



Review of Road Safety

M4 Eastbound Off-ramp at Church St,
near Parramatta

1 Introduction and scope of the review

On the morning of 9 May 2019, there was a significant crash on the M4 near the eastbound off-ramp at Church St, near Parramatta.

While the NSW Police Force leads crash investigations, this report outlines a road safety review of the M4 eastbound off-ramp and surrounds, which has been completed at the request of the Secretary of Transport.

To complete this review, Transport for NSW' (TfNSW) Centre for Road Safety (CRS) has worked closely with TfNSW' Transport Coordination (TC) and Roads and Maritime Services (RMS), and received input from WestConnex and the NSW Police Force.

2 Context to the review

2.1 Road Safety is a key priority for the NSW Government

The NSW Government is committed to reducing the rates of fatalities and serious injuries resulting from road-related crashes in NSW. Achieving a 30 per cent reduction in the number of fatalities by 2021 (from 2008-10 levels) is a State Priority Target – and the Government has identified using roads safely as a priority area for action.

The Government is also committed to the Towards Zero vision within *Future Transport 2056*, which aims to have a NSW transport network with zero trauma by 2056.

NSW has adopted the internationally recognised Safe System approach to road safety, which is a holistic and proven approach. The core Safe System principles are:

- Fatalities and serious injuries should not be accepted. Roads, roadsides, travel speeds and vehicles need to be designed to help avoid a crash or reduce the impact of a crash if it happens. When one or more pillars of the system fail, the rest of the system should pick-up the load to ensure no one is killed or seriously injured.
- People make mistakes; but that shouldn't cost anyone their life. Human error is inevitable and therefore, crashes are inevitable.
- Humans are vulnerable. The human body has physical limits to withstanding the impact of a crash.

Road safety is a shared responsibility. We all need to make decisions with safety in mind, from the design of our roads and vehicles, investments, laws and education, to each road user acting safely every day.



The four pillars of the Safe System

2.2 Roles and responsibilities within the context of the review

While the enforcement of the NSW Road Rules is a primary responsibility of the NSW Police Force, TfNSW leads the development of a safe, efficient and integrated transport

system that keeps people and goods moving, connects communities and shapes the future of NSW cities, centres and regions.

CRS, within TfNSW, is responsible for developing practical solutions to reduce deaths and serious injuries on NSW roads, and administers the Community Road Safety Fund to deliver road safety programs across NSW. As a key implementation partner, RMS' role is to build, manage and maintain state road networks and assets.

RMS has granted a concession to the WestConnex New M4 concessionaire to build, finance, operate and maintain the New M4, including the M4 Widening. RMS retains a key WestConnex assurance role on behalf of the NSW Government.

2.3 Responding to fatal crashes on State roads

When a fatal crash occurs on NSW State roads, the NSW Police Force attends, investigates and develops a crash report. Police can work with RMS Vehicle Inspectors to investigate the roadworthiness of vehicles involved.

Police provide information about the crash to CRS, as input to a Fatal Crash Report outlining the time, date, location, vehicles, traffic controllers and traffic movements involved in the crash. CRS provides such Fatal Crash Reports within State and Local Government, and also maintains a database of NSW crash data for the analysis and design of road safety programs across NSW.

In addition, RMS Sydney Region conducts a site inspection following a fatal crash on a State road, to investigate and inform engineering treatments and road environment asset considerations.

RMS Sydney Region also meets each month with the NSW Police Force to discuss the circumstances surrounding fatal crashes on State roads and to give consideration to any safety mitigations that may be required. The Safe System approach is applied and considerations include engineering treatments, line markings, speed limits, behavioural and enforcement options.

2.4 Availability of NSW crash data

CRS' database of NSW crash data currently includes finalised data up until the end of the 2017 calendar year, and preliminary data for 2018 and early 2019.

While fatal crash information is typically available in the days following a crash, there is a delay of several months before injury crash data is available, during which time CRS brings together, checks and finalises data from the NSW Police Force and NSW Health.

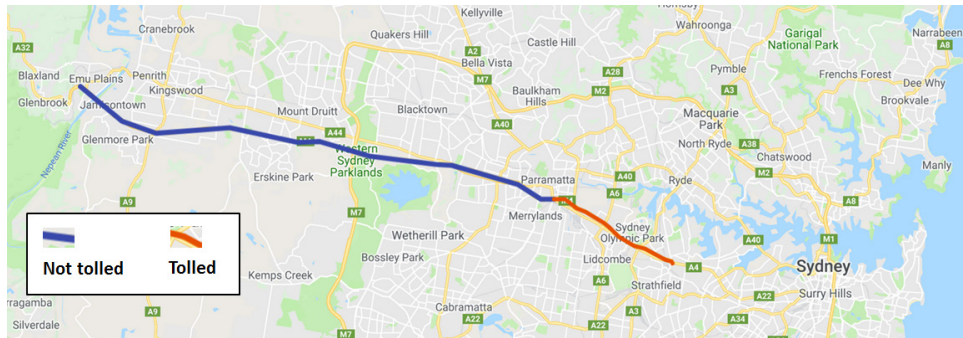
2.5 The M4 and WestConnex Parramatta connections are a key link within Sydney's road and transport networks

The M4 Motorway runs for 40 kilometres of separated carriageway from Lapstone at the foothills of the Blue Mountains, via the Central River City of Greater Parramatta, to Concord in Sydney's inner west.

The M4 is one of the highest trafficked roads in NSW, and the section of the M4 west of Parramatta (which represents more than 80 per cent of the M4 Motorway) is not tolled.

In July 2017, the NSW Government completed the widening of the existing M4 Motorway from Parramatta to Homebush, to increase capacity on this section from three to four lanes in each direction. The 7.5km M4 Widening forms part of the \$16.8 billion WestConnex project, and this section of the project officially opened to traffic with a toll free period in July 2017.

A distance-based toll was introduced between Parramatta and Homebush on 15 August 2017.



Sydney's M4 Motorway runs from Lapstone to Concord

A person driving a car or riding a motorcycle eastbound along the M4 who passes the off-ramp at Church St is now required to pay a toll as follows on WestConnex:

- \$2.23 to exit at the James Ruse Drive off-ramp,
- \$3.49 to exit at Silverwater,
- \$4.08 to exit at Hill Road,
- \$4.93 to exit at Homebush Bay Drive.

No further tolls currently apply to continue eastbound beyond Homebush Bay Drive. However, further tolls will apply when the New M4 tunnels open later this year.

2.6 The WestConnex project is one of the NSW Government's infrastructure initiatives to support the significant growth forecast for the greater Parramatta area over the coming years

Other infrastructure projects to support the Greater Parramatta area include the Parramatta Light Rail and the Sydney Metro West.

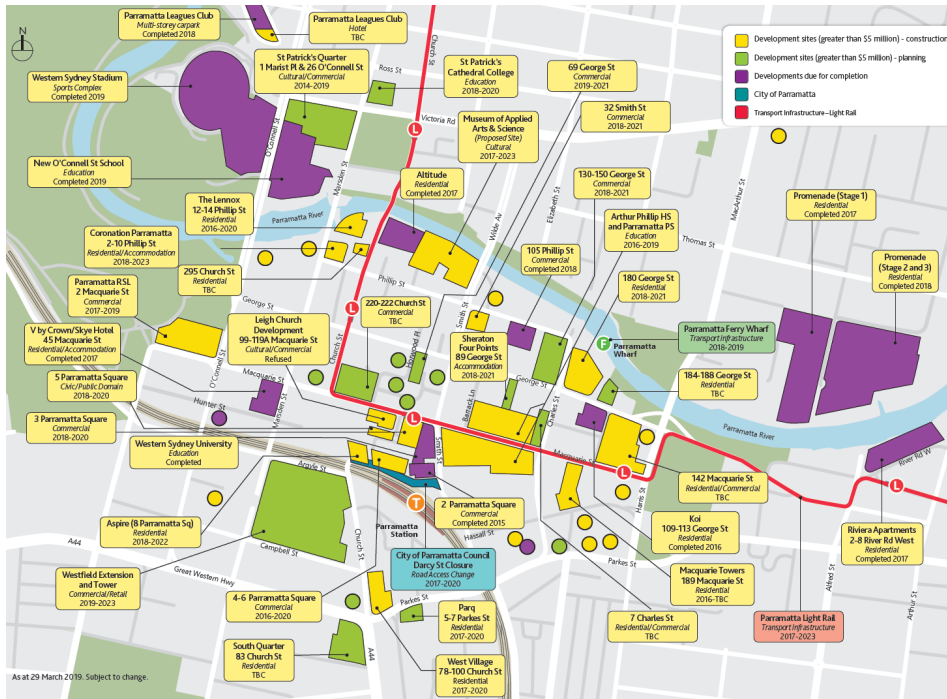
In the Parramatta CBD alone, around \$5.4 billion worth of construction is underway now, and further \$4.5 billion of investment is planned or under consideration.

These infrastructure and development projects are required to support the forecasted 72,000 additional homes to be built in Greater Parramatta, to accommodate a population increase from 238,850 residents in 2016 to 416,750 by 2036 – an increase of 177,900 residents.¹

More than 113,000 additional jobs are also forecast to emerge within Greater Parramatta over the next 20 years, via a combination of growth of existing industries and establishment of new knowledge intensive businesses into the precinct.²

¹ DP&E Greater Parramatta Growth Area Interim Plan, and DP&E Population Forecast Main Series

² DP&E Greater Parramatta Growth Area Interim Plan

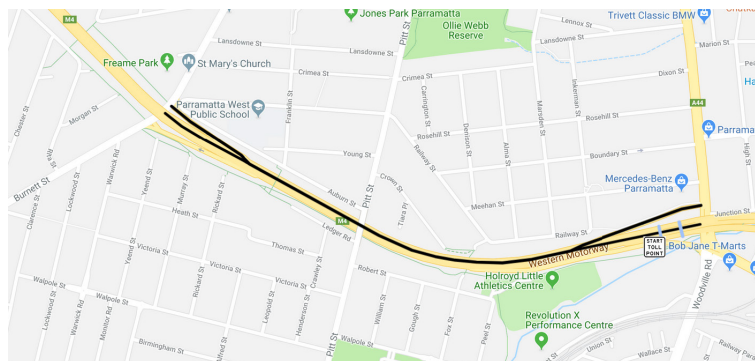


Significant development is planned, underway and has been recently completed in Parramatta

3 The M4 eastbound Church St off-ramp and surrounds

3.1 Road configuration

The review team has identified that the road environment around the Church St off-ramp can be broadly conceived as the length of the M4 from the Burnett St on-ramp (including the on-ramp), past the Church St off-ramp (including the off-ramp) to the toll point and the commencement of WestConnex.



M4 eastbound Church St off-ramp and surrounds

The M4 runs for approximately 1km between the end of the Burnett St on-ramp and the start of the Church St off-ramp. Drivers joining the M4 via the Burnett St on-ramp are required to merge into traffic on the M4, before drivers already on the M4 may need to merge onto the Church St off-ramp a short distance down the road.

The toll point, at the commencement of WestConnex, is approximately 340 metres beyond the start of the Church St off-ramp.

3.2 Traffic volumes on the M4 and WestConnex around Parramatta have changed over recent years

The off ramps at Church St (eastbound) and James Ruse Drive / Burnett St (westbound) are the principal access points for motorists travelling on the M4 or WestConnex to reach the Parramatta CBD. However, traffic volumes at the Church St (eastbound) off-ramp and the Westconnex route from Parramatta to Homebush have been impacted by the introduction of the toll in August 2017.

For example, the number of vehicles using the Church St off-ramp in the AM and PM peaks increased by approximately 35% following the introduction of the toll.




The inverse effect was observed for the first stage of WestConnex from Parramatta to Homebush. For that length of road, average daily traffic volumes (at all times of the day) reached their highest point during the toll free period, before falling approximately 25% in the year following the introduction of the new toll.


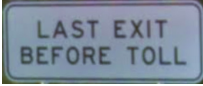

3.3 Traffic signals

Traffic signals operate at the end of the off-ramp where drivers can turn left or right at the intersection with Church St. TMC and RMS operate the intersection to minimise queuing back on to the M4 as far as reasonably possible.

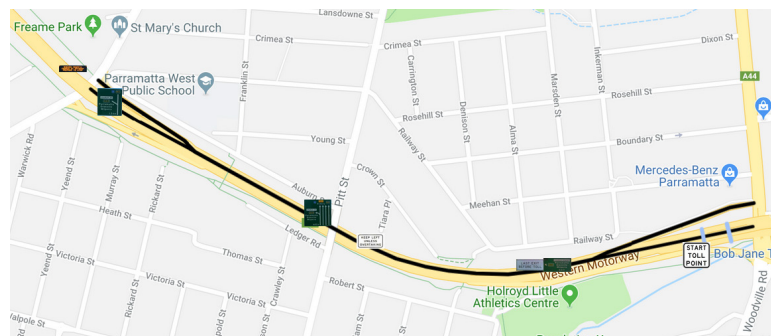
3.4 Major signage

Motorists are presented with the following major signage on approach to the Church St off-ramp:

 <p>Variable Messaging Sign (VMS)</p>	<p>This VMS is in place just before the Burnett St overbridge, displaying messaging to warn drivers about queued traffic around the Church St off-ramp ahead.</p>
 <p>Exit 1.5 km ahead sign</p>	<p>This large directional sign is in place just after the Burnett St overbridge, and advises drivers that the Church St off-ramp is 1.5km ahead.</p>
 <p>Exit 600m ahead sign</p>	<p>This large directional sign is in place just prior to the Pitt St overbridge, and advises drivers that the Church St off-ramp is 600m ahead.</p> <p>The sign also identifies that the right-most three lanes proceed eastbound past the off-ramp, where a toll applies.</p>

 <p>Keep left unless overtaking sign</p>	<p>This smaller sign is in place just after the Pitt St overbridge, and serves as a reminder for motorists to comply with NSW Road Rule 130 to keep left unless:</p> <ol style="list-style-type: none"> 1. Overtaking, 2. Turning right or making a U-turn, 3. Avoiding an obstacle, 4. Driving in congested traffic, 5. Driving in a special purpose lane, or 6. If there is a 'left lane must turn left' sign or left traffic arrow, and the driver is not turning left.
 <p>Last exit before toll sign</p>	<p>This sign is in place approximately 50m before the start of the deceleration lane which precedes the Church St off-ramp, and explicitly advises drivers that they must take the Church St off-ramp if wish to avoid paying the minimum \$2.23 toll to proceed along WestConnex to the James Ruse Drive off-ramp.</p>
 <p>Church St exit sign</p>	<p>This large directional sign is in place at the start of the deceleration lane which precedes the Church St off-ramp.</p>

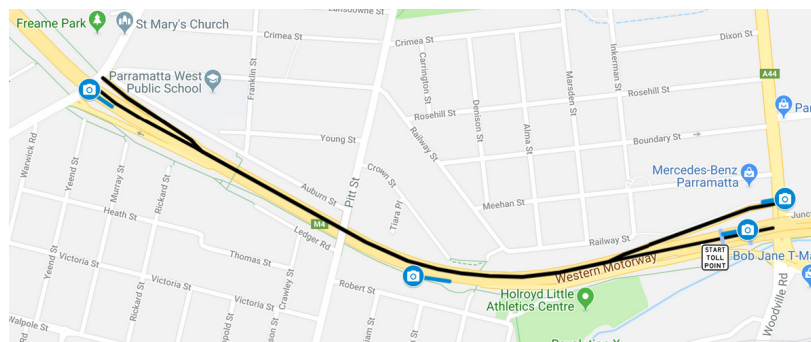
These signs are placed along the M4 as follows:



Major signage on approach to the Church St off-ramp

3.5 Traffic monitoring cameras

TC operates four traffic monitoring cameras at the Church St off-ramp and surrounds, which provide excellent coverage along the M4 and the Church Street off-ramp, as follows:



Four traffic monitoring cameras at the Church St off-ramp and surrounds

These cameras provide a live-stream of traffic and road conditions and driver behaviours, which feed through to the Transport Management Centre and RMS.

The footage is not recorded, but the live-stream feed is used to manage traffic light phasing and other safety and traffic management treatments within the road environment.

3.6 Enforcement cameras

3.6.1 Speed cameras

The NSW Government does not currently operate any fixed or mobile speed cameras on the M4.

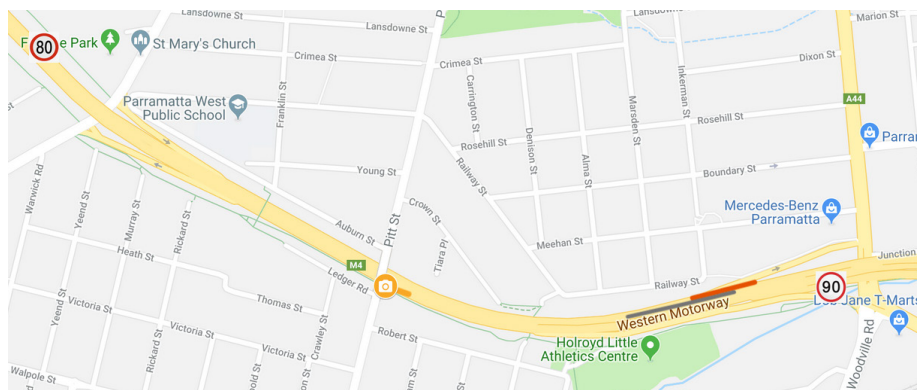
However, in previous years there were two fixed speed cameras in place on the M4 at Wentworthville, approximately 4km west of the Church St off-ramp between the Coleman Street Overpass and Cumberland Highway Overpass. Those speed cameras were decommissioned alongside a number of others, on the basis of the NSW Auditor-General's finding that there had not been a consistent reduction in crashes, injuries and fatalities at those locations.

4 Timeline of key events

The review team has identified the following timeline of key road safety events at the Church St off-ramp and surrounds, over recent years:

- July 2017:** The widening work from Parramatta to Homebush was completed and this first stage of WestConnex opened to traffic with a toll free period.
- 15 Aug 2017:** A toll was introduced onto the widened WestConnex from Parramatta to Homebush. (Over the following year, traffic volumes increased at the M4 Church St off-ramp, particularly in the AM peak; and decreased on WestConnex between Parramatta and Homebush).
- 8 Jul 2018:** A fatal crash involving three cars occurred (approximately 6:00pm on a Sunday night). A car was attempting to merge from the Burnett St on-ramp onto the M4, and collided with a stationary vehicle that was queuing to access the Church St off-ramp. A passenger in the merging vehicle was killed.
- 9 Jul 2018:** RMS completed a desktop review of the crash location.
- 11 Jul 2018:** RMS completed a site inspection of the crash location, noting that the crash occurred in a 90km/h speed zone, approximately 600m before the beginning of the Church St off-ramp. The inspection also noted that a range of directional, warning and advisory signage was present, as well as a permanent VMS.
- 20 Jul 2018:** RMS introduced a package of safety treatments at the Church St off-ramp and surrounds,³ including:
- A **traffic barrier** to manage merging at the Church St off-ramp,
 - 200m of **solid line markings** to prohibit drivers from merging onto the off-ramp from the three right hand lanes of the M4,
 - Extending the 80km/h works zone **speed reduction** from before the Burnett St overbridge up to the toll point and the commencement of WestConnex,
 - A **video recording traffic camera** near the Burnett St on-ramp to capture driver behaviour.

³ <https://www.rms.nsw.gov.au/about/news-events/news/roads-and-maritime/2018/180717-new-traffic-barrier-m4-off-ramp-church-st-parramatta.html>



Package of safety treatments introduced 20 July 2018

- 8 Aug 2018:** RMS met with the NSW Police Force to review fatal crashes on State roads within Sydney Region, including the fatality of 8 July 2018. Considerations noted the recently completed package of safety treatments, and no further treatments were identified but it was agreed to continue to monitor the location.
- 9 May 2019:** A fatal crash involving multiple vehicles occurred (approximately 6:00am on a Thursday morning). A car came to a stop on the M4 at the Church St off-ramp and activated its hazard lights. A number of vehicles braked heavily and collided, including a large rigid truck in lane 5 which collided with a light truck (ute) in the same lane. The light truck (ute) was pushed into a car also in lane 5, and the driver of the light truck (ute) was killed.
- 16 May 2019** RMS completed a site inspection of the crash location, noting that the crash occurred in an 80km/h speed zone, a short distance before the WestConnex toll gantry. The inspection also noted the directional, warning and advisory signage was present.
- 17 May 2019** AECOM provided the WestConnex New M4 concessionaire with a draft report of a Road Safety Audit of the crash location. The audit was undertaken in accordance with CRS' *Guidelines for Road Safety Practices*, 2011. The advice identified three safety issues classified with a high risk rating:
- The 'toll ahead' and 'last exit before toll' signage are too close to the Church St off-ramp,
 - Drivers were observed crossing the unbroken line to 'jump the queue' for the Church St off-ramp
 - Drivers were observed exceeding the posted speed limit of 80km/h.
- The draft report also identified that there is no street lighting on the eastbound carriageway near the Church St exit.
- 18 May 2019** A further crash involving multiple vehicles occurred (approximately 7pm on a Saturday night). A number of vehicles in lanes 3 and 4 collided a short distance after the Burnett St on-ramp, and no injuries were recorded. A number of vehicles travelling in lanes 1 and 2 to avoid the first crash then collided, in a secondary crash closer to the Church St off-ramp. One vehicle flipped onto its side. While emergency services attended the crash, no road users were transported to hospital.

5 RMS is also currently working to implement additional works at the Church St off-ramp and surrounds

RMS is currently working to implement three road works projects at the Church St off-ramp and surrounds. These are outlined overleaf, and were identified and planned before the crash of 9 May 2019.

<p>Increasing the capacity of the M4 eastbound Church St off-ramp</p>	<p>Significant works are planned to extend the length of an existing left hand turn lane, and create a right turn lane, to improve the capacity of the off-ramp.</p> <p>These works are anticipated to significantly reduce queuing in off-peak times; although queuing may still remain during the AM and PM peak.</p> <p>Further information is provided within Attachment 1. RMS is now working to expedite these works to commence in mid-2019 and be completed before the end of the year.</p>
<p>Improvements to the intersection of Woodville Road, Parramatta Road and Church Street</p>	<p>Significant works are planned to increase the capacity of this intersection, which will facilitate increased traffic flows through the M4 off-ramp at Church St.</p> <p>These works are part of the \$30 million Parramatta Congestion Improvement Program to upgrade intersections that access the Parramatta CBD.</p> <p>Further information is provided within Attachment 2.</p>
<p>Widening and resurfacing the Burnett St eastbound on-ramp, introducing lane use signs on gantries, electronic signs and entry ramp signals</p>	<p>These works are part of the M4 Smart Motorway project to provide for safer merging onto the M4 motorway.</p> <p>These works are currently underway – and are the reason for the 80km/h speed zone that was extended to the WestConnex toll point on 20 July 2018.</p> <p>These works will make the M4 safer and more efficient by improving and controlling the vehicle merge arrangements.</p> <p>Further information is provided as Attachment 3.</p>

These works are anticipated to improve road safety at the Church St off-ramp.

6 Analysis of crash data

6.1 Comparative analysis: casualty crashes at the Church St off-ramp

CRS has analysed the number of casualty crashes at the Church St off-ramp and surrounds, for the three significant periods identified in the timeline of key events:

<p>Prior to the introduction of the toll</p>	<p>5 years of data (15/8/2012 – 14/8/2017)</p>
<p>After the introduction of the toll, but before RMS applied the safety treatments</p>	<p>Almost 1 year of data (15/8/2017 – 19/7/2018)</p>
<p>After RMS applied the safety treatments</p>	<p>Approx 5 months of data (20/7/2018 – 31/12/2018). Note: Caution is required to draw meaningful conclusions from this very small sample of less than 6 months of data.</p>

The analysis is provided at **Attachment 4**, and demonstrates that there was a notable increase in casualty crashes at the Church St M4 off-ramp and surrounds after the toll was introduced onto the widened WestConnex from Parramatta to Homebush in August 2017.

However, the analysis also identifies that casualty crashes have subsequently fallen substantially at the same location, since RMS applied the package of safety treatments (a barrier, solid line marking, speed reduction and additional traffic camera). While that finding is drawn from the very small dataset that is currently available, it is clear the number of casualty crashes per year has fallen back below that observed before the introduction of the toll.

Attachment 4 also includes analysis of all other M4 off-ramps. To achieve this, a common approach was applied to define the area of the off-ramps, to include the off-ramp as well as a length of motorway before and after the off-ramp. All off-ramps have been analysed against the same three time periods applied to analyse the Church St M4 off-ramp.

The comparison with other M4 off-ramps (both eastbound and westbound) suggests that while the package of safety treatments has been effective – the M4 Church St eastbound off-ramp continues to have a higher number of crashes than other M4 off-ramps.

6.2 Comparative analysis: casualty crashes at other comparable Sydney motorway off-ramps

CRS has also analysed the number of casualty crashes at a selection of comparable off-ramps at other Sydney motorways. That analysis is provided at **Attachment 5**.

The analysis within Attachment 5 demonstrates that the Church St M4 off-ramp also has a higher number of casualty crashes than all other off-ramps analysed.

6.3 A note on the comparison of different off-ramp locations

It should be noted that there are numerous and significant differences in the road environments at various off-ramps. For example:

- Different geographic features, development patterns and destinations impact traffic flows in different ways within and across different motorways.
- The WestConnex motorway east of Parramatta is tolled, while the M4 motorway west of Parramatta is not tolled.
- The M5 motorway west of King Georges Road is tolled, while the M5 East to the east of King Georges Road is not tolled.
- There are also differences in the way that the toll is applied between tolled sections of the M5 and WestConnex. The NSW Government M5 Cashback scheme allows NSW residents to claim back the value of tolls (excluding GST) paid while using privately registered vehicles on the M5 South Western Motorway.⁴

For this reason, caution is required to draw explicit conclusions about the relative safety of one off-ramp and surrounds compared to another, without concurrent consideration of traffic volumes and features of the local road network at those points.

⁴ <http://www.rms.nsw.gov.au/roads/using-roads/motorways-tolling/index.html>

7 Conclusions and recommendations

While the crash analysis completed for this review has identified that casualty crashes have fallen substantially at the M4 eastbound Church St off-ramp and surrounds since RMS implemented the package of safety treatments on 20 July 2018, it is apparent that the M4 eastbound Church St off-ramp continues to have a higher number of casualty crashes than all other off-ramps analysed.

Recommendations		
Safer Roads	Action 1	RMS will review signage on approach to the M4 eastbound Church St off-ramp, to ensure that signage provides motorists with sufficient time to select the appropriate lane, and to safely manoeuvre to the off-ramp if they do not wish to proceed onto WestConnex and pay a toll.
	Action 2	RMS will review whether street lighting is required on the eastbound carriageway of the M4 near the Church St off-ramp.
	Action 3	In the short term, RMS will expedite the planned works to increase the capacity of the Church St off-ramp. Over the longer term, RMS will investigate whether it would be safe and beneficial to connect the Burnett St on-ramp and the Church St off-ramp via a continuous lane, rather than the current separated merging on and off lanes. Also over the longer term, RMS will investigate whether there may be any options to develop additional access points for drivers travelling eastbound on the M4 to access the Parramatta CBD.
	Action 4	TC will review the timing for ' <i>traffic queuing ahead</i> ' messaging on the VMS display situated on approach to the M4 eastbound Church St off-ramp.
	Action 5	RMS and TC will further review the operation of traffic signals at the intersection of the off-ramp and Church St, to determine if more can be done to mitigate queueing back onto the M4.
Safer Speeds	Action 6	RMS and TC will investigate whether it is appropriate to include this section of the M4 in the smart motorway system, to enable speed management via a variable speed zone responsive to queueing at the Church St off-ramp. RMS and TC will also investigate whether to retain, reduce or redesign the 80km/h speed zone which is currently in place, at each stage of the upgrades and works conducted at this location.
	Action 7	CRS will investigate the appropriateness of a speed camera to enforce eastbound on the M4 immediately prior to Church St off ramp, taking into account there are a relatively low number of speed related crashes recorded at the location.
Safer People	Action 8	CRS, TC and RMS will investigate additional initiatives to communicate that under the distance based tolling framework, a comparatively smaller toll currently applies to proceed beyond the Church St M4 off-ramp to the WestConnex James Ruse Drive off-ramp (\$2.23), than applies to continue further eastbound on WestConnex (up to \$4.93).
	Action 9	CRS will investigate whether road user movement enforcement cameras or an additional Police presence could be feasible and beneficial at locations such as the Church St off-ramp and surrounds.

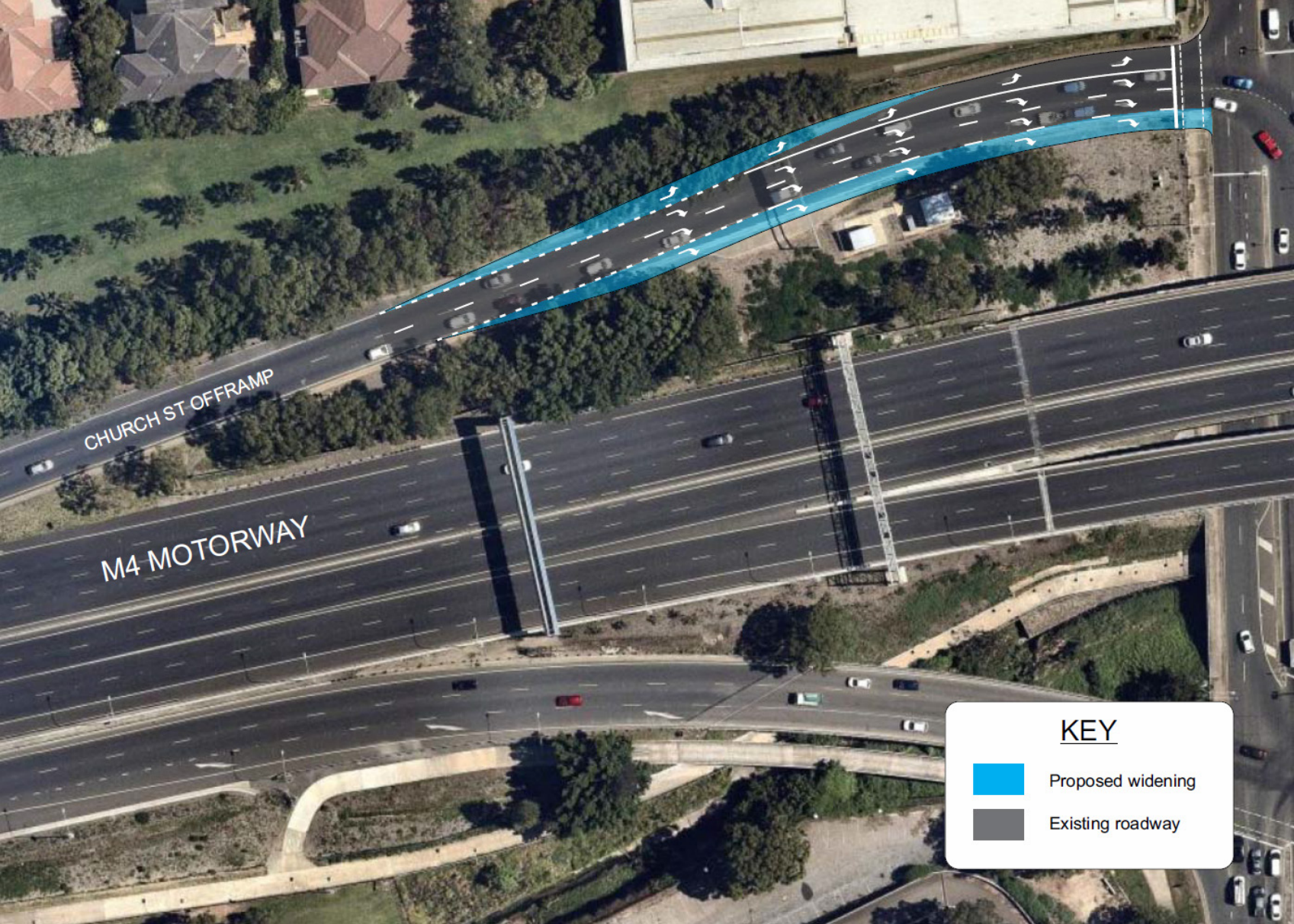
Post-Crash Response	Action 10	CRS will investigate updating NSW' <i>Guidelines for Road Safety Practices</i> (2011), with regard to the recently published <i>Managing Road Safety Audits</i> (2019) report published by Austroads (the peak organisation of Australasian road transport and traffic agencies).
	Action 11	CRS and RMS will investigate whether RMS' Fatal Crash Site Inspection report template could be improved to capture additional insights and better identify road safety treatments.
	Action 12	TC and RMS will continue to monitor traffic movements and crash data at the M4 eastbound Church St off-ramp and surrounds.

It should also be noted that NSW' transport agencies are moving to a new operating model from 1 July 2019, from which time TfNSW' Greater Sydney Division will lead the administration of the Sydney road network, including the M4 eastbound off-ramp and surrounds.

8 Potential broader considerations

There are a number of other points within Sydney's road network, and in other jurisdictions, where toll roads commence. TfNSW could also consider a broader project to identify whether there are useful road, behavioural and speed treatments in place at other locations that could be applied at the Church St off-ramp.

Increasing the capacity of the M4 eastbound Church St off-ramp



Review of Road Safety: M4 Eastbound Off-ramp at Church St, near Parramatta – June 2019



Intersection improvements on Woodville Road, Parramatta Road and Church Street, Granville

The NSW Government is funding this work as part of its \$30 million Parramatta Congestion Improvement Program which aims to reduce congestion around the Parramatta local government area by upgrading key intersections that access the Parramatta Central Business District.

Updates and announcements

Roads and Maritime Services will carry out utility survey and geotechnical investigation work along Woodville Road and Church Street, at the intersections of:

- Crescent Street
- Parramatta Road
- M4 Western Motorway on and off ramps.

We will be on site for up to 20 night shifts and 7 day shifts between Monday 30 July 2018 and Friday 5 October 2018, weather permitting.

Our day work hours will be between 7am and 6pm from Monday to Friday and 8am to 6pm on Saturdays. Our night work hours will be between 6pm to 7am from Sunday to Thursday.

For more information please view or download the [July 2018 project update \(PDF, 928Kb\)](#).

Project background

The NSW Government has committed \$30 million to the Parramatta Congestion Improvement Program to reduce congestion in Parramatta and surrounding areas by upgrading key intersections.

The Woodville Road, Parramatta Road and Church Street intersection at Granville has been identified as an important intersection to manage the increasing traffic demand and to improve traffic flow around the Parramatta CBD.

Proposed intersection improvements would serve future traffic and transport needs of the Parramatta CBD by reducing queue lengths, and easing congestion at the Woodville Road, Parramatta Road and Church Street intersection.

Key features

Proposed intersection works would include:

- provision of three through lanes for southbound vehicles and two through lanes for northbound vehicles along Woodville Road at the intersection of Church Street
- provision of a dedicated left turn lane from Woodville Road to access the M4 Motorway
- provision of dual right turn lanes from Woodville Road to access to Parramatta Road
- provision of a dedicated right turn lane from Woodville Road to access Crescent Street
- maintenance of dual left turn lanes from Crescent St to access Woodville Road
- removal of bus priority lane on Parramatta Road
- provision of a shared through and right turn lane and one dedicated right turn lane from Parramatta Road to access Church Street
- provision of three westbound through lanes along Parramatta Road to access the M4 Motorway modification of a left turn lane from Parramatta Road to Woodville Road
- maintenance of dual left turn lanes from Church Street to Parramatta Road
- additional right turn lane at the Church Street M4 Motorway eastbound exit ramp
- formalise southbound kerbside lane on Woodville Road from south of Junction Street as left turn only to Parramatta Road.

Next steps

Investigation work will inform the design of traffic improvements along Woodville Road.

We will continue to keep the community informed as the project progresses.

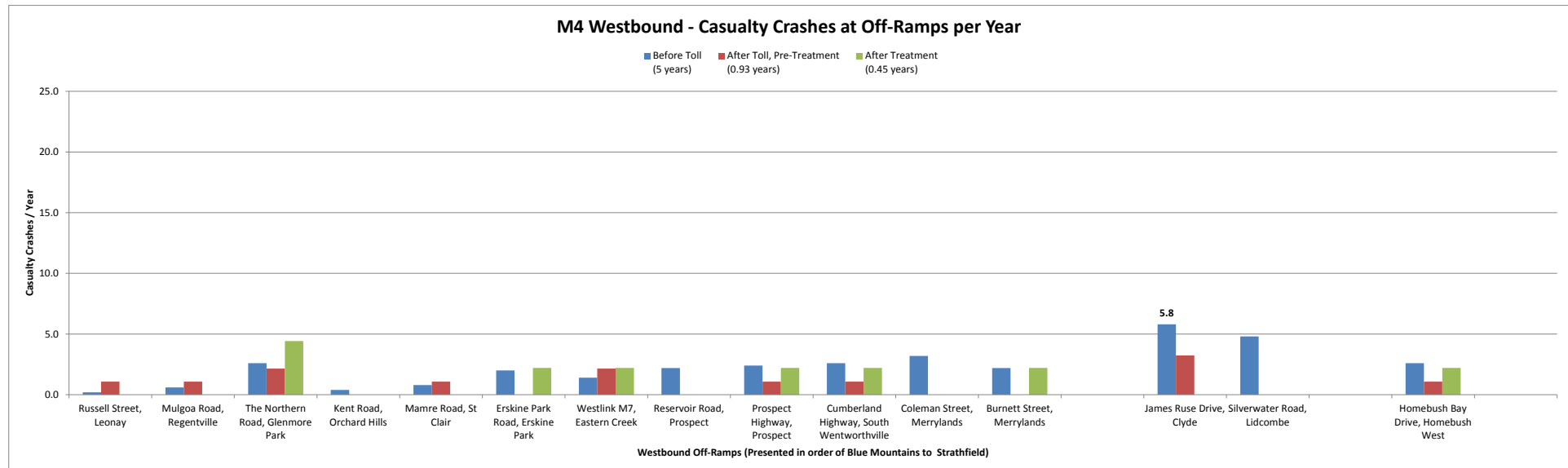
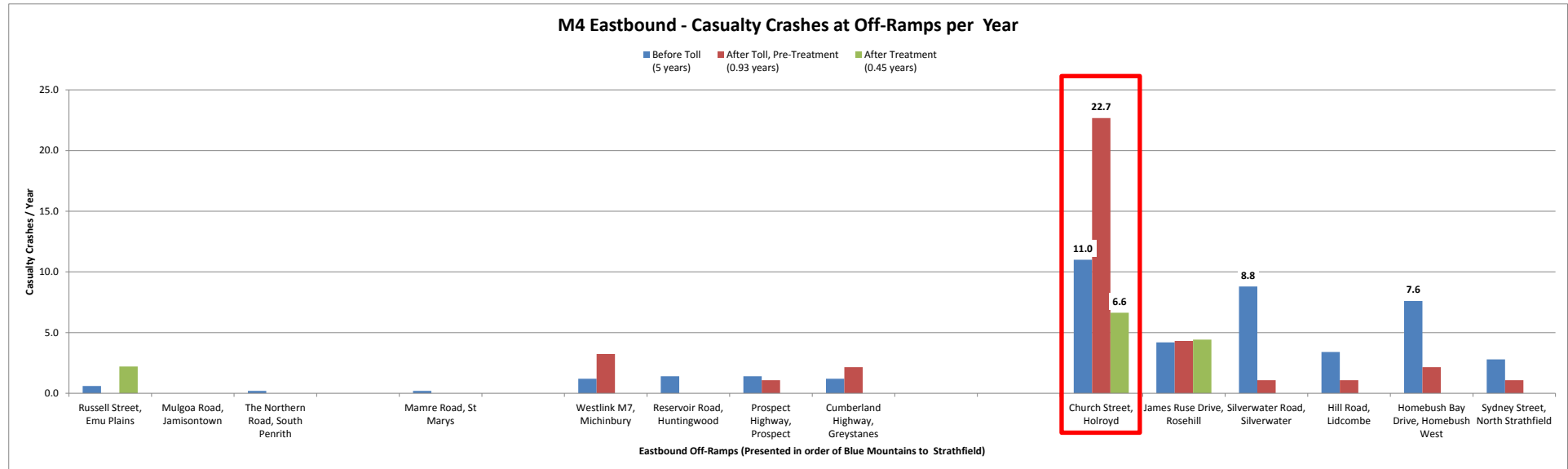
M4 Smart Motorway

Proposed changes to Burnett Street interchange



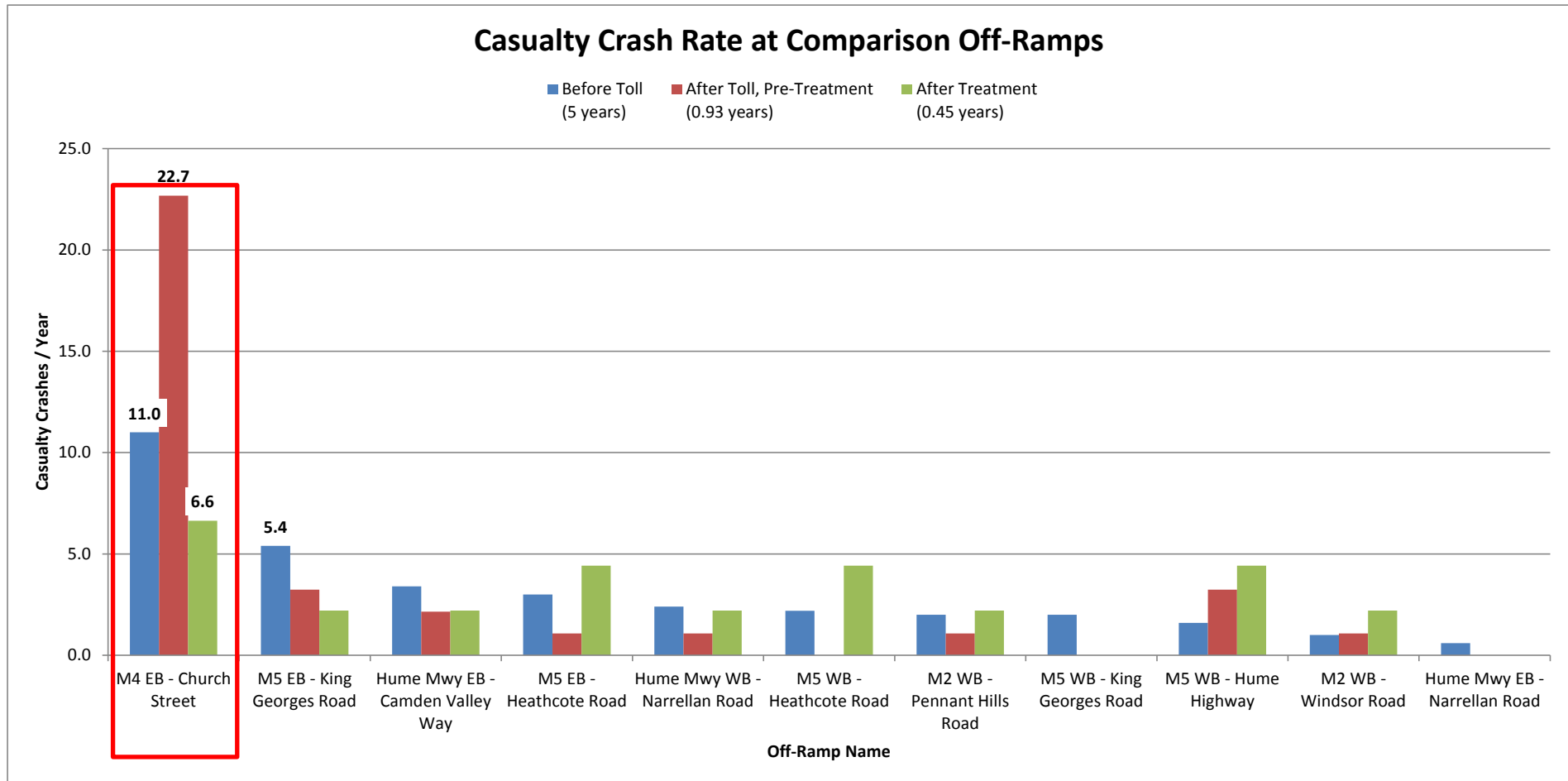
Review of Road Safety: M4 Eastbound Off-ramp at Church St, near Parramatta – June 2019

Attachment 4: Casualty crashes at all M4 off-ramps



Note: As the time periods available for analysis vary, casualty crashes are presented as a rate per year to enable comparison.

Attachment 5: Casualty crashes at selected Sydney motorway off-ramps



Note: As the time periods available for analysis vary, casualty crashes are presented as a rate per year to enable comparison.