Exhibited

This planning application is open for public comment until 22 December 2025

Reference no	**PLN-25-0170**
Site	**59 RAEBURN ROAD BREADALBANE**
Proposed Development	**Vehicle access track and new access to Evandale Road for use associated with concrete batch plant & quarry (CT:180210/2, 186290/2, 186290/1, 166270/1, 157107/1, 144549/1)**
Zone	**21.0 Agriculture**
Use class	**Extractive industry**

Written representations may be made during this time to the General Manager;
mailed to PO Box 156, Longford, Tasmania 7301,
delivered to Council offices or
a pdf letter emailed to planning@nmc.tas.gov.au

(no special form required)

Exhibited

NORTHERN MIDLANDS COUNCIL

PLANNING APPLICATION

FOR BUILDINGS, WORKS AND CHANGE OF USE

(E.g. Residential houses, sheds, carports, retaining walls, visitor accommodation, commercial development, signage etc.)

Office Use Only:

The Proposal

Description of proposal: Development and use of internal road (track) and new access to Evandale Road.

Driveway construction material:

The Land

Site address: 59 RAEBURN ROAD, BREADALBANE TAS 7250

Title reference: C/T: 180210/2 186290/2 186290/1 166270/1 157107/1 144549/1

Existing buildings on site: Concrete batch plant

Existing use of site: Concrete batch plant and internal track

Applicant justification of any variation/discretion to the *Tasmanian Planning Scheme – Northern Midlands*

Department of State Growth

SALAMANCA BUILDING PARLIAMENT SQUARE
4 SALAMANCA PLACE, HOBART TAS

GPO Box 536, Hobart TAS 7001 Australia
Email permits@stategrowth.tas.gov.au Web www.transport.tas.gov.au

Tasmanian Government

Michelle Schleiger
Woolcott Land Services
By email: planning@woolcott.au

Dear Michelle

Crown Landowner Consent Granted SRA-25-551

I refer to your recent request for Crown landowner consent relating to the development application at 59 Raeburn Road Breadalbane for new access to Evandale Road.

I, Fiona McLeod, Director Asset Management, the Department of State Growth, having been duly delegated by the Minister under section 52(1F) of the *Land Use Planning and Approvals Act 1993* (the Act), and in accordance with the provisions of section 52(1B)(b) of the Act, hereby give my consent to the making of the application, insofar as it affects the State road network and any Crown land under the jurisdiction of this department.

The consent given by this letter is for the making of the application only insofar as that it impacts Department of State Growth administered Crown land and is with reference to your application dated 13 August 2025, and the approved documents, as accessible via the link below:

https://files.stategrowth.tas.gov.au/index.php/s/1kdwQ2DpXD2kgPW

A copy of the Instrument of Delegation from the Minister authorising the delegate to sign under section 52 of the Act can also be accessed via the above link.

Please access and download these documents for your records as soon as possible as this link will expire six (6) months from the date of this letter.

In giving consent to lodge the subject development application, the department notes the following applicable advice:

Access – construction or alteration (Access works permit required)

In giving consent to lodge the subject development application, the Department notes that the proposed access to the State road network will require the following additional consent:

The consent of the Minister under Section 16 of the *Roads and Jetties Act 1935* to undertake works within the State road reservation.

For further information please visit https://www.transport.tas.gov.au/road_permits/permits_and_bookings/new_or_altered_access_onto_a_road_driveways or contact permits@stategrowth.tas.gov.au.

On sealed State roads all new accesses must be sealed from the road to the property boundary as a minimum.

Pursuant to Section 16 of the *Roads and Jetties Act 1935*, where a vehicle access has been constructed from land to a State highway or subsidiary road, the owner of that land is responsible for the maintenance and repair of the whole of the vehicular access.

Other:

The through lanes and existing shoulder back to the access, as well as the proposed deceleration lane, will all require to be asphalted to cover the turning movements of vehicles exiting the access.

The department reserves the right to make a representation to the relevant council in relation to any aspect of the proposed development relating to its road network and/or property.

Yours sincerely

[redacted]

Fiona McLeod
DIRECTOR ASSET MANAGEMENT

Delegate for the Minister administering the *Roads and Jetties Act 1935*

26 August 2025

Cc: General Manager, Northern Midlands Council

August 2025

PLANNING REPORT

DEVELOPMENT OF AN INTERNAL ROAD AND PROPOSED ACCESS

59 Raeburn Road BREADALBANE

Woolcott LAND SERVICES

EAST COAST SURVEYING
CONSULTING SURVEYORS & LAND PLANNERS

Prepared by
Woolcott Land Services Pty Ltd
ABN 63 677 435 924

Launceston

Head office

P 03 6332 3760
E enquiries@woolcott.au
A 10 Goodman Court Invermay 7250

St Helens

East Coast office

P 03 6376 1972
E admin@ecosurv.com.au
A 52 Cecilia Street St Helens 7216

www.woolcott.au

Job Number: L230820

Prepared by: Michelle Schleiger (michelle@woolcott.au)

BUrbRegEnvPlan

Town Planner

Rev.no	Description	Date
1	Review	
2	Final	13 August 2025
3	Review	23 September 2025
4	Review	29 October 2025
5	Review	18 November 2025
6	Review	28 November 2025

Annexures

Annexure 1 Folio text and plan

Annexure 2 Site and construction plans

Annexure 3 Environmental noise assessment

Annexure 4 Traffic Impact Assessment

Annexure 5 Assessment of the Natural Assets Code

Annexure 6 Agricultural Assessment & TPS compliance

Contents

1. Introduction

This report has been prepared in support of a planning permit application under Section 57 of the *Land Use Planning and Approvals Act 1993*.

Proposed development
Development of an internal access track and new access point

This application is to be read in conjunction with the following supporting documentation:

Document	Consultant
Site plan	Woolcott Land Services
Traffic Impact Assessment	Midson Traffic Pty Ltd
Assessment of the Natural Assets Code	RMCG
Culvert sizing hydraulic report	Flussig
Road design Cross Section	Hazell Bros
Agricultural assessment and compliance report	Pinion Advisory
Environmental Noise Assessment	Tarkarri Engineering Pty Ltd

2. Subject site and proposal

2.1 Site details

Address	59 Raeburn Road, Breadalbane TAS 7258
Property ID	9791273
Title	180210/2
Land area	101.0ha
Planning Authority	Northern Midlands Council
Planning Scheme	Tasmanian Planning Scheme – Northern Midlands (Scheme)
Easements	Rights of way
Application status	Discretionary application
Existing Access	Existing access to 59 Raeburn Road (via private road named McGraths Road) from Hobart Road.
Zone	Agriculture

General Overlay	None
Overlays	Attenuation area Airport noise exposure area Airport obstacle limitation area Bushfire-prone areas Low landslip hazard band Waterway and coastal protection area
Existing use and development	Approved use 'Extractive industries' (PLN-19-0034) Concrete batch plant. Mining Lease (ML1874 P17)
Planning History	PLN-19-0034 – Concrete batch plant PLN-24-0041 - private access road (track)

2.2 Proposal

The proposal is to develop an internal private access road, or 'track' to be used subservient to the concrete batch plant and quarry at 59 Raeburn Road. The proposal includes a new access point to Evandale Road.
The proposed includes only the land at 59 Raeburn Street, CT180210/2.

The internal part of the track is partially constructed.

The track must cross two waterways. The waterway known as Briarly Creek will have a culvert system built to allow normal flows and for the road to be built over the creek. The other waterway is a minor tributary and will be crossed by a concrete ford (pad) as a part of the access track.

The track will head southerly then south west from the batch plant towards Evandale Road, parallel to the south most boundary. This will allow direct access to Evandale Road from the site. The access will be based on a left in/left out scenario and the access will be made according to the recommendations made in the Traffic Impact Assessment that forms an integral part of this application.

An Environmental noise assessment has been undertaken and recommends a wall section to a part of the track. This would be entirely in the subject site and is not proposed to be in any other title.

2.3 Subject site

The site is located north of the Launceston Airport and east of Midland Highway and Evandale Road. The site is near the Translink precinct, which is zoned General Industrial. The established batch plant is

toward the north west of the parcel at 59 Raeburn Road, with established access to the private road known as McGraths Road.
The lot that is the subject site is associated with the quarry at the east boundary.

A planning permit (PLN-19-0034) for the use and development of a concrete batch plant and the associated buildings co-located with the quarry, was granted in April 2019.

Figure 1 Aerial view of the subject site (Source: LIST)

3. Zoning and overlays

3.1 Zoning

The site is zoned Agriculture under the Scheme.

Figure 2 Zoning for the subject site (Source: LIST)

3.2 Overlays

The following images provide an indication of overlays as applied to the land.

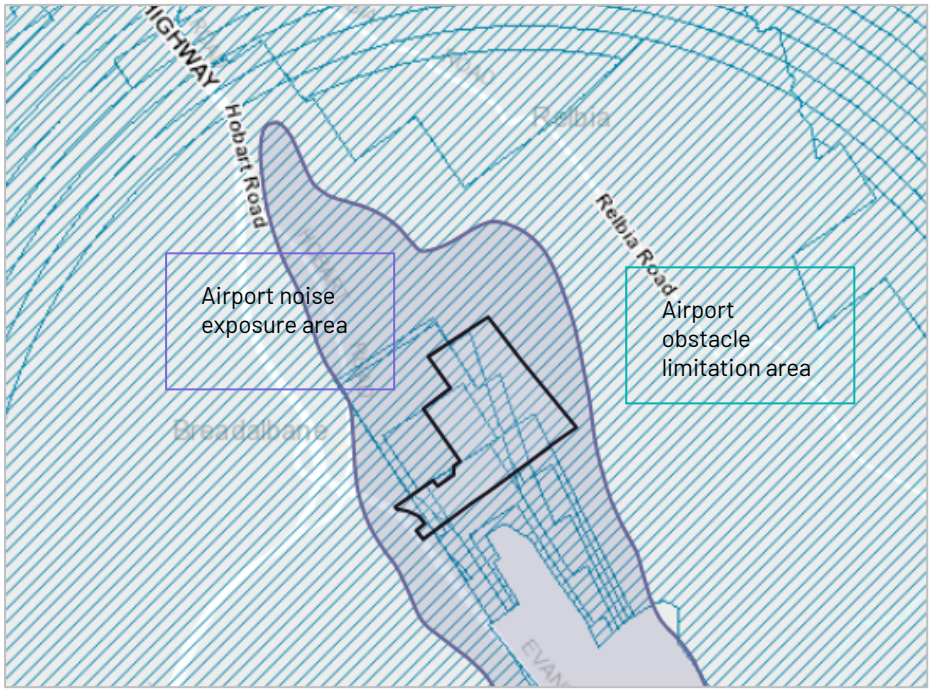


Figure 3 Overlays as they are applied to the subject site (Source: LIST)

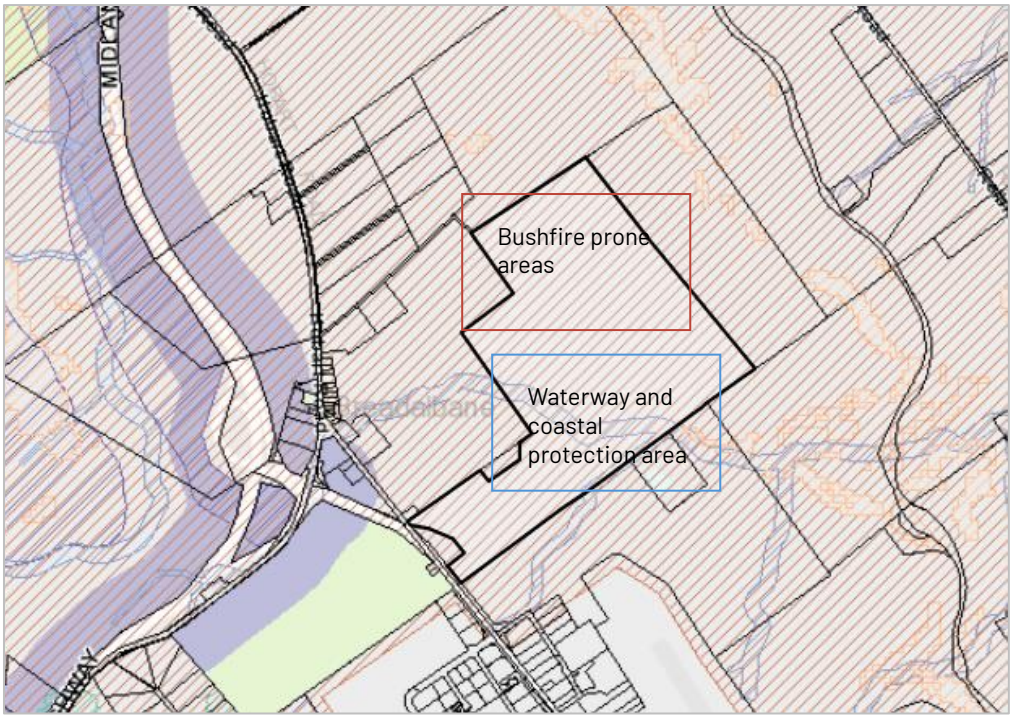


Figure 5 Overlays as they are applied to the subject site (Source: LIST)

Figure 4 Overlays as they are applied to the subject site (Source: LIST)

4. Planning Scheme Assessment

4.1 Zone assessment

21.0 Agriculture Zone

21.1 Zone Purpose

21.1.1 To provide for the use or development of land for agricultural use.

21.1.2 To protect land for the use or development of agricultural use by minimising:

a) conflict with or interference from non-agricultural uses;

b) non-agricultural use or development that precludes the return of the land to agricultural use; and

c) use of land for non-agricultural use in irrigation districts. To provide for the efficient utilisation of available social, transport and other service infrastructure.

21.1.3 To provide for use or development that supports the use of the land for agricultural use.

21.2 Use Table

Discretionary	Qualification
Manufacturing and Processing	If for: a) the manufacturing of agricultural equipment; or b) the processing of materials from Extractive Industry.

Response

The Use, as existing on the site at 59 Raeburn Road, was approved under PLN-19-0034.

21.3 Use Standards

21.3.1 Discretionary uses

21.3.1 Discretionary uses

Objective	
That uses listed as Discretionary: a) support agricultural use; and b) protect land for agricultural use by minimising the conversion of land to non-agricultural use.	
Acceptable Solutions	Performance Criteria
A1 No Acceptable Solution.	P1 A use listed as Discretionary, excluding Residential or Resource Development, must be required to locate on the site, for operational or security reasons or the need to contain or minimise impacts arising from the operation such as noise, dust, hours of operation or traffic movements, having regard to: a) access to a specific naturally occurring

	resource on the site or on land in the vicinity of the site; b) access to infrastructure only available on the site or on land in the vicinity of the site; c) access to a product or material related to an agricultural use; d) service or support for an agricultural use on the site or on land in the vicinity of the site; e) the diversification or value adding of an agricultural use on the site or in the vicinity of the site; and f) provision of essential Emergency Services or Utilities

Response

P1 The performance criteria must be addressed. The Use is existing and established.

a. The operation of the concrete batch plant is so located to be near the quarry (naturally occurring resource).

b. The site has access to the main transport connections via, Midland Highway and Evandale Road (also via Hobart Road), granting access to the broader road network as suited for the transportation of the product. The development of the track creates increased benefit in accessing Evandale Road, therefore the broader transport network which is vital to the industry.

c. Access to an agricultural product is not applicable[1].

d. This application does not include an agricultural use.

e. This application does not include an agricultural use.

f. Not applicable

Please refer to the supplied Agricultural assessment for the remainder of the zone response.

21.4 Development Standards for Buildings and Works

21.4.1 Building height

Objective	
To provide for a building height that: a) is necessary for the operation of the use; and b) minimises adverse impacts on adjoining properties.	
Acceptable Solutions	Performance Criteria
A1 Building height must be not more than 12m.	P1 Building height must be necessary for the operation of the use and not cause an unreasonable impact on adjoining properties, having regard to:

[1] Notwithstanding other agricultural potential over the subject site not included as a part of this application.

	a) the proposed height of the building; b) the topography of the site; c) the bulk and form of the building; d) separation from existing use on adjoining properties; e) the nature of the existing uses on adjoining properties; and f) any buffers created by natural or other features.

Response

A1 The acceptable solution is achieved. A section of wall is proposed as according to the Environmental Noise Assessment. It will not be more than 12m in height.

21.4.2 Setbacks

Objective	
That the siting of buildings minimises potential conflict with use on adjoining properties.	
Acceptable Solutions	Performance Criteria
A1 Buildings must have a setback from all boundaries of: a) not less than 5m; or b) if the setback of an existing building is within 5m, not less than the existing building.	P1 Buildings must be sited to provide adequate vehicle access and not cause an unreasonable impact on existing use on adjoining properties, having regard to: a) the bulk and form of the building; b) the nature of existing use on the adjoining properties; c) separation from existing use on the adjoining properties; and d) any buffers created by natural or other features.
A2 Buildings for a sensitive use must have a setback from all boundaries of: a) not less than 200m; or b) if the setback of an existing building for a sensitive use on the site is within 200m of that boundary, not less than the existing building.	P2 Buildings for a sensitive use must be sited so as not to conflict or interfere with an agricultural use, having regard to: a) the size, shape and topography of the site; b) the prevailing setbacks of any existing buildings for sensitive uses on adjoining properties; c) the location of existing buildings on the site; d) the existing and potential use of adjoining properties; e) any proposed attenuation measures; and f) any buffers created by natural or other features.

Response

A1 The installation of a wall section may have a setback of less than 5m to the side boundary. As it must meet the wall at the land at 81 Evandale Road at the frontage it will not exceed the setback of an existing building.

A2 Not applicable.

21.4.3 Access for new dwellings

Objective	
That new dwellings have appropriate vehicular access to a road maintained by a road authority.	
Acceptable Solutions	**Performance Criteria**
A1 New dwellings must be located on lots that have frontage with access to a road maintained by a road authority.	P1 New dwellings must have legal access, by right of carriageway, to a road maintained by a road authority, that is appropriate having regard to: a) the number of users of the access; b) the length of the access; c) the suitability of the access for use by the occupants of the dwelling; d) the suitability of the access for emergency services vehicles; e) the topography of the site; f) the construction and maintenance of the access; g) the construction, maintenance and usage of the road; and h) any advice from the road authority.

Response

Not applicable – no dwellings are proposed.

4.2 Code Assessment

C2.0 Parking and Sustainable Transport Code

C2.5 Use Standards

C2.5.1 Car parking numbers

Response

A1 The number of car parking spaces is as existing. There is no increase in car parking demand as a result of the development; the number of staff required on site is not increased. Car parking is as approved at PLN-19-0034.

C3.0 Road and Railway Assets Code

Response

Please refer to the Traffic Impact Assessment (TIA) supplied with this application. The TIA identifies no significant impact to the road network as a result of the development (internal track).

C7.0 Natural Assets code

C7.6 Development Standards for Buildings and Works

C7.6.1 Buildings and works within a waterway and coastal protection area or a future coastal refugia area

Response

Please refer to the report prepared by RMCG for a response to this code.

C9.0 Attenuation Code

Response

Please refer to the noise and environment assessment provided.

C13.0 Bushfire-Prone Areas Code

C13.2.1 This code applies to:

a. subdivision of land that is located within, or partially within, a bushfire-prone area; and
b. a use, on land that is located within, or partially within, a bushfire-prone area, that is a vulnerable use or hazardous use.

Response

The code does not apply to this application.

C15.0 Landslip Hazard Code

C15.2.1 This code applies to:

a. use or development of land within a landslip hazard area;

Response

The development is not within the affected area. The code does not apply.

C16.0 Safeguarding of Airports Code

C16.4 Use or Development Exempt from this Code

C16.4.1 The following use or development is exempt from this code:

(a) development that is not more than the AHD height specified for the site of the development in the relevant airport obstacle limitation area.

Response

The application is exempt as the development does not breach the AHD height of 189.76m AHD (minimum).

3. Conclusion

This planning application is for Use and Development in the Agriculture Zone. The development of a track, or internal private access road, will direct transport away from the areas of residential Use and Development on Raeburn Road and the surrounding area. The proposed access direct to Evandale Road is required together with the track. This proposal is confined to a single lot.

Notwithstanding, the land is subject to a boundary adjustment (approved but not made at the time of application). Adjustments to accommodate this may be required upon a boundary realignment, such as a right of way easement. At the time of submission though, the legal title is CT. 180210/2.

The supplied Traffic Impact Assessment shows that there is no impact or detriment to the surrounding road network. This is reviewed by Department of State Growth and consent to lodge the application is granted.

The Environmental noise report recommends a sound wall and this is indicated within the report. The wall would be entirely located within the subject site and may be moved to increase a setback to the south boundary.

The proposed represents an improvement to transport measures available to the batch plant.
The application meets the requirements of the Tasmanian Planning Scheme – Northern Midlands and approval is sought accordingly.

OWNER: A & J GARDNER PTY LTD

FOLIO REFERENCE: CT.32508/1, CT.32508/3

GRANTEE: PART OF 584 ACRES GRANTED TO THOMAS SCOTT, WHOLE OF 43A-0R-11PS. LOCATED TO H. MULLENS, WHOLE OF 43A-1R-29PS. LOCATED TO J. DAWSON AND PART OF 106A-1R-0PS. GTD. TO CHARLES FLETCHER HOWARD.

PLAN OF SURVEY

BY SURVEYOR PETER NOEL ANDERSON of
CAMPBELL SMITH PHELPS PEDLEY
3/23 BRISBANE STREET, LAUNCESTON

LOCATION PARISH OF BREADALBANE
DISTRICT OF CORNWALL

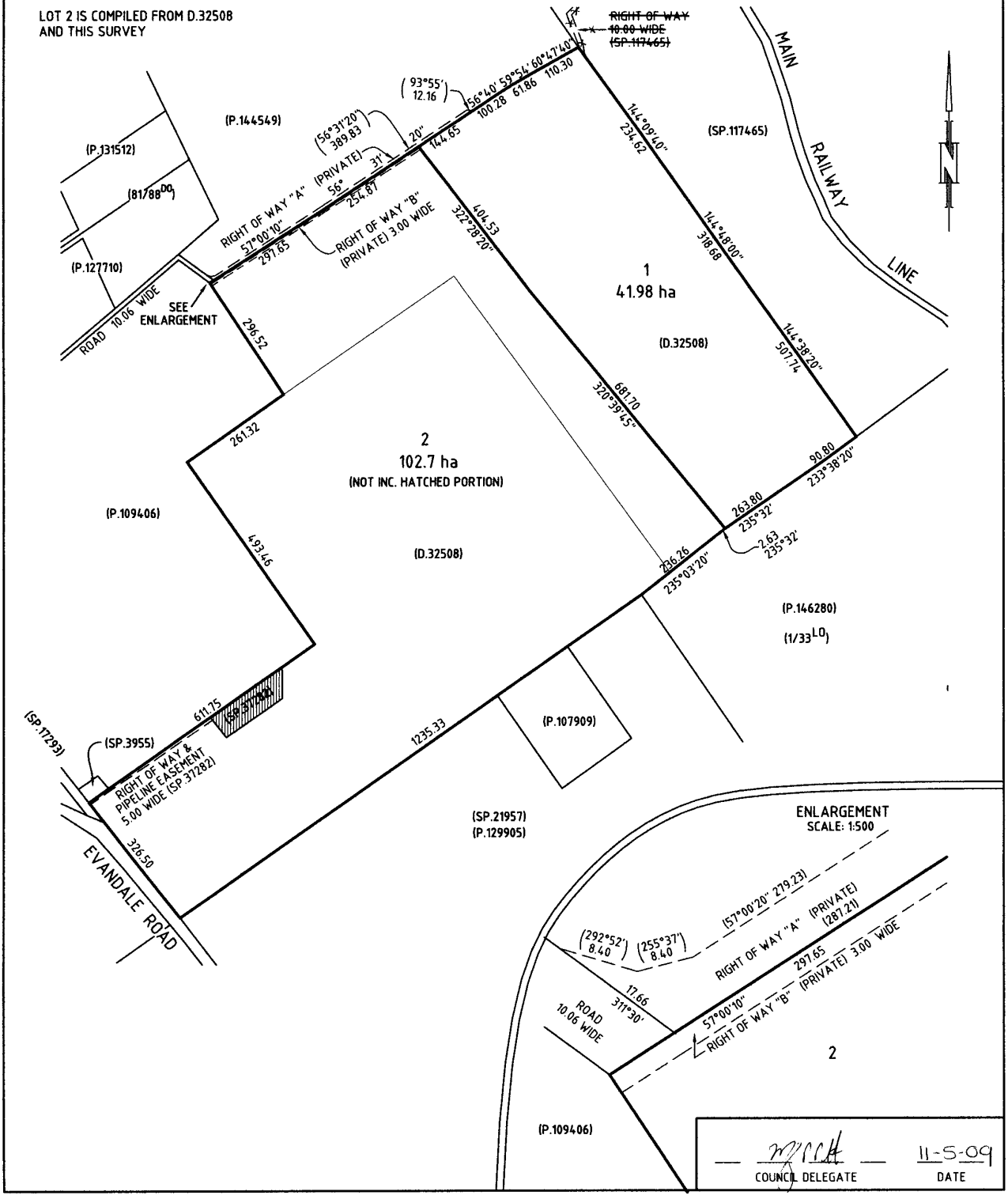
SCALE: 1:8000 | LENGTHS IN METRES | SURVEYORS REF: 304-08

REGISTERED NUMBER
SP157107

~~APPROVED~~
EFFECTIVE FROM 25 MAY 2009
Alice Kava
Recorder of Titles

MAPSHEET MUNICIPAL CODE No. 123 (5040 - 55)
LAST UPI No FET 03 , 4701190
LAST PLAN No. D32508
ALL EXISTING SURVEY NUMBERS TO BE CROSS REFERENCED ON THIS PLAN

LOT 2 IS COMPILED FROM D.32508 AND THIS SURVEY



COUNCIL DELEGATE — 11-5-09 DATE

OWNER: A & J GARDNER PTY LTD

FOLIO REFERENCE: FR.159125/2

GRANTEE: Part of 584 Acres Gtd. to T. Scott, Whole of 43A-0R-11P Located to H. Mullens, Whole of 43A-1R-29P Located to J. Dawson and Part of 106A-1R-0P Gtd. to Charles Fletcher Howard.

PLAN OF TITLE

LOCATION: LAND DISTRICT OF CORNWALL
PARISH OF BREADALBANE

FIRST SURVEY PLAN No:

COMPILED BY: VERIS AUSTRALIA PTY LTD

SCALE 1: 7,500 LENGTHS IN METRES

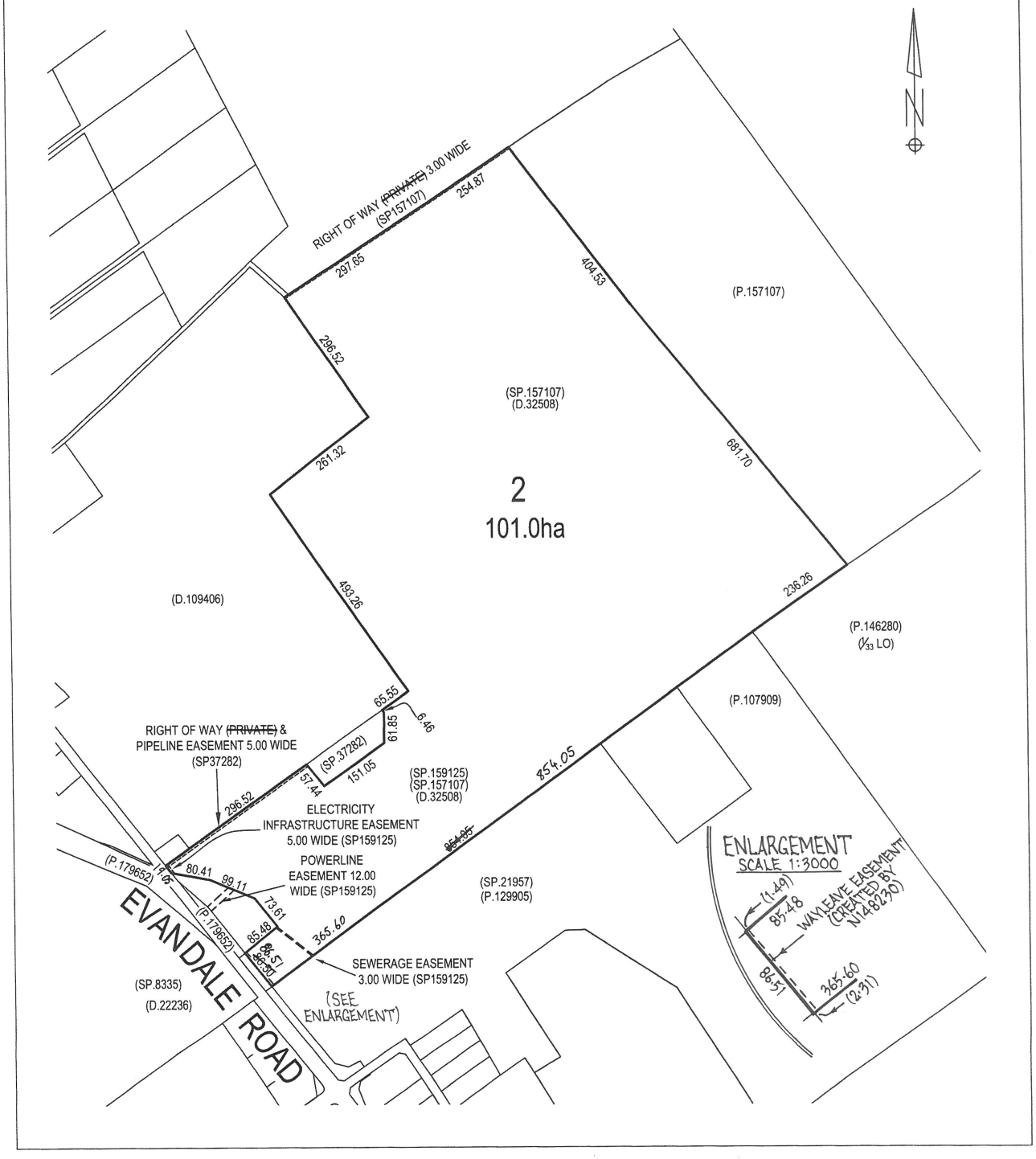
REGISTERED NUMBER
P180210

APPROVED 1 DEC 2021

Recorder of Titles

ALL EXISTING SURVEY NUMBERS TO BE CROSS REFERENCED ON THIS PLAN

BALANCE PLAN



Exhibited

THIS PLAN WAS PREPARED AS A PROPOSAL PLAN
TO ACCOMPANY A DEVELOPMENT APPLICATION TO COUNCIL
AND SHOULD NOT BE USED FOR ANY OTHER PURPOSE.
ALL MEASUREMENTS AND AREAS ARE SUBJECT TO SURVEY.

PLANNING

MCGRATHS ROAD
HAZELL BROS BATCH PLANT
EXISTING TRACK
SUBJECT SITE
#59 RAEBURN ROAD, BREADALBANE
C.T.180210/2
TITLE BOUNDARY
PROPOSED ACCESS ROAD 5m WIDE, TO EVANDALE ROAD 1710m LONG
TITLE BOUNDARY
EXISTING TRACK
TITLE BOUNDARY
EXISTING CREEK
604
#831 HOBART ROAD
#55 RAEBURN RD
27
TITLE BOUNDARY
EXISTING CREEK
C.T.107909/1
PROPOSED ACCESS ROAD 5m WIDE, TO EVANDALE ROAD 1710m LONG
#59 RAEBURN ROAD, BREADALBANE
C.T.180210/2
#81 EVANDALE ROAD
PROPOSED ACCESS - REFER TO TIA FROM MIDSON TRAFFIC MAY 2025
TITLE BOUNDARY
EVANDALE ROAD
18
#311 EVANDALE RD
C.T.128763/1
TRANSLINK AVENUE
RICHARD STREET

- WATERWAY AND COASTAL PROTECTION AREA

PROPOSAL PLAN WITH ACCESS TO EVANDALE ROAD

59 RAEBURN ROAD, BREADALBANE,
81 EVANDALE ROAD, WESTERN JUNCTION
C.T.180210/2

N

Woolcott LAND SERVICES
10 Goodman Court Invermay TAS 7248
PO Box 593 Mowbray Heights TAS 7248
Phone (03) 6332 3760
Email: enquiries@woolcott.au

Job Number L230820

Drawn	File name	Date	Scale	Edition	Sheet
EGB	L230820_PropPlan_130825_v3.1.dwg	13/08/25	1:5000@A3	v3.1	1 of 1

Hazell Bros

Breadalbane concrete batching plant alternate access environmental noise assessment

Report No. 7115_AC_R_R1

TARKARRI ENGINEERING PTY LTD
PO Box 506
Kings Meadows TAS 7249

November 2025

Tarkarri Engineering

Air Quality • Acoustics • Environment • Vibration

DOCUMENT CONTROL

HAZELL BROS
BREADALBANE CONCRETE BATCHING PLANT
ALTERNATE ACCESS
ENVIRONMENTAL NOISE ASSESSMENT

Report No.
7115_AC_R_R1
Prepared for
Hazell Bros
73-79 Lilydale Road
Rocherlea
Tasmania, 7248

Contact Ms Michelle Schleiger
☎ +61 3 6332 3760
Mobile +61(0)477 332 008
Email michelle@woolcott.au

Library Code
AC
Prepared by
Tarkarri Engineering Pty Ltd
PO Box 506
Kings Meadows
Tasmania 7249

Contact Dr Alex McLeod
☎ +61 3 6343 2077
Mobile +61(0)439 357 297
Email alex.mcleod@tarkarri.com

Author Alex McLeod, Director / Principal Consultant — Date: 18 November 2025

Revision History

Revision No.	Date Issued	Reason/Comments
0	18/11/2025	Initial release
1	28/11/2025	Edits

Distribution

Copy No._____	Revision No.	Location
1	1	Project/Client File
2	1	Client
3	1	Tarkarri Engineering Library

Keywords

dBA – *Decibels A-weighted.*

A-weighting – *Weighting of the audible frequencies reflective of the response of the human ear to noise.*

$L_{Aeq,T}$ – *Equivalent continuous A-weighted sound pressure level over a given time (T).*

$L_{A90,T}$ – *A-weighted sound pressure level exceeded for 90 % of a given time period (T), typically known as the background.*

$L_{A10,T}$ – *A-weighted sound pressure level exceeded for 10 % of a given time period (T).*

Table of Contents

List of Figures

List of tables

References

[1] SoundPLAN Acoustic modelling software - Braunstein & Berndt GmbH.

[2] ISO 9613-2:2024 Acoustics -- Attenuation of sound during propagation outdoors -- Part 2: Engineering method for the prediction of sound pressure levels outdoors.

[3] CONCAWE The oil companies' international study group for conservation of clean air and water – Europe (est. 1963) report 4/81.

1 Introduction

Tarkarri Engineering was commissioned by Hazell Bros to conduct an environmental noise assessment of their concrete batching plant located at 59 Raeburn Rd Breadalbane as part of an Environmental Effects Report (EER) to extend hours of operations. The original assessment detailed in Tarkarri Engineering report 5709_AC_R_R2 had vehicles accessing the plant via the plants current access road (McGraths Rd) off Hobart Road. The Tasmanian Environmental Protection Authority (EPA) raised concerns in relation to noise impacts from increase heavy vehicle traffic on Hobart Rd during the night period. As a result this assessment considers an alternative access route into the plant from Evandale Rd near the General Industrial zone located to the south. This access route may be used at any time.

The site's current permitted hours are outlined below with this assessment considering the 1800 hrs to 0600 hrs on weekdays,1800 hrs to 0800 hrs on Friday nights into Saturdays.

> 3.1 *Except for administration, the use must not be undertaken outside the hours of 0600 hours to 1800 hours on weekdays and 0800 hours to 1600 hours on Saturdays.*
> 3.2 *Notwithstanding the above paragraph, activities must not be carried out on Sundays and public holidays that are observed Statewide (Easter Tuesday excepted).*
> 3.3 *The use may operate outside these hours on no more than 12 occasions each calendar year.*
> 3.4 *The permit operator must notify Council on each occasion that the use operates outside the hours allowed in conditions 3.1 and 3.2.*

2 Site description

The Hazell Bros Breadalbane concrete batching plant is located on McGraths Rd to the west of the Raeburn Quarry and east of Hobart Rd. Noise sensitive residential premises are located to the north-west on the western slopes of Cocked Hat Hill and to the south-west and south on Hobart Rd and Raeburn Rd.

Figure 2-1 shows an aerial view with the location of the batching plant marked. Figure 2-2 presents an aerial view with the proposed night time access route to the plant.

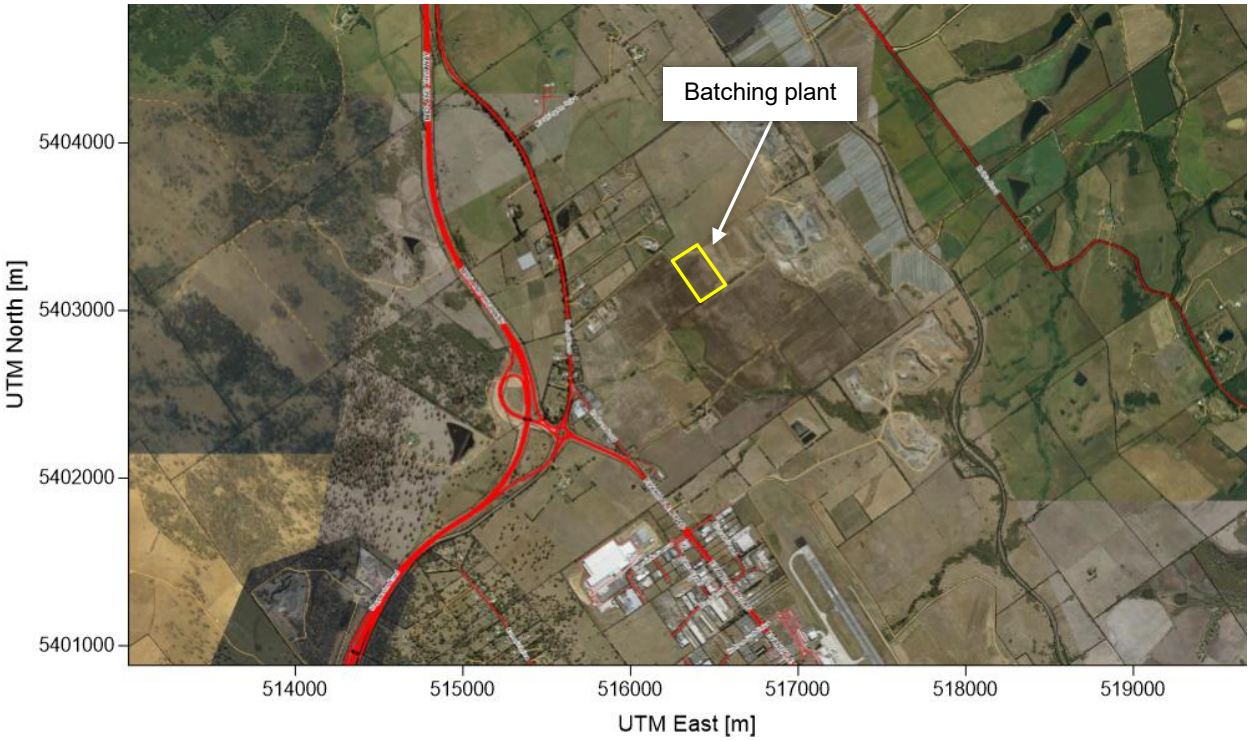


Figure 2-1: Aerial view of the Breadalbane concrete batching plant land and surrounds.

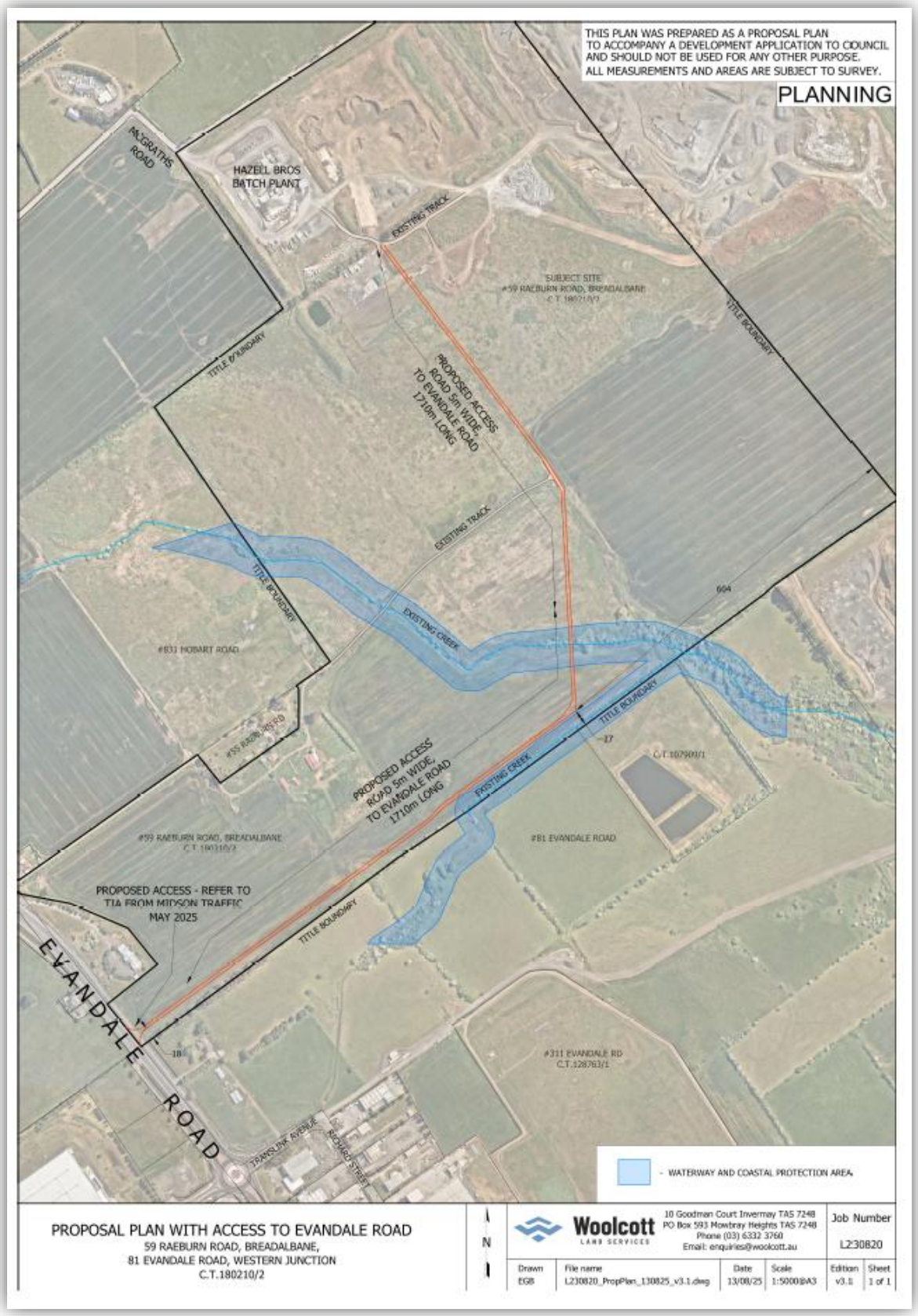


Figure 2-2: Aerial view of proposed night access route (provided by Hazell Bros).

3 Ambient noise environment

3.1 Ambient noise monitoring procedure

An unattended logging sound level meter (SLM) was located at a residence on the land to the south of the concrete batching plant land (55 Raeburn Rd. Breadalbane, UTM coords 516437, 5402437) measuring relevant 10-minute noise statistics for a period of approx. 6 days between 19 and 25 April 2022.

All measurements were carried out in general accordance with the *Tasmanian Noise Measurements Procedures Manual*.

Figure 3-1 shows an aerial view showing the location of the monitoring and the batching plant. Figure 3-2 shows a photograph of the SLM at the monitoring location.

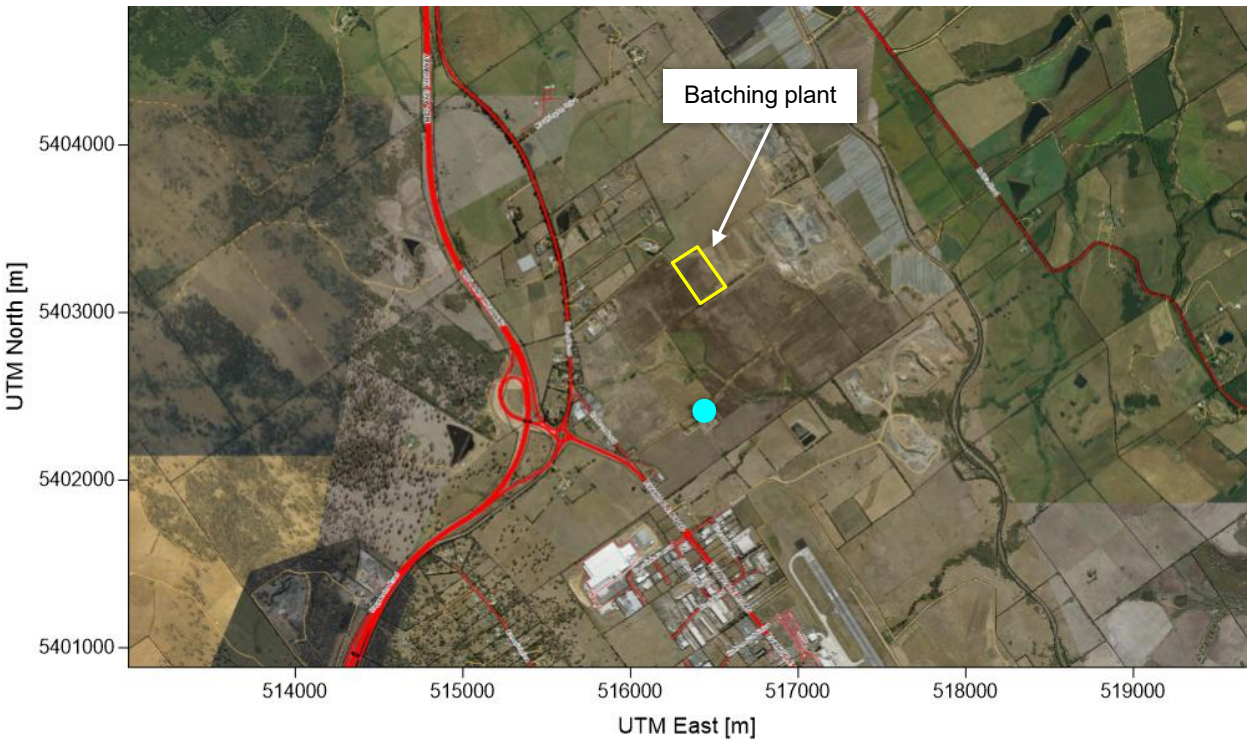


Figure 3-1: Aerial view with monitoring location marked.

Figure 3-2: Photograph showing of the SLM (taken by Tarkarri Engineering).

Figures 3-3 provides logged levels for the following noise statistics through the monitoring period:

- $L_{Aeq,10min}$: A-weighted energy equivalent sound pressure level over a 10-minute period
- $L_{A90,10min}$: A-weighted sound pressure level exceeded for 90 % of a 10-minute period, commonly termed the background noise level and control by constant noise sources.
- $L_{A10,10min}$: A-weighted sound pressure level exceeded for 10 % of a 10-minute period, representative of transient noise sources in the environment.

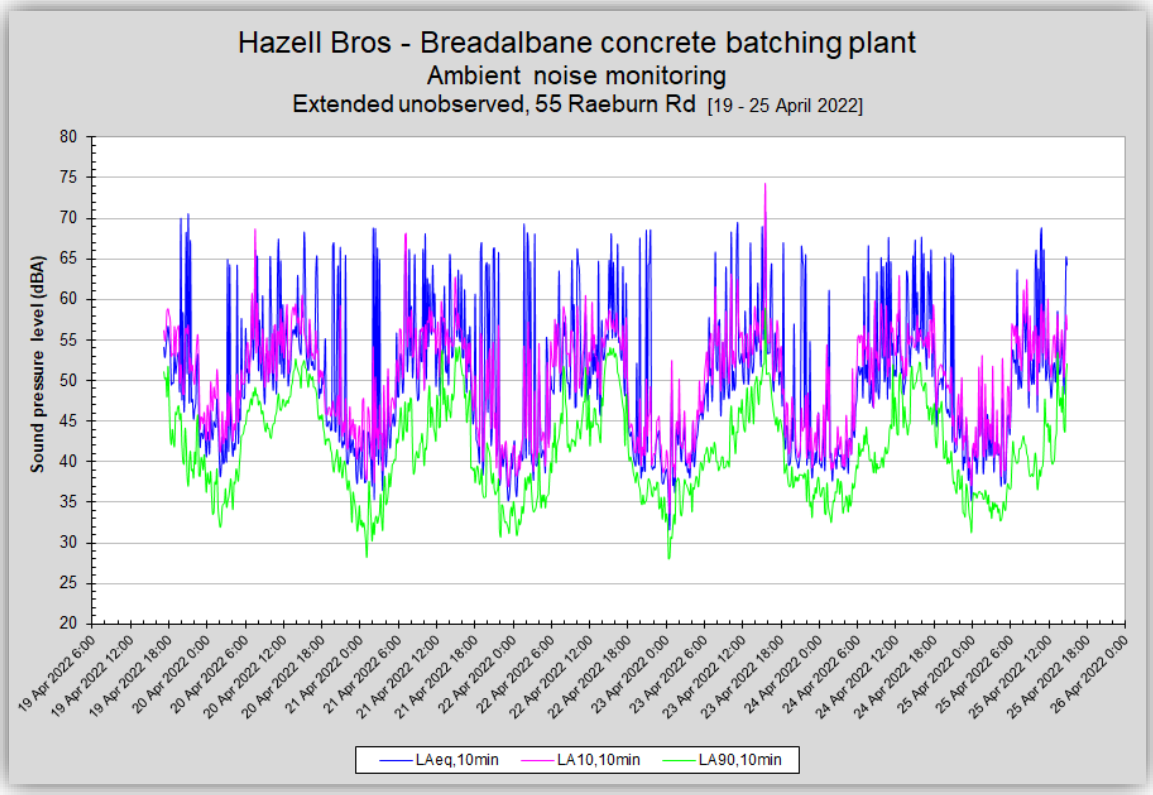


Figure 3-3: Measured 10-minute noise statistics.

From the above the following is noted:

$L_{Aeq,10min}$

- Levels generally fluctuated between 35 to 40 dBA during the night and up to 50 to 55 dBA during the day.
- Numerous high amplitude peaks are present as result of aircraft movements to and from the airport, at these times L_{Aeq} levels exceed L_{A10} levels indicating the short duration of the events.

$L_{A90,10min}$

- Levels were as low as 30 dBA during the night and up to 50 to 55 dBA during the day.

  NB: The high amplitude flight events seen in the L_{Aeq} results are not present. This is due to the short duration of an overflight event not influencing the $L_{A90,10min}$ statistic.

Below are rating background levels (RBLs) for the day (0600 to 1800 hrs, 0800 to 1600 hrs on Saturday), evening (1800 Hrs to 2200 hrs) and night (2200 to 0600 hrs, 2200 to 0800 on Friday night into Saturday) periods calculated from the monitor data, in accordance with section 14.5 of the *Tasmanian Nosie Measurement Procedures Manual*.

- Day: 40 dBA
- Evening: 37 dBA
- Night 33 dBA

Following a principle of RBL + 5 dBA the following project assessment criterion was developed for night operations and provides the basis of the analysis of modelling results in subsequent sections of this report:

- Night: **$L_{Aeq,10min}$ 38 dBA**

NB: This assessment also considers the evening period, however, for assessment purposes the night criterion above is utilised to cover both the evening and night periods.

4 Environmental noise modelling

SoundPLAN[1] software was used for carrying out detailed noise emission spectra and contour modelling. This program allows the use of the calculation algorithms for modelling attenuation/amplification of noise in the environment. Parameters influencing sound propagation and attenuation include:

- Source type (point, line, plane).
- Relative source and receiver height.
- Topography and barriers.
- Industrial buildings as sources and/or barriers.
- Ground and air absorption.
- Distance attenuation.
- Atmospheric conditions (Pasquill stability, temperature, humidity and vector wind speed).
- Reflecting surfaces.
- Source directivity.

As all propagation and attenuation parameters are frequency dependent, all input source data has been based on 1/3-octave band sound power spectra.

Geo-referenced spatial data was obtained from LISTdata. This provided contours at 10 m intervals and cadastral parcels for the area modelled. 1 m LIDAR contour data for the existing topography in the vicinity of the batching plant was developed and provided by Esk Mapping.

Equipment list and layout data for operations were developed during a site visit.

All source and geodata is referenced to the Map Grid of Australia (MGA).

4.1 Noise mitigation

Following analysis of the modelling results presented in Tarkarri Engineering report 5507_AC_R and the configuration of the permanent plant now in place the noise mitigation measures considered in this assessment are outlined in Table 4-1 below.

Noise mitigation measures	
Mitigation	Comment
Truck loading barrier wall (existing)	An existing feature of the plant, a tilt up concrete wall is in place on the northern side of the trucking loading bay (refer to picture) 
Partial enclosure of truck wash area (existing).	Three walled and roofed structure around truck wash area with adequate sound transmission loss and internal acoustically absorptive lining for surfaces above 2 m. An automatic door in the northern facade to allow access for truck traffic from loading area that closes following entry.
Alternative access route during the night period (future).	Access via Evandale Rd to the south of the plant. 40 km/hr speed limit.
140 m, 3.2 m high barrier fence.	Located along boundary with 81 Evandale Rd near Evandale Rd. See Figure 4-4 for the location and extent. **NB**: The barrier fence would need to be constructed from a material that provides a minimum sound transmission loss of 15 dB for 1/3-octave bands from 80 Hz and above. This, for example, could be achieve with 24 mm thick marine plywood between universal columns or 100 mm thick tilt up concrete panels or a prefabricated acoustic panel barrier system (e.g. Flexshield Sonic System). A textured surface to the face fronting the haul route would assist in breaking up and scattering reflections off the barrier system that would occur during truck traverses.

Table 4-1: Noise mitigation measures.

4.2 Model input data

Input sound power (SWL) spectra were taken from Tarkarri Engineering measurement data obtained during a site visit by Tarkarri Engineering on 18 December 2020 and again on 4 March 2022. Table 4-2 presents overall SWLs and details of the noise sources identified during the site visit. Table 4-3 presents 1/1-octave band L_{Aeq} SWL spectra.

Overall sound power levels (dBA)			
Source	SWL		Comment
	L_{Aeq}	L_{Amax}	
Truck being loaded	103*	108	Material being loaded into the truck, noise generated by the hydraulic drive and engine radiator. Operating for 6-minutes in 10-minutes. Operating for 3-minutes in 10-minutes.
Loading structure openings	85	-	Openings for conveyor penetrations into the structure to the rear of the truck loading bay
Truck at wash stand	103*	108	Truck parked up at wash stand with noise generated by hydraulic drive and engine radiator. Operating for 3-minutes in 10-minutes.
Truck – Evandale Rd to wash waiting area	98*	102	Truck moving between Evandale Rd and site waiting area, noise generated by truck engine.
Truck - waiting area to loading	87*	102	Truck moving between the waiting area and loading area, noise generated by truck engine
Truck - from loading to wash stand	87*	102	Truck moving between the loading area and wash stand, noise generated by truck engine.
Truck - wash stand to Evandale Rd	98*	102	Truck moving between the wash stand and Evandale Rd, noise generated by truck engine.
FEL	97*	107	Front end loader (FEL) moving between material storage and loadout bins, noise generated by FEL engine. Operating for 6-minutes in 10-minutes.
Compressor	90*	104	Air compressor, intermittent operation.

* Has been scaled for time of operation in a 10-minute period (e.g. where a vehicle traverse takes less than 10-minutes then the L_{Aeq} SWL has been scaled to represent this).

Table 4-2: Overall sound power levels and data source information.

1/1-octave band L_{Aeq} sound power levels spectra (dBA)										
Source	Frequency (Hz)									Total
	31.5	63	125	250	500	1k	2k	4k	8k	
Truck being loaded	55	71	80	89	97	98	97	93	87	**103**
Loading structure openings	39	63	68	75	79	78	77	74	71	**85**
Truck at wash stand	55	71	80	89	97	98	97	93	87	**103**
Truck - Evandale Rd to wash waiting area	62	72	79	82	89	93	92	89	81	**98**
Truck - waiting area to loading	48	59	69	72	78	83	82	79	71	**87**
Truck - from loading to wash stand	48	59	69	72	78	83	82	79	71	**87**
Truck - wash stand to Evandale Rd	62	72	79	82	89	93	92	89	81	**98**
FEL	60	74	82	83	89	93	90	86	82	**97**
Compressor	44	59	63	70	75	78	83	86	83	**90**

Table 4-3: 1/1-octave band L_{Aeq} sound power level spectra.

4.3 Atmospheric conditions

The ISO 9613[2] and CONCAWE[3] algorithms are utilised here to model sound propagation in the environment. The following propagation conditions were modelled:

- **ISO** 9613 algorithm.
- **CONCAWE worst-case**: This condition considers all receiver points to be downwind of the plant with a Pasquill stability class F and a vector wind speed of 2 m/s, noise contours will then represent the highest predicted sound pressure levels at any location around the plant.

4.4 Model receivers

Six model receiver locations were selected to represent noise sensitive residential premises surrounding the batching plant. Table 4-4 presents location information for each receiver while Figure 4-1 presents a model plan projected onto aerial photographic coverage with the receiver locations marked.

Environmental noise model receiver positions		
Number	Location	Coordinates (MGA94, Zone 55 G)
R1	805 Hobart Rd	516189 5403510
R2	803 Hobart Rd	516123 5403582
R3	843 Hobart Rd	515681 5402794
R4	55 Raeburn Rd	516407 5402400
R5	81 Evandale Rd	516300 5401888
R6	62 Evandale Rd	516107 5401943

Table 4-4: Environmental noise model receiver positions.

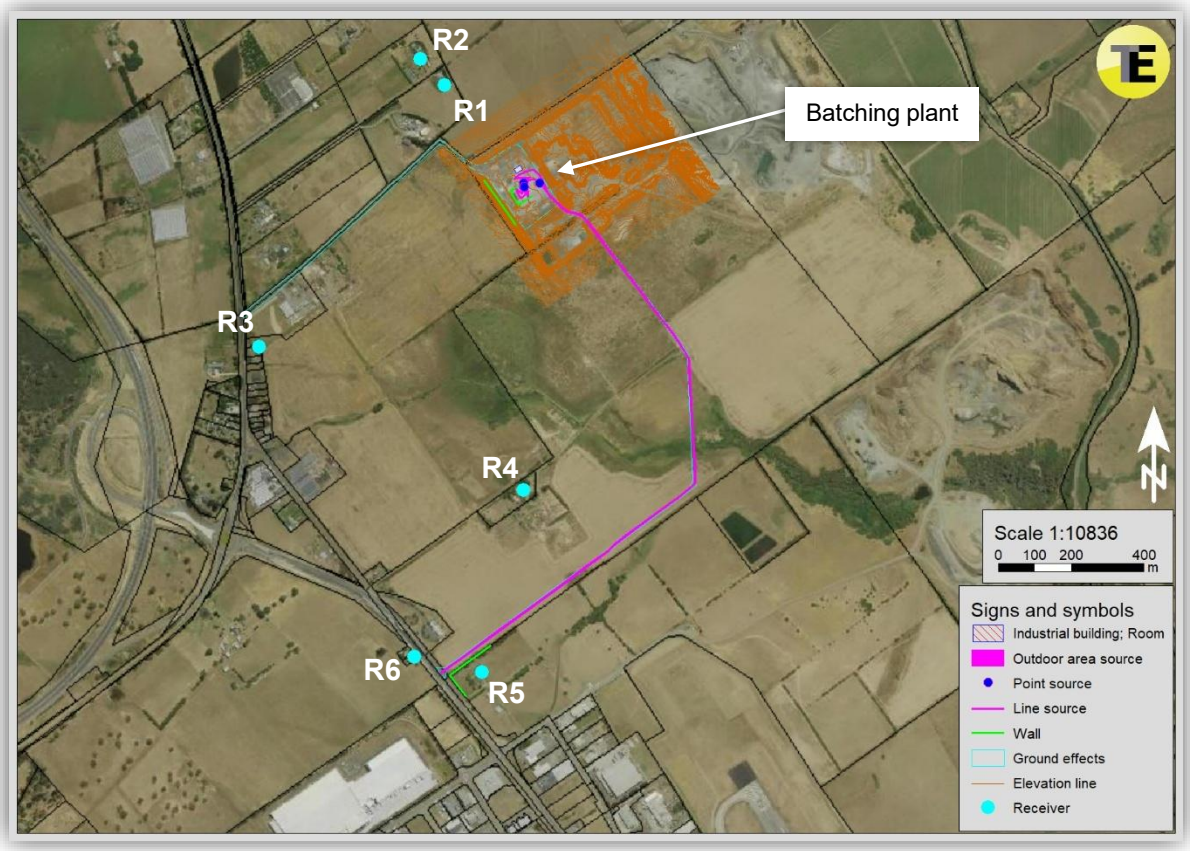


Figure 4-1: Model view with receiver locations.

4.5 Model scenario

Figure 4-2 presents a model plan view projected onto aerial photographic coverage with the locations of the noise sources as detailed in Table 4-1 and 4-2 marked. Figure 4-3 presents a wire-frame model view from the south.

The scenario presented represents a 10-minute period of night activity with both L_{Aeq} and L_{Amax} levels predicted. An additional scenario was modelled with three trucks on the access road as a worst-case operational scenario, however, this number of trucks on the access road in a 10-minute period isn't expected.

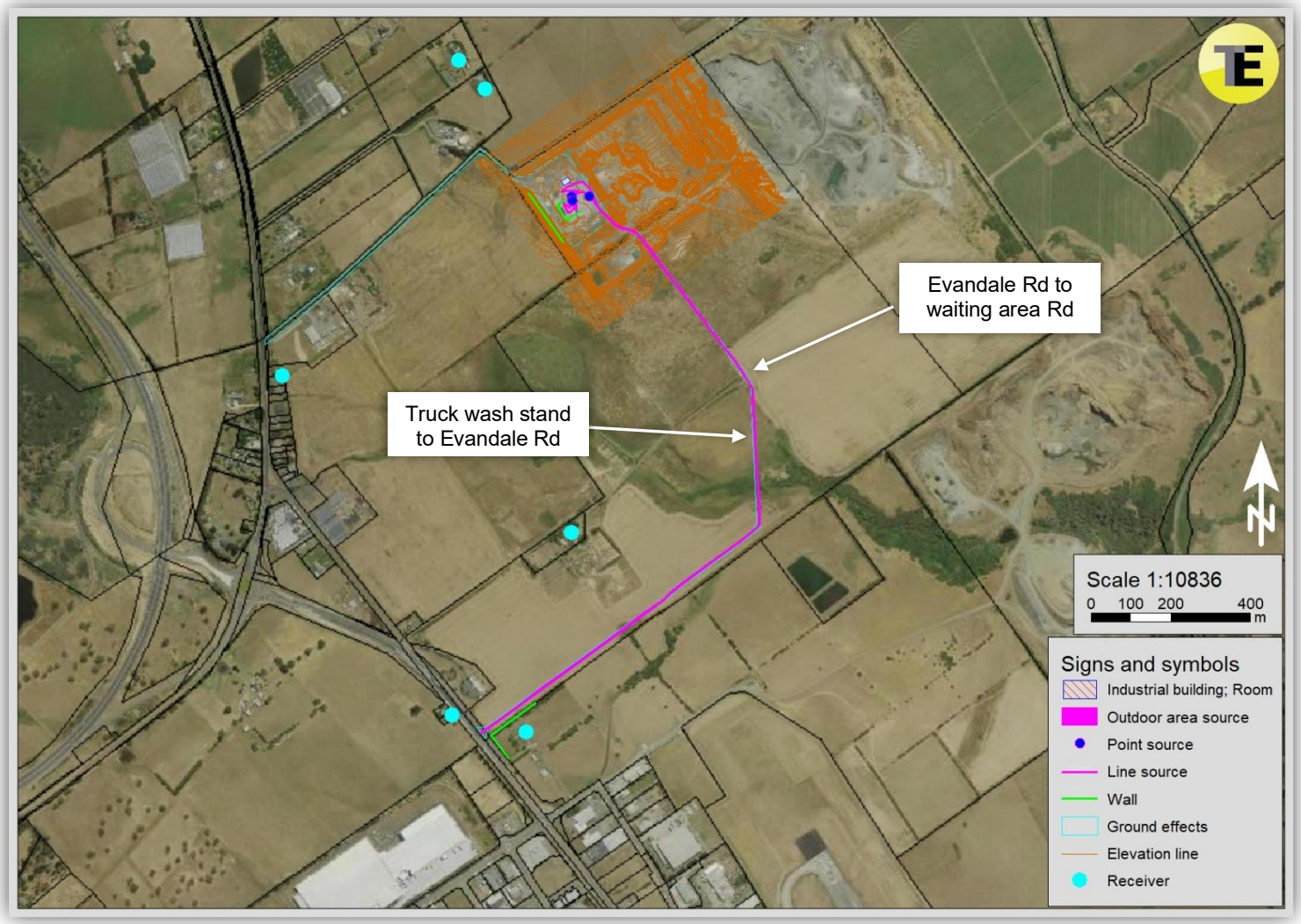


Figure 4-2: Model plan view.

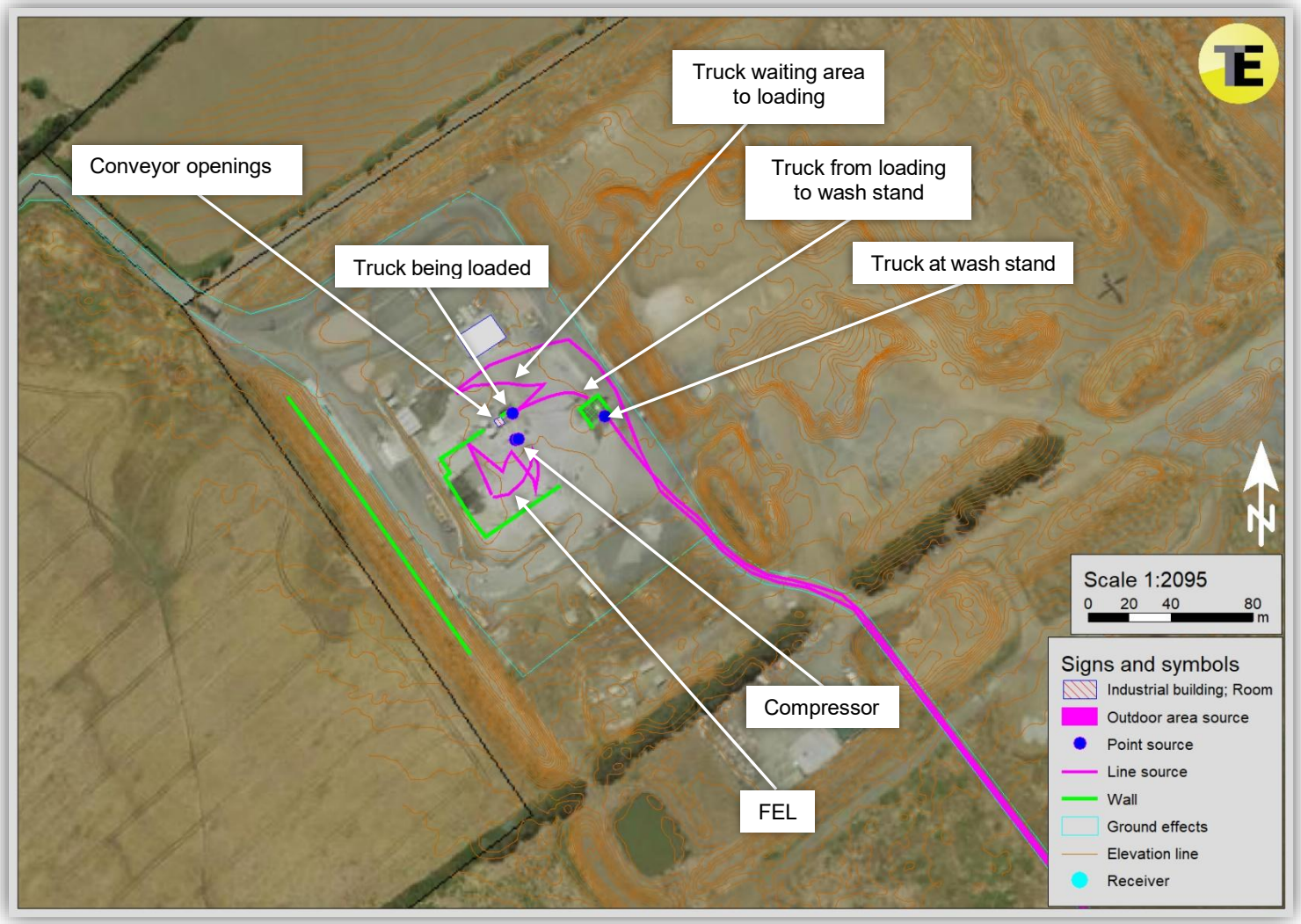


Figure 4-3: Model plan view.

Figure 4-4: Model plan view.

4.6 Modelling results and discussion

Table 4-4 presents predicted L_{Aeq} and L_{Amax} noise emission levels at the five receiver locations under the ISO and CONCAWE worst-case model algorithms.

Predicted sound pressure levels (dBA)								
Receivers	2 trucks on access road (typical)				3 trucks on access road (worst-case)			
	ISO		CONCAWE		ISO		CONCAWE	
	L_{Aeq}	L_{Amax}	L_{Aeq}	L_{Amax}	L_{Aeq}	L_{Amax}	L_{Aeq}	L_{Amax}
R1	35	44	36	46	35	44	36	46
R2	32	42	33	43	32	42	33	43
R3	25	34	25	35	26	34	26	35
R4	35	40	36	42	36	40	37	42
R5	34	48	35	51	36	48	37	51
R6	35	51	37	53	36	51	38	53

Table 4-5: Predicted noise emission levels.

From the above:

- L_{Aeq} levels are no greater than 37 dBA under typical operations at surrounding receiver locations with maximum noise levels predicted between 34 and 53 dBA.
- With a third truck on the access L_{Aeq} levels are raised by no more than 1 to 2 dB.

  NB: Predicted dBC levels, not presented here, are less than 15 dB higher than predicted dBA levels.

Figure 4-5 presents predicted L_{Aeq} 1/3-octave band spectra at the six model receiver locations. The spectra indicate that predicted noise levels don't contain excessive levels of low frequency or significant tonality as defined under the *Tasmanian Nosie Measurements Procedures Manual*. Some tonality is present, resulting from the FEL, however, these tones are not temporally stable.

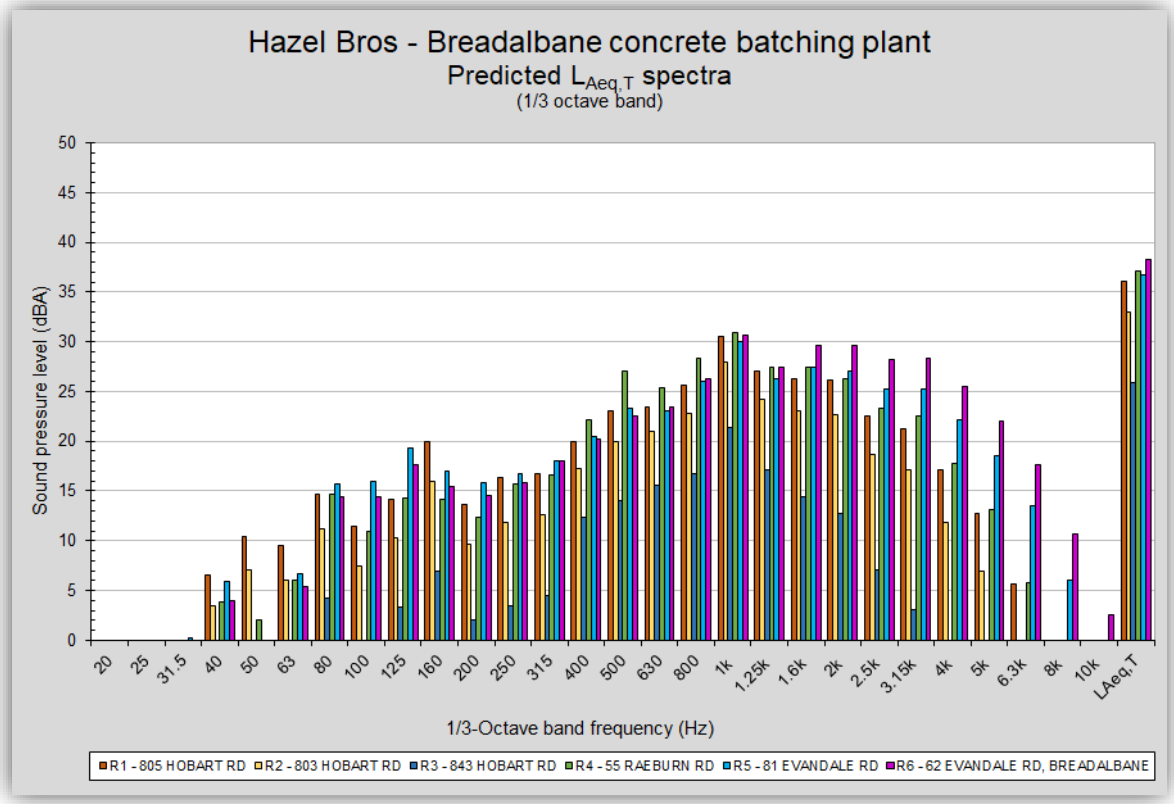


Figure 4-5: Predicted L_{Aeq} 1/3-octave band spectra.

5 Conclusions and recommendations

- Predicted noise levels from the concrete batching plant in the night period (2200 hrs to 0600 hrs on weekdays and 2200 hrs to 0800 hrs on Friday nights into Saturdays) are below the criterion level of 38 dBA with the controls outlined in section 4.1 in place.
- Intrusive noise characteristics are not expected with modelling results showing no indication of excessive low frequency or temporally stable tonal emissions. Impactive noise (generating impulsive noise emissions) present in the mobile plant assessed in Tarkarri Engineering report 5507_AC_R has been removed with the reconfiguration of the material loading system.
- Maximum noise levels predicted are below the indicator level of 60 dBA for outside of a bedroom window in the *Environment Protection Policy (Noise) 2009* indicating that they are not excessive.
- Once the future controls outlined in section 4.1 have been implemented an attended noise survey of a night operation, currently allowable on 12 occasions under the existing permitted hours for the site, would be conducted at receivers R1, R4 and R5 as a minimum, to demonstrate the efficacy of the controls.

Appendix

Figures A-1 to A-4 present predicted noise emission contours for night operations under both the ISO and CONCAWE worst-case model algorithms. The 38 dBA criteria level contour is highlighted in turquoise.

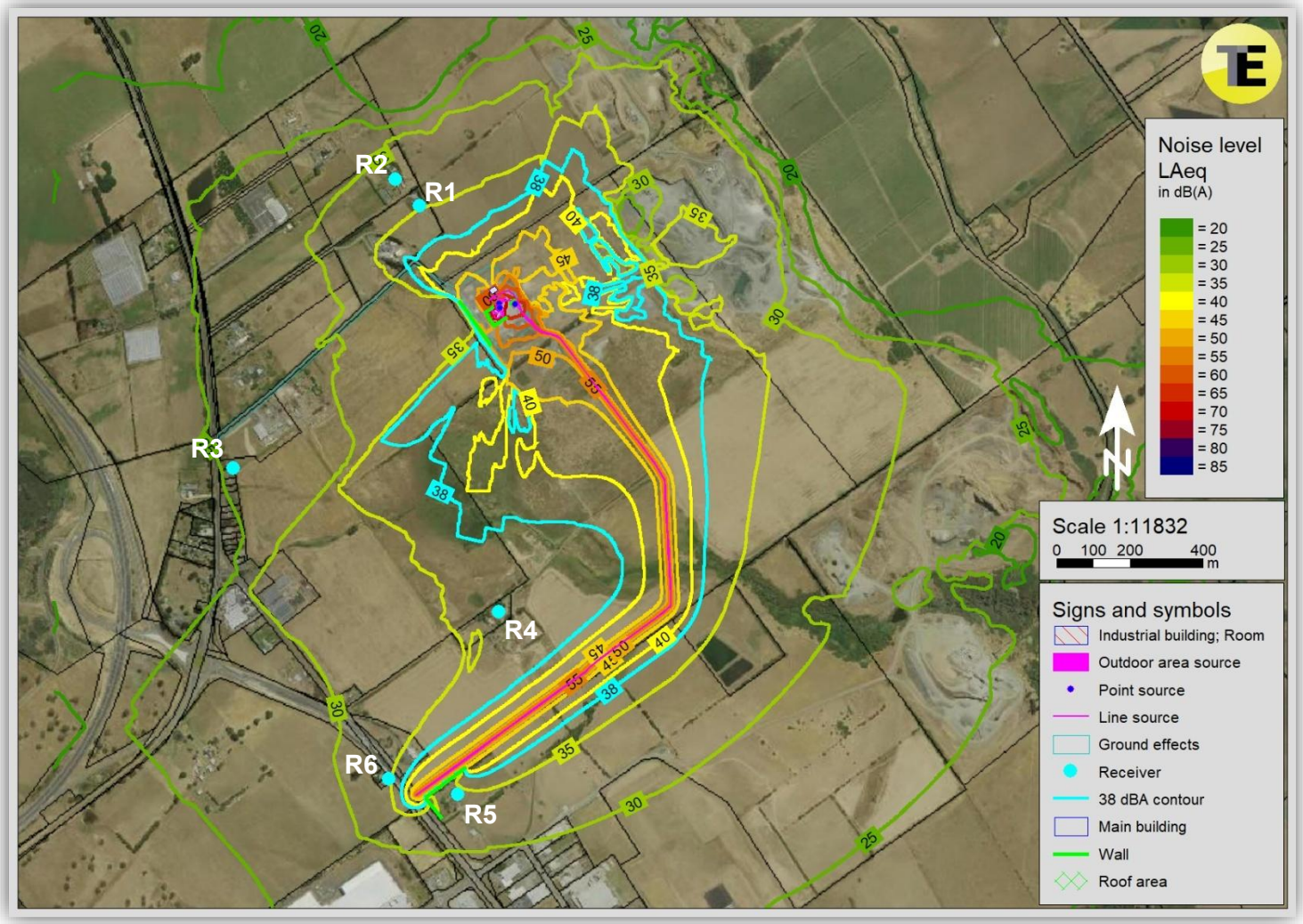


Figure A-1: Predicted L_{Aeq} contours under ISO, typical operations.

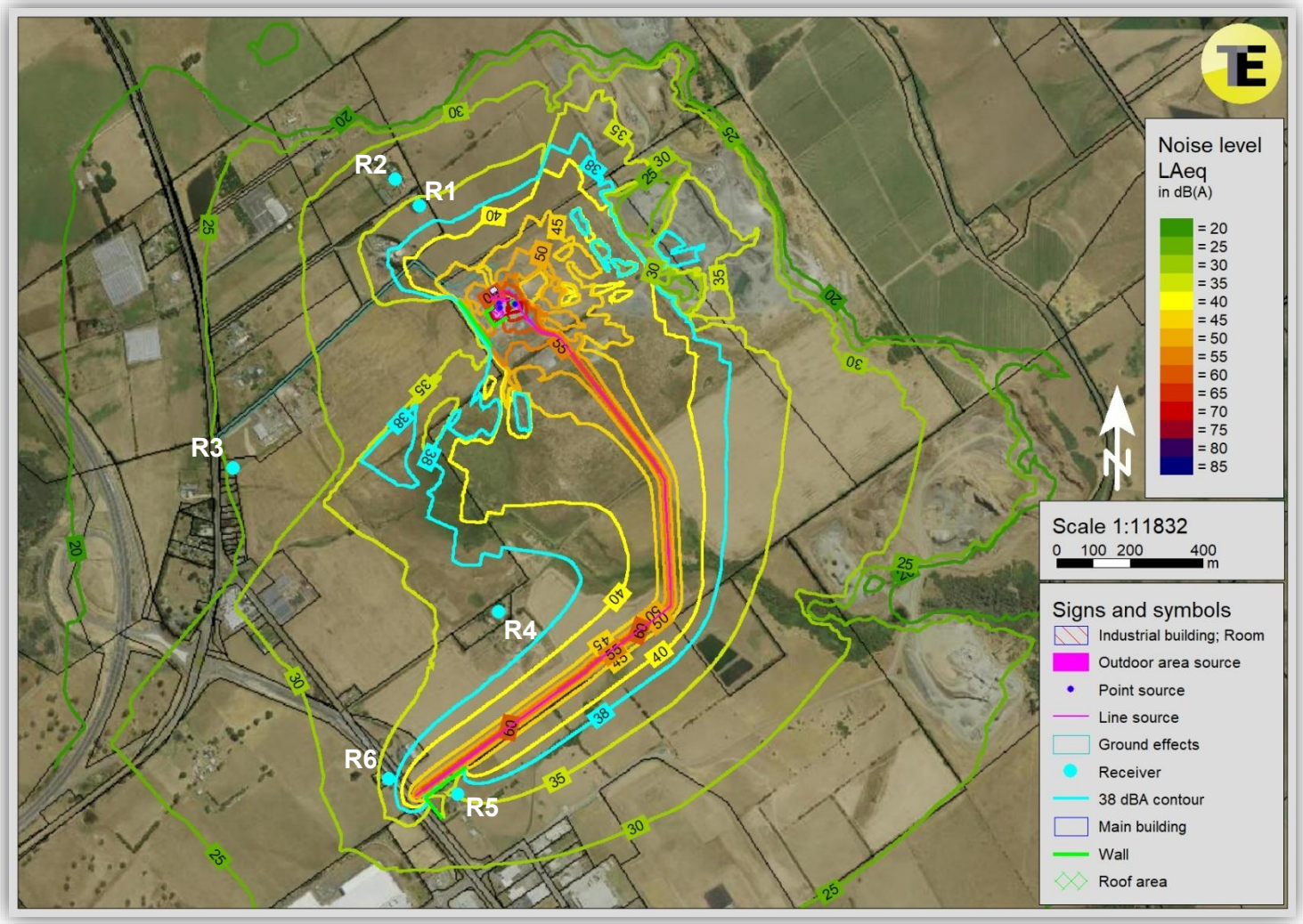


Figure A-2: Predicted L_{Aeq} contours under CONCAWE worst-case weather, typical operations.

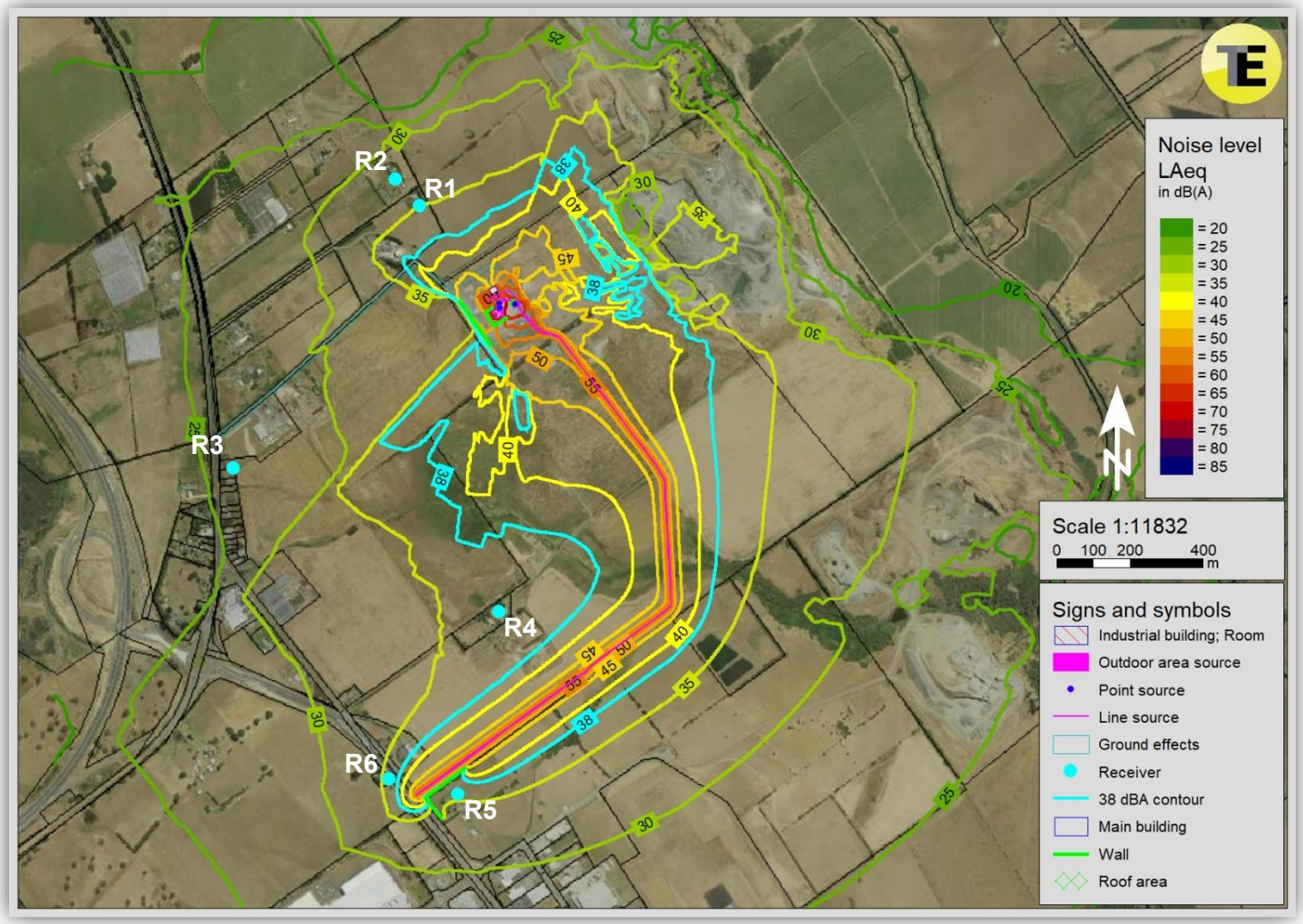


Figure A-3: Predicted L_{Aeq} contours under ISO, worst-case operations.

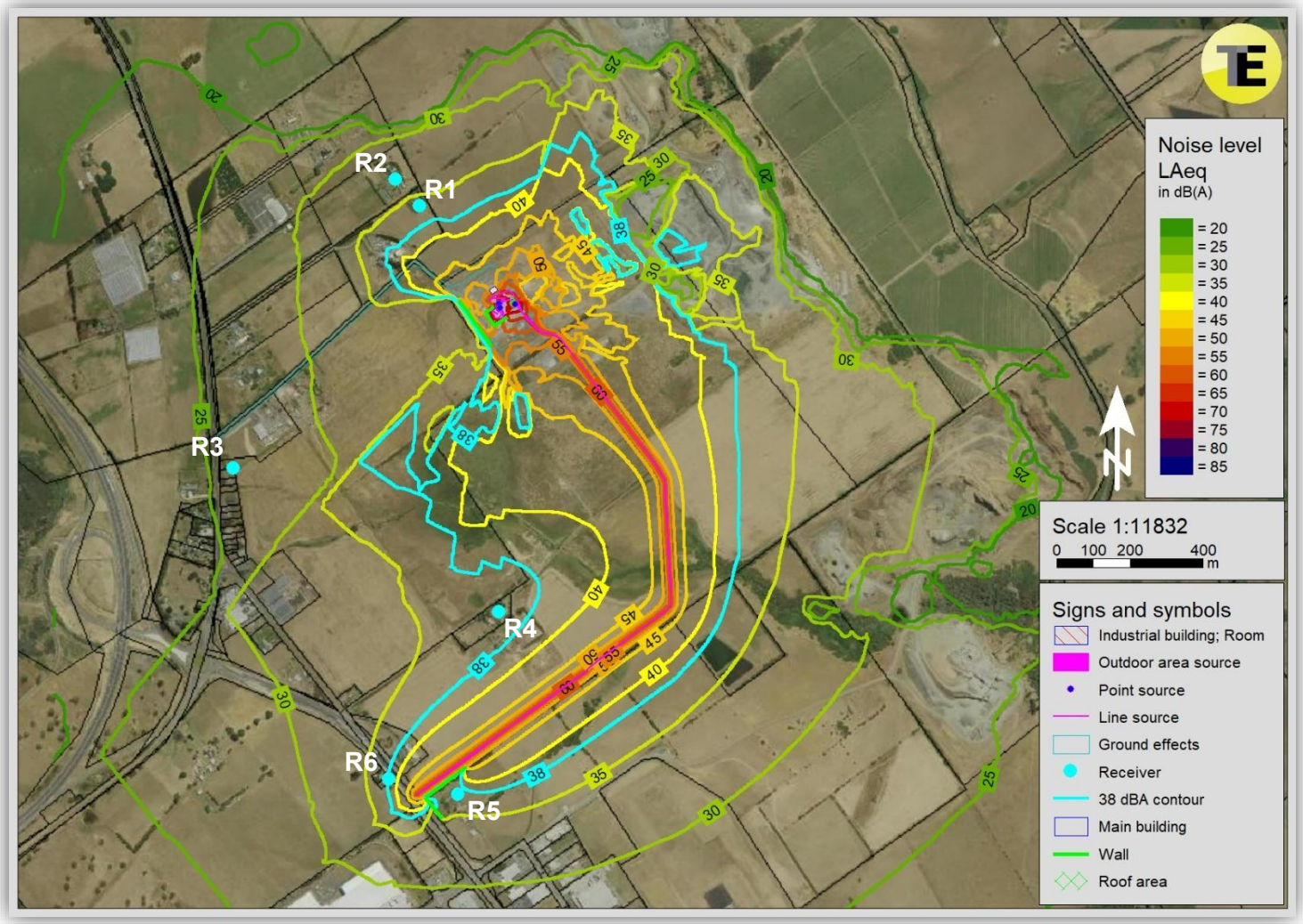


Figure A-4: Predicted L_{Aeq} contours under CONCAWE worst-case weather, worst-case operations.

MIDSON
traffic
pty ltd

Hazel Bros

Raeburn Quarry
Traffic Impact Assessment

May 2025

CELEBRATING 15 YEARS
2008 - 2023

MIDSON traffic pty ltd

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1. Introduction

1.1 Background

Midson Traffic were engaged by Hazel Bros to prepare a traffic impact assessment for a proposed access road to service the concrete batching plant and quarry located at 59 Raeburn Road, Breadalbane. The access road will connect directly to Evandale Road, thus reducing traffic that currently utilises Mcgraths Road.

1.2 Traffic Impact Assessment (TIA)

A traffic impact assessment (TIA) is a process of compiling and analysing information on the impacts that a specific development proposal is likely to have on the operation of roads and transport networks. A TIA should not only include general impacts relating to traffic management, but should also consider specific impacts on all road users, including on-road public transport, pedestrians, cyclists and heavy vehicles.

This TIA has been prepared in accordance with the Department of State Growth (DSG) publication, *Traffic Impact Assessment Guidelines*, August 2020. This TIA has also been prepared with reference to the Austroads publication, *Guide to Traffic Management,* Part 12: *Integrated Transport Assessments for Developments*, 2020.

Land use developments generate traffic movements as people move to, from and within a development. Without a clear understanding of the type of traffic movements (including cars, pedestrians, trucks, etc), the scale of their movements, timing, duration and location, there is a risk that this traffic movement may contribute to safety issues, unforeseen congestion or other problems where the development connects to the road system or elsewhere on the road network. A TIA attempts to forecast these movements and their impact on the surrounding transport network.

A TIA is not a promotional exercise undertaken on behalf of a developer; a TIA must provide an impartial and objective description of the impacts and traffic effects of a proposed development. A full and detailed assessment of how vehicle and person movements to and from a development site might affect existing road and pedestrian networks is required. An objective consideration of the traffic impact of a proposal is vital to enable planning decisions to be based upon the principles of sustainable development.

This TIA also addresses the relevant clauses of C2.0, *Parking and Sustainable Parking Code*, and C3.0, *Road and Railway Assets Code*, of the Tasmanian Planning Scheme – Northern Midlands, 2021.

1.3 Statement of Qualification and Experience

This TIA has been prepared by an experienced and qualified traffic engineer in accordance with the requirements of Council's Planning Scheme and The Department of State Growth's, *Traffic Impact Assessment Guidelines*, August 2020, as well as Council's requirements.

The TIA was prepared by Keith Midson. Keith's experience and qualifications are briefly outlined as follows:

- 29 years professional experience in traffic engineering and transport planning.
- Master of Transport, Monash University, 2006

- Master of Traffic, Monash University, 2004
- Bachelor of Civil Engineering, University of Tasmania, 1995
- Engineers Australia: Fellow (FIEAust); Chartered Professional Engineer (CPEng); Engineering Executive (EngExec); National Engineers Register (NER)

1.4 Project Scope

The project scope of this TIA is outlined as follows:

- Review of the existing road environment in the vicinity of the site and the traffic conditions on the road network.
- Provision of information on the proposed development with regards to traffic movements and activity.
- Identification of the traffic generation potential of the proposal with respect to the surrounding road network in terms of road network capacity.
- Review of the parking requirements of the proposed development. Assessment of this parking supply with Planning Scheme requirements.
- Traffic implications of the proposal with respect to the external road network in terms of traffic efficiency and road safety.

1.5 Subject Site

The subject site is located at 59 Raeburn Road, Breadalbane. The site currently contains a concrete batching plant and quarry with existing access via McGraths Road.

The subject site and surrounding road network is shown in Figure 1.

Figure 1 Subject Site & Surrounding Road Network

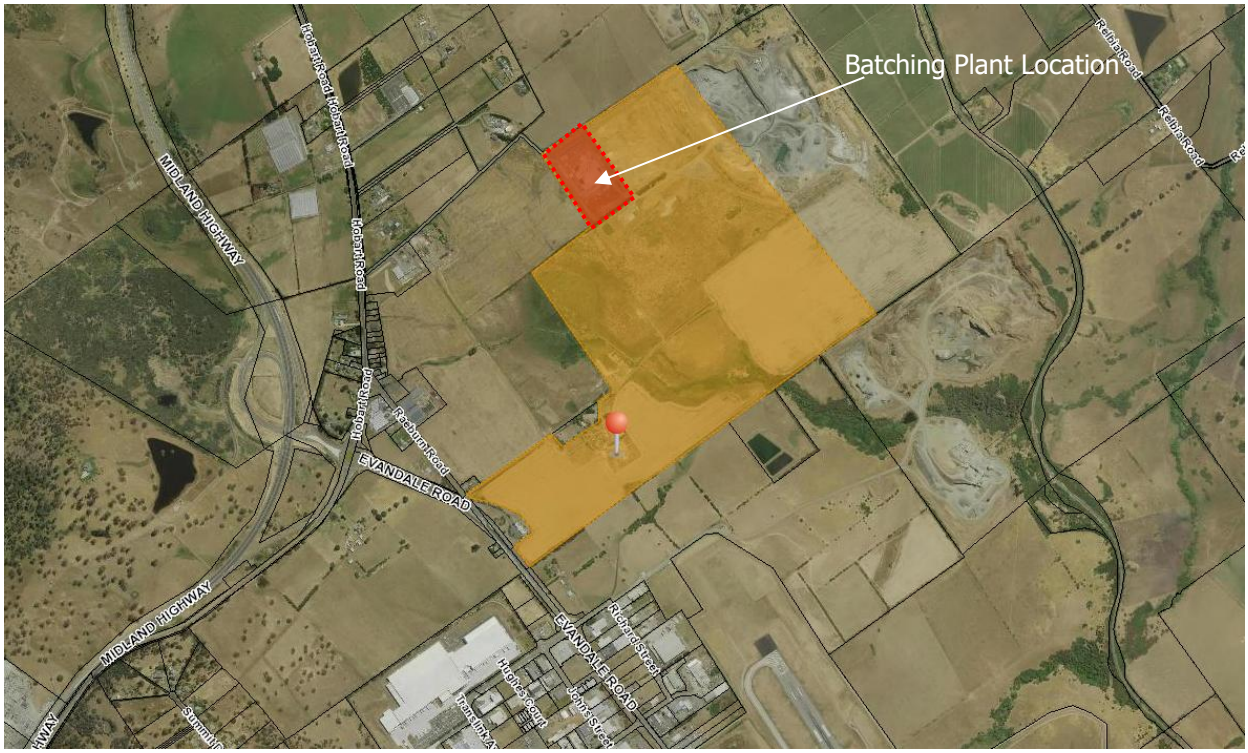


Image Source: LIST Map, DPIPWE

1.6 Reference Resources

The following references were used in the preparation of this TIA:

- Tasmanian Planning Scheme – Northern Midlands, 2021 (Planning Scheme)
- Austroads, *Guide to Traffic Management,* Part 12: *Integrated Transport Assessments for Developments*, 2020
- Austroads, Guide to Road Design, Part 4A: Unsignalised and Signalised Intersections, 2021
- Department of State Growth, *Traffic Impact Assessment Guidelines*, 2020
- Roads and Maritime Services NSW, *Guide to Traffic Generating Developments*, 2002 (RMS Guide)
- Roads and Maritime Services NSW, *Updated Traffic Surveys,* 2013 (Updated RMS Guide)
- Australian Standards, AS2890.1, *Off-Street Parking*, 2004 (AS2890.1)

2. Existing Conditions

2.1 Transport Network

The transport network relevant to this TIA consists of McGraths Road, Raeburn Road, and Evandale Road.

2.1.1 McGraths Road

McGraths Road is a local access road that provides access to the subject site and a number of industrial properties along its length.

McGraths Road connects to Hobart Road at a T-junction with Hobart Road having priority. McGraths Road has an estimated traffic volume of 500 vehicles per day. The general urban speed limit is applicable to McGraths Road.

2.1.2 Raeburn Road

Raeburn Road is a local access road that provides access to a small number of properties along its length. It connects to the subject site at its northeastern termination. It connects to Hobart Road at a T-junction with Hobart Road having priority.

2.1.3 Evandale Road

According to the Department of State Growth's Road Hierarchy, Evandale Road is classified as a Category 2, *Regional Freight Route* between Midland Highway and Launceston Airport. It is then classified as a Category 4, *Feeder Road* to the east of the Airport. Regional Freight Roads link major production catchments to the Trunk Roads (in this case the Midland Highway). Evandale Road is classified as a 'Major Road' under the Planning Scheme.

Evandale Road carries approximately 9,910 vehicles per day near the subject site[1]. The posted speed limit of Evandale Road is 80-km/h. Evandale Road has a heavy vehicle proportion of 14.1%. Typical weekday hourly flows are 730 and 990 vehicles per hour during the AM and PM peak periods respectively. The typical hourly traffic flows by day of the week are shown in Figure 2.

Evandale Road is a four-lane divided carriageway between Midland Highway and Translink Avenue. The carriageways are separated by a central median with a wire rope barrier. Lane widths are 3.5 metres, with a sealed shoulder.

Evandale Road adjacent to the proposed access location is shown in Figure 3.

[1] Department of State Growth traffic data – Evandale Road, 230 metres east of Midland Highway, 2023.

Figure 2 Evandale Road Hourly Traffic Flow

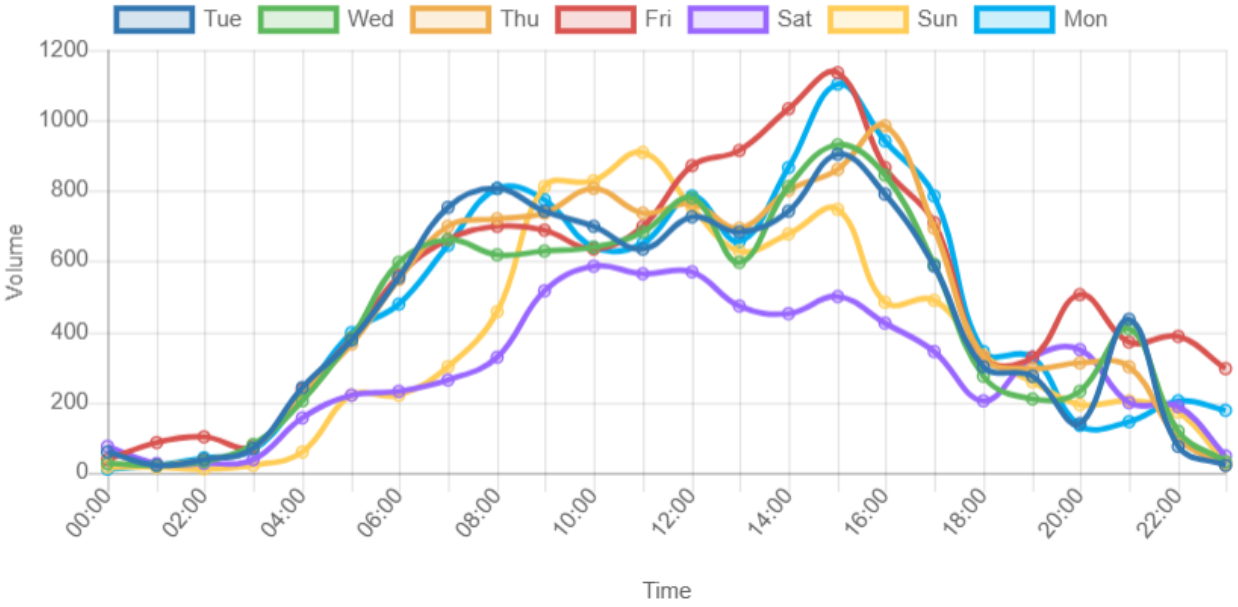


Figure 3 Evandale Road

2.1.4 Evandale Rd/ Translink Ave/ Richard St Roundabout

A turning movement survey was undertaken at the roundabout at Evandale Road/ Richard Street/ Translink Avenue on Thursday 8th February 2024, during peak periods between 8:00am to 9:00am, and 4:00pm to 5:00pm. The turning movements are summarised in Table 1 and Table 2 for the AM and PM peaks respectively.

Table 1 AM Evandale Rd/ Richard St/ Translink Ave Turning Movement Summary

Approach	Left Turn	Through	Right Turn
Evandale Rd east	21 vph	323 vph	21 vph
Richard St	3 vph	8 vph	31 vph
Evandale Rd west	47 vph	262 vph	83 vph
Translink Ave	42 vph	1 vph	18 vph

Table 2 PM Evandale Rd/ Richard St/ Translink Ave Turning Movement Summary

Approach	Left Turn	Through	Right Turn
Evandale Rd east	18 vph	356 vph	9 vph
Richard St	3 vph	6 vph	58 vph
Evandale Rd west	20 vph	246 vph	43 vph
Translink Ave	114 vph	1 vph	24 vph

2.2 Road Safety Performance

Crash data can provide valuable information on the road safety performance of a road network. Existing road safety deficiencies can be highlighted through the examination of crash data, which can assist in determining whether traffic generation from the proposed development may exacerbate any identified issues.

Crash data was obtained from the Department of State Growth for a 5-year period between 1st January 2020 and 31st December 2024 for Evandale Road between Richard Street and the Midland Highway.

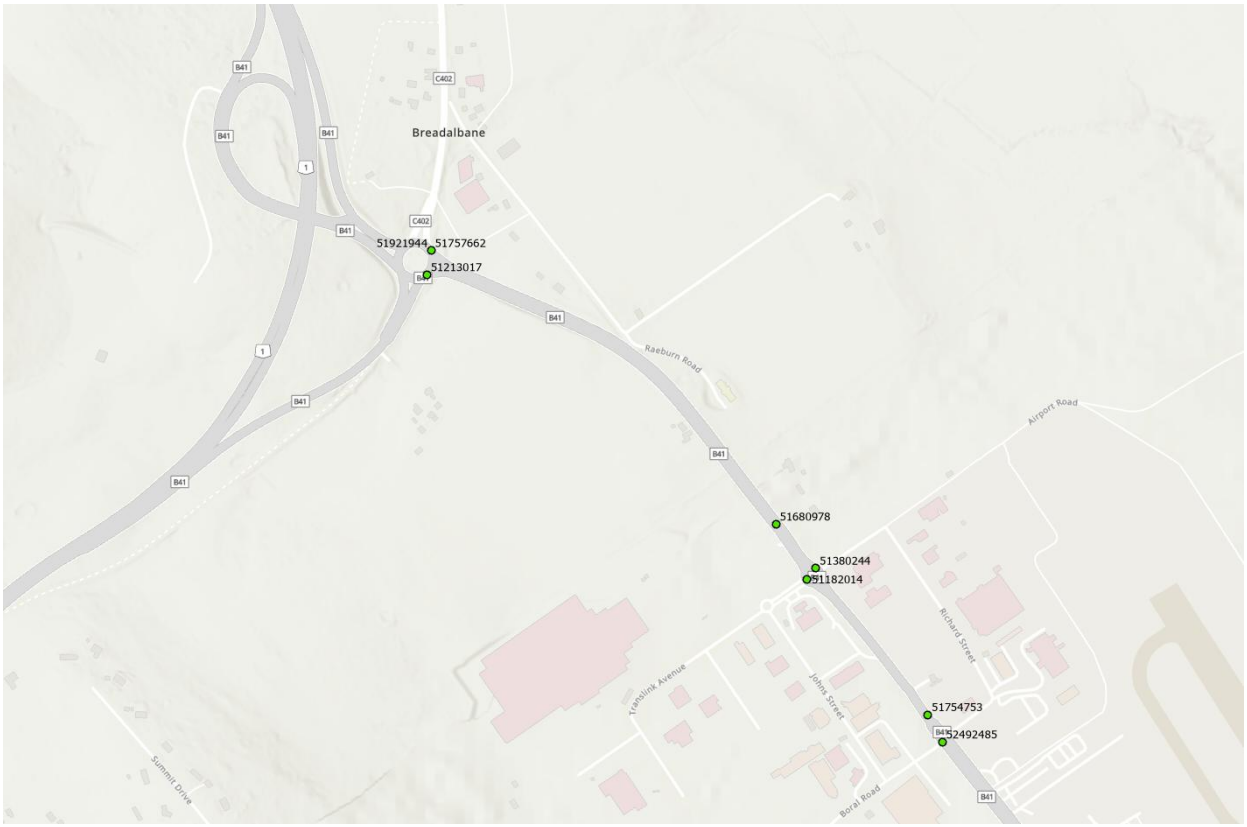
The findings of the crash data analysis is summarised as follows:

- A total of 8 crashes were reported during this time.
- Severity. 1 crash involved a fatality; 1 crash involved serious injury; 1 crash involved minor injury; 5 crashes involved property damage only.

- Time of day. 7 crashes were reported between 7:00am and 2:00pm. 1 crash was reported at 4:30am and 1 crash was reported at 9:30pm.
- Day of week. No crash trends were noted by day of week. 3 crashes were reported on Fridays; 2 crashes were reported on Thursdays; 1 crash was reported on a Monday, Tuesday and Wednesday. No crashes were reported on weekends.
- Crash types. No crash trends were noted by crash type. Crash types ranged from single vehicle loss of control (3 crashes with varying specific types), intersection collisions (3 crashes), head-on (1 crash), side swipe (1 crash) and other manoeuvring (1 crash).
- Crash locations. 3 crashes were reported at the Hobart Road intersection; 2 crashes were reported at the Airport Road/ Translink Avenue roundabout; 1 crash was reported at the Boral Road intersection; 2 crashes were reported at midblock locations. The crash locations are shown in Figure 4.
- Vulnerable road users. No crashes involved vulnerable road users (pedestrians, cyclists or motorcyclists).

The crash data does not indicate that there are any road safety deficiencies in the existing network that may be exacerbated by traffic generated by the proposed development.

Figure 4 Crash Locations



Source: Department of State Growth

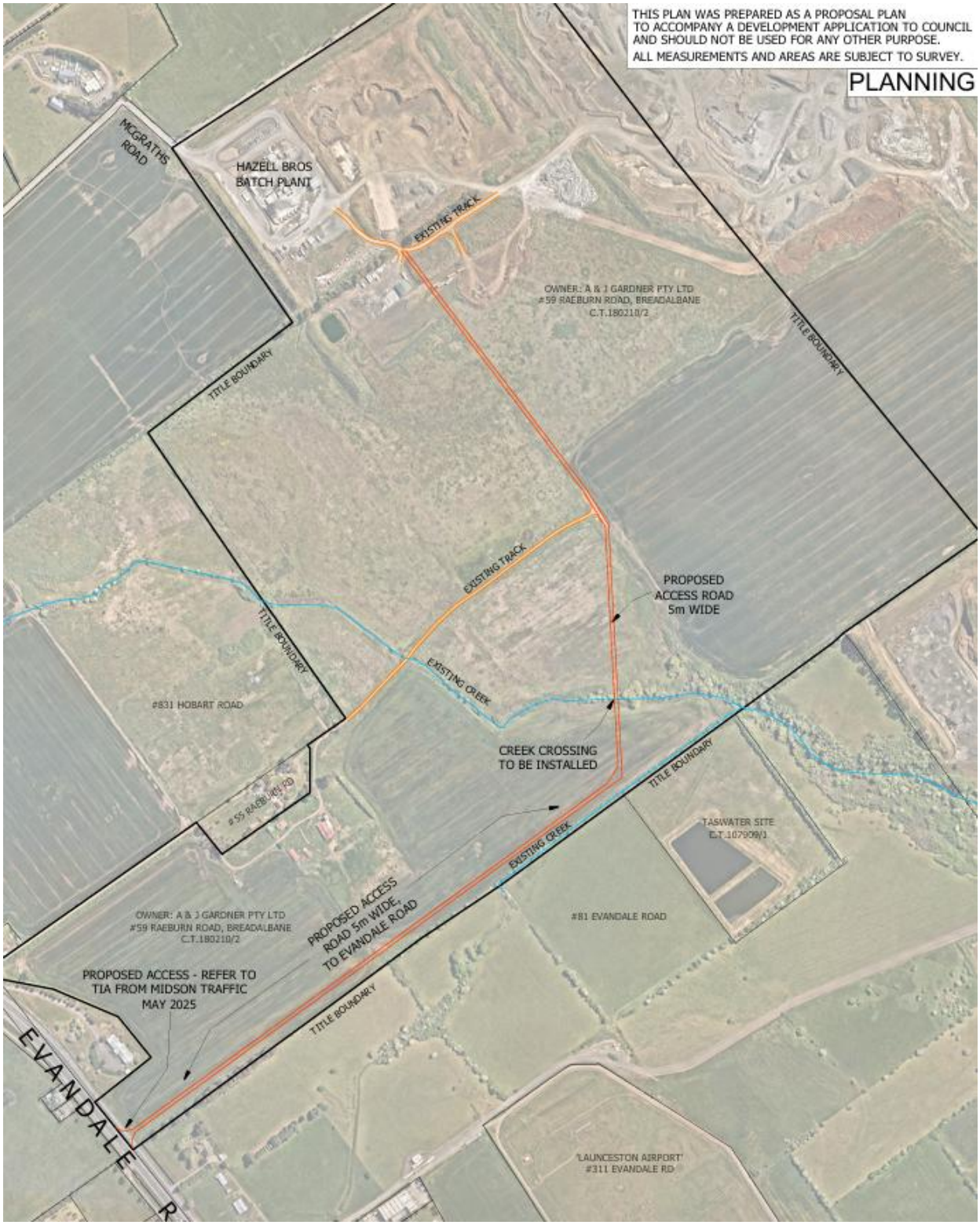
3. Proposed Development

3.1 Development Proposal

The proposed development involves the construction of a new private access road to service the site. The new access road will connect directly to Evandale Road, providing a left-in/ left-out access arrangement.

The proposed development is shown in Figure 5.

Figure 5 Proposed Development Plans



4. Traffic Impacts

4.1 Trip Generation

The existing traffic generation is 110 vehicles per day. This consists of truck movements and staff vehicle movements that all currently utilise the Mcgraths Road access. No changes to the existing traffic generation will occur as a result of the construction of the proposed access road.

The peak traffic movements utilising the proposed access road will be 4 vehicles per hour (two-way movements).

4.2 Trip Assignment

No effective changes will occur with the normal operation of the batching plant during the existing operating hours. The traffic generation and traffic assignment at the Mcgraths Road access and surrounding network will be reduced by the construction of the proposed access road.

4.3 New Junction Assessment

The Acceptable Solution A1.2 of Clause C3.5.1 of the Planning Scheme states "*For a road, excluding a category 1 road or a limited access road, written consent for a new junction, vehicle crossing, or level crossing to serve the use and development has been issued by the road authority*".

The Department of State Growth (road authority) were consulted in relation to the proposed access on Evandale Road. The road authority raised no issues in principle, but require a TIA to be prepared that investigates the following:

- Adequate sight distance is required to the east of the access on Evandale Road in accordance with Austroads requirements (provided in Section 4.6). Adequate sight distance is also required for vehicles to change lanes to the right lane in preparation for a U-turn manoeuvre at the Translink Avenue roundabout.
- Appropriate junction design is likely to be required, including provision of a short Auxiliary Left Turn lane, AUL(S). This is subject to assessment in the TIA (provided in Section 4.5).

On this basis, whilst road authority consent is likely, it is not yet provided as it is subject to assessment of the TIA. The access was therefore assessed under the Performance Criteria P1 of Clause C3.5.1 of the Planning Scheme, which states:

> *"Vehicular traffic to and from the site must minimise any adverse effects on the safety of a junction, vehicle crossing or level crossing or safety or efficiency of the road or rail network, having regard to:*
>
> *(a) any increase in traffic caused by the use;*
>
> *(b) the nature of the traffic generated by the use;*

(c) the nature of the road;

(d) the speed limit and traffic flow of the road;

(e) any alternative access to a road;

(f) the need for the use;

(g) any traffic impact assessment; and

(h) any advice received from the rail or road authority".

The following is relevant with respect to the proposed access:

a. Increase in traffic. No change in traffic generation will occur as a result of the proposed new road junction. It will redistribute some traffic away from a residential area.

b. Nature of traffic. Traffic utilising the access will be industrial in nature.

c. Nature of road. Evandale Road is a Category 2 road under the Department of State Growth's road hierarchy. Evandale Road is the primary access to the Airport industrial precinct and is appropriate for heavy vehicle access.

d. Speed limit and traffic flow. Evandale Road carries a traffic volume of approximately 10,000 vehicles per day and has a posted speed limit of 80-km/h.

e. Alternative access. The proposed access is to reduce existing site traffic that currently utilises Mcgraths Road in a residential environment. In this regard, whilst it is usually preferable to access a lower order road (in a hierarchical sense), in this case it is appropriate for the industrial activity to access Evandale Road rather than the local road which includes residential land use.

f. Need for use. The proposed access is intended to reduce the amount of industrial traffic currently accessing a predominantly residential area.

g. Road authority advice. The Department of State Growth are supportive in principle of the proposed access, subject to the preparation of a TIA.

Based on the above assessment, the proposed access satisfies the requirements of Performance Criteria P1 of Clause C3.5.1 of the Planning Scheme. Specifically, the TIA has addressed State Growth's technical requirements for the proposed access on Evandale Road.

4.4 Traffic Capacity Analysis

The development will reduce the existing traffic generation or distribution at Mcgraths Road and the surrounding network.

The proposed new road will increase traffic flows at the roundabout at Evandale Road/ Richard Street. This is due to the left-in/ left-out configuration of the access which will result in right turn exit demands being accommodated at the roundabout.

The roundabout was assessed using SIDRA Intersection analysis software. Note that modelling was not required for the proposed access junction at Evandale Road, which will only have a peak of 4 vehicles per hour with only left-in/ left-out manoeuvres, resulting in a high level of service at all times.

4.4.1 SIDRA Modelling

Traffic modelling was undertaken using SIDRA Intersection software. SIDRA uses complex analytical traffic models coupled with iterative approximation technique to provide estimates of capacity and performance of intersections. SIDRA is endorsed as a modelling tool by Austroads.

One of the key SIDRA outputs is an indication of level of service (LOS) at intersections. The LOS concept describes the quality of traffic service in terms of 6 levels, with level of service A (LOS A) representing the best operating condition (ie. at or close to free flow) and level of service F (LOS F) representing the worst (i.e. forced flow). Other key outputs of SIDRA include average movement delay and 95th percentile queue lengths[2].

The level of service method used in the modelling is the Delay method, where level of service is based solely on average movement delay, including geometric delay, as summarised in Table 3.

Table 3 SIDRA LOS Performance standards

Level of Service	Signals and Roundabouts	Sign Control (Give Way & Stop)
LOS A	$d \leq 10$	$d \leq 10$
LOS B	$10 < d \leq 20$	$10 < d \leq 15$
LOS C	$20 < d \leq 35$	$15 < d \leq 25$
LOS D	$35 < d \leq 55$	$25 < d \leq 35$
LOS E	$55 < d \leq 80$	$35 < d \leq 50$
LOS F	$80 < d$	$50 < d$

The lowest target level of service considered acceptable for an urban environment is LOS D, which corresponds to a maximum delay of 55 seconds for roundabouts. LOS E and F represent the junction operating at capacity, with forced flow conditions.

4.4.2 Existing Roundabout Performance

SIDRA traffic modelling was undertaken at the two intersections using the turning movements obtained in the traffic surveys (summarised in Table 1 and Table 2). The SIDRA movement summaries are provided in Table 4 and Table 5 for the existing (2024 base year) AM And PM peaks respectively.

[2] This is the queue length not exceeded 95% of the time

It can be seen that the roundabout is currently operating at a high level of service (LOS A or LOS B for all approaches during both peak periods).

Table 4 AM Peak SIDRA Summary – Evandale Rd/ Richard St

Movement Performance - Vehicles								
Mov ID	Turn	Demand Flow veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m
South East: Evandale Rd								
21	L	22	18.0	0.141	5.9	LOS A	0.7	6.0
22	T	340	18.0	0.141	4.4	LOS A	0.7	6.0
23	R	22	18.0	0.141	12.3	LOS B	0.7	5.8
Approach		384	18.0	0.141	4.9	LOS A	0.7	6.0
North East: Richard St								
24	L	3	18.0	0.046	6.6	LOS A	0.2	1.3
25	T	5	18.0	0.046	5.3	LOS A	0.2	1.3
26	R	33	18.0	0.046	13.2	LOS B	0.2	1.3
Approach		41	18.0	0.046	11.7	LOS B	0.2	1.3
North West: Evandale Rd								
27	L	49	18.0	0.139	5.5	LOS A	0.7	6.0
28	T	276	18.0	0.139	4.0	LOS A	0.7	6.0
29	R	87	18.0	0.139	11.9	LOS B	0.7	5.9
Approach		413	18.0	0.139	5.8	LOS A	0.7	6.0
South West: Translink Ave								
30	L	44	18.0	0.073	6.7	LOS A	0.3	2.2
31	T	1	18.0	0.073	5.4	LOS A	0.3	2.2
32	R	19	18.0	0.073	13.3	LOS B	0.3	2.2
Approach		64	18.0	0.073	8.7	LOS A	0.3	2.2
All Vehicles		902	18.0	0.141	5.9	LOS A	0.7	6.0

Level of Service (LOS) Method: Delay (HCM 2000).
Roundabout LOS Method: Same as Signalised Intersections.
Vehicle movement LOS values are based on average delay per movement

Table 5 PM Peak SIDRA Summary – Evandale Rd/ Richard St

Movement Performance - Vehicles								
Mov ID	Turn	Demand Flow veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m
South East: Evandale Rd								
21	L	19	18.0	0.146	5.8	LOS A	0.8	6.4
22	T	375	18.0	0.146	4.3	LOS A	0.8	6.4
23	R	9	18.0	0.146	12.3	LOS B	0.8	6.3
Approach		403	18.0	0.146	4.6	LOS A	0.8	6.4
North East: Richard St								
24	L	3	18.0	0.076	6.5	LOS A	0.3	2.3
25	T	6	18.0	0.076	5.2	LOS A	0.3	2.3
26	R	61	18.0	0.076	13.0	LOS B	0.3	2.3
Approach		71	18.0	0.076	12.1	LOS B	0.3	2.3
North West: Evandale Rd								
27	L	21	18.0	0.109	5.5	LOS A	0.6	4.8
28	T	259	18.0	0.109	4.0	LOS A	0.6	4.8
29	R	45	18.0	0.109	11.8	LOS B	0.6	4.7
Approach		325	18.0	0.109	5.2	LOS A	0.6	4.8
South West: Translink Ave								
30	L	120	18.0	0.170	7.1	LOS A	0.7	5.6
31	T	1	18.0	0.170	5.8	LOS A	0.7	5.6
32	R	25	18.0	0.170	13.7	LOS B	0.7	5.6
Approach		146	18.0	0.170	8.2	LOS A	0.7	5.6
All Vehicles		945	18.0	0.170	5.9	LOS A	0.8	6.4

Level of Service (LOS) Method: Delay (HCM 2000).
Roundabout LOS Method: Same as Signalised Intersections.
Vehicle movement LOS values are based on average delay per movement

4.4.3 Development Impacts on Roundabout Performance

The proposed development will generate additional traffic on the Evandale Road/ Richard Street/ Translink Avenue roundabout. This will include vehicles travelling through the roundabout to the east, as well as vehicles undertaking a U-turn manoeuvre to access the Midland Highway.

To model a 'worst-case' scenario based on the projected use of the proposed access, the traffic generation associated with the use of the proposed access road has been applied to the commuter AM and PM peak periods. The peak traffic generation utilising the access has also been increased from 4 vehicles per hour to 10 vehicles per hour. A high rate of U-turn manoeuvres has been assumed (60%).

Background traffic growth of 2% per annum was applied to all legs of the roundabout over a 10-year period to provide forecast 2034 traffic conditions. The development traffic was 2 inward and 2 outward truck trips, all originating/ terminating at the northwestern leg of Evandale Road.

The SIDRA modelling summary for the AM and PM peak periods is provided in Table 6 and Table 7 respectively.

It can be seen that the roundabout will continue to operate at a high level of efficiency (LOS A or LOS B for all legs during both peak periods).

On this basis, the additional traffic as a result of the proposed access road will not have any significant adverse impacts over a 10-year forecast period.

Table 6 AM Peak SIDRA Summary – 2034 with Development Traffic

Movement Performance - Vehicles								
Mov ID	Turn	Demand Flow veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m
South East: Evandale Rd								
21	L	33	18.0	0.224	6.3	LOS A	1.3	10.5
22	T	505	18.0	0.224	4.9	LOS A	1.3	10.5
23	R	33	18.0	0.224	12.9	LOS B	1.2	10.1
Approach		571	18.0	0.224	5.4	LOS A	1.3	10.5
North East: Richard St								
24	L	4	18.0	0.094	7.4	LOS A	0.3	2.8
25	T	13	18.0	0.094	6.1	LOS A	0.3	2.8
26	R	59	18.0	0.094	13.9	LOS B	0.3	2.8
Approach		76	18.0	0.094	12.2	LOS B	0.3	2.8
North West: Evandale Rd								
27	L	84	18.0	0.219	5.6	LOS A	1.3	10.3
28	T	414	18.0	0.219	4.1	LOS A	1.3	10.3
29	R	136	18.0	0.219	12.0	LOS B	1.3	10.1
Approach		634	18.0	0.219	6.0	LOS A	1.3	10.3
South West: Translink Ave								
30	L	65	18.0	0.122	7.5	LOS A	0.5	3.9
31	T	1	18.0	0.122	6.2	LOS A	0.5	3.9
32	R	28	18.0	0.122	14.1	LOS B	0.5	3.9
Approach		95	18.0	0.122	9.5	LOS A	0.5	3.9
All Vehicles		1375	18.0	0.224	6.4	LOS A	1.3	10.5

Level of Service (LOS) Method: Delay (HCM 2000).
Roundabout LOS Method: Same as Signalised Intersections.
Vehicle movement LOS values are based on average delay per movement

Table 7 PM Peak SIDRA Summary - 2034 with Development Traffic

Movement Performance - Vehicles								
Mov ID	Turn	Demand Flow veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m
South East: Evandale Rd								
21	L	28	18.0	0.232	6.2	LOS A	1.4	11.2
22	T	557	18.0	0.232	4.8	LOS A	1.4	11.2
23	R	14	18.0	0.232	12.8	LOS B	1.3	10.8
Approach		599	18.0	0.232	5.0	LOS A	1.4	11.2
North East: Richard St								
24	L	4	18.0	0.136	7.2	LOS A	0.5	4.2
25	T	9	18.0	0.136	5.9	LOS A	0.5	4.2
26	R	101	18.0	0.136	13.8	LOS B	0.5	4.2
Approach		115	18.0	0.136	12.9	LOS B	0.5	4.2
North West: Evandale Rd								
27	L	42	18.0	0.173	5.6	LOS A	1.0	8.3
28	T	389	18.0	0.173	4.1	LOS A	1.0	8.3
29	R	74	18.0	0.173	11.9	LOS B	1.0	8.1
Approach		505	18.0	0.173	5.3	LOS A	1.0	8.3
South West: Translink Ave								
30	L	178	18.0	0.292	8.2	LOS A	1.3	10.4
31	T	1	18.0	0.292	6.9	LOS A	1.3	10.4
32	R	38	18.0	0.292	14.8	LOS B	1.3	10.4
Approach		217	18.0	0.292	9.4	LOS A	1.3	10.4
All Vehicles		1436	18.0	0.292	6.4	LOS A	1.4	11.2

Level of Service (LOS) Method: Delay (HCM 2000).
Roundabout LOS Method: Same as Signalised Intersections.
Vehicle movement LOS values are based on average delay per movement

4.5 Access Impacts

Austroads was referenced to determine the most appropriate junction treatment for the proposed junction on Evandale Road. The Austroads requirements for the intersection are reproduced in Figure 6.

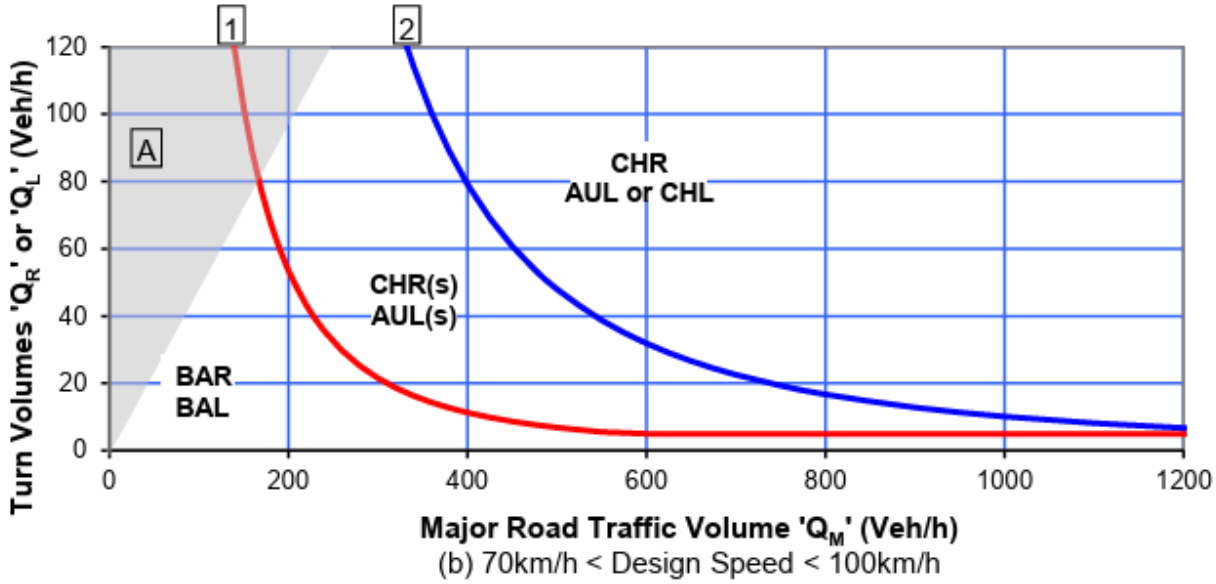
The access will connect to the eastbound carriageway of Evandale Road, with all movements being left-in/ left-out. The relevant consideration is therefore the provision of left-turn entry lane treatments when considering traffic flow in the eastbound carriageway only.

In this case the access will generate 4 vehicles per hour during peak utilisation. This will comprise of 2 entry and 2 exit movements. The corresponding traffic flow will be 470 vehicles per hour[3]. This triggers the warrant for a Basic Auxiliary Left turn lane (BAL) treatment at the access.

The relatively high traffic flow on Evandale Road results in the Short Auxiliary Left Turn lane, AUL(S) treatment almost being met. Due to the fact that the access will only be utilised by heavy vehicles accessing from an 80-km/h speed zone, it is recommended that an AUL(S) treatment be installed. Consultation with State Growth (as road authority) confirms that the installation of an AUL treatment is preferred.

[3] Department of State Growth traffic data – weekday eastbound flow, 2:00pm – 3:00pm.

Figure 6 Austroads Turn Lane Warrants



4.6 Sight Distance

Austroads Part 4A provides the requirements for Safe Intersection Sight Distance (SISD) at a road junction. SISD is the minimum sight distance which should be provided on the major road at any intersection. SISD provides sufficient distance for a driver of a vehicle on the major road to observe a vehicle on a minor road approach moving into a collision situation (e.g. in the worst case, stalling across the traffic lanes), and to decelerate to a stop before reaching the collision point.

For a design speed of 80-km/h, the required SISD is 181 metres. The available sight distance at the junction location is approximately 300 metres to the northeast (noting that sight distance is not required to the southwest as the access is only applicable to the southbound carriageway of Evandale Road). The available sight distance therefore complies with the Austroads SISD requirements.

4.7 Road Design

The proposed development will require a new road to be constructed between the existing concrete batching plant to the proposed new road junction at Evandale Road. The road will be constructed through private property and will only be available for vehicles accessing the batching plant and quarry.

The requirements for rural sealed roads are reproduced in Table 8. The following standards are applicable for the internal road network:

- Road design should be in accordance with Austroads Guidelines.
- LGAT Standard Drawings and Tasmanian Subdivision Guidelines.

Table 8 LGAT Standard Drawings – Rural Roads Unsealed

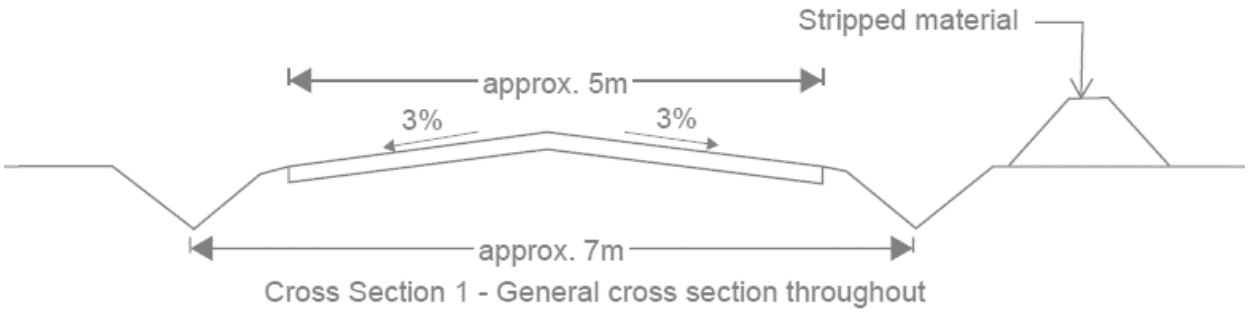
CODE*	A.A.D.T.	(w) TRAFFIC WIDTH	GRAVEL SHOULDER	VERGE	PAVEMENT WIDTH	LOGGING ROUTE	HEAVY VEHICLES	BUS ROUTE	Bends with < 60m sight line
US1	<30	4000 (S)	500	NO	5	NO	< 5%	NO	w + 1000
US2	30 – 100	4000 (S)	1000	NO	6	YES < 5%	< 5 %	YES	w + 1000
US3	100 – 300	5500 (D)	1000	NO	7.5	YES	< 10%	YES	w + 500
US4	> 300	6000 (D)	1000	NO	8	YES	> 10%	YES	w + 500

*To satisfy a Road Class (eg. US3) the capability to comply with A.A.D.T, LOGGING ROUTE, HEAVY VEHICLE and BUS ROUTE is necessary.
(S) – SINGLE LANE
(D) – DUAL LANE

The appropriate road design for the proposed access road is an S2 design a minimum pavement width of 6.0 metres and a traffic road width of 4.0 metres.

The typical cross-section design of the proposed access road is shown in Figure 7. The proposed road cross-section complies with LGAT design requirements.

Figure 7 Typical Road Cross-Section Design



4.8 Road Safety Impacts

The proposed development generates a relatively small amount of additional traffic on the surrounding road network (in the order of 4 vehicles per hour during peak times, which is an average of approximately 1 vehicle movement every 15 minutes).

No significant adverse road safety impacts are therefore foreseen for the following reasons:

- The existing crash history of in the surrounding network does not indicate that there are any road safety deficiencies that would be exacerbated by the proposed development.
- The traffic generation of the proposed development is considered to be low (in the order of 4 vehicles per hour during peak periods as noted above), and therefore will not alter the level of

service of any part of the transport network. No significant road safety impacts are likely to result without a corresponding deterioration in the network's level of service.

- The site access is located at a straight section of road alignment in Evandale Road. The junction will provide left turn deceleration lane to reduce risk of rear end collisions. The nature of the traffic generated by the development is compatible and consistent with existing traffic in the surrounding network.

5. Conclusions

This traffic impact assessment (TIA) investigated the traffic and parking impacts of a proposed new access road connecting to Evandale Road at a left-in/ left-out junction. The access will enable continued access of the site without impacting on nearby residential amenity.

The key findings of the TIA are summarised as follows:

- The proposed access on Evandale Road will facilitate left-turn entry and left-turn exit movements only. Demands for right-turn exit will be accommodated via U-turn manoeuvres at the existing roundabout at Translink Avenue. It is recommended that the access be designed with a AUL treatment (deceleration lane) on the approach to the junction.
- The traffic generation of the quarry and batching plant will not change as a result of the construction of the new access road. The access road will reduce traffic utilising the existing access at McGraths Road therefore reducing the residential amenity impacts of existing road network that services the site.
- The increased traffic will not have any adverse impacts on the operation of the Evandale Road/ Richard Street/ Translink Avenue roundabout in terms of operational efficiency or safety.
- The proposed road junction on Evandale Road satisfies the requirements of Performance Criteria P1 of Clause C3.5.1 of the Planning Scheme.
- The proposed junction complies with the requirements of Acceptable Solution A1.4 of Clause C3.5.1 of the Planning Scheme.
- The proposed road design complies with the LGAT rural unsealed road design requirements.

Based on the findings of this report the proposed development is supported on traffic grounds.

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0	Keith Midson	Zara Kacic-Midson	10th May 2025
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11th November 2025

Michelle Schleiger
Woolcott Land Services
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Dear Michelle,

59 RAEBURN RD – RESPONSE TO COUNCIL RFI

This letter provides a formal response to the matters raised by Council regarding the proposed Hazel Bros access road that will connect to the westbound carriageway of Evandale Road.

1. Sight Distance

A reassessment of the available sight distance confirmed a minimum available sight distance of approximately 230 metres at the proposed Evandale Road access, reflecting both the horizontal curve and the vertical crest to the north. This exceeds the Austroads Safe Intersection Sight Distance (SISD) requirement of 181 m for an 80 km/h environment, ensuring adequate visibility for all movements.

The photographs included within the TIA (Figure 3) were extracted from State Growth's Hawkeye road-video platform and were intended solely to illustrate road alignment and geometry. The camera height used in the Hawkeye imagery is unknown; however, this imagery was not relied upon for measurement of sight distance. SISD was determined from field observation and plan verification.

2. Crown Landowner Consent

A copy of the Crown Consent letter issued by the Department of State Growth (9 July 2025) accompanies this response.

The letter provides formal consent for the development application insofar as it affects the State Road network and confirms that further consent under s.16 of the *Roads and Jetties Act 1935* will be required for any works within the State road reservation. The comments in that letter regarding sealing and asphalt treatment of the proposed deceleration lane (AUL) have been noted and will be addressed during the detailed design stage.

3. Feasibility of AUL Lane

Physical inspection confirms approximately 12 m of road reservation between the edge of the through carriageway and the property boundary, with about 3.5 m of verge immediately adjacent to the traffic

lane. This provides adequate space to accommodate a Basic Left-turn (BAL) or Auxiliary Left-turn (AUL) treatment in accordance with Austroads *Guide to Road Design Part 4A*.

Where provided, the auxiliary lane would generally match the 3.5 m width of the adjacent through lane, with taper and deceleration storage lengths based on design speed and volume class. Detailed design, including final taper geometry and drainage adjustments, will be undertaken subject to the required State Growth Section 16 permit process.

4. Traffic Generation and Junction Capacity

Hazel Bros has confirmed the expected operational demand of 4 vehicles per hour (two-way), consistent with the TIA and SIDRA inputs. The access will be actively managed by Hazel Bros — restricted by user, time-of-day, and day-of-week — to maintain safety and operational control. Unauthorised access will be restricted through signage and internal procedures.

As requested by Council, SIDRA traffic modelling has been undertaken for the access on Evandale Road during the AM and PM peak periods under 2035 traffic conditions (using a growth rate of 2% per annum compound growth). The results of the SIDRA modelling is provided in Tables 1 and 2 for the AM and PM peaks respectively.

It is noted that the performance of the access junction is governed primarily by opposing traffic volumes on Evandale Road rather than by the low-volume turning flows from the quarry. Even a substantial increase in access-road volume (e.g., several-fold higher than 4 vph) would have negligible effect on the level of service for the access, as the critical movement delay is determined by available gaps in the main-road traffic stream. Accordingly, the SIDRA results (worst-case LOS D in the AM peak under 2035 conditions) are robust even under higher-than-forecast internal flows.

Table 1 Proposed Access/ Evandale Rd AM Peak 2035

Movement Performance - Vehicles								
Mov ID	Turn	Demand Flow veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m
North: Access Road								
7	L	2	100.0	0.012	28.9	LOS D	0.0	0.5
Approach		2	100.0	0.012	28.9	LOS D	0.0	0.5
West: Evandale Rd								
10	L	2	100.0	0.142	11.9	LOS B	0.0	0.0
11	T	503	14.4	0.142	0.0	LOS A	0.0	0.0
Approach		505	14.8	0.142	0.0	NA	0.0	0.0
All Vehicles		507	15.1	0.142	0.2	NA	0.0	0.5

Level of Service (LOS) Method: Delay (HCM 2000).
Vehicle movement LOS values are based on average delay per movement
Minor Road Approach LOS values are based on average delay for all vehicle movements.

Table 2 Proposed Access/ Evandale Rd PM Peak 2035

Movement Performance - Vehicles								
Mov ID	Turn	Demand Flow veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m
North: Access Road								
7	L	2	100.0	0.009	23.0	LOS C	0.0	0.4
Approach		2	100.0	0.009	23.0	LOS C	0.0	0.4
West: Evandale Rd								
10	L	2	100.0	0.112	11.9	LOS B	0.0	0.0
11	T	396	14.4	0.112	0.0	LOS A	0.0	0.0
Approach		398	14.9	0.112	0.1	NA	0.0	0.0
All Vehicles		400	15.3	0.112	0.2	NA	0.0	0.4

Level of Service (LOS) Method: Delay (HCM 2000).
Vehicle movement LOS values are based on average delay per movement
Minor Road Approach LOS values are based on average delay for all vehicle movements.

5. Internal Road Design

As detailed in Section 4.7 of the Traffic Impact Assessment, the proposed internal road is a low-volume private access serving quarry operations. The design standard adopted in the TIA (6 m formation, 4 m trafficked width with passing opportunities and adequate sight lines) is appropriate for its intended function and very low daily traffic volumes. The cross-section allows two-way operation for the quarry fleet under controlled conditions and provides compliant geometry for the operating speed environment. It is therefore considered suitable and does not warrant upgrade to a public-road standard such as LGAT US4.

6. Planning Scheme Traffic Generation Threshold

Traffic increases at the Richard Street intersection remain below the thresholds in Table C3.1 (≤20 % or ≤40 vpd), meeting the Acceptable Solution.

Please contact me on 0437 366 040 if you require any further information.

Yours sincerely,

Keith Midson BE MTraffic MTransport FIEAust EngExec

DIRECTOR
Midson Traffic Pty Ltd

Department of State Growth

SALAMANCA BUILDING PARLIAMENT SQUARE
4 SALAMANCA PLACE, HOBART TAS

GPO Box 536, Hobart TAS 7001 Australia
Email permits@stategrowth.tas.gov.au Web www.transport.tas.gov.au

Tasmanian Government

Michelle Schleiger
Woolcott Land Services
By email: planning@woolcott.au

Dear Michelle

Crown Landowner Consent Granted SRA-25-369

I refer to your recent request for Crown landowner consent relating to the development application at 59 Raeburn Road, Breadalbane for alteration of internal road and new access to Evandale Road.

I, Lucy Thorne, Acting Director Asset Management, the Department of State Growth, having been duly delegated by the Minister under section 52(1F) of the *Land Use Planning and Approvals Act 1993* (the Act), and in accordance with the provisions of section 52(1B)(b) of the Act, hereby give my consent to the making of the application, insofar as it affects the State road network and any Crown land under the jurisdiction of this department.

The consent given by this letter is for the making of the application only insofar as that it impacts Department of State Growth administered Crown land and is with reference to your application dated 22 May 2025, and the approved documents, as accessible via the link below:

https://files.stategrowth.tas.gov.au/index.php/s/Sa8VmG6Ual1tYu1

A copy of the Instrument of Delegation from the Minister authorising the delegate to sign under section 52 of the Act can also be accessed via the above link.

Please access and download these documents for your records as soon as possible as this link will expire six (6) months from the date of this letter.

In giving consent to lodge the subject development application, the department notes the following applicable advice:

Access – construction or alteration (Access works permit required):

In giving consent to lodge the subject development application, the Department notes that the proposed access to the State road network will require the following additional consent:

The consent of the Minister under Section 16 of the *Roads and Jetties Act 1935* to undertake works within the State road reservation.

For further information please visit https://www.transport.tas.gov.au/road_permits/permits_and_bookings/new_or_altered_access_onto_a_road_driveways or contact permits@stategrowth.tas.gov.au.

On sealed State roads all new accesses must be sealed from the road to the property boundary as a minimum.

Pursuant to Section 16 of the *Roads and Jetties Act 1935*, where a vehicle access has been constructed from land to a State highway or subsidiary road, the owner of that land is responsible for the maintenance and repair of the whole of the vehicular access

Other:

The through lanes and existing shoulder back to the access, as well as the proposed deceleration lane, will all require to be asphalted to cover the turning movements of vehicles exiting the access.

The department reserves the right to make a representation to the relevant council in relation to any aspect of the proposed development relating to its road network and/or property.

Yours sincerely

L. Thorne

Lucy Thorne
Acting Director Asset Management

Delegate for the Minister administering the *Roads and Jetties Act 1935*

9 July 2025

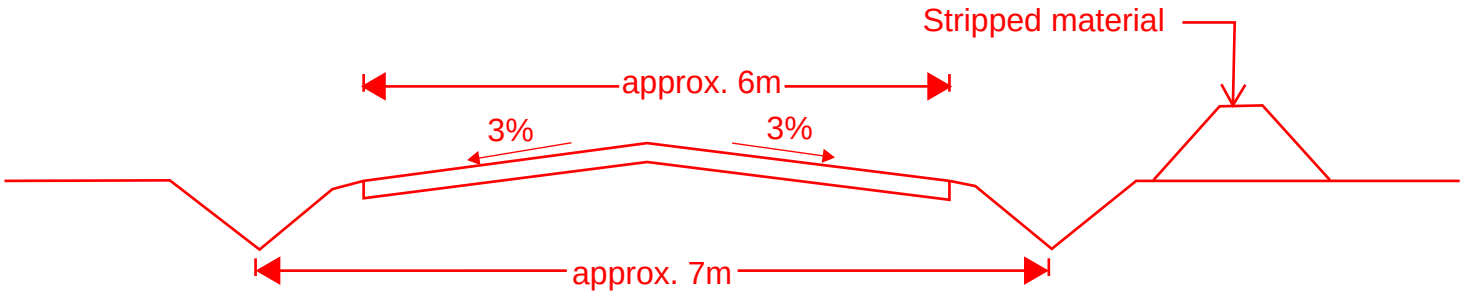
Cc: General Manager, Northern Midlands Council

Exhibited

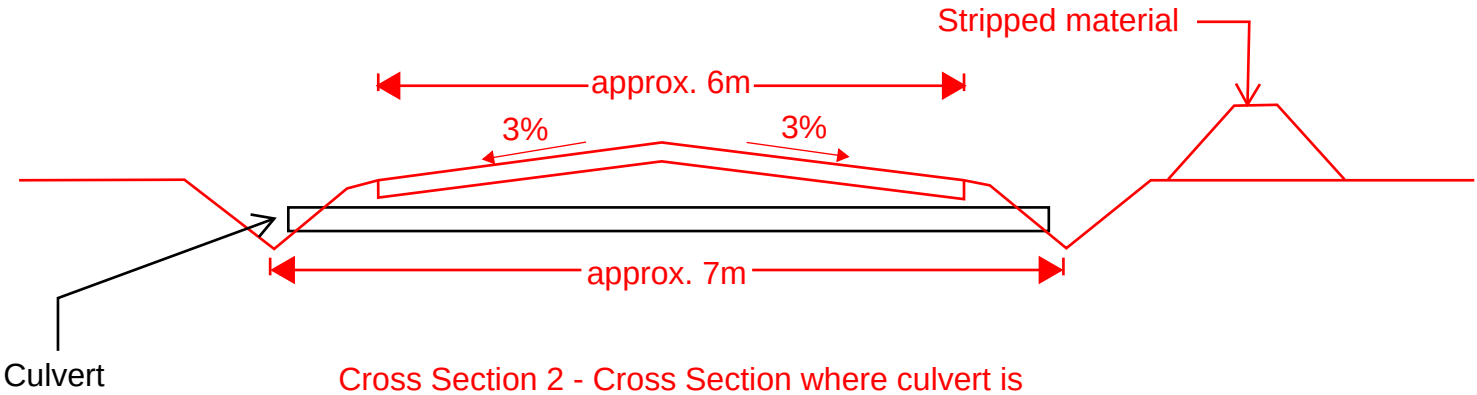
Raeburn Track

Received
28.11.2025

Proposed Access Road Cross Section



Cross Section 1 - General cross section throughout



Cross Section 2 - Cross Section where culvert is required under road for low lying areas or for water management

(Plans are general and detailed plans will be according to advice contained in TIA, 2025, from Midson Traffic)

RMCG

#2308

23 September 2025

Michelle Schleiger
Woolcott Land Services
Via email: michelle@woolcott.au

Dear Michelle,

Proposed New Internal Roadway – Assessment of the Natural Assets Code

Please find below my report on the assessment of the Natural Assets Code in relation to the proposed new internal roadway at 59 Raeburn Rd, Breadalbane.

BACKGROUND

RMCG have been engaged to undertake an assessment of the Natural Assets Code, specifically clause C7.6.1, in relation to a proposed 5m wide internal roadway at 59 Raeburn Rd, Breadalbane (CT 180210/2). The proposed roadway crosses Briarly Creek in the south of CT 180210/2. Thirty metres either side of Briarly Creek are within a mapped 'waterway and coastal protection area' under the *Tasmanian Planning Scheme – Northern Midlands* (the Planning Scheme). There will be no dredging or reclamation required, nor will a new stormwater point discharge into a watercourse be required as part of the proposed development. See Figure 1 for the Site Plan.

The relevant sections of the Natural Assets Code under the Planning Scheme in relation to the proposal are as follows;

C7.6.1 Buildings and works within a waterway and coastal protection area or a future coastal refugia area

Objective: That buildings and works within a waterway and coastal protection area or future coastal refugia area will not have an unnecessary or unacceptable impact on natural assets.

Performance Criteria:

P1.1 Buildings and works within a waterway and coastal protection area must avoid or minimise adverse impacts on natural assets, having regard to:

a) Impacts caused by erosion, siltation, sedimentation and runoff;

b) Impacts on riparian or littoral vegetation;

c) Maintaining natural streambank and streambed condition, where it exists;
d) Impacts on in-stream natural habitat, such as fallen logs, bank overhangs, rocks and trailing vegetation;
e) The need to avoid significantly impeding natural flow and drainage;
f) The need to maintain fish passage, where known to exist;
g) The need to avoid land filling of wetlands;
h) The need to group new facilities with existing facilities, where reasonably practical;
i) Minimising cut and fill;
j) Building design that responds to the particular size, shape, contours or slope of the land;
k) Minimising impacts on coastal processes, including sand movement and wave action;
l) Minimising the need for future works for the protection of natural assets, infrastructure and property;
m) The environmental best practice guidelines in the *Wetlands and Waterways Works Manual*; and
n) The guidelines in the *Tasmanian Coastal Works Manual*.

As per the Natural Assets Code of the Planning Scheme, natural assets means biodiversity, environmental flows, natural streambank and streambed condition, riparian vegetation, littoral vegetation, water quality, wetlands, river condition and waterway and/or coastal values. Waterway values means the values of watercourses and wetlands derived from their aquatic habitat and riparian vegetation, physical elements, landscape function, recreational function and economic function.

ASSESSMENT

Sally Scrivens of RMCG undertook a site visit of the subject site on the 15 February 2024. The site visit found that the main channel of Briarly Creek is edged by a 'lower bank' that is below the elevation of the surrounding paddocks; the 'upper bank'. The entire area associated with the creek crossing, including the lower bank and upper bank is comprised of vegetation described as a weed infestation. This is supported by TASVEG 4.0 mapping of the site. This infestation is more extensive on the northern side where there is also some native *Phragmites australis* southern reed present among the weeds. The lower bank is dominated by *Salix spp.* willow with *Crataegus monogyna* hawthorn, *Rubus spp.* blackberry, *Dipsacus fullonum* teasel, thistles, and pasture grasses common on both the lower and upper banks.

The main channel of the creek contained willow roots and did not appear to have any overhanging sections. The creek contained water at the time of the site visit, that appeared almost still and was highly turbid (see Figure 2). A gaggle of geese was disturbed from the site on approach which may have resulted in the turbidity, however, after 30 minutes, the quality of the water had visually not significantly changed. Hence, the stream bed could not be assessed, however, the site in general is heavily modified and the waterway values of the watercourse are considered to be minimal.

Given the topography at the site, the crossing over Briarly Creek will require fill to be added to the banks. It is understood that a culvert sized appropriately for the site[1] will be installed at a time of low flows and will aim to avoid heavy rain. The main flow may be diverted when the culvert is installed and rocks will be placed both upstream and downstream from the culvert.

[1] As determined by engineers.

The proposal has been assessed against the Planning Scheme as below.

P1.1 Buildings and works within a waterway and coastal protection area must avoid or minimise adverse impacts on natural assets, having regard to:

a) Impacts caused by erosion, siltation, sedimentation and runoff. *There is a risk of erosion, siltation, sedimentation and runoff during construction of the road, especially at Briarly Creek due to the nature of works required. Recommendations are provided to ensure that works have minimal impacts on the watercourse.*

b) Impacts on riparian or littoral vegetation. *There is no native riparian vegetation at the Briarly Creek crossing; vegetation at the site is entirely comprised of introduced species. While this vegetation will be impacted as a result of the proposed crossing, it is not considered to have any adverse impacts on the natural assets of the site. There is no littoral vegetation present.*

c) Maintaining natural streambank and streambed condition, where it exists. *The streambank and stream bed condition of Briarly Creek will be impacted at the crossing as a culvert will be installed. This will be limited to a 5m width and, given the highly modified nature of the site, it is not considered to adversely impact on the natural assets at the site.*

d) Impacts on in-stream natural habitat, such as fallen logs, bank overhangs, rocks and trailing vegetation. *It was difficult to determine the instream natural habitat of Briarly Creek due to the turbidity of the site, however, no bank overhangs were evident and any trailing vegetation is comprised of introduced species. Given the highly modified nature of the site, the installation of the culvert with rock placement at either end in Briarly Creek is not considered to adversely impact on the natural assets at the site.*

e) The need to avoid significantly impeding natural flow and drainage. *A culvert designed to ensure natural flow of Briarly Creek will be installed. While natural flow and drainage may be impeded during installation of the culvert, this will be short-term only and will not result in an overall significant impact on natural flow or drainage.*

f) The need to maintain fish passage, where known to exist. *There may be existing fish passage within Briarly Creek and this is expected to be maintained with the installation of the culvert.*

g) The need to avoid land filling of wetlands. *NA; there is no wetland present on site.*

h) The need to group new facilities with existing facilities, where reasonably practical. *NA – grouping a new road with an existing road is not practical.*

i) Minimising cut and fill. *Cut and fill is required at the Briarly Creek crossing for the road to pass between the upper banks and over the proposed culvert. This amount of fill cannot be minimised further.*

j) Building design that responds to the particular size, shape, contours or slope of the land. *The route of the proposed road is over gently sloped land and the road design at ground level responds to this. The crossing of Briarly Creek (with road batters and the installation of a culvert) is designed to maintain the elevation of the road while also allowing for flow to be retained through Briarly Creek.*

k) Minimising impacts on coastal processes, including sand movement and wave action. *NA.*

l) Minimising the need for future works for the protection of natural assets, infrastructure and property. *As the appropriate culvert size for Briarly Creek has been determined by engineers, no future works for the protection of natural assets, infrastructure, or property is expected as a result of the proposed development.*

m) The environmental best practice guidelines in the *Wetlands and Waterways Works Manual*. *The proposed stream crossing has been appropriately designed for the site and will be constructed with*

low-risk practices (see recommendations), as per the environmental best practice guidelines in the Wetlands and Waterways Works Manual.

n) The guidelines in the *Tasmanian Coastal Works Manual*. *NA.*

CONCLUSION

The proposal is to construct a waterway crossing, over Briarly Creek, in a waterway and coastal protection area at 59 Raeburn Rd, Breadalbane (CT 180210/2) as part of a proposed new internal road. The crossing involves installation of a culvert and fill. Provided the below recommendations are adhered to, the proposal is considered to minimise adverse impacts on natural assets and therefore is considered to adequately address the performance criteria of the C7.6.1 under the Natural Assets Code of the *Tasmanian Planning Scheme – Northern Midlands.*

Recommendations

- Sow down the Briarly Creek crossing batters with grass seed immediately following works.
- Avoid a perched culvert.
- Place rock at both the upstream and downstream side of the culvert immediately after installation.
- Silt fences/sediment barriers must be utilised between the works area and Briarly Creek. The barriers are to be erected prior to works commencing at the site and then maintained for the duration of works until the grass is established and the risk of sediment movement is reduced.
- Time construction of the crossing for a period of low flows and to avoid heavy rainfall events.
- Prevent biosecurity incursions and new weed incursions by implementing strict washdown protocols for all vehicles, machinery, and equipment used during works.

Kind regards,

Sally Scrivens
CONSULTANT

SITE PLAN

Figure 1: Site Plan showing the proposed road and the Briarly Creek crossing.

PHOTOS

All photos taken by Sally Scrivens 15 February 2024.

Figure 2: View of the proposed crossing site at Briarly Creek.

Figure 3: View south toward Briarly Creek from the upper bank.

This report has been prepared by:

RM Consulting Group Pty Ltd trading RMCG

Level 2, 102-104 Cameron Street, Launceston Tasmania 7250

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Document review and authorisation

Project Number: #2308

Doc Version	Final/Draft	Date	Author	Project Director review	BST QA review	Release approved by	Issued to
1.0	Final	28/10/2023	S. Scrivens	A. Ketelaar	L. McKenzie	A. Ketelaar	Woolcott Surveys
1.1	Final	28/10/2023	S. Scrivens	A. Ketelaar	L. McKenzie	A. Ketelaar	Woolcott Surveys
2.0	Final	23/09/2025	S. Scrivens	-	L. McKenzie	S. Scrivens	Woolcott Land Services

Exhibited

AGRICULTURAL ASSESSMENT AND COMPLIANCE REPORT

Property title 180210/2 59 Raeburn Road, Breadalbane

October 2025

pinion ADVISORY

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Author

Jason Lynch, Senior Agricultural Consultant
BAppSci (hort.) CPAg

Document status
Version 1

Date	Status/issue	Reason for revision	Reviewed by	Authorised by
27 October 2025	FINAL	FINAL	JL	JL
Select date				
Select date				

Executive Summary

This agricultural assessment report has been prepared on behalf of the proponent, Hazel Bros, and covers various aspects of the proposed development at property title 180210/2 at 59 Raeburn Road, Breadalbane.

The agricultural land use activity on the property is based on the production of dryland cereal and oilseed crops and extensive areas of land already used as part of the quarrying operations and includes a concrete batching plant.

The subject property is extensively covered by a hard rock quarry mining lease, as per 1874P/M, which extends over 63.5 hectares of land, and also includes the entirety of the adjacent property to the east, as per property title 157107/1.

The proposed development is covered by planning application PLN-25-0170 "Vehicle access track and new access to Evandale, 59 Raeburn Road, Breadalbane".

The proposed development is for an internal private access road, or 'track' to be used subservient to the concrete batch plant at 59 Raeburn Road".

As per a request from the Northern Midlands Council, additional information is required regarding compliance with the Tasmanian Planning Scheme Clause 21.3.1 P2.

The proposed development has been specifically located in order to minimise the potential for negative impacts on the agricultural land use activities conducted on the subject property.

Due to a combination of setback distances, existing shelter belt vegetation, nature of the agricultural land use activity conducted on the subject property and that of adjacent properties, in conjunction with the nature of the development and associated use it is reasonable to consider that there would be a negligible expectation for the potential to have a negative impact on the operation and management of agricultural land use activity on the adjacent and nearby properties.

The proposed development is considered to be compliant with the relevant clauses associated with the Tasmanian Planning Scheme, as per 21.3.1P2.

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APPENDICES

Purpose

This report has been undertaken on behalf of Hazel Bros. (the proponent) to support an application for road access to a concrete batching plant and quarrying operation on the property at 59 Raeburn Road, Breadalbane.

The document provides an agricultural assessment of the property in question and reports on how the proposal complies with provisions of the Tasmanian Planning Scheme. This report reviews the current agricultural usage of the property and the surrounding area in relation to the land capability and land classification. This includes soils, aspect, topography, water resource, economic feasibility, and impact of the development in relation to agricultural activities.

1 General overview

1.1 LAND CAPABILITY

The currently recognised reference for identifying land capability is based on the class definitions and methodology described in the Land Classification Handbook, Second Edition, C.J Grose, 1999, Department of Primary Industries, Water and Environment, Tasmania.

Most agricultural land in Tasmania has been classified by the Department of Primary Industries and Water at a scale of 1:100,000, according to its ability to withstand degradation. A scale of 1 to 7 has been developed with class 1 being the most productive for agriculture and resilient to degradation and class 7 the least suitable to agriculture. Class 1, 2 and 3 are collectively termed "prime agricultural land". For planning purposes, a scale of 1:100,000 is often unsuitable and a re-assessment is required at a scale of 1:25,000 or 1:10,000. Factors influencing capability include elevation, slope, climate, soil type, rooting depth, salinity, rockiness and susceptibility to wind, water erosion, and flooding.

1.2 REPORT AUTHOR

This report has been co-authored and reviewed by senior consultant, Jason Lynch. Jason Lynch possesses a Bachelor of Applied Science (horticulture) and is a certified practising agriculturalist (CPAg) with over 25 years' experience in the agricultural industry in Tasmania. He has previously been engaged by property owners, independent planners, and surveyors to undertake evaluations and studies across various municipalities to comply with the Tasmanian Planning Scheme and council based interim planning schemes. This work involves the assessment of land for development purposes and potential conflict.

1.3 TASMANIAN PLANNING SCHEME – NORTHERN MIDLANDS

The Tasmanian Planning Scheme[1] establishes the requirements for use and development of land in the Northern Midlands municipality in accordance with the *Land Use Planning and Approvals Act 1993.*

[1] Tasmanian Planning Scheme V13, effective date 16th July 2025.

2 Property details

2.1 LOCATION

The subject property is owned by A & J Gardiner Pty Ltd and is located at 59 Raeburn Road, Breadalbane which is approximately 3.6km north west of Perth. (Image 1 and Image 2).

Table 1 Property identification details.

Address	Property ID	Title reference	Hectares (approx.)
59 Raeburn Road, Breadalbane, 7258	9791273	180210/2	101.5

The property is covered by flat to very gently sloping and undulating ground, however on the north western area of the property the presence of spoil heaps is shown as small, elevated mounds. Image 3

The vegetation present on the property is typically dominated by a mix of seasonal cash crops, such as cereals and canola, with areas of native riparian vegetation interspersed with hawthorn shrubs along sections of Briarly Creek, and a number of shelter belts and hedges (consisting of native trees and shrubs and hawthorns) along the sections of the western and southern boundaries and limited numbers of paddock boundaries.

Land tenure of the subject property and all adjacent land is private free hold (yellow shaded) with an area of TasWater land on the central southern boundary, Commonwealth tenure land as per the Launceston airport nearby to the south Conservation Covenant land nearby to the south, and Authority Crown land nearby to the west, and Casement associated with the road and railway infrastructure in this locale.[2] (Image 4).

Under the Tasmanian Planning Scheme, the subject property and all adjacent land is zoned Agriculture, with an area of Utilities zoned land on the central southern boundary as well associated with the various roads and nearby railway in this locale, General Industry is nearby to the south west, with Low Density Residential zoned land further to the south west.[3] (Figure 5).

Infrastructure present on the subject property includes a concrete batching plant, weigh bridge, site offices, various support infrastructure associated with the quarry's operation and boundary fencing, a residential dwelling and various farm sheds.

The subject property is extensively covered by a hard rock quarry mining lease, as per 1874P/M, which extends over 63.5 hectares of land, and also includes the property title to the east 157107/1. Other hard rock quarrying mining lease are also present to the north and south east of the subject property. (Image 6)

[2] The LIST map dataset.
[3] The LIST map dataset.

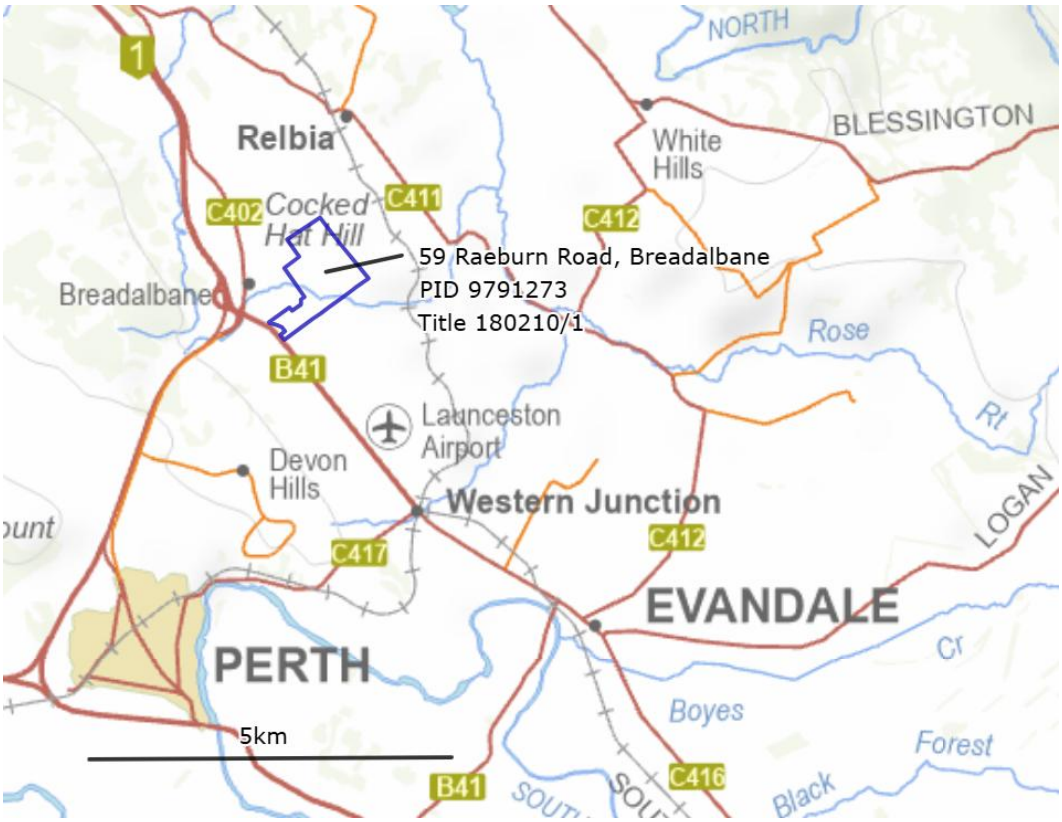


Image 1 Subject property location (blue). (Source: The LISTMap).

Image 2 Aerial overall view imagery of the subject property (blue outline). (Source: The LISTMap).

Exhibited

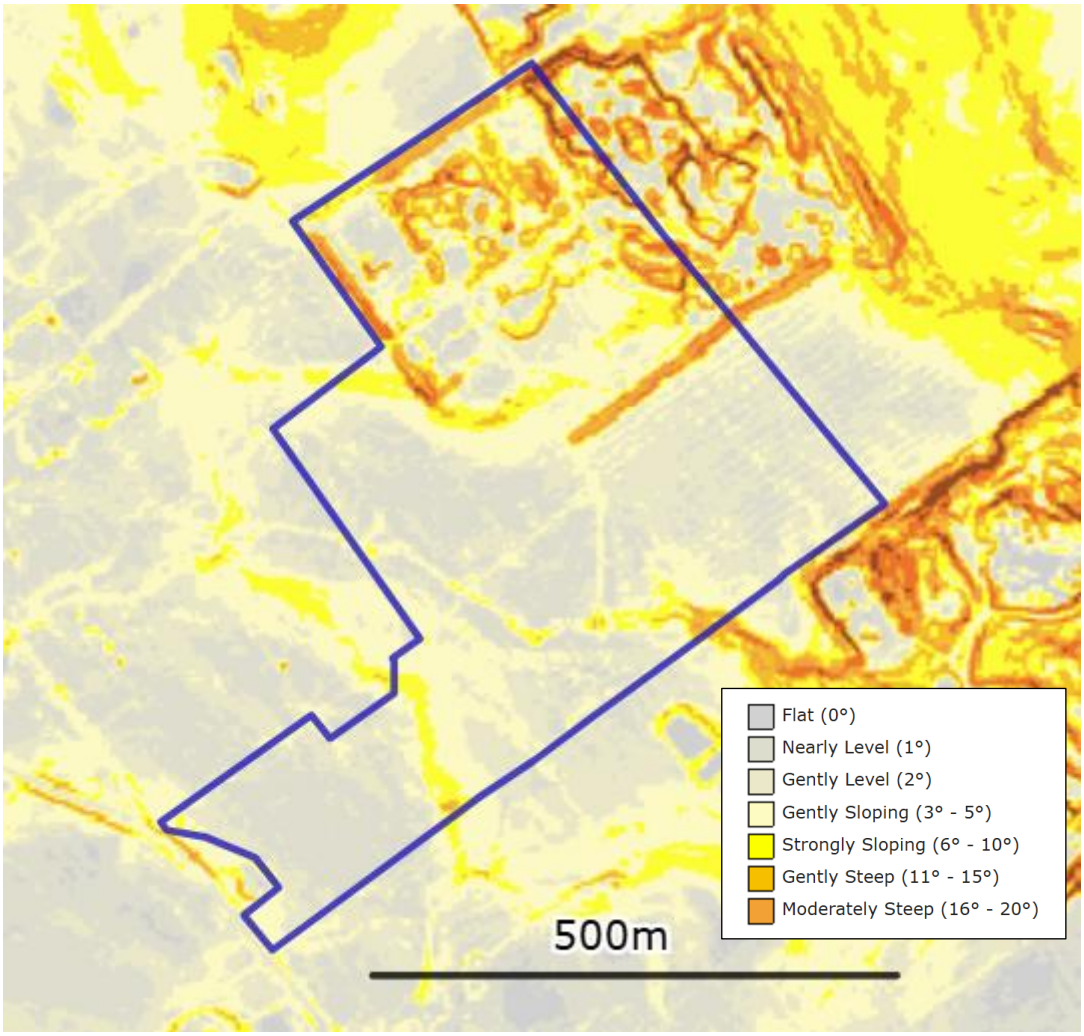


Image 3 Topographic map of the subject property (blue outline). (Source: The LISTMap).

Exhibited

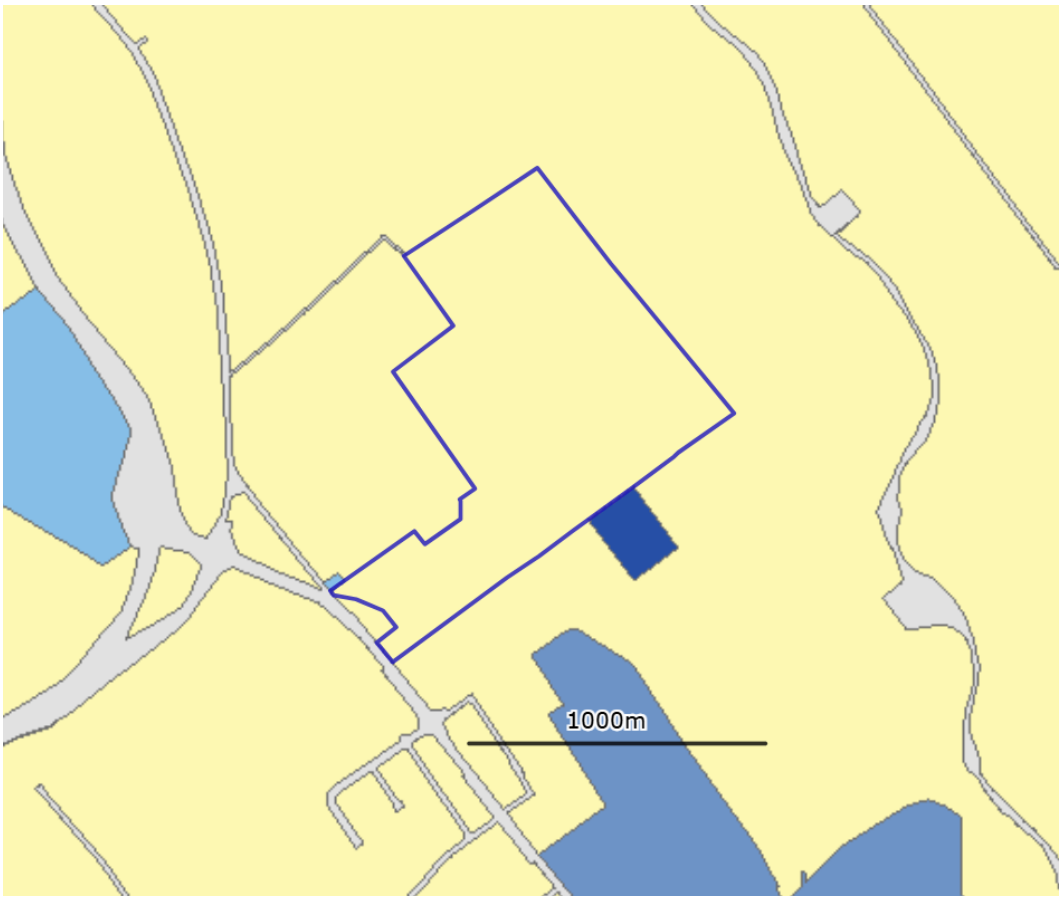


Image 4 Land tenure of the subject property (blue outline) and all adjacent land is private free hold (yellow shaded) with an area of TasWater (dark blue shaded) land on the central southern boundary, Commonwealth tenure land (light blue shaded) as per the Launceston airport nearby to the south Conservation Covenant land nearby to the south, and Authority Crown land (pale blue shaded) nearby to the west, and Casement (grey shaded) associated with the road and railway infrastructure in this locale. (Source: The LISTMap).

Image 5 Under the Tasmanian Planning Scheme, the subject property (blue outline) and all adjacent land is zoned Agriculture (brown shaded). with an area of Utilities (Yellow shaded) zoned land on the central southern boundary and associated with the various roads and nearby railway in this locale, General Industry (purple shaded) is nearby to the south west, with Low Density Residential (salmon shaded) zoned land further to the south west. (Source: The LISTMap).

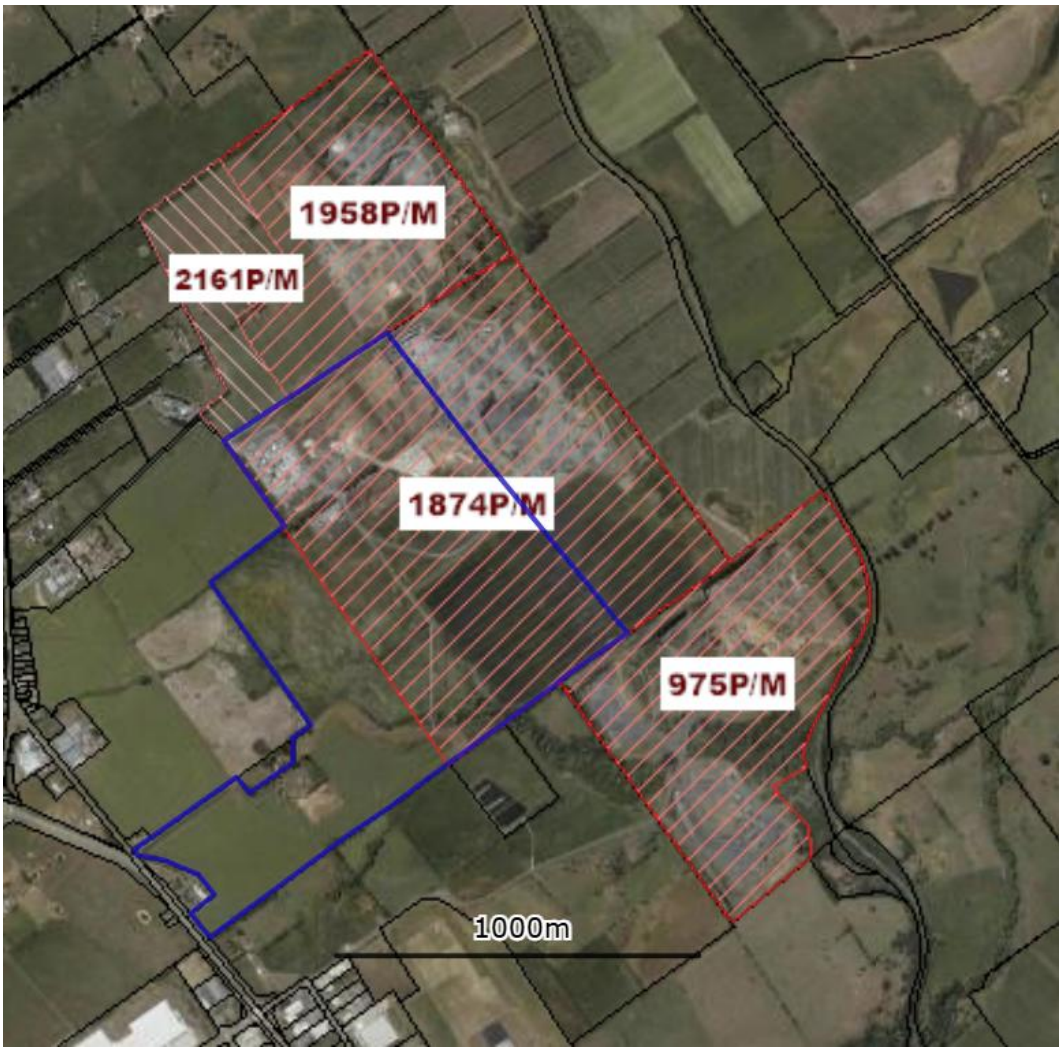


Image 6 Hard rock quarrying mining leases in and in the vicinity of the subject property (outlined in blue).

3 Land capability

Land capability of the property was assessed according to the Tasmanian land capability classification system (Grose, 1999)[4]. Land is graded according to its ability to sustain a range of agricultural activities considering the chances of degradation of the land resource. Class 1 land is prime agricultural and Class 7 land is unsuitable for agriculture due to severe limitations. A wide range of limitations are considered, and the most significant limitation determines the final classification. For example, limitations can be in relation to soils and could include stoniness, topsoil depth, drainage, and erosion hazard. Limitations to topography could include slope angle and associated erosion hazard.

3.1 SITE VISIT

Desktop research was conducted to review available data associated with geology, topography, presence of threatened native vegetation, land capability, soil information and climatic data of the property and surrounding area. Pinion Advisory consultant, Jason Lynch conducted a site visit on 30th September 2025 to ground-truth the information. The site assessment included inspection of the soil profile (to spade depth), an evaluation of the topography and vegetation as well as examination of land use on the subject property and neighbouring properties. These assessments consider the planned setbacks and potential impacts of the proposed development on agricultural activities.

3.1.1 Land capability assessment

The official land capability map for the area was produced by the DPIF at a scale of 1:100,000 and reported in their South Esk Report in 1996. The ground within the subject property was identified as class 3 and 4[5] land capability.

A detailed inspection of the property was undertaken by the author in September 2025 and determined the majority of the property is covered by Class 4, with a small area of class 6 land present and substantial areas of land exempt from land classification. Image 7.

The land exempt from the land capability assessment includes:

- E1: covering approximately 31.5 hectares, located on the north east of the property, and includes land used for the concrete batching plant, site offices, weigh bridge, spoil and gravel piles and general support areas for the existing quarry operations.
- E2: covering approximately 1.7 hectares, located on the boundary area of the south western area of the property, and includes the residential dwelling and a number of sheds.

Land capability class definitions can be found in Table 2. Land capability assessment details can be found in Table 3.

Various images (Images 10 to 18) of the property are shown in the Appendix 2.

[4] Grose C.J. (1999) Land Capability Handbook: Guidelines for the Classification of Agricultural Land in Tasmania. 2nd Edition, DPIWE, Tasmania.
[5] Grose C. J. and Moreton R. M. (1996) Land Capability Survey of Tasmania, South Esk, 1:100 000 map. Department of Primary Industry and Fisheries, Tasmania.

The key land capability limitations associated with this property are:

- Soils (s): due to challenging growing conditions for pasture and/or crops associated with limitations such as topsoil depth and texture contrast frequency.
- Erosion (e): associated with the risk rill and sheet erosion caused by surface water movement on bare and exposed soil and potential for degraded soil structural due to pugging from livestock movement on waterlogged soils and/or inappropriate and excessive ground cultivation activities.
-

Table 2 Land capability class definitions for the property according to Grose, 1999.[6]

Class	Definition
4	Land well-suited to grazing, but which is limited to occasional cropping or to a very restricted range of crops. The length of cropping phase and/or range of crops are constrained by severe limitations of erosion, wetness, soils or climate. Major conservation treatments and/or careful management are required to minimise degradation. Cropping rotations should be restricted to one to two years out of ten in a rotation with pasture or equivalent to avoid damage to the soil resource. In some areas longer cropping phases may be possible but the versatility of the land is very limited.
6	Land marginally suitable for grazing because of severe limitations. This land has low productivity, high risk of erosion, low natural fertility or other limitations that severely restrict agricultural use.

[6] Grose C.J. (1999) Land Capability Handbook: Guidelines for the Classification of Agricultural Land in Tasmania. 2nd Edition, DPIWE, Tasmania.

Image 7 Land capability map of the subject property.

Table 3 Land capability assessment.

Land capability class	Land characteristics							
	Geology & soils	**Slope (%)**	**Topography & elevation**	**Erosion type & severity**	**Soil qualities**	**Agricultural versatility**	**Main land management requirements**	**Climatic limitations**
4se (66.8 ha)	Clay loam soil, as per the Breadalbane soil profile association, developed on Tertiary basalt geology. Grey/brown medium clay loam soil.	0-5	Flat to gently undulating ground. Approximately 155-175m ASL.	Low/moderate risk of rill and sheet erosion due to surface water movement on bare and exposed soils, and structure decline due to excessive and inappropriate soil cultivation. At high risk of pugging due to being subject to extended periods of soil waterlogging.	Imperfect to moderately well drained soils with slow permeability. Low/moderate risk of soil waterlogging.	Suitable for frequent cropping (up to 3-in-10-year rotation) and a range of suitable crops. Land suitable for grazing, with minor limitations, albeit to reduce grazing pressure when soils are waterlogged and/or when soil moisture is limiting and when pasture covers are reduced.	Avoid situations that lead to the exposure of bare soil, therefore maintain sufficient ground cover. The risk of compaction in winter from soil cultivation, machinery and stock movements increases significantly during periods of soil waterlogging.	Moderate climatic limitations. This region experiences cool/cold winters and warm summer conditions. The area receives an average of 620mm annual rainfall, can experience up to 40 frost days annually, 1,080 growing degree days (October to April) and 1,025 chill hours (May-August).

Land capability class	Land characteristics							
	Geology & soils	**Slope (%)**	**Topography & elevation**	**Erosion type & severity**	**Soil qualities**	**Agricultural versatility**	**Main land management requirements**	**Climatic limitations**
6we (1.5 ha)	Complex clay loam soil, as per the Breadalbane soil profile association, developed on Tertiary basalt geology, and clayey soil derived recent from Quaternary alluvium. Black/brown medium to heavy clay loam soils.	0-5	Riparian ground associated with Briarly Creek and the immediately adjacent ground. Approximately 150-153m ASL.	Moderate/high risk of rill and sheet erosion due to surface water movement on bare and exposed soils, and stream bank erosion during periods high waterway flow in Briarly Creek, and structure decline due to excessive and inappropriate soil cultivation. At high risk of pugging due to being subject to extended periods of soil waterlogging.	Poor to imperfectly drained soils with slow permeability. Moderate/high risk of soil waterlogging.	Unsuitable for cropping. Land suitable for grazing, with severe limitations. In reality much of this land is covered by a mix of riparian vegetation and hawthorn shrubs and in conjunction with the presence of the Briarly Creek waterway it is not capable of being used for agricultural land use activity.	Avoid situations that lead to the exposure of bare soil, therefore maintain sufficient ground cover. The risk of compaction in winter from soil cultivation, machinery and stock movements increases significantly during periods of soil waterlogging.	Moderate climatic limitations. This region experiences cool/cold winters and warm summer conditions. The area receives an average of 620mm annual rainfall, can experience up to 40 frost days annually, 1,030 growing degree days (October to April) and 1,050 chill hours (May-August).

4 Proposed development

The proposed development is covered by planning application PLN-25-0170 "Vehicle access track and new access to Evandale, 59 Raeburn Road, Breadalbane".

The proposed development is for an internal private access road, or 'track' to be used subservient to the concrete batch plant at 59 Raeburn Road".

As per a request from the Northern Midlands Council, additional information is required regarding compliance with the Tasmanian Planning Scheme Clause 21.3.1 P2:

> **P2**
> A use listed as Discretionary, excluding Residential, must minimise the conversion of agricultural land to non-agricultural use, having regard to:
> (a) the area of land being converted to non agricultural use;
> (b) whether the use precludes the land from being returned to an agricultural use;
> (c) whether the use confines or restrains existing or potential agricultural use on the site or adjoining sites.

Section 6 of this report will address the proposed developments' compliance with this clause.

The proposed access track would be 1,710m long and 5m wide, and therefore cover a total area of approximately 8,550m^2 or approximately 0.85 hectares.

This equates to approximately 0.8% of the total area of the subject property, and which further equates to approximately 1.3% of the total area available for agriculture (66 hectares) on the subject property.

The northern end of the proposed access track would follow a previously existing headland paddock track, and this would account for approximately 350m of the northern most end of the development. Therefore, the new extension to the track would be 1,360m in length, and this would account for 6,800m^2 which equates to a revised approximately 1% of the total area available for agriculture (66 hectares) on the subject property.

The proposed access track would be located running in a north south direction through central area of the property and then be directed in an east west direction along the western end of the southern boundary.

The majority, 830m, of the proposed track would be located parallel to the southern boundary of the subject property, and this means it is favourable positioned in the same direction as the operational use of the paddock, as per the sowing, spreading and harvesting runs as per the production of cereal and oil seed (e.g. canola) crops. Therefore, the new access track would minimise the disruption to the operation and management of the cropping program undertaken on the subject property.

A small area of the subject property, approximately 0.8 hectares of land, would be located to the east of the access track and bound by Briarly Creek and the southern property boundary, and effectively "strands" this parcel of ground. However, it should be noted that this land is already compromised and is not able to be fully utilised for agricultural land use activity, e.g. cropping, due to being more prone to browsing wildlife pressure, and is effectively an enlarged headland and not readily used for planting out with crops.

5 Land use activity

5.1 CURRENT AGRICULTURAL ACTIVITIES CONDUCTED

The property has approximately 66 hectares of land which is capable of supporting agriculture for cropping and/or pasture production, and this is currently being cropped for the production of cereals and canola.

5.2 POTENTIAL AGRICULTURAL ACTIVITIES CONDUCTED

Pastoral use

The subject property is capable of being used for livestock production and, based on 66 hectares of land would have a total potential sustainable dryland carrying capacity of approximately 924 DSE[7].

924 DSE would equate to running approximately 330 breeding ewes, and this could generate a potential gross margin return of approximately $15,000.

It is important to note that the exact financial returns which can and could be generated from the property would vary depending upon the exact and nature of the livestock enterprise operated, nature of the livestock sales (e.g. store or finished animals, amount of supplementary feed provided, and general enterprise operational requirements (e.g. animal husbandry, pasture production costs) and livestock markets conditions.

5.2.1 Cropping use

The property has 66 hectares of class land which is and could continue to be cropped on the property.

Due to the absence of access to irrigation water on the property the cropping program is limited to the production of dryland crops such as cereals (wheat and barley) and canola.

5.2.2 Perennial horticulture

Due to a combination of the clayey soils present, flat topography and the associated soil drainage issues, the absence of irrigation water and high degree of frost risk, for the investment required relative to the production risk it would not be considered a viable site for wine grape production.

Due to similar site challenges, other perennial crops such as cherries, hazelnuts and olives would not be considered viable.

[7] DSE is a standard unit used to compare the feed requirements of different classes of livestock to assess the carrying capacity of a farm or paddock. One DSE is defined as the amount of feed required by a two-year-old 50 kg 'dry' Merino sheep (wether or non-lactating, non-pregnant ewe) to maintain its weight.

5.3 ADJACENT LAND USE ACTIVITY

The land use activity on adjacent land titles includes:

- North:
  - Title reference 144549/1 (approximately 59.5 hectares), Agriculture zoned land, limited agricultural land use activity with 26.5 hectares of pasture available for grazing with livestock and the balance (approximately 33 hectares) used for a hard rock quarry operated by VDQ. The entirety of this property is covered by current mining leases, as per 2161P/M and 1958P/M.
  - Title reference 186290/2 (approximately 50.7 hectares), Agriculture zoned land, used for agricultural land use activity as per dryland cereal cropping, and no residential dwelling is present.
- East:
  - Title reference 157107/1 (approximately 41.6 hectares), Agriculture zoned land, Agriculture zoned land, limited agricultural land use activity with 11.5 hectares of land used for dryland cropping and the balance used for a hard rock quarry operated by Hazel Bros. The entirety of this property is covered by a current mining lease, as per 1874P/M.
- South:
  - Title reference 146280/1 (approximately 55.8 hectares), Agriculture zoned land, not used agriculture, used for a hard rock quarry operated by Bis. Almost the entirety of this property is covered by a current mining lease, as per 975P/M.
  - Title reference 180211/1 (approximately 63 hectares), Agriculture zoned land, used for agricultural land use activity as per pasture production and seasonal dryland cropping, and has a residential dwelling present. This property provides access the quarrying site located adjacent to the east, as per title 146280/1.
  - Title reference 1107909/1 (approximately 5 hectares), Utilies zoned land, not used agricultural land use activity, used by TasWater as a location for sewerage water treatment ponds.
- West:
  - Title reference 37282/1 (approximately 1 hectare), Agriculture zoned land, no agricultural land use activity, used for residence purposes with a residential dwelling present.
  - Title reference 180209/1 (approximately 1.4 hectares), Agriculture zoned land, no agricultural land use activity, and has a church present.
  - Title reference 65571/1 (approximately 0.2 hectare), Agriculture zoned land, no agricultural land use activity, used for residence purposes with a residential dwelling present.

5.4 IMPACT OF AGRICULTURAL ACTIVITY ON NEIGHBOURING LAND TO THE PROPOSED DEVELOPMENT

Land use activity on neighbouring properties adjacent to the subject property includes a combination of hard rock quarrying, residential, and low intensity dryland agricultural land use activity.

The agricultural land use activity conducted on the southern and northern boundaries of the subject property involves dryland cropping (e.g. cereals and oil seed canola) is of a limited scale and considered to be relatively low intensity.

The proposed development of the access track involves vehicles moving along this thoroughfare and it unlikely that they would ever directly interact with the agricultural land use activities which can and could be conducted on the balance of the subject property nor on adjacent properties.

Normal operational activities associated with agricultural use on neighbouring land are not expected to have any unreasonable impact on or interference with the proposed development on the subject property. An assessment of the key risks is summarised in Table 4.

Table 4 Potential risk from agricultural land use activities on neighbouring land.

Potential risk from neighbouring agricultural land activity	Extent of risk & possible mitigation strategy
1. Spray drift and dust	Risk = low. The scale and nature of agricultural land use activity and the associated use of agricultural chemicals on land adjacent and/or nearby the subject property involves low intensity agriculture, as per grazing livestock and dryland cropping. A shelter belt is located along the majority of the southern boundary of the subject property. It would be appropriate to improve the existing shelter along this common southern boundary. The presence of several residential dwellings on the boundaries of the subject property and property title 186290/2 already requires the careful use and application of agricultural chemicals. The application of all agricultural chemicals must abide by the Tasmanian Code of practice for ground and aerial spraying 2014 and any applicable agricultural chemical label requirements. The use and application of agricultural chemicals is already a normal feature of land use in this locale, albeit on a limited scale, and operators routinely adopt practices which minimise the risk of conflict and/or negative impacts on neighbouring properties and enterprises.
2. Noise from machinery, livestock, and dogs	Risk = low. Plant, machinery, vehicles, working dogs and livestock are routinely used/involved in general farming duties on adjacent land. The property is located in a rural area, and close to Launceston airport so it is accepted that noises generated by farm machinery and associated infrastructure, livestock and aircraft will occur.
3. Irrigation water over boundary	Risk = low. Irrigated agricultural land use activity is not practiced on adjoining land. If irrigated agriculture were undertaken on the adjacent properties due to a combination of the existing shelter along much of the common southern boundary and setback distance from the development (e.g. the access the track) to the northern property it is unlikely

Potential risk from neighbouring agricultural land activity	Extent of risk & possible mitigation strategy
	any negative issues would arise. It should be noted that access to irrigation water is severely restricted in this locale.
4. Stock escaping and causing damage	Risk = low. Provided boundary fences are maintained in sound condition and livestock are checked regularly.
5. Electric fences	Risk = low. Mitigated by attaching appropriate warning signs on boundary fencing if required.

5.5 IMPACT OF PROPOSED DEVELOPMENT ON AGRICULTURAL ACTIVITY OF NEIGHBOURING LAND

The agricultural land use activity conducted on the southern and northern boundaries of the subject property involves dryland cropping (cereals and oil seed canola) is of a limited scale and considered to be relatively low intensity.

The proposed access track development would be considered subservient to the concrete batching plant and therefore allow the proponent to undertake the logistics activities involved in this enterprise.

Other risks to neighbouring agricultural activity are outlined in Table 5. Some of these risks rely on an element of criminal intent.

Table 5 Potential risk from proposed development to neighbouring agricultural land use and activity.

Potential risk to neighbouring agricultural land activity	Extent of risk & possible mitigation strategy
1. Trespass	Risk = low. Mitigation measures include installation and maintenance of sound boundary fencing, lockable gates and appropriate signage to warn visitors about entry onto private land, report unauthorised entry to police.
2. Theft	Risk = low. Ensure there is good quality boundary fencing on neighbouring properties and appropriate signage to deter inadvertent entry to property, control vehicle movements, report thefts to police.
3. Damage to property	Risk = low. As for theft.
4. Weed infestation	Risk = low. Risks are expected to be low with weed management undertaken, and ongoing with routine weed control activities performed.
5. Fire outbreak	Risk = low. Fire risk can be mitigated by careful operation of burn-offs, outside barbeques and disposal of rubbish. In summer, mowing/grazing of long dry grass and vegetation is important. Observe all fire restriction imposed by the Northern Midlands council and state government.

5.6 WATER STORAGE AND RESOURCES

The subject property is not serviced by TasWater for the provision of water and sewerage services.

The property is located within the North Esk Irrigation District (NEID) but is not serviced and/or connected the North Esk Irrigation Scheme (NEIS). The NEIS is a fully allocated scheme, and no irrigation water is available.

No groundwater bores are present on the property.

No dams are present on the property.

6 Tasmanian Planning Scheme Compliance – Northern Midlands

As per a request from the Northern Midlands Council, additional information required regarding the proposed developments' compliance with the Tasmanian Planning Scheme Clause 21.3.1 P2.

6.1 CLAUSE 21.3.1 DISCRETIONARY USE

Objective
That uses listed as discretionary: (a) support agricultural use, and (b) protect land for agricultural use by minimising the conversion of land to non-agricultural use.
Response
The proposed access track development would be considered subservient to concrete batching plant and therefore allow the proponent to undertake the logistics activities involved in this enterprise. , and hence the concentration on the response to Performance Criteria P4(a).
Performance criteria
P2 A use listed as Discretionary, excluding Residential, must minimise the conversion of agricultural land to non-agricultural use, having regard to: (a) the area of land being converted to non agricultural use; (b) whether the use precludes the land from being returned to an agricultural use; (c) whether the use confines or restrains existing or potential agricultural use on the site or adjoining sites.
Response
P2 (a) The proposed access track has been planned and designed to minimise the conversion of agricultural land to non-agricultural use. The proposed access track would be 1,710m long and 5m wide, and therefore cover a total area of approximately 8,550m^2 which equates to approximately 0 1.3% of the total area available for agriculture (66 hectares) on the subject property. The northern end of the proposed access track would follow a previously existing headland paddock track, and this reduces the length of new track required down to 1,360m in length and 6,800m^2 which equates to approximately 1% of the total area available for agriculture (66 hectares) on the subject property. The positioning of the track would follow the southern boundary of the property, and this allows for the least impact on the operational management of the agricultural land which thereby minimises the potential interference on the operational use of the land, such as for sowing, application of agricultural chemical and harvesting, by allowing for straight driving paths to be followed. (b) If required the access laneway could be removed, and land rehabilitated to allow for its return to use for agricultural land use activity. During the construction phase, the topsoil should be stripped back or pushed to one side (or removed and stockpiled) and therefore if required in the future the track construction material can be removed and topsoil replaced. Thereafter soil amelioration activities undertaken (ripping, cultivation and application of amendments applied) to rejuvenate the land and return it to productivity agricultural use. (c) As outlined in section 5.4 and 5.5 of the agricultural report considerations have made for the proposed developments' impact to and from agricultural land use activity. These considerations relate to issues regarding the application of agricultural chemicals spray drift, noise emissions, irrigation spray drift, trespass, fencing, weed management and fire management, and have been considered to be of low risk. There is no irrigated land and/or irrigation infrastructure which would be imp acted by the proposed development. It is important to note that the operating conditions of the concrete batch plant must be adhered to, and traffic management (e.g. vehicle speeds and operating hours for vehicle movements). The agricultural property to the north, as per title 186290/2, would have no

Objective	
	expectations negative impact due to a combination of the nature of the agricultural land use activity (dryland cropping) and setback distances to the development (at the nearest point being approximately 300m). In relation to the property to the adjacent to the south, as per title 180211/1, the benefit of a shelter belt along the common southern boundary, relative low intensity nature of the agricultural land use activity (dryland grazing by sheep and occasional dryland cropping) and presence of the existing laneway access to the hard rock quarry on property title 146280/1. When the hard rock quarry of property title 146280/1 is in operation vehicles would be driving through the agricultural property to the south, as per title 180211/1. The majority of the proposed track would be located parallel to the southern boundary of the subject property, and this means it is favourable positioned in the same direction as the operational use of the paddock, as per the sowing, spreading and harvesting runs as per the production of cereal and oil seed (e.g. canola) crops. Therefore, the new access track would minimise the disruption to the operation and management of the cropping program undertaken on the subject property. A small area of the subject property, approximately 0.8 hectares of land, would be located to the east of the access track and bound by Briarly Creek and the southern property boundary, and effectively "strands" this parcel of ground. However, it should be noted that this land is already compromised and is not able to be fully for agricultural land use activity, e.g. cropping, due to being more prone to browsing wildlife pressure, and is effectively an enlarged headland and not readily used for planting out with crops. The balance of the paddock where the access track would be located in would still be able to be utilised for the production of dryland cereals and oilseed crops.

7 Conclusion

1. The subject property, property title 180210/2 at 59 Raeburn Road, Breadalbane, covers approximately 101.5 hectares of land.

2. The agricultural land use activity on the property is based on the production of dryland cereal and oilseed crops and extensive areas of land already used as part of the quarrying operations and includes a concrete batching plant.

3. The subject property is extensively covered by a hard rock quarry mining lease, as per 1874P/M, which extends over 63.5 hectares of land, and also includes the entirety of the adjacent property to the east, as per property title 157107/1.

4. The proposed development is covered by planning application PLN-25-0170 "Vehicle access track and new access to Evandale, 59 Raeburn Road, Breadalbane", and us based on an internal private access road, or 'track'.

5. The internal access track would be used subservient to the concrete batch plant at 59 Raeburn Road.

6. The proposed development has been specifically located in order to minimise the potential for negative impacts on the agricultural land use activities conducted on the subject property.

7. Due to a combination of setback distances, existing shelter belt vegetation, nature of the agricultural land use activity conducted on the subject property and that of adjacent properties, in conjunction with the nature of the development and associated use it is reasonable to consider that there would be a negligible expectation for the potential to have a negative impact on the operation and management of agricultural land use activity on the adjacent and nearby properties.

8. The proposed development is considered to be compliant with the relevant clause of the Tasmanian Planning Scheme, as per 21.3.1P2.

Exhibited

8 Declaration

I declare that I have made all the enquiries which I consider desirable or appropriate, and no matters of significance which I regard as relevant have, to my knowledge, been withheld.

Jason Lynch

Jason Lynch BAppSc (hort.) CPAg
Senior Agricultural Consultant
Pinion Advisory
October 2025

Appendix 1 Development plans

Image 8 Development proposal plan. (source Woolcott Land Services)

Appendix 2 Property images

Image 9 Soil profile of the Breadalbane soil profile present on the agricultural land. Taken at site assessment 30/9/2025.

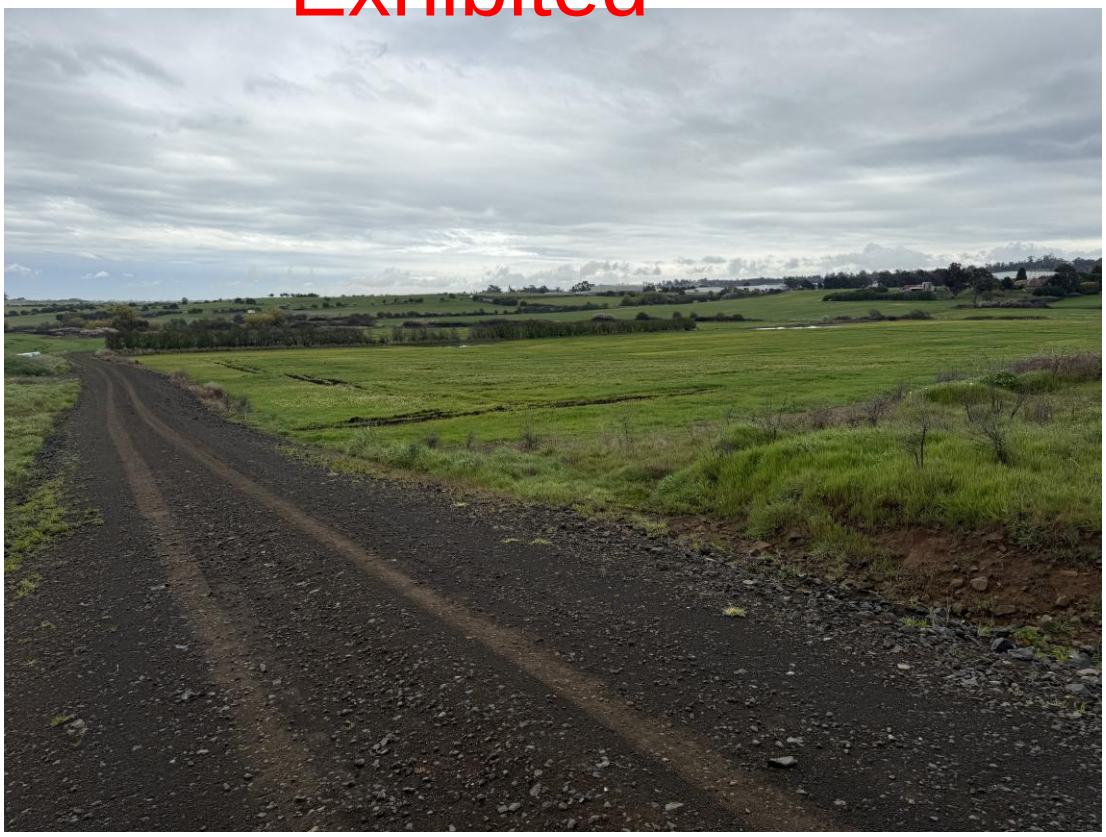


Image 10 Southerly view along the northern end of the proposed access track. Taken at site assessment 30/9/2025.

Image 11 Southerly view over the cropping land present to the immediate east of concrete batching plant as would be located north of the subject property. Taken at site assessment 30/9/2025.

Image 12 westerly view along from the far western end of the southern boundary of the subject property. Taken at site assessment 30/9/2025.

Image 13 Southerly view from the end of the Briarly creek crossing looking towards the nearby southern boundary. Taken at site assessment 30/9/2025.

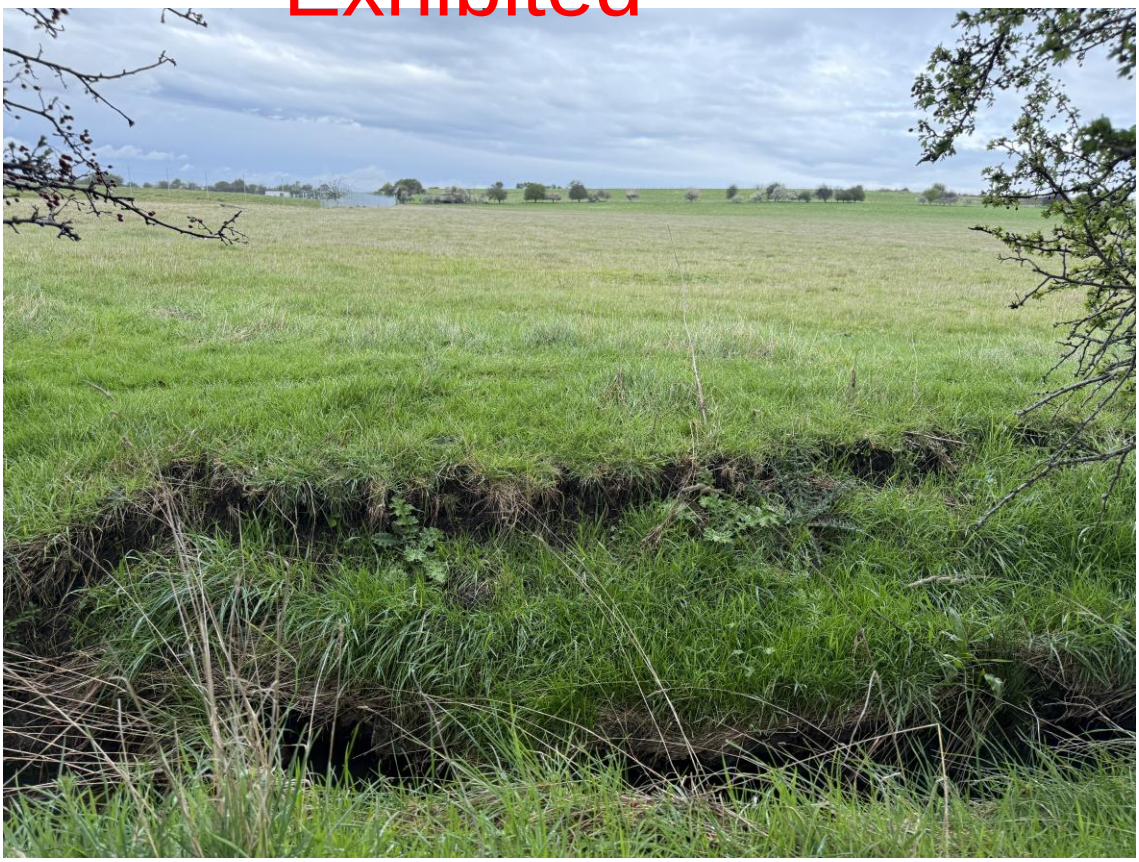


Image 14 Southerly view across the property adjacent to the south, as per title 180211/1. Taken at site assessment 30/9/2025.

flüssig ENGINEERS

CULVERT SIZING HYDRAULIC REPORT

FE-23978

Document Information

Title	Client	Document Number	Project Manager
Raeburn Access Road Cuvert Sizing Hydraulic Report	**Hazell Bros Group**	FE-23978	**Max W. Möller** *BEng,FIEAust,EngExec,CPEng,NER,APEC Engineer, IntPE(Aus)* *Managing Director / Principal Hydraulic Engineer*

Document Initial Revision

REVISION 00	Staff Name	Signature	Date
Prepared by	Max W. Möller		17/11/2023
Reviewed by	John Holmes		20/11/2023
Authorised by	Max W. Möller		20/11/2023

Document Revision History

Rev No.	Description	Reviewed by	Authorised by	Date

Contents

APPENDICES

Introduction

This comprehensive report has been crafted to support the application process for the establishment of an access track leading to the Raeburn Concrete Plant situated in Breadalbane, to the south of Launceston. The primary focus of this report is the meticulous examination of drainage infrastructure requirements at strategically critical locations integral to the proposed development.

The investigation meticulously evaluates the catchment area associated with the Briarly Creek/drainage line, which intersects with the designated access track and subsequently flows into Kellys Creek before ultimately converging with the North Esk River. The fundamental objective of this assessment is to delineate an overarching indicative strategy for locations where vehicular infrastructure is slated to span over the creek.

Anticipating a minimal increase in runoff to the creek, attributable to the modest 4,500m² gravel access track and the explicit goal of detaining and adhering to current rural runoff guidelines, this report is specifically tailored to address the drainage infrastructure nuances at the identified Briarly Creek crossings.

The pinpointed locations have been discerned in strict accordance with the Concept Plans submitted as an integral part of the application. The proposed culvert location denotes a planned road crossing atop the existing waterway, coursing through the site in a west-to-east trajectory. This necessitates the installation of culverts underneath to facilitate the uninterrupted flow of the waterway along its existing path.

The pre-existing upstream culvert, situated in the southwest corner beneath the creek crossing at No. 839 Hobart Road, is currently a 900mm diameter circular pipe. However, it is unlikely that this culvert has been dimensioned to accommodate a 1% Annual Exceedance Probability (AEP) event, equating to a 100-year storm event, given the dimensions of the natural creek channel.

In adherence to best practices, guidance from the "AustRoads Guide to Road Design Part 5: Drainage General and Hydrology Considerations," specifically Table 4.3, has been meticulously considered. The recommended Average Recurrence Interval (ARI) for flood immunity for culvert and bridge drainage according to this guide is 10 years. However, a more conservative approach has been adopted in this report, opting for an Annual Exceedance Probability (AEP) of 1%.

The sizing of both culverts has been conducted using the Rational Method, employing rainfall data in accordance with the Australian Rainfall and Runoff 2019 (ARR2019) guidelines. Subsequent to the Rational Method calculations, the obtained results were transposed onto a Colebrook-White Chart to derive approximate culvert sizes. The subsequent sections of this report provide a detailed exposition of these calculations, while an overview of the Rational Method and its associated variables is presented on the subsequent page for clarity and reference.

Formula

Used to calculate flow rates for each catchment.

Q = 0.47 * C * I * A

Where Q = Flow Rate (m^3/s)
C = Runoff Coefficient (as per IDM Table 10)
I = Rainfall Intensity (mm/hr) (determined using BOM Rainfall IFD Charts) A
= Catchment Area (km^2)

Time of Concentration

Used as an input for BOM rainfall IFD charts, to determine Rainfall Intensity.

Where t_c = Time of Concentration (hrs) A
= Catchment Area (km^2)

Location 1: Proposed Internal Road Crossing

Location 1 is a proposed road crossing of the waterway in the Brooking Road unmade road reserve. Calculations are provided below.

See Sheet 1 (appended) for location and catchment sizes.
See Colebrook-White Chart 1 (appended) for pipe size determination.

	CATCHMENT CHARACTERISTICS							
CATCHMENT	CATCHMENT AREA	TRAVEL DISTANCE	AVERAGE SLOPE	RUNOFF COEFFICIENT	OVERLAND FLOW TIME	RECCURENCE INTERVAL	RAINFALL INTENSITY	TOTAL CATCHMENT DISCHARGE FLOW
	A_C (ha)	L (m)	S_C (%)	C	t_C (min) $t_C = 92.7L/(A^{0.1} S_C^{0.2})$ [Bransby Williams formula NAASRA (1986)]	(ARI)	I_C (mm/hr)	Q_C (m3/s) $Q_C = CIA_C/0.36$ [Rational formula NAASRA (1986)]
Area 1	470.000000	1800	1.700	0.4	51.2	1	12	**6.267**
						2	13	**6.789**
						5	17	**8.878**
						10	20	**10.444**
						20	23	**12.011**
						50	27	**14.100**
						100	30	**15.667**

Approx. Pipe Size	Colebrook-White Chart (k=0.60mm)	**2700mm**

Utilizing the derived flow rate (Q, in L/s) and adopting a conservative hydraulic gradient (S) of 1 in 300—representing the utmost level of flatness for efficient pipe conveyance, and consequently, presenting the worst-case scenario—an analysis was conducted by entering these parameters into a Colebrook-White chart. It is noteworthy that the assumed pipe roughness (k) was set at 0.60mm for these calculations.

Based on the outcomes of this analytical process, preliminary assessments indicate that the proposed road crossing at location 1 necessitates a circular culvert with a diameter of 2700mm to effectively accommodate a 1% Annual Exceedance Probability (AEP) storm event.

An alternative configuration, such as a 3000mm x 1500mm box culvert or a twin culvert system with equivalent capacity, may also be considered. This alternative arrangement has the potential to mitigate the extent of road reserve elevation required, contingent upon the scrutiny of detailed design considerations and obtaining approval from the relevant council.

To further validate and cross-verify the results, the catchment data was incorporated into the Regional Flood Frequency Estimation Model. The outcomes derived from this computational tool are outlined in the subsequent sections, providing an additional layer of robustness and comprehensive insight into the hydraulic characteristics and stormwater management requirements of the proposed road crossing at location 1.

This dual-method approach ensures a thorough exploration of the hydraulic dynamics, enhancing the reliability and precision of the infrastructure recommendations presented in this report.

RFFE Lower Confidence Limit (1%)	= 1.29 m^3/s
RFFE Discharge	**= 3.28 m^3/s**
Rational Method Actual Flow Rate (Q)	**= 15.66 m^3/s**
RFFE Upper Confidence Limit (95%)	= 8.42 m^3/s

Actual Flow Rate (Q) calculated by hand is within the confidence limits of results provided via the Regional Flood Frequency Estimation Model.

Conclusion

The proposed road access crossing is envisaged to necessitate a circular culvert with a diameter of 2700mm or an equivalent structure to effectively accommodate a 1% Annual Exceedance Probability (AEP) storm event.

Implementation of the access track crossing would entail substantial earthworks to elevate the crossing, ensuring adequate coverage on the culverts. However, during the detailed design phase, consideration may be given to employing slimmer culvert profiles with equivalent capacity, thereby minimizing the extent of earthworks required.

It is imperative to acknowledge certain caveats regarding the accuracy of these results. Firstly, the approximation of catchment areas relied upon contour data, roadside swales, or existing drainage infrastructure present in the attached plans. These factors may introduce additional catchments or exclude sections of the catchment, introducing a level of uncertainty into the calculations.

Secondly, the chosen 1% AEP for the preceding calculations is recognised as a preliminary overestimate. It is plausible that, during subsequent stages, the council may recommend adopting a 2% or 5% AEP to align with AustRoads and commonly accepted guidelines, potentially resulting in a reduction in pipe size requirements.

Furthermore, the design of waterway crossings will adhere to State Growth Guidelines. The detailed design of these crossings will be an integral aspect of the development stage, necessitating careful consideration and alignment with project specifications.

This report, inclusive of its associated calculations, should be treated as indicative. The intricacies and specific details are slated to be clarified and refined during the subsequent design stage, emphasizing the provisional nature of the current findings.

References

Bureau of Meteorology. (n.d.). *Design Rainfall Data System (2016)*. Retrieved January 30, 2020, from Bureau of Meteorology: http://www.bom.gov.au/water/designRainfalls/revised-ifd/

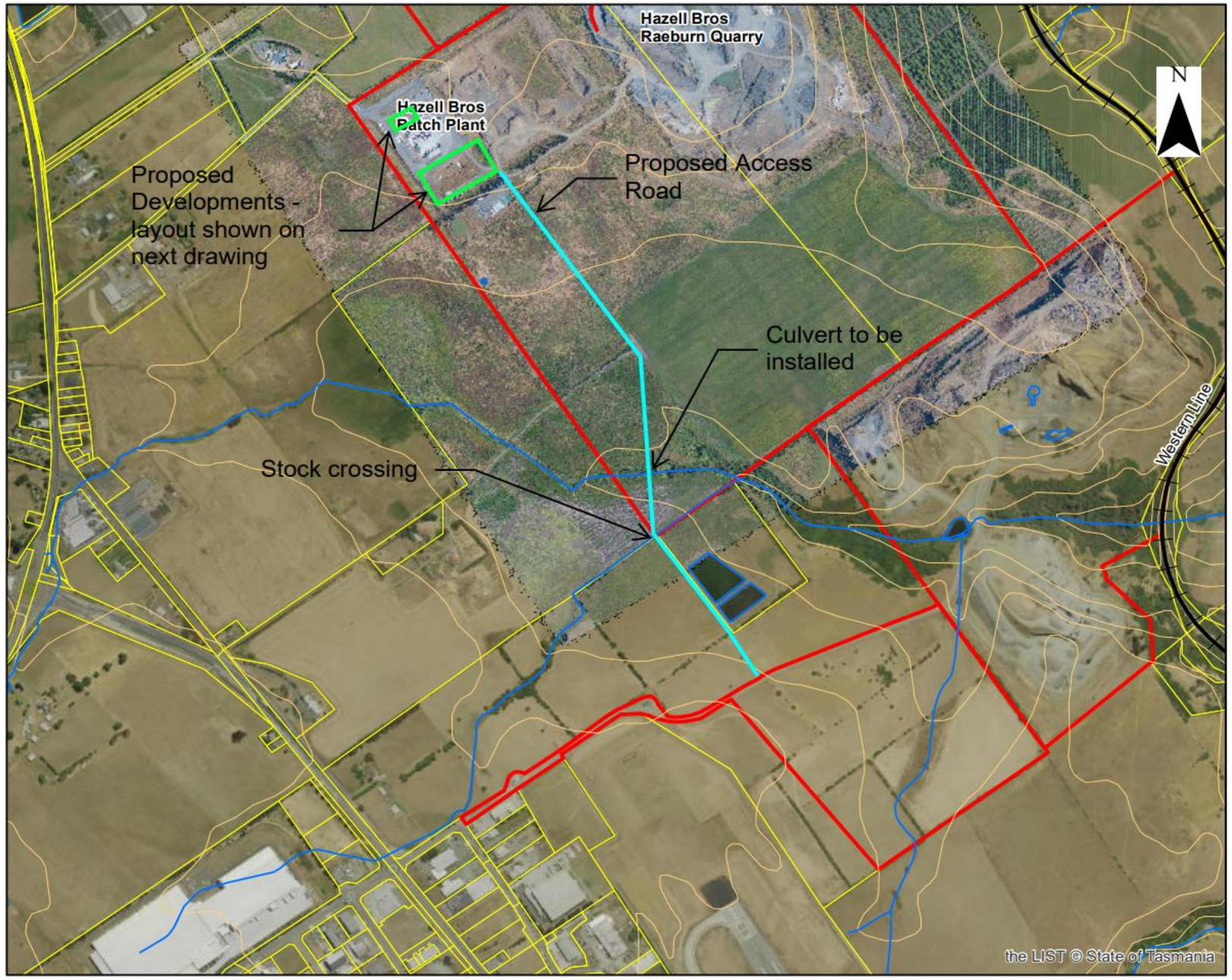
Concrete Pipe Association of Australasia. (n.d.). *Colebrook-White Charts.* Retrieved January 30, 2020, from Concrete Pipe Association of Australasia: https://www.cpaa.asn.au/General/design-manuals.html

Haddad, K., & Rahman, A. (n.d.). *Regional Flood Frequency Estimation Model*. Retrieved from Regional Flood Frequency Estimation Model: https://rffe.arr-software.org/

Local Government Infrastructure Design Association. (2020). *Infrastructure Design Manual.* Tongala: Local Government Infrastructure Design Association.

Exhibited

Hazell Bros Raeburn Concrete



hazellbros

Legend

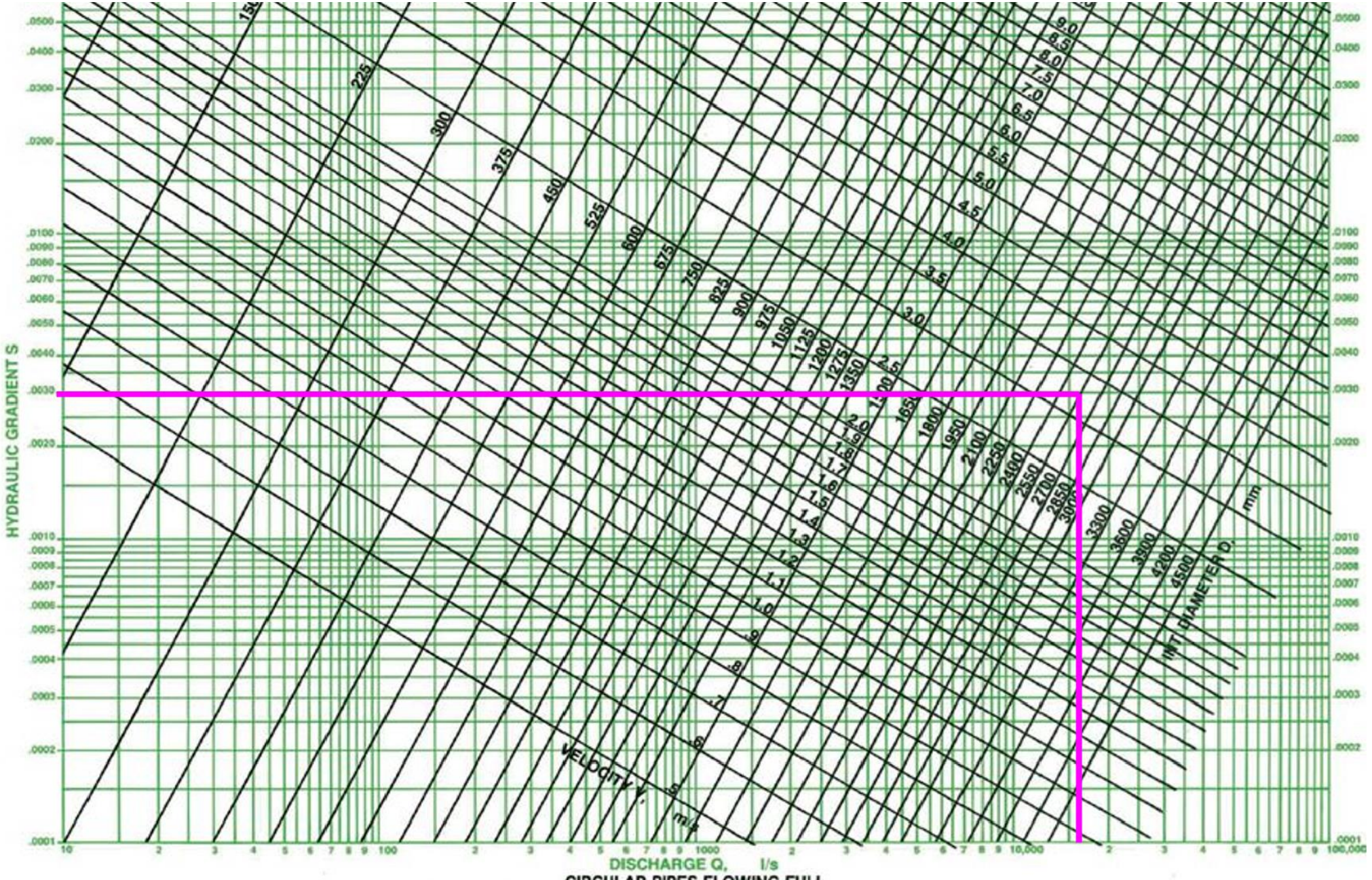
- TasRail Western Line
- Streams
- 10m contours
- Leases

Meters
0 100 200 400

Map prepared by Chris Davey 170423

Exhibited

Exhibited


HYDRAULIC GRADIENT S
DISCHARGE Q, l/s
VELOCITY V, m/s
NET DIAMETER D, mm
CIRCULAR PIPES FLOWING FULL
COLEBROOK-WHITE FORMULA k = 0.60mm