



Reference: 17.544r03v1

1 December 2019

Serco Australia Pty Ltd
Level 24, 60 Margaret Street
SYDNEY NSW 2000

Attention: Ms Robyn Barlow, Operational Performance Manager

Re: Clarence Correctional Centre – Road Safety Audit

Dear Robyn,

We refer to the Clarence Correctional Centre and Condition D2 which requires a Road Safety Audit (RSA) to be undertaken of Six Mile Lane and Old Six Mile Lane in Glenugie. TRAFFIX has subsequently commissioned DC Traffic Engineering to independently undertake this RSA in accordance with the scope, and is presented in **Attachment 1**.

The RSA has published 'findings', which outline the key safety issues identified. As these roads are a public asset, the responsibility for closing these findings rest with Clarence Valley Council and the Roads and Maritime Services (RMS), who would have the authority to endorse and enact any remedial measures. This letter thus provides context for the impact of the particular development on these roads, having regard for:

- The operational characteristics of the Clarence Correctional Centre, including management measures documented in the Traffic Management Plan, prepared by Serco Australia.
- The expected traffic volumes on these roads in 2030 for a ten year horizon from occupation.

▶ **Condition D2**

Condition D2 states stipulates:

"Prior to occupation, an independent RSA of Six Mile Lane and Old Six Mile Lane, from the existing Pacific Highway to Avenue Road, must be prepared by a suitably qualified traffic engineer to identify any road safety risks and ensure that appropriate measures are identified to mitigate any identified risks to the satisfaction of Council and RMS.

The RSA must:

- a) consider expected traffic volumes on these roads in 2030 (ten year horizon from occupation) as agreed by RMS and Council with consideration of management practices identified to address Condition D1;



- b) utilise a speed limit of 80 km/h on both Avenue Road and Eight Mile Lane (or as otherwise advised by RMS); and
- c) consider Austroads Guide to Traffic Management Part 6 Intersections, Interchanges and Crossings, Section 2.3.6 Warrants for BA, AU and CH Turn Treatments and Austroads Guide to Road Design Part 4A Unsignalised and Signalised Intersections."

► Scope of RSA

The scope of Condition D2 has been satisfactorily addressed by the RSA undertaken by DC Traffic Engineering, with the following noteworthy:

- Future Volumes: The Lead Auditor has clarified that the RSA considered future traffic growth and the change in function of these roads as a result of the Pacific Motorway operation (Woolgoolga to Ballina Upgrade). In particular:
 - Six Mile Lane, Aerodrome Road, Airport Road and Old Mile Lane North Deviation were all assessed in the context of being publicly accessible roads either for through travel, or to access the Clarence Valley Airport.
 - The section of Old Six Mile Lane between Airport Road and Old Six Mile Lane North Deviation was also assessed in the context of being a publicly accessible road for through travel.
 - The remnant and discontinuous sections of Old Six Mile Lane were assessed in the context of being local access, low-volume roads only. Since this road has been severed by the Pacific Motorway, and is no longer continuous for through travel, its function has been reduced accordingly. Furthermore, the expected/ demanded safety amenity along these no through roads is also considerably less compared with the alternative through route of Old Six Mile Lane North Deviation.

TRAFFIX agrees with this methodology to assess the roads based on their future expected classification, which thus assumes a commensurate amount of traffic volumes.
- Speed Limits: The Audit Team undertook the Road Safety Audit in November 2019 following completion of road works for Avenue Road and Eight Mile Lane, including a 80 km/h speed limit.
- Intersections: Table 1 of the RSA confirms the scope was based on all roads between Pacific Highway and Avenue Road. Safety findings were published for Airport Road / Aerodrome Road / Old Six Mile (2-2), Pacific Highway / Six Mile Lane Intersection (3-2), Old Six Mile Road Deviation (5-4) and Eight Mile Road / Aerodrome Road (7-2).



► RSA Findings

To assist Council and RMS in closing the RSA, TRAFFIX has assessed the impacts of the Clarence Correctional Centre on these potential roads, having regard for the Traffic Management Plan (TMP) prepared by Serco. A response to each finding is provided in **Table 1**.

Table 1 – RSA Findings

Reference	Roads / Intersection	Finding Summary	Development Context
2-1a	Airport Road	The sealed pavement on Airport Road, north of Old Six Mile Lane is insufficient and in poor condition.	It is not expected that any drivers from the Clarence Valley Correctional Centre will use this section of road on a regular basis noting it only serves the Clarence Valley Airport. Road maintenance is the responsibility of Council for a locally managed road.
2-1b		The curvilinear alignment on Airport Road, north of Old Six Mile Lane needs protection from an embankment.	
2-2	Airport Road / Aerodrome Road / Old Six Mile Lane	The intersection may have insufficient sight distance based on the rural default speed limit of 100km/h.	The Serco TMP has prohibited use of these roads being traversed by staff with the exception of those staff living locally. It is the responsibility of the RMS to set appropriate speed limits on roads.
2-3	Airport Road	Lack of readability for speed limit signage.	The Serco TMP has prohibited use of this road being traversed by staff with the exception of those staff living locally. It is the responsibility of the RMS to set and display speed limits on roads.
2-4		Clear zone conditions on each side of the road is poor.	The Serco TMP has prohibited use of this road being traversed by staff with the exception of those staff living locally. The verge is under the management and control of Council.



3-1a	Aerodrome Road	Lack of delineation	<p>The Serco TMP has prohibited use of this road being traversed by staff with the exception of those staff living locally.</p> <p>Council and RMS could resolve any treatments through the Traffic Committee</p>
3-1b	Six Mile Lane	Lack of delineation	<p>The Serco TMP has prohibited use of this road being traversed by staff with the exception of those staff living locally.</p> <p>Council and RMS could resolve any treatments through the Traffic Committee</p>
3-2	Pacific Highway / Six Mile Lane	This intersection should be channelised to allow for through traffic on Pacific Highway to pass a right turning vehicle.	<p>This risk is an existing deficiency and is inherent to the high volumes of the Pacific Highway, being a major arterial road.</p> <p>The Serco TMP prohibits use of Six Mile Lane with the exception of local staff (who would not use this intersection).</p>
3-3a	Aerodrome Road and Six Mile Lane	Further signage can be implemented to guide road users on the curvilinear alignment.	<p>The Serco TMP has prohibited use of this road being traversed by staff with the exception of those staff living locally.</p> <p>Council and RMS could resolve any treatments through the Traffic Committee</p>
3-3b			
3-3c			
3-3d			
3-3e			
3-4			
3-5	Six Mile Lane / Pacific Highway	Further signage can be implemented to alert drivers to Six Mile Lane terminating at Pacific Highway.	<p>The Serco TMP has prohibited use of this road being traversed by staff with the exception of those staff living locally.</p> <p>Council and RMS could resolve any treatments through the Traffic Committee</p>



3-6	Aerodrome Road / Six Mile Lane	The roadway along bridges do not have a flush pavement surface.	The Serco TMP has prohibited use of this road being traversed by staff with the exception of those staff living locally. Council could undertake Civil Engineering works to remedy the pavement design.
4-1a	Old Six Mile Lane	The section of Old Six Mile Lane east of Airport Road is unsealed and cannot sustain high vehicle speeds.	The Serco TMP has prohibited use of this road being traversed by staff with the exception of those staff living locally. Council could undertake Civil Engineering works to seal the road.
4-1b			
5-1			
5-2		The new deviation of Old Six Mile Lane should be provided with centerlines, edgelines and shoulders.	The Serco TMP has prohibited use of this road being traversed by staff with the exception of those staff living locally. Council and RMS could resolve any treatments through the Traffic Committee
5-3		The curvilinear arrangement may require warning signs to slow vehicles down to a suitable speed.	
5-4		The intersection of the new deviation and old alignment requires further signage and potentially a change in priority to account for future volumes.	
6-1		The old alignment is unsealed, though in any case may be suitable for local road access. A No Through Road sign is recommended The	
6-2			
7-1	Aerodrome Road	Consideration should be given to widening this road to accommodate future through traffic.	The Serco TMP has prohibited use of this road being traversed by staff with the exception of those staff living locally. Council and RMS could resolve any treatments through the Traffic Committee
7-2	Eight Mile Lane / Aerodrome Road	This shoulder at this intersection does not allow for passing of through traffic.	The Serco TMP has prohibited use of this road being traversed by staff with the exception of those staff living locally. Council and RMS could resolve any treatments through the Traffic Committee



► Conclusion

The Road Safety Audit undertaken independently by DC Traffic Engineering has published findings based on the scope required by Condition D2 and when accounting for the future growth and functions of Six Mile Land and Old Six Mile Lane. The Traffic Management Plan by Serco prohibits use of these roads with the exception of local staff, which will minimise risks and impacts associated with traffic for the Clarence Correctional Centre.

Accordingly, TRAFFIX considers that the Clarence Correctional Centre may operate safely, where progressive upgrades can be undertaken to Six Mile Lane and Old Six Mile Lane independently by Council and RMS.

We trust the above is of assistance and request that you contact the undersigned should you have any queries or require any further information.

Yours faithfully,

Trafix

Kedar Ballurkar
Senior Engineer

Encl: Attachment 1 – Road Safety Audit (DC Traffic Engineering)

ATTACHMENT 1

Road Safety Audit