10 March 2022 211022 TAAB

Schools Infrastructure c/o TSA Management
Level 15
207 Kent Street
Sydney NSW 2000

Attention: Nicola Carcary

## Wee Waa High School

**Traffic Response to Submissions**

Dear Nicola,

This letter aims to respond to items raised by authorities and the public during the exhibition period for the Wee Waa High School Project (SSE-21854025).

**Transport for New South Wales Submission**

*TfNSW submission to SEARS recommended that the proponent consider in consultation with TfNSW and Narrabri Shire Council as a part of the design process, alternative locations for the pickup drop off area preferably within the site boundary with access gained from a local road.*

*The current proposal provides a pickup drop off bay in George Street in line with the proposed bus zone. TfNSW notes that seven drop off spaces and two bus spaces have been provided in the current proposed design.*

*The Transport and Accessibility Impact Assessment indicates that 45% of high school students and 6% of teachers are expected to utilize drop off facilities with a 15 minute peak period expected. The proposed design proposed is based on an estimated turn over of 90 seconds for an estimated 68 vehicles in the peak period. TfNSW is concerned that the proposed combined design and the location of the pickup drop off area will result in queuing of vehicles onto the Kamilaroi Highway.*

*Accordingly, TfNSW recommends that the pickup drop off bay be located separate to the bus zone. The pickup drop off zone should be located within the site boundary with access gained from a local road. Alternatively, the pickup drop off bay should be located on a local road, designed with adequate length to ensure queuing into the Kamilaroi Highway is avoided.*

The current design has a pick up and drop off that is designed with adequate length to ensure queuing into the Kamilaroi Highway is avoided. This has been determined based on a demand assessment using travel mode survey data collected during the preparation of the TAIA and the projected student numbers.

Further, the site pick up and drop off demand assessment (detailed in the TAIA) that dictated the length of the pick up and drop off area is considered a conservative estimate for the following reasons:

- Surveys of other school sites has indicated that during the 15 minute peak between 20% to 50% of students are picked up and dropped off. The site assessment assumed the worst case of 50% of students during this peak.
- The pick up and drop off capacity has been provided for the full future capacity of 300 students which is dependent on further funding and should this service be needed. In the interim the capacity of this pick up and drop off area will be double what is required by current enrolments.

It is noted that if the future capacity of the school increases to 300, should pick up and drop off queues form, management solutions can be pursued such as staggered bell times.

The pick up and drop off location was discussed with the senior staff of the current high school and as part of this consultation process it was identified that the pick up and drop off was required to be located adjacent to the administration area of the school to allow for passive supervision of the students entering.

Pick up and drop off within the site boundary was considered during the detailed design phase. An on site through road that provides pick up and drop off capacity is undesirable from a pedestrian safety point of view as it increases the number of pedestrian-vehicle conflicts within the site. It also would result in significant spatial impacts to the site, reducing available area for play space and sports fields and courts.

TfNSW's Road User Space Allocation Policy states that road user space should be allocated to road users in the order of walking, cycling, public transport, freight and deliveries, and point to point transport ahead of general traffic and on street parking for private motorised vehicles. The provision of an internal road to provide for kiss and drop would counteract this policy by prioritising general traffic over the pedestrian links across the playing field and football field/athletics track.

*TfNSW does not support the location of a pedestrian crossing across the Kamilaroi Highway as depicted on the submitted plans. TfNSW notes that the traffic and pedestrian numbers are not likely to meet TfNSW warrants and safety considerations for approval of a pedestrian crossing.*

*Subject to support by Narrabri Shire Council TfNSW suggests that Kerb extensions, with no pedestrian refuge, designed in accordance with TfNSW Technical Directions, Australian Standard – Manual for uniform Traffic Control Devices and Austroads Design Guide Part 4 Intersections and Crossings be installed on Mitchell Street on the western side of the Mitchell and George Streets intersection to provide a formalized crossing location.*

*The installation of kerb extensions at this point will also provide clear delineation of the traffic lane and discourage overtaking at the intersection.*

If a crossing is used predominantly by school children, is in a site that is not suitable for a children's crossing, and in two counts of one-hour duration immediately before and after school hours:

- Pedestrians volumes are greater than or equal to 30, and
- Vehicles volumes are greater than or equal to 200,

Then a pedestrian zebra crossing may be installed.

The travel mode survey identified that pedestrian travel by students was highly impacted due to a lack of infrastructure to cross Mitchell Street. As part of the survey students, carers/parents and staff were asked " "*Which measures would encourage you to walk or ride a bicycle? If you already walk or ride a bicycle - what measures would you like to see more*?", 26% of respondents stated that more crossings and footpaths would encourage walking as a transport mode.

As provided to TfNSW during the submission preparation phase, the student addresses of both the future site of Wee Waa High School and the existing Wee Waa Public School show there are a significant number of students in a walking catchment of 400 metres that would require crossing Mitchell Street (41 primary school students and 77 high school students). With the future capacity of 300, an additional 76 students would require crossing. This would exceed the 30 pedestrian requirement of the pedestrian crossing warrants.

Current pedestrian counts show 32 and 26 pedestrians crossing the Kamilaroi Highway in the vicinity of the site between 8-9am and 2:45-3:45pm respectively. Vehicle volumes in the same period indicate 180 vehicles in the AM peak and 198 vehicles in the PM peak. While current vehicle and pedestrian counts do not meet the warrants, once a safe crossing facility is in place it is expected that pedestrian travel will increase and warrants would likely be met in both time periods. This is supported by the responses within the travel mode survey.

It is noted that there is currently no marked pedestrian crossing on the Kamilaroi Highway within Wee Waa and it is expected that if built, this facility will also provide amenity for the wider residents of Wee Waa. There is also a 40 km/h zone on Mitchell Street between George Street and Charles Street and as such the proposed crossing fits within this road safety regime at this part of Mitchell Street / Kamilaroi Highway.

Further to the above, since the submission of the SSDA documentation, School Infrastructure has commissioned an independent Road Safety Audit (attached in Appendix A) to assess safety issues surrounding the Kamilaroi Highway within the vicinity of the site. The Road Safety Audit identified a high level of risk with both the distance required to cross the Kamilaroi Highway and the high percentage of heavy vehicles on the Kamilaroi Highway. The provision of a marked pedestrian crossing with kerb blisters will reduce these risks identified within the audit.

The provision of a marked crossing on the Kamilaroi Highway is also supported by TfNSW's Road User Space Allocation Policy as it prioritises road user space to walking over freight and general traffic.

It is noted that TfNSW supports the installation of kerb extensions. While the installation of kerb extensions will increase pedestrian safety and assist in reducing the distance required to cross, it will not provide legal priority to pedestrians crossing. If warrants were not expected to be met then this would be an acceptable solution, however as noted previously, these warrants are likely to be met once This would not achieve the aims of the Road User Space Allocation Policy as it would prioritise freight

*Any landscaping, fencing and signage to be provided within the site or along the boundary with any adjoining road reserve is to be designed and maintained to provide safe sight distance to pedestrians and motorists entering and exiting the site to minimise conflict in accordance with Austroads SISD and AS2890.1-2004 "Off-street car parking.*

*All signage including any proposed internally lit signs must be contained within property boundaries and designed to meet the objectives of Transport Corridor Outdoor Advertising and Signage Guidelines 2017 (NSW DPE 2017). Illuminated signage is to have a maximum luminance levels as set out in guideline and Signage Guidelines.*

TTW note compliance with the requirements outlined in Austroads SISD, AS2890.1-2004, and the Transport Corridor Outdoor Advertising and Signage Guidelines 2017 (NSW DPE 2017). This will be referenced during detailed design of such signage.

**Narrabri Shire Council Submission**

*Council will not accept a painted (zebra) pedestrian crossing on Mitchell Street (Kamilaroi Highway). Similar to what Council has previously constructed on the eastern side of the Mitchell/George Street intersection, a kerb extension/blister would be acceptable only.*

See previous response to TfNSW regarding the pedestrian crossing on the Kamilaroi Highway.

*There does not appear to be any consultation undertaken with local bus companies, and Council had previously been requested to extend the bus zone at the old High School due an increased number of buses queuing (in particular during the afternoon).*

Discussions with bus operators were held on the 30th of March 2021 as students were dropped off at the current primary school site. No queuing issues were raised. During previous consultation meetings with Council the request for extended bus zone facilities at the previous High School site has not been raised.

*With both the bus zone and pickup area being located within the same area, this may result in vehicles queuing back onto the Kamilaroi Highway. It is recommended that an off-street parking area for students and parents be constructed to prevent any safety issues with traffic on the Kamilaroi Highway*

See previous response to TfNSW regarding the capacity of the pick up and drop off area proposed.

*Page 53, Section 6.2.3 School Buses – does not mention the route which school buses will now be required to travel when accessing and leaving the school. This may impact local residential streets (e.g. Boundary Street), with access onto the highway not being considered.*

Bus vehicles are expected to depart via a left turn on Boundary Street, a left turn on Charles Street and continue straight through Charles Street. Swept paths have been conducted as part of the design to ensure bus movements are possible through these alternate routes.

*At no stage throughout the report does it mention parking for students and visitors.*

Promotion for student parking does not align with the promotion of alternate travel modes, such as bus transport, carpooling, and active transport modes and is against School Infrastructure Policy. Street parking will still be accessible to student and visitors travelling to site, with parking within proximity of site available along Charles Street, George Street north and south of Mitchell Road, and Church Street. As staff parking demand is allowed for within the site, it is expected that a number of on street parking spaces will be available for students and visitors in close vicinity of the school.

*Page 31 states "…the construction of a new two-stream high school with a capacity of 200 students, with the potential to grow to 300 students…"*
*Page 31 states "…school will continue to operate at approximately 150 students and 50 staff on opening, however the site has been future proofed for an additional 50 students, extending to an additional 150 students…"*
*These two statements differ by a factor of 50 students (300 vs 350).*

Impact to traffic generation as well as pick up and drop off services have been performed for a total student population of 300 students and 50 staff members. The additional 50 student and 150 student counts are not cumulative, instead representing the expected growth of 50 additional students from 150 to 200 as opposed to the maximum growth of 150 additional students from 150 to 300.

**Public Submission**

One public submission noted that no fewer than 10 car parking spaces should be placed opposite their residence.

Parking is permissible and the amount of parking has been provided based on Council and Transport's request to alleviate on-street parking demand.

Should you require anything further please contact the undersigned.

Yours faithfully,
**TTW (NSW) PTY LTD**

**GRACE CARPP**
**Associate**

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# Appendix A

# Road Safety Audit

# Pedestrian Access for Wee Waa School

## Road Safety Audit

Strategic Design Stage

8th December 2021

JN22029_Report01 Rev02 - TTW Wee Waa School

On Behalf of

## Taylor Thomson Whitting

1503C/41-45 Belmore Street
Ryde, NSW, 2112

0405 345 124
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www.amwc-rsa.com
ABN 13 619 698 985

# NSW RSA Register Details

| | |
|---|---|
| **Final Signoff Date** | 08/12/2021 |
| **Title of Audit** | Pedestrian Access for Wee Waa School |
| **Location of Audit** | Wee Waa |
| **Project Description** *(max 300 char)* | The aim of this project is to construct a new school on Mitchell Street in Wee Waa, between Charles Street and George Street |
| **Purpose of Audit** *(max 300 char)* | The aim of this Road Safety Audit (RSA) is to assess pedestrian access and desire lines across Mitchell Street in the context of the strategic plans and existing conditions |
| **State of Audit** | NSW |
| **Stage of Audit** | Strategic Design Stage |
| **Client Company** | Taylor Thomson Whitting |
| **Client Contact** | Paul Yannoulatos |
| **Client Phone** | 02 9439 7288 |
| **Client Email** | Paul.Yannoulatos@ttw.com.au |
| **Audit Team Lead** | Aaron Walton |
| **Audit Team Member** | Mark Keech |

# Table of Contents

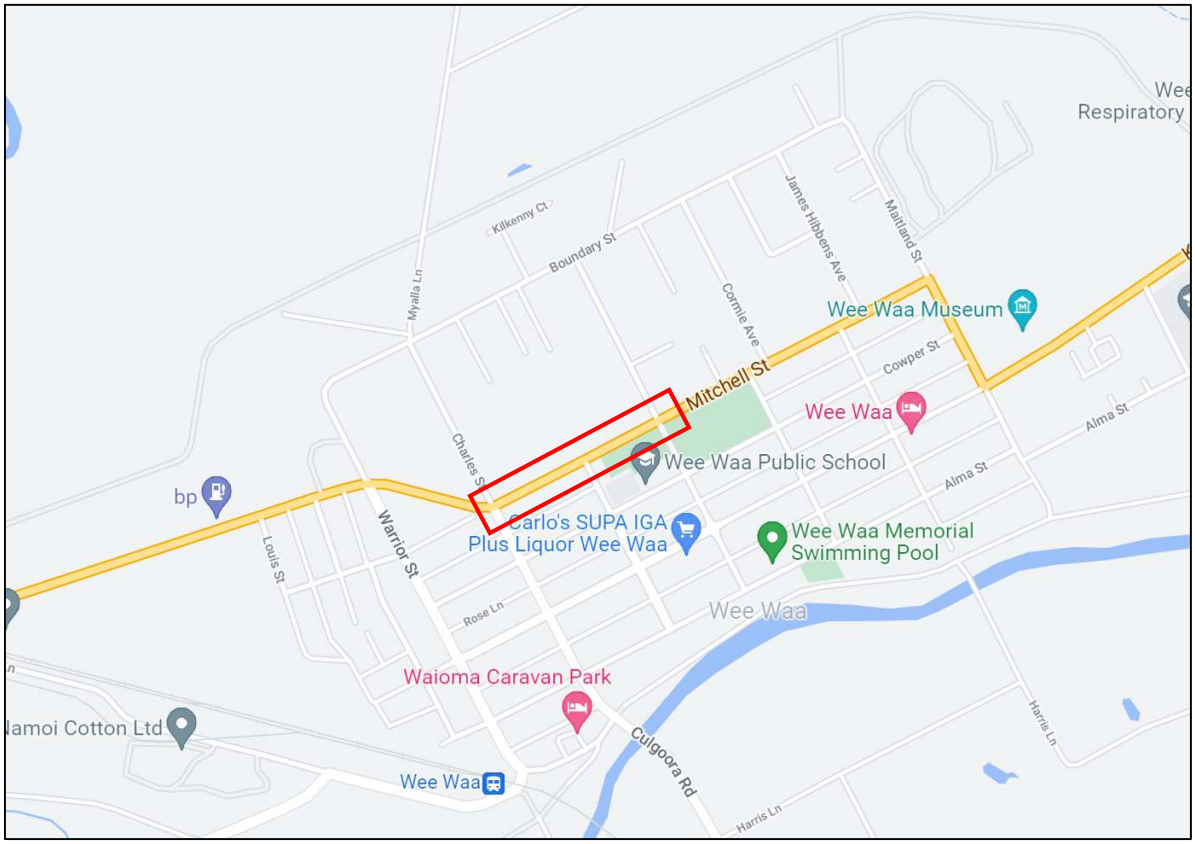
# 1 Project Description

The aim of this project is to construct a new school on Mitchell Street in Wee Waa, between Charles Street and George Street.

The aim of this Road Safety Audit (RSA) is to assess pedestrian access and desire lines across Mitchell Street in the context of the strategic plans and existing conditions.

# 2 Study Area

The general audit location is shown below.




*Source – Google Maps*

# 3 Auditable Data

The following data was referenced during the audit:

> Email – Paul.Yannoulatos@ttw.com.au – dated 21/10/2021

# 4 Audit Stage

A Strategic Design Stage Audit was carried out on the 1st of November 2021 including a desktop assessment of the auditable data and a site visit of proposed works during day and night conditions. At the time of the site visit the weather was clear and traffic was light.

The audit was generally undertaken in accordance with 'TfNSW Guidelines for Road Safety Audit Practices (2011)' and 'Austroads: Guide to Road Safety Part 6 and Part 6a (2019)'.

# 5 Exclusions

At the time of the audit the following exclusions were presented to the audit team.

- The audit is to exclude all data outside of potential pedestrian movements across Mitchell Street.

# 6 Audit Team

The audit team and client details are shown below.

**Table 6-1 Audit Team & Client Details**

| **Role** | Name | |
|---|---|---|
| **Client (Sponsor)** | Taylor Thomson Whitting | |
| **Client Contact** | Paul Yannoulatos | Technical Director |
| **Client Email** | Paul.Yannoulatos@ttw.com.au | |
| **Lead Auditor** | Aaron Walton | RSA-02-0501 - Level 3 Auditor |
| **Lead Auditor Email** | admin@amwc-rsa.com | |
| **Team member** | Mark Keech | RSA-02-0124 - Level 3 Auditor |

# 7 Audit Program

The audit program details are shown below.

**Table 7-1 Audit Program**

| **Activity** | **Date** | **Attendees** |
|---|---|---|
| **Opening Meeting** | 21/10/2021 | Aaron Walton, Paul Yannoulatos |
| **Site Inspection** | 01/11/2021 | Aaron Walton, Mark Keech |
| **Draft Report Internal Review** | 04/11/2021 | RSA Report (Rev00) |
| **Draft Report External Responses** | 05/11/2021 | RSA Report (Rev01) |
| **Completion Meeting** | 15/11/2021 | Aaron Walton, Paul Yannoulatos, Grace Carpp |
| **Final Report** | 08/12/2021 | RSA Report (Rev02) |

# 8 Audit Risk Assessment Technique

For each of the safety issues identified, the level of risk with each has been determined. The tables below are extracted from Austroads: Guide to Road Safety Part 6 and Part 6a (2019) and have been used in the assessment of risk for this audit.

**Table 8-1 Incident Frequency**

| Frequency | Description |
|---|---|
| **Frequent** | Once or more per week |
| **Probable** | Once or more per year |
| **Occasional** | Once every five or ten years |
| **Improbable** | Less often than once every ten years |

**Table 8-2 Incident Severity**

| Severity | Description | Examples |
|---|---|---|
| **Catastrophic** | Likely multiple deaths | > High-speed, multi-vehicle crash on freeway.<br>> Car runs into crowded bus stop.<br>> Bus and petrol tanker collide.<br>> Collapse of bridge or tunnel. |
| **Serious** | Likely death or serious injury | > High or medium-speed vehicle/vehicle collision.<br>> High or medium-speed collision with a fixed roadside object.<br>> Pedestrian or cyclist struck by a car. |
| **Minor** | Likely minor injury | > Some low-speed vehicle collisions.<br>> Cyclist falls from bicycle at low speed.<br>> Left-turn rear-end crash in a slip lane. |
| **Limited** | Likely trivial injury or property damage only | > Some low-speed vehicle collisions.<br>> Pedestrian walks into object (no head injury).<br>> Car reverses into post. |

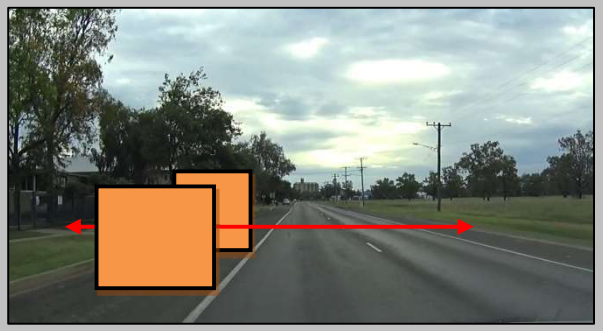
**Table 8-3 Resulting Level of Risk Matrix**

| | Frequent | Probable | Occasional | Improbable |
|---|---|---|---|---|
| **Catastrophic** | Intolerable | Intolerable | Intolerable | High |
| **Serious** | Intolerable | Intolerable | High | Medium |
| **Minor** | Intolerable | High | Medium | Low |
| **Limited** | High | Medium | Low | Low |

# 9 Audit Findings

**Table 9-1 Audit Findings**

| Item<br>Location | Safety Hazard Finding | Frequency | Severity | Level Of Risk | Project Manager Response |
|---|---|---|---|---|---|
| **1.**<br>Crossing Length<br>Mitchell Street | There is a long crossing length required for pedestrians between the southern kerb and the northern verge across Mitchell Street.<br>There is a risk that a pedestrian may begin to cross Mitchell Street with insufficient time to complete the crossing before encountering an oncoming vehicle resulting in pedestrian-vehicle collisions.<br>  | Occasional | Serious | High | The current design includes a marked pedestrian crossing with kerb blisters intended to reduce this crossing distance. |
| **2.**<br>Heavy Vehicles<br>Mitchell Street | On site it was observed that there was a high percentage of heavy vehicles along Mitchell Street.<br>There is a risk that a pedestrian crossing or waiting to cross Mitchell Street may be impacted by a heavy vehicle.<br>  | Occasional | Serious | High | The current design includes a marked pedestrian crossing with kerb blisters to provide a safe location for pedestrians to store prior to crossing the roadway. |

| Item<br>Location | Safety Hazard Finding | Frequency | Severity | Level Of Risk | Project Manager Response |
|---|---|---|---|---|---|
| **3.**<br>Parking<br>Mitchell Street | There is parking permitted along Mitchell Street.<br>There is a risk that a parked vehicle may block sight between an oncoming vehicle and a pedestrian stepping out to cross the road resulting in pedestrian-vehicle collisions.<br>  | Improbable | Serious | Medium | The current design includes kerb blistering to prevent cars parking adjacent to the pedestrian crossing. |
| **4.**<br>Unsealed Shoulder<br>George Street | There are unsealed shoulders on the northeast and northwest sides of George Street.<br>There is a risk that a pedestrian may slip-trip-fall on loose material at the edge of the travel lane when crossing George Street.<br>There is a risk that erosion and edge drop may form at the shoulder increasing the risk of trip-fall incidents.<br>This risk is increased given the proximity of the hazards to live traffic.<br>  | Improbable | Serious | Medium | The current design proposes kerb and footpath along the north-western edge of George Street adjacent to the School. |

| Item<br>Location | Safety Hazard Finding | Frequency | Severity | Level Of Risk | Project Manager Response |
|---|---|---|---|---|---|
| **5.**<br>Pedestrian Infrastructure<br>Extent of Works | There is incomplete pedestrian infrastructure, including concrete foot paths and kerb ramps, throughout the extent of works.<br>There is a risk that a pedestrian, particularly elderly or disabled, may trip/fall at kerb and gutter where kerb ramps are not provided.<br>There is a risk that a pedestrian, particularly elderly or disabled, may slip/trip/fall on grassed/gravel verges, or a pedestrian may avoid grassed/gravel verges and walk along sealed road/shoulder areas resulting in collisions with through vehicles or parking vehicles.<br>  <br>  <br>  | Occasional | Minor | Medium | The current design includes a pedestrian footpath along George Street that connects to a pedestrian footpath on Mitchell Street and a proposed pedestrian crossing. This provides pedestrian connection across to the formal pedestrian infrastructure to the south of Mitchell Street. |

| Item<br>Location | Safety Hazard Finding | Frequency | Severity | Level Of Risk | Project Manager Response |
|---|---|---|---|---|---|
| **6.**<br>Existing Infrastructure<br>Extent of Works | There are existing infrastructure and incomplete path works in the verge area.<br>There is a risk that a pedestrian may trip/fall at existing infrastructure or incomplete path works resulting in injury.<br>  <br>  <br>  | Occasional | Minor | Medium | The current design includes a pedestrian footpath along George Street that connects to a pedestrian footpath on Mitchell Street and a proposed pedestrian crossing. This provides pedestrian connection across to the formal pedestrian infrastructure to the south of Mitchell Street. |

| Item<br>Location | Safety Hazard Finding | Frequency | Severity | Level Of Risk | Project Manager Response |
|---|---|---|---|---|---|
| **7.**<br>Lighting<br>Extent of Works | There is insufficient lighting throughout the extent of works. Of particular concern is the southern side of Mitchell Street where street lighting is on the northern side and large trees block spill lighting; and the existing electric school signage at the corner of Mitchell Street and George Street, that is displaying bright, coloured and changing light across the pedestrian path, intersection point and pedestrian-vehicle conflict point.<br>There is a risk at night that a pedestrian may trip/fall on path side objects resulting in injury.<br>There is a risk at night that the electric school signage may conceal a pedestrian or distract a turning motorist from a crossing pedestrian resulting in pedestrian-vehicle collisions.<br>  <br>  | Occasional | Serious | High | Signage to be investigated and if found to be non-compliant measures for resolution to be implemented. Measures may include:<br>– Signage dimmed at certain hours<br>– Number of changes limited at certain hours<br>– Signage switched off at certain hours |

# 10 Formal Statement

We, the undersigned, declare that we have reviewed the site and data listed in this report and identified the safety and operational deficiencies above.

It should be noted that while every effort has been made to identify potential safety hazards, no guarantee could be made that every deficiency has been identified.

A project sponsor is under no obligation to accept the findings outlined in this audit report. This report simply provides the opportunity to review potential safety issues highlighted by the auditors.

This audit will be recorded on the NSW Register of Road Safety Auditors and the project sponsor should expect email notification from the register to confirm the audit has been carried out.

We recommend that points of concern be investigated, and necessary corrective actions undertaken.

**Aaron Walton**
*Level 3 Road Safety Auditor*
*Team Leader*

**Mark Keech**
*Level 3 Road Safety Auditor*
*Team Member*