

“One strategy for one network”: Delivering sustainable road safety in Rockhampton Region through improved governance

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Abstract

Taking a “one network” approach, the *Rockhampton Regional Road Safety Strategy 2012 – 2022* formalises the partnership across state and local agencies and operationalises the governance process recommended in the newly-developed *‘International Standard for Road Traffic Management Systems – Requirements with Guidance for Use’*. In doing so, local delivery is driven by the following management functions: (i) results focus; (ii) coordination; (iii) legislation; (iv) funding and resource allocation; (v) promotion; (vi) monitoring and evaluation; and (vii) research and knowledge transfer. The Strategy redefines the role of the Regional Road Safety (3E) Committee to facilitate cross-agency decision-making. The 3E Committee meets monthly, with the focus alternating between strategic (proactive) and operational (reactive) objectives. This governance model actively encourages members of the community and elected representatives to bring emerging road safety issues/ideas to the 3E Committee for technical consideration, and ensures consistency and transparency in process. The Strategic Working Group (proactive function) of the 3E Committee is addressing a series of “shared priorities” under each of the elements of a ‘safe system’. The Regional Road Safety Priority Matrix was informed by stakeholder input, a review of the crash profile for the region and an understanding of the unique road safety challenges facing the RRC area. This paper describes the journey to develop the Strategy and provides an interim report card on performance to date. Innovative ways to share knowledge and resources across agencies are a feature of discussion and many of the lessons learned would be transferable to similar jurisdictions.

Introduction

In the face of population growth and increased vehicle ownership, the Queensland road toll has more than halved in the last 30 years. This reduction has been achieved through the successful implementation of evidence-based road safety policy and innovative countermeasures targeting at-risk road users and behaviours. Unfortunately, this downward trend has plateaued over the last decade and approximately 6,500 Queenslanders continue to be hospitalised following road crashes each year (Department of Transport & Main Roads, 2013).

From a global perspective, more than 90 countries, including Australia, have pledged a commitment to a *Decade of Action for Road Safety 2011-2020* (United Nations Road Safety Collaboration, 2011). In response, the Australian Transport Council adopted a new *National Road Safety Strategy 2011-2020* which sets the ambitious target of a 30 percent reduction in road trauma related fatalities and serious injuries by 2020 (Department of Infrastructure & Transport, 2011). Like the National Strategy, the recently released *Queensland Road Safety Action Plan 2013-2015* is founded on the internationally recognised ‘Safe System’ approach which requires “shared responsibility” and increased coordination across all elements of the transport system (Bliss & Breen, 2009). It also places increased emphasis on the role of community partnerships and Local Government in reducing the road toll. Local Government manages approximately 80 percent of the road network in Queensland and about half of the serious casualty crashes occur on its roads (Road Safety Partnership Team, 2011). This responsibility requires them to be an integral partner in all aspects of road safety planning and delivery.

Following on from pilot projects in the Moreton Bay (Deller, 2010) and Logan Regions (Logan City Council, 2010), Rockhampton Regional Council (through the Regional Roads Group) successfully applied to Roads Alliance Project Team in Transport & Main Roads (TMR) to conduct a Road Safety Partnership Project. Based on the Road Safety Partnership Team's (2011) 'Capability Development Model', Rockhampton Regional Council (RRC) aspired to be a 'Road Safety Leader' Council characterised by sound governance, long-term planning and a comprehensive Road Safety Strategy with measurable results.

The remainder of this paper describes the multifaceted methodology adopted to identify local priorities and develop the Strategy. Innovative approaches to cross-agency issue management and delivery are also discussed, as well as a "report card" monitoring tool to simplify reporting and maximise transparency.

Method

To adequately meet the road safety challenges in the region, RRC were strongly committed to developing a Strategy that was both evidence-based and captured community vision regarding transport and safety issues. The development process was guided by a Steering Committee involving senior officers from Council, TMR and Queensland Police Service (QPS) and involved the following complementary processes:

- Extensive community and stakeholder consultation;
- Regional profiling of current and future transport needs based on an understanding of our location, people, network and road use;
- An in-depth analysis of crash trends for the region; and
- Research on best practice in road safety delivery and governance.

Consultation: Encouraging the community to 'Be Heard' on safety and transport needs

Throughout 2011, RRC conducted a community consultation process known as the 'Be Heard' campaign, to inform the development of the Community Plan and the Regional Planning Scheme. The importance of transport and road safety issues was central to discussions at the 21 'Be Heard' community workshops and 18 special interest forums (*see Figures 1 and 2*).



Figures 1 & 2. Action shots from the Emu Park (left) and Yeppoon (right) 'Be Heard' workshops.

While not its primary purpose, the community feedback generated through this process informed priorities in the *Rockhampton Regional Council Road Safety Strategy 2012-2022*. Prominent themes to emerge from the workshops and special interest groups were as follows:

- Increased amenity and safety for pedestrians and cyclists;
- Improved intersection design and directional signage;
- Ensure a high standard of local road construction and maintenance;
- Increased grading and sealing of rural roads;
- Continued work towards flood proofing the network;
- Maintaining clear zones to increase visibility of animals and reduce roadside hazards;
- Improved accesses and appropriate speed zones to allow safe access onto highways;
- More rest areas on highways with appropriate amenities (toilets);
- More public transport options during peak times and improved bus routes/stops;
- Align speeds with road function and usage (reduced speeds in towns and CBD areas);
- Improved connectivity, accessibility and consistency of pathways - better linkages to housing and community facilities;
- Discourage heavy vehicles from using local roads where possible;
- Improved road shoulders to reduce sharp drop offs; and
- Provision of passing lanes for through traffic at cross roads.

The second consultation exercise involved a day-long stakeholder workshop to review current agency resourcing and priorities and cross-agency delivery opportunities. The workshop was facilitated by Lockholm Consulting and involved representatives from RRC, TMR, QPS, Education Queensland, Department of Communities, Queensland Health, Queensland Rail, Central Queensland University and interested community groups.

Crash and community profiling

To ensure the strategic direction aligned with known risk factors, the Steering Committee undertook a comprehensive analysis of crash and network use trends for a five year period. This detailed profile used both casualty data to pinpoint at-risk road users and crash data to highlight the dynamics and causal factors contributing to crash involvement. The analysis was structured around the following questions:

- *Who?* – At-risk road users;
- *What?* – Crash nature;
- *Where?* – Crash locations;
- *When?* – Temporal characteristics; and
- *Why?* – Causal factors.

As the intent was to align future road safety activity with the biggest crash risk (ie. “get best bang for the buck”), comparisons with Queensland trends were also made to identify issues/problems which were overrepresented, or of greatest urgency, in the Rockhampton region. The key findings of the data analysis component were as follows:

- Young drivers remain the predominant high-risk road user group in the region, accounting for 11 percent of the population and 36 percent of the serious injury crashes.
- Utilities/vans and heavy vehicles were overrepresented in serious crash statistics, reflecting the reliance on work-related travel in the region.
- Compared to the state average, Rockhampton region had a slightly higher proportion of crashes involving seniors (aged 60 years and over) and unlicensed drivers. Interestingly, crash victims in the area were less likely to be a motorcyclist.
- Crashes at all intersection types continue to be a major problem for the region. On local government-controlled roads, these crashes generally involve two vehicles travelling from adjacent approaches. ‘Rear-end’ and ‘hit object’ crashes are also frequent, indicating that following too closely and inappropriate speed are behaviours requiring attention.

- Crashes at cross-intersections are significantly higher in the region which, in part, reflects the grid-pattern road network. These crashes are more likely to occur at ‘give way’ or ‘stop’ signs, highlighting the need for increased emphasis on compliance with the basic tenets of the give way rule. In some instances, crashes appear to be a product of poor compliance with the urban default speed limit exacerbated by the wide roads. This data suggests that improved speed management through the 3Es – Education, Enforcement and Engineering – has significant potential to reduce both the incidence and severity of crashes in the region.
- Crashes are more likely to occur on weekdays during peak travel times in the afternoon. Late night and early in the morning remain high-risk times, particularly for young drivers.
- The overwhelming majority of crashes in the region (88.1%) were the product of illegal or poor driver behaviour. In addition to the ‘Fatal 5’ (ie. speeding, alcohol/drugs, fatigue, seatbelts and distraction), failing to give way or stop, disobeying road rules and driving dangerously are the primary causes of crashes in the RRC area.

Results

Based on the intelligence generated through the consultation process and regional network and crash profiling, the Steering Committee’s challenge was to develop a Strategy that:

- (i) Prescribed a model for effective and efficient road safety decision-making and delivery in the region [*improved governance*]; and
- (ii) Articulated a course of action that addressed known road safety problems in the RRC locality [*evidence-based strategic direction*].

Improved governance

Central to the development of the Strategy was a recognition that effective local partnerships and sound governance are critical to effective road safety delivery. To do this, the group responsible for regional road safety delivery – the Regional Road Safety (3E) Committee - operationalised the newly-developed ‘*International Standard for Road Traffic Management Systems – Requirements with Guidance for Use*’ (International Organization for Standardization, 2011) as its “way of doing business”. In doing so, local delivery is driven by the following institutional management functions: (i) results focus; (ii) coordination; (iii) legislation; (iv) funding and resource allocation; (v) promotion; (vi) monitoring and evaluation; and (vii) research and knowledge transfer.

In terms of **results focus**, the 3E Committee subscribed to the national target of a 30 percent reduction in road trauma-related fatalities and serious injuries by 2020 within our region. They also committed to contributing to national and state road safety initiatives, as well as local priorities.

The major change to current practice was improved **coordination** across agencies. This involved redefining the function of the 3E Committee. Historically, the 3E Committee almost exclusively had an operational focus, reacting to a multitude of customer and political requests. Through the strategy development process, this focus shifted to alternate between strategic (proactive) and operational (reactive) objectives (*see Figure 3*). This governance model actively encourages members of the community and elected representatives to bring emerging road safety issues/ideas to the 3E Committee for technical consideration. Issues are dealt with by agencies collectively and decisions are minuted and made available to politicians and community members upon request. This has noticeably increased consistency and transparency, as well as community confidence in the process. Streamlining the issue management task has obviously reduced duplication and ultimately increased the capacity of stakeholders to devote more time to strategic endeavours.

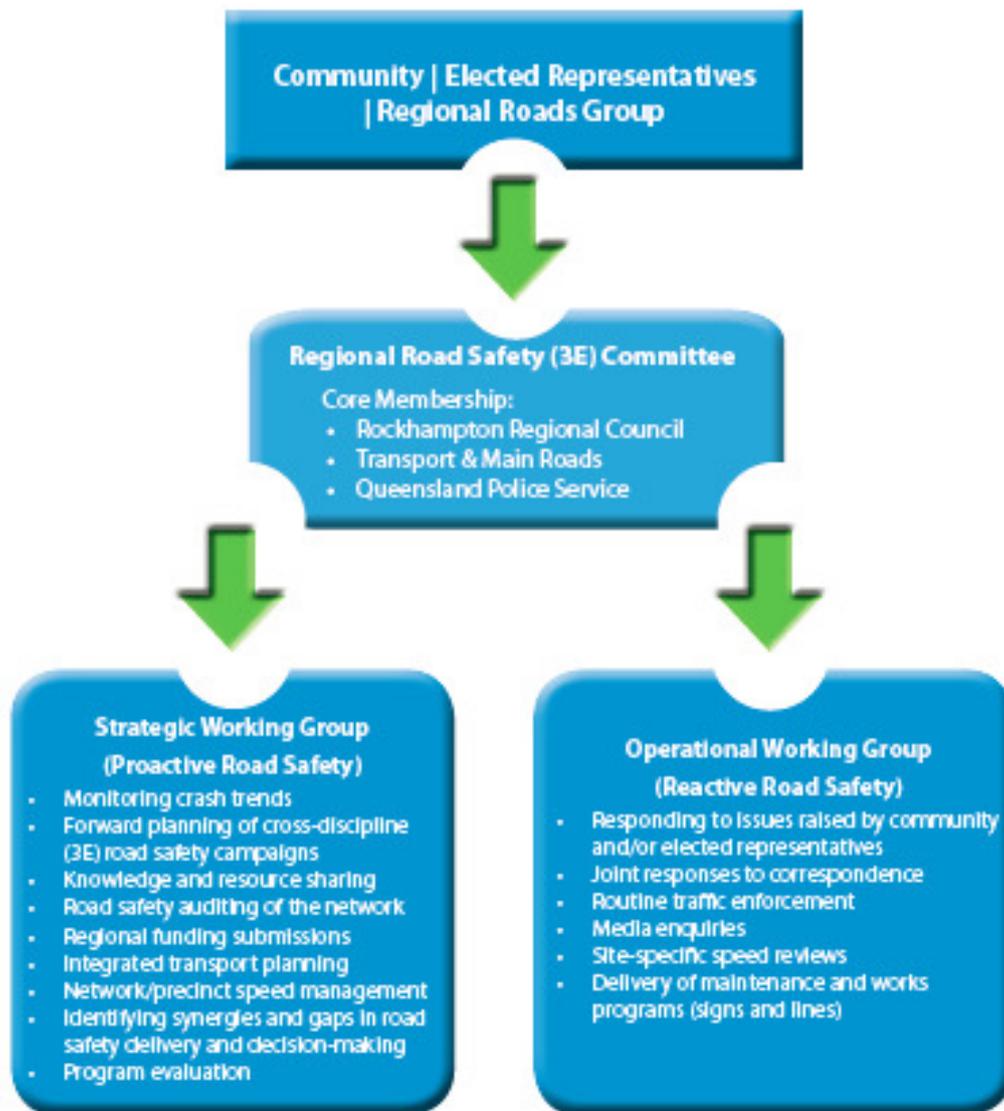


Figure 3. Road Safety Governance Model for Rockhampton Regional Council Area.

With regard to **legislation**, all road safety activity in the region is guided by the legal and policy requirements pertaining to land use, as well as network, vehicle and road user management. The 3E Committee also sees its role to suggest improvements to legislation as required, primarily to ensure logistical feasibility in the rural context.

Funding and resource allocation in the Rockhampton region is based on anticipated effectiveness (ie. ability to reduce road trauma and/or potential risk) and sustainability of initiatives. The 3E Committee is also actively exploring opportunities to foster an expressed interest from the private sector to invest in road safety infrastructure and tap into external funding sources/grant rounds.

A primary role of the 3E Committee is road safety **promotion**. This involves encouraging a shared recognition in the community that “road safety is everyone’s responsibility” and advocating across government to elevate the status of safety in the ‘transport planning hierarchy’, above and beyond amenity and efficiency (Schmidt, 2004). Improved relationships with traditional and social media are imperative to this function.

The 3E Committee fully appreciates the importance of developing and maintaining a sound knowledge base to make informed road safety decisions. Consequently, the 3E Committee has a process to systematically use crash and vehicle movement data to monitor performance over time, identify emerging trends, evaluate the effectiveness of initiatives/treatments and inform future road

safety delivery. ***Monitoring and evaluation*** is a standard agenda item for all strategic working group meetings and, as the data owners, QPS and TMR take a lead role in this function.

To facilitate ***research and knowledge transfer***, the 3E Committee keeps abreast of the latest road safety research and best practice delivery through established links with the Centre for Accident Research & Road Safety – Queensland (CARRS-Q). The Local Government Association of Queensland (LGAQ) has also been identified as suitable network to share experiences across Councils who are increasing their road safety focus. To this end, TMR and several Councils (including RRC) recently teamed up to develop a ‘Road Safety Technical Skills’ course which is earmarked to be delivered across several regions in Queensland. Themes covered in the course include: fundamentals of road safety theory and countermeasure selection; effective stakeholder engagement and governance; as well as the basics of crash mapping and investigation, road safety audit and speed management.

Finally, the governance model itself serves as a valuable succession planning tool. In the event of personnel changes, the governance model provides clear direction as to how road safety is managed locally and the role of individual agencies.

Evidence-based strategic direction: Priorities to action

The primary function of the Strategy document was to outline evidence-based road safety priorities for the region for the period 2012 to 2022. These priorities were informed by both the data profiling and community consultation tasks and aligned with the core components of the ‘Safe Systems’ model. They were captured in a *Regional Road Safety Priority Matrix* (see *Figures 4 and 5*).

A targeted Action Plan was subsequently drafted by the Steering Committee, outlining a suite of proposed initiatives to address each of these strategic priorities. Endorsed by Council in mid-2013, the Action Plan was developed on the premise that it is not possible to deliver road safety improvements to address all crash types and road user groups (ie. “do everything for everybody”). As such, the focus is on actions with the greatest potential to reduce the road toll. The Steering Committee was careful not to promise a “shopping list” of actions that were not sustainable or created false expectations within the community or among local elected representatives.

The Strategy and Action Plan are very much in their infancy. However, the 3E Committee has already started to progress some key initiatives, starting with those deemed to address the region’s major road safety problems and with the greatest potential to reduce road trauma. For example, in the ‘Safe Road Users’ domain, the partner agencies of the 3E Committee have:

- Partnered with local media to map out a year-long public education campaign with a focus on the primary behavioural factors contributing to crashes in the region (launch coincided with Fatality Free Friday 2013);
- Partnered with HotFM radio and local high schools to engage youth in the development of peer-based road safety advertising – based on the “mates helping mates” philosophy shown to have positive results in other areas of health promotion;
- Partnered with the Police Citizens Youth Club (PCYC) and local job network agencies to deliver monthly road safety and licensing sessions for at-risk and disadvantaged youth; and
- Partnered with PCYC and local volunteer groups to run a pilot Leaner Driver Mentor Program to assist disadvantaged youth obtain valuable supervised driving hours.

To date, minimal effort has been devoted to the ‘Safe Vehicles’ domain. However, planning is currently underway to better utilise local crash and vehicle movement data, as well as local intelligence, to inform deterrence-based enforcement operations targeting compliance of heavy vehicles. Best practice fleet management policy and practices across government are also a priority.



Figure 4. 'Safe Road Users' and 'Safe Vehicles' quadrants of the Priority Matrix.

In line with the National Strategy, the *Rockhampton Regional Road Safety Strategy* recognises the potential for improved road design and speed management to reduce road trauma. Consequently, local road safety activity has focused heavily on these two quadrants of the 'Safe Systems' model.

From a 'Safe Roads and Roadsides' perspective, effort has been devoted to addressing the 'fail to give way' problem in urban areas reflected in the crash data. Through improved crash mapping, the 3E Committee has pinpointed problem intersections on the network with a trend of 'hit angle' and 'rear end' crashes and scheduling 'fit-for-purpose' treatments to improve give way and speed compliance in the works program. In some cases, this has simply involved identifying inconsistencies in line-marking and/or signage and treating accordingly. Both local and state government are striving for consistency in pavement marking and signage across the entire network.

In addition, the Road Safety Strategy espouses a stronger commitment to Road Safety Auditing, recognising the significant benefit-cost ratios associated with both design audits (3 - 242:1) and existing roads audits (2.4 - 84:1) (Austroads, 2009; cited in Lee, 2010). Increased focus on safe design through rigorous development assessments locally should, in time, contribute to lower 'whole-of-life' costs associated with major capital works projects. For example, through proactive design, Rockhampton Regional Council (RRC) is also progressively implementing the 'Complete Streets' program (Institute of Public Works Engineering Australia, Queensland Division, 2010) 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.

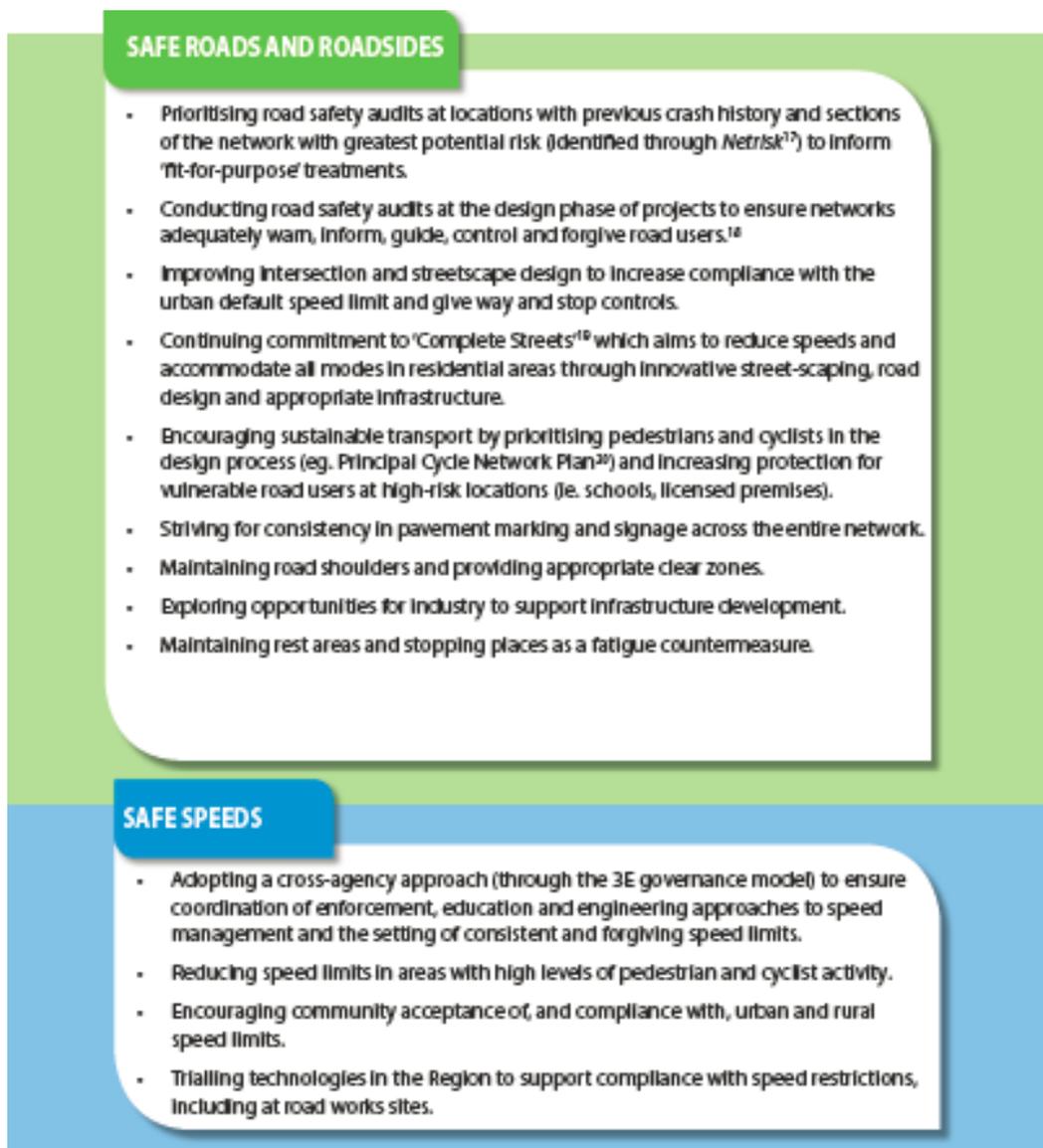


Figure 5. 'Safe Roads and Roadsides' and 'Safe Speeds' quadrants of the Priority Matrix.

Through Council's related 'Living Streets' policy, they are improving intersection and street-scape design to increase compliance with the urban default speed limit and give way and stop controls. This involves retrofitting existing parts of the network to separate carriageways, reduce lane width and increase connectivity, providing the dual benefit of improved safety and amenity, as well as lower 'whole-of-life' costs associated with a smaller area of pavement to maintain. An example of a current 'Living Streets' project in Rockhampton (Kent Street, between Cambridge and Archer Streets) is shown in *Figure 6*.

Finally, in the rural context, there is a local focus on: (i) installing painted median treatments to separate the carriageways on high-speed roads with high potential for 'head-on' crashes; and (ii) possible trials of low-cost perceptual countermeasures shown to be effective in reducing 'run-off-road on curve' and rural intersection crashes in Victoria and New South Wales (Macaulay et al., 2004). The potential for industry to support infrastructure development related to road safety (eg. rest areas and/or stopping places) is also being explored.

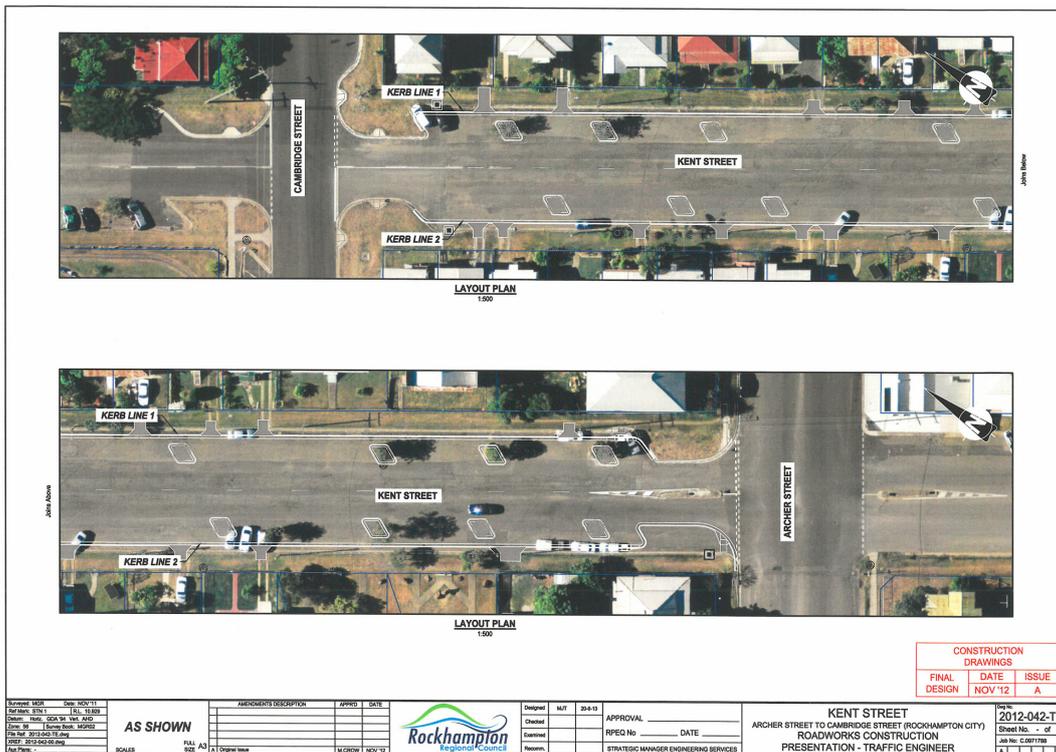


Figure 6. Preliminary design for the ‘Living Streets’ project in Kent Street, Rockhampton.

Even small speed reductions can greatly reduce crash risk and subsequent consequences (Global Road Safety Partnership, 2008). Therefore, delivery priorities in the Strategy are improved precinct and site-specific speed management. Both the community consultation process and the analysis of crash data highlighted the potential for speed reductions in urban centres (CBD areas) to improve safety and amenity for pedestrians and cyclists. To this end, RRC has committed to introducing lower speed limits in its three major urban centres. In Rockhampton, the CBD will be signed as a 30km/h zone, while both Yeppoon (see Figure 7) and Emu Park CBDs will be 40km/h precincts.



Figure 7. Local Area Traffic Management Plan for Yeppoon CBD area.

The perimeter of the reduced speed precincts was determined by a combination of crash patterns and exposure. This direction aligns well with the European philosophy of “sustainable road safety” which recognises the vulnerability of non-motorised road users and gives priority to their needs (Parker, 1997; cited in Corben, 1998).

Finally, in terms of site-specific speed management, the 3E Committee is actively conducting speed limit reviews on problematic sections of the network to ensure consistency and that posted speed limits marry the function of the road environment.

Conclusion and Future Direction

The *Rockhampton Regional Road Safety Strategy 2012 – 2022* formalises the partnership across state and local agencies and operationalises the newly-developed ‘*International Standard for Road Traffic Management Systems – Requirements with Guidance for Use*’. Through improved governance, the Strategy redefines the role of the Regional Road Safety (3E) Committee to facilitate cross-agency decision-making and channel collective resources into road safety priorities with the greatest potential to reduce road trauma.

The recently endorsed Action Plan outlines the steps to be taken by the 3E Committee and partner agencies to address the regional road safety priorities identified in the Strategy, many of which have been progressed. The Plan captures:

- *Strategy items* (under each of the four ‘Safe System’ elements);
- *Localised actions* (with lead agencies specified);
- *Comparative priority level* (high, medium, low);
- *Indicative 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 to document performance at a process and outcome level at six-monthly intervals).

The ‘Evaluation (Report Card)’ will be populated by the 3E Committee as actions are implemented with a view to the first report card being tabled to Council prior to the end of 2013. 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.

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