

7 March 2022

Ms Mikaela Meggetto
Coroner's Registrar
By email: cpuresponses@coronerscourt.vic.gov.au

Dear Ms Meggetto

Thank you for your email of 7 December 2021 with accompanying cover letter and Her Honour Coroner Magistrate Audrey Jamieson's Finding (the report) dated 6 December 2021, reference **COR 2018 004310**, without inquest into the death of Mrs Ingeburg Muller on 28 August 2018.

The City of Boroondara extends its deepest condolences to Mrs Muller's family and friends for their loss.

Pursuant to section 72(3 & 4) of the Coroners Act 2008, we provide the following responses in relation to recommendations 57, 58 and 59 of the report as below.

57. With the aim of promoting public health and safety and preventing like deaths, I recommend that Boroondara City Council continue review the design and layout of the three-way intersection of High Street and Marquis Street in light of the circumstances of this collision and consider improve the existing infrastructures.

The Coroner's recommendation has OR will be implemented.

Council officers met with officers from the Department of Transport to undertake a comprehensive review of the design and layout of the existing intersection. The Department of Transport has provided several comments / recommendations on the operation of the existing intersection for further consideration.

An independent Road Safety Audit of the existing intersection was also undertaken by an accredited Senior Road Safety Auditor engaged by Council. The audit provided Council officers with several findings and recommendations for our consideration.

Council supports the intent of the Coroner's recommendation and will review the input by the Department of Transport and the independent Road Safety Audit with a view to implementing several infrastructure improvements. These include but are not limited to improving visibility by removal or trimming of existing vegetation in Marquis Street, replacement of the existing asphalt crosswalk with a more contrasting grey coloured concrete surface and relocation of an existing bicycle parking rail to improve safety and access.

These improvements are scheduled to be completed by June 2022.

Copies of the independent Road Safety Audit and the Department of Transport advice are attached.

58. With the aim of promoting public health and safety and preventing like deaths, I recommend that Boroondara City Council replace the existing advisory speed limit sign of 40 kilometres per hour between the hours of 7.00am to 7.00pm along the northbound lane of Marquis Street to a warning sign of ‘Raised Intersection’ with advisory speed limit of 40 kilometres per hour.

An alternative to the Coroner’s recommendation has OR will be implemented.

The 40km/h advisory speed limit sign on the Marquis Street approach to the intersection is essentially an advance warning sign for motorists approaching High Street to inform them of the speed limit along High Street. The installation of this sign is consistent with the Department of Transport guidelines, Traffic Engineering Manual, Vol 3 Part 211 Speed Zoning Guidelines Dec 2021, for signing of activity centres speed zones (the time based 40km/h speed limit on High Street). As such, it is proposed to retain the current advisory 40km/h, 7am – 7pm sign. This is also consistent with the feedback received from both the Department of Transport and an independent Road Safety Audit.

Installation of a ‘Raised Intersection’ warning sign with an advisory 40km/h speed limit sign is generally applicable on through carriageways and slip lanes in line with the Department of Transport’s Road Design Note 03-07. Installation of such signs in Marquis Street on the approach to High Street may lead to confusion amongst approaching motorists where it may be implied that a motorist can negotiate the intersection at a speed of 40km/h. Given the T-intersection, motorists are required to slow down and come to a complete stop before safely entering High Street from Marquis Street.

Council, however proposes an alternative solution involving the installation of an advance ‘Stop Sign Ahead’ warning sign to face southbound motorists on Marquis Street, approaching the raised threshold treatment.

As per the Coroner’s report, LSC McCormick’s coronial brief stated:

“viewed the CCTV footage and attended the intersection post collision and noted that the vast majority of drivers do not stop at the Stop sign unless there is vehicle or pedestrian traffic present”.

The suggested ‘Stop Sign Ahead’ warning sign is expected to further reinforce the need for approaching motorists to slow down and come to a complete stop at the T-intersection. This sign will be installed by end March 2022.

59. With the aim of promoting public health and safety and preventing like deaths, I recommend that Boroondara City Council introduce a more contrasting grey coloured pavement marking on the raised safety platform.

The Coroner's recommendation has OR will be implemented.

Council supports this recommendation in full and will be replacing the existing asphalt crosswalk surface on the raised safety platform with a contrasting grey coloured concrete pavement. It is also proposed to install a 400mm transverse saw-cut pattern on the raised crosswalk to further increase the conspicuity of the treatment. These works are due to be completed by June 2022.

Following the implementation of recommendations, we will provide evidence to demonstrate that the works have been completed. This is due to be provided by July 2022.

Should you have any queries in relation to the above information or require further details please contact Jim Hondrakis, Manager Traffic and Transport on 9278 4546 or via email on jim.hondrakis@boroondara.vic.gov.au .

Yours sincerely



Phillip Storer
Chief Executive Officer

Our ref: CAS-1082534

Bhushan Jani

From: Bruno Spandonide <Bruno.Spandonide@roads.vic.gov.au>
Sent: Wednesday, 2 February 2022 9:58 AM
To: Jim Hondrakis
Cc: Steven Yang; Sean Yates; Savoula Lidis; Daniel Freer; Bhushan Jani; Michelle Goodwin; Oliver Mihaila
Subject: FW: High Street / Marquis Street -Coroners Finding with Recommendation
Attachments: AGTM08-20-Part-8-Local-Street-Management.pdf; Design Principles for Raised Priority Crossings (RPC) - v1.0 August 2021.pdf

Good morning Jim,

Please find below some of the recommendations from our teams (special thanks to Sean for the comprehensive review) regarding the High St Marquis St intersection:

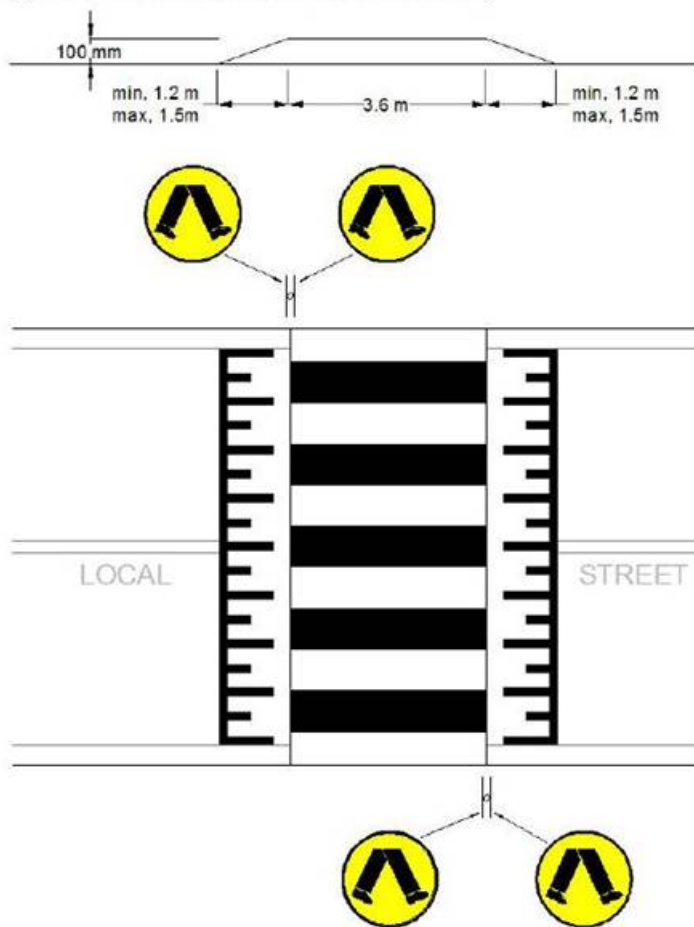
- Improving visibility lines by removal of street infrastructure / vegetation which may have obscured – especially from entry of crossing from Pharmacy. As noted in the Design Principles for Raised Priority Crossings document, mutual sight distance is a key ingredient for the success of these treatments. Regular vegetation trimming on Marquis St would improve the visibility of the intersection approach.
- Warning signs for vulnerable users on Marquis St and appropriate signs for a T-intersection/raised crossing.
- Considering changing the colour of the crossing to improve visibility but also minimise any confusion regarding priority. Ideally, the crossing would have appropriate contrast to the approaching carriageway to alert motorists of the change in environment. Our Road Design and Safe System team recommends the treatment to be a different colour to the footpath either side of the crossing so that pedestrians do not assume priority as the road rules do not provide this priority (again, this would be a wombat crossing with accompanying signs & linemarking). It would be best for this crossing to be concrete, which has been adopted for many similar treatments across the state.
- Speed reduction on approach arm (Marquis Street) through speed cushions or advisory signs. This could act as a supplementary/supporting device to further calm speeds on approach to the crossing.
- Enhancing the raised pedestrian platform (or raised threshold treatment, as they're sometimes referred to) on Marquis St with appropriate height which causes some level of discomfort to approaching vehicles, bringing speeds down. Design of raised platform should be in accordance with Raised Safety Platforms Road Design Note 0307. The benefits include:
 - Assisting in lowering operational speeds of vehicles entering and exiting intersecting minor or local roads
 - Enhancing the pedestrian experience by providing a flat, continuous, and convenient path for users
 - Raising awareness of the potential for crossing pedestrians and have the potential to reinforce motorists' regulatory need to give way when turning into the minor road
 - Assisting in establishing boundaries to local area traffic management on the surrounding local road network

Regarding their design, while RDN 03-07 covers the use of Raised Safety Platforms on through carriageways and slip lanes, it does not provide tailored guidance to raised pedestrian platforms / raised threshold treatments. In general, this means that the profiles adopted within the RDN are more forgiving/less severe than a traditional road hump or wombat crossing as they're generally not looking to achieve the same level of speed reduction as these devices – i.e. an RSP will generally be targeting speeds of 40 – 50km/h to achieve Safe System compliance for vehicle-to-vehicle side impact crashes, while a road hump or wombat crossing will generally be looking to achieve speeds ≤ 30 km/h.

For the High St / Marquis St site, which will be in a lower speed local road context, the relevant guidance that should be adhered to can be found in Austroads Guide to Traffic Management (AGTM) Part 8: Local Area Traffic Management (attached), AS 1742.10: Pedestrian Control & Protection and AS 1742.13: Local Area Traffic Management.

AGTM discusses vertical deflection devices including Wombat Crossings and Flat-Top Humps in Section 8.2, as well as Threshold Treatments and Continuous Footpath Treatments in Section 8.5. Our Road Design and Safe System team recommends leveraging off of the below figure for the recommended height of the device, as well as min. & max. grades for the approach ramps (note that the wombat crossings would not be necessary for a raised pedestrian platform / raised threshold treatment unless there is an intent to provide priority for footpath users over vehicular traffic).

Figure 8.8: Indicative dimensions of a wombat crossing



Source: Based on AS 1742.13 – 2009 and RTA (2011).

- As an alternative to raised pedestrian platform, consider a raised intersection if that fits in Council budget – this is the coroner’s advice and seems fit for geometry of the intersection, but questions remain whether similar intersections in the vicinity would have to be given similar treatment for consistency purposes.

This would require elongating the current crossing further along Marquis St and widening the raised crossing along/into Marquis St. This could allow for an approach ramp and could assist in drawing attention to the potential for pedestrians in this space, which would be beneficial.

- Slight offset of crossing from intersection – however this may not be align with pedestrian desire lines. Providing an offset would allow for a motorist entering Marquis St to store slightly off the High St carriageway, allowing for the turn to be carried out in two movements (turn first, then give way to

pedestrians if priority is given). Space appears to be very limited & this is unlikely to match pedestrians desire lines, which is not ideal.

- Undertaking an RSA/risk assessment as part of the optioneering for this site. The feasibility of each will depend on which 'package' of treatments are pursued – for instance, elongating/extending the raised crossing into Marquis St and providing a more severe approach ramp grade could have a somewhat similar impact as introducing a speed cushion on approach to the intersection. It could be considered that adopting both could be an overengineered option – our Road Design and Safe System team recommends to carry out a risk assessment & determine which mitigating measures will work best (and work with Council & stakeholders priorities). Finalisation of Improvements for this intersection should be done with the knowledge that these treatments could be used as a precedent for surrounding area. Also, any treatments here should not cause confusion on other similar intersections which have fitted with similar treatments. Consistency and practicability should be a consideration at a network level.

Please feel free to get in contact if there is anything else we can assist you with

Kind regards

Bruno

Bruno Spandonide (*he/him*)

Team Leader Active Modes and Amenity



Metro South East

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Department
of Transport



I acknowledge the Traditional Aboriginal Owners of Country throughout Victoria and pay my respect to Elders past, present, emerging and to the ongoing living culture of Aboriginal people.

From: Jim Hondrakis <Jim.Hondrakis@boroondara.vic.gov.au>

Sent: Thursday, 30 December 2021 1:42 PM

To: Bruno Spandonide <Bruno.Spandonide@roads.vic.gov.au>; Savoula Lidis <Savoula.Lidis@roads.vic.gov.au>

Cc: SafeSystemDesign <SafeSystemDesign@roads.vic.gov.au>; Daniel Freer <Daniel.Freer@boroondara.vic.gov.au>;

Michelle Goodwin <Michelle.Goodwin@boroondara.vic.gov.au>; bhushan.jani@boroondara.vic.gov.au; Oliver

Mihaila <Oliver.Mihaila@boroondara.vic.gov.au>

Subject: High Street / Marquis Street -Coroners Finding with Recommendation

Importance: High

Dear Savoula and Bruno

Wishing you had a great Xmas and all the very best for 2022 !

I am seeking your advice to assist us in responding to the Coroner’s findings into the death of a pedestrian at the intersection of High Street and Marquis Street.

The crash occurred on 20 June 2018, at about 2.48pm. The pedestrian, Mrs Muller was crossing Marquis Street at the T intersection at High Street from an east to west direction and was hit by a motorist travelling south in Marquis Street.

The intersection incorporates a threshold treatment across Marquis Street at High Street to improve access and the level of safety for pedestrians crossing Marquis Street which was installed in January 2008. From 19 May 2008 to 11 September 2008, streetscape works were undertaken in Marquis Street involving removal of parking, rain gardens, landscaping, street furniture and relocation of litter and recycling bins. These formed part of the overall Ashburton Shopping Centre streetscape works and were completed in September 2008.

The designs were prepared by Council and approved by VicRoads at the time.

Street view image below.



The coroner has made the following recommendations and we are required to provide a response by 7 March 2022 at the latest.

The coroner has made specific reference has been made to the Raised Safety Platforms Road Design Note 0307 (copy attached)

RECOMMENDATIONS

Pursuant to section 72(2) of the Act, I make the following recommendations:

57. With the aim of promoting public health and safety and preventing like deaths that Boroondara City Council continue review the design and layout of the intersection of High Street and Marquis Street in light of the circumstances and consider improve the existing infrastructures.
58. With the aim of promoting public health and safety and preventing like deaths that Boroondara City Council replace the existing advisory speed limit sign of 40 km per hour between the hours of 7.00am to 7.00pm along the northbound lane of High Street to a warning sign of 'Raised Intersection' with advisory speed limit of 40 km per hour.

The recommendations may influence the design guidelines and future installations across Melbourne.

On this basis we are looking to have a discussion with DoT to discuss the findings and seek advice which would assist us in responding to the coroner.

With respect to item 58, It should refer to the southbound lane and the sign in question is associated with the 40 km/h High Street shopping strip speed limit. The Coroner is recommending signage consistent with the Road Design Notes.



We are happy to provide further details and look forward to meeting with you to discuss the issues.

Please contact me with respect to a meeting date and time.

Kind regards

Jim Hondrakis

Manager Traffic and Transport

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0400603808

jim.hondrakis@boroondara.vic.gov.au
www.boroondara.vic.gov.au



Help keep our community safe and healthy by getting vaccinated and following the directions of the Victorian Chief Health Officer.

For more information visit [coronavirus.vic.gov.au](https://www.coronavirus.vic.gov.au)

From: CSV-CORONERS COURT-TEAM7 (CSV) team7@courts.vic.gov.au

Sent: Tuesday, 7 December 2021 10:24 AM

To: jane.addis@boroondara.vic.gov.au

Cc: boroondara@boroondara.vic.gov.au

Subject: Attn Cr Jane Addis | Coroners Finding with Recommendation - COR 2018 004310 - Ingeburg Muller

Dear Cr Addis and team,

Her Honour Coroner Audrey Jamieson has recently completed the coronial investigation into the death of Ingeburg Muller.

Her Honour has made three recommendations directed to the Boroondara City Council.

Please find attached a copy of the finding along with our covering letter.

Please contact the court if you have any questions.

Kind Regards,

Mikaela

Coroner's Registrar

Coroners Court Registry – Team 7

Mikaela Meggetto | **Coroner's Registrar**
Ralph Zeeman | **Coroner's Solicitor**



Coroners Court
of Victoria

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The Coroners Court of Victoria acknowledges Aboriginal People as the traditional owners of Country and pays respect to their Elders past, present and emerging.

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Marquis Street/High Street, Ashburton
Threshold Treatment
Existing Conditions Stage Road Safety Audit



Prepared for: City of Boroondara
Project Ref: TS-22-RSA-5715A
Date: 14 February

2022

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Document control

Project Ref	Date	Revision	Lead Auditor	Auditor
TS-22-RSA-5715A	14 February 2022	A	Simon Penca	Darren Vella

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1. Introduction

Transafe has been engaged by City of Boroondara to undertake an existing conditions stage road safety audit of the existing threshold treatment on Marquis Street at High Street in Ashburton.

2. Audit team

This audit was conducted by:

**Darren Vella [BEng Civil (Hons), Director]
Accredited Senior Road Safety Auditor**

and;

**Simon Penca [BEng Civil, Director]
Accredited Senior Road Safety Auditor**

Transafe is accredited for the conduct of road safety audits under DoT's professional services register.

3. Site inspection

A site inspection was conducted during the day and night of 3rd February 2022. The weather was clear and dry during the day and night inspections. Traffic volumes were moderate to low at the time of the inspections with some pedestrians but no cyclists observed at the site.

4. Road safety audit process

A road safety audit is a formal examination of an existing or future road or traffic project in which an independent, qualified team reports on the projects crash potential and safety performance (Austroads). This road safety audit has been carried out in accordance with the Austroads Guide to Road Safety Part 6: Road Safety Audit with reference to relevant standards and guides, and draws on industry practice and experience to identify potential road safety audit findings. However, no guarantee is made that every deficiency has been identified.

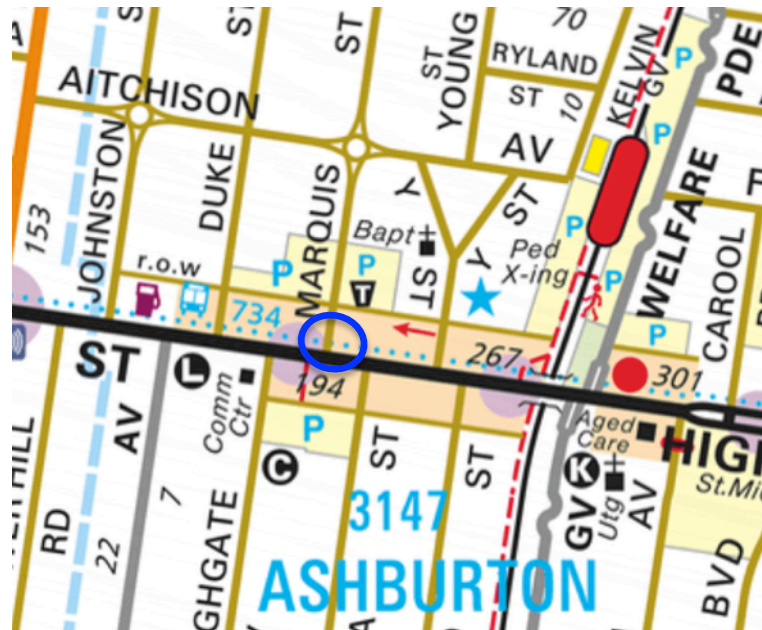
5. Responding to this audit

As set out in the road safety audit guidelines, responsibility for the road always rests with the project team and not the auditor. The project team is under no obligation to accept all of the audit recommendations. Also, it is not the role of the auditor to agree to or approve the project teams response to the audit. This audit report should be responded to in writing including reasons for rejection of an audit finding and audit recommendation. Acceptance of all recommendations of this report would not guarantee that every potential road safety issue has been addressed, rather adoption of the recommendations should improve the level of safety of the subject site.

6. Site details

The subject site is on Marquis Street at the intersection with High Street in Ashburton and is located within the Ashburton Shopping Centre.

Figure F1: Location plan



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High Street is a primary state arterial road with a two-way, four-lane carriageway, is aligned east-west and has a 40km/h speed limit 7am to 7pm (60km/h is applicable outside of these hours). Due to on-street parking, High Street typically operates as a two-way, two-lane road, outside of clearway times (clear way times apply during AM peak inbound and PM peak outbound). The road environment is consistent with a built up urban environment/strip shopping centre and includes footpaths, on-street parking, property boundaries/buildings in close proximity to the roadway, driveways/laneways, and hazards close to the road such as utility poles, trees, and property fences/buildings.



High Street looking east



High Street looking west

Marquis Street is a Local Council street with a two-way, two-lane carriageway, is aligned north-south intersecting High Street in a T-intersection with Stop control at its southern end. The road environment is consistent with a built up urban environment/strip shopping centre and includes footpaths, on-street parking, property boundaries/buildings in close proximity to the roadway, driveways/laneways, and hazards close to the road such as utility poles, trees, and property fences/buildings. Marquis Street is a residential local street with dwellings to the north, and access to various off street car parking areas are provided to the south (near the shops).



Marquis Street looking north



Marquis Street looking south towards High Street

7. Scope of audit

The scope of this road safety audit is to assess the existing conditions of Marquis Street at High Street, specifically the threshold treatment. Although this audit may cover pedestrian accessibility, it is not a formal DDA assessment. Similarly, although this audit may cover lighting, it is not a formal lighting luminance assessment.

8. Documents used to facilitate audit

The following information / drawings were used to facilitate the audit:

- Coroner's recommendations from finding into death without inquest, COR 2018 004310.
- Crash information.

9. Crash data

City of Boroondara's most recent available crash statistics for the 5-year period were provided to Transafe for Marquis Street, and three crashes have been recorded. One crash was on High Street with a motorist changing lanes and failing to see a scooter in the lane adjacent, DCA code - 135 - Lane change left.

Two crashes were on Marquis Street with pedestrians being struck, DCA code 100 - Ped near side. Ped hit by vehicle from right. The first crash on 15/5/17 involved a pedestrian on a mobility scooter being struck on the crossing of High Street by a vehicle edging forward in the vicinity of the stop line. The second crash on 20/6/18 also involved a pedestrian being struck on the crossing of High Street by a vehicle edging forward in the vicinity of the stop line.

Exact details of the two crashes are limited, however both crashes involved elderly and/or frail pedestrians (aged 90 and 85 respectively), were low impact speeds (below 10km/h), and the fitness to drive of both motorists is questionable (the crash description reports the driver that struck the mobility scooter was short in stature and driving a large four-wheel drive vehicle which may have lead to visibility issues over the front of the vehicle, while the driver that struck the pedestrian was reported to have hearing difficulties, and following the crash, an eye sight review revealed that the motorist had poor to limited eye sight at best – their licence was cancelled subsequently). In the second crash the motorist was reported to have not stopped and continued driving forward through the stop sign, dragging the pedestrian into High Street before stopping after being directed to do so by passers-by.

10. Audit findings and recommendations

The findings and recommendations of the road safety audit are detailed on the following pages. A response from the project team should be inserted into the relevant columns. Responses to audit findings and recommendations are generally not required by the auditors; rather a record should be kept for reasons of adoption or rejection of the recommendations for future reference by the project team.

Audit findings risk ranking

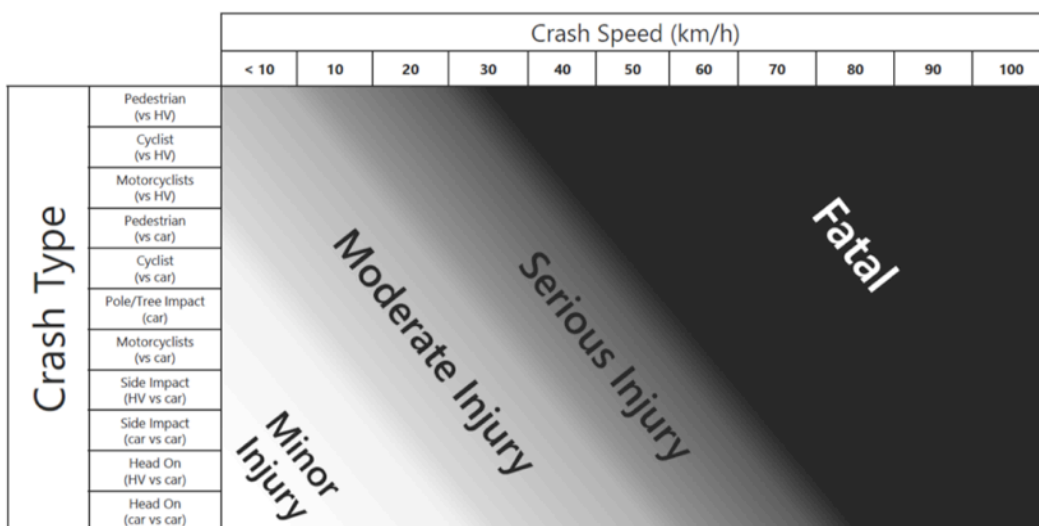
The findings included within this audit report have been given a risk ranking in accordance with Austroads Guidelines.

			Severity*				
			Insignificant	Minor	Moderate	Serious	Fatal
			Property damage	Minor first aid	Major first aid and/or presents to hospital (not admitted)	Admitted to hospital	Death within 30 days of the crash
Likelihood (includes exposure)	Almost Certain	One per quarter	Medium	High	High	Extreme (FSI)	Extreme (FSI)
	Likely	Quarter to 1-year	Medium	Medium	High	Extreme (FSI)	Extreme (FSI)
	Possible	1 to 3 Years	Low	Medium	High	High (FSI)	Extreme (FSI)
	Unlikely	3 to 7 Years	Negligible	Low	Medium	High (FSI)	Extreme (FSI)
	Rare	7 years+	Negligible	Negligible	Low	Medium (FSI)	High (FSI)

*see Severity Guidance Sheet

Safe System crash outcome threshold

Austroads RSA risk matrix





Austrroads Severity Guidance sheet


The corresponding priorities for mitigation are categorised as:



- Negligible – no action required.
- Low – should be corrected or the risk reduced if the treatment cost is low.
- Medium – should be corrected or the risk significantly reduced, if the treatment cost is moderate, but not high.
- High – should be corrected or the risk significantly reduced, even if the treatment cost is high.
- Extreme – must be corrected regardless of cost.


Road safety audit findings table

Marquis Street at High Street, Ashburton – Threshold Treatment Existing Conditions Stage Road Safety Audit			
Item	Finding and Commentary / Recommendation	Ranking	Project Team/Client Response
			Accept Yes/No
10.1	<p>The threshold treatment raised surface (where pedestrians cross) is asphalt, which is the same as the road surface on both Marquis Street and High Street. The threshold treatment has reduced conspicuity/inadequate contrast with only a concrete channel on the High Street side and a grey ramp/transition on the northern side. The threshold treatment should have greater contrast for the raised section/crossing with an alternative surface to asphalt to highlight its presence. Notwithstanding, current road rules dictate that all road users turning into Marquis Street must give way to pedestrians crossing the road, while pedestrian crossing must give-way to traffic travelling south on Marquis Street. However, it is often the case that motorists travelling south to a T-intersection will give-way to a pedestrian crossing.</p> 	Medium	
Likelihood Unlikely, Severity Moderate (based on Car vs Ped at <10km/h) = Risk is Medium			

Marquis Street at High Street, Ashburton – Threshold Treatment Existing Conditions Stage Road Safety Audit			
Item	Finding and Commentary / Recommendation	Ranking	Project Team/Client Response
			Accept Yes/No
10.2	<p>Sight lines from Marquis Street to the west are restricted by the pedestrian fencing located on the northern side of High Street, to the west of Marquis Street. When viewed from a low angle, the fence is difficult to see through and creates a near solid visual obstruction. For motorists to safely pick a gap in traffic and also observe more vulnerable road users (e.g. cyclists, motorcyclists/scooters, etc.), clear sight lines to/from the intersection should be achieved. It is acknowledge that the fence is installed to prevent pedestrians from crossing High Street away for the pedestrian operated signals, however it comprises the ability of motorists to see on-coming traffic and crossing pedestrians.</p>  <p>Likelihood Possible, Severity Moderate (side impact car vs car and Car vs Ped at <10km/h) = Risk is High/High (FSI) depending on operating speed and/or vulnerable road user</p>	High / High (FSI)	

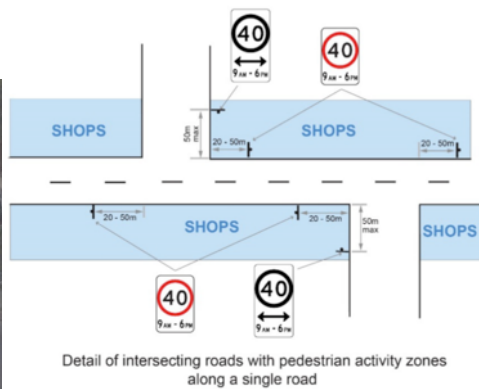
Marquis Street at High Street, Ashburton – Threshold Treatment Existing Conditions Stage Road Safety Audit				
Item	Finding and Commentary / Recommendation	Ranking	Project Team/Client Response	
			Accept Yes/No	Reasons/Comments
10.3	<p>The grades of the ramps are unknown, however they appear to allow a motorist to negotiate them with minimum vertical deflection. AS1742 for at-grade raised crossings recommend a grade of between 1 in 12 and 1 in 20. Confirm ramp grades are appropriate or consideration should be given to increasing the ramp grades to slow vehicle negotiating the threshold treatment. NB: motorists travelling southbound on Marquis Street to High Street are faced with a T-intersection with STOP control; as such it is reasonable to assume that motorists would be travelling below 10km/h as they negotiate the raised threshold treatment. Motorists turning into Marquis Street are faced with negotiating the raised crossing also and it is reasonable to assume a turning speed of 10-15km/h. Current safe system principles indicate that at speeds $\leq 30\text{km/h}$, the severity of any pedestrian or cyclist related crash is reduced to a survivable level.</p> <p>Likelihood Rare, Severity Moderate (based on Car vs Ped at $<10\text{km/h}$) = Risk is Low</p>	Low		
10.4	<p>Sight lines from the Marquis Street southbound approach to the threshold treatment/raised crossing are partially obscured by trees/vegetation. This may be exacerbated by the position of the seating which in busy periods may have groups of pedestrian that could limit visibility to/from pedestrians about to cross from the east to west.</p>  <p>Likelihood Rare, Severity Moderate (based on Car vs Ped at $<10\text{km/h}$) = Risk is Low</p>	Low		
10.5	<p>Further to the above, the STOP sign is not visible due to trees. The STOP should be clearly visible to approaching motorists. Vegetation should be removed as required.</p> <p>Likelihood Rare, Severity Moderate (based on Car vs Ped at $<10\text{km/h}$) = Risk is Low</p>	Low		

Marquis Street at High Street, Ashburton – Threshold Treatment Existing Conditions Stage Road Safety Audit			
Item	Finding and Commentary / Recommendation	Ranking	Project Team/Client Response
			Accept Yes/No
10.6	<p>There are some pits and or other features within the footpath that are not flush with the surrounding surface and are potential tripping hazards.</p>  <p>Likelihood Possible, Severity Insignificant (pedestrian trips over) = Risk is Low</p>	Low	
10.7	<p>There is an edge drop from the pedestrian area on the western side of Marquis Street near the seating and bicycle lock up hoop. The level difference is a potential tripping hazard.</p>  <p>Likelihood Possible, Severity Insignificant (pedestrian trips over) = Risk is Low</p>	Low	

Marquis Street at High Street, Ashburton – Threshold Treatment Existing Conditions Stage Road Safety Audit				
Item	Finding and Commentary / Recommendation	Ranking	Project Team/Client Response	
			Accept Yes/No	Reasons/Comments
10.8	<p>The bicycle lock up hoop is located at back of kerb and bicycles parked may encroach into the roadway. There is potential for bicycles close to the road to be struck by a vehicle. The bicycle hoop should be able to park bicycles clear of the kerb and road.</p> 	Low		
	Likelihood Possible, Severity Insignificant (property damage) = Risk is Low			
10.9	No further issues were identified at night. Street lighting is prevalent on High Street and a streetlight is located directly above the crossing. The lighting of the crossing is appropriate to illuminate pedestrians and the treatment.	NA		
Commentary on Coroner's recommendations				
10.10	<p>Recommendation (no 57)</p> <p><i>"With the aim of promoting public health and safety and preventing like deaths, I recommend that Boroondara City Council continue review the design and layout of the three-way intersection of High Street and Marquis Street in light of the circumstances of this collision and consider improve the existing infrastructures."</i></p> <p>Response – See existing conditions stage road safety audit items 10.1 to 10.9</p>			

**Marquis Street at High Street, Ashburton – Threshold Treatment
Existing Conditions Stage Road Safety Audit**

Item	Finding and Commentary / Recommendation	Ranking	Project Team/Client Response	
			Accept Yes/No	Reasons/Comments
10.11	<p>Recommendation (no 58)</p> <p><i>“With the aim of promoting public health and safety and preventing like deaths, I recommend that Boroondara City Council replace the existing advisory speed limit sign of 40 kilometres per hour between the hours of 7.00am to 7.00pm along the northbound lane of Marquis Street to a warning sign of ‘Raised Intersection’ with advisory speed limit of 40 kilometres per hour.”</i></p> <p>Response – The 40km/h advisory speed limit sign on Marquis Street is consistent with DoT guidelines (TEM Vol 3 Part 211 Speed Zoning Guidelines Dec 2021) for signing of activity centres speed zones (i.e. the 40km/h speed limit on High Street). As such the current advisory 40km/h 7am – 7pm should remain.</p>	NA		



Marquis Street at High Street, Ashburton – Threshold Treatment Existing Conditions Stage Road Safety Audit				
Item	Finding and Commentary / Recommendation	Ranking	Project Team/Client Response	
			Accept Yes/No	Reasons/Comments
10.12	<p>Further to the above, the recommendation to install a raised intersection sign is unlikely to change drivers behaviour (i.e. this is evident from the Coroner’s inquest report where LSC McCormick’s coronial brief stated “viewed the CCTV footage and attended the intersection post collision and noted that the vast majority of drivers do not stop at the Stop sign unless there is vehicle or pedestrian traffic present”. Furthermore, most motorists would perceive the raised intersection sign as simply being a speed hump or raised pavement, but it has no warning of the potential for pedestrians to be crossing.</p> <p>If the intention of a sign is to warn of the potential for pedestrians crossing, a pedestrian warning sign (W6-1) is more appropriate. Where such a sign is installed it should not be installed on the same post as the advisory 40km/h sign as the two messages are independent. However signing of every street approach to a pedestrian crossing with a hump or pedestrian warning sign is impracticable and will diminish the signs intention (i.e. to warn motorists of the presence of pedestrians (or hump) in a location that they would not normally expect them/it), the surrounding infrastructure provides sufficient visual cues to this location being an activity centre/shopping centre with high volumes of pedestrians which the average road user would be aware of and hence remain vigilant to the potential for pedestrians crossing the road, both at designated crossings but also away from them.</p>	NA		
10.13	<p>Recommendation (no 59)</p> <p><i>“With the aim of promoting public health and safety and preventing like deaths, I recommend that Boroondara City Council introduce a more contrasting grey coloured pavement marking on the raised safety platform.”</i></p> <p>Response – The lack of contrast between the threshold treatment/pedestrian raised crossing and the road pavement is outlined in item 10.1.</p>	NA		

Project team response undertaken by:

Name.....Signed.....Date.....

11. Concluding statement

This road safety audit has attempted to balance the safety needs of all road users within the site/design constraints. It is the intention that all audit recommendations are realistic and feasible and commensurate with the actual risk posed.



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and;



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