock (chge 35.5km)
    - **80km/h** Red Rock to Byfield Township (chge 40.95km)
    - **60km/h** through Byfield Township (chge 40.95km – 42.4km)
    - **80km/h** north Byfield Township to end of the bitumen seal (chge 45.11km)

  Jeff explained that there are consultants reviewing the curve advisory speed signage as well as the warrants for CAMs on curves on this road. Discussion regarding the use of the road by heavy vehicles. **Committee Decision:** DTMR and LSC endorse the proposed changes. QPS do not support the changes, specifically with too many speed changes in short distances on the road. **Endorse the proposed speed changes with majority vote.**
- **Update:** Contractor well advanced with plan work. A varicom assessment has also been completed to review curve advisory signage.

- *From strategic meeting held 16/09/15* **Tanby Road (Western Yeppoon – Emu Park Road)**, from Taranganba turnoff to Kanagra Restaurant: Cr Glenda Mather has requested DTMR to consider a drop in speed from 100km/h to 80km/h in this area. **ACTION:** Jeff to gather speed data and also look at number of accesses and road function. *Update 4/11/15:* In progress. If required, LSC may be able to complete the traffic data collection on behalf of DTMR. *Update 16/12/15:* EH has received another request for 80km/h along this road. JVN requested LSC to complete a traffic data collection. *Update 9/03/16:* Traffic data has been gathered by LSC. Colin and Jeff will carry out the speed limit review using QLimits. *Update 6/10/16:* Refer to breakdown of traffic count, see **Attachment A**. QLimits would identify 100km/h. Suggestion to look at number of accesses in the area and what speed zones they are in. The Committee would like to see a crash analysis of the area. **ACTION:** Colin to present crash data at the next meeting. **ACTION:** DTMR to complete an access visibility assessment. **Update:** DTMR has assigned this to a contractor to review

- *8/12/16:* **Tanby Road (Western Yeppoon – Emu Park Road), Kinka Heights Estate:** Complaint of speeding vehicles and request to reduce speed. Ewan advised QPS completed patrols for a week in the area and no traffic infringements were issued. A traffic count will be completed, in the New Year, after school returns. **Update:** Waiting on traffic count data from DTMR ARMIS

- *8/12/16:* **Mcevoy Road/Four Mile Road, Kabra:** following a fatal traffic crash, RRC completed a speed review of the curve. RRC are proposing a 2km length of reduction of speed from 100km/h to 80km/h. **ACTION:** Stuart to forward the assessment to committee members for review prior to the next meeting. **Update:** To be done before next meeting.

- *2/02/17:* **Wood Street, Depot Hill:** Colleen received a complaint of speeding **ACTION:** Stuart to investigate signage and speed zones and then to advise Colleen **Update:** Site visit completed – 50km/h > 60km/h > 50km/h. The 60km/h section does feel like a 60km/h zone. Further investigation to be done by RRC.

- *New:* **Woodbury Road:** LSC have received a request from a resident on Woodbury Road to consider a reduction in the posted speed limit from Victory Bridge past the Mt Rae Road turnoff, and around the RH corner – there has been a recent crash. LSC have undertaken an audit of the Mt Rae Road approach. There is adequate signage approaching the T intersection. **ACTION:** Jeff to complete a visibility check at this intersection

- *New:* **Ward Street/Spencer Street:** There has been previous speed investigations in this area. 24 hour traffic count in both directions revealed:
    - Spencer near the school the 85th percentile was 45km/h
    - Spencer closer to the hospital 85th percentile was 54km/h
    - Ward near school the 85th percentile was 46.8km/h
    - Ward closer to the hospital the 85th percentile was 51.1km/h

  Sight distance has been investigated. See Attachment B. RRC is considering the option to remove 2 parking spaces at the intersection with Henry Street while adding 2 parking spaces closer to the hospital. Discussion on crashes, driver behaviour and perception **Committee Decision:** Support RRC option to remove parking spaces at Ward and Henry Streets intersection to provide minimum gap sight distance

Agenda item 2 Media Profile

- Nil

Agenda item 3 Agency share

- TMR had a display at the Kabra Motorcycle 'Show and Shine' on 4 March 2017. Significant interest from riders and 50 survey interviews conducted on road safety suggestions and the identification of high risk roads for riders. This will inform a local grant submission for road safety audits of high risk motorcycle routes in Central Region.

- Stuart spoke about centreline RRPMs on ranges in the Cairns area which are installed behind one another, instead of side-by-side to give motorcycles more road width.

- Professional Development for Local Governments is now secured (8 week course over June/July 2017). Invitations and officer nominations to be done through the next round of Regional Roads and Traffic Group meetings. See Attachment C.

- New round of Community Road Safety Grants due to open in April and close in late May 2017. **ACTION:** Colin to provide grant details and application information to Local Governments when the round is officially launched.

Agenda item 4 General Business

- **Road Rules interpretation:** Discussion on Section 134 of the Road Rules Legislation regarding crossing single barrier line at an intersection. There is confusion between the Legislation and the MUTCD and DTMR road rules documentation. **ACTION:** Jeff to follow up with DTMR Brisbane

- **Fitzroy River Bridge Footpath**, CFR-3006 – conflict between pedestrians and bicycles. Contractor has provided information on treatment. See Attachment D. Stuart advised that one existing sign will be moved as it is too close to the path. Concern that there isn't enough width for centre linemarking on the bridge footpath. **ACTION:** Jeff to advise contactor about sign relocation

- **Joyce Street, Mt Morgan:** RRC received request for speed humps and Give Way signage due to speeding on Thursday & Saturday nights. Discussion on speed humps. The area is mostly undeveloped. For QPS information

- **Clanfield Street, North Rockhampton:** RRC received request for speed humps with a complaint of speeding. Speed data collected and within range for 50 speed limit as per MUTCD table C1. No further action.

- **Bramble Street, Rockhampton:** RRC received complaint of speeding. Speed data collected and within range for 40 speed as per MUTCD table C1. Current speed limit of 50km/h. No further action

- **Johnson Road, Gracemere:** RRC received complaint of Heavy Vehicles using Johnson Road as a rat run to avoid the overpass on the Capricorn Highway. To limit rat running on Johnson Road, RRC suggest installing a sign on Gavial-Gracemere Road, prior to Lawrie Street, to direct Heavy Vehicles to Gracemere Industrial Area (GIA) via Capricorn Highway. Heavy Vehicles (not B-doubles) have a right of use to Johnson Road **ACTION:** Stuart to provide Jeff with the traffic data **ACTION:** Jeff to investigate installing this sign

- **Waterloo Street, intersection with Kerrigan Street:** Car are parking opposite T-intersection request for no stopping line **ACTION:** Stuart to investigate

- **Bruce Highway, Bajool:** Linemarking works, complaint received regarding behaviour of pilot vehicles (1 ahead and 1 behind the linemarking truck). Rear pilot driver indicating to following traffic to go around by using right indicator and waving vehicles past. When stopped by QPS on two occasions pilot drivers advised they were complying with guidelines. **ACTION:** Jeff to provide information to Ewan regarding the guidelines.

- **Frenchville Road, North Rockhampton:** RRC received complaint of illegal right turns into child care centre and requested raised centre median. Issue discussed. After operational works, driveway will have raised island installed to better define use of driveway as per approved development application. Regulatory no right turn sign is adjacent to driveway. For QPs information. No further action.

- **Gladstone Road & Derby Street intersection, Rockhampton:** complaint that right turn lane is not long enough, congestion at peak times. **ACTION:** Jeff to investigate

- **Thozet Road, North Rockhampton:** RRC received complaint of speed and requested mobile radar speed sign to be temporarily used. RRC request for Volunteers in Policing (VIP) in area. VIP attended Thozet Road on 9/02/2017. No further action

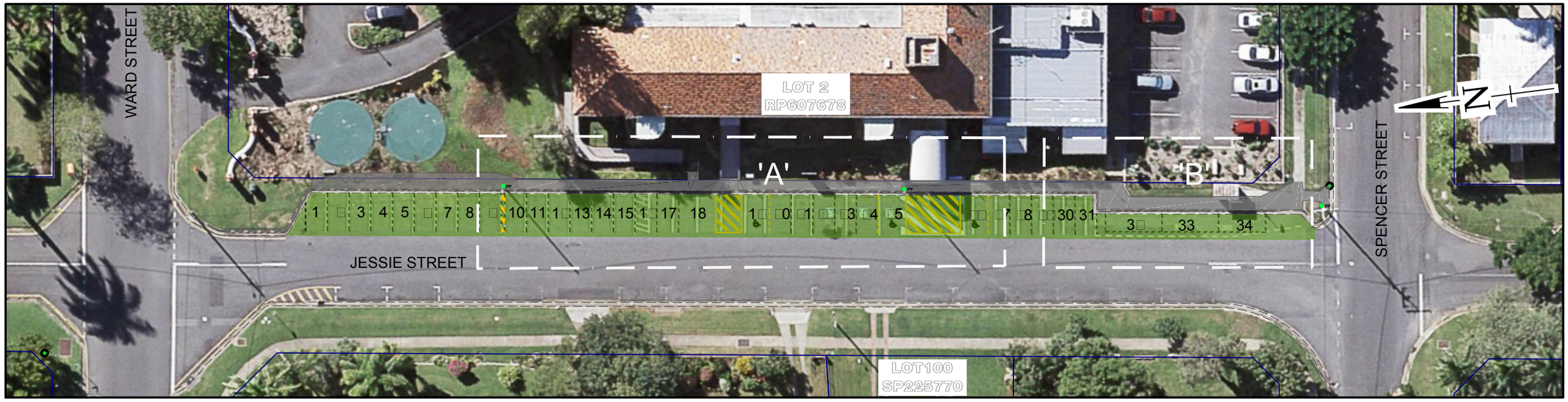
- **Frenchville School, North Rockhampton:** RRC received complaint vehicles went through red light when exiting school as well as double parking. For QPS information. Ewan advised that there have been QPS patrols in the area during school hours. Colleen advised that there has been a request to stagger the hold line at the traffic lights.

Date of next meeting

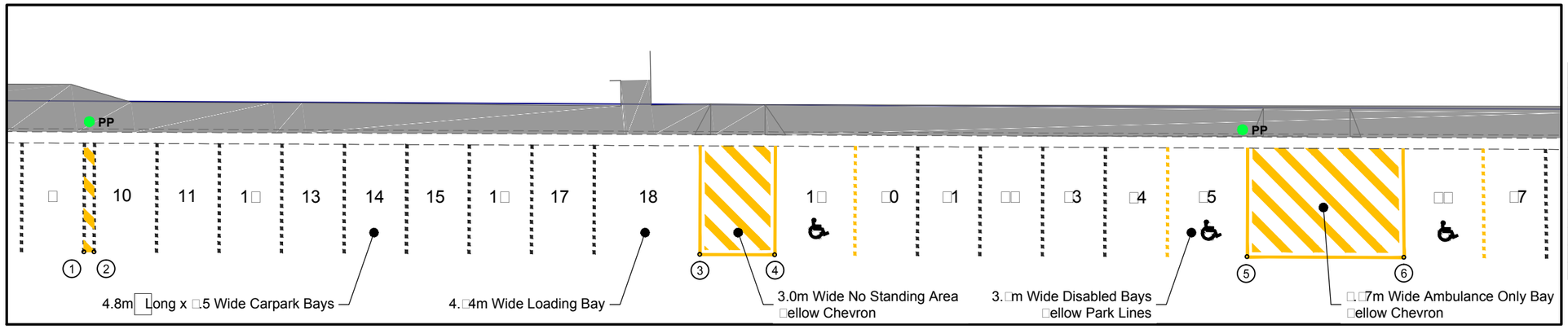
2 minutes

The next meeting is proposed for Thursday 6 April 2017

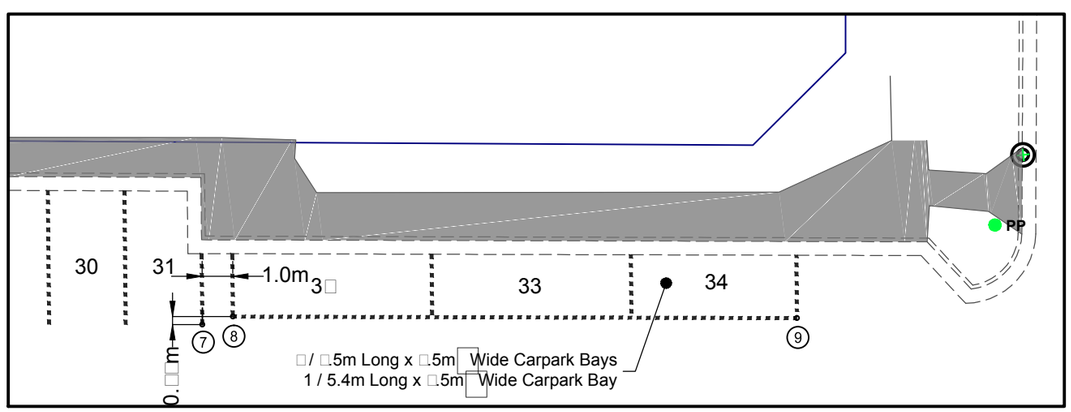
Appendix D – Jessie Street Line Marking Proposal



GENERAL LAYOUT



DETAIL 'A'



DETAIL 'B'

LINEMARKING SETOUT TABLE

POINT No.	CO-ORDINATES EASTING	CO-ORDINATES NORTHING	DESCRIPTION
1	441 8.887	7410 7.730	End of PL
	441 8.83	7410 7.333	End of PL
3	441 5.714	7410 03. 7	End of PL
4	441 5.3 8	7410 00.3	End of PL
5	441 8 4	7410181.57	End of PL
	441 08	7410175.3 0	End of PL
7	441 0.0 4	741015 7 0	End of PL
8	441 0. 0	7410158.7 8	End of PL
	44187.8 0	7410140.51	End of PL

LINEMARKING LEGEND

Existing Kerb and Channel

PL (Park Line) 100mm Wide (White) 00mm Stripe 00mm Gap

1 34 Proposed Parking Bays

Disability Symbol

Measured from Invert of erb

NOTES

- All pavement markings to be in accordance with RRC STD DWG No. RRC R01
- Chevron markings to comply with RCC STD DWG No.SD 038

LEGEND:

Existing Concrete Footpath

New Surface
Reseal surface 515 m

1 34 Proposed Parking Bays

PP Power Pole

CONCEPT
29/06/2016

Surveyed:	Date:		
Ref Mark:	R.L.		
Datum: Horiz.GDA '4 Vert. AHD			
Zone: 5	Survey Book:		
File Ref: 01105 01.dwg			
XREF:			
Aux Plans:			

PLAN GENERAL LA OUT 1:500
PLAN DETAIL 'A' 'B' 1:00
SCALES FULL SIZE A3

	AMENDMENTS DESCRIPTION	APPR'D	DATE
A	Original Issue		

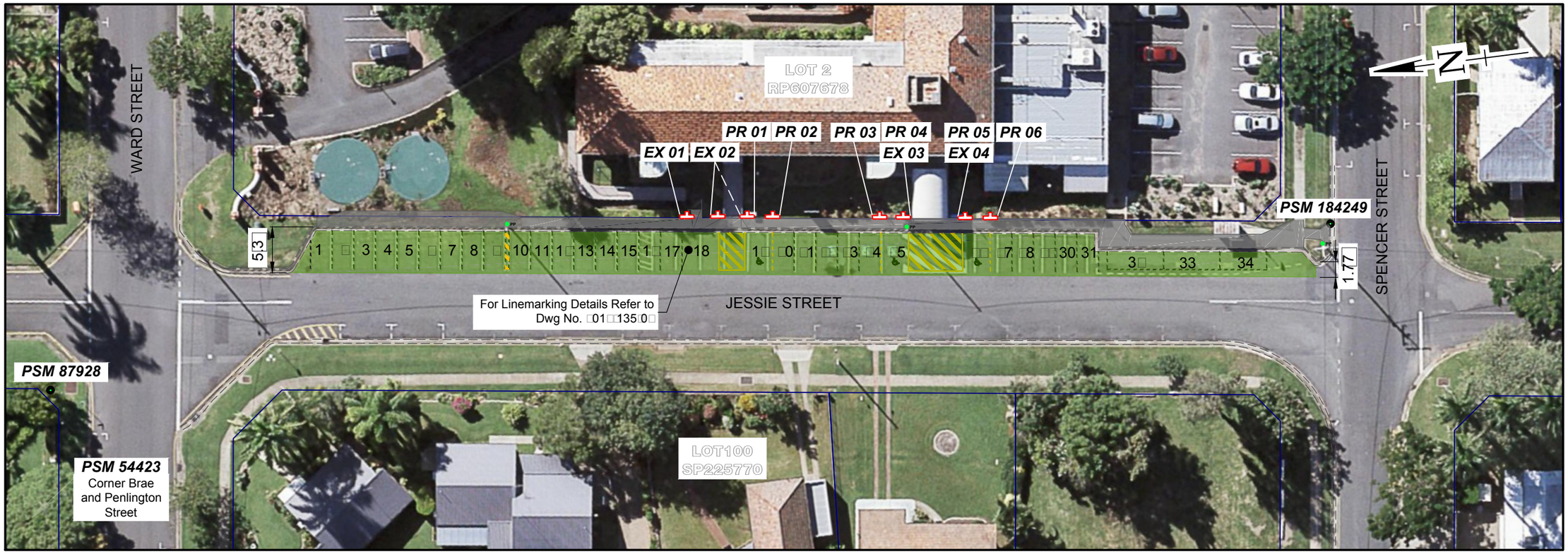
Rockhampton Regional Council

Designed	S.J.S	JUNE '1
Checked	S.A.H	JUNE '1
Examined		
Recomm.		

APPROVAL
RPEQ No DATE
MANAGER ENGINEERING SERVICES

JESSIE STREET
SPENCER STREET TO WARD STREET
ON STREET PAR ING MANAGEMENT
LINEMAR ING

Dwg No. 01 135 0
Sheet No. of
Job No: 01 135
A



GENERAL LAYOUT and SIGNS

SIGNAGE REQUIREMENTS	
SIGN NO.	**COMMENTS**
PR 01	Proposed ***DISABLED ONLY*** sign and post.
PR 02	Proposed ***DISABLED ONLY*** sign and post.
PR 03	Proposed ***DISABLED ONLY*** sign and post.
PR 04	Proposed ***DISABLED ONLY*** sign and post.
PR 05	Proposed ***DISABLED ONLY*** sign and post.
PR 06	Proposed ***DISABLED ONLY*** sign and post.
EX 01	Existing ***LOADING ZONE*** sign to be relocated.
EX 02	Existing ***LOADING ZONE*** sign to be relocated.
EX 03	Existing ***AMBULANCE EXCEPTED*** sign to remain.
EX 04	Existing ***AMBULANCE EXCEPTED*** sign to remain.

R5 3
(L/R)

EX01, EX02

R5 35
(L/R)

EX03, EX04

R5 10
(L/R)

PR01 - 06

SURVEY STATION CO-ORDINATES				
STATION	**CO-ORDINATES**		**R.L.**	**DESCRIPTION**
	EASTING	**NORTHING**		
PSM 184 4	441 .17	741013 531		Screw In erb
PSM 87 8	441 1.554	7410 81.5 4		PSM 87 8
PSM 5 4 3	440 0.004	741053 30	47.83	CNR Brae Penlington St

LEGEND:

- **Existing Concrete Footpath**
- **New Surface** Reseal surface 515 m
- 1 34 Proposed Parking Bays
- Measured from Invert of erb

CONCEPT
29/06/2016

Surveyed:	Date:		AMENDMENTS DESCRIPTION	APPR'D	DATE	Designed	S.J.S JUNE '1
Ref Mark:	R.L.					Checked	S.A.H JUNE '1
Datum: Horiz. GDA '4 Vert. AHD						Examined	
Zone: 5	Survey Book:					Recomm.	
File Ref: 01105 01.dwg							
XREF:							
Aux Plans:							

0 5 10m
PLAN 1:500
SCALES FULL SIZE A3

A Original Issue

Rockhampton Regional Council

APPROVAL
RPEQ No _____ DATE _____
MANAGER ENGINEERING SERVICES

JESSIE STREET
SPENCER STREET TO WARD STREET
ON STREET PAR ING MANAGEMENT
SIGNS and RESURFACE

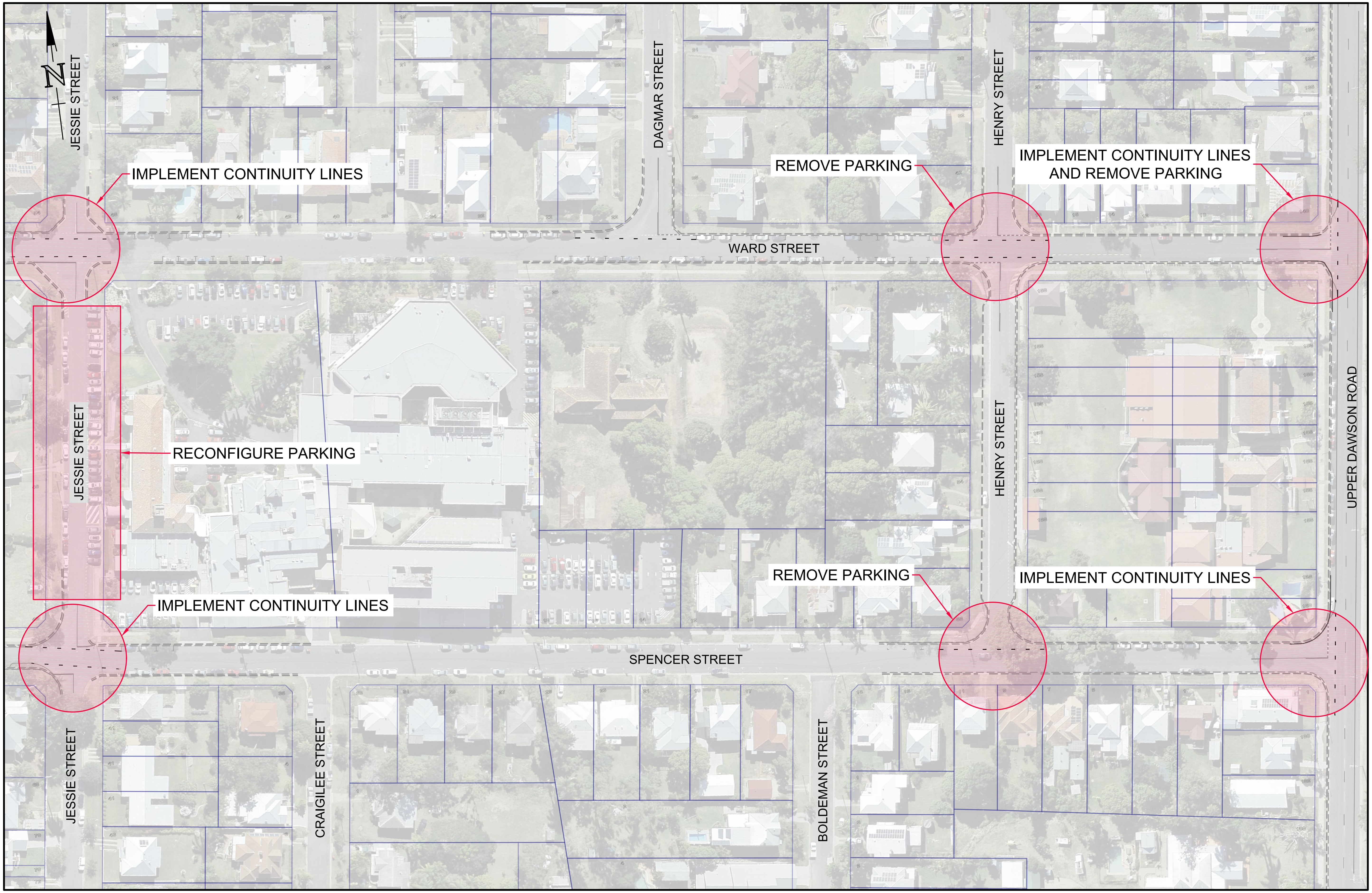
Dwg No. 01 135 01
Sheet No. 1 of
Job No: 01 135
A

WARD AND SPENCER STREET TRAFFIC SAFETY ANALYSIS

Option 3 - Overall Linemarking Plan

Meeting Date: 16 May 2017

Attachment No: 2



Surveyed: Date:			AMENDMENTS DESCRIPTION	DRAWN	APPR'D	DATE	Designed	SFV	MAY '17	APPROVAL	WARD / SPENCER STREET	Dwg No.
Ref Mark: R.L.	0 12.5 25m 1:1250						Checked			RPEQ No DATE	UPPER DAWSON ROAD TO JESSIE STREET	Sheet No. of
Datum: Horiz. Vert.	DESCRIPTION						Examined				TRAFFIC MANAGEMENT	Job No:
Zone: Survey Book:							Recomm.			MANAGER ENGINEERING SERVICES	OVERALL LAYOUT	
File Ref:												
XREF:												
Aux Plans:	SCALES	FULL SIZE A3	A Original Issue									

Rockhampton Regional Council

8.4 STREET SAFETY AND VEHICLE PARKING - STEWART STREET AND SOMERSET ROAD

File No:	**377**
Attachments:	**1. Stewart St - Somerset Rd Intersection**
Authorising Officer:	**Martin Crow - Manager Engineering Services** **Peter Kofod - General Manager Regional Services**
Author:	**Jamie McCaul - Coordinator Development Engineering**

SUMMARY

Further to the Planning and Regulatory Committee Meeting on 13 September 2016, Council Officers have undertaken investigations with a view to identifying any potential parking issues and street safety issues within Stewart Street and at the Stewart Street / Somerset Road intersection.

OFFICER'S RECOMMENDATION

THAT Council monitor the Stewart Street and Somerset Road intersection to ensure any vehicles parking in the vicinity are compliant with the road rules and setback from the intersection and should issues be evident, advise Local Laws accordingly.

COMMENTARY

The matter is brought to the Council table following concerns raised by Councillors at the Planning and Regulatory Committee meeting on 13 September 2016. A report has previously been presented regarding the Springfield Drive/Foulkes Street intersection. This report is to address the second part of the resolution.

Somerset Road is identified as an industrial collector road. It currently has a carriageway width of 10m and a road reserve width of approximately 40m adjacent to Stewart Street. This is staged construction of the ultimate road configuration. Future upgrades are identified for Somerset Road in Council's Local Government Infrastructure Plan (LGIP) to widen the carriageway width out to 18m, which is consistent with this road hierarchy. Direct property access exists onto Somerset Road and the speed environment is 60km/hr. Further, a 3m wide parking lane has been provided on southern side of Somerset Road. The National Heavy Vehicle regulator approved Somerset Road as a B-Double and Type 1 Road Train route in 2013.

Stewart Street is identified as an industrial access road, however, is currently constructed to a rural minor collector standard. It has a carriageway width of 7m and a road reserve width of 40m. As the sites fronting Stewart Street develop, the carriageway width will be widened out to 13m, which is consistent with the industrial access hierarchy. Direct property access exists onto Stewart Street and the speed environment is 60km/hr. Stewart Street is an existing approved B-Double route but it is not approved for Road Trains.

The zoning on the western side of Stewart Street is medium and low impact industry while the zoning on the eastern side of Stewart Street is Rural. An application has however recently been approved for a vehicle depot on the eastern side of Stewart Street. This has been an existing use for some time.

Under Council's development guidelines, the functional capacity of an industrial collector and an industrial access road is determined by the catchment it serves. A catchment area of less than 30 hectares and less than 8 hectares respectively is identified. This differs from having a specific set volume as per the case for a residential or rural road network.

To determine a contributing catchment for the road network it is necessary to look at the zoning of the surrounding land as identified in the Rockhampton Regional Planning Scheme (RRPS) and the destination and origin of the uses that may be expected. Consequently, assumptions are made on the volumes of traffic that will use various sections of a road.

The developed catchment area that is currently being serviced by Somerset Road (in the vicinity of Stewart Street) is minimal, hence the current standard of the road. It is envisaged that by 2021 sections of Somerset Road will be upgraded to the full 18m wide carriageway as the demand on the road increases. Ultimately, all of Somerset Road will be upgraded to the intended Industrial Collector standard.

It has been determined that the catchment size of industrial land being catered for by this section of Somerset Road is less than 30 hectares. And the capacity of Somerset Road towards Stewart Street is well within the capacity of the current road configuration.

Stewart Street's current configuration being Rural Minor Collector has a capacity of 999 vehicles per day (vpd) under Council's development guidelines. Count data for Stewart Street was 170vpd in 2016 which is well within the road's current functional capacity.

The intersection of Somerset Road and Stewart Street is an uncontrolled tee intersection with associated give way signage on the Stewart Street leg. The intersection is unrestricted with full movements permitted.

A channelized right turn lane is provided in Somerset Road for vehicles entering into Stewart Street and vehicles are able to turn right into Somerset Road from Stewart Street. Sight distances are acceptable from both directions and compliant with relevant legislation.

A road safety audit was conducted by Strategic Infrastructure Officers in 2013 and presented to Council in 2014 for numerous intersections along Somerset Road including the Stewart Street intersection. The recommendations from this audit concluded that the intersection was safe and compliant with relevant legislation. The vegetation located on the eastern corner of the intersection was to be monitored and trimmed where necessary to ensure sight distances are not impeded.

The Queensland Government implement parking rules to ensure Queensland roads stay organised and safe for all road users and pedestrians. Parking fines are issued by the Queensland Police Service and Council's Local Laws using a traffic infringement penalty notice. Parking is not permitted within 10m of any intersection without traffic lights, unless there are signs that permit this.

With regards to parking restrictions, Council identifies Somerset Road as suitable for legal on-street parking given the parking lane identified on the southern side of the road reserve. In its current configuration, the Stewart Street road reserve width of 40m provides ample opportunity for any vehicles parked to be well clear of the trafficable area. This will be monitored and, in the event that safety issues arise, the need for parking restrictions can be assessed and implemented.

Council is selective in where parking restriction signs and yellow line marking are applied. As such they are generally reserved for streets where Council has determined that a genuine road safety issue can be addressed through their implementation.

Council Officers have investigated the capacity of Somerset Road and the safety of the carriageway and intersection with Stewart Street. A number of site inspections have been conducted between December 2016 and March 2017 at varying times to identify any problematic parking and road safety issues that are a cause for concern. It was noted that no vehicles were parking within the road reserve during these inspections and no causes for concern where identified.

BACKGROUND

Concerns were raised at the Planning and Regulatory Committee meeting on 13 September 2016, regarding parking and street safety at the intersection of Somerset Road and Stewart Street.

RISK ASSESSMENT

Council Officers have assessed the risk associated with vehicles parking on the carriageway of Somerset Road and also vehicles parking adjacent to the intersection.

Any concerns with regards to traffic safety are a low risk and the risk will be further mitigated with monitoring any vehicles parking at the intersection.

CORPORATE/OPERATIONAL PLAN

Provide engineering, infrastructure planning and project management services to meet the current and future needs of the community and the organization.

CONCLUSION

Council Officers have undertaken investigations with a view to identify any potential parking issues and street safety issues within Somerset Road and at the Stewart Street and Somerset Road intersection.

No road safety issues have been identified however, it is recommended that the Stewart Street and Somerset Road intersection be monitored to ensure any vehicles parking in the vicinity are compliant with the road rules and setback from the intersection.

STREET SAFETY AND VEHICLE PARKING - STEWART STREET AND SOMERSET ROAD

Stewart St - Somerset Rd Intersection

Meeting Date: 16 May 2017

Attachment No: 1

A4 Page scale at 1: 918.45

Printed from GeoCortex on 03/05/2017

Legend

- Easements
- Property Parcels (Main)
- Coastline
- Ocean
- Rivers
- DCDB Parks
  - National Park
  - Reserves
  - State Forest

Rockhampton Regional Council

8.5 ROAD ACCESS - MAINTENANCE OF ROADS

File No:	**412**
Attachments:	**1. Attachment 2 Roads that are maintained** **2. Attachment 3 Roads that are not maintained by Council**
Authorising Officer:	**Peter Kofod - General Manager Regional Services**
Author:	**David Bremert - Manager Civil Operations**

SUMMARY

Councils Local Law 1.1 states that the property owner is responsible for the construction and maintenance of the access from the property boundary to the formed road.

Council has currently two different methods of treating the maintenance of these. Either it is up to the owner or Council to undertake.

To ensure consistency across Council, it is recommended that the current Local Law 1.1 is enforced across Council.

OFFICER'S RECOMMENDATION

THAT Council reconfirms that the property owner is responsible for maintaining access from property boundaries to the road reserve and further that Council only maintains roads that serve more than one property owner; and

THAT Council updates the road register for the adjustments that occur.

COMMENTARY

Council has an adopted a policy and Local Law Number 1.1 that states that the property access from the road to the property (construction, maintenance and reconstruction) is the responsibility of the land owner. This Local Law is used across Council areas.

This is also stated this on Council web page under Civil Operation's property access.

In some areas, historically Council has been undertaking grading and repair works on these property accesses.

An issue has arose with Council having numerous roads that solely serve one property or multiple allotment owned by one person and in some cases the road runs through the one property and ends at the garage of the house on that property.

Examples are shown in Attachment 1 Roads that are maintained and Attachment 2 Roads that are not maintained issues throughout the Council area.

Currently, Council has two methods of handling people's driveway issues. Some are handled by Council undertaking the works and some by Council enforcing the policy where the property owner is responsible.

So that Council can undertake a consistent approach across Council areas, it is proposed that Council enforces the policy that property owners maintain road access and that Council will only maintain roads to the closest property boundary of the multiple allotments own by the same person or group.

BUDGET IMPLICATIONS

The reduction in grading will allow the crews to grade other roads and would have a nil impact on budget.

STAFFING IMPLICATIONS

The reduction in grading will have nil impact on staffing.

RISK ASSESSMENT

Council will be acting as a consistent approach across the Council area which would reduce any inconsistencies being undertaken.

CONCLUSION

Historically, Council has been undertaking repair works on resident's driveways on the odd locations throughout the Council.

In a majority of the areas, Council requires the property owner to construct, maintain and rebuild the property access.

To be consistent across Council, it is recommended to enforce the property access requirements across the whole of Council.

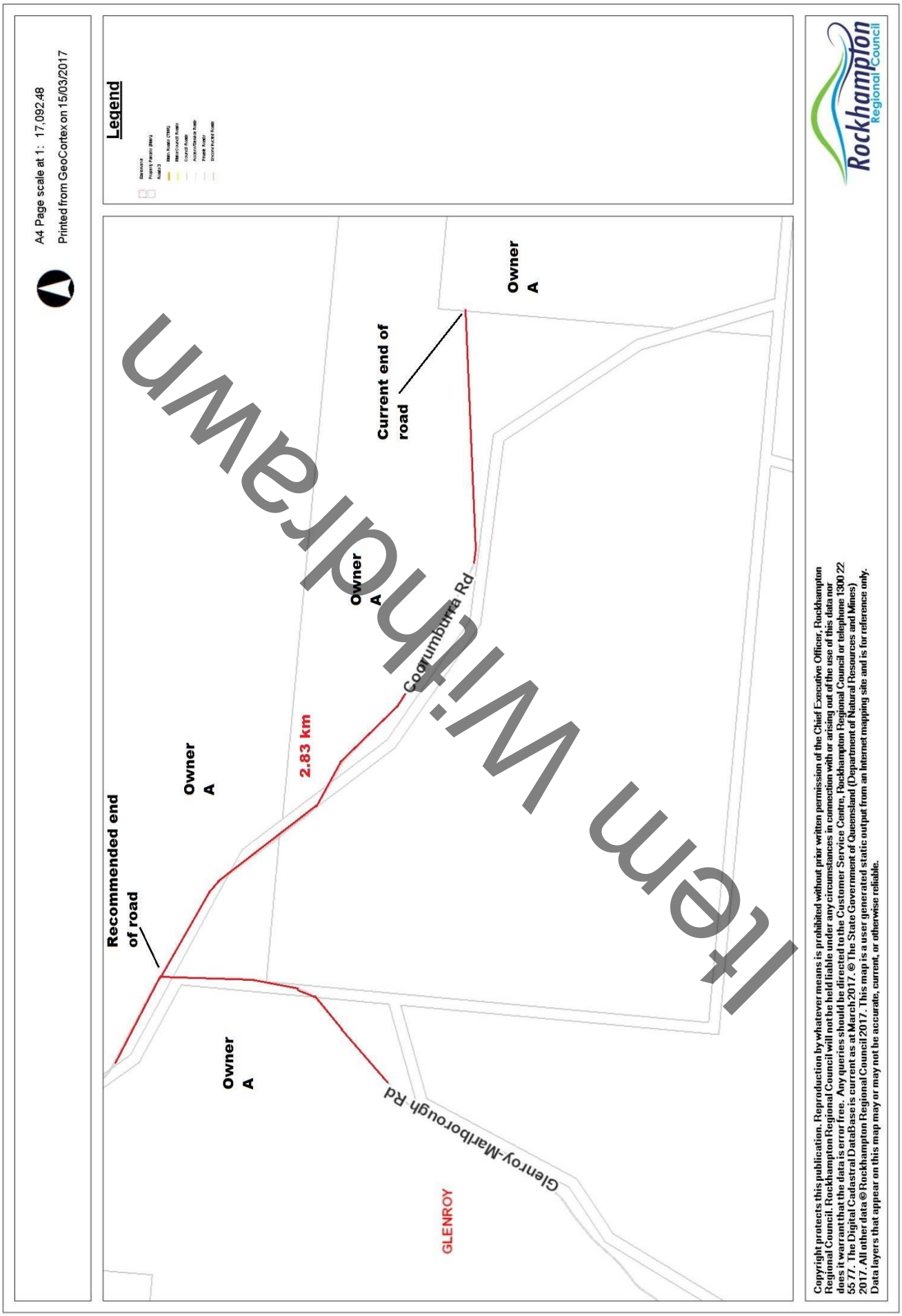
If a multiple properties are owned by one person or group, then Council would maintain the road to the closes junction of the property to the road.

ROAD ACCESS - MAINTENANCE OF ROADS

Roads that are maintained

Meeting Date: 16 May 2017

Attachment No: 1


A4 Page scale at 1: 17,092.48
Printed from GeoCortex on 15/03/2017
Legend
Rockhampton Regional Council
Recommended end of road
Owner A
2.83 km
Owner A
Current end of road
Owner A
Gogrumburra Rd
Glenroy-Marlborough Rd
GLENROY
Item Withdrawn
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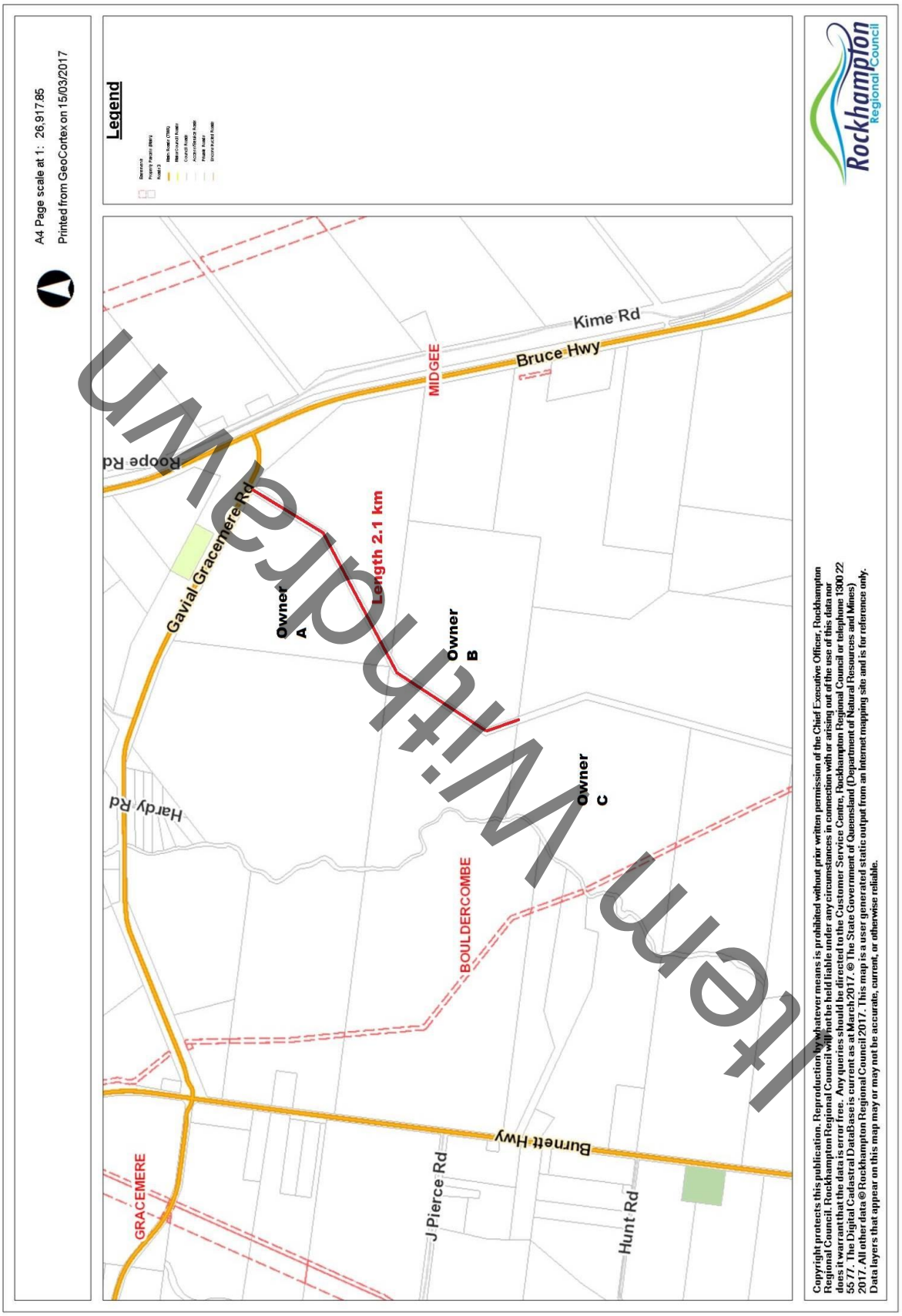
ROAD ACCESS - MAINTENANCE OF ROADS

Roads that are not maintained by Council

Meeting Date: 16 May 2017

Attachment No: 2



8.6 CIVIL OPERATIONS MONTHLY OPERATIONS REPORT - MAY 2017

File No:	**7028**
Attachments:	**1. Monthly Operations Report - Civil Operations 30 April 2017** **2. Works Program May - June 2017**
Authorising Officer:	**Peter Kofod - General Manager Regional Services**
Author:	**David Bremert - Manager Civil Operations**

SUMMARY

This report outlines Civil Operations Monthly Operations Report 30 April 2017 and also Works Program of planned projects for the months May to June 2017.

OFFICER'S RECOMMENDATION

THAT the Civil Operations Monthly Operations Report for May 2017 be received.

COMMENTARY

The Civil Operations Section submits a monthly report outlining the details of the programmed works for the upcoming month to assist Council's Executives and Councillors when they receive enquiries from their constituents in relation to road and associated road reserve works.

BACKGROUND

	April
Inspections Created	**304**
Inspections Completed	**221**
Work Orders Created	**285**
Work Orders Completed	**235**

BUDGET IMPLICATIONS

All works specified in this report are included in Council's current approved budget.

LEGISLATIVE CONTEXT

All works outlined in this report will be conducted in a manner to comply with all legislation.

STAFFING IMPLICATIONS

The works specified in this report have been programmed whilst taking into consideration current staffing levels.

RISK ASSESSMENT

Civil Operations Section's staff conduct a risk assessment of their job site before work commences to ensure they have identified assessed and controlled any possible hazards to ensure the safety of themselves and others.

CONCLUSION

This report outlines the planned works program and the customer requests received for Civil Operations, Urban and Rural Operations Capital Projects Report Financial Year to Date and are for the information of Councillors .

CIVIL OPERATIONS MONTHLY OPERATIONS REPORT - MAY 2017

Monthly Operations Report – Civil Operations 30 April 2017

Meeting Date: 16 May 2017

Attachment No: 1

MONTHLY OPERATIONS REPORT

CIVIL OPERATIONS SECTION

April 2017

VARIATIONS, ISSUES AND INNOVATIONS

Improvements / Deterioration in Levels of Services or Cost Drivers

Restoration of damage caused by Cyclone Marcia works packages nearly completed.

The Cyclone Marcia flood damage is completed except for Wyvilles Road, which is underway.

1. COMPLIANCE WITH CUSTOMER SERVICE REQUESTS

The response times for completing the predominant customer requests in the reporting period of April 2017 for *Civil Operations* are as below:

All Monthly Requests (Priority 3)
Civil Operations 'Traffic Light' report
April 2017

	Balance B/F	Completed In Current Mth	Current Month NEW Requests		TOTAL INCOMPLETE REQUESTS BALANCE	Work Orders Issued	Under Long Term Investigation	Avg W/O Issue Time (days) 12 months	Completion Standard (days)	Avg Completion Time (days) Current Mth	Avg Completion Time (days) 6 Months	Avg Completion Time (days) 12 Months	Avg Duration (days) 12 Months (complete and
			Received	Completed									
Abandoned Vehicles (INFRA USE ONLY NOT CS) (Asset)	17	1	1	0	17	1	0	25.95	90	0.00	41.60	41.65	61.32
Property Accesses	0	0	1	0	0	0	0	2.47	14	0.00	2.63	3.25	3.62
Rural Property Addressing (Existing)	0	0	0	0	0	0	0	0.00	28	0.00	7.13	9.47	9.38
Rural Property Addressing (New)	0	0	1	0	1	0	0	0.00	28	0.00	7.00	25.58	24.42
Bridge Vandalism (Asset)	0	0	0	0	0	0	0	0.00	14	0.00	0.00	0.00	0.00
Boat Ramps (Asset)	2	2	0	0	0	0	0	4.82	14	0.00	7.75	5.00	3.88
Bridge Maintenance (Asset)	0	0	2	1	1	1	0	9.42	60	1.00	8.33	8.83	8.69
Burn Off Advice - Reduction Burning	0	0	0	0	0	0	0	0.00	5	0.00	1.00	2.28	1.81
Bus Stops, Seating, Bus Shelters (Asset)	3	1	2	1	3	0	0	5.61	60	3.00	7.17	13.79	12.23
Drainage Miscellaneous (Asset)	31	10	20	6	34	5	0	6.82	30	7.17	13.73	26.38	27.77
Drainage Inundation (Flooding Issues) (Asset)	14	6	54	49	13	0	0	9.35	30	0.27	6.90	7.88	8.53
Drainage Kerb & Chanel (Asset)	9	1	5	0	13	1	0	8.93	30	0.00	9.41	11.38	15.29
Drainage Gully Pits (Asset)	3	2	1	0	2	0	0	5.61	30	0.00	41.29	25.84	26.07
Drainage Pipes and Culverts (Asset)	7	3	3	1	6	2	0	3.06	5	4.00	68.13	44.46	54.56
Drainage Vandalism (Asset)	0	0	0	0	0	0	0	0.00	30	0.00	0.00	0.00	0.00
Grading Unsealed Road Maintenance (Asset)	22	5	28	8	37	10	0	-0.08	60	16.00	200.21	212.36	184.85
Guard Rails (Asset)	0	0	3	1	2	2	0	7.69	30	4.00	8.00	17.00	9.57
Guide Post (Asset)	0	0	1	0	1	1	0	1.51	14	0.00	2.00	0.75	3.20
Illegal Dumping (INFRA ONLY-CSO USE NUILIT)(Asset)	0	0	0	0	0	0	0	46.68	14	0.00	6.67	6.48	6.08
Infrastructure - General Enquiry	4	0	80	78	6	0	0	9.36	2	0.49	2.64	4.66	4.68
Jetties/Wharves (Asset)	0	0	1	1	0	0	0	7.21	14	3.00	3.00	3.00	3.00
Miscellaneous Road Issues (Asset)	65	21	81	44	80	23	0	5.10	14	2.66	12.99	24.65	25.59
Footpath & Off-Road Cycle Ways Maint. (Asset)	32	10	20	9	33	2	0	6.85	30	6.33	16.05	16.10	16.90
Potholes - Sealed Roads (Asset)	35	22	41	25	28	11	0	1.59	5	3.64	5.97	14.45	14.69
Railway Crossings (Asset)	0	0	0	0	0	0	0	13.19	60	0.00	32.00	60.00	17.00
Rural Roadside Vegetation Slashing (Asset)	0	0	5	5	0	0	0	4.67	30	0.60	13.50	9.05	9.05
Signs & Lines (Already Existing) - (Asset)	35	7	22	7	42	10	0	6.01	10	7.86	8.46	10.36	13.99
Street Lighting - Other (Asset)	4	1	2	1	4	0	0	2.56	30	0.00	11.71	19.45	29.67
Street Lighting - Maintenance (Asset)	0	0	1	0	1	0	0	0.18	30	0.00	24.20	28.23	21.25
Street Sweeping - (Asset)	9	5	18	11	11	4	0	3.17	14	2.55	5.47	5.16	5.55
Traffic Lights (Asset)	5	0	4	1	8	3	0	1.47	14	2.00	1.00	4.43	11.32
Water Course Miscellaneous (Asset)	6	4	1	1	2	0	0	6.76	14	6.00	9.50	8.62	10.95
Water Course Vandalism (Asset)	0	0	0	0	0	0	0	5.01	14	0.00	0.00	3.00	3.00

Comments & Additional Information

Delivery statistics have improved and we will continue to strive to meet the stated timeframes.

Third flocon operating full time and is currently targeting potholes suburb by suburb.

Priority Escalation

This function allows the Actioning Officer and/or Responsible Officer of the Request to receive an e-mail message each time the Priority is escalated. These Priority escalations are notification / reminders to action the request and not necessarily to complete the request.

Estimated Duration Maintenance

The Estimated Duration Maintenance form displays the Estimated Duration Maintenance Timeframe (or Service Level) for Request Types ie. Minutes, Hours, Days, Weeks and Years.

2. COMPLIANCE WITH STATUTORY AND REGULATORY REQUIREMENTS INCLUDING SAFETY, RISK AND OTHER LEGISLATIVE MATTERS

Safety Statistics

The safety statistics for the reporting period are:

	THIRD QUARTER			FOURTH QUARTER
	January	**February**	**March**	**April**
Number of Lost Time Injuries	**1**	**1**	**0**	**TBA**
Number of Days Lost Due to Injury	**5**	**17**	**21**	**TBA**
Total Number of Incidents Reported	**3**	**3**	**4**	**TBA**
Number of Incomplete Hazard Inspections	**0**	**1**	**3**	**TBA**

Risk Management Summary

Example from Section Risk Register (excludes risks accepted/ALARP)

Potential Risk	Current Risk Rating	Future Control & Risk Treatment Plans	Due Date	% Completed	Comments
Budget overrun (Capital Projects) resulting in inability to complete project to specification impacting on end user/fit for purpose, seeing corporate/operational plan objectives not being addressed and Council's credibility with the community being impacted.	Very High 2	1. (2) Design Services to design high risk projects prior to drafting budget to provide design estimates. Apply cost indexation to design estimates to update estimate to proposed budget period. 2. (2) Coordinators Urban and Rural Operations to prepare estimates for new projects and the Manager Civil Operations to review estimates. 3. Project management framework including project plans to be implemented.	30/06/2017	60%	All high risk projects being scoped, designed and design estimates being checked by Coordinator and Works Engineers. All projects have project plans and estimates undertaken. This is being undertaken in most projects.

Potential Risk	Current Risk Rating	Future Control & Risk Treatment Plans	Due Date	% Completed	Comments
Increased input costs not factored in to budgets thus resulting in inability to fully complete stated work programs.	High 4			100%	Material costs and plant costs regularly updated in estimates.
Failure of operation asset condition (roads, drainage, etc) leading to: injury or death of public/staff; damage to property/equipment - resulting in legal outcomes, financial impacts and negative publicity for Council.	Very High 2	(1) Fine tune and review the ongoing Civil Operation asset condition inspections, which are conducted in conjunction with Council's Asset Management Unit for assets, facilities & major projects. (Note - Civil Operations inspect rural roads but the Asset Management Unit inspect urban roads)	28/06/2017	75%	Rural roads being regularly inspected. Use of RACAS inspection system to commence in September, 2014 Urban Roads have RACAS system driven over once a year. Meeting with asset management staff to coordinate repairs has been undertaken.
"Unacceptable response times on maintenance call outs resulting in low community confidence."	Moderate 5			100%	Callout escalates until a response from a Council officer is obtained. Additional resources being allocated to improve the response times.
Interruption to program of works resulting in non-achievement of corporate targets and reduction in service delivery. (This includes Capital Works program)	Moderate 5	Project management framework/tool to provide a robust and prioritised forward works program.	30/06/2017	80%	10 year Works Program completed.
Contamination of land and waterways from inappropriate work practices / procedures.	Moderate 6			100%	All fuel trailers have spill kits. In field maintenance and fuelling kept to the minimum possible to reduce risk of contamination by hydrocarbons.
Landslip and/or rocks on road along Pilbeam Drive at Mt Archer - poses a threat to safety of road users resulting in public liability.	High 5			100%	Regular inspections are done after significant rain events

Legislative Compliance & Standards

3. ACHIEVEMENT OF CAPITAL PROJECTS WITHIN ADOPTED BUDGET AND APPROVED TIMEFRAME

The following abbreviations have been used within the table below:

RWC	*Rural West Control*
UCC	*Urban Central Control*
UWC	*Urban West Control*

BDG	*Bridges*	*RC*	*Reconstruction*	*TM*	*Traffic Management*
BR	*Boat Ramps*	*RF*	*Road Furniture*	*AS*	*Asphalt Seal*
FP	*Footpaths*	*RS*	*Reseal*	*LA*	*Land Acquisition*
GR	*Gravel Re-sheet*	*SW*	*Stormwater*	*SL*	*Street Lighting*
NC	*New Construction*	*TL*	*Traffic Lights*		

End of Month General Ledger - (Inc Operating & Capital) - CIVIL OPERATIONS

As At End Of April

Report Run: 02-May-2017 12:36:15 Excludes Nat Accs: 2802,2914,2917,2924

	Adopted Budget	Revised Budget	Revised Budget (Pro Rata YTD)	EOM Commitments	YTD Actual	YTD Commit + Actual	Variance	On target
	$		$	$	$	$	%	83.3% of Year Gone
CAPITAL							Revised Budget Comparison	
CIVIL OPERATIONS								
CP412 - March 2017 Rural Flood Disaster								
2 - Expenses	0	0	0	0	1,925	1,925	0%	✗
3 - Transfer / Overhead Allocation	0	0	0	0	4,032	4,032	0%	✗
Total Unit: Civil Operations Management	***0***	***0***	***0***	***0***	***5,957***	***5,957***	**0%**	✗
CP414 - July 2016 Rural Disaster Event								
1 - Revenues	0	(800,000)	(666,667)	0	(177,872)	(177,872)	22%	✗
2 - Expenses	0	333,333	277,778	0	0	0	0%	✓
Total Unit: Civil Operations Management	***0***	***(466,667)***	***(388,889)***	***0***	***(177,872)***	***(177,872)***	**38%**	✗
CP415 - July 2016 Urban Disaster Event								
1 - Revenues	0	(445,000)	(370,833)	0	(43,569)	(43,569)	10%	✗
2 - Expenses	0	350,000	291,667	0	0	0	0%	✓
Total Unit: Civil Operations Management	***0***	***(95,000)***	***(79,167)***	***0***	***(43,569)***	***(43,569)***	**46%**	✗
CP416 - 2015 RURAL DISASTER RECONSTRUCTION								
1 - Revenues	(1,378,157)	(3,200,000)	(2,666,667)	0	(1,365,693)	(1,365,693)	43%	✗
2 - Expenses	1,766,081	3,243,000	2,702,500	494,566	2,423,710	2,918,276	90%	✗
3 - Transfer / Overhead Allocation	0	0	0	0	61,076	61,076	0%	✗
Total Unit: Civil Operations Management	***387,924***	***43,000***	***35,833***	***494,566***	***1,119,094***	***1,613,660***	**3753%**	✗
CP417 - 2015 URBAN DISASTER RECONSTRUCTION								
1 - Revenues	(7,442,548)	(10,215,218)	(8,512,682)	0	(6,924,146)	(6,924,146)	68%	✗
2 - Expenses	10,193,174	12,459,748	10,383,123	729,560	12,449,325	13,178,885	106%	✗
3 - Transfer / Overhead Allocation	0	0	0	0	343,387	343,387	0%	✗
Total Unit: Civil Operations Management	***2,750,626***	***2,244,530***	***1,870,441***	***729,560***	***5,868,566***	***6,598,126***	**294%**	✗
CP420 - CAPITAL CONTROL REVENUE CIVIL OPERATIONS								
1 - Revenues	(6,332,129)	(7,201,638)	(6,001,365)	0	(15,963,245)	(15,963,245)	222%	✓
2 - Expenses	0	0	0	0	580	580	0%	✗
Total Unit: Civil Operations Management	***(6,332,129)***	***(7,201,638)***	***(6,001,365)***	***0***	***(15,962,666)***	***(15,962,666)***	**222%**	✓
CP421 - CAPITAL CONTROL RURAL GRAVEL CRUSH								
2 - Expenses	0	0	0	5,249	216,462	221,711	0%	✗
3 - Transfer / Overhead Allocation	0	0	0	0	300,811	300,811	0%	✗
Total Unit: Civil Operations Management	***0***	***0***	***0***	***5,249***	***517,273***	***522,522***	**0%**	✗
CP422 - CAPITAL CONTROL RURAL OPERATIONS WEST								
2 - Expenses	4,591,800	4,723,636	3,936,364	279,900	2,322,928	2,602,828	55%	✓
3 - Transfer / Overhead Allocation	0	0	0	0	1,247,994	1,247,994	0%	✗
Total Unit: Civil Operations Management	***4,591,800***	***4,723,636***	***3,936,364***	***279,900***	***3,570,923***	***3,850,823***	**82%**	✓
CP427 - CAPITAL CONTROL CENTRAL URBAN OPERATIONS								
1 - Revenues	0	0	0	0	29,540	29,540	0%	✗
2 - Expenses	14,292,800	17,527,303	14,606,086	15,703,922	12,052,918	27,756,840	158%	✗
3 - Transfer / Overhead Allocation	0	0	0	0	2,437,623	2,437,623	0%	✗
Total Unit: Civil Operations Management	***14,292,800***	***17,527,303***	***14,606,086***	***15,703,922***	***14,520,081***	***30,224,003***	**172%**	✗
CP428 - CAPITAL CONTROL WEST URBAN OPERATIONS								
2 - Expenses	1,607,700	1,400,719	1,167,266	80,624	852,454	933,078	67%	✓
3 - Transfer / Overhead Allocation	0	0	0	0	235,663	235,663	0%	✗
Total Unit: Civil Operations Management	***1,607,700***	***1,400,719***	***1,167,266***	***80,624***	***1,088,117***	***1,168,741***	**83%**	✗
Total Capital:	**17,298,721**	**18,175,884**	**15,146,570**	**17,293,821**	**10,505,904**	**27,799,725**	**153%**	✗
Grand Total:	**45,653,654**	**50,240,394**	**41,866,995**	**17,832,394**	**37,306,233**	**55,138,627**	**110%**	✗

Project Description	Estimated/ Actual Start Date	Estimated/ Actual Completion Date	Status 14 April	Revised Budget 1	Total Committals	Estimated Final Cost
CP427 CAPITAL CONTROL CENTRAL URBAN OPERATIONS						
UCC-ALL-Preproject planning and design				204,000	0	50,000
UCC-AS-Annual Reseal Program				2,345,661	0	2,078,538
-UCC-AS-Archer Street-Agnes Street to Quarry Street					-338	
-UCC-AS-Berserker Street-Kerrigan Street to Stewart Street					119,740	120,000
-UCC-AS-Dean Street-Talbort Street to Robinson Street					52,099	
-UCC-AS-Frenchville Road-Dean Street to Watt Street				0	81,793	81,793
-UCC-AS-Quarry Street-Little Kellow Street to Archer Street				0	65,330	65,330
-UCC-AS-Royal Street-Quay Street to East Street					1,736	
-UCC-AS-Scott Street-Richardson Road to Lutton Street					34,821	
-UCC-AS-Thozet Road-Wigginton Street to Zervos Avenue				0	178	
-UCC-AS-Upper Dawson Rd-Cemetery Car Park to Church Street					-180	
UCC-BDG-Bridge Rehabilitation				102,000	4,818	100,000
UCC-Bus Stop Program	02/02/2017	30/04/2017	50 % Completed	161,200	71,018	160,000
UCC-Carpark 4-Cambridge Street Rockhampton City			100% complete	0	3,943	3,950
UCC-Carpark-Exhibition Road					-6	
UCC-FP-Agnes St - Penlington St to Ward Street			100% complete	13,000	46,814	46,900
UCC-FP-Agnes St - Range College to Penlington Street				7,000	177	
UCC-FP-Archer St-Alma St-Denison Street				20,400	27,767	27,643
UCC-FP-Barrett St - Farm St to MacKinlay Street				30,000	9,094	9,100
UCC-FP-Barrett St - MacKinlay St to Richardson Road				0	5,041	5,041

Project Description	Estimated/ Actual Start Date	Estimated/ Actual Completion Date	Status 14 April	Revised Budget 1	Total Committals	Estimated Final Cost
UCC-FP-Berserker St-Charles St-Rodboro St - Division 3					39,907	
UCC-FP-Bolsover St-Stanley St-Francis Street				84,700	0	0
UCC-FP-Carlton St-Orr Av-McLaughlin Street				102,000	0	0
UCC-FP-Dean Street (near Frenchville Rd) - Division 2					13,822	
UCC-FP-Denham St Ext (Agnes-Ann)				125,800	25	0
UCC-FP-Derby St-Gladstone Rd-Canning Street	16/08/2016	20/09/2016	100% complete	50,000	84,737	85,000
UCC-FP-Hall St - Lion Creek Rd to Huish Drive				0	177	
UCC-FP-Haynes St (Richardson Rd-Harriette)				89,300	74,802	89,300
UCC-FP-High St (Eldon-Access to Salvation Army Property)				37,700	0	
UCC-FP-Kerrigan Roundabout - Underpass					24,493	50,000
UCC-FP-Moores Creek Rd-Norman Grdns Cycle path	13/02/2017	19/05/2017	80% Completed	178,500	126,393	178,500
UCC-FP-Norman Rd-Norman Grdns Cycle path		19/05/2017	80% Completed	146,500	21,518	146,500
UCC-FP-North St - Campbell St to Eventide					0	20,000
UCC-FP-OShanesy St-Thozet Rd to first cul de sac			100% complete	0	1,544	1,544
UCC-FP-Penlington St (Agnes cross connection)	08/07/2016	05/08/2016	100% complete	60,000	1,570	2,000
UCC-FP-Pilbeam Walkway Stage 1 Mt Archer	01/02/2017	30/06/2017	40% Completed	0	869,895	1,500,000
UCC-FP-Reconstruction Footpaths-To be determined from Asset				305,000	169,534	270,000
UCC-FP-Richardson Rd-Norman Rd-Bruigom Street				183,600	2,114	0
UCC-FP-Talford Street_Albert Street to North Street				235,000	15,518	235,000
UCC-FP-Thozet Road-Dempsey Street to				162,000	0	0
UCC-FP-Thozet Road-Lilley Ave to Zervos Avenue				180,000	1,117	0

Project Description	Estimated/ Actual Start Date	Estimated/ Actual Completion Date	Status 14 April	Revised Budget 1	Total Committals	Estimated Final Cost
UCC-FP-Upper Dawson Road-King Street	06/05/2016	11/08/2016	100% complete	50,000	210,485	210,500
UCC-FP-Yaamba Rd - Mason Ave to Olive Street				0	90	
UCC-LA-Land acquisition costs associated with projects				233,000	-104,775	125,000
UCC-MC-Thozet Cr & Frenchmans Ck Debris community resil				100,000	166	0
UCC-MISC-Asphalt Repairs				0	206,985	
UCC-Miscellaneous Small Plant Purchases				0	10,209	10,209
UCC-Muellerville Walk Pathway W4Q					269	
UCC-NC- Jones St -Brosnan Cr to Norman Road			Design	0	13,852	5,101
UCC-NC-Ballard St-Totteridge St to	18/07/2016	11/10/2016	100% complete	370,000	291,350	292,000
UCC-NC-Canning St-Cambridge St to Derby St cycle path				0	3,922	1,103
UCC-NC-Denison St-Denham St Kerbing - Blackspot	21/02/2017	21/04/2017	40% Completed	248,200	147,298	248,200
UCC-NC-Denison St-Derby St Kerbing - Blackspot	02/02/2017	21/04/2017	40% Completed	454,000	211,754	454,000
UCC-NC-Denison St-William St Kerbing - Blackspot	01/11/2016	28/04/2017	100% complete	246,600	377,458	370,000
UCC-NC-North Rockhampton Flood Levee	01/07/2016	05/10/2016	100% complete	100,000	270,979	255,000
UCC-NC-North St-Victoria Pde to Campbell St cycle path				0	3,346	1,103
UCC-NC-Northside Boatramp Carpark			Design	0	32,206	8,000
UCC-NC-Pilbeam Drive Carpark Ch 0.2km				0	1,358	1,400
UCC-NC-Ski Gardens Boatramp Carpark			Design	0	14,416	15,000
UCC-NC-Southside Boatramp Carpark			Design	0	3,624	5,000
UCC-NorthRock Boat Ramp Carpark & Walkway W4Q					8,676	
UCC-Pavement rehab CBD rds near Fitzroy Street				200,000	0	200,000

Project Description	Estimated/ Actual Start Date	Estimated/ Actual Completion Date	Status 14 April	Revised Budget 1	Total Committals	Estimated Final Cost
UCC-PM-RPMs on 60 kmh roads			100% complete	0	15,359	15,359
UCC-RC- Mason Ave-Hotham Cl to Norman Road			Design	0	17,264	5,517
UCC-RC-Berserker St-Simpson St-Robinson St	15/12/2016	27/01/2017	100% complete	200,000	9,271	200,000
UCC-RC-Bertram Street _Main St to Thomasson St	06/09/2016	31/03/2017	80% Completed	900,000	612,163	900,000
UCC-RC-Bevis St-Wandal Rd to Cavell Street				0	622	
UCC-RC-Birdwood Street-Dibden Street to Wandal Road					-323,239	
UCC-RC-Bolsover St - Stanley St intersection improvement			100% complete	0	2,511	2,511
UCC-RC-Boundary Rd_Norman Rd Intersection					802	
UCC-RC-Campbell St-Albert St-North Street	20/03/2017	05/07/2017	Started	734,400	100,929	1,200,000
UCC-RC-Campbell Street-Archer Street	05/04/2016	30/08/2016	100% complete	340,000	409,645	410,000
UCC-RC-Campbell Street-North Street to Albert Street				0	39,515	37,000
UCC-RC-Caroline St - Davies St intersection improvements			100% complete	0	611	611
UCC-RC-Design costs for future projects				100,000	0	100,000
UCC-RC-Dibden Street-Oakley Street to Birdwood Street			100% complete	0	-550,607	2,000
UCC-RC-Dooley St Depot road upgrade				200,000	13,774	100,000
UCC-RC-Dorly St (No39 to Rifle Range access)	20/09/2016	14/10/2016	100% complete	60,000	30,569	60,000
UCC-RC-Eldon Street-High St to Clifton St					-15	
UCC-RC-Farm St-Alexandra St (Maloney-Hinchliff-Hollingsw			Design	0	17,334	15,927
UCC-RC-Francis Street-Quay Street	15/06/2016	15/08/2016	100% complete	70,000	132,928	133,000
UCC-RC-Glenmore Road-(Main St-NC Railway)					584	
UCC-RC-Gregory Street-Johnson Street to Sturt Street					-10	

Project Description	Estimated/ Actual Start Date	Estimated/ Actual Completion Date	Status 14 April	Revised Budget 1	Total Committals	Estimated Final Cost
UCC-RC-Hindley Street-Elphinstone Street				185,000	3,871	0
UCC-RC-Maloney Street-Quinn Street	09/08/2016	28/10/2016	100% complete	200,000	283,799	284,000
UCC-RC-Murray St - Derby St intersection improvements			100% complete	0	5,206	5,206
UCC-RC-North Street-Canning Street to Robert Street	26/07/2016	10/03/2017	100% Completed	1,540,000	1,410,267	1,420,000
UCC-RC-Oakley St-Wandal Rd to Dibden Street			98% completed	15,000	-215,824	15,000
UCC-RC-Pershing Street-Morgan Street to Dibden Street				0	-163,822	
UCC-RC-Rodboro Street-Dean Street to	28/06/2016	05/08/2016	100% complete	133,000	192,604	193,000
UCC-RC-Sharples Street (Berserker Street to Skardon Street)	01/07/2016	30/01/2017	100% complete	1,160,000	1,275,507	1,275,000
UCC-RC-Stamford Street-Dean Street to Bawden Street				0	16	
UCC-RC-Thozet Rd-Lakes Creek Rd-Elphinstone Street				400,000	0	0
UCC-RC-Unnamed Laneway-Off Canning Street				40,800	2,989	40,800
UCC-RC-Upper Dawson Rd-Nathan-Wakefield				350,000	12,333	12,300
UCC-RF-Replace guardrail at various locations					-16,626	
UCC-RS-Road Safety Minor Works Program				170,000	143,206	170,000
UCC-SLS-Agnew Avenue-End to End					9,437	
UCC-SLS-Alexandra Street-306-308 Alexandra Street to Joh					40,399	
UCC-SLS-Allenby Street-Lion Creek Road to Morgan Street					3,188	
UCC-SLS-Baker Street-Elphinstone Street to Dawbarn Street					5,477	
UCC-SLS-Bank Street-Hadgraft Street to Thompson Street					4,153	
UCC-SLS-Birch Street-Glenmore Road to End					2,772	
UCC-SLS-Bowen Street-Nathan Street to Blackall Street					4,503	

Project Description	Estimated/ Actual Start Date	Estimated/ Actual Completion Date	Status 14 April	Revised Budget 1	Total Committals	Estimated Final Cost
UCC-SLS-Braddy Street-Richardson Road to Agnew Avenue					1,573	
UCC-SLS-Bremner Street-Mason Street to Elphinston Street					8,013	
UCC-SLS-Caxton Street-Eton Street to Harrow Street					2,152	
UCC-SLS-Dawbarn Street-Grimley Street to Thozet Road					3,880	
UCC-SLS-Dawbarn Street-Horton Street to End					5,364	
UCC-SLS-Denning Street-2 Doyle Street to 35/37 Denning Street					4,691	
UCC-SLS-Dinsdale Street-Moores Creek Road to End					1,678	
UCC-SLS-Dunbar Street-Grimley Street to Thozet Road					4,305	
UCC-SLS-Farrell Street-Main Street to Tung Yeen Street					4,305	
UCC-SLS-Francis Street-Quay Street to Bolsover Street					13,350	
UCC-SLS-Grimley Street-Elphinstone Street to Dawbarn Street					5,596	
UCC-SLS-Harrow Street-Caxton Street to Denham Street Ext					8,292	
UCC-SLS-Harrow Street-Caxton Street to North Street					11,010	
UCC-SLS-Harrow Street-Denham Street Ext to End				0	1,549	1,549
UCC-SLS-High Street-Georgeson Street to End					3,394	
UCC-SLS-Hinton Street-14/16 Hinton Street to O'Shanesy Street					9,503	
UCC-SLS-Hinton Street-Thozet Road to 14/16 Hinton Street					3,808	
UCC-SLS-Housden Street-Berserker Street to End					9,106	
UCC-SLS-Lloyd Street-Main Street to Tung Yeen Street					4,597	
UCC-SLS-Lucas Street-Musgrave Street to End					8,554	
UCC-SLS-MacFarlane Street-Musgrave Street to End					1,325	

Project Description	Estimated/ Actual Start Date	Estimated/ Actual Completion Date	Status 14 April	Revised Budget 1	Total Committals	Estimated Final Cost
UCC-SLS-Mary Street-Penlington Street to Denham Street					9,931	
UCC-SLS-Mason Street-Thozet Road to Shephard Street					5,795	
UCC-SLS-Maxwell Street-Barrett Street to 37/39 Maxwell Street					1,214	
UCC-SLS-Murphy Street-Kerrigan Street to Beasly Street					6,209	
UCC-SLS-O'Shanesy Street-Kavanagh Crescent to 22/24 O'Shanesy Street					5,215	
UCC-SLS-Painswick Street-McKean Street to Edwards Street					3,394	
UCC-SLS-Part Street-Charles Street to Burnett Street					4,691	
UCC-SLS-Pennycuick Street-Littler Street to Gardener Street					3,270	
UCC-SLS-Rose Street-Stenhouse Street to Rhodes Street					4,456	
UCC-SLS-Rowe Street-Moores Creek Road to 3 Rowe Street					2,544	
UCC-SLS-Royes Cresent-Rowe Street to Cul-de-sac					2,028	
UCC-SLS-Short Street-Lower Dawson Road to Upper Dawson Road					2,368	
UCC-SLS-Talford Street-Derby Street to Stanley Street					11,294	
UCC-SLS-Thirkettle Avenue-289/291 to End					5,574	
UCC-SLS-Thurston Street-Fitzroy Street to Archer Street					5,524	
UCC-SL-Street Lighting Improvement Program				51,000	14,030	46,750
UCC-SLS-Verney Street-Schultz Street to Eton Street					5,174	
UCC-SLS-Weinholt Street-West Street to Talford Street					4,087	
UCC-SW-203 Peter Street Drainage			Design	0	217	5,000
UCC-SW-Alexander Street Drainage				40,000	5,339	0
UCC-SW-Archer St main drain reline and repair				200,000	18,224	30,000

Project Description	Estimated/ Actual Start Date	Estimated/ Actual Completion Date	Status 14 April	Revised Budget 1	Total Committals	Estimated Final Cost
UCC-SW-Bawden St extension pipe past No10				25,000	8,301	0
UCC-SW-Canoona Rd Drainage - Opposite #91				0	203	
UCC-SW-Caribbea Estate Stg 2				180,000	6,338	5,810
UCC-SW-Cheney St Drainage Upgrade-Contribution to Develop				800,000	0	0
UCC-SW-Dean St Drainage_Rodboro St to Peter Street	06/09/2016	30/11/2016	100% complete	500,000	33,104	36,300
UCC-SW-Dean Street-Rodboro Street				25,000	15,279	25,000
UCC-SW-Harrow Street-Number 2/4	01/06/2016	21/10/2016	100% complete	250,000	605,520	605,500
UCC-SW-Harrow Street-Number 60			100% complete	0	2,448	2,448
UCC-SW-McLeod Park DrainageSchmStge2A				1,500,000	0	0
UCC-SW-McLeod Park Open Drain			Design		3,821	5,000
UCC-SW-Oakley Street-Dibden Street to Jardine Park Stage					0	
UCC-SW-Oakley Street-Dibden Street to Jardine Park Stage 1			100% complete	20,000	1,264,606	8,800
UCC-SW-Park Street Stage 2B_Alick Street	01/07/2016	30/08/2016	100% complete	200,000	254,916	255,000
UCC-SW-Park Street Stage 3-Glenmore Road	01/09/2016	31/01/2017	100% complete	727,691	790,089	788,000
UCC-SW-Park Street SW Stage 3B-Robison St to Haynes Street				0	490,992	490,000
UCC-SW-Quay Lane_North St to Albert Street			Design		7,503	5,000
UCC-SW-Replace Stormwater Inlets			60% completed	56,100	35,625	56,100
UCC-SW-Road Safety Stormwater grate upgrades					0	
UCC-SW-Simpson Street Drainage - Hearn St to Moores Creek	12/08/2016	05/05/2017	95% Completed	290,310	2,864,838	2,950,000
UCC-SW-Stack St Stage 2				255,000	8,176	3,209

Project Description	Estimated/ Actual Start Date	Estimated/ Actual Completion Date	Status 14 April	Revised Budget 1	Total Committals	Estimated Final Cost
UCC-SW-Venables Street Drainage				60,000	0	0
UCC-SW-Western St (Meade)				110,000	4,817	0
UCC-TL-Misc Traffic Light Upgrades- (PAPL to Radio Link)				153,000	0	
UCC-TL-Traffic Signal full upgrade - Elphinstone St-Berserker			100% complete	0	2,193	2,193
UCC-TL-Traffic Signal full upgrade - Feez St-St Anthonys entr			100% complete	0	1,209	1,209
UCC-TL-Traffic Signal upgrade - Bolsover St and Denham Street				0	30,350	38,000
UCC-TL-Traffic Signal upgrade - Bolsover St and William Street				0	28,490	38,000
UCC-TL-Traffic Signal upgrade - Dean St-Honour St $21100			100% complete	0	3,651	3,650
UCC-TL-Traffic Signal upgrade - East St and William Street				0	30,163	39,000
UCC-TL-Traffic Signal upgrade - High St at Stockland ent		12/02/2017	100% complete	0	41,184	40,500
UCC-TM-Campbell St - North St Intersection	01/02/2017	01/06/2017	5% Completed	0	179,497	200,000
				19,066,462	**14,158,080**	**19,807,005**

Project Description	Estimated/ Actual Start Date	Estimated/ Actual Completion Date	Status 14 April	Revised Budget 1	Total Committals	Estimated Final Cost
CP428 - CAPITAL CONTROL WEST URBAN OPERATIONS						
UWC-Annual Reseal Program				250,000	1,102	250,000
-UWC-AS-O'Shanesy Street-Capricorn Hwy to 17 Oshanesy Street				0	2,787	
-UWC-SLS-O'Shanesy Street-1 O'Shanesy St to 17 O'Shanesy Street				0	-3,888	
UWC-Low cost sealing of minor roads				103,000	0	
-UWC-SS-Gordon St (Black to end)				8,200	0	8,200
UWC-FP-Burnett Highway (between 52538 - 52570 Burn - Division 4				0	42,065	70,000
UWC-FP-Gordon St - East St to Hall Street				0	868	
UWC-FP-Ranger St (Barry-Fisher)				130,000	38,690	130,000
UWC-FP-Russell St (Barry to Fisher)				70,000	59,316	70,000
UWC-NC-Baldwin St Mt Morgan 190m		01/03/2017	100% complete	0	39,996	40,000
UWC-NC-Cifton St Low cost sealing		11/11/2016	100% complete	150,000	130,954	131,000
UWC-NC-Lister St Low cost sealing	30/01/2017	16/02/2017	100% complete	90,000	112,987	90,000
UWC-NC-Macks Esp Mt Morgan 190m		01/03/2017	100% complete	0	31,207	30,000
UWC-NC-Middle Rd Stewart intersection	13/02/2017	22/02/2017	100% complete	74,200	64,555	74,200
UWC-NC-Middle Rd-Capricorn-Macquarie Stage 3				350,000	1,267	350,000
UWC-NC-Middle Road-Capricorn Street to Macquarie Street				0	8,300	8,300
UWC-NC-School St South Mt Morgan 270m		01/03/2017	100% complete	0	42,646	32,000
UWC-NC-Stewart Street - Somerset Road to Boongary Road			100% complete	0	7,654	7,654
UWC-NC-West St (Huff to East)		11/11/2016	100% complete	45,000	40,133	40,000
UWC-NC-West St Mt Morgan-Dee-Gordon seal				100,000	88,481	100,000

Project Description	Estimated/ Actual Start Date	Estimated/ Actual Completion Date	Status 14 April	Revised Budget 1	Total Committals	Estimated Final Cost
UWC-RC-Allan Rd Upgrade-Conway Ct-Lucas Street	15/02/2017	23/02/2017	100% complete	120,000	106,162	120,000
UWC-RC-Capricorn St-Gracemere Creek extend to Middle Road			Design	0	34,784	34,700
UWC-RC-Macquarie St-Somerset Rd to Middle Road			Design	0	81,029	63,000
UWC-SL-Johnson Road				86,000	10,548	87,000
UWC-SL-Streetlighting Improvement Program				81,600	9,047	81,600
UWC-SW-Brooks St Drainage FSC Plan 387	15/08/2016	15/11/2016		100,000	139,716	140,000
UWC-SW-Replace Stormwater Inlets				35,700	0	35,700
UWC-TM-Ranger St - Breakspear St to Lawrie Street				0	18,451	17,772
				1,793,700	**1,108,856**	**2,011,126**

Project Description	Estimated/ Actual Start Date	Estimated/ Actual Completion Date	Status 14 April	Revised Budget 1	Total Committals	Estimated Final Cost
CP422 CAPITAL CONTROL RURAL OPERATIONS WEST						
RWC-Annual Reseal Program		09/03/2017		306,000	0	306,000
RWC-NC-Renewal of Unsealed Road Gravel Program A	01/07/2016	30/06/2017	80% complete	1,700,000	0	412,268
-RWC-GR-Aremby Rd Bouldercombe Ch 0.0-0.35 2.2-2.4 3.7-4.		19/10/2016	100% complete	0	50,784	50,784
-RWC-GR-Bishop Rd Garnant Ch 2.95-3.39 3.47-3.58 5.25-5.5					-1	
-RWC-GR-Black Gin Creek Rd Alton Downs Ch 1.27 - 2.4km		01/09/2016	100% complete	0	17,269	17,269
-RWC-GR-Boulder Creek Rd Boulder Ck Ch 2.00-2.2 km		28/09/2016	100% complete	0	5,889	5,889
-RWC-GR-Boulder Creek Rd Boulder Ck Ch 4.50-4.90 km		14/10/2016	100% complete	0	23,743	23,743
-RWC-GR-Boulder Creek Rd Boulder Creek Ch 0.2-1.0 km		21/09/2016	100% complete	0	17,809	17,809
-RWC-GR-Calmorin Rd Ridgelands Ch 0.49-1.58km		15/11/2016	100% complete	0	28,472	28,472
-RWC-GR-Craigilee Rd Morinish Ch 0.0-0.03 0.1-0.5 1.15-2.		27/10/2016	100% complete	0	36,662	36,662
-RWC-GR-Culliungal Rd Baree Ch 0.0 - 0.7 km		13/09/2016	100% complete	0	11,360	11,360
-RWC-GR-Cunningham Rd Nine Mile Ch 1.215 - 1.515 km		19/08/2016	100% complete	0	3,987	3,987
-RWC-GR-Ellrott Rd Morinish Ch 1.2-2.2 2.6-3.0 4.4-5.1 km		06/08/2016	100% complete	0	47,007	47,007
-RWC-GR-Fernvale Road Nine Mile Creek Ch 0.4-0.55 1.4-1.5		05/12/2016	100% complete	0	13,140	13,140
-RWC-GR-Glenroy - Marlborough Rd Glenroy Ch TBA		25/11/2016	100% complete	0	228,968	228,968
-RWC-GR-Glenroy Rd Morinish Ch 22.45 - 22.75 km		16/09/2016	100% complete	0	12,767	12,767
-RWC-GR-Green Rd Alton Downs Ch 0.00 - 0.25 km		01/02/2017	100% complete		2,594	5,000
-RWC-GR-Harding Rd Dalma Ch 10.52 - 12.5 km					-511	
-RWC-GR-Hopkins Rd Kalapa Ch 0.5 - 0.67 1.367 - 1.4km		20/09/2016	100% complete	0	10,312	10,312
-RWC-GR-Hume Rd Kabra Ch 0.00 - 0.4 km		28/07/2016	100% complete	0	20,442	20,442

Project Description	Estimated/ Actual Start Date	Estimated/ Actual Completion Date	Status 14 April	Revised Budget 1	Total Committals	Estimated Final Cost
-RWC-GR-Klaproth Rd Alton Downs Ch 0.00 - 0.2 km		19/01/2017	100% complete	0	4,653	5,000
-RWC-GR-Leydens Hill Road Leydens Hill Ch 0.00 - 0.70 km					16,878	
-RWC-GR-Lion Mountain Rd Nine Mile Ch 2.47-3.345 5.26-5.8		22/08/2016	100% complete	0	50,455	50,455
-RWC-GR-McCamley Rd Bajool Ch 0.25 - 0.67 km					-624	
-RWC-GR-McNamara Rd Alton Downs Ch 0.0 - 0.81 km		18/01/2017	100% complete	0	20,447	20,000
-RWC-GR-Meteor Park Rd Kabra Ch TBA		08/02/2017	100% complete		13,789	13,055
-RWC-GR-Mogilno Rd Midge Ch 0.2-0.6km		06/10/2016	100% complete	0	13,348	13,348
-RWC-GR-Murphy Rd Kabra Ch 2.20 - 2.50 km		03/08/2016	100% complete	0	7,785	7,785
-RWC-GR-Pocock Rd Stanwell Ch TBA km		21/07/2016	100% complete	0	21,023	21,023
-RWC-GR-R Pierce Rd Port Curtis Ch 0.02-0.82 km		07/09/2016	100% complete	0	23,550	23,550
-RWC-GR-Reid Rd Alton Downs Ch 4.11 - 5.37km		01/09/2016	100% complete	0	20,124	20,124
-RWC-GR-Riverslea Rd Gogango Ch 1.87-2.37 2.37-2.87 2.9-3		20/07/2016	100% complete	0	86,617	86,617
-RWC-GR-Rosewood Rd Morinish Ch 23.3-24.17 25.86-25.9 30.		13/12/2016	100% complete	0	41,779	41,779
-RWC-GR-Rosewood Rd Morinish Ch 53.0-54.9 55.2-56.2 56.6-		20/10/2016	100% complete	0	86,746	86,746
-RWC-GR-Sandy Creek Rd Bushley Ch 3.0-4.0km					26,815	
-RWC-GR-Sheehan Rd Alton Downs Ch 0.00 - 1.00 km		06/02/2017	100% complete		18,184	20,000
-RWC-GR-Sheldrake Rd Alton Downs Ch 0.09 - 1.09 km		04/07/2016	100% complete	0	11,466	11,466
-RWC-GR-South Yaamba Rd Alton Downs Ch 2.87-3.65 3.76-4.4		28/10/2016	100% complete	0	41,873	41,873
-RWC-GR-Spring Creek Rd Westwood Ch 0.10-0.20 0.30-0.51 k					5,705	
-RWC-GR-Stracey Rd Nine Mile Ch 1.25 - 2.25 km		17/08/2016	100% complete	0	35,444	35,444
-RWC-GR-Tucker Rd Alton Downs Ch 0-1.2 1.96-2.32 2.6-8.41		30/08/2016	100% complete	0	40,421	40,421

Project Description	Estimated/ Actual Start Date	Estimated/ Actual Completion Date	Status 14 April	Revised Budget 1	Total Committals	Estimated Final Cost
-RWC-GR-Warren Rd Stanwell Ch 0.5-0.67 0.87-1.0 1.4-2.0 k		12/09/2016	100% complete	0	22,702	22,702
-RWC-GR-Waynes Lane Bouldercombe Ch 0.0 - 0.53km		31/08/2016	100% complete	0	9,066	9,066
-RWC-GR-Wedel Rd Alton Downs Ch 0.00 - 1.00 km		10/02/2017	100% complete		18,897	20,000
-RWC-GR-Woodford Rd Alton Downs Ch 0.08 - 1.28 km		31/01/2017	100% complete	0	19,535	22,000
RWC-BDG-Calmorin Road-Hansens Bridge Replacement					1,608	
RWC-Inslay Avenue-Bouldercombe-Ch 0-0.67			100% complete	0	1,068	0
RWC-MC-Bishop Rd Louisa Creek	03/03/2017			360,000	174,740	220,000
RWC-MC-South Yaamba Rd Sandy Creek				50,000	166,472	150,000
RWC-NC-Clem Clark Road		17/08/2016	100% complete	40,000	14,921	14,921
RWC-NC-Isabella - Albert St Stanwell		19/04/2017		0	2,133	171,400
RWC-NC-Malchi Nine Mile Road-Ch 3.3 to Ch 4.7				0	-430	
RWC-NC-Mount Morgan Scenic Lookout				0	43,059	10,180
RWC-NC-Nine Mile Rd - Fogarty Rd Intersection			100% complete	0	19,017	0
RWC-RC-Gracemere Depot road upgrade	02/03/2017	24/02/2017	100% complete	100,000	157,680	150,000
RWC-RC-Malchi-Nine Mile Rd Ch 25.7 to Ch 28.2	28/11/2016	31/01/2017	100% complete	550,000	414,454	420,000
RWC-RC-Nine Mile Rd floodway Ch7.85-10.68		30/01/2017	100% complete	790,000	760,901	800,000
RWC-RC-Nine Mile Road Ch8.37-10.7 Local Government Grant		07/11/2017			582	400,000
RWC-RC-San Jose Road Ch1.10-2.60					7,737	
RWC-RC-Sheldrake Rd Works	10/03/2017			100,000	0	50,000
RWC-RC-Slaughterhouse Rd - Ch0 to 0.8 bit seal		05/06/2017		0	1,663	200,000
RWC-RC-Stanwell Waroula Rd-Ch0.24-2.24 Local Government Grant		22/05/2017			6,136	586,000

Project Description	Estimated/ Actual Start Date	Estimated/ Actual Completion Date	Status 14 April	Revised Budget 1	Total Committals	Estimated Final Cost
RWC-RC-Stanwell Waroula Rd-Ch23.75-28.25 Local Government Grant	06/02/2016			450,000	263,358	1,033,000
RWC-RC-Struck Oil Road-Ch 1.20-1.80			100% complete	0	962	0
RWC-Roller Screed - Honda Wildcat Multivibe SN 14946					12,320	
RWC-RS-Alton Downs-Nine Mile Rd Bajool 0.3 to 1.6 & 1.6					46,074	
RWC-RS-Black Gin Ck Rd Ridgelands 0 to 1.26 km				0	29,194	
RWC-RS-Calmorin Rd Ridgelands 0 to 0.45 km				0	14,693	
RWC-RS-Fairy Bower Rd Gracemere 2.2 to 4.25 km					31,128	
RWC-RS-Garnant Rd Ridgelands 0.1 to 1.9 km				0	31,762	
RWC-RS-Hinchliffe Ave Bouldercombe 0 to 0.4 km				0	4,070	
RWC-RS-Laurel Bank Rd Ridgelands 3.25 to 3.75 km					9,900	
RWC-RS-Leanne Hinchliffe Carpark Bouldercombe					2,691	
RWC-RS-Leanne Hinchliffe Drive Bouldercombe 0 to 0.1 km					3,295	
RWC-RS-Leigh Close Bouldercombe 0 to 0.12 km				0	1,720	
RWC-RS-Linda Close Bouldercombe 0 to 0.28 km				0	4,370	
RWC-RS-Main St & Carpark Stanwell					2,113	
RWC-RS-Mark Close Bouldercombe 0 to 0.08 km				0	1,227	
RWC-RS-McLaughlin St Gracemere 0 to 1.1 km					18,521	
RWC-RS-Mount Usher Rd Bouldercombe 0.9 to 2.1 km				0	20,094	
RWC-RS-Old Coach Rd Bajool 0.1 to 0.25 km				0	3,633	
RWC-RS-South Ulam Rd Bajool 13.27 to 14.65 & 16.78 to 17				0	32,971	
RWC-RS-Stanwell-Waroula Rd Bajool 0 to 2.25 & 4.35 to 5					41,875	

Project Description	Estimated/ Actual Start Date	Estimated/ Actual Completion Date	Status 14 April	Revised Budget 1	Total Committals	Estimated Final Cost
RWC-RS-Stanwell-Waroula Rd Ridgelands 28.3 to 29.5 km					19,404	
RWC-SW-Alton Downs Nine Mile Road-Ch 1.57			100% complete	0	5,916	0
RWC-SW-Arthur St Wwood-Ch 2.49	07/04/2017			35,700	0	0
RWC-SW-Birrahlee Rd Ch 1.04 & 2.82	19/04/2017			45,900	2,058	0
RWC-SW-Bishop Rd Ch 0.06 & 3.41	15/12/2016			51,000	4,506	110,000
RWC-SW-J Pierce Rd Ch 1.54	03/03/2016			45,900	64	0
RWC-SW-Kabra Road-Ch 1.94	06/10/2016	23/11/2016	100% complete	165,000	157,591	157,510
RWC-SW-Lion Mountain Rd-Ch4.32 3.26&6.86	01/02/2016			153,000	163	0
RWC-SW-Neerkol Rd Stanwell	21/03/2017			28,000	1,338	0
RWC-SW-Rookwood Rd Ch 17.0		26/09/2016	100% complete	36,300	33,482	33,482
RWC-SW-South Yaamba Road-Ch 13.5			100% complete	0	1,685	0
RWC-SW-South Yaamba Road-Ch 14.4					-26	
RWC-SW-South Yaamba Road-Ch 3.76 9.70 13.79 14.66&17.				0	279	
RWC-SW-Wyvills Rd Ch 0.13	03/04/2017			30,000	0	30,000
				5,036,800	**3,761,539**	**6,400,826**

Total Urban and Rural	**25,896,962**	**19,028,476**	**28,218,957**

4. ACHIEVEMENT OF OPERATIONAL PROJECTS WITHIN ADOPTED BUDGET AND APPROVED TIMEFRAME

As at period ended April – 83% of year elapsed.

Overall the expenditure is around the 68% including committals which are close to the budget forecast.

End of Month General Ledger - (Inc Operating & Capital) - CIVIL OPERATIONS

As At End Of April

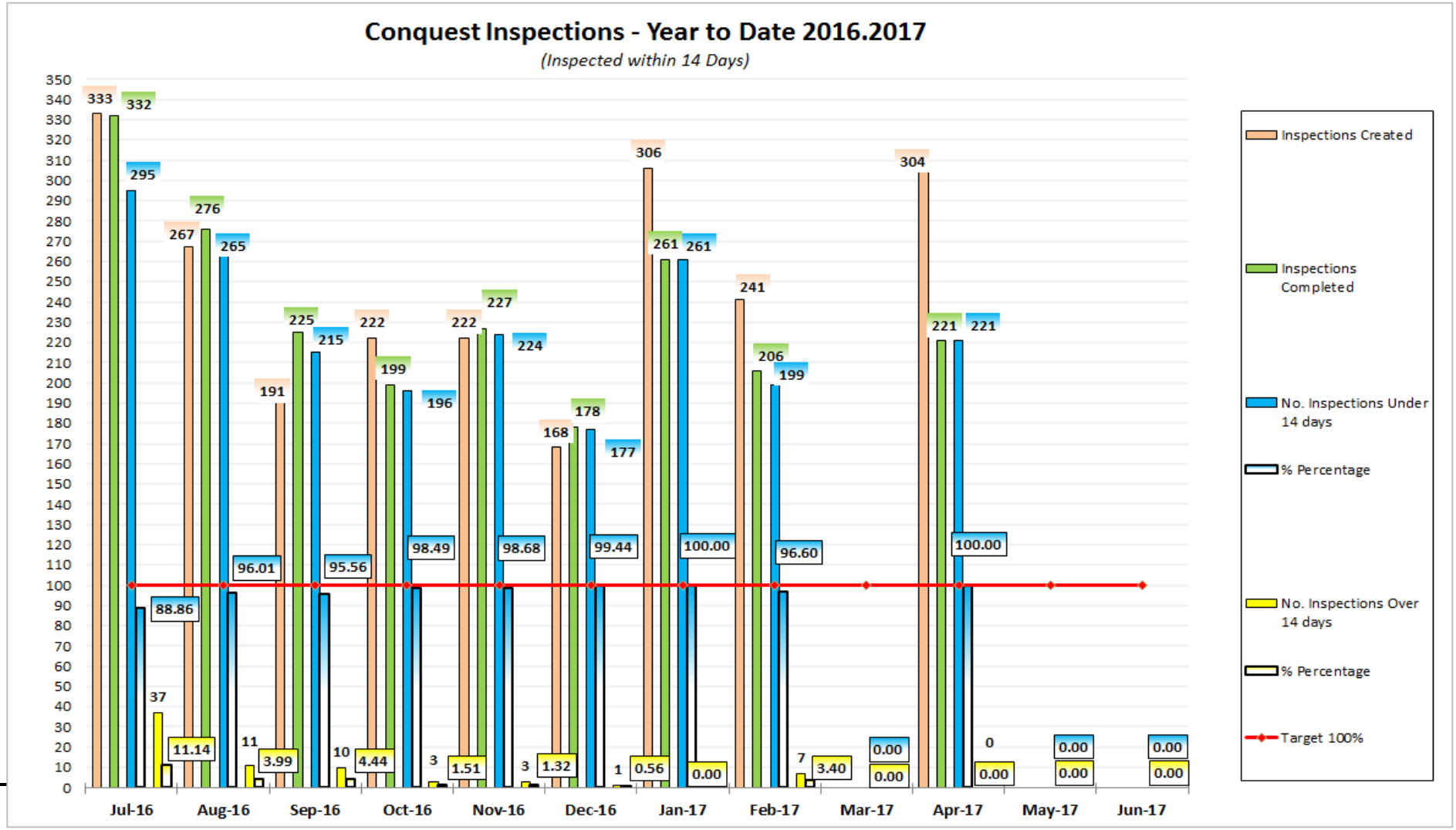
Report Run: 02-May-2017 12:36:15 Excludes Nat Accs: 2802,2914,2917,2924

	Adopted Budget	Revised Budget	Revised Budget (Pro Rata YTD)	EOM Commitments	YTD Actual	YTD Commit + Actual	Variance	On target
	$		$	$	$	$	%	83.3% of Year Gone
OPERATIONS								Revised Budget Comparison
CIVIL OPERATIONS								
Urban Operations								
1 - Revenues	(1,310,969)	(1,110,969)	(925,808)	0	(889,866)	(889,866)	80%	✗
2 - Expenses	6,402,954	6,255,472	5,212,893	285,627	6,539,277	6,824,904	109%	✗
3 - Transfer / Overhead Allocation	2,108,719	2,108,719	1,757,266	0	291,129	291,129	14%	✓
Total Unit: Urban Operations	***7,200,704***	***7,253,222***	***6,044,352***	***285,627***	***5,940,540***	***6,226,167***	**86%**	✗
Rural Operations								
1 - Revenues	(947,156)	(947,156)	(789,297)	0	0	0	0%	✗
2 - Expenses	3,788,307	3,651,093	3,042,578	145,285	1,767,655	1,912,940	52%	✓
3 - Transfer / Overhead Allocation	1,290,601	1,305,601	1,088,001	0	1,477,124	1,477,124	113%	✗
Total Unit: Rural Operations	***4,131,751***	***4,009,538***	***3,341,282***	***145,285***	***3,244,779***	***3,390,063***	**85%**	✗
Civil Operations Management								
1 - Revenues	(23,000)	(23,000)	(19,167)	0	(23,169)	(23,169)	101%	✓
2 - Expenses	19,111,435	22,890,708	19,075,590	107,662	19,112,060	19,219,721	84%	✗
3 - Transfer / Overhead Allocation	(2,065,958)	(2,065,958)	(1,721,632)	0	(1,473,880)	(1,473,880)	71%	✗
Total Unit: Civil Operations Management	***17,022,477***	***20,801,750***	***17,334,792***	***107,662***	***17,615,010***	***17,722,672***	**85%**	✗
Total Operations:	**28,354,933**	**32,064,510**	**26,720,425**	**538,573**	**26,800,329**	**27,338,903**	**85%**	✗

5. DELIVERY OF SERVICES AND ACTIVITIES IN ACCORDANCE WITH COUNCIL'S ADOPTED SERVICE LEVELS

5.1 Conquest Inspections *Customer Request / Conquest Inspections* (finalised within 14 working days)

Service Delivery Standard	Target	Current Performance
Received April 304 inspections, 221 completed – 0 inspections outside the standard 14 days	100%	**100%**

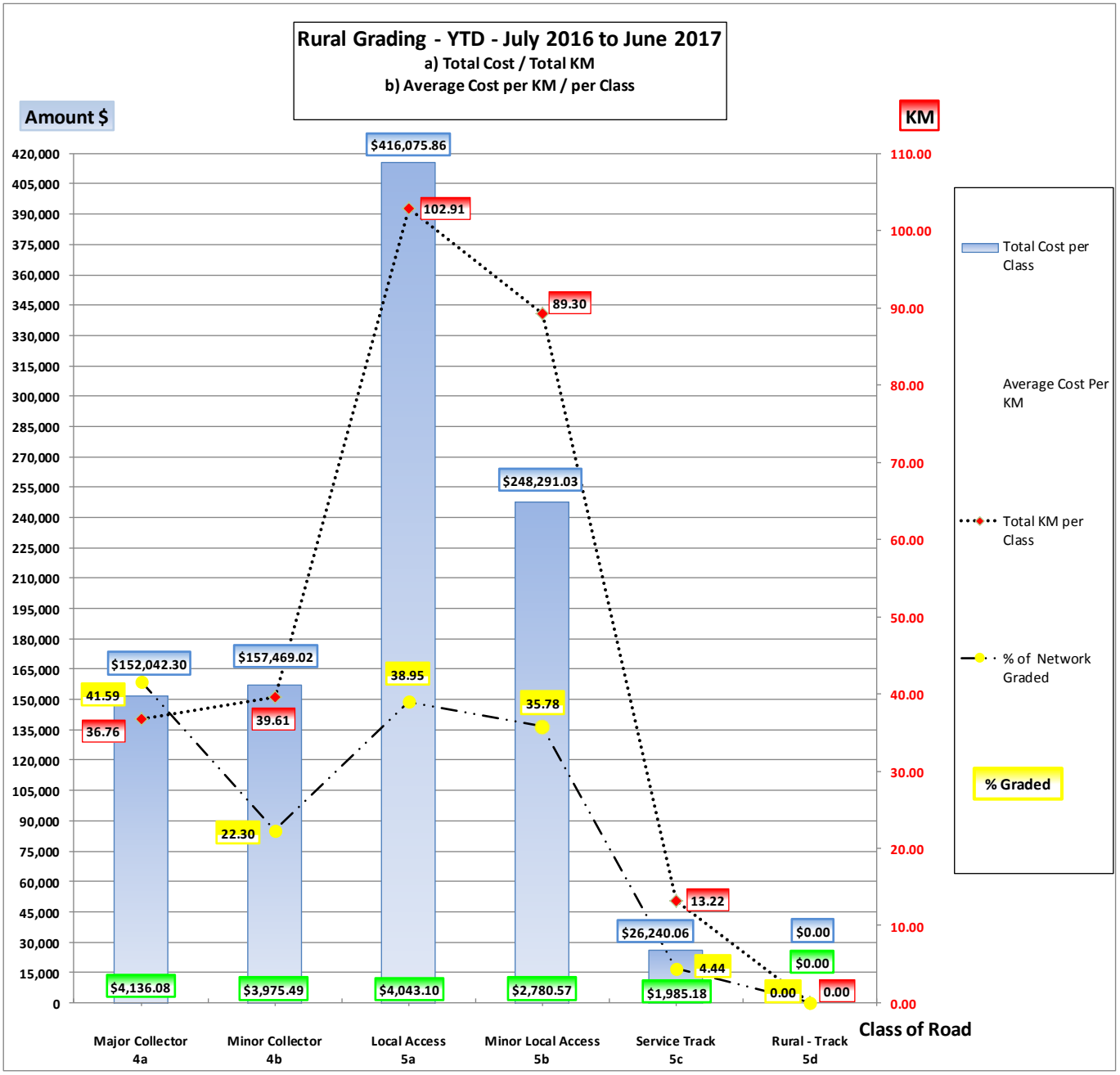


5.2 Unsealed Road Surface Condition Summary

Council's unsealed road network is maintained through scheduled actions, and not by the use of intervention levels. Grading and re gravelling priorities are determined through regular inspections by suitably experienced road inspectors.

Rural Grading – YTD – July to June 2017

Class	Description of Class	Network Total Length KM	Total KM per Class	Total Cost per Class	Average Cost Per KM	% of Network Graded
4a	Major Collector	88.39	36.76	$152,042.30	$4,136.08	41.59
4b	Minor Collector	177.66	39.61	$157,469.02	$3,975.49	22.30
5a	Local Access	264.21	102.91	$416,075.86	$4,043.10	38.95
5b	Minor Local Access	249.56	89.30	$248,291.03	$2,780.57	35.78
5c	Service Track	297.84	13.22	$26,240.06	$1,985.18	4.44
5d	Rural - Track	34.49	0.00	$0.00	$0.00	0.00
	Total	1112.15	281.79	$1,000,118.27	$3,549.12	25.34



Road Name	KM	Cost
A. Pierce Road - Morinish	5.30	$9,533.14
Allen Road	1.82	$9,377.51
Aremby Road	4.60	$11,646.49
Ashford Street	0.80	$2,184.58
Barnett Road	1.36	$3,307.94
Barrett Road	11.69	$23,009.08
Benedict Road	4.80	$11,901.19
Black Gin Creek Road	1.13	$8,830.31
Bob's Creek Road	5.93	$35,361.29
Bond Road	1.54	$7,865.40
Calliungal Road	0.90	$2,765.37
Calmorin Road	0.59	$3,960.82
Cavell Road - Gracemere	1.60	$2,078.83
Colliver Road	1.35	$3,871.56
Comino Road	2.00	$10,440.93
Connor Road	3.22	$7,175.65
Craigilee Road	1.10	$2,884.51
Craignaught Road	10.60	$26,887.30
Cunningham Road	1.24	$7,228.95
Donovan Road	5.24	$12,449.04
E Williams Road	1.30	$8,373.06
Edgar Road	1.69	$5,765.03
Fernvale Road	2.30	$7,425.10
Galvin Road	1.25	$2,223.05
Geihe Road	0.98	$2,083.14
Glenroy-Marlborough Rd	20.55	$103,167.49
Gold Escort Road	0.12	$926.56
Goodwin Rd - Gracemere	2.85	$9,759.41
Green Road	0.50	$4,309.56
Greenup Road	0.80	$1,278.77
Halfpenny Road	2.73	$8,870.55
Hallam Road	0.80	$1,540.28
Hanrahan Road	5.83	$15,441.76
Harnsworth Road	0.58	$1,507.33
Hopkins Road	0.50	$3,692.37
Hopper Road	4.30	$16,949.28
Hume Road	3.40	$18,831.62
Hunt Road	2.80	$18,729.25
Huxham Lane	0.99	$5,390.52
Josefski Road	1.76	$8,508.88

Road Name	KM	Cost
McLean Road	1.35	$7,486.27
McLoughlin Road	0.35	$843.44
Mandlay Road	0.80	$6,688.53
Mogilno Road	5.03	$23,671.00
Moller Road	2.00	$3,025.50
Moore Road	0.90	$3,025.88
Morgan Road	1.06	$2,633.54
Murphy Road	3.80	$25,049.22
Native Cat Road	1.89	$7,245.25
Pandora Road	2.62	$10,629.68
Pipeline Road	1.80	$5,481.54
Pocock Road	1.53	$5,787.23
Porters Lane	0.10	$801.89
Porters Road	0.12	$1,050.54
Pump Lane	0.80	$3,193.31
Ranger Road	2.10	$5,467.52
Raspberry Creek Road	7.30	$8,258.95
Redbank Road	10.08	$26,162.26
Reid Road	4.31	$16,047.30
Riverslea Road	14.44	$44,499.31
Rosewood Road	18.58	$51,228.64
Salsbury Road	0.59	$1,307.89
Seeney Road	0.66	$2,052.21
Sheehan Road	0.65	$1,912.14
Somerset Road	2.17	$6,453.27
South Yaamba Road	6.25	$34,900.51
Spragg Road	0.48	$2,537.92
Spring Creek Road	0.10	$979.71
Stanley Road	0.60	$3,884.65
Stewart Park Road	0.98	$2,937.41
Stracey Road	1.03	$5,796.58
Taylor Street	1.00	$7,415.67
Thirsty Creek Road	18.78	$57,315.83
Tindall Road	1.20	$6,993.86
Tipson Lane	1.03	$4,639.07
Truelson Road	1.10	$2,125.61
Tucker Road	3.60	$4,122.95
Tyrell Road	1.40	$6,282.86
Upper Ulam Road	11.79	$60,535.21
V. Ramm Road	1.40	$3,084.26

Kabra-Scrubby Creek Rd	2.25	$11,469.47
Road Name	***KM***	***Cost***
Kakoma Road	1.80	$6,260.31
Kangaroo Crescent	0.25	$569.80
Kelly Road	2.92	$7,851.10
Klaproth Road	1.00	$3,585.83
Laurel Bank Road	3.50	$15,219.39
Lee Street	0.20	$777.74
Lee Farm Road	1.25	$2,491.30
Mckenzie Road	2.01	$5,368.84
Subtotal 1	***138.02***	***$501,126.68***

Warren Road	2.60	$6,024.85
Road Name	***KM***	***Cost***
Washpool Road	1.00	$3,117.99
Watts Road	0.51	$2,660.53
Wedel Road	1.30	$3,947.52
Westwood Cemetery Rd	0.99	$3,076.52
Williams Road	0.30	$1,677.12
Woodford Road	1.30	$4,932.65
Subtotal 2	***143.77***	***$498,991.59***
Total	***281.79***	***$1,000,118.27***

CIVIL OPERATIONS MONTHLY OPERATIONS REPORT - MAY 2017

Works Program May - June 2017

Meeting Date: 16 May 2017

Attachment No: 2

Construction and Works Program - May - June 2017

Council's Civil Operations Section advises the proposed road and associated road reserve network works and other planned projects to be conducted throughout the Region in May - June 2017 subject to weather conditions and other competing priorities. Please note that the information listed in the Potential Interruptions section is general information and does not override the information that is provided to the Emergency Services Personnel and Bus Company's etc.

Rural West Area				
Work Location	**Work Description**	**Start**	**Finish**	**Potential Interruptions**
RWC-BDG-Bishop Rd , Louisa Creek Bridge	Bridge Work	**Early March**	**Early June**	Traffic Controllers and Speed Restrictions
RWC-NC-Slaughterhouse Rd Ch 00-0.80 bitumen seal	Construction	**Mid May**	**Mid June**	Traffic Controllers and Speed Restrictions
RWC-RC-Cherryfield Rd , bitumen seal	Re-construction	**Mid May**	**Mid July**	Traffic Controllers and Speed Restrictions
RWC-RC-Isabella - Albert St Stanwell , bitumen seal	Re-Construction	**Early May**	**Late May**	Traffic Controllers and Speed Restrictions
RWC-RC-Sheldrake Avenue earthworks	Re-Construction	**Late May**	**Early June**	Traffic Controllers and Speed Restrictions
RWC-RC-South Ulam Rd	Re-Construction	**Early May**	**Mid May**	Traffic Controllers and Speed Restrictions
RWC-RC-Stanwell Waroula Road- Ch 0.24 to 2.24 , bitumen seal	Re-Construction	**Late May**	**Mid July**	Traffic Controllers and Speed Restrictions
RWC-RC-Stanwell Waroula Road- Ch 23.72-28.22 , bitumen seal	Re-Construction	**Late February**	**Late July**	Traffic Controllers and Speed Restrictions
RWC-SW-Bishop Rd Ch 0.06 & 3.41	Stormwater	**Early June**	**Early June**	Traffic Controllers and Speed Restrictions
RWC-SW-Nine Mile Rd floodway Grant Money	Stormwater	**Early June**	**Late November**	Traffic Controllers and Speed Restrictions
RWC-SW-Wyvilles Rd Ch 0.13	Stormwater	**Early April**	**Late April**	Traffic Controllers and Speed Restrictions
Urban Central Area				
Work Location	**Work Description**	**Start**	**Finish**	**Potential Interruptions**
UCC-Footpaths Division 3 (Cr Williams) Stage 2	Footpath	**Mid April**	**Early May**	Traffic Controllers and Speed Restrictions
UCC-FP-Moores Creek Rd (Norman Gardens Cycle path)	Footpath	**Mid February**	**Early May**	Traffic Controllers and Speed Restrictions
UCC-FP-Pilbeam Drive Footpath	Footpath	**Early February**	**Mid June**	Traffic Controllers and Speed Restrictions
UCC-FP-Talford Street_Albert Street to North Street	Footpath	**Early May**	**Late July**	Traffic Controllers and Speed Restrictions
UCC-NC - Denison Street - Denham St kerbing blackspot	Construction	**Late February**	**Early June**	Traffic Controllers and Speed Restrictions
UCC-NC - Denison Street - Derby St kerbing blackspot	Construction	**Early February**	**Late May**	Traffic Controllers and Speed Restrictions
UCC-RC Leamington St	Re-Construction	**Early March**	**Early May**	Traffic Controllers and Speed Restrictions
UCC-RC-Bertram Street _Main St to Thomasson St	Re-Construction	**Early September 2016**	**Late June**	Traffic Controllers and Speed Restrictions
UCC-RC-Campbell Street-Albert St to North St	Re-Construction	**Early March**	**Late July**	Traffic Controllers and Speed Restrictions
UCC-RC-Campbell Street-North St Cycle paths	Re-Construction	**Early February**	**Late May**	Traffic Controllers and Speed Restrictions

Work Location	Work Description	Start	Finish	Potential Interruptions
UCC-RC-Dooley St Depot road upgrade	Re-Construction	**Early May**	**Late May**	Traffic Controllers and Speed Restrictions
UCC-RC-Quay Street- Stage 1B	Re-Construction	**Early October 2016**	**Mid July**	Traffic Controllers and Speed Restrictions
UCC-RC-Quay Street- Stage 1C & 1D	Re-Construction	**Late April**	**Early November**	Traffic Controllers and Speed Restrictions
UCC-SL-Canning/Cambridge Street Light Conduits	Street Lights	**Mid March**	**Mid May**	Traffic Controllers and Speed Restrictions
UCC-SW-Archer St main drain reline and repair	Stormwater	**Mid April**	**Mid May**	Traffic Controllers and Speed Restrictions
UCC-SW-Dowling Street Levee Subsoil $ Kerb	Stormwater	**Mid March**	**Early May**	Traffic Controllers and Speed Restrictions

Urban West Area

Work Location	Work Description	Start	Finish	Potential Interruptions
UWC-Footpaths Division 4 (Cr Smith) Stage 2	Footpath	**Mid May**	**Mid June**	Traffic Controllers and Speed Restrictions
UWC-FP-Ashes Garden FP Gracemere	Footpath	**Mid April**	**Mid May**	Traffic Controllers and Speed Restrictions
UWC-NC-Middle Road-Capricorn Street to Macquarie Street Stage 3	Re-Construction	**Early May**	**Early July**	Traffic Controllers and Speed Restrictions
UWC-SL-Breakspear Street Street Light Conduits	Street Lights	**Mid May**	**Late May**	Traffic Controllers and Speed Restrictions
UWC-SL-Johnson Rd Street Light Conduits	Street Lights	**Mid April**	**Mid May**	Traffic Controllers and Speed Restrictions
UWC-SS-Gordon Street-Black Street to end	Spray Seal	**Early May**	**Early May**	Traffic Controllers and Speed Restrictions

8.7 ENGINEERING SERVICES MONTHLY OPERATIONS REPORT - MAY 2017

File No:	**7028**
Attachments:	**1. Monthly Operations Report Engineering Section**
Authorising Officer:	**Peter Kofod - General Manager Regional Services**
Author:	**Martin Crow - Manager Engineering Services**

SUMMARY

This report outlines Engineering Services Monthly Operations Report for the period to the end of April 2017.

OFFICER'S RECOMMENDATION

THAT the Engineering Services Monthly Operations Report for May 2017 report be received.

COMMENTARY

The Engineering Services Section submits a monthly operations report outlining issues faced by the section and performance against nominated service level criteria.

Due to the reporting timeframes and agenda requirements of the Infrastructure Committee, the statistics utilised in the reports will lag the committee meeting dates by approximately 1 month.

ENGINEERING SERVICES MONTHLY OPERATIONS REPORT - MAY 2017

Monthly Operations Report
Engineering Section

Meeting Date: 16 May 2017

Attachment No: 1

MONTHLY OPERATIONS REPORT

ENGINEERING SECTION

Period Ended 30 April 2017

VARIATIONS, ISSUES AND INNOVATIONS

Innovations

The floodplain management and stormwater consultancy services contract continues. An internal workshop was held on the impacts of the ARR revision and implications for Council's flood modelling. Council Officers are looking at a transitional arrangement over a period of approximately 2 years to implement changes in modelling processes suggested by the ARR Revision. A report will be presented to Council on these arrangements in the next quarter.

A small working group has also been initiated across several Council units to look at Council's processes and standards with regards to stormwater quality.

Improvements / Deterioration in Levels of Services or Cost Drivers

The traffic light report indicates that customer response times have been good in all areas. This is pleasing given we are down a couple of people in our Traffic and Transport area at present.

Graphs for the Development assessment timeframes have not been presented in this report. Some anomalies have been discovered in relation to dates on which certain actions or assessments were completed against what has been recorded in the Development Assessment Timeframes spreadsheet. These are currently being investigated and corrected and will be presented at the next monthly meeting.

LINKAGES TO OPERATIONAL PLAN

1. COMPLIANCE WITH CUSTOMER SERVICE REQUESTS

The response times for completing the predominant customer requests in the reporting period for 30 April 2017 are as below:

All Monthly Requests (Priority 3)
Engineering 'Traffic Light' report
April 2017

	Balance B/F	Completed in Current Mth	Current Month NEW Requests		TOTAL INCOMPLETE REQUESTS BALANCE	Work Orders Issued	Under Long Term Investigation	Avg W/O Issue Time (days) 12 months	Completion Standard (days)	Avg Completion Time (days) Current Mth	Avg Completion Time (days) 6 Months	Avg Completion Time (days) 12 Months	Avg Duration (days) 12 Months (complete and
			Received	Completed									
Urban Addressing (General)	1	1	1	1	0	0	0	0.63	28	4.00	4.75	3.69	5.40
Development - Building Over Sewerline	1	1	2	1	1	0	0	0.00	7	0.00	4.41	3.29	2.35
Engineering - Development Dust, Noise, Road, Misc	0	0	2	1	1	0	0	4.79	7 14	2.00	9.75	13.33	7.44
Disaster Management - General Enquiry SES	0	0	0	0	0	0	0	0.00	5	0.00	13.33	21.67	0.00
Engineering - General Enquiry	0	0	3	2	1	0	0	5.09	14	0.00	6.91	16.31	7.98
Flood Management Creeks/Rivers	4	2	4	2	4	0	0	2.89	10	1.50	5.07	4.17	6.42
Heavy Vehicles (Not related to MTCE)	0	0	0	0	0	0	0	0.00	28	0.00	0.00	0.00	0.00
Infra. Ops Unit - G/E (D/Planner) NOT FOR CSO USE	0	0	0	0	0	0	0	0.00	28	0.00	1.88	9.20	7.42
Water/Sewerage	0	0	2	2	0	0	0	0.17	28	3.00	3.00	5.14	1.33
Petition (Infra Use Only)	0	0	0	0	0	0	0	0.00	90	0.00	0.00	0.00	0.00
Roundabout/Medians (Not related to MTCE)	0	0	0	0	0	0	0	8.63	28	0.00	11.43	14.90	13.00
Speed Limits/Traffic Volumes (Not related to MTCE)	0	0	1	0	1	0	0	3.00	28	0.00	9.33	9.39	12.85
Signs & Lines (New Request - not already existing)	9	5	7	4	7	0	0	116.00	28	5.25	8.15	10.52	10.10
Traffic Signals (Stop Light) (Not related to MTCE)	0	0	0	0	0	0	0	3.34	28	0.00	0.00	24.33	24.33
Traffic Counts	0	0	0	0	0	0	0	0.92	28	0.00	3.80	7.13	4.64

Comments & Additional Information

As at 1 September 2014, Engineering Services have adopted Service Levels for their Child Request Codes.

The Priority Escalation timeframes are only used as a notification reminder process.

These Service Levels have been set up in Pathways under Priority Escalation and Estimated Duration Maintenance parameters.

Priority Escalation

This function allows the Actioning Officer and/or Responsible Officer of the Request to receive an e-mail message each time the Priority is escalated. These Priority escalations are notification / reminders to action the request and not necessarily to complete the request.

Estimated Duration Maintenance

The Estimated Duration Maintenance form displays the Estimated Duration Maintenance Timeframe (or Service Level) for Request Types ie. Minutes, Hours, Days, Weeks and Years.

2. COMPLIANCE WITH STATUTORY AND REGULATORY REQUIREMENTS INCLUDING SAFETY, RISK AND OTHER LEGISLATIVE MATTERS

Safety Statistics

The safety statistics for the reporting period are:

	THIRD QUARTER		
	January	**February**	**March**
Number of Lost Time Injuries	**0**	**0**	**0**
Number of Days Lost Due to Injury	**0**	**0**	**0**
Total Number of Incidents Reported	**0**	**0**	**0**
Number of Incomplete Hazard Inspections	**0**	**0**	**0**

Risk Management Summary

Example from Section Risk Register (excludes risks accepted/ALARP)

Potential Risks	Current Risk Rating	Future Control & Risk Treatment Plans	Due Date	% Completed	Comments
Inability of Engineering Services to provide or maintain adequate levels of service for infrastructure planning, development assessment and infrastructure design resulting in reduced productivity, inadequate infrastructure, risk to the general public and workers and financial loss for Council.	High 4	1. Undertake staffing level review and business planning for Engineering Services. 2. Improve focus on professional development and training (including graduate development program) by management implementing appropriate training and development plans and staff completing them.	31/12/17	70%	T&D plans implemented in Design Services. Staffing review and minor restructure proposal carried out in May 2015 and has been implemented. Training matrices for Strategic Infrastructure and Development Engineering have been developed and are to be implemented through the performance appraisal process.

Potential Risks	Current Risk Rating	Future Control & Risk Treatment Plans	Due Date	% Completed	Comments
Breach of the Professional Engineers Act resulting in installation of unsafe infrastructure or infrastructure that does not meet legislative requirements causing the following possible impacts to Council: Service delivery delays; negative financial impacts; possible serious harm to public/workers; and reputation tarnished.	High 4	1. Make RPEQ qualification mandatory for some positions in the future. 2. Request technical staff to obtain their RPEQ if possible.	31/12/17	50%	RPEQ numbers in Engineering Services generally ok now however one coordinator position is to be followed up on.
Failure to maintain accuracy and value of the forward works program and adequately provide for the annual capital program resulting in projects nominated for delivery being deferred to accommodate increased costs within annual capital program and the Long Term Financial Strategy (LTFS).	High 4	1. Continued refinement of forward works program. 2. Development of indicative estimating tool. 3. Develop Network specific prioritisation processes.	1/7/18	75%	Development of the FWP has stalled. Future design and concept budget included in capital budget. Prioritization process for pathways has been developed. Prioritization process for stormwater has been developed.

Legislative Compliance & Standards

All applicable legislative and compliance standards have been met.

3. ACHIEVEMENT OF CAPITAL PROJECTS WITHIN ADOPTED BUDGET AND APPROVED TIMEFRAME

Project	Start Date	Expected Completion Date	Status	Budget Estimate	YTD actual (incl committals)
ENGINEERING SERVICES CAPITAL WORKS PROGRAM					
Costs as at 24/2/17					
Traffic and Road Safety Minor Works Program	1/7/16	30/6/17	Not Started	$82,000	$0
Comment: Unallocated at this point in time.					
Preliminary design and concepts	1/7/16	30/6/17	In progress	$100,000	$135,913
Comment: Budget to allow progression of preliminary designs and estimates for future year works. Wackford St Drainage and Webber Park Drainage underway.					
Land Acquisitions and Resumptions	1/7/16	30/6/17	In progress	$800,000	$122,670
Comment:. Funding land acquisition for Alexander St Ext, Charles street and GIA.					
Design Office Survey equipment	1/7/16	30/6/17	Completed	$75,000	$74,809
Comment: Equipment has been purchased and received.					

4. ACHIEVEMENT OF OPERATIONAL PROJECTS WITHIN ADOPTED BUDGET AND APPROVED TIMEFRAME

As at period ended 30 April 2017 – 83% of year elapsed

Project	Revised Budget	Actual (incl. committals)	% budget expended	Explanation
Traffic / Transport Planning Consultancy Budget	*$100,000*	*$59,075*	*59%*	*Consultant Engineer*
Stormwater Drainage Planning Consultancy Budget	*$200,000*	*$447,714*	*224%*	*FMP and Stormwater consultancy..*
Road Safety Consultancy Budget	*$30,000*	*$2,720*	*9%*	*Used for road safety audits and training..*
Roads Alliance Consultancy Budget	*$50,000*	*$53,200*	*106%*	*Technical and administrative support for Rockhampton Regional Roads and Transport Group.*
Water and Sewerage Planning Consultancy Budget	*$30,000*	*$0*	*0%*	*Water Loss mapping.*
Disaster Management Consultancy Budget	*$75,000*	*$14,878*	*20%*	*Risk assessment. Early warning.*

Service Delivery Standard	Target	Current Performane
Development Operational Works Completed in 7 days	**90%**	**TBA**
Development MCU ROL Works Completed in 8 days	**90%**	**TBA**

Graphs for the Development assessment timeframes have not been presented in this report. Some anomalies have been discovered in relation to dates on which certain actions or assessments were completed against what has been recorded in the Development Assessment Timeframes spreadsheet. These are currently being investigated and corrected and will be presented at the next monthly meeting.

FINANCIAL MATTERS

End of Month General Ledger - (Inc Operating & Capital) - ENGINEERING SERVICES

As At End Of April

Report Run: 03-May-2017 12:39:27 Excludes Nat Accs: 2802,2914,2917,2924

	Adopted Budget $	Revised Budget	Revised Budget (Pro Rata YTD) $	YTD Actual $	YTD Commit + Actual $	Variance %	On target 83.3% of Year Gone
OPERATIONS							Revised Budget Comparison
ENGINEERING SERVICES							
Development Engineering							
1 - Revenues	(3,000)	(3,000)	(2,500)	(639)	(639)	21%	✗
2 - Expenses	1,275,269	1,208,213	1,006,844	862,805	862,805	71%	✓
3 - Transfer / Overhead Allocation	(502,313)	(502,313)	(418,594)	(280,299)	(280,299)	56%	✗
Total Unit: Development Engineer	***769,956***	***702,900***	***585,750***	***581,867***	***581,867***	**83%**	✓
Strategic Infrastructure							
1 - Revenues	(17,000)	(30,300)	(25,250)	(36,687)	(36,687)	121%	✓
2 - Expenses	1,876,612	1,689,888	1,408,240	1,047,554	1,455,361	86%	✗
3 - Transfer / Overhead Allocation	(301,375)	(280,714)	(233,928)	(139,103)	(139,103)	50%	✗
Total Unit: Strategic Infrastructure	***1,558,237***	***1,378,874***	***1,149,061***	***871,765***	***1,279,571***	**93%**	✗
Engineering Services Management							
2 - Expenses	383,898	366,594	305,495	257,898	262,224	72%	✓
Total Unit: Engineering Services M	***383,898***	***366,594***	***305,495***	***257,898***	***262,224***	**72%**	✓
Design Services							
2 - Expenses	541,011	519,248	432,707	359,269	362,247	70%	✓
3 - Transfer / Overhead Allocation	25,000	25,000	20,833	12,048	12,048	48%	✓
Total Unit: Design Services	***566,011***	***544,248***	***453,540***	***371,317***	***374,295***	**69%**	✓
Disaster Coordination							
1 - Revenues	(86,574)	(83,954)	(69,962)	(100,316)	(100,316)	119%	✓
2 - Expenses	310,829	302,501	252,085	267,504	281,747	93%	✗
3 - Transfer / Overhead Allocation	236,000	236,000	196,667	195,139	195,139	83%	✓
Total Unit: Disaster Coordination	***460,255***	***454,547***	***378,790***	***362,327***	***376,570***	**83%**	✓
Total Operations:	**3,738,357**	**3,447,163**	**2,872,636**	**2,445,174**	**2,874,527**	**83%**	✗
CAPITAL							Revised Budget Comparison
ENGINEERING SERVICES							
CP430 - CAPITAL CONTROL ENGINEERING SERVICES							
1 - Revenues	0	(150,000)	(125,000)	(150,000)	(150,000)	100%	✓
2 - Expenses	330,000	1,094,000	911,667	199,121	345,924	32%	✓
3 - Transfer / Overhead Allocation	0	0	0	8,341	8,341	0%	✗
Total Unit: Disaster Coordination	***330,000***	***944,000***	***786,667***	***57,462***	***204,265***	**22%**	✓
CP431 - CAPITAL CONTROL ENGINEERING SERVICES REVENUE							
1 - Revenues	(2,053,200)	0	0	0	0	0%	✓
Total Unit: Disaster Coordination	***(2,053,200)***	***0***	***0***	***0***	***0***	**0%**	✓
Total Capital:	**(1,723,200)**	**944,000**	**786,667**	**57,462**	**204,265**	**22%**	✓
Grand Total:	**2,015,157**	**4,391,163**	**3,659,303**	**2,502,636**	**3,078,792**	**70%**	✓

9 NOTICES OF MOTION

Nil

10 URGENT BUSINESS/QUESTIONS

Urgent Business is a provision in the Agenda for members to raise questions or matters of a genuinely urgent or emergent nature, that are not a change to Council Policy and can not be delayed until the next scheduled Council or Committee Meeting.

11 CLOSURE OF MEETING