Ardill Payne & PARTNERS

ENGINEERS PLANNERS SURVEYORS ENVIRONMENTAL PROJECT MANAGEMENT

ROAD SAFETY AUDIT

EXISTING ROAD
McAuleys Lane, Myocum
Between Mullumbimby Road and Myocum Road

for:

McAuleys No. 1 Pty Ltd

September 2020

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1. Project Information

1.1 Introduction

McAuleys No. 1 Pty Ltd (Client) has engaged Ardill Payne & Partners (APP) to undertake a Road Safety Audit (RSA) of McAuleys Lane, Myocum, between Mullumbimby Road and Myocum Road.

The locality plan is shown in **Figure 1.**

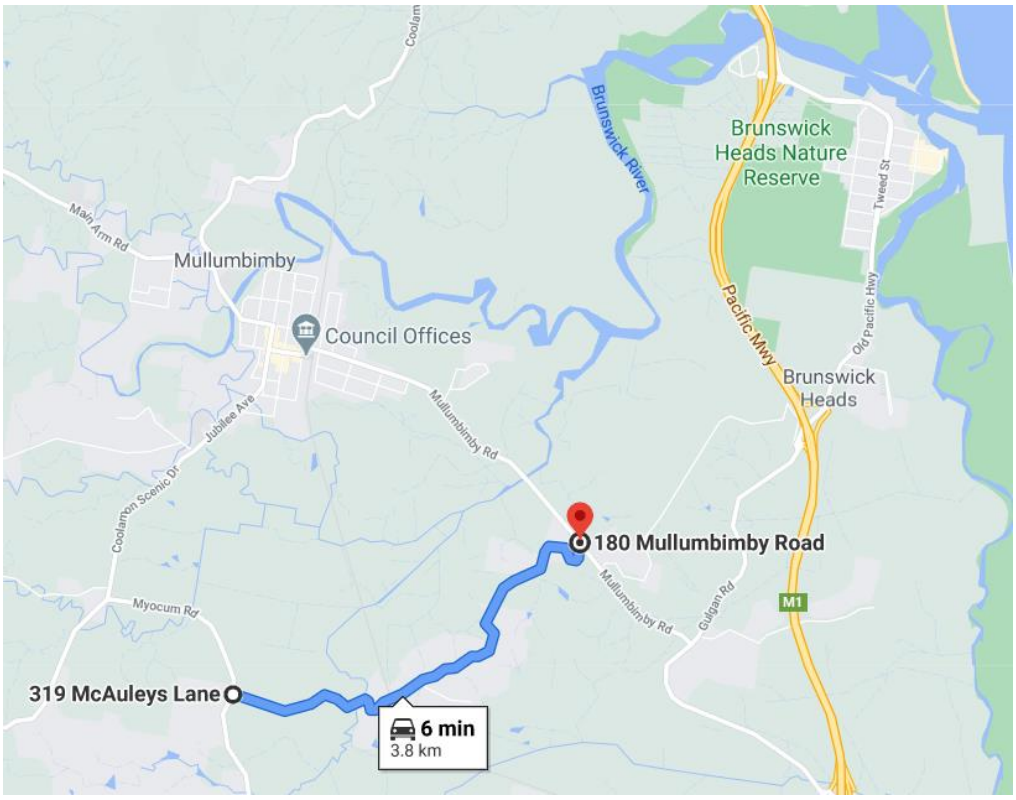


Figure 1: Locality Plan

1.2 Description of the Site

McAuleys Road is a rural road in the Byron Shire Council local government area, and extends from Mullumbimby Road in the east, to Myocum Road in the west (approx. 3.8km in length).

The road is rural in nature (roadside shoulders and table drains), and is undulating with several tight curves. There are several intersections and numerous rural driveways along its length. The sealed road width varies between 5.0 and 7.0m. Some sections have little or no shoulders, with steep embankments near the road edge. The road has speed derestriction signs at both ends – signs advise drivers to 'Drive to Conditions'.

A centreline plan is shown in **Attachment 1**.

Key milestones along the road include (chainages increasing westbound, approx. only):

- Ch. 0: Intersection Mullumbimby Road (start of audit)

- Ch. 2060: Intersection Muli Court
- Ch. 2100: Intersection Bilin Road
- Ch. 2355: Bridge over North Coast Railway
- Ch. 2765: Pipeclay Creek crossing
- Ch. 3786: Intersection Myocum Road (end of audit)

1.3 Traffic and Crash Data

Approximate traffic volumes are as follows (source: Byron Shire Council):

- McAuleys Lane (2016/2017 count) – 633vpd (5% HV).
- Mullumbimby Road (2016/2017 count) – 11,275vpd (6.8% HV).
- Myocum Road (2016/2017 count) – 1,794vpd (7.8% HV).

Crash data has been obtained from the *'Transport for NSW, Centre for Road Safety'* website. Between 2014 and 2018, there has been 4 crashes recorded within this section of road:

- There have been no recorded fatalities; all crashes resulted in moderate injuries.
- All crashes occurred at intersections – 3 at the Mullumbimby Road intersection, and 1 at the Myocum Road intersection.
- The 3 crashes at the Mullumbimby Road intersection were rear end collisions, where a vehicle travelling on Mullumbimby Road collided with the rear of a vehicle turning into McAuleys Lane.
- The crash at the Myocum Road intersection was a 'fail to give way' crash.
- Speed was not recorded as a contributing factor in any of the crashes.
- 1 crash occurred in wet weather.
- 2 crashes occurred at night.

Note: traffic and crash data was not reviewed until after the RSA findings were documented.

1.4 Audit Scope and Objective

This report is a Road Safety Audit of an existing rural road, McAuleys Lane, Myocum, between Mullumbimby Road and Myocum Road (total length of audit approx. 3.8km).

The scope of the RSA has been limited to assessment of the road from the perspective of all road users, and during daylight and night conditions.

The objective of the RSA is to identify any potential road safety issues/deficiencies associated with the existing arrangement from the perspective of all road users that may need to be investigated and rectified. Deficiencies raised will be described and given a risk rating. Positive aspects of the road environment have not been recorded.

The RSA has been carried out in accordance with the prescribed methods in the Austroads '*Guide to Road Safety, Part 6A: Implementing Road Safety Audits'* (2019), with consideration of the NSW RMS '*Guidelines for Road Safety Audit Practices, Part 1: Road Safety Audit'* (2011).

The RMS Guide does not permit the inclusion of recommendations in a RSA. However, the Austroads Guide does permit the inclusion of recommendations, if requested by the Client. No recommendations are included in this report.

1.5 Audit Team

The RSE has been carried out by Tony Cromack and Peter Brouwer (Ardill Payne & Partners). Tony Cromack is the Lead Auditor.

Lead Auditor – Tony Cromack

- Senior Civil Engineer and Principal at Ardill Payne & Partners, with over 35 years' experience in urban and rural road design
- Bachelor of Technology (Engineering), University of Southern Queensland, (1999)
- Technologist Member – Engineers Australia
- Member – Institute of Public Works Engineering Australasia (IPWEA)
- NSW RMS accreditation to Prepare Work Zone Traffic Management Plans (2020)
- 'Road Safety Auditor' course, IPWEA (2014)
- 'Lead Road Safety Auditor' course, IPWEA (2017)
- 'Safe System Principles' and 'Safe System Assessments' courses, Safe System Solutions Pty Ltd, Victoria (2019)
- 'Treatment of Crash Locations' course, IPWEAQ (2019)
- Registered Level 3 Road Safety Auditor (NSW) – Auditor # RSA-02-0414

Auditor – Peter Brouwer

- Senior Civil Designer at Ardill Payne & Partners, with over 30 years' experience in urban and rural road design
- Associate Diploma in Surveying – Queensland Institute of Technology (1985)
- Autocad Drafting Certificate – TAFE (1999)
- 'Road Safety Auditor' course, IPWEA (2018.)
- Registered Level 1 Road Safety Auditor (NSW) – Auditor # RSA-02-1325.

2. Road Safety Audit Program

2.1 Commencement Meeting

The commencement meeting was held on 21 September 2020. Dwayne Roberts represented the Client, and Tony Cromack represented the audit team.

A summary of the meeting is as follows:

- Mr. Roberts advised that a rural residential subdivision is proposed on Lot 8 DP 589795, known as 53 McAuleys Lane, Myocum. Byron Shire Council's *'Rural Land Use Strategy'* nominates the property as a priority site for future rural lifestyle living opportunities – potential 'R5 Large Lot Residential' expansion area. According to the Strategy, the landowner of this site *"must undertake an intersection 'capacity and functionality' assessment prior to commencing the rezoning process"*. This is to include an assessment of the physical state of the asset.
- At a pre-DA meeting, Council requested that the Client provide a Road Safety Audit of the full length of McAuleys Lane.
- Council's main area of concern is the Mullumbimby Road/McAuleys Lane intersection.
- The audit includes the intersections at both ends of the road.
- Further detail and specifics of any other concerns were not raised or discussed to ensure the audit team could undertake an unbiased RSA.
- Mr. Cromack explained the audit process, reiterating that it is not a compliance or design check.
- Mr. Roberts was advised that it is the audit teams task to identify and document safety issues, and the Client's task to respond and act on those issues. Recommendations will not be included in the report.

2.2 Field Audit

The field audit was carried out by the audit team on the afternoon and evening of Monday 21 September 2020. The team drove through the site twice in each direction and filmed the drive from the dashboard of the vehicle.

The daylight audit took place between 3:30 and 5:00pm (AEST), and the evening audit between 6:30 and 7:00pm.

The weather on the day was fine. There had been <5mm of rain in the week preceding the inspection. The road surface was dry.

Photographs of any deficiencies found were taken and notes were made.

Some key physical and observed features of the road are:

- Road is narrow (approx. 5m seal); narrow or non-existent shoulders in places. Vehicles tend to drive in the middle of the road and move over to pass.

- The poor condition of sections of the road pavement and surface (cracks, potholes, uneven surface).
- Many roadside hazards (trees, steep embankments, etc.), mostly without safety barriers.
- Minimal delineation of curve alignment. No advance warning of curves.
- Poor shape (super-elevation) on most curves. It is noted that current travel speeds are low due to the road condition and environment.
- Cars were observed parking on the road shoulder/verge in places, which further narrowed the road carriageway.
- Many concealed driveways.

2.3 Completion Meeting

A completion meeting generally involves the Auditor and the Client, and is an opportunity for clarification of aspects of the audit. A completion meeting has not been held at the time of preparing this report.

3. Risk Level Determination

Deficiencies raised in relation to the audit have been given a risk level based on the associated safety priority, as categorised using **Table 1** to **Table 4**. The risk tables below are reproduced from Austroads '*Guide to Road Safety Part 6A: Implementing Road Safety Audits*' (2019).

Table 1: Likely Frequency

Frequency	Description
Frequent	Once or more per week
Probable	Once or more per year (but less than once a week)
Occasional	Once every five to ten years
Improbable	Less often than once every ten years

Table 2: Likely Severity

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

Table 3: Resulting Level of Risk

Severity	Frequency			
	Frequent	Probable	Occasional	Improbable
Catastrophic	Intolerable	Intolerable	Intolerable	High
Serious	Intolerable	Intolerable	High	Medium
Minor	Intolerable	High	Medium	Low
Limited	High	Medium	Low	Low

Table 4: Treatment Approach

Risk	Suggested Treatment Approach
Intolerable	Must be corrected
High	Should be corrected or the risk significantly reduced, even if the treatment cost is high.
Medium	Should be corrected or the risk significantly reduced, if the treatment cost is moderate, but not high.
Low	Should be corrected or the risk reduced, if the treatment cost is low.

4. Road Safety Audit Findings

The following audit findings were identified during the RSA inspection. Audit findings are a listing of identified safety deficiencies: what is potentially dangerous about the road or what could lead to crashes occurring or injury resulting. Relevant photographs of the findings are provided in **Attachment 2**.

Table 5: Audit Findings

Number	Description	Risk Rating	
01	**Road Width** The road width is consistently narrow for most of the length. Many sections have narrow or non-existent shoulders. Some sections are very narrow (at the "slip" – refer Finding 17 and 18), winding, and in poor condition. In some locations, cars were parked on the road shoulder/verge at the time of the inspection, further reducing the available road carriageway width. Due to the narrow width there is no painted centreline. There is a risk that drivers may not allow for the narrow road and not drive to the conditions, and lose control and collide with an oncoming vehicle or a roadside hazard. *Refer to Photo 1, 2* *Location: Entire length*	Frequency: Severity: Risk:	Improbable Serious Medium
02	**Road Shoulders/Roadside Drainage** The road shoulders are narrow or non-existent in many locations. Pavement edges are damaged. Some of the road shoulders are above the level of the road surface. Some roadside drains are silted or overgrown, or non-existent. Inadequate roadside drainage can result in water ponding or flowing on the road surface. Where there is no shoulder, there is no recovery area for errant vehicles or refuge for stopped vehicles. There is less room for cyclists and pedestrians. There is a risk that vehicles may hit the damaged road edges or water on the road edge and lose control, resulting in a collision with a roadside hazard or another vehicle. Drivers may tend to keep a distance from the shoulders, increasing the risk of a head-on collision. *Refer to Photo 3, 4* *Location: Numerous*	Frequency: Severity: Risk:	Improbable Serious Medium

03	**Poor Condition of Road Surface and Pavement** The road surface and pavement is in a poor condition in many places - uneven surface, cracks, potholes, patches, shoving and rutting. The worst section is from Mullumbimby Road (including the intersection) to #119 McAuleys Lane (approx. Ch. 1150). *(List may not include every location).* There is a risk that vehicles will lose control on the damaged surface, especially on curves, resulting in a collision with a roadside hazard or another vehicle. *Refer to Photo 5, 6* *Location: Numerous*	Frequency: Severity: Risk:	Improbable Serious Medium
04	**No Advanced Warning of Curves and/or Advisory Speed** There are very few advance warning signs, or advisory speed signs, for most of the curves. Some curves are located beyond crests. It is noted that there are 'Winding Road' and advisory speed signs in both approaches to the "slip" at Ch. 1250. Without adequate warning, there is a risk that drivers will not correctly anticipate the road's alignment, particularly at night, resulting in a collision with an oncoming vehicle or a roadside hazard *Location: Numerous*	Frequency: Severity: Risk:	Occasional Serious High
05	**Inadequate Definition of Curve Alignments** There are no alignment delineation devices (such as advisory signage, CAMs, guideposts, RRPMs, etc.) on many of the curves. The curves at Ch. 2550 and Ch. 2800 have insufficient chevron alignment markers (CAM) (minimum requirement is 4). These alignments could be considered hazardous without additional delineation devices. Without adequate delineation, there is a risk that motorists will not correctly anticipate the road's alignment, particularly at night, resulting in a collision with an oncoming vehicle or a roadside hazard. *Refer to Photo 7* *Location: Numerous*	Frequency: Severity: Risk:	Occasional Serious High

06	**Roadside Hazards** There are numerous roadside hazards along the road: • Large trees – too numerous to list • Embankment at the following chainages: 275; 425; 1200-1450; 1700; 1875; 2500; 2650-2850; 3050 • Several poles and stays • Fence at Ch. 450 • Headwall at Myocum Road intersection • Creek crossing (headwalls) at Ch. 2750. *(List may not include every location).* Some of these hazards are on the outside of a curve in the line of travel. An impact with any of these roadside hazards may increase the severity of a run-off-road crash. The provision of safety barriers may be warranted in some of these locations. There is a risk that an errant vehicle could leave the roadway, resulting in a collision with the roadside hazards. *Refer to Photo 8, 9* *Location: Numerous*	Frequency: Improbable Severity: Serious Risk: Medium
07	**Safety Barriers** The safety barrier end terminal at Ch. 1450 is non-compliant. The safety barrier end terminal at Ch. 1750 is non-compliant and is also against a tree. The required deflection distance is not provided between the barrier and the hazard. The safety barrier end terminals between Ch. 1450-1850 are not adequately delineated – no yellow/black chevrons. In general, the safety barriers do not have adequate reflectors for night time delineation. There is a risk that an errant vehicle may collide with the end of the safety barrier. There is a risk that an impact with the end of the safety barrier may increase the severity of a run-off-road crash. *Refer to Photo 10* *Location: As listed*	Frequency: Improbable Severity: Serious Risk: Medium

08	**Concealed Driveways/Sight Distance from Driveways** There are many concealed driveways along the road. Sight distances are sometimes reduced by the road alignment, roadside vegetation, or fencing. There is only one 'Concealed Driveways' sign – additional signs may be warranted. There is a risk that vehicles entering or leaving these driveways may be struck by through traffic. *Refer to Photo 11, 12* *Location: Numerous*	Frequency: Improbable Severity: Serious Risk: Medium
09	**Confusing Road Alignment at Ch. 2575** The travel path through the bend is not well defined – looks a bit like an intersection. There are several driveways on the bend. From the west the road looks like it goes straight ahead (up a driveway). Drivers may not correctly anticipate the road alignment. There is a risk that a driver could be confused by the layout and head up the driveway, then make a last minute correction back onto McAuleys Lane. This could result in the driver losing control and colliding with an oncoming vehicle or a roadside hazard. *Refer to Photo 13* *Location: Ch. 2575*	Frequency: Improbable Severity: Serious Risk: Medium
10	**Sight Distances Inadequate** Sight distances at the following intersections appear to be deficient: • From McAuleys Lane, looking right along Mullumbimby Road • From McAuleys Lane, looking left along Myocum Road There is a risk of a crash at the intersections due to the poor sight distances. *Refer to Photo 14* *Location: As listed*	Frequency: Improbable Severity: Serious Risk: Medium
11	**No Advance Warning of Intersections** There are no advance warning signs for McAuleys Lane on Mullumbimby Road (westbound) and on Myocum road (southbound). There is a risk of rear-end collisions if a vehicle is slowing to turn at one of these intersections and following drivers are not anticipating vehicles stopping ahead. There is also the risk of a collision with an opposed turning vehicle. *Location: As listed*	Frequency: Improbable Severity: Serious Risk: Medium

12	**Lack of Intersection Signs/Lines** There is a lack of relevant signs and line marking at the following intersections: • Mullumbimby Road – no 'Stop' or 'Give Way' signs or hold line. • Muli Court – no 'Stop' or 'Give Way' signs, no hold line, no sight board. • Bilin Road – no 'Stop' or 'Give Way' signs, no hold line, no sight board. There is a risk that drivers will misjudge the intersection controls resulting in a collision with an oncoming or turning vehicle. *Refer to Photo 15* *Location: As listed*	Frequency: Improbable Severity: Serious Risk: Medium
13	**Line Marking at Intersections** The line marking at the Mullumbimby Road and Myocum Road intersections is badly worn. There is no line marking at the Muli Court and Bilin Road intersections. There are also no RRPM's at the intersections. Without adequate delineation, there is a risk that drivers may incorrectly interpret the road alignment or travel path at the intersections and cross to the incorrect side of the road, particularly at night, resulting in a collision with an oncoming vehicle. *Refer to Photo 16* *Location: As listed*	Frequency: Improbable Severity: Serious Risk: Medium
14	**Signs, Guide Posts, and Barriers Obscured by Vegetation** There are some warning signs, guide posts, and safety barriers that are partially overgrown or obscured by vegetation. The sight board at the Myocum Road intersection has been vandalized. The "Drive to Conditions" signs are illegible. There is a risk that drivers may not adequately perceive the sign advice or the road alignment, resulting in a collision with an oncoming vehicle or a roadside hazard. There is also a risk that drivers may not adequately perceive the road edge or barriers, resulting in a collision with the barrier. This could deflect the vehicle into oncoming traffic. *Refer to Photo 17* *Location: Numerous*	Frequency: Improbable Severity: Minor Risk: Low

15	**Insufficient Guide Posts** In many locations, there are insufficient guide posts to define the road edge or alignment. This also applies at rural driveways and culvert crossings. There is a risk that drivers may not perceive the road's edge, a driveway, or a hazard, particularly at night, and lose control of the vehicle, resulting in a collision with a roadside hazard or another vehicle. *Location: Numerous*	Frequency: Improbable Severity: Serious Risk: Medium
16	**Super-elevation** There is very little super-elevation at most curves – in some cases it is compounded by uneven road pavements. These curves are too numerous to list. It is noted that current travel speeds are low due to the road condition and environment. Design to include super-elevation should be considered in any future road upgrades. There is a risk that a vehicle will travel too fast into the curve, and the driver may lose control, resulting in a collision with an oncoming vehicle or a roadside hazard. *Location: Numerous*	Frequency: Improbable Severity: Serious Risk: Medium
17	**"Slip" at Ch. 1250 - Priority** At Ch. 1250, a recent "slip" has been repaired, and the road reduced to a short section of one lane travel. The "slip" is in a narrow winding section of road, and approach sight distance to the hazard is minimal. A convex mirror has been installed for westbound traffic. A painted edge line to define the slip is barely visible. Eastbound traffic appears to have priority (there is a 'Prepare to Stop' sign for westbound traffic). However, for westbound traffic, there is no 'Give Way' sign (and hence no advance warning of same), and no hold line. Also, CAMs have been used to delineate the "slip" rather than the more appropriate unidirectional hazard markers. There is a risk that a westbound driver may not give way, resulting in a head-on crash, or run-off road crash into a roadside hazard. There is also a risk of a rear end collision when a vehicle is stopped to give way. *Refer to Photo 18* *Location: Ch. 1250*	Frequency: Improbable Severity: Serious Risk: Medium

18	**"Slip" at Ch.1250 – Sight Distance** It is not possible to see oncoming traffic at either end of the restricted passing zone at the "slip", almost until traffic meets. This may result in oncoming or following vehicle collisions, vehicles passing at the narrow section, or vehicles having to reverse to provide room to pass. *Location: Ch. 1250*	Frequency: Severity: Risk:	Improbable Serious Medium
19	**No Advance Warning of Narrow Bridge** The width of the rail overbridge at Ch. 2375 is approximately the same as the road approaches. However, the safety barriers have a "walling" effect making the bridge appear narrower. There are no advance warning signs ('Narrow Bridge') and no advance 'No Overtaking or Passing' signs in the approaches. There is a risk that two vehicles may collide on the bridge, or an approaching driver may lose control and collide with an oncoming vehicle or a roadside hazard. *Refer to Photo 19* *Location: Bridge at Ch. 2375*	Frequency: Severity: Risk:	Improbable Serious Medium
20	**Possible Spear Hazard from Upper Rail on Bridge at Ch. 2375** There is a thin tubular rail located above the bridge safety barrier. The rail ends are unprotected. An impact with the end of this rail during a crash may increase the severity of the crash. There is risk of a driver or passenger being "speared" by the rail during a run-of road crash. *Refer to Photo 20* *Location: Bridge at Ch. 2375*	Frequency: Severity: Risk:	Improbable Serious Medium
21	**Provision for Cyclists** There is no provision for cyclists or pedestrians along the road (i.e. non-existent or narrow shoulders). There are a few 'Cyclists' and 'Pedestrians' warning signs. There is a risk of a collision between a vehicle and cyclist/pedestrian, or a head-on collision between two vehicles if one driver swerves to avoid a cyclist/pedestrian. *Location: Most of road length*	Frequency: Severity: Risk:	Improbable Serious Medium

22	**Signposting of Speed Limits** McAuleys Lane is incorrectly signposted as a "derestricted" speed zone. This sign is no longer in use and should be replaced. As the intersecting roads at each end (Mullumbimby Road and Myocum Road) are 80km/h roads, the correct signage on entering McAuleys Lane at each end is the 'End 80' sign. Due to the road conditions, the sign should be supplemented with a 'Reduce Speed to Conditions' sign. At each end of McAuleys Lane, an '80' sign should be installed to indicate a return to an 80km/h speed zone on the intersecting roads. An '80' painted on the road pavement adjacent to the signs may also be warranted. There is a risk that a driver will not adequately perceive the correct speed limit and travel too fast along the road. *Location: Change in speed zones*	Frequency: Occasional Severity: Serious Risk: High
23	**Bus Stop on Mullumbimby Road** There is a bus stop on Mullumbimby Road, approx. 70m east of the intersection. For westbound traffic on Mullumbimby Road, the bus stop is just over a crest. There is no advance warning of the bus stop, and sight distance is limited. There is also a "short cut" from McAuleys Lane to the bus stop. Eastbound drivers on McAuleys Lane take the short cut to the bus stop to pick up passengers (observed as mainly school children), then pull out onto Mullumbimby Road (observed mainly turning left). Sight distance to the right is limited. There is a risk of a collision between a westbound vehicle on Mullumbimby Road and a bus pulling into or out of the bus stop. There is a further risk of a collision between a vehicle pulling out of the "short cut" and a westbound vehicle on Mullumbimby Road. *Refer to Photo 21* *Location: Bus stop on Mullumbimby Road*	Frequency: Occasional Severity: Serious Risk: High

5. Concluding Statement

We, the audit team, declare that we are independent of the project and have appropriate experience and training.

The audit has been carried out for the sole purpose of identifying any features of the Road which could compromise road safety at the site. The identified issues have been noted in this report in **Table 5**. APP does not take any responsibility for any suggested design changes made in this report.

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

No 'intolerable' risks were identified during the audit. As per **Table 4**, risks with a 'high' ranking '*should be corrected or the risk significantly reduced, even if the treatment cost is high'*. Risks with a 'medium' ranking '*should be corrected or the risk significantly reduced, if the treatment cost is moderate, but not high*.'

It is recommended that audit findings be investigated with satisfactory corrective actions identified and implemented.

1/10/2020

Tony Cromack
AUDIT TEAM LEADER # RSA-02-0414

1/10/2020

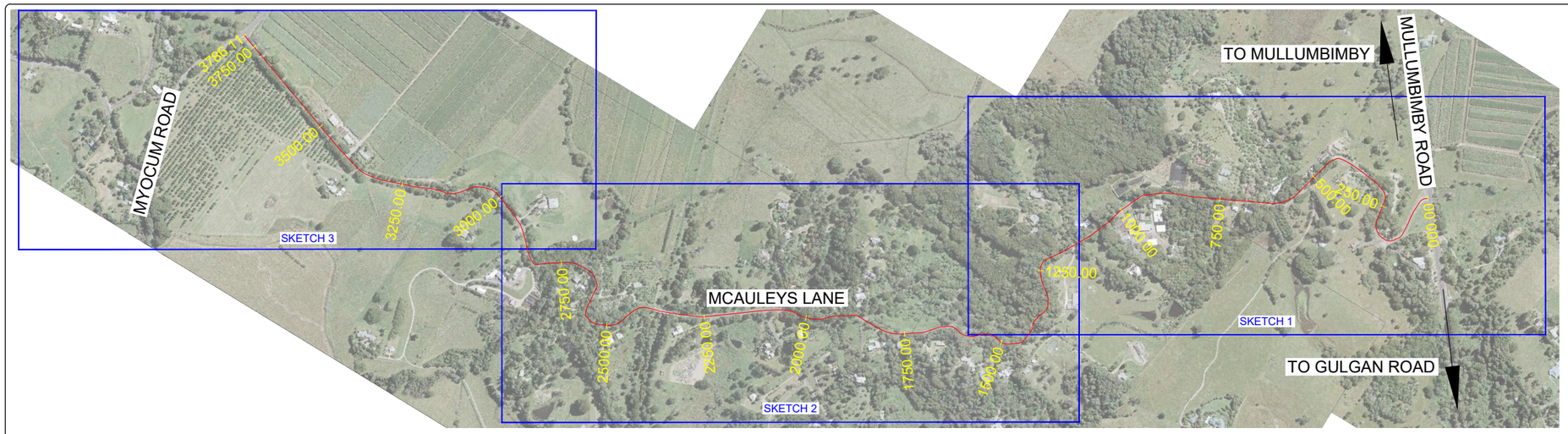
Peter Brouwer
AUDIT TEAM MEMBER # RSA-02-1325

6. Attachments

Attachment 1	Centreline Plans
Attachment 2	Site Photographs

ATTACHMENT 1

Attachment 1: Centreline Plans



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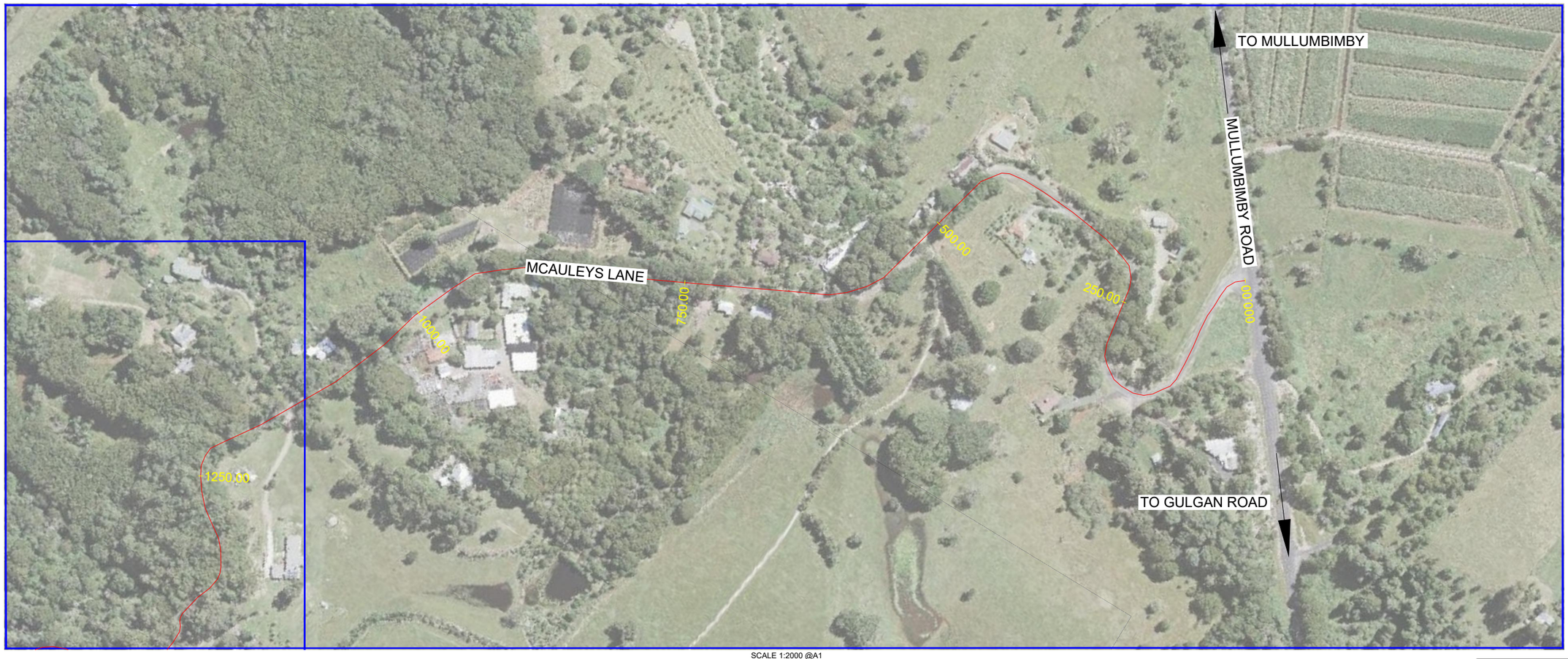

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Issue	Date	Description	App'd
A	09/09/2020	ORIGINAL ISSUE	TC

Client: MCAULEYS NO. 1 PTY LTD

Project: 53 MCAULEYS LANE
MYOCUM, NSW
ROAD SAFETY AUDIT

Title: ROAD SAFETY AUDIT

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Date	09/09/2020	Design File	
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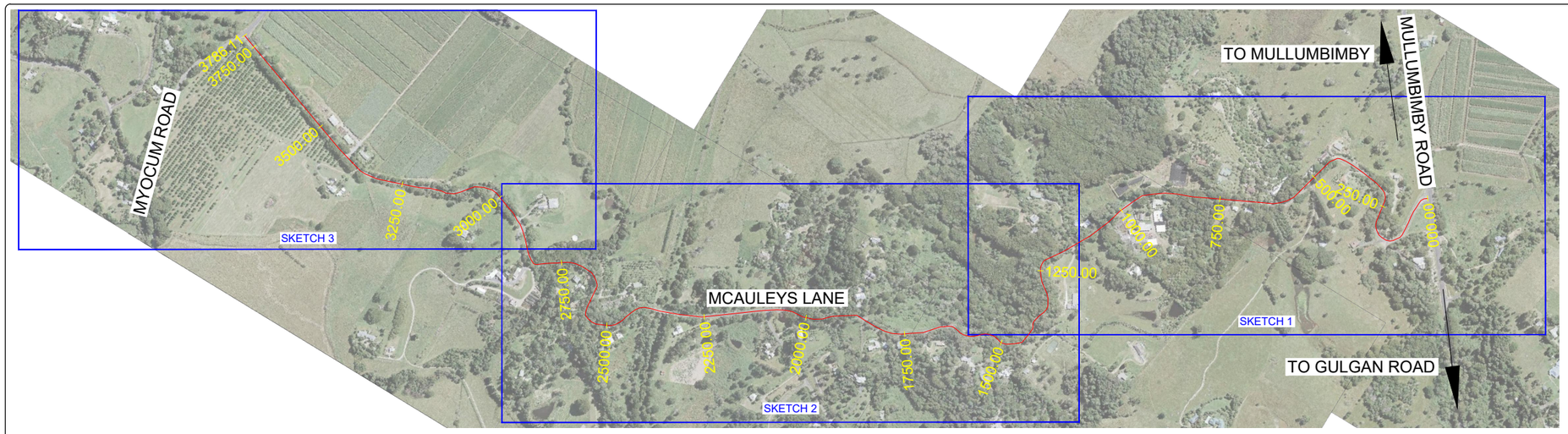

LOCALITY PLAN
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Design	TC	Scale	Various - refer plan
Drawn	EMR		
Checked	AH	Datum	
Approved	TC	Drafting File	10431_CHAINAGE_RSA.dwg
Date	09/09/2020	Design File	
Job No.	10431	Dwg No. SK02	Issue A

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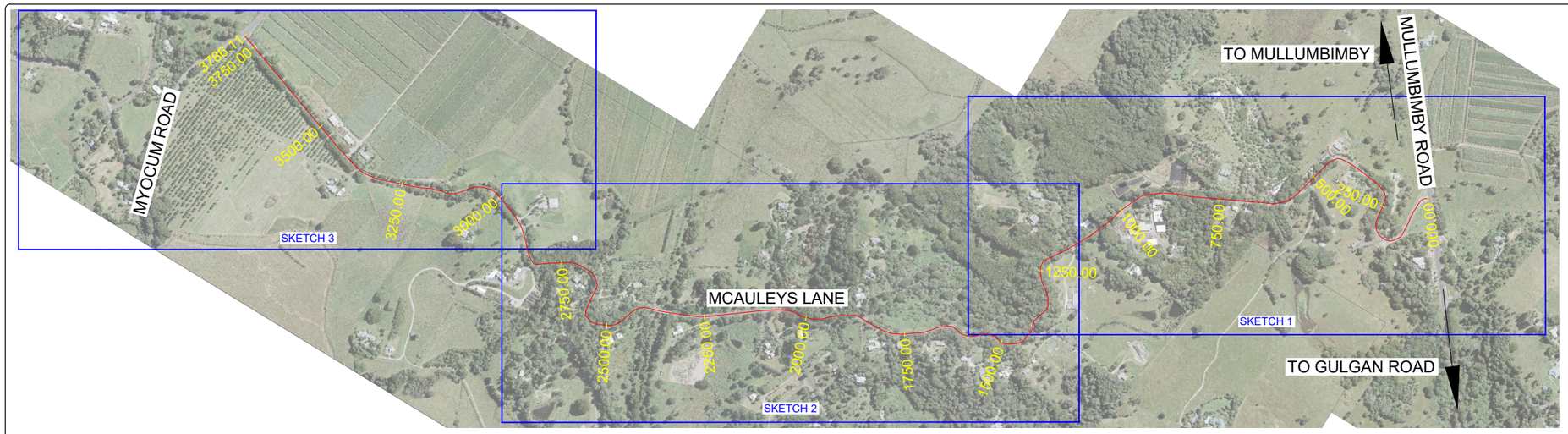

LOCALITY PLAN
SCALE 1:6250 @A1

SCALE 1:2000 @A1

This plan is NOT to be used for construction purposes unless it carries the approval stamp of the local authority.

Issue	Date	Description	App'd
A	09/09/2020	ORIGINAL ISSUE	TC

Client: MCAULEYS NO. 1 PTY LTD

Project: 53 MCAULEYS LANE
MYOCUM, NSW
ROAD SAFETY AUDIT

Title: ROAD SAFETY AUDIT

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Date	09/09/2020	Design File	
Job No.	10431	Dwg No. SK03	Issue A

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ATTACHMENT 2

Attachment 2: Site Photographs

Photo 1: Example of narrow road width

Photo 2: Parked cars further reducing road width

Photo 3: Example 1 of narrow shoulders/inadequate roadside drainage

Photo 4: Example 2 of narrow shoulders/inadequate roadside drainage

Photo 5: Road condition at Mullumbimby Road intersection – patchy and uneven

Photo 6: Example of road condition between Mullumbimby Road and #119

Photo 7: Example of inadequate delineation of curves (no CAMs)

Photo 8: Example of roadside hazards – steep bank down from shoulder

Photo 9: Example of roadside hazards – large trees near road edge

Photo 10: Safety barrier end at tree

Photo 11: Concealed driveway – driveway through fence at shoulder edge

Photo 12: Example of concealed driveway

Photo 13: Bend approach from the west is confusing – driveway looks like road continues straight

Photo 14: Sight distance (right) at Mullumbimby Road. Note bus stop (on right) just over crest

Photo 15: Example of lack of intersection signs/lines – Mullumbimby Road (no stop/give way sign, or hold line)

Photo 16: Condition of line marking at Myocum Road intersection (note: no stop/give way sign, or hold line)

Photo 17: Superseded speed zoning sign; 'Drive to Conditions' sign is totally illegible

Photo 18: The "slip" at Ch. 1250 – one lane; faded edge line; incorrect use of CAMs

Photo 19: Westbound approach to rail overbridge

Photo 20: Potential spear hazard?

Photo 21: Bus stop/shelter on Mullumbimby Road – westbound view from crest in road