

**ITEM 3. ITEM FOR COMMITTEE INFORMATION – SAFETY
IMPROVEMENTS – INTERSECTION OF EUSTON ROAD AND
MADDOX STREET ALEXANDRIA**

TRIM RECORD NO: 2013/217908

RECOMMENDATION

It is recommended that the Committee note and support:

- (A) The introduction of a dedicated right-turn arrow for motorists travelling north on Euston Road turning right into Maddox Street;
- (B) The introduction of a signalised pedestrian crossing across Maddox Street (west);
- (C) The banning of the right-turn traffic movement from Euston Road (south) into Maddox Street (west); and
- (D) The City to commission traffic surveys in Lawrence Street, Alexandria six months after the signal upgrade to determine if further traffic calming is required in the local area.

DECISION

BACKGROUND

The Roads and Maritime Service (RMS) invited Council to nominate projects for the Federal Government's Nation Building Black Spot and the NSW Government's Black Spot Programs which seeks to reduce crashes on Australian roads. These programs fund treatments at dangerous "black spot" locations where high rates of road crashes occur.

To be considered for funding, a location must have a minimum of three (3) casualty crashes over a five year period with the proposed treatment having a Benefit Cost Ratio (BCR) of 2.0 or more.

The City nominated the intersection of Euston Road and Maddox Street for the 2014/15 Black Spot Program. Between 1 July 2007 and 30 June 2012, this intersection recorded a total of 13 crashes of which 11 resulted in injuries and ten involved the right-turn movement from Euston Road into Maddox Street. Between 1 July 2012 and 30 June 2013, a further two crashes involving the right-turn from Euston Road into Maddox Street have occurred at this intersection.

On 4 July 2014, the City received confirmation from the RMS that this location had received 50/50 funding to upgrade the traffic signals as part of the 2014/15 Black Spot Program. The City has accepted this funding to upgrade the intersection.

The funds from the 2014/15 Program will be used to upgrade the traffic signals to provide:

- a dedicated right-turn arrow for motorists travelling north on Euston Road turning right into Maddox Street;
- a signalised pedestrian crossing across Maddox Street (west); and

- the banning of the right-turn traffic movement from Euston Road (south) into Maddox Street (west).

Euston Road is a State Road under the control of the RMS while Maddox Street is local road under the control of the City. The RMS is the consent authority for all traffic signals and they must give support to any proposed change to traffic signals.

This intersection is currently controlled by traffic signals. All approaches have through movements with filtered left and right-turns. Both arms of Euston Road and only the eastern arm of Maddox Street have signalised pedestrian crossings over them.

COMMENTS

To address the issue of right-turning vehicles from Euston Road colliding with through traffic, the City and RMS discussed the potential to include a dedicated right-turn arrow for both north and southbound motorists on Euston Road. This proposal was not supported by the RMS as it would increase congestion at the intersection and on Euston Road, especially in peak hours.

Instead, the RMS agreed to a dedicated right-turn arrow for northbound motorists on Euston Road turning right into Maddox Street and banning the right-turn movement for southbound vehicles on Euston Road turning into Maddox Street.

The proposed dedicated right-turn arrow for northbound motorists on Euston Road into Maddox Street targets the movement where the highest numbers of right-turning crashes are occurring without introducing additional phases into the traffic signal cycle.

The RMS' *Traffic Signal Design* guidelines recommend introducing a "No Right Turn" restriction for motorist's safety when the opposing flow of traffic has a dedicated right-turn arrow to improve safety of all road users.

Benefits of Safety Improvements

The dedicated right-turn arrow for northbound motorists on Euston Road turning into Maddox Street will mitigate the majority of the injury crashes occurring at this intersection.

Adding the missing pedestrian crossing across the western arm of Maddox Street is consistent with the City's initiative to improve pedestrian accessibility and safety wherever possible.

The "No Right Turn" restriction into Maddox Street for southbound motorists on Euston Road will prevent conflict between vehicles and pedestrians using the new signalised crossing in Maddox Street (west).

The "No Right Turn" restriction also encourages through traffic to remain on State Roads like Euston Road, Fountain Street and Sydney Park Roads instead of using local streets like Maddox Street.

Traffic Volume Considerations

To analyse the traffic impact of the proposed safety improvements, the City commissioned the following traffic surveys:

- video classification counts at the intersections of Euston Road/Maddox Street and McEvoy/Fountain Streets

- 7 day tube counts in Lawrence Street between Fountain Street and Harley Street.

An analysis of the survey data results showed:

- The right-turn movement from Euston Road into Maddox Street(west) recorded a total volume of 909 vehicles over the 24 hour period with a maximum of 119 vehicles during the weekday PM peak hour – or about two vehicles per minute.
- Lawrence Street between Fountain Street and Harley Street recorded an Annual Average Daily Traffic (AADT) volume of 890 vehicles (two-way) with a peak hour volume of 119 vehicles per hour in the PM weekday peak hour – or about two vehicles per minute.

Intersection modelling was undertaken for the signalised intersection of Fountain and McEvoy Streets assuming a worst case scenario whereby all vehicles banned from turning right from Euston Road into Maddox Street would reroute via this intersection. This modelling showed there would be no reduction in the Level of Service at the intersection of McEvoy and Fountain Streets in peak hours.

The City does envisage a portion of traffic currently turning right into Maddox Street from Euston Road would reroute into Lawrence Street via the intersection of Fountain and McEvoy Streets.

Assuming a worst case analysis whereby all vehicles currently turning right from Euston Road into Maddox Street (west) would reroute via Lawrence Street would result in:

- Peak hour volumes in Lawrence Street between Fountain and Harley Streets increasing to around 238 vehicles an hour – or about 4 vehicles every minute.
- Daily traffic volumes in Lawrence Street between Fountain and Harley Streets increasing to around 1,799 vehicles per day.

It should be noted that in reality this worst case analysis is unlikely to eventuate as a number of existing vehicles currently undertaking the right-turn from Euston Road into Maddox Street (west) would seek alternate routes other than Lawrence Street to reach their destination.

The RMS' *Guide to Traffic Generating Developments* specifies environmental limits for each road class. These standards are based on RMS research relating to safety (crossability, visibility, pedestrian delay) and amenity (noise and air quality).

In practice, if these standards are met, then it is reasonable to assume that the street can be crossed safely and with little delay and that traffic noise and air quality levels are acceptable.

For a local street like Lawrence Street, the standards stipulate a **desirable** peak volume of 200 vehicles per hour and an **absolute** peak volume of 300 vehicles per hour.

Under the worst case analysis, peak-hour volumes in Lawrence Street would be just over the desirable environmental limit but well under the absolute environmental limits with the "No Right Turn" in place.

A further criteria specified by the RMS in the *Road Design Guide* stipulates that daily traffic volumes on local streets should not exceed a maximum of 2,000 vehicles per day.

Again, under the worst case analysis, daily traffic volumes in Lawrence Street would still remain under the maximum limit for local streets with the “No Right Turn” in place.

The City will however monitor the traffic impact in Lawrence Street and commit to commissioning traffic counts six months after the upgrade to the signalised intersection to determine if further traffic calming is required in the local area.

CONSULTATION

The RMS was consulted on the safety improvements and provided their “in-principle” support prior to the City nominating this intersection for the 2014/15 Black Spot Program.

The City notified local residents and businesses about the safety improvements by a letterbox drop to 1,617 properties in the area. The City allowed 28 day for the Community to provide written submissions.

The City received 40 submissions regarding the changes. Four submissions totally supported the safety improvements at the intersection and one submission was neutral. Thirty-five (35) submissions were opposed to the safety improvements - it should be noted this represents just over 2% of the total number of residents consulted.

Submissions of support for the safety improvements were based on increased pedestrian safety, improved traffic flow along Euston Road and a reduction in the number of motorists using Maddox Street to access Mitchell Road.

Submissions opposed to the safety improvements were based on:

- the “No Right Turn” restriction forcing residents to drive further to access their properties
- an increase in the volume of vehicles using Lawrence and
- A dedicated right turn arrow should be provided at the intersection of Euston Road and Maddox Street instead of the “No Right Turn” restriction.

It is accepted that the “No Right Turn” restriction into Maddox Street will increase travel distances for some local residents but the extra distance residents will need to travel to access their properties would be less than 100 metres using Lawrence Street.

Vehicles accessing Maddox Street from all other directions would not be affected by the “No Right Turn” restriction.

It is concluded that on balance the overall benefit to public safety from the improvements to the intersection of Euston Road and Maddox Street far outweigh the impact of the reassigned traffic and any extra travel distance for residents to access their properties.

FINANCIAL

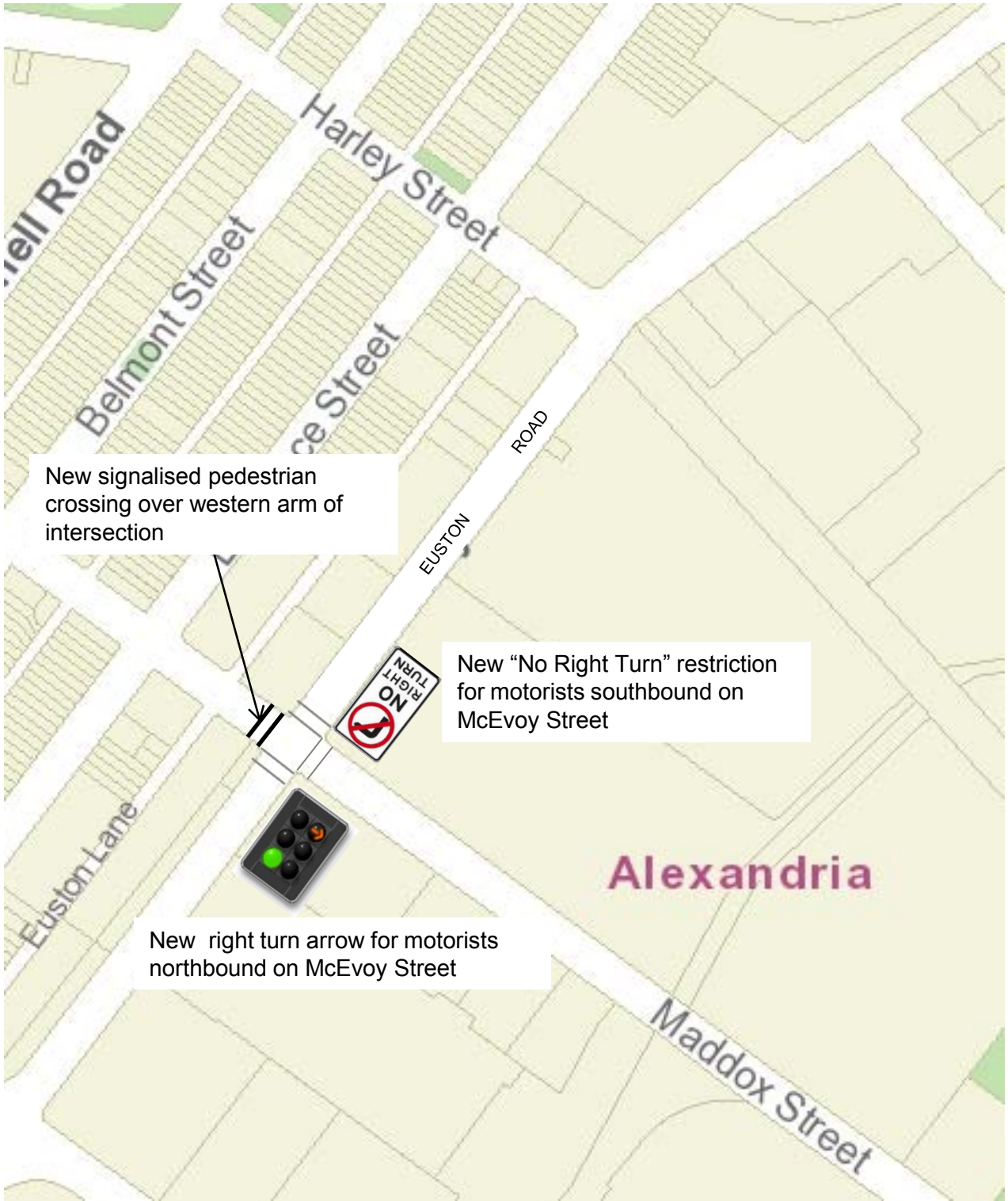
On 4 July 2014, the City was advised by the RMS that 50/50 funding was approved under the Black Spot Program for this intersection to be upgraded. The City has accepted this funding and the improvements must be delivered within the 2014/15 Financial Year.

ATTACHMENTS

Attachment A – Safety Improvements – Euston Road and Maddox Street, Alexandria

Attachment B – Crash Diagram – intersection of Euston Road and Maddox Street, Alexandria

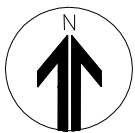
Rodney King, Senior Traffic Engineer



New signalised pedestrian crossing over western arm of intersection

New "No Right Turn" restriction for motorists southbound on McEvoy Street

New right turn arrow for motorists northbound on McEvoy Street



Euston Road and Maddox Street, Alexandria
Proposed Black Spot Intersection Upgrade

Intersection of: Euston Road and Maddox Street, Alexandria

TCS ID: 748

Crashes reported 1 July 2007 to 31 June 2012

