Executive Summary

The Department of State Growth (the Department), is seeking to upgrade Evandale Road between the Breadalbane Roundabout and the Launceston Airport to improve traffic efficiency and safety. These works predominantly involve improvement of the current intersections for heavy vehicle movements and widening of some sections of the road.

This noise assessment has been prepared to ensure that the proposed design complies with the Department's Tasmanian State Road Traffic Noise Management Guidelines, Revision 1, October 2015, and determine if any mitigation works will be required at nearby residences.

Noise logging conducted in late 2018 for a post construction noise assessment of the Midland's Highway duplication between Breadalbane and Perth was used to validate the noise model for existing traffic conditions.

Noise levels (with and without the road upgrade) were predicted for current traffic volumes and for the predicted traffic volume 10 years after the completion of the upgrade of the road. Modelling was carried out using using **SoundPlan8.1** environmental noise software, utilising the **CoRTN** traffic noise standard calculation method. The model was informed by traffic volume counting also carried out in late 2018.

The results of the noise modelling indicate that the upgrade of Evandale Road between the Breadalbane Roundabout and the Launceston Airport will have a negligible impact on the traffic noise levels in adjoining areas. The upgrade meets all noise related requirements of the Northern Midlands interim planning scheme.

1. Introduction

The Department of State Growth (the Department), is seeking to upgrade Evandale Road between the Breadalbane Roundabout and the Launceston Airport to improve traffic efficiency and safety. These works predominantly involve improvement of the current intersections for heavy vehicle movements and widening of some sections of the road.

This noise assessment has been prepared to ensure that the proposed design complies with the Department's Tasmanian State Road Traffic Noise Management Guidelines, Revision 1, October 2015. and determine if any mitigation works will be required for nearby residences or to prevent excessive noise levels at the nearby Launceston Airport.

2. Traffic Noise Management Guidelines

The policies and procedures used by the Department to manage the impact of traffic noise generated by the roads for which they are responsible, are set out in the *Tasmanian State Road Traffic Noise Management Guidelines, Revision 1, October 2015, referred to hereafter as* "the guidelines". The guidelines reflect the principles and strategies of the *State Road Noise Strategy 2011* and the requirements of the *Environmental Management and Pollution Control Act 1994 (EMPCA)*. The guidelines describe how noise from new roads or road upgrades should be predicted and checked. It establishes key noise level limits that are to be used as design targets and as trigger levels for including noise mitigation measures in a road project, to minimise the noise impacts on neighbouring properties.

The guidelines also contain a detailed explanation of the concepts behind how noise behaves and the reasoning behind the management approach, written with a non-technical audience in mind.

Traffic Noise Measurement

Traffic noise constantly varies throughout the day and night depending on many factors such as the number, type and speeds of the vehicles, weather conditions, road surface conditions etc. For the purpose of managing the impact of traffic noise on the community, noise is measured 10 times a second over an extended period, of up to two or three weeks. This captures the variations in noise level. Various measures can be used to "condense" this data into a single number that summarises the impact of the noise.

For assessing noise from a road upgrade project, the $L_{A10\,(18hour)}$ measure is used. This is defined as the noise level that is exceeded by 10% of all the noise levels recorded in an 18hour period starting at 6am and concluding at midnight. Traffic noise is commonly reported using this measure around the World (with a notable exception in NSW, who use Leq, which is similar to the average of the noise levels recorded.) The L_{A10} is inherently more sensitive to traffic noise, and less sensitive to other types of noise that occur in urban environments.

The guidelines reference the requirements of the DPIPWE *Noise Measurement Procedures Manual, 2008,* for the detailed methodology and equipment to be used for undertaking traffic noise measurements.

Normally measurements of traffic noise are made by placing a battery powered noise logger on a site, to continuously record noise levels, for two to three weeks. Under most circumstances this allows periods of strong wind or heavy rain which may generate sufficient noise to interfere with the recording to be cut out, while still leaving 5-week days of measurements, to calculate the L_{A10} measure from. Measurements are not made on weekends, public or school holidays when noise levels are generally lower than on week days.

Traffic Noise Criteria

For an upgrade to an existing road the guideline design target level is an $L_{A10\ (18hour)}$ of 63 dB(A). This is a commonly used target in Australia for new and upgraded roads. This noise level is to be measured 1 metre in front of the building façade most exposed to traffic. Tasmania has used this criterion for about 13 years. The sensitivity of people to noise is highly variable, so it is difficult to establish a practical, cost effective limit that will satisfy all people. Various studies have investigated the relationship between the level of annoyance in the community, with increasing noise levels, as shown in Figure 1 below, which is extracted from the guidelines. The 63 dB(A) limit lies approximately where 10% of the population could be expected to be "annoyed".

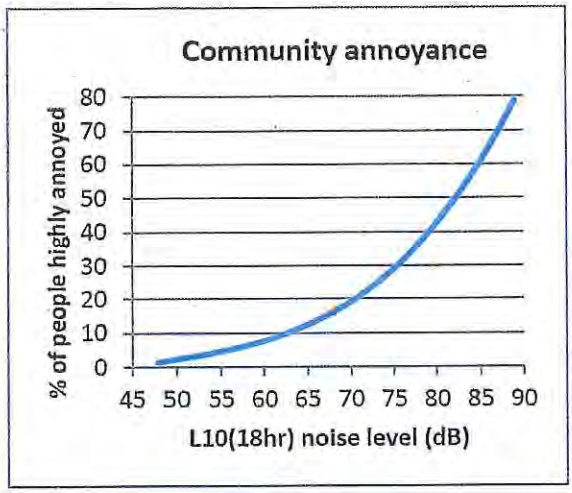

Figure 1 - Community annoyance vs noise exposure (from the guidelines)

Traffic Noise Mitigation

Where traffic noise at a residence exceeds an $L_{A10\ (18hour)}$ of 63 dB(A), the guidelines call for the implementation of "noise mitigation" measures to reduce the noise levels reaching inside the residence. For new projects, the criteria are applied including an allowance for ten years of traffic growth, after the completion of the project. This could be achieved by various means, including building a "noise wall" along the edge of the road, using a quieter road pavement surface or by providing the house owner with "acoustic treatment" of the house to reduce the noise that penetrates inside. Acoustic treatments can consist of double glazing, tighter fitting door seals, additional ceiling insulation etc. Further detail on noise mitigation measures is found in the guidelines.

If the traffic noise at a residence already exceeds an $L_{A10\ (18hour)}$ of 63dB(A), prior to the construction, the guidelines do not call for mitigation measures unless the predicted noise level, 10 years after completion of a project, exceeds 68 dB(A). The guideline allows for mitigation to be provided for any sensitive receiver within the project area, that is predicted to exceed 68 dB(A), 10 years after completion, irrespective of what the existing noise level is prior to construction.

For a "greenfield" project, that is a new road constructed in an area where there was previously little traffic and very low existing traffic noise levels, the 63 dB(A) design level may constitute a large increase in noise levels, and hence a significant loss of amenity. To address this, an additional trigger level for offering noise mitigation is provided. The trigger level is reached if the $L_{A10\ (18hour)}$ traffic noise level exceeds the LAEQ (16hour) measure of ambient noise by more than 15 dB(A).

The Department will only consider noise mitigation in particular circumstances irrespective of the measured or predicted noise levels. The decision-making process for determining eligibility is defined in detail in Tables A to H of Part B in the guidelines. The intent is to balance competing needs of the community in a fair and transparent way.

Predicting Traffic Noise Levels

At the design stage of a new road project, the noise levels can be predicted using a standard method developed by the UK Department of Environment's Calculation of Road Traffic Noise (CoRTN). This is typically implemented using environmental noise modelling software, allowing noise levels at multiple properties to be efficiently calculated. Section 6.4 of the guidelines describes the detailed requirements for using this method.

3. Noise Assessment

3.1 Noise Measurements

This noise assessment was prepared during the period of COVID19 restrictions. Traffic volume and therefore traffic noise was significantly lower that normal, during this period, so new noise measurements were not undertaken. Instead traffic noise measured at one location in 2018, following the completion of the Perth to Breadalbane Midland Highway duplication project were used to verify the accuracy of the Evandale Road model. These measurements were made by a logger located on the Midland Highway, opposite 41 Summit Drive between October 28 and 30, 2018.

Table 1 - Noise Measurement Location Details

Site	Details
Address:	Midland Highway, opposite 41 Summit Drive.
MGA Coordinates	514988, 5401709
Logger Site Description:	In between old and new highways, opposite Summit Drive
Logger Type:	*Rion* NR42

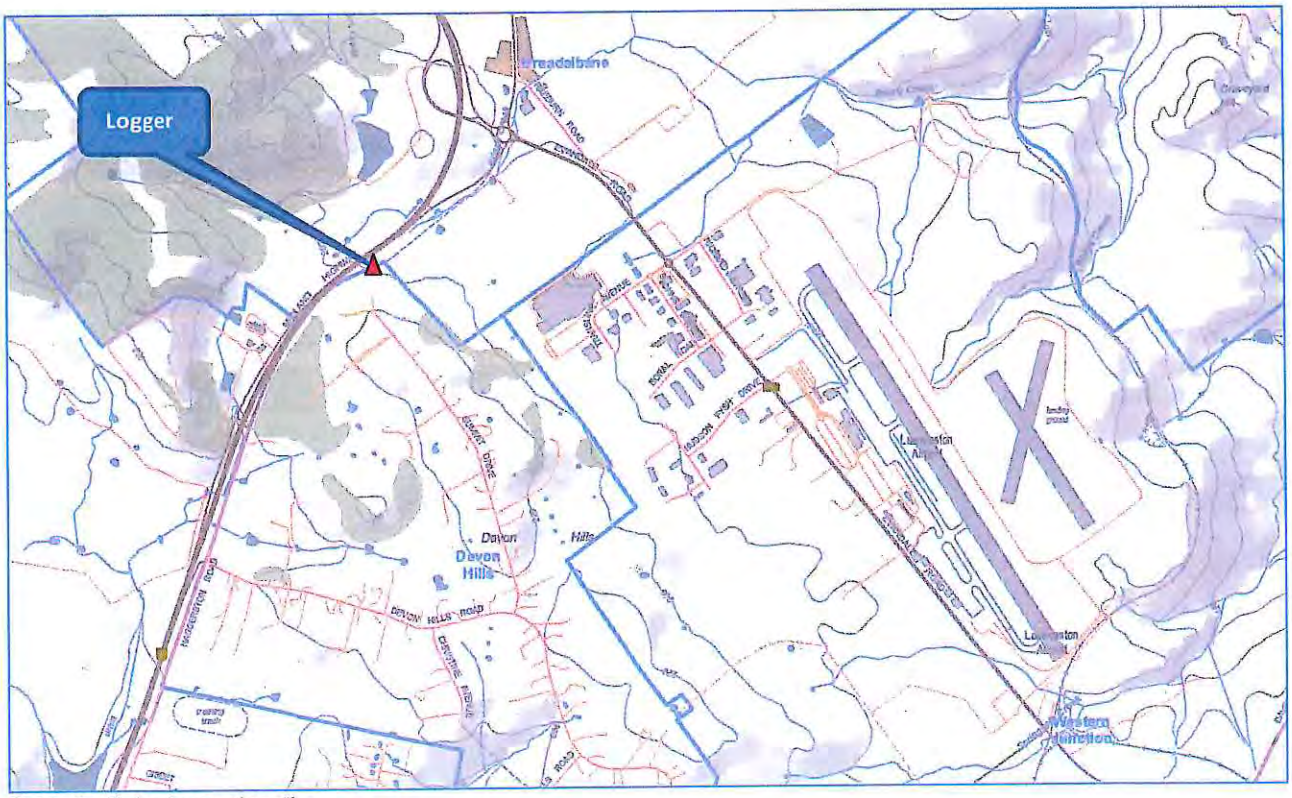

Figure 2 - Noise Logger Location

3.2 Traffic Noise Modelling

Methodology

Noise modelling was carried out in accordance with the methodology required by the Department Guidelines, using the **CoRTN** standard methodology, implemented on **SoundPLAN 8.1** environmental noise modelling software. This standard takes into account the effect of traffic volume, traffic speed, mix of heavy and light vehicles, road surface characteristics and road gradient. From these factors the noise level at the centreline of the road is calculated. The software then calculates the reduced noise level that occurs at other locations, which are referred to as "receivers". The noise reduction depends on the distance, the terrain, the weather, how "soft" or "hard" the ground is and the effect of solid obstacles like buildings that may block some of the noise or reflect noise towards the receiver. The layout of the model is shown in Figure 3 below.

Model Inputs – Traffic Volumes

Traffic counting carried out during 2014 and 2018 for the pre and post construction noise assessments of the Midland Highway upgrades between Perth and Breadalbane were used to inform the model. The model includes noise from traffic on the Midland Highway as this has a significant effect on noise levels at properties at the northern end of Evandale Road, when combined with nose form traffic on Evandale Road itself. For completeness noise from traffic on Devon Hills Road and Summit Drive is also included.

The percentage heavy vehicles used was 14%. An annual growth rate of 0.5% was used for Devon Hills Road, with a rate of 1.5% used elsewhere to predict the traffic volume in 2033 which is ten years after the anticipated completion of construction.

Table 2 – Average Daily Weekday 18hour Traffic Volumes used for Noise Modelling

Street	2018 18Hr Traffic Volume Existing	2033 18Hr Traffic Volume Post Construction
Midland Highway Between Launceston and Perth, ziplanes, ontakes and offtakes	10475	12832
Offtake from Launceston to Breadalbane	1180	1446
On take from Breadalbane to Launceston	3700	4533
Midland Highway South of Breadalbane (to Perth)	12272	15033
South Zip lane from Breadalbane to Perth	1797	2202
Evandale Road	9016	11045
Hobart Road	5045	6181
Devon Hills Road	212	228
Summit Drive	75	92

Model Inputs – Other Parameters

Road Surface Factors: The existing road pavements were assumed to be a 7mm/14mm chip spray sealed surface (+ 4.0 dB(A)) along the Midlands Highway South of the Breadalbane intersection, with all other surfaces including slip lanes assumed to have a dense graded asphalt surface (+0 dB(A)). The new Evandale Road surface is to be dense graded asphalt (+0 dB(A)).

CoRTN Correction Factors: Correction factors of -1.7dB for results at building facades and -0.7 dB for free field results, have been applied to the modelling results. These correction factors are commonly used in Australia to allow for differences between the Australian vehicle fleet and the UK fleet for which CoRTN was originally devised. An additional factor of +2.5 dB was applied to allow

for the measurement positions being 1m in front of a building façade.

Ground Absorption: Various different ground absorption factors were used to improve local accuracy in sections of the model. These factors included "100% hard" for industrial and built up areas and "60% soft" for low density residential, grass and farmland areas.

Buildings: Existing buildings are included in the model. Sound reflections and shielding caused by buildings were calculated by the software. Building footprints were sourced from *theList*.

Traffic Speed: Traffic speeds were set in the model to 60kmh on Devon Hills Road and Summit Drive, 80kmh through the Breadalbane intersection, and along Evandale and Hobart Roads, and 110kmh along the Midland Highway, reflecting existing speed limits.

Terrain/Road Geometry: Existing terrain topography was obtained from 10 metre contour data sourced through *theList*. 3D design modelling geometry for the road upgrade, was merged with this for the upgraded road cases.

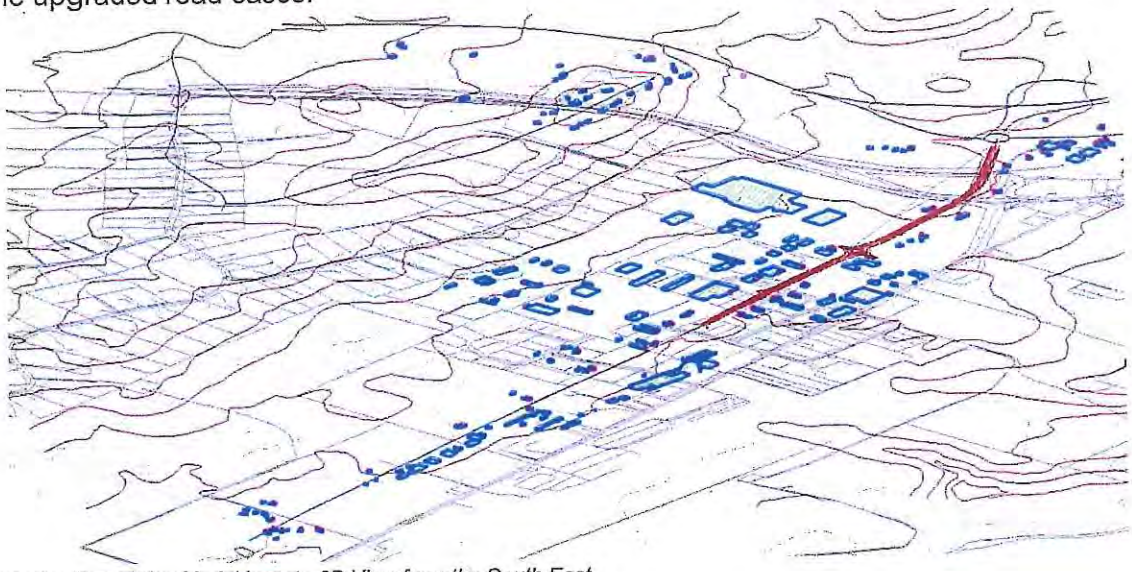

Figure 3 - SoundPlan Model layout - 3D View from the South East

Model Validation

Standard practice in modelling traffic noise, is to validate the noise levels predicted by the model at a number of receiver locations. This is done by comparing the modelled noise levels, with the actual noise levels measured by noise loggers set up at the same locations. The guidelines require that the difference between each of the measured results and the modelled results be no more than +/- 2 dB(A).

Table 3 below compares the results modelled from the November 2018 traffic data (seasonally adjusted for February / March) for the existing road, with the noise logger results obtained. It can be seen that the difference between the modelled and logged results does not exceed +/- 2 dB(A).

Table 3 - Comparison of Modelled and Measured Results (dB(A).

Measure	Logger 7
Logger	70.4
Model	69.7
Error	-0.7

3.3 Modelling Results

Table 4 below shows the noise level results predicted by the model.

$L_{A10,18hr}$ results were calculated for various properties located within/nearby to the project area. Receivers were included on the most exposed faces of buildings to ensure an accurate and representative result was calculated.

Table 4 has results for four modelling scenarios; the existing situation in 2018, the situation in 2033 without any changes to the road and the situations with the upgraded road, using 2018 and 2033 traffic data. The right hand column indicates if the guideline trigger levels of 63 or 68 dB(A) have been met or if the noise level has gone down as a result of the upgrade. Results exceeding 63 or 68 dB (A) are shaded pink or yellow respectively. Commercial properties such as shopping centres, warehouses and industrial facilities are not subject to these provissions.

Figure 4 and Figure 5 are noise level "contour maps" of the surrounding area, showing the variation in traffic noise level from the highway, for the existing 2018 and upgraded 2033 scenarios.

It can be seen from the results that the road upgrade will have a neglibile effect on the existing traffic noise levels in the area, due to closely following the existing route, with only minor changes at intersections.

Eligibility for Noise Mitigation

There are no residential properties in the project area, where the predicted noise level exceeds the 63 or 68 dB(A) criterium

Table 4 - Modelling Results LA10,18hr dB(A)

Receiver	Use	Existing 2018	Existing 2033	As Built 2018	As Built 2033	Trigger
11 Boral Road	Commercial	61.6	62.5	59.3	60.1	Down
57 Evandale Road	Commercial	60.8	61.6	57.3	58.1	Down
60 Evandale Road	Residential	68.2	69.0	66.2	67.0	Down
62 Evandale Road	Residential	68.0	68.9	66.6	67.4	Down
81 Evandale Road	Residential	60.8	61.6	59.6	60.4	Down
129 Evandale Road	Commercial	64.5	65.3	62.2	63.1	Down
135 Evandale Road	Commercial	62.8	63.6	60.4	61.3	Down
139 Evandale Road	Commercial	66.0	66.8	64.2	65.0	Down
149 Evandale Road	Commercial	65.5	66.3	63.4	64.3	Down
188 Evandale Road	Commercial	69.6	70.5	69.6	70.4	na
190 Evandale Road	Commercial	69.6	70.4	69.6	70.4	na
864 Hobart Road	Residential	50.4	51.3	50.3	51.1	-
1A Hudson Fysh Drive	Commercial	62.3	63.2	61.5	62.4	-
1B Hudson Fysh Drive	Commercial	62.1	62.9	61.6	62.5	-
2 Hudson Fysh Drive	Commercial	62.1	62.9	60.4	61.3	Down
12 Johns Street	Commercial	61.2	62.1	58.8	59.7	Down
16 Johns Street	Commercial	62.3	63.2	59.9	60.7	Down
18 Johns Street	Commercial	65.2	66.0	62.8	63.6	Down
16662 Midland Highway	Residential	55.4	56.3	53.7	54.5	Down
1 Raeburn Road	Residential	54.8	55.7	54.8	55.7	-
3 Raeburn Road	Residential	54.8	55.7	54.9	55.7	-
5 Raeburn Road	Residential	54.3	55.1	54.1	55.0	-
10 Raeburn Road	Commercial	59.3	60.1	59.5	60.3	-
18 Raeburn Road	Residential	57.7	58.6	57.6	58.4	-
24 Raeburn Road	Residential	58.9	59.7	58.0	58.8	Down
30 Raeburn Road	Residential	62.6	63.5	60.0	60.8	Down
51 Raeburn Road	Residential	61.2	62.1	56.9	57.7	Down
21 Richard Street	Commercial	65.4	66.2	63.2	64.1	Down
1 Translink Avenue	Commercial	61.3	62.1	58.7	59.5	Down

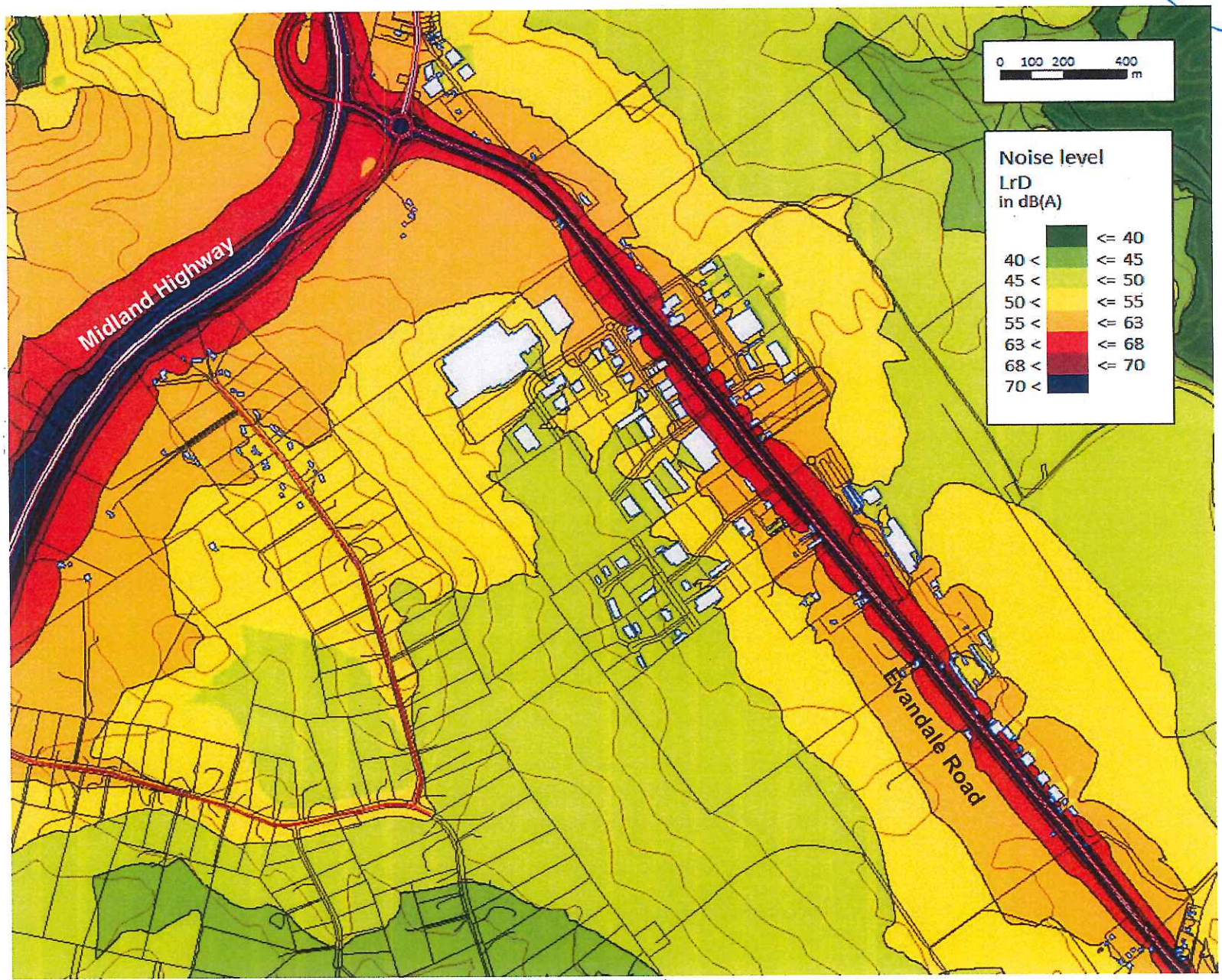

Figure 4 - Existing 2019 Noise Level Contour Map (including + 2.5 dB(A) facade allowance)

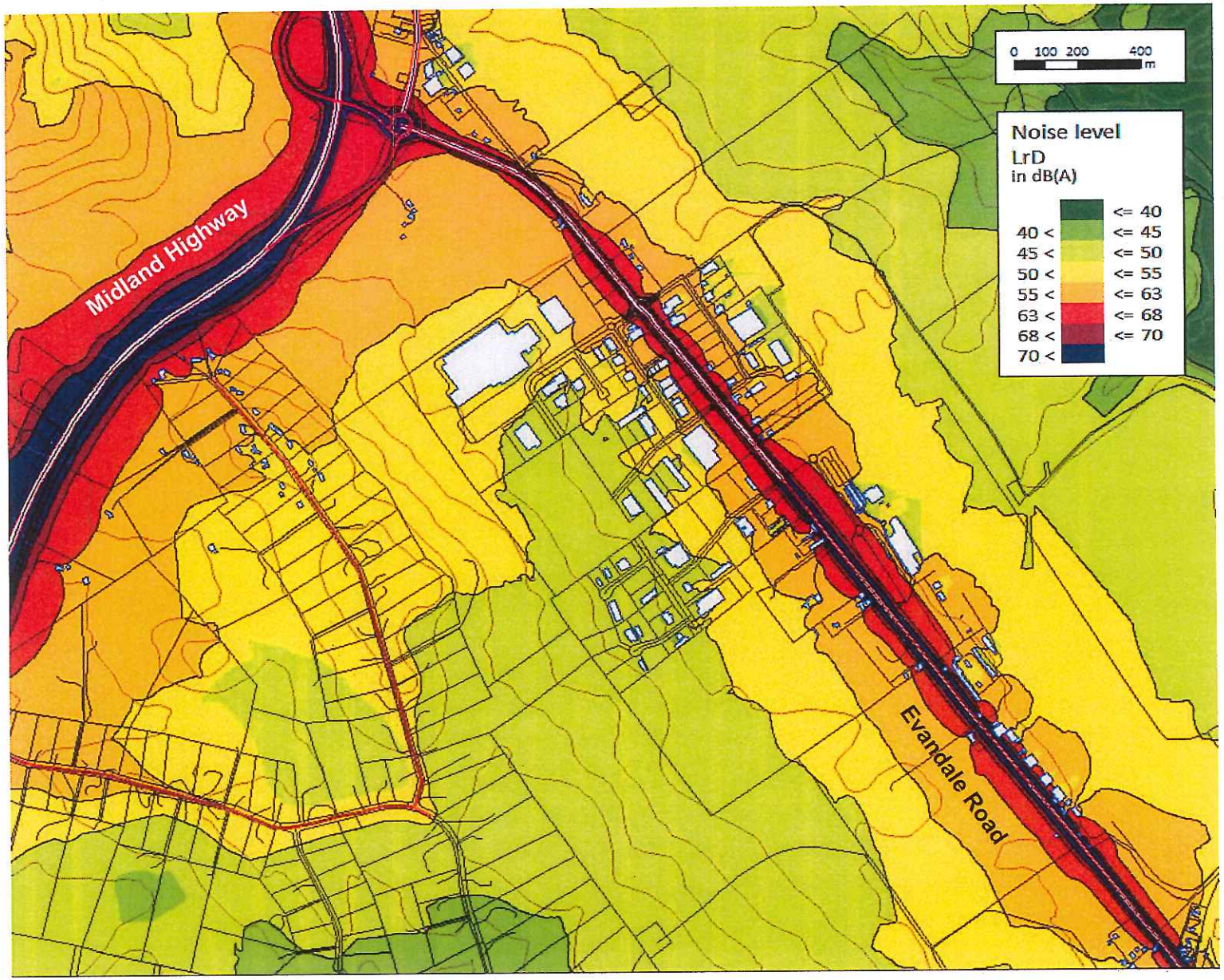

Figure 5 – With Bypass 2032 Noise Level Contour Map (including + 2.5 dB(A) facade allowance)

4. Planning Scheme Compliance

The upgrade of the road will require the use of some additional land adjoining the existing road reserve. This triggers the requirement for a development application addressing the requirements of the Northern Midlands Interim Planning Scheme 2015, including the noise related provisions within the sections reproduced below.

Rural Resource Zone

26.3.1 Discretionary Uses if not a single dwelling

Objective

(a) To provide for an appropriate mix of uses that support the Local Area Objectives and the location of discretionary uses in the rural resources zone does not unnecessarily compromise the consolidation of commercial and industrial uses to identified nodes of settlement or purpose built precincts.
(b) To protect the long term productive capacity of prime agricultural land by minimising conversion of the land to non-agricultural uses or uses not dependent on the soil as a growth medium, unless an overriding benefit to the region can be demonstrated.
(c) To minimise the conversion of non-prime land to a non-primary industry use except where that land cannot be practically utilised for primary industry purposes.
(d) Uses are located such that they do not unreasonably confine or restrain the operation of primary industry uses.
(e) Uses are suitable within the context of the locality and do not create an unreasonable adverse impact on existing sensitive uses or local infrastructure.
(f) The visual impacts of use are appropriately managed to integrate with the surrounding rural landscape.

Acceptable Solution	Performance Criteria
A4 A1 If for permitted or no permit required uses.	P4 It must be demonstrated that: (a) emissions are not likely to cause an environmental nuisance; and (b) primary industry uses will not be unreasonably confined or restrained from conducting normal operations; and (c) the capacity of the local road network can accommodate the traffic generated by the use.

Assessment

The change in traffic noise level as a result of the road upgrade is not sufficient to cause environmental nuisance at any nearby locations. The project meets the requirement of P4(a).

Road and Railway Assets Code

E4.7.1 Development on and adjacent to Existing and Future Arterial Roads and Railways

Objective: To ensure that development on or adjacent to category 1 or 2 roads (outside 60km/h), railways and future roads and railways is managed to:

a) ensure the safe and efficient operation of roads and railways; and
b) allow for future road and rail widening, realignment and upgrading; and
c) avoid undesirable interaction between roads and railways and other use or development.

Acceptable Solution	Performance Criteria
A1 The following must be at least 50m from a railway, a future road or railway, and a category 1 or 2 road in an area subject to a speed limit of more than 60km/h: a) new road works, buildings, additions and extensions, earthworks and landscaping works; and b) building areas on new lots; and c) outdoor sitting, entertainment and children's play areas	P1 Development including buildings, road works, earthworks, landscaping works and level crossings on or within 50m of a category 1 or 2 road, in an area subject to a speed limit of more than 60km/h, a railway or future road or railway must be sited, designed and landscaped to: a) maintain or improve the safety and efficiency of the road or railway or future road or railway, including line of sight from trains; and b) mitigate significant transport-related environmental impacts, including noise, air pollution and vibrations in accordance with a report from a suitably qualified person; and c) ensure that additions or extensions of buildings will not reduce the existing setback to the road, railway or future road or railway; and d) ensure that temporary buildings and works are removed at the applicant's expense within three years or as otherwise agreed by the road or rail authority.

Assessment

The change in traffic noise level as a result of the road upgrade is not sufficient to cause any increased environmental impact at any nearby locations. The project meets the requirement of P1(b).

Translink Specific Area Plan

F1.4.12 Environmental Quality

Objective:

(a) To ensure that development does not result in environmental harm to the local area
(b) To ensure that development does not impact on the operational safety of the Launceston Airport.

Acceptable Solution	Performance Criteria
A1 Emissions must not cause a hazard to the safe operation of Launceston Airport.	P1 No performance criteria

Assessment

The change in traffic noise levels is not sufficient to cause a hazard to the safe operation of Launceston Airport (A1).

5. Conclusions

The results of the noise modelling indicate that the upgrade of Evandale Road between the Breadalbane Roundabout and the Launceston Airport will have a negligible impact on the traffic noise levels in adjoining areas. The upgrade meets all noise related requirements of the Northern Midlands interim planning scheme.

pitt&sherry

Evandale Main Road Duplication

Noise Assessment

Contact

Douglas Ford
03 6323 1930
dougford@pittsh.com.au

Pitt & Sherry (Operations) Pty Ltd
ABN 67 140 184 309

Phone 1300 748 874
info@pittsh.com.au
pittsh.com.au

Located nationally —
Melbourne
Sydney
Brisbane
Hobart
Launceston
Newcastle
Devonport
Wagga Wagga

ref: HB19503H009 Rep 31P Noise Assessment Rev01.docx/DGF

Appendix E

Traffic Impact Assessment

pitt&sherry

Evandale Main Road Duplication – Launceston Airport to Breadalbane

Traffic Impact Assessment

Prepared for
Department of State Growth

Client representative
Trevor Gibson

Date
22 June 2020

Rev 00

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Appendix D — SIDRA Results – Proposed Layout

Prepared by — Leenah Ali-Lavroff	Leenahali	**Date** — 22/06/2020
Reviewed by — Ross Mannering	RSMannering	**Date** — 22/06/2020
Authorised by — Ross Mannering	RSMannering	**Date** — 22/06/2020

Revision History

Rev No.	Description	Prepared by	Reviewed by	Authorised by	Date
00	Traffic Impact Assessment	L Ali-Lavroff	R Mannering	R Mannering	22/06/2020

1. Introduction

1.1 Background

During the leadup to the 2018 State election, the Liberal Party committed to deliver the $72 million "Roads Package to Support Tasmania's Visitor Economy". The package included a commitment of $5.5 million over financial years 2018 to 2021 for the upgrade of Evandale Main Road to four lanes from the entrance of the Launceston Airport (Launceston Airport/ Hudson Fysh Drive/ Evandale Main Road roundabout) to the Breadalbane Roundabout (Midland Highway/ Hobart Road/ Evandale Main Road roundabout). The purpose of the Evandale Main Road upgrade includes:

- Improving travel time reliability
- Catering for the growing number of passenger and freight vehicles travelling on the road
- Providing a better first impression for road users arriving at Launceston from the airport.

With the Liberal Party winning the State election, the State Government is now seeking to deliver the Evandale Road upgrades.

1.2 Traffic Impact Assessment Scope

The Department of State Growth (Department) have engaged pitt&sherry to undertake a Traffic Impact Assessment (TIA) for the proposed upgrades along Evandale Main Road.

This report has been prepared with reference to the Department's publication *Traffic Impact Assessments (TIA) Guidelines* and the *Northern Midlands Council Interim Planning Scheme 2013* (Planning Scheme).

2. Existing Conditions

2.1 Traffic Impact Assessment Study Length

The study length consists of a 1.76 km stretch of Evandale Main Road, from south east of the Breadalbane Roundabout (Midland Highway/ Hobart Road/ Evandale Main Road Roundabout) to the entrance of Launceston Airport (Launceston Airport Entrance/ Hudson Fysh Drive/ Evandale Main Road Roundabout).

The Translink Avenue/ Richard Street/ Evandale Main Road roundabout, the Boral Road/ Evandale Main Road/ Richard Street intersection and the Launceston Airport Entrance roundabout are located within the study length. The Breadalbane Roundabout is located to the north-west of the study length.

The study length is currently zoned 28.0 Utilities under the Planning Scheme. Surrounding land uses include 25.0 General Industrial, 26.0 Rural Resource and 28.0 Utilities.

Figure 1 shows the study length in the local context including the land zoning.

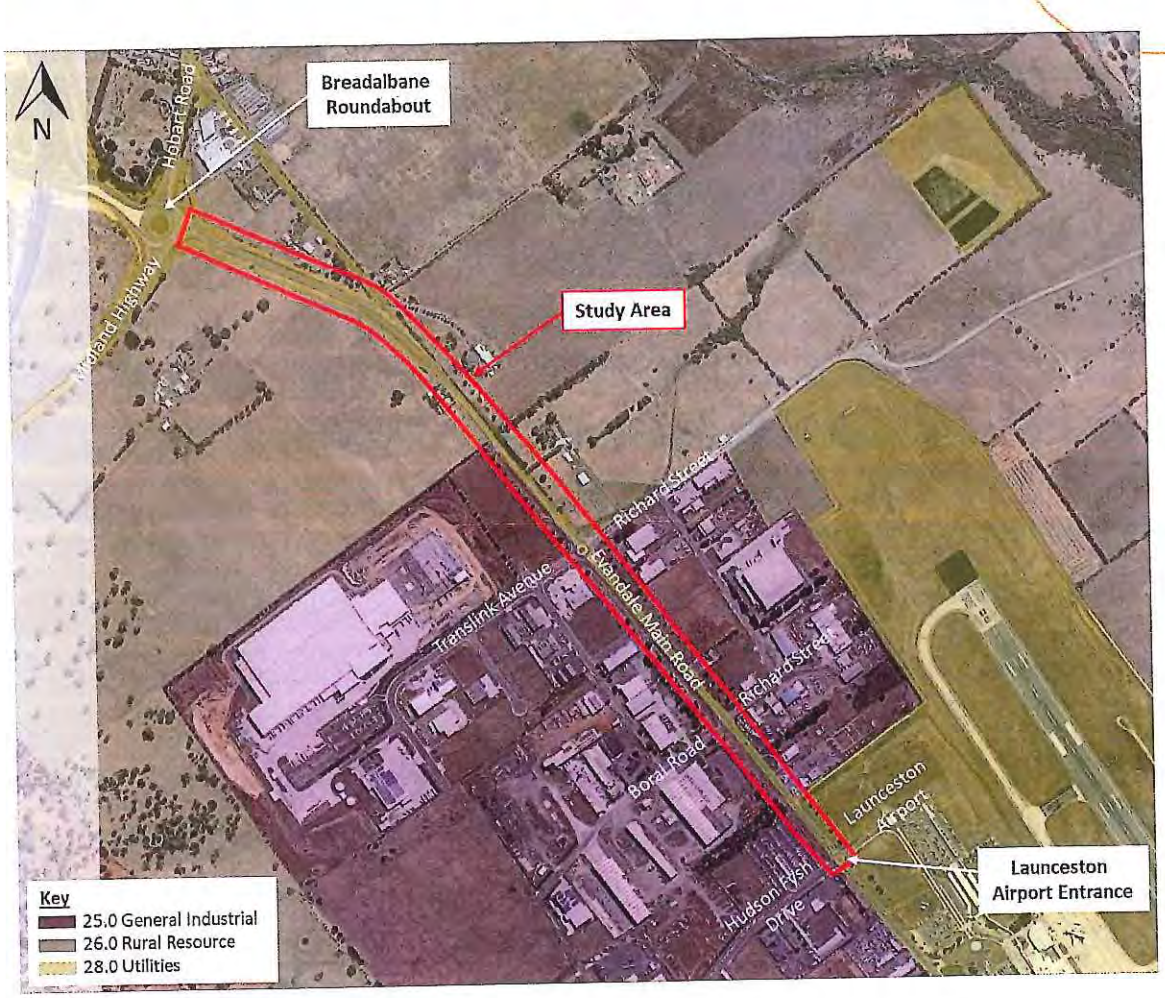


Figure 1: Site Locality Including Land Zoning (Aerial Source: https://maps.thelist.tas.gov.au/listmap/app/list/map)

2.2 Surrounding Road Network

2.2.1 Evandale Main Road

Evandale Main Road (shown in Figure 2 and Figure 3) is an arterial road providing the primary connection between the Launceston City Centre and the town of Evandale including Launceston Airport. Evandale Main Road originates at the Breadalbane Roundabout and continues south-east to the town of Evandale. Beyond Evandale, Evandale Main Road continues as Nile Road and eventually joins the Midland Highway near Conara.

Within the study length, Evandale Main Road is classified as a Category 2 Regional Freight Road in the Department's State Road Hierarchy, accommodating B-Doubles and Over Dimensional vehicles to and from the General Industrial Zone. It is a two-way road that operates in a north-west south-east direction and is configured with a single lane in each direction.

Evandale Main Road has an approximate sealed road width of 7 metres. The sealed shoulder along Evandale Main Road varies between 1.5 metres and 2.9 metres.

Evandale Main Road within the study length carries approximately 11,020[1] vehicles a day with a heavy vehicle proportion of 9.8%.

Figure 2: Evandale Main Road facing north-west (Source: Google Earth November 2016)

Figure 3: Evandale Main Road facing south-east (Source: Google Earth November 2016)

2.2.2 Translink Avenue

Translink Avenue (shown in Figure 4 and Figure 5) is a Northern Midlands Council (Council) owned local two-way road configured with a single lane in each direction. The road operates in south-west north-east direction for 400m west of Evandale Main Road, following which it undertakes a 90-degree bend and operates in a north-west south-east direction for 200m, until its termination point.

Translink Avenue has a posted speed limit of 50km/h and carries approximately 2,310[2] vehicles a day. The heavy vehicle proportion along Translink Avenue is 56.3%.

Figure 4: Translink Avenue facing north-east (Source: Google Earth January 2010)

Figure 5: Translink Avenue facing south-west (Source: Google Earth January 2010)

[1] *Traffic volume calculated using 2019 traffic data collected by Matrix Traffic and Transport Data and assuming a peak to daily ratio of 10%*

[2] *Traffic volume calculated using 2019 traffic data collected by Matrix Traffic and Transport Data and assuming a peak to daily ratio of 10%*

2.2.3 Richard Street

Richard Street (shown in Figure 4 and Figure 5) is a Council owned local two-way road configured with a single lane in each direction. Richard Street operates as a loop road, originating at the Translink Avenue/ Richard Street/ Evandale Main Road roundabout and terminating 400m south-east of the roundabout at the Boral Road/ Evandale Main Road/ Richard Street intersection.

There are no speed limited signs along Richard Street subjecting it to the Tasmanian Urban Speed Limit of 50km/h. Richard Street carries approximately 1,230[2] vehicles a day with a heavy vehicle proportion of 33.2%.

Figure 6: Richard Street facing south-west (Source: Google Earth January 2010)

Figure 7: Richard Street facing north-east (Source: Google Earth January 2010)

2.2.4 Hudson Fysh Drive

Hudson Fysh Drive (shown in Figure 4 and Figure 5) is a Council owned local two-way road configured with a single lane in each direction. The road operates in an north-east/ south-west direction.

Hudson Fysh Drive is signposted with a 50km/h speed limit. Hudson Fysh Drive carries approximately 1,300[3] vehicles a day with a heavy vehicle proportion of 29.6%.

Figure 8: Hudson Fysh Drive facing north-east (Source: Google Earth January 2010)

Figure 9: Hudson Fysh Drive facing south-west (Source: Google Earth January 2010)

[3] *Traffic volume calculated using 2019 traffic data collected by Matrix Traffic and Transport Data and assuming a peak to daily ratio of 10%*

2.2.5 Launceston Airport Access Road

The Launceston Airport Access Road (shown in Figure 10) is a Federal Government owned two-way access road configured with a single lane in each direction. The road operates in a north-east south-west direction.

Launceston Airport Access Road is signposted with a 40km/h speed limit and has an approximate width between kerbs of 8.0m. The road carries approximately 7,800[3] vehicles a day with a heavy vehicle proportion of 1.9%.

Figure 10: Launceston Airport Access Road facing north-east (Source: pitt&sherry file photograph)

2.3 Surrounding Intersections

The following intersections are located within the study length:

- Translink Avenue/ Richard Street/ Evandale Main Road (4 leg roundabout)
- Boral Road/ Evandale Main Road/ Richard Street (4 leg give-way intersection)
- Launceston Airport Entrance/ Hudson Fysh Drive/ Evandale Main Road (4-leg Roundabout)

In addition to above intersections, the Breadalbane Roundabout (Midland Highway/ Hobart Road/ Evandale Main Road Roundabout) is located to the north-west of the study length.

2.4 Existing Traffic Volumes

2.4.1 Traffic Data Collection

Vehicle turning movement counts were undertaken by Matrix Traffic and Transport Data on Friday 1 March 2019 during the AM peak period (7:30am – 9:30am) and the PM peak period (3:00pm – 6:00pm) at the following intersections:

- Translink Avenue/ Richard Street/ Evandale Main Road Roundabout
- Launceston Airport Entrance/ Hudson Fysh Drive/ Evandale Main Road Roundabout

Analysis of the collected turning movement data determined that the AM peak hour for the network occurred between 7:45am - 8:45am while the PM peak hour occurred between 4:30pm – 5:30pm.

No traffic counts have been undertaken at the Boral Road/ Evandale Main Road/ Richard Street intersection as Boral Road and Richard Street are noted to generate minimal traffic movements.

2.4.2 Growth Rates

As the traffic data along Evandale Main Road is from 2019, it has been necessary to calculate 2020 traffic volumes.

In order to calculate 2020 traffic volumes, the following assumptions have been made:

- The traffic growth rate along Evandale Main Road has been assumed to be 2.9% based on traffic data available from the Department of State Growth for Evandale Main Road
- A growth rate of 3.6% has been assumed for traffic generated by Launceston Airport based on proposed development expected at Launceston Airport
- A growth rate of 2% has been applied to the traffic volumes along Translink Avenue, Richard Street and Hudson Fysh Drive.

2.4.3 Summary of Traffic Volumes

Based on the traffic data collected and the calculated traffic generation, the estimated existing traffic volumes are shown in Figure 11 and Figure 12.

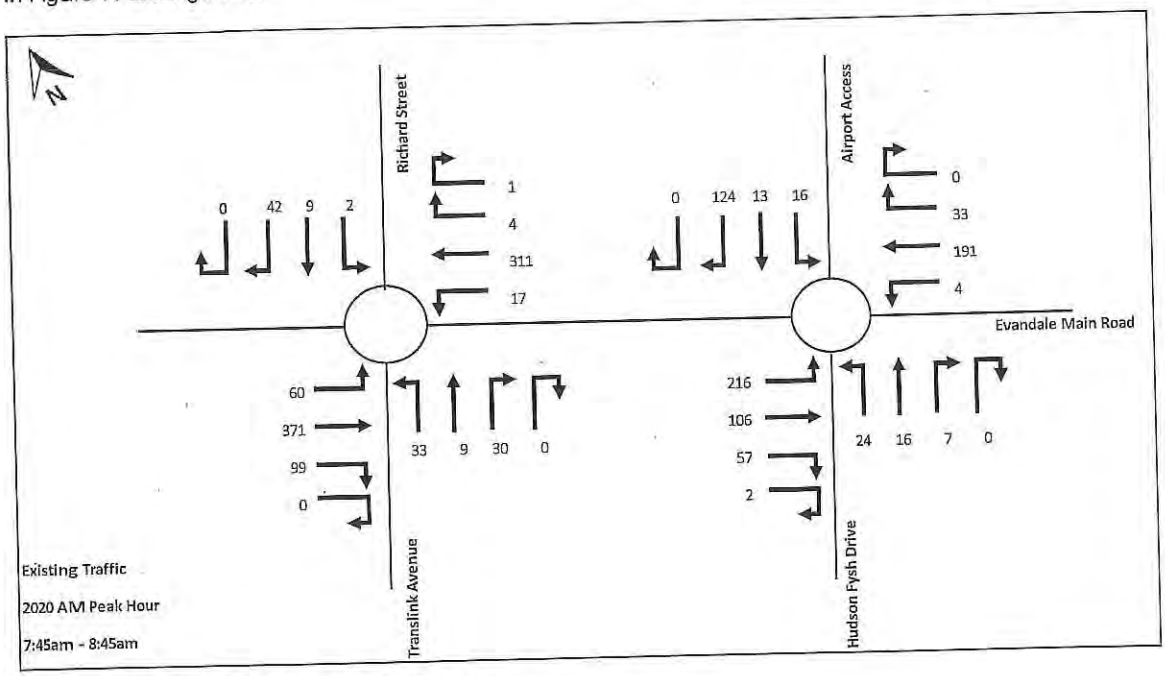


Figure 11: Existing 2020 Traffic Volumes - AM Peak Hour

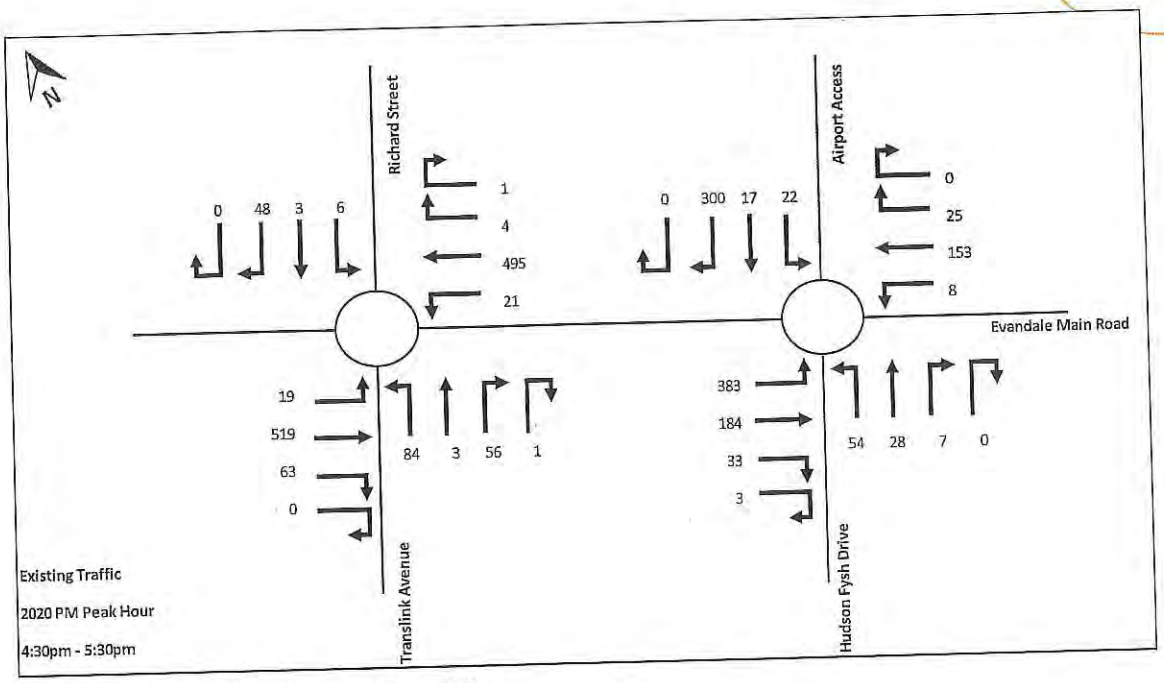


Figure 12: Existing 2020 Traffic Volumes - PM Peak Hour

2.5 Existing Intersection Performance

2.5.1 Traffic Modelling Software

The traffic operation of the existing intersections within the study length have been assessed using SIDRA Intersection 8.0 modelling software. SIDRA Intersection rates the performance of the intersection based on the vehicle delay and the corresponding LOS. It is generally accepted that an intersection operates well if it is at LOS D or higher. Table 1 shows the criteria that SIDRA adopts in assessing the LOS.

Table 1: SIDRA Level of Service

LOS	Delay per Vehicle (secs)		
	Signals	**Roundabout**	**Sign Control**
A	10 or less	10 or less	10 or less
B	10 to 20	10 to 20	10 to 15
C	20 to 35	20 to 35	15 to 25
D	35 to 55	35 to 50	25 to 35
E	55 to 80	50 to 70	35 to 50
F	Greater than 80	Greater than 70	Greater than 50

2.5.2 Traffic Modelling Layouts

The geometry of the existing intersections within the study length used for the SIDRA traffic model was developed with reference to aerial photography obtained from the LISTmap, observations made during the site visit and available survey data. The aerial photography, site visit and survey data informed the number, width and length of trafficable lanes and speed limits.

The general layout used for the intersections are shown in Figure 13 and Figure 14.

It is noted that the Midland Highway/ Hobart Road/ Evandale Main Road Roundabout has not been modelled as part of this Traffic Impact Assessment as it is outside the study length.

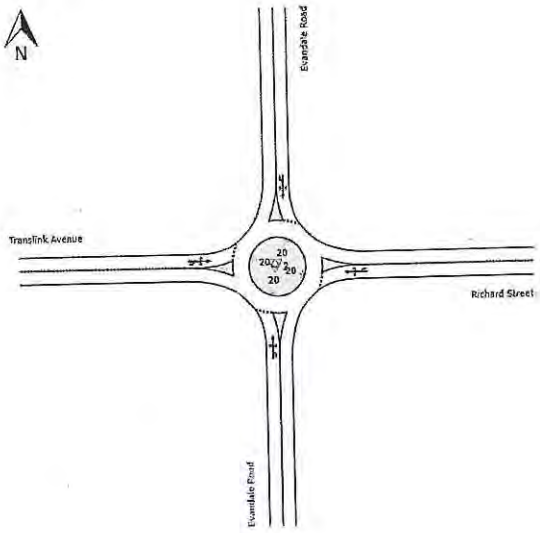


Figure 13: Translink Avenue/ Richard Street/ Evandale Main Road Existing Roundabout SIDRA Modelling Layout

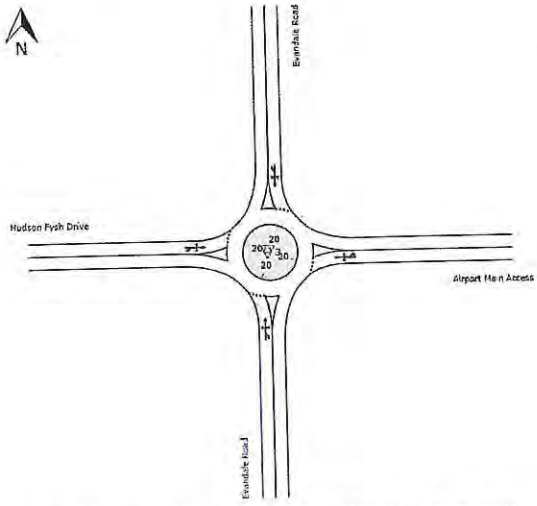


Figure 14: Launceston Airport Entrance/ Hudson Fysh Drive/ Evandale Main Road Existing Roundabout SIDRA Modelling Layout

2.5.3 Vehicle Mix

The vehicle mix in the SIDRA models used the total number of vehicles recorded and the proportion of heavy vehicles (Austroads Vehicle Class 3 and above). Buses were considered as heavy vehicles and included in the heavy vehicle proportion.

2.5.4 Traffic Modelling Results

Translink Avenue/ Richard Street/ Evandale Main Road Roundabout

The LOS for each approach of the Translink Avenue/ Richard Street/ Evandale Main Road Roundabout is shown in Figure 15 and Figure 16. A summary of the SIDRA Intersection results for the degree of saturation, average delay and 95th percentile queue is provided in Table 2. Full results are presented in Appendix B.

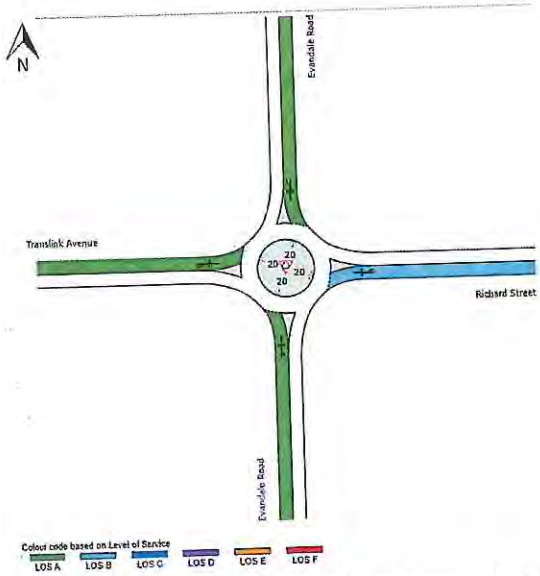


Figure 15: Translink Avenue/ Richard Street/ Evandale Main Road Roundabout - Existing Operation AM Peak Hour LOS

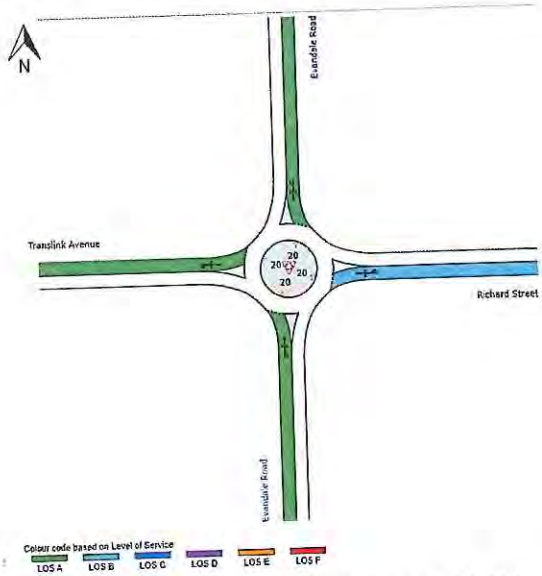


Figure 16: Translink Avenue/ Richard Street/ Evandale Main Road Roundabout - Existing Operation PM Peak Hour LOS

Table 2: Translink Avenue/ Richard Street/ Evandale Main Road Roundabout - Existing Operation SIDRA Results

Approach	Peak Hour	Degree of Saturation	Average Delay (secs)	95th Percentile Queue (m)
South: Evandale Road	AM	0.30	8	14
East: Richard Street		0.09	11	4
North: Evandale Road		0.39	8	22
West: Translink Avenue		0.09	7	4
All Vehicles		**0.39**	**8**	**22**

Approach	Peak Hour	Degree of Saturation	Average Delay (secs)	95th Percentile Queue (m)
South: Evandale Road	PM	0.41	7	21
East: Richard Street		0.07	11	3
North: Evandale Road		0.45	7	27
West: Translink Avenue		0.18	8	8
All Vehicles		**0.45**	**7**	**27**

Based on the results presented above, it is seen that all approaches of the Translink Avenue/ Richard Street/ Evandale Main Road Roundabout operate well with an acceptable LOS B or better during both the AM and PM peak hours.

Launceston Airport Entrance/ Hudson Fysh Drive/ Evandale Main Road Roundabout

The LOS for each approach of the Launceston Airport Entrance/ Hudson Fysh Drive/ Evandale Main Road roundabout is shown in Figure 17 and Figure 18. A summary of the SIDRA Intersection results for the degree of saturation, average delay and 95th percentile queue is provided in Table 3. Full results are presented in Appendix B.

Figure 17: Launceston Airport Entrance/ Hudson Fysh Drive/ Evandale Main Road Roundabout - Existing Operation AM Peak Hour LOS

Figure 18: Launceston Airport Entrance/ Hudson Fysh Drive/ Evandale Main Road Roundabout - Existing Operation PM Peak Hour LOS

Table 3: Launceston Airport Entrance/ Hudson Fysh Drive/ Evandale Main Road Roundabout - Existing Operation SIDRA Results

Approach	Peak Hour	Degree of Saturation	Average Delay (secs)	95th Percentile Queue (m)
South: Evandale Road	AM	0.21	8	9
East: Airport Access		0.14	7	5
North: Evandale Road		0.29	7	13
West: Hudson Fysh Drive		0.06	6	2

Approach	Peak Hour	Degree of Saturation	Average Delay (secs)	95th Percentile Queue (m)
All Vehicles		**0.29**	**7**	**13**
South: Evandale Road	PM	0.20	9	9
East: Airport Access		0.32	8	14
North: Evandale Road		0.44	7	25
West: Hudson Fysh Drive		0.11	6	4
All Vehicles		**0.44**	**7**	**25**

The results above show that all approaches of the Launceston Airport Entrance/ Hudson Fysh Drive/ Evandale Main Road roundabout currently operate well with an acceptable LOS A during both the AM and PM peak hours.

2.6 Predicted Intersection Operation in 2021 and 2031 (with existing intersection layouts)

2.6.1 Future Traffic Data

The future traffic operation of the existing intersections within the study length have been assessed for two scenarios as follows:

- 2021 – year of completion
- 2031 – 10 years post completion

The traffic growth rates used for calculating existing traffic volumes have also been used to calculate 2021 and 2031 traffic volumes. These growth rates are discussed in Section 2.4.2 of this report.

2.6.2 Additional Traffic Calculation

Industrial Area Growth

It is understood that there is potential for additional traffic generation along Translink Avenue and Hudson Fysh Drive based on existing land zoning under the Planning Scheme. In order to determine the impact of these land uses on the study area, the traffic generation for these land uses have been added to the calculated 2021 and 2031 traffic volumes.

The expected traffic generation of the land uses were determined using traffic generation rates from the Roads and Maritime Services Guide to Traffic Generating Developments (RMS Guide). The RMS Guide specifies that industrial estates would have 28 employees per hectare with a breakdown of trips during the day as set out in Table 4.

Table 4: Design Traffic Generation Breakdown for Industrial Estates

Period	Design Generation Rate	
	Cars/ 1000 staff	Trucks / 1000 staff
7:00am – 8:00am	100	1
8:00am – 9:00am	307	11
9:00am – 10:00am	206	28

Period	Design Generation Rate	
	Cars/ 1000 staff	Trucks / 1000 staff
10:00am – 11:00am	108	33
11:00am – 12:00pm	83	33
12:00pm – 1:00pm	132	31
1:00pm – 2:00pm	162	34
2:00pm – 3:00pm	113	26
3:00pm – 4:00pm	163	31
4:00pm – 5:00pm	265	24
5:00pm – 6:00pm	350	15
6:00pm – 7:00pm	43	1
Total	**2032**	**268**

Using the RMS design generation rates, the expected traffic generation along Translink Avenue and Hudson Fysh Drive are set out in Table 5.

Table 5: Traffic Generation Estimates along Translink Avenue and Hudson Fysh Drive

Location	Developable Land	Traffic Generation (Cars + Trucks)	
		AM Peak Hour	PM Peak Hour
Translink Avenue West	12.18ha	123	130
Translink Avenue East	2.67ha	27	28
Hudson Fysh Drive	52.56ha	533	559

The directional split of traffic (i.e. the ratio of inbound and outbound traffic movements) that has been adopted for the additional traffic is as follows:

- AM Peak Hour 60% in/ 40% out
- PM Peak Hour 40% in/ 60% out

The distribution of the traffic is based on several factors including:

- The location of major traffic distribution roads in the vicinity
- The location of traffic generating developments; and
- Existing traffic patterns

The adopted distribution of the expected traffic generated along Translink Avenue and Hudson Fysh Drive is shown in Figure 19 and Figure 20.

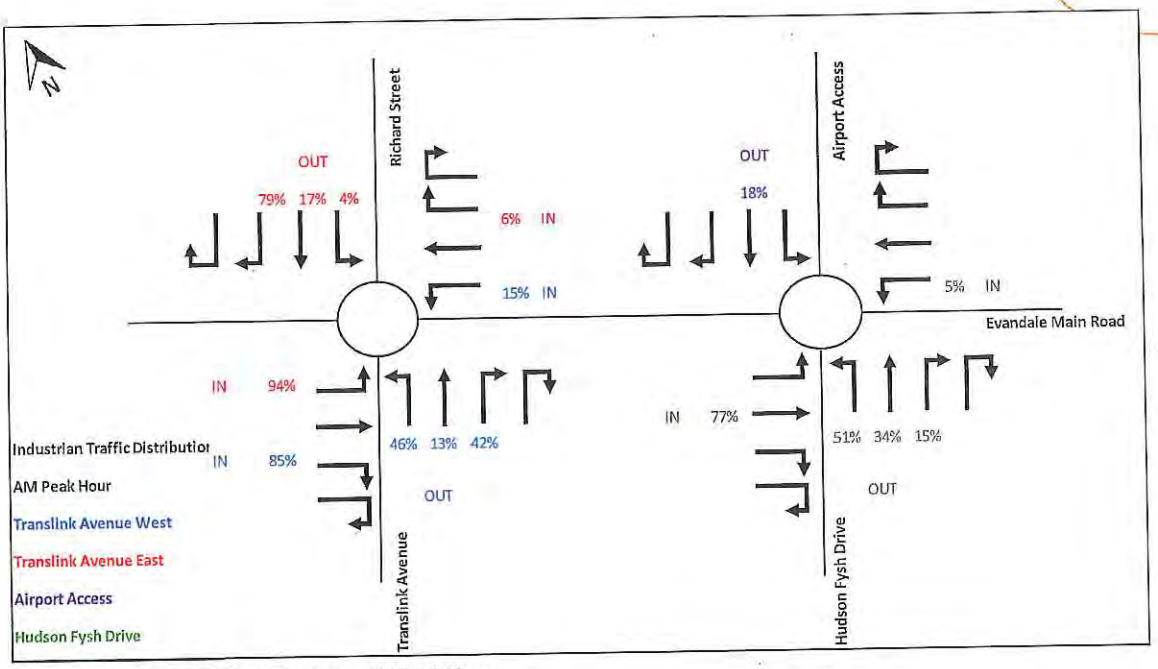


Figure 19: Additional Traffic Distribution – AM Peak Hour

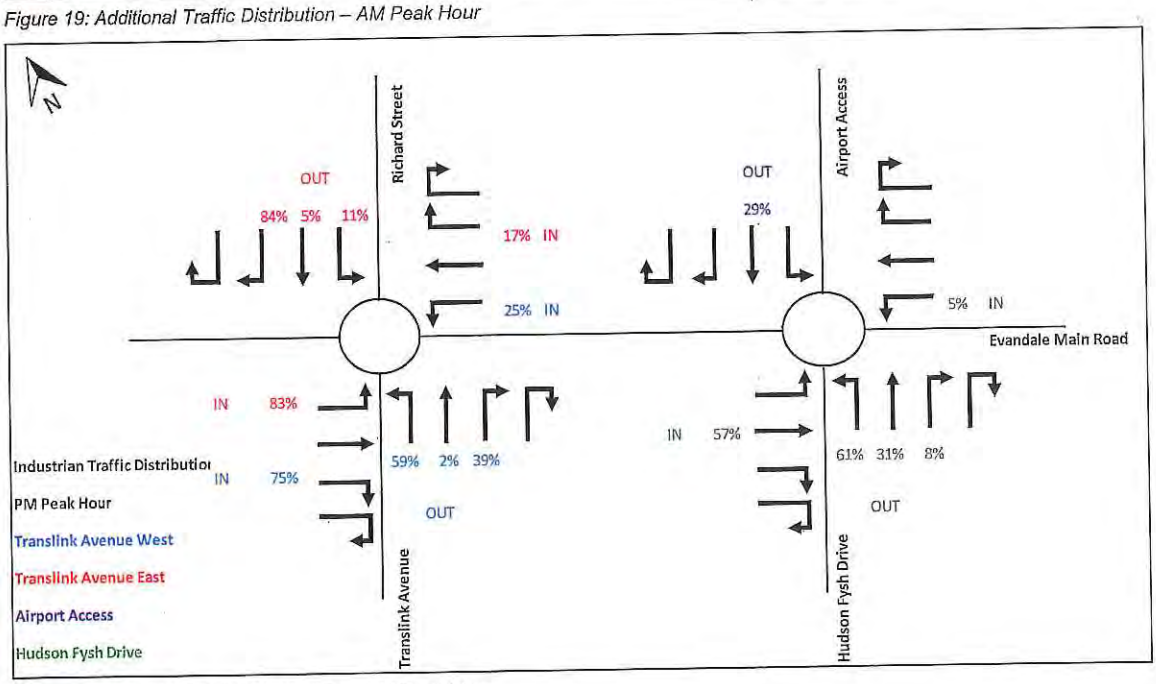


Figure 20: Additional Traffic Distribution – PM Peak Hour

Evandale Subdivision Growth

It is understood that Evandale may be the subject of major development in the future with the potential for 600 low density residential lots to be using Evandale Main Road.

The anticipated traffic volumes for the 600-lots has been assumed to be 600 vehicles per hour during the peak hour. The directional split of traffic (i.e. the ratio of inbound and outbound traffic movements) that has been adopted for the additional traffic is as follows:

- AM Peak Hour 35% in/ 65% out
- PM Peak Hour 60% in/ 40% out

2.6.3 Summary of Future Traffic Volumes

Based on the calculated 2021 and 2031 traffic data and the addition of the traffic expected to be generated by the Translink Avenue and Hudson Fysh Drive Land Uses and the Evandale subdivision, the expected traffic volumes in 2021 and 2031 are shown in Figure 21 to Figure 24.

It is noted that the additional traffic expected to be generated by the Translink Avenue and Hudson Fysh Drive Land Uses and the Evandale Subdivision have been added to both the 2021 and 2031 volumes in order to assess the worst-case scenario.

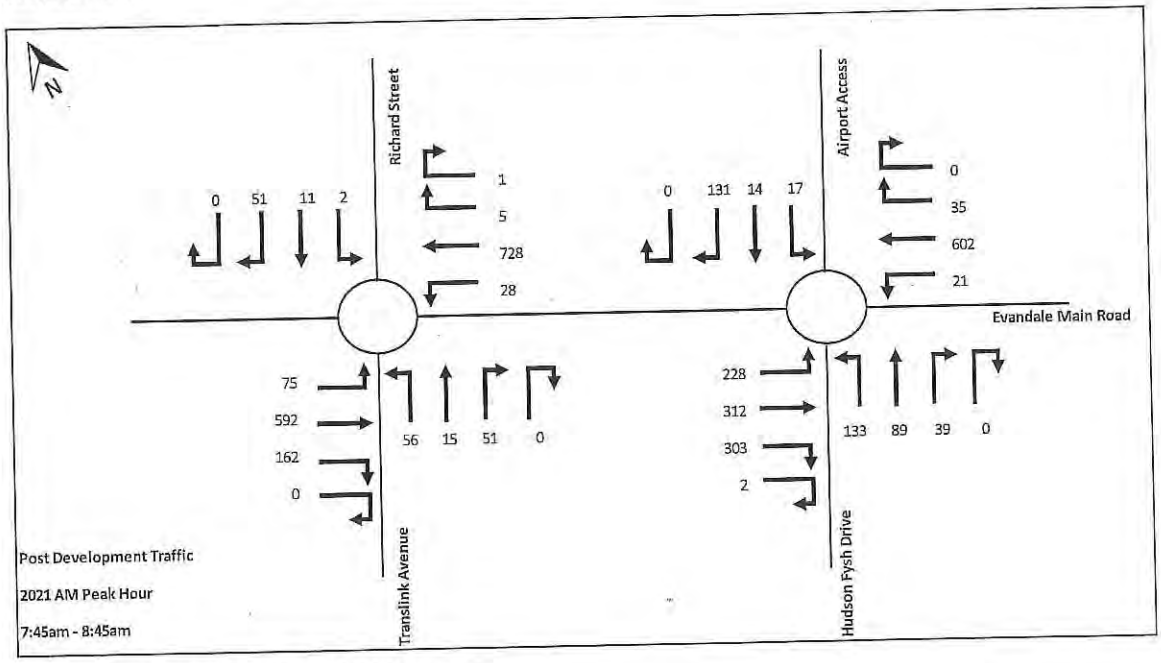


Figure 21: 2021 Traffic Volumes - AM Peak Hour

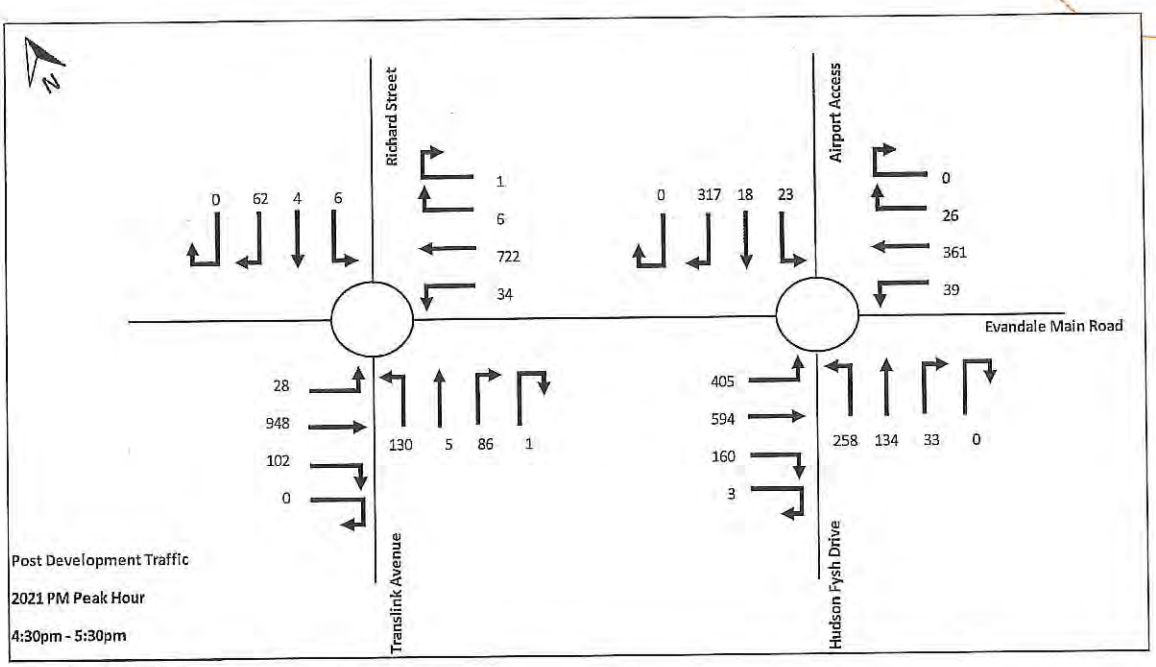


Figure 22: 2021 Traffic Volumes - PM Peak Hour

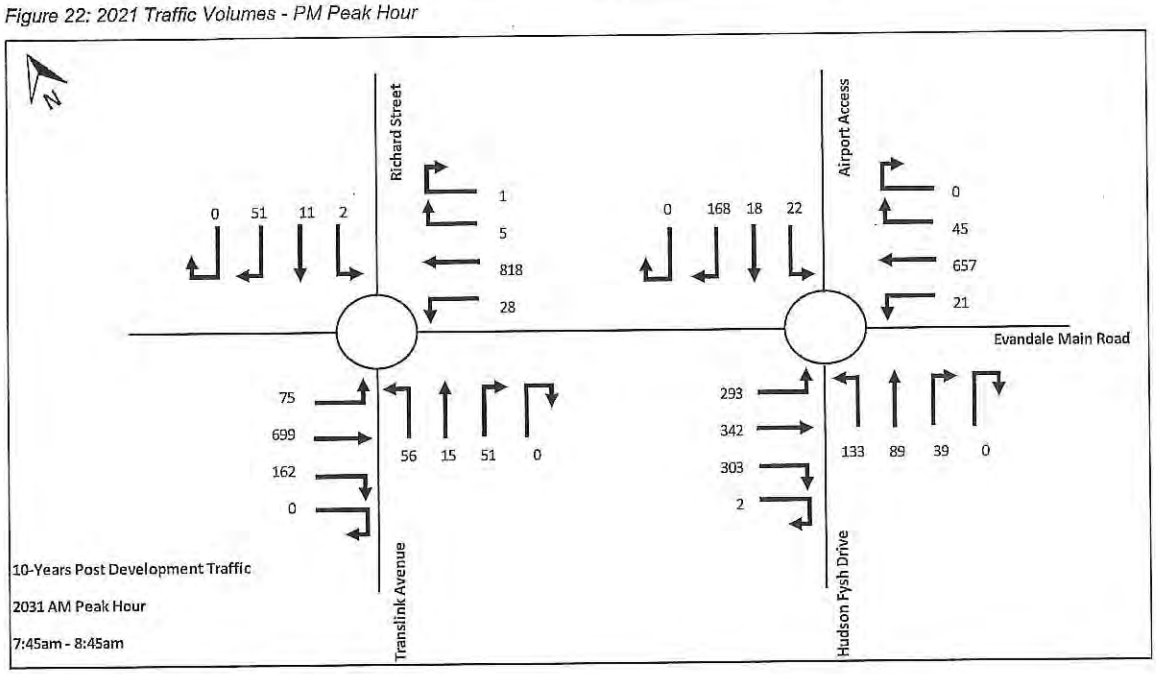


Figure 23: 2031 Traffic Volumes - AM Peak Hour

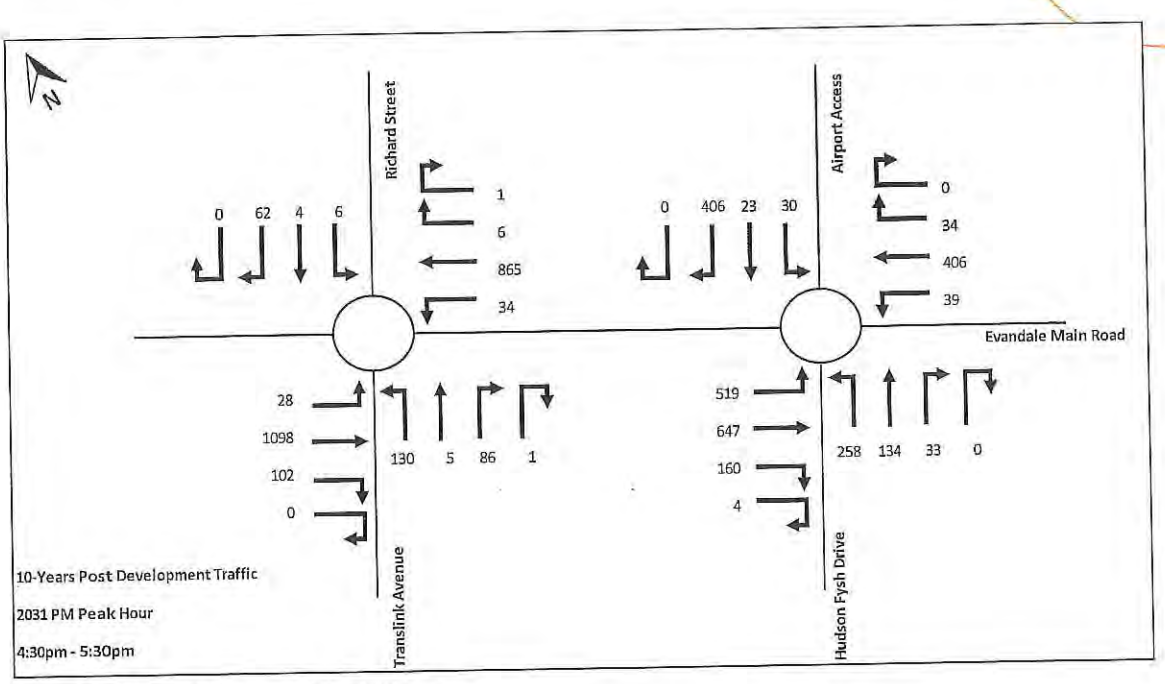


Figure 24: 2031 Traffic Volumes - PM Peak Hour

2.6.4 Traffic Modelling Results

The operation of the roundabouts under future traffic volumes without upgrading of Evandale Road has been assessed with the results provided below.

Translink Avenue/ Richard Street/ Evandale Main Road Roundabout

The LOS for each approach of the Translink Avenue/ Richard Street/ Evandale Main Road Roundabout in 2021 is shown in Figure 25 and Figure 26 while the LOS for each approach in 2031 is shown in Figure 27 and Figure 28. A summary of the SIDRA Intersection results for the degree of saturation, average delay and 95th percentile queue is provided in Table 6. Full results are presented in Appendix C.

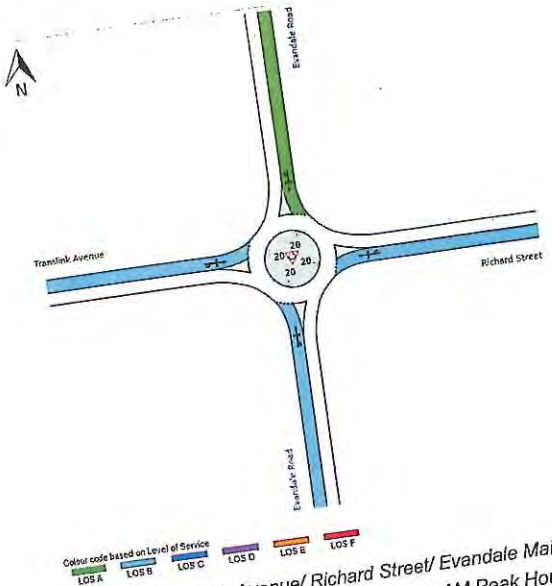


Figure 25: Translink Avenue/ Richard Street/ Evandale Main Road Existing Roundabout - 2021 Operation AM Peak Hour LOS

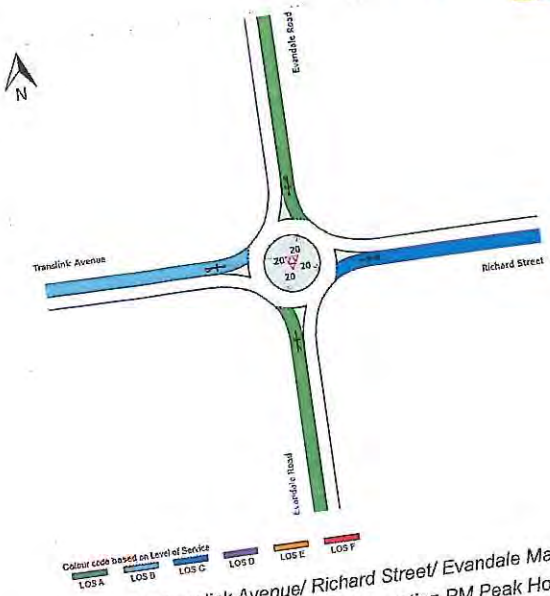


Figure 26: Translink Avenue/ Richard Street/ Evandale Main Road Existing Roundabout - 2021 Operation PM Peak Hour LOS

Figure 27: Translink Avenue/ Richard Street/ Evandale Main Road Existing Roundabout - Operation 2031 AM Peak Hour LOS

Figure 28: Translink Avenue/ Richard Street/ Evandale Main Road Existing Roundabout - 2031 Operation PM Peak Hour LOS

Table 6: Translink Avenue/ Richard Street/ Evandale Main Road Existing Roundabout – 2021 and 2031 Operation SIDRA Results

Year	Approach	Peak Hour	Degree of Saturation	Average Delay (secs)	95th Percentile Queue (m)
2021	South: Evandale Road	AM	0.73	11	69
	East: Richard Street		0.16	15	9
	North: Evandale Road		0.64	8	56
	West: Translink Avenue		0.28	12	16
	All Vehicles		**0.73**	**10**	**69**
	South: Evandale Road	PM	0.64	8	45
	East: Richard Street		0.25	20	14
	North: Evandale Road		0.82	8	102
	West: Translink Avenue		0.40	12	22
	All Vehicles		**0.82**	**9**	**102**
2031	South: Evandale Road	AM	0.81	13	102
	East: Richard Street		0.19	17	12
	North: Evandale Road		0.71	8	74
	West: Translink Avenue		0.34	14	21
	All Vehicles		**0.81**	**11**	**102**
	South: Evandale Road	PM	0.78	9	79
	East: Richard Street		0.41	34	26
	North: Evandale Road		0.92	9	181
	West: Translink Avenue		0.51	18	34
	All Vehicles		**0.92**	**11**	**181**

Based on the modelling results presented above, although the increase in traffic will result in a worsening of the operation of the Translink Avenue/ Richard Street/ Evandale Main Road roundabout, the roundabout is expected to continue to operate at an acceptable LOS D or better in 2021 and 2031 in both the AM and PM peak hour.

It is noted that for roundabouts, a Degree of Saturation of 0.85 is normally considered a practical degree of saturation and values above this indicate an intersection approach is reaching capacity. In the 2031 PM peak hour, the Degree of Saturation for the northern approach is 0.92 which indicates that the approach is congested and long queues are expected to form resulting in poor traffic flow.

Launceston Airport Entrance/ Hudson Fysh Drive/ Evandale Main Road Roundabout

The LOS for each approach of the Launceston Airport Entrance/ Hudson Fysh Drive/ Evandale Main Road roundabout in 2021 is shown in Figure 29 and Figure 30 while the LOS for each approach in 2031 is shown in Figure 31 and Figure 32. A summary of the SIDRA Intersection results for the degree of saturation, average delay and 95th percentile queue is provided in Table 7. Full results are presented in Appendix C.

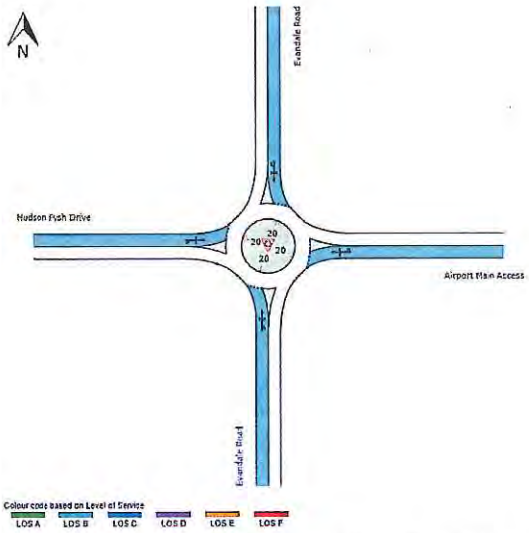


Figure 29: Launceston Airport Entrance/ Hudson Fysh Drive/ Evandale Main Road Existing Roundabout - 2021 Operation AM Peak Hour LOS

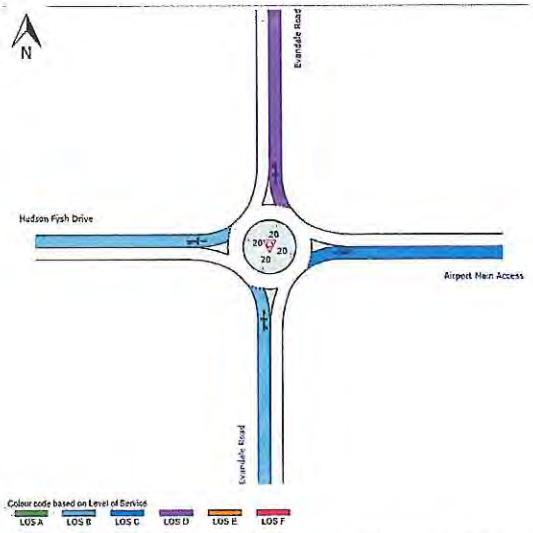


Figure 30: Launceston Airport Entrance/ Hudson Fysh Drive/ Evandale Main Road Existing Roundabout - 2021 Operation PM Peak Hour LOS

Figure 31: Launceston Airport Entrance/ Hudson Fysh Drive/ Evandale Main Road Existing Roundabout - Operation 2031 AM Peak Hour LOS

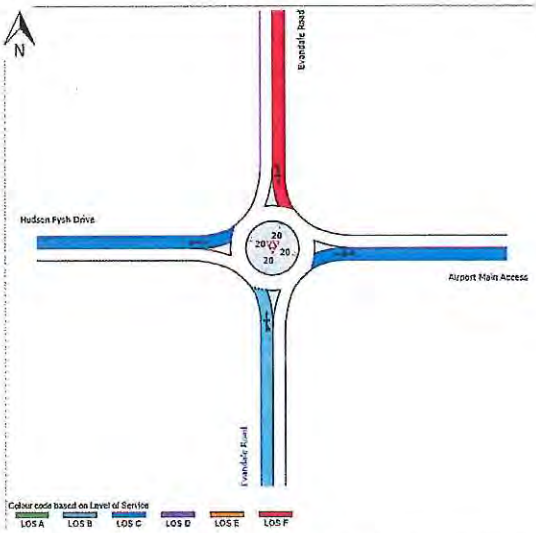


Figure 32: Launceston Airport Entrance/ Hudson Fysh Drive/ Evandale Main Road Existing Roundabout - 2031 Operation PM Peak Hour LOS

Table 7: Launceston Airport Entrance/ Hudson Fysh Drive/ Evandale Main Road Existing Roundabout – 2021 and 2031 Operation SIDRA Results

Year	Approach	Peak Hour	Degree of Saturation	Average Delay (secs)	95th Percentile Queue (m)
2021	South: Evandale Road	AM	0.79	17	84
	East: Airport Access		0.26	11	13
	North: Evandale Road		0.74	10	69
	West: Hudson Fysh Drive		0.54	14	39
	All Vehicles		**0.79**	**13**	**84**
	South: Evandale Road	PM	0.56	12	37
	East: Airport Access		0.71	23	61
	North: Evandale Road		1.02	43	423
	West: Hudson Fysh Drive		0.65	14	51
	All Vehicles		**1.02**	**30**	**423**
2031	South: Evandale Road	AM	0.91	29	158
	East: Airport Access		0.37	12	20
	North: Evandale Road		0.82	12	104
	West: Hudson Fysh Drive		0.63	21	51
	All Vehicles		**0.91**	**19**	**158**
	South: Evandale Road	PM	0.69	16	58
	East: Airport Access		0.85	31	98
	North: Evandale Road		1.17	163	1139
	West: Hudson Fysh Drive		0.78	26	80
	All Vehicles		**1.17**	**93**	**1139**

Based on the modelling results presented above, it is seen that although the increase in traffic volumes results in a worsening of the operation of the Launceston Airport Entrance/ Hudson Fysh Drive/ Evandale Main Road roundabout, the roundabout is expected to continue to operate at an acceptable LOS D or better during both the AM and PM peak hours in 2021 and AM peak hour in 2031. The Degree of Saturation in the 2021 PM peak hour and 2031 AM peak hour is however noted to be greater than 0.85, indicating that traffic delays are below the acceptable performance level.

In 2031 PM peak hour, the Evandale Main Road northern approach of the intersection is expected to operate at an unacceptable LOS F. The Degree of Saturation for this approach is also noted to be greater than 1 indicating oversaturated conditions in which long queues of vehicles build up on the approach. All other approaches are expected to operate at a LOS D or better with an acceptable Degree of Saturation of less than 0.85 during the PM peak hour in 2031.

2.7 Road Safety

The Department have provided crash history along the study length for the most recent 5-year period.

The crash history shows that 16 crashes have been recorded along the study length. A summary of the recorded crashes is presented in Table 8.

Table 8: Summary of Crashes

Location	Crash Type	Severity	Count
Translink Avenue/ Richard Street/ Evandale Main Road Roundabout	130 – Vehicle in same lane rear end	Property Damage Only	1
	184 – Out of control on carriageway	Property Damage Only	1
Boral Road/ Evandale Main Road/ Richard Street Intersection	121 – Right through	Property Damage Only	1
	110 – Cross traffic	Property Damage Only	3
	130 – Vehicle in same lane rear end	Property Damage Only	1
Evandale Road	130 – Vehicle in same lane rear end	Property Damage Only	3
		Minor	1
	171 – Left off carriageway into object or parked vehicle	Property Damage Only	1
	172 – Off carriageway to right	Property Damage Only	1
	174 – Out of control on carriageway	Serious	1
Launceston Airport Entrance/ Hudson Fysh Drive/ Evandale Main Road Roundabout	110 – Cross traffic	Minor	1
	116 – Left near	Property Damage Only	1

The crash history above indicates that the majority of crash types recorded in the most recent 5-year period have occurred once.

Among the crashes that have occurred more than once, the most common types are the 110 – Cross traffic (3 instances), and 130 – Vehicle in same lane rear end (4 instances).

The crash history is considered to be reflective of similar arterial roads that carry large volumes of traffic and are approaching capacity.

3. Development Proposal

3.1 Overview

As discussed, an upgrade of Evandale Main Road to four lanes from the entrance of the Launceston Airport to the Breadalbane Roundabout is proposed as part of the Roads Package to Support Tasmania's Visitor Economy. In addition to the Evandale Main Road upgrade, it is also proposed to upgrade the single-lane Translink Avenue/ Evandale Main Road/ Richard Street roundabout to a two-lane roundabout and introduce a Channelised Right Turn (CHR) Lane to Boral Road at the Boral Road/ Evandale Main Road/ Richard Street intersection.

Full plans of the proposed layout of Evandale Main Road between the entrance of the Launceston Airport and the Breadalbane Roundabout including the roundabout and intersection upgrades is included in Appendix A.

3.2 Evandale Main Road Upgrade

With the proposed upgrade of Evandale Main Road from the entrance of the Launceston Airport to the Breadalbane Roundabout, two lanes will be provided in each direction along the study length. The upgrade will consist of:

- Two 3.5 metres wide trafficable lanes in each direction with a 2 metre sealed shoulder on either side, catering for B-doubles and Over Dimensional vehicles
- Zip merge from two lanes to one lane on south-eastern approach of Evandale Main Road at the Breadalbane Roundabout
- New two-lane roundabout at the Translink Avenue/ Richard Street/ Evandale Main Road intersection catering for B-doubles and Over Dimensional vehicles
- Dedicated left turn lane for vehicles turning left into airport from north-western approach of Evandale Main Road at the the Launceston Airport Entrance roundabout
- Dedicated channelised right turn (CHR) lane to Boral Road at the Boral Road/ Evandale Main Road/ Richard Street intersection catering for B-doubles and Over Dimensional vehicles
- Tensioned wire-rope barrier along the study length designed in accordance with turning movement requirements for over-dimensional vehicles
- New street lighting at the intersections and along the study length with lumination in accordance with Australian Standards requirements for a Category V5 road
- A posted speed limit of 80 km/h.

3.3 Restricted Access

As part of the upgrade of Evandale Main Road to four lanes, it is proposed to upgrade the Boral Road/ Evandale Main Road/ Richard Street intersection to include a Channelised Right Turn (CHR) treatment into Boral Road and restricted movements from Boral Road and Richard Street.

The CHR treatment will allow passenger and heavy vehicles to turn right from Evandale Road to Boral Road, as shown in Figure 33.

The restricted movements will be for right turns from Boral Road and Richard Street onto Evandale Main Road and these movements have been restricted due to the risk associated with trying to perform right turn movements on a high-volume road across multiple lanes of traffic. The impacts on traffic due to these restricted movements are however considered to be minor due to the connectivity of the adjacent road network. Vehicles wishing to turn right from either Boral Road or Richard Street can make the following movements, as shown in Figure 34:

- Boral Road: Turn left at Evandale Main Road, U-Turn at Translink Avenue/ Richard Street/ Evandale Main Road roundabout,
- Boral Road: Travel along Johns Street, right turn into Translink Avenue, right turn at Evandale Main Road
- Richard Street: Turn left at Evandale Main Road, U-turn at Hudson Fysh Drive/ Airport Access Road/ Evandale Main Road,
- Richard Street: Travel along Richard Street north-west, turn right at Translink Avenue/Richard Street/ Evandale Main Road roundabout.

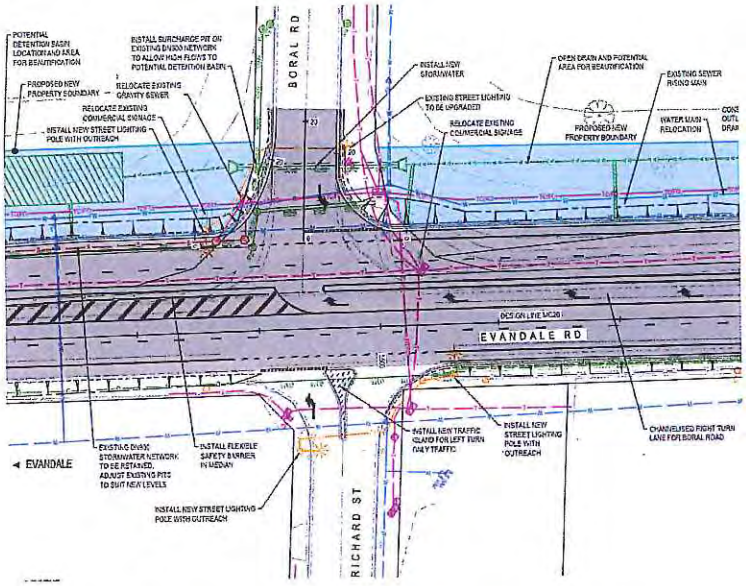


Figure 33: CHR Treatment at Boral Road/ Richard Street/ Evandale Road

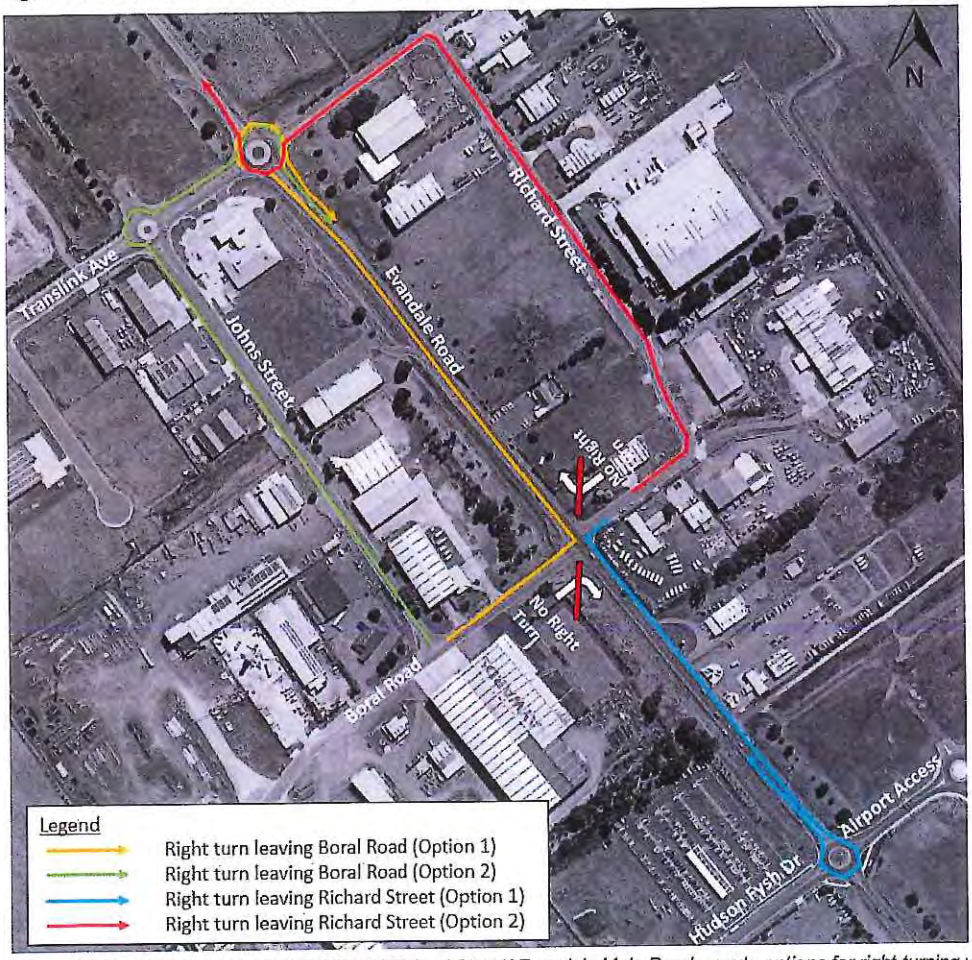


Figure 34: Restricted access at Boral Road/ Richard Street/ Evandale Main Road – route options for right-turning vehicles (Aerial Source: https://maps.thelist.tas.gov.au/listmap/app/list/map)

4. Traffic Assessment

4.1 Traffic Impact Assessment

4.1.1 Vehicle Routes

Evandale Main Road

As the changes to Evandale Main Road between the entrance of the Launceston Airport and the Breadalbane Roundabout will be limited to upgrading to four lanes, there will be no changes in the vehicle routes along Evandale Main Road.

Translink Avenue/ Richard Street/ Evandale Main Road Roundabout

The changes to the Translink Avenue/ Richard Street/ Evandale Main Road roundabout will be limited to upgrading the existing single-lane roundabout to a two-lane roundabout. There will be no changes in the vehicle route for vehicles travelling through the roundabout.

Boral Road/ Evandale Main Road/ Richard Street Intersection

As discussed, with the upgrade of Evandale Main Road to four lanes, Boral Road and Richard Street at the Boral Road/ Evandale Main Road/ Richard Street intersection will be restricted to left in and left out movements only with the exception of Boral Road which will facilitate right in movements.

In order to undertake an exiting right turn movement at this intersection, vehicles using Boral Road will need to travel to the the Translink Avenue/ Richard Street/ Evandale Main Road roundabout and undertake a U-turn while vehicles using Richard Street will need to travel to the Launceston Airport Entrance/ Hudson Fysh Drive/ Evandale Main Road Roundabout and undertake a U-turn.

Launceston Airport Entrance/ Hudson Fysh Drive/ Evandale Main Road Roundabout

As the changes to the Launceston Airport Entrance/ Hudson Fysh Drive/ Evandale Main Road Roundabout will be limited to the Evandale Main Road northern leg being upgraded to four lanes, there will be no changes in the vehicle route for vehicles travelling through the roundabout.

4.1.2 Intersection Operation

Traffic Modelling Layout

The geometry of the proposed roundabout layout used for the SIDRA traffic model was developed with reference to prepared concept plans. The concept plans informed the number, width and length of trafficable lanes and speed limits.

The general layout used for the intersections are shown in Figure 35 and Figure 36.

Whilst the Evandale Main Road departure on the northern leg at the Hudson Fysh Drive roundabout will diverge into two lanes shortly after the roundabout, this has not been reflected within the SIDRA model layout shown in Figure 36 due to the modelling software parameters which do not graphically reflect exit lanes that are starting after an intersection.

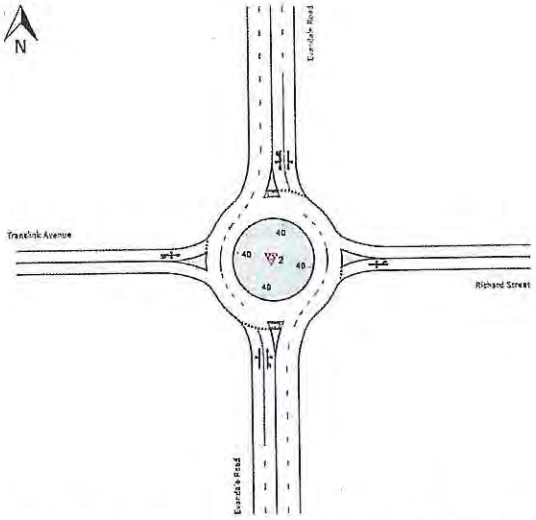


Figure 35: Translink Avenue/ Richard Street/ Evandale Main Road Proposed Roundabout SIDRA Modelling Layout

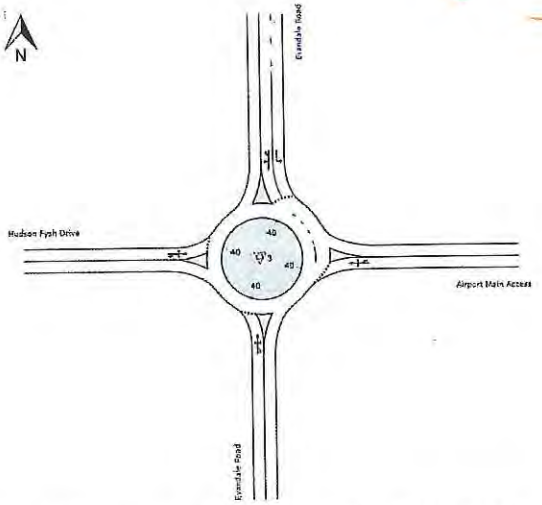


Figure 36: Launceston Airport Entrance/ Hudson Fysh Drive/ Evandale Main Road Proposed Roundabout SIDRA Modelling Layout

Traffic Modelling Results

Translink Avenue/ Richard Street/ Evandale Main Road Roundabout

The LOS for each approach of the Translink Avenue/ Richard Street/ Evandale Main Road proposed roundabout in 2021 is shown in Figure 37 and Figure 38 while the LOS for each approach in 2031 is shown in Figure 39 and Figure 40. A summary of the SIDRA Intersection results for the degree of saturation, average delay and 95th percentile queue is provided in Table 9. Full results are presented in Appendix D.

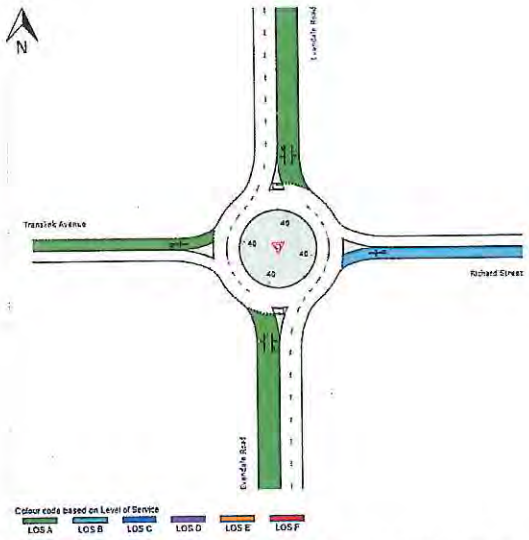


Figure 37: Translink Avenue/ Richard Street/ Evandale Main Road Proposed Roundabout - 2021 Operation AM Peak Hour LOS

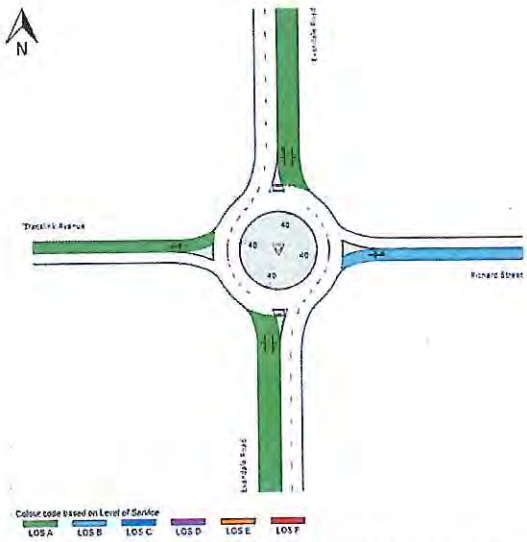


Figure 38: Translink Avenue/ Richard Street/ Evandale Main Road Proposed Roundabout - 2021 Operation PM Peak Hour LOS

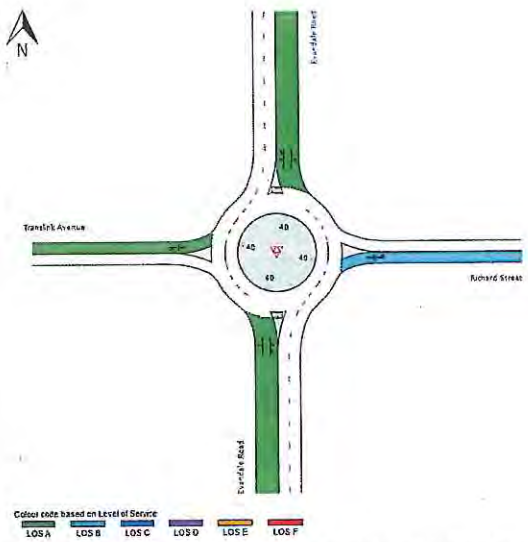


Figure 39: Translink Avenue/ Richard Street/ Evandale Main Road Proposed Roundabout - Operation 2031 AM Peak Hour LOS

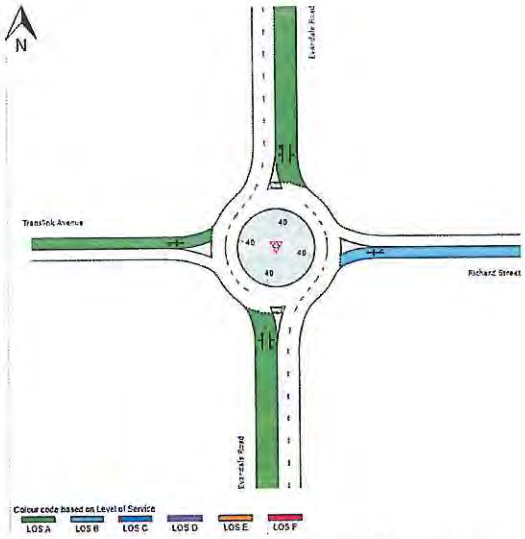


Figure 40: Translink Avenue/ Richard Street/ Evandale Main Road Proposed Roundabout - 2031 Operation PM Peak Hour LOS

Table 9: Translink Avenue/ Richard Street/ Evandale Main Road Proposed Roundabout – 2021 and 2031 Operation SIDRA Results

Year	Approach	Peak Hour	Degree of Saturation	Average Delay (secs)	95th Percentile Queue (m)
2021	South: Evandale Road	AM	0.30	7	15
	East: Richard Street		0.11	10	4
	North: Evandale Road		0.29	7	15
	West: Translink Avenue		0.19	7	7
	All Vehicles		**0.30**	**7**	**15**
	South: Evandale Road	PM	0.27	6	13
	East: Richard Street		0.11	10	3
	North: Evandale Road		0.37	7	20
	West: Translink Avenue		0.29	7	9
	All Vehicles		**0.37**	**7**	**20**
2031	South: Evandale Road	AM	0.34	7	17
	East: Richard Street		0.12	11	5
	North: Evandale Road		0.32	7	18
	West: Translink Avenue		0.20	8	7
	All Vehicles		**0.34**	**7**	**18**
	South: Evandale Road	PM	0.32	6	15

Year	Approach	Peak Hour	Degree of Saturation	Average Delay (secs)	95th Percentile Queue (m)
	East: Richard Street		0.12	10	4
	North: Evandale Road		0.42	7	25
	West: Translink Avenue		0.31	7	10
	All Vehicles		**0.42**	7	**25**

Based on the modelling results presented above, all approaches of the Translink Avenue/ Richard Street/ Evandale Main Road roundabout are expected to operate well at a LOS B or better in 2021 and 2031. This is compared to the LOS D or better expected if there was to be no change to the existing layout.

Launceston Airport Entrance/ Hudson Fysh Drive/ Evandale Main Road Roundabout

The LOS for each approach of the Launceston Airport Entrance/ Hudson Fysh Drive/ Evandale Main Road proposed roundabout in 2021 is shown in Figure 41 and Figure 42 while the LOS for each approach in 2031 is shown in Figure 43 and Figure 44. A summary of the SIDRA Intersection results for the degree of saturation, average delay and 95th percentile queue is provided in Table 10. Full results are presented in Appendix D.

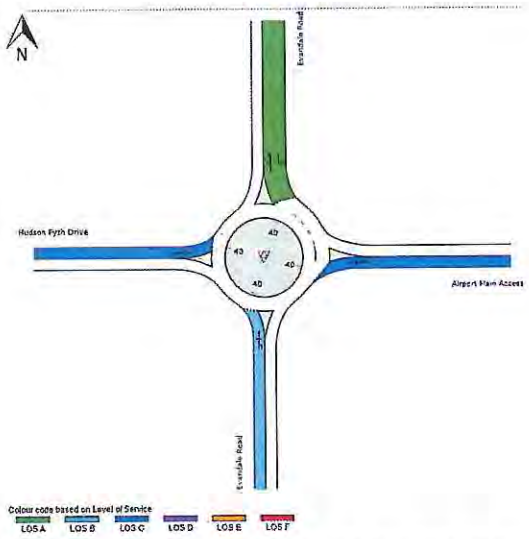


Figure 41: Launceston Airport Entrance/ Hudson Fysh Drive/ Evandale Main Road Proposed Roundabout - 2021 Operation AM Peak Hour LOS

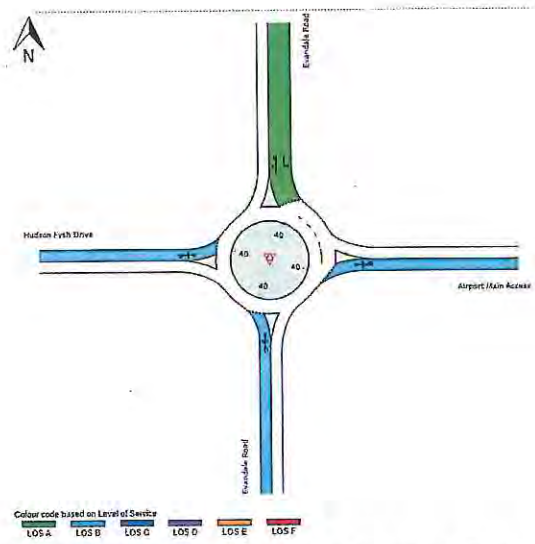


Figure 42: Launceston Airport Entrance/ Hudson Fysh Drive/ Evandale Main Road Proposed Roundabout - 2021 Operation PM Peak Hour LOS

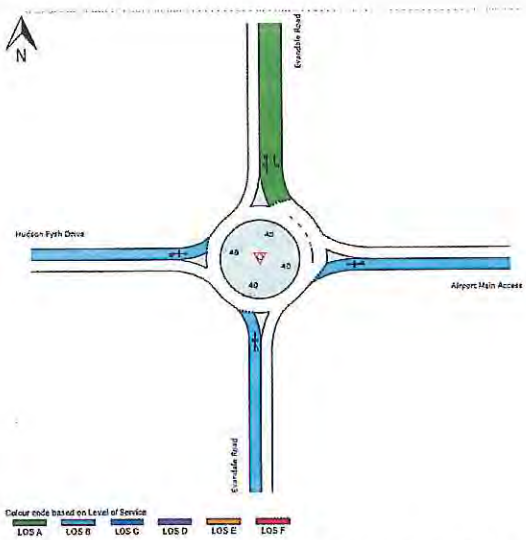


Figure 43: Launceston Airport Entrance/ Hudson Fysh Drive/ Evandale Main Road Proposed Roundabout - Operation 2031 AM Peak Hour LOS

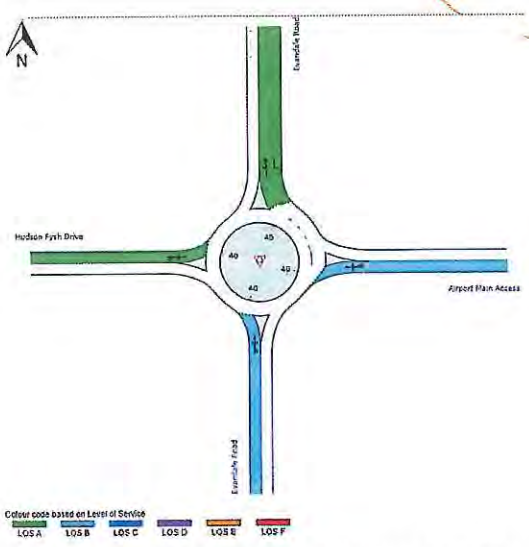


Figure 44: Launceston Airport Entrance/ Hudson Fysh Drive/ Evandale Main Road Proposed Roundabout - 2031 Operation PM Peak Hour LOS

Table 10: Launceston Airport Entrance/ Hudson Fysh Drive/ Evandale Main Road Proposed Roundabout – 2021 and 2031 Operation SIDRA Results

Year	Approach	Peak Hour	Degree of Saturation	Average Delay (secs)	95th Percentile Queue (m)
2021	South: Evandale Road	AM	0.59	12	44
	East: Airport Access		0.85	34	98
	North: Evandale Road		0.58	8	43
	West: Hudson Fysh Drive		0.73	21	78
	All Vehicles		**0.85**	**15**	**98**
	South: Evandale Road	PM	0.75	15	77
	East: Airport Access		0.31	11	13
	North: Evandale Road		0.45	9	1=29
	West: Hudson Fysh Drive		0.52	13	39
	All Vehicles		**0.75**	**11**	**77**
2031	South: Evandale Road	AM	0.47	9	27
	East: Airport Access		0.61	18	42
	North: Evandale Road		0.53	8	38
	West: Hudson Fysh Drive		0.61	12	52
	All Vehicles		**0.61**	**10**	**52**
	South: Evandale Road	PM	0.66	12	54

Year	Approach	Peak Hour	Degree of Saturation	Average Delay (secs)	95th Percentile Queue (m)
	East: Airport Access		0.23	10	10
	North: Evandale Road		0.42	9	26
	West: Hudson Fysh Drive		0.44	9	29
	All Vehicles		**0.66**	**10**	**54**

Based on the modelling results presented above, all approaches of the Translink Avenue/ Richard Street/ Evandale Main Road roundabout are expected to operate satisfactorily at a LOS C or better in both the AM and PM peak hours of 2021 and 2031. This is compared to the LOS F expected during the 2031 PM peak hour if there was to be no change to the existing layout.

4.2 Road Safety Implications

The upgrade of Evandale Main Road to four lanes from the entrance of the Launceston Airport to the Breadalbane Roundabout is expected to result in an overall reduction in the 130 – Vehicle in same lane rear end crash types due to a reduction in congestion along the study length. The upgrade of the shoulder width is expected to reduce the likelihood of run-off road crashes due to motorists having a larger recovery area.

In addition to the above, the implementation of the tensioned wire rope safety barrier along the study length is considered to improve road safety as it will reduce the likelihood of head-on collisions.

4.3 Traffic Management/ Impacts During Construction

As the upgrade of Evandale Main Road to four lanes from the entrance of the Launceston Airport to the Breadalbane Roundabout is within the existing road reserve, there will likely be disruption to traffic.

Construction activities will be carefully managed to ensure that delays and disruptions are minimised, recognising the importance of reliable journey times. The Department has strict performance requirements for traffic management on arterial roads with respect to delays and an overall policy to restrict works on these roads that might delay traffic between the hours of 6:30am to 9:30am and 3:00pm to 6:30pm other than exceptional circumstances.

4.4 Parking Assessment

There will be no parking required for the development.

5. Planning Scheme Assessment

The proposed development has been assessed against the relevant sections of the E4.0 Road and Railway Assets Code of the Planning Scheme. The use standards of the code have been assessed in Table 11 while the development standards have been assessed in Table 12.

The proposed development has not been assessed against E6.0 Car Parking and Sustainable Transport Code of the Planning Scheme as the code is not applicable to the development.

Table 11: E4.0 Road and Railway Assets Code Use Standards

E4.6.1 Use of road or rail infrastructure

Objective:

To ensure that the safety and efficiency of roads and rail infrastructure is not reduced by the creation of new accesses and junctions or increased use of existing accesses and junctions

Acceptable Solution/ Performance Criteria	Comments
A3 For roads with a speed limit of more than 60km/h the use must not increase the annual average daily traffic (AADT) movements at the existing access or junction by more than 10%.	**Complies with Acceptable Solutions A3** The proposed development will not generate any additional traffic but will instead cater for traffic growth on the road network growth.

Table 12: E4.0 Road and Railway Assets Code Development Standards

E4.7.1 Development on and adjacent to existing and future arterial roads and railways

Objective:

To ensure that development adjacent to category 1 or category 2 (outside 60km/h) railways and future roads is managed to:

a. Ensure the safe and efficient operation of roads and the rail network;
b. Allows for future road and rail widening, realignment and upgrading; and
c. Avoid undesirable interaction between roads and railways and other use or development

Acceptable Solution/ Performance Criteria	Comments
A1 The following must be at least 50m from a railway, future road or railway and a category 1 or 2 road in an area subject to a speed limit of more than 60km/h a. New road works, buildings, additions and extensions, earthworks and landscaping works; and b. Building areas on new lots; and c. Outdoor sitting, entertainment and children's play areas. **P1** Development including buildings, road works, earthworks, landscaping works and level crossings on or within 50m of a Category 1 or 2 road, in an area subject to a speed limit of more than 60km/h, a railway or future road must be sited, designed and landscaped to: a. Maintain or improve the safety and efficiency of the road or railway or future road or railway, including line of sight from trains; b. Mitigate significant transport related environmental impacts, including noise, air pollution and vibrations in accordance with a report from a suitably qualified person;	**Satisfies Performance Criteria P1** As the proposed development is located within and adjacent to the Evandale Main Road corridor, it is unable to comply with Acceptable Solution A1. It does however satisfy Performance Criteria P1 as follows: a. The proposed development includes the upgrade of Evandale Main Road to four lanes between from the entrance of the Launceston Airport to the Breadalbane Roundabout. The proposed upgrade will improve the traffic flow through the study length, improving travel time reliability. The upgrade will also cater for traffic growth along the road network in the future. b. The Department of State Growth is the Tasmanian State Road Authority and the proposed development is a Department of State Growth project. This Traffic Impact Assessment has been prepared by a suitably qualified traffic engineer for the Department of State Growth and the Department has endorsed this report. Additional reports discussing environmental impacts are also understood to have been prepared.

c. Ensure that additions or extensions of buildings will not reduce the existing setback to the road, railway or future road or railway; and d. Ensure that temporary buildings and works are removed at the applicant's expense within three years or as otherwise agreed by the road or rail authority.	c. N/A as the proposed development is not an addition or extension of a building d. The Department of State Growth is the Tasmanian State Road Authority and the proposed development is a Department of State Growth project. It is expected that all temporary buildings and works will be removed in accordance with the requirements set out by the Department of State Growth.

E4.7.2 Management of road accesses and junctions

Objective:

To ensure that the safety and efficiency of roads is not reduced by the creation of new accesses and junctions.

Acceptable Solution/ Performance Criteria	Comments
A2 For roads with a speed limit of more than 60km/h the development must not include a new access or junction.	**Complies with Acceptable Solution A2** The proposed development will not create any new junctions or accesses.

E4.7.4 Sight distance at accesses, junctions and level crossings

Objective:

To ensure that accesses, junctions and level crossings provide sufficient sight distance between vehicles and between vehicles and trains to enable safe movement of traffic.

Acceptable Solution/ Performance Criteria	Comments
A1 Sight distances at: a. An access or junction must comply with the Safe Intersection Sight Distance shown in Table E4.7.4; and b. Rail level crossings must comply with AS1742.7 Manual of uniform traffic control devices – Railway crossings, Standards Association of Australia; and c. If the access is a temporary access, the written consent of the relevant authority has been obtained.	**Complies with Acceptable Solution A1** The proposed development will not create any new junctions or accesses. All existing accesses are noted to have sufficient sight distance in accordance with Table E4.7.4.

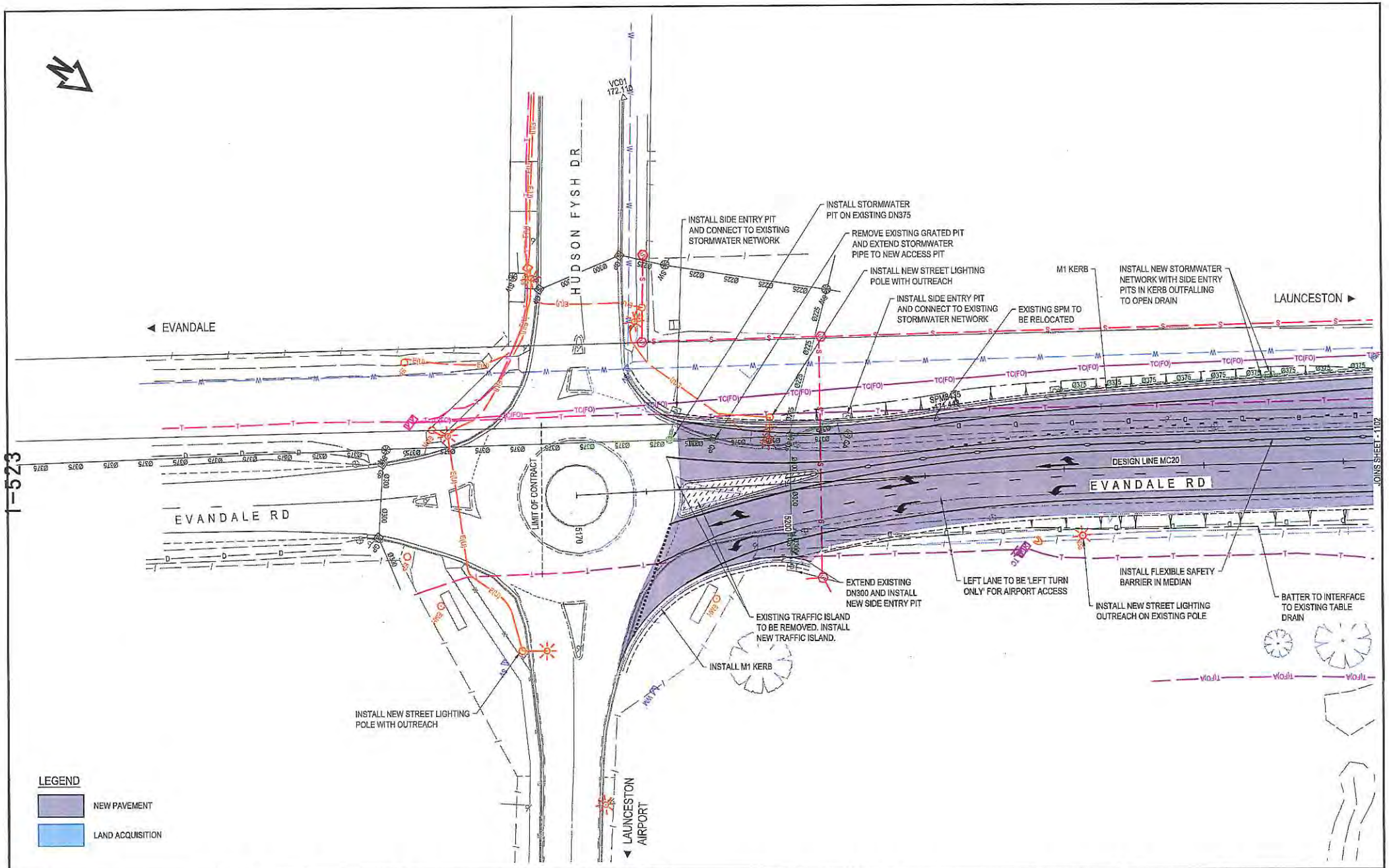
6. Conclusion

The Department of State Growth have engaged pitt&sherry to undertake a Traffic Impact Assessment for the proposed upgrades along Evandale Main Road from the entrance of the Launceston Airport to the Breadalbane Roundabout. This report has been prepared with reference to the Department of State Growth's publication *Traffic Impact Assessments (TIA) Guidelines* and the *Northern Midlands Council Interim Planning Scheme 2013*. The findings presented within this report can be summarised as follows:

- As part of the Roads Package to Support Tasmania's Visitor Economy, it is proposed to upgrade Evandale Main Road to four lanes from the entrance of the Launceston Airport to the Breadalbane Roundabout
- It is also proposed to upgrade the single-lane Translink Avenue/ Evandale Main Road/ Richard Street roundabout to a two-lane roundabout and introduce a Channelised Right Turn (CHR) Lane to Boral Road at the Boral Road/ Evandale Main Road/ Richard Street intersection
- The proposed upgrades are expected to cater for the road network growth
- Upgrade of the Translink Avenue/ Evandale Main Road/ Richard Street roundabout results in it operating at a LOS C or better in 2031 compared to the LOS F expected under the existing layout
- The proposed upgrades will result in Boral Road and Richard Street at the Boral Road/ Evandale Main Road/ Richard Street intersection to have restricted movements
- The proposed upgrades are expected to result in a reduction in the 130 – Vehicle in same lane rear end crash types
- Construction activities for the project will be managed using the Department of State Growth's Standard Specifications to ensure that delays and disruptions are minimised.

Concept Plans

Appendix A



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pitt&sherry

Tasmanian Government

DESIGNED L. ALLEN
REVIEWED R. THORP

Department of State Growth

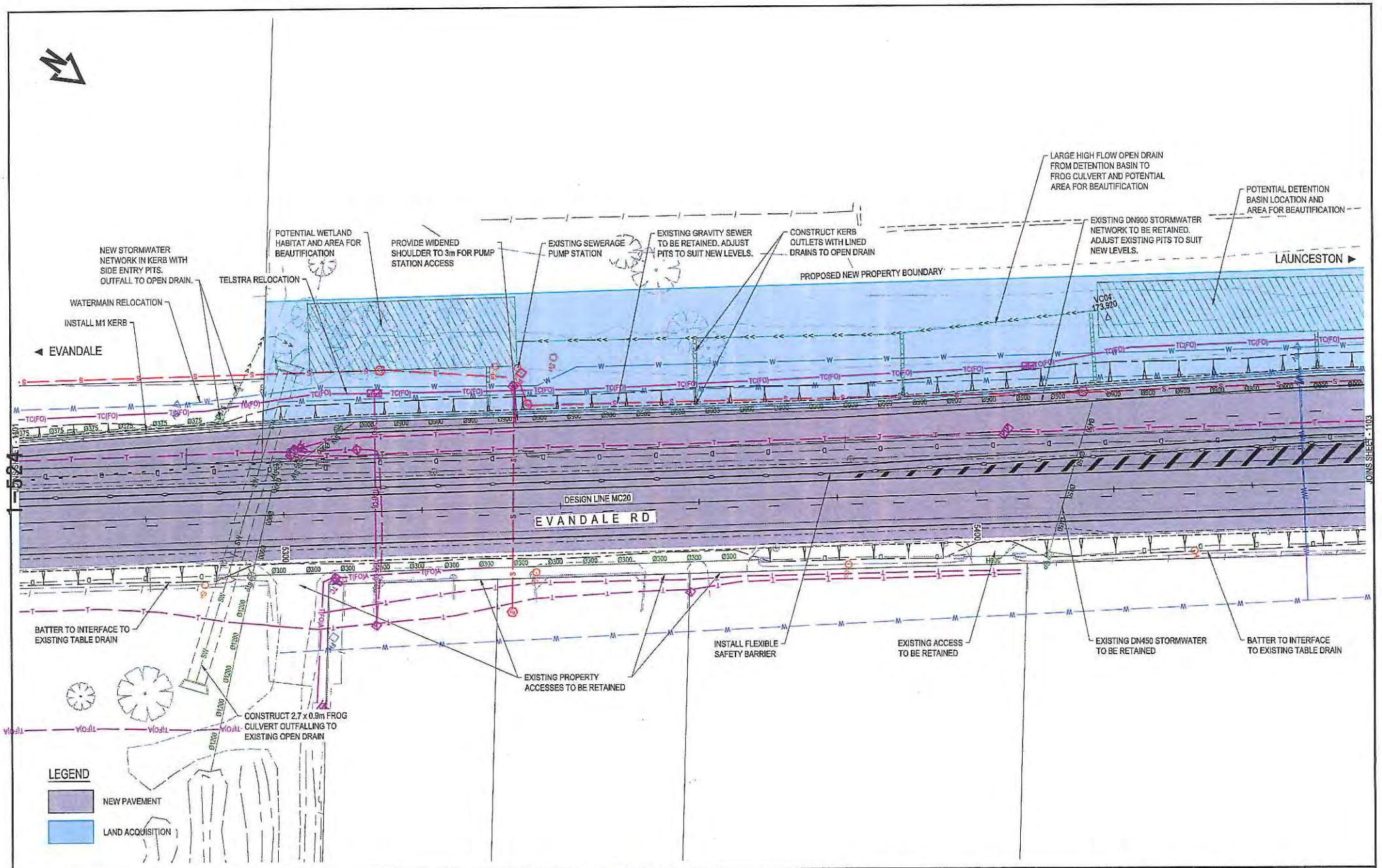
EVANDALE MAIN ROAD (A1109)
BREADALBANE TO LAUNCESTON AIRPORT
ROADWORKS

GENERAL ARRANGEMENT - DRG 1

CONTRACT No.	DRAWING	PRINTED DATE	SHEET No.
-	HB18139-P21	05-Jun-20, 3:42 PM	P21

REGISTRATION NUMBER
HB18139-P21

REVISION A



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Co-ordinate System: MGA ZONE 55 | Height Datum: A.H.D.

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Tasmanian Government

DESIGNED L. ALLEN
REVIEWED R. THORP

Department of State Growth
EVANDALE MAIN ROAD (A1109)
BREADALBANE TO LAUNCESTON AIRPORT
ROADWORKS
GENERAL ARRANGEMENT - DRG 2

CONTRACT No.	DRAWING	PRINTED DATE	SHEET No.
-	HB18139-P22	05-Jun-20, 3:42 PM	P22

REGISTRATION NUMBER
HB18139-P22

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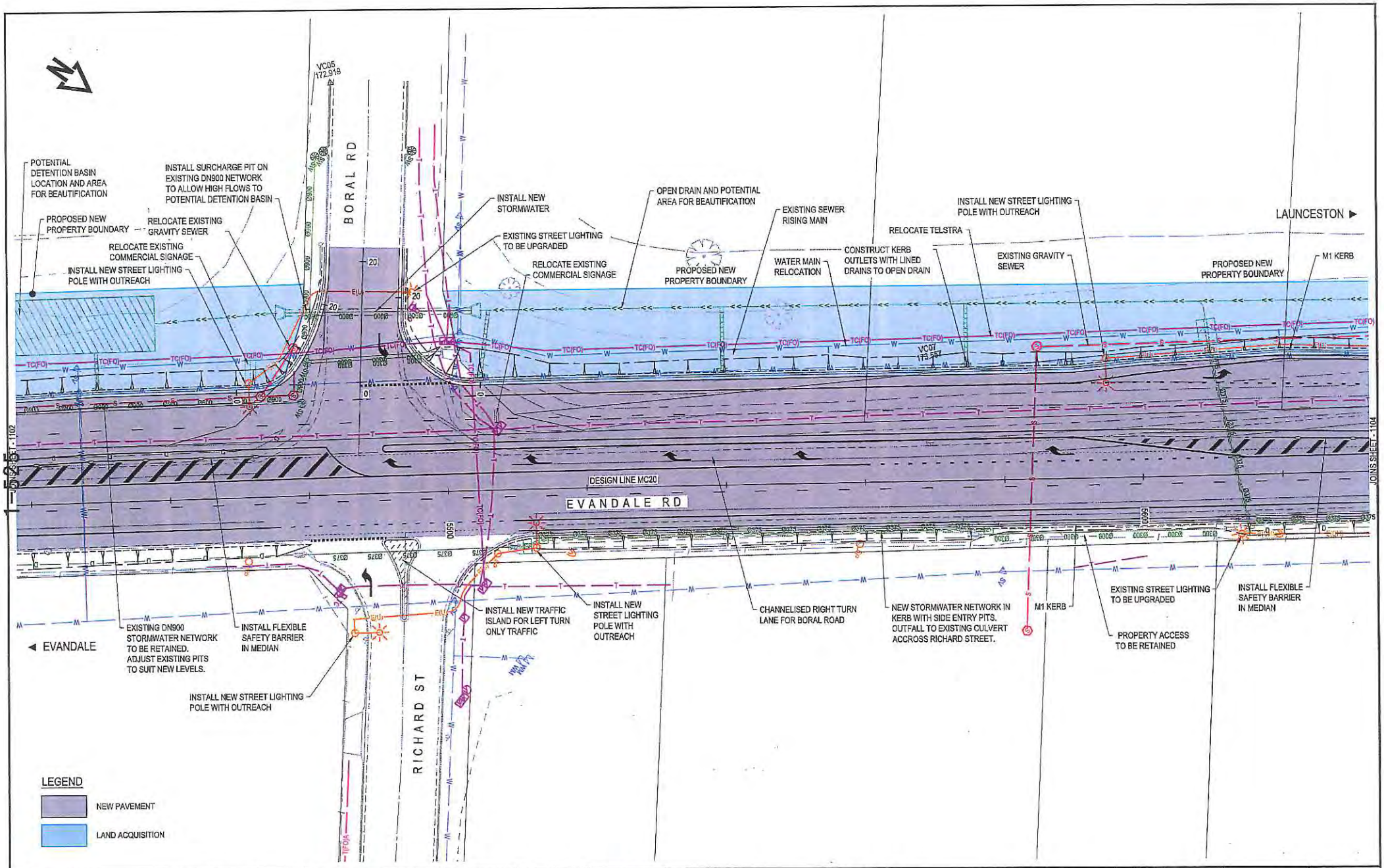

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Department of State Growth

EVANDALE MAIN ROAD (A1109)
BREADALBANE TO LAUNCESTON AIRPORT
ROADWORKS

GENERAL ARRANGEMENT - DRG 3

CONTRACT No.	DRAWING	PRINTED DATE	SHEET No.
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REGISTRATION NUMBER
HB18139-P23

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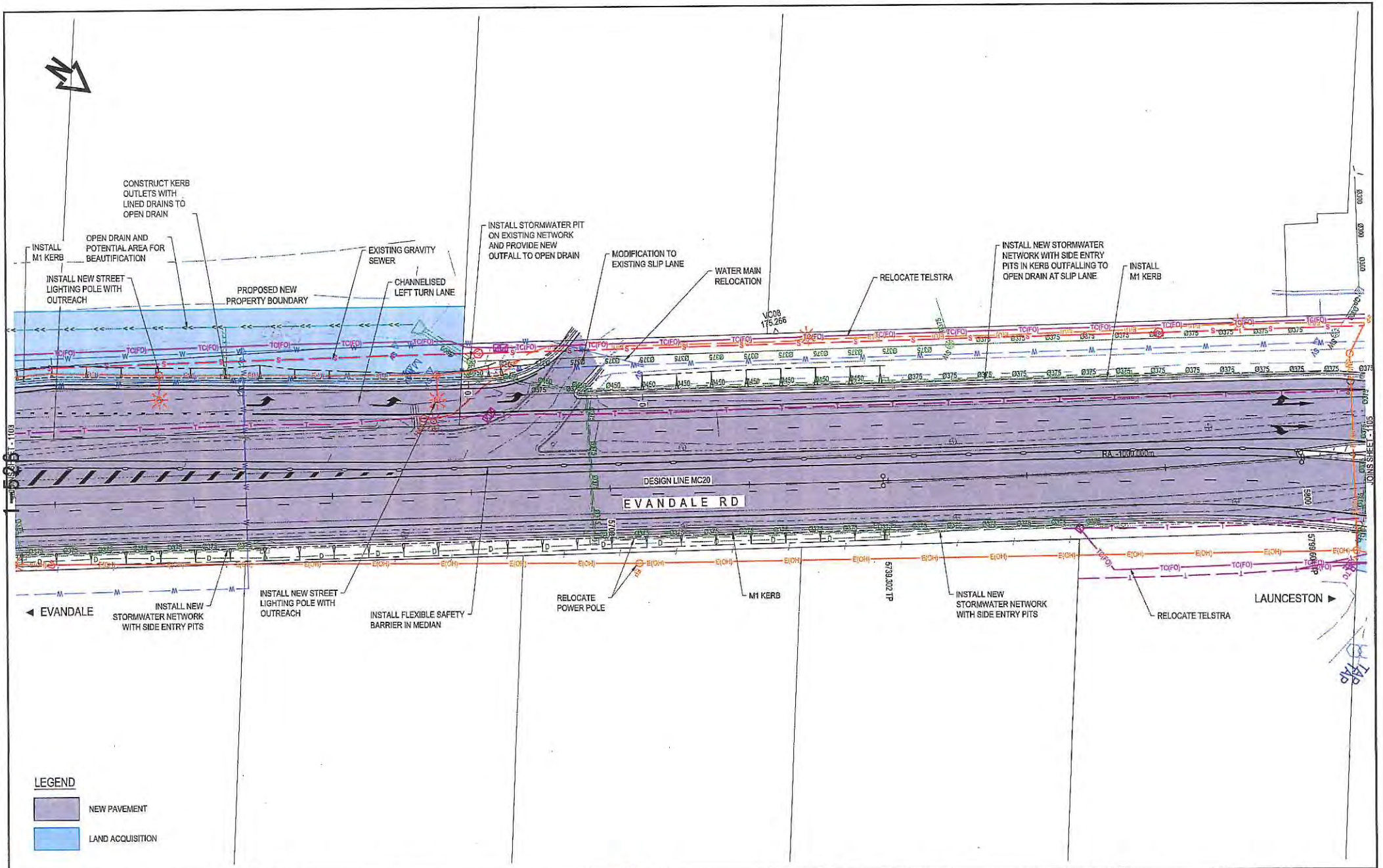

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REVIEWED R. THORP

Department of State Growth

EVANDALE MAIN ROAD (A1109)
BREADALBANE TO LAUNCESTON AIRPORT
ROADWORKS

GENERAL ARRANGEMENT - DRG 4

CONTRACT No.	DRAWING	PRINTED DATE	SHEET No.
-	HB18139-P24	05-Jun-20, 3:43 PM	P24

REGISTRATION NUMBER
HB18139-P24

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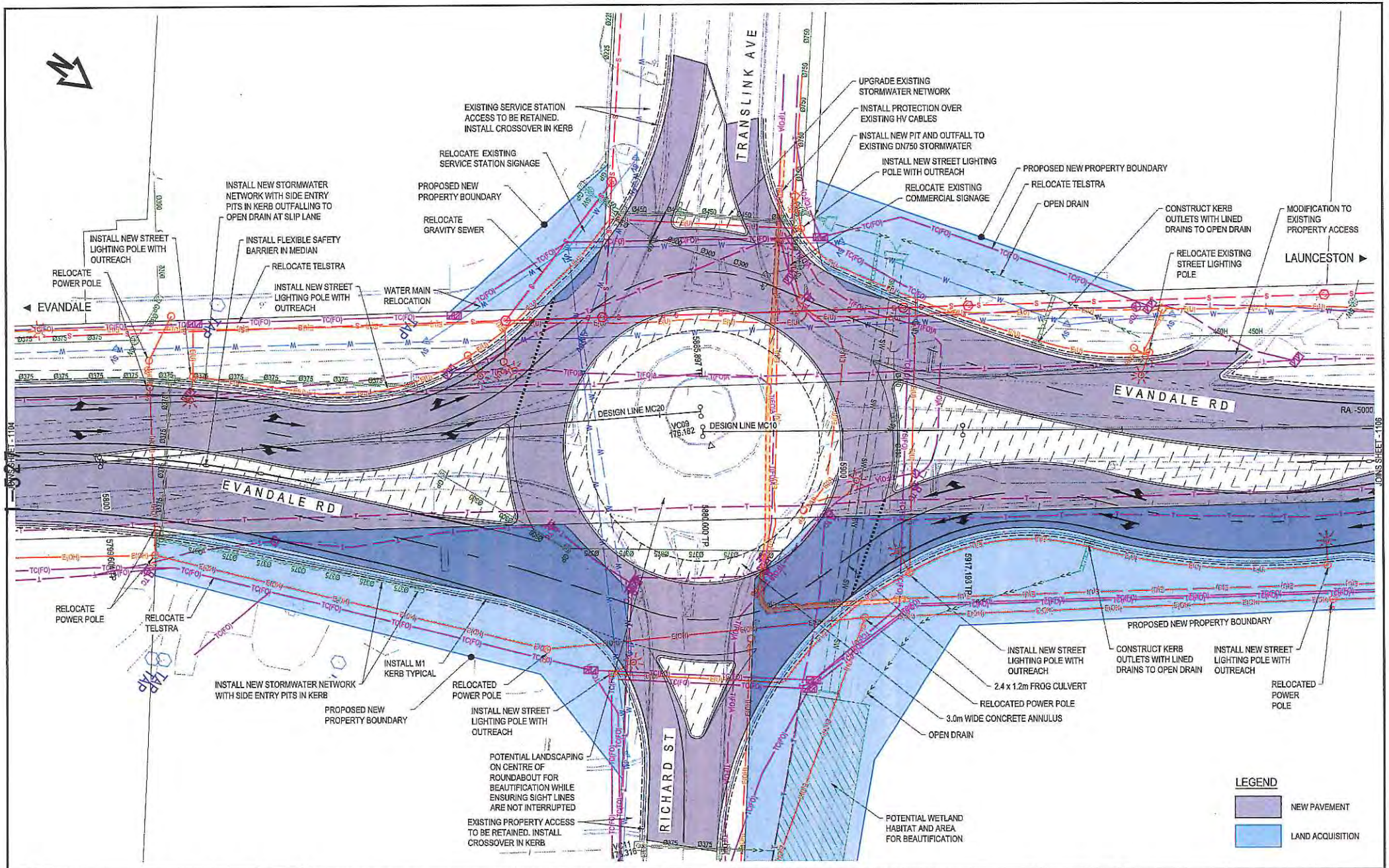

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Department of State Growth

EVANDALE MAIN ROAD (A1109)
BREADALBANE TO LAUNCESTON AIRPORT
ROADWORKS

GENERAL ARRANGEMENT - DRG 5

CONTRACT No.	DRAWING	PRINTED DATE	SHEET No.
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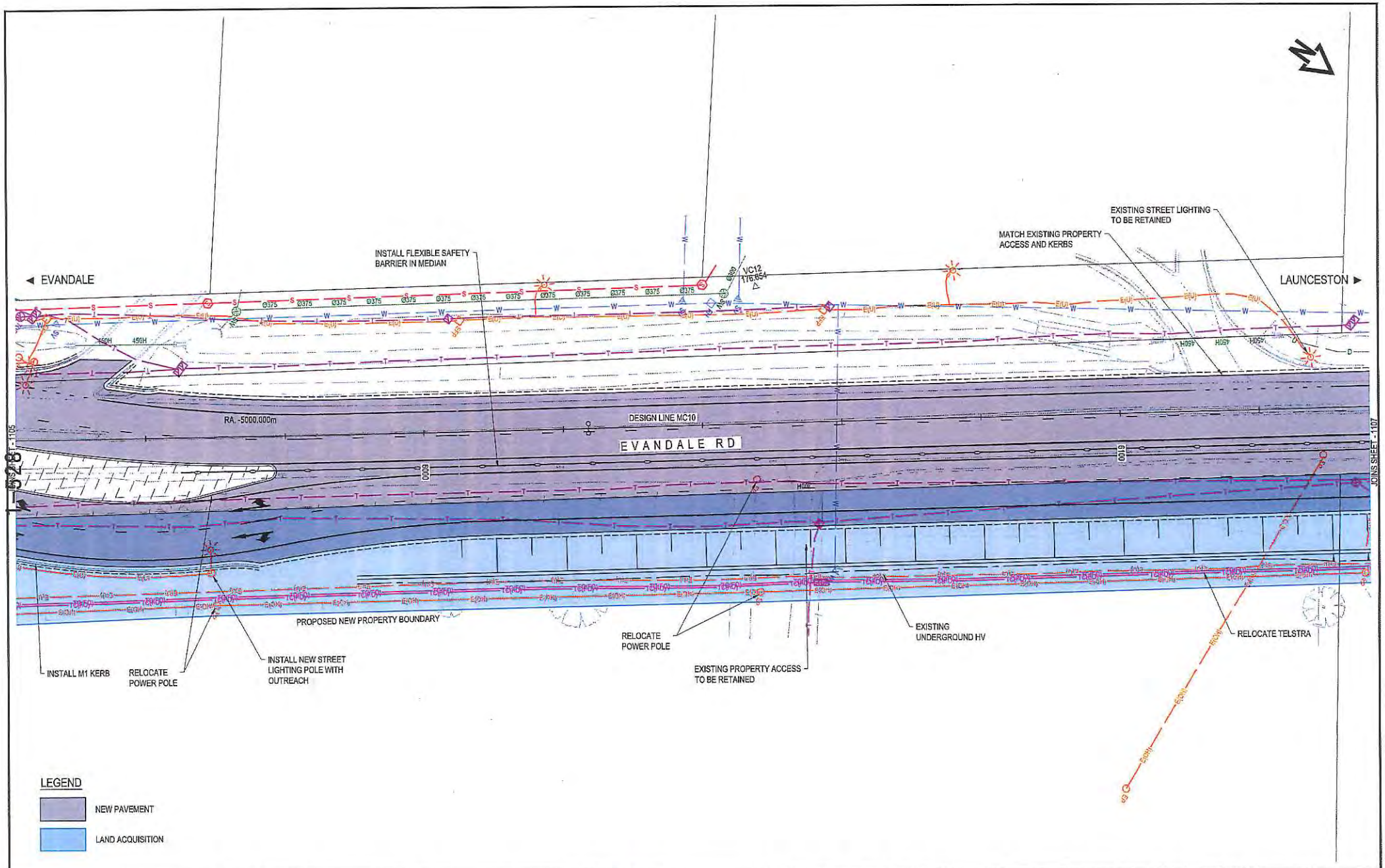

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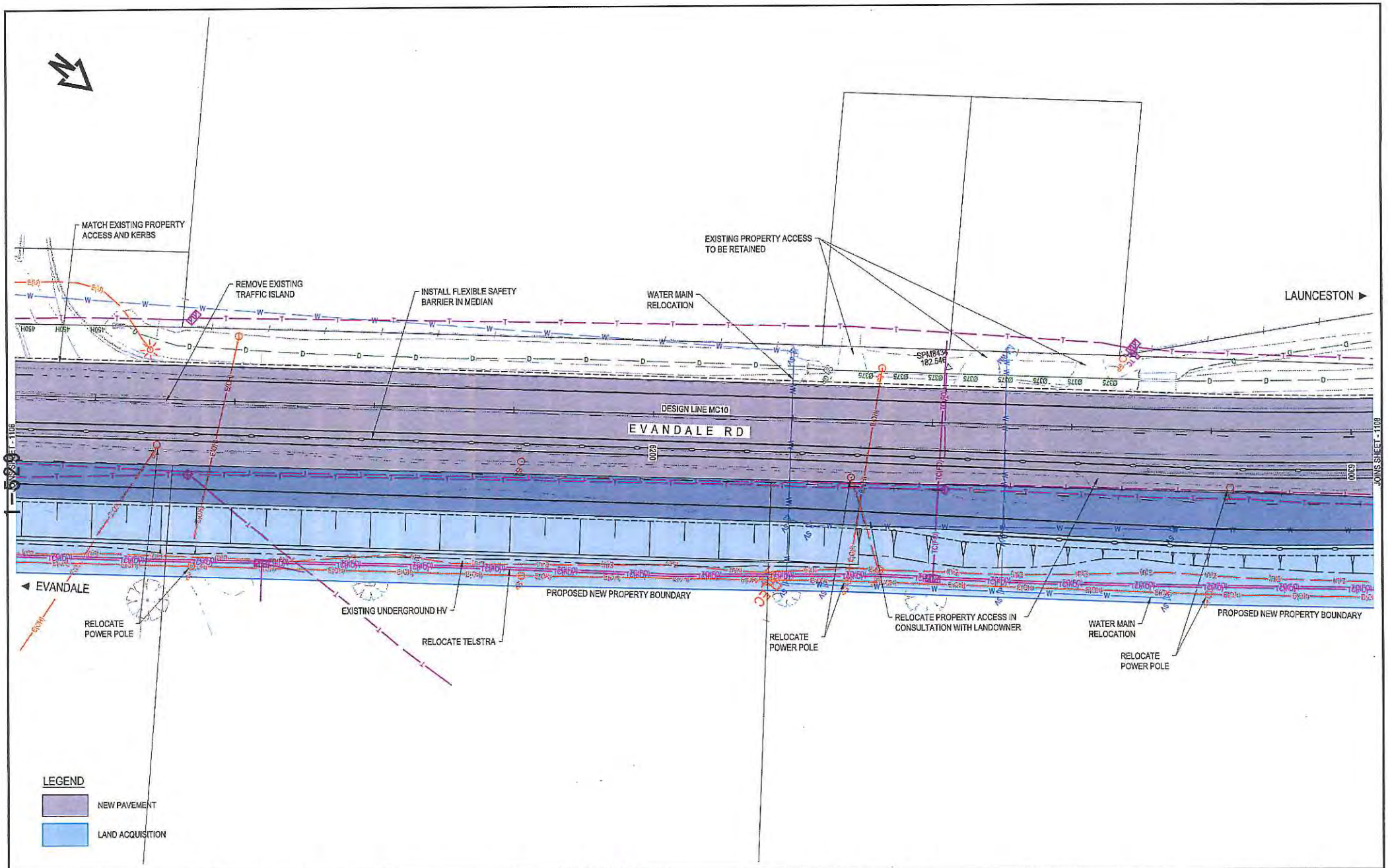
REVIEWED R. THORP

Department of State Growth
EVANDALE MAIN ROAD (A1109)
BREADALBANE TO LAUNCESTON AIRPORT
ROADWORKS
GENERAL ARRANGEMENT - DRG 6

CONTRACT No.	DRAWING	PRINTED DATE	SHEET No.
-	HB18139-P26	05-Jun-20, 3:44 PM	P26

REGISTRATION NUMBER
HB18139-P26

REVISION A



No.	Amendment Description	Initials	Date
A	CONCEPT DESIGN	R.T.	-

A3 original | This sheet may be prepared using colour and may be incomplete if copied

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SCALE IN METRES - 1:500

Co-ordinate System: MGA ZONE 55 | Height Datum: A.H.D.

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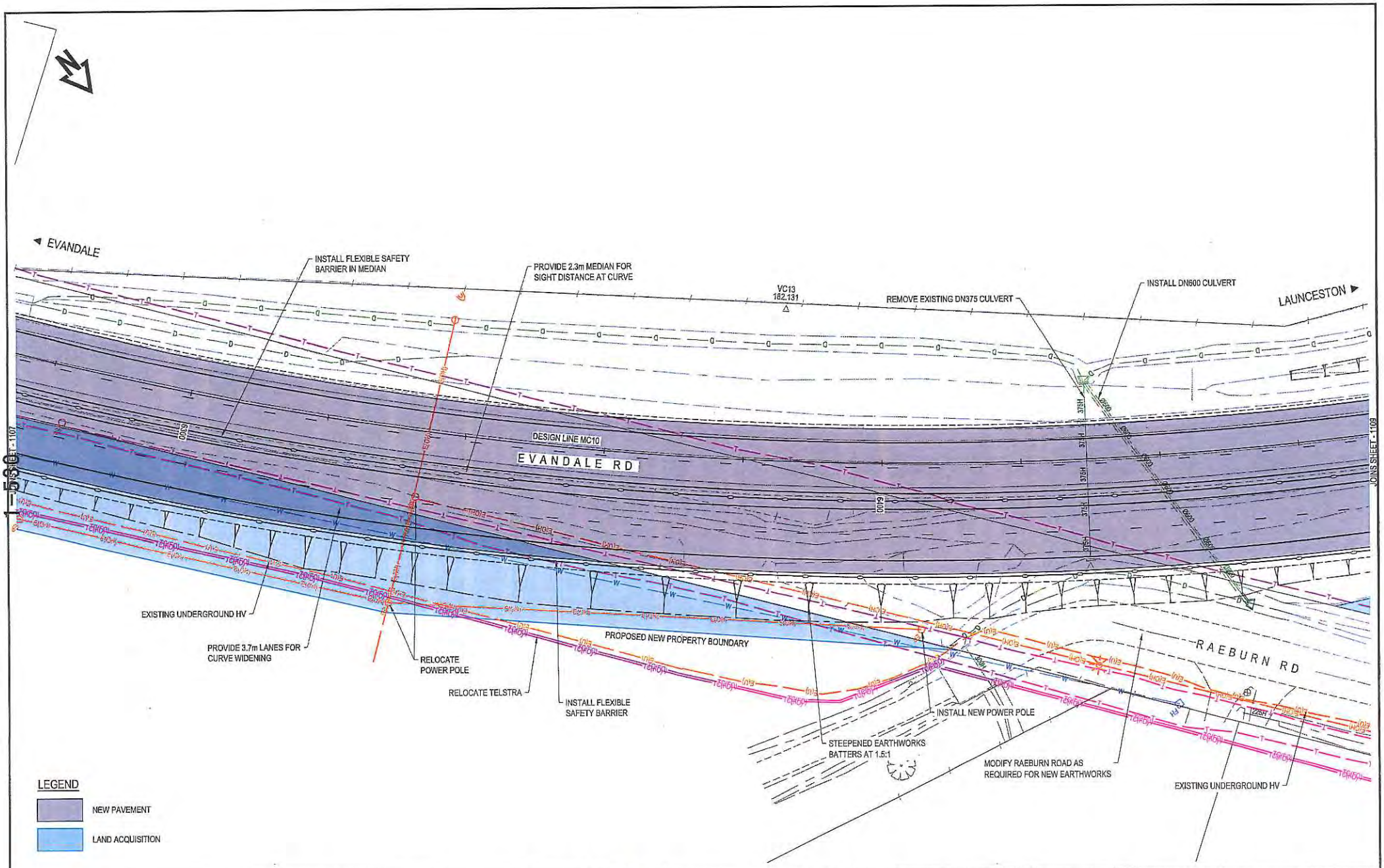
Department of State Growth
EVANDALE MAIN ROAD (A1109)
BREADALBANE TO LAUNCESTON AIRPORT
ROADWORKS
GENERAL ARRANGEMENT - DRG 7

CONTRACT No.	DRAWING	PRINTED DATE	SHEET No.
-	HB18139-P27	05-Jun-20, 3:44 PM	P27

REGISTRATION NUMBER
HB18139-P27

REVISION A



No.	Amendment Description	Initials	Date
A	CONCEPT DESIGN	R.T.	-

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SCALE IN METRES - 1:500

Co-ordinate System: MGA ZONE 55 | Height Datum: A.H.D.

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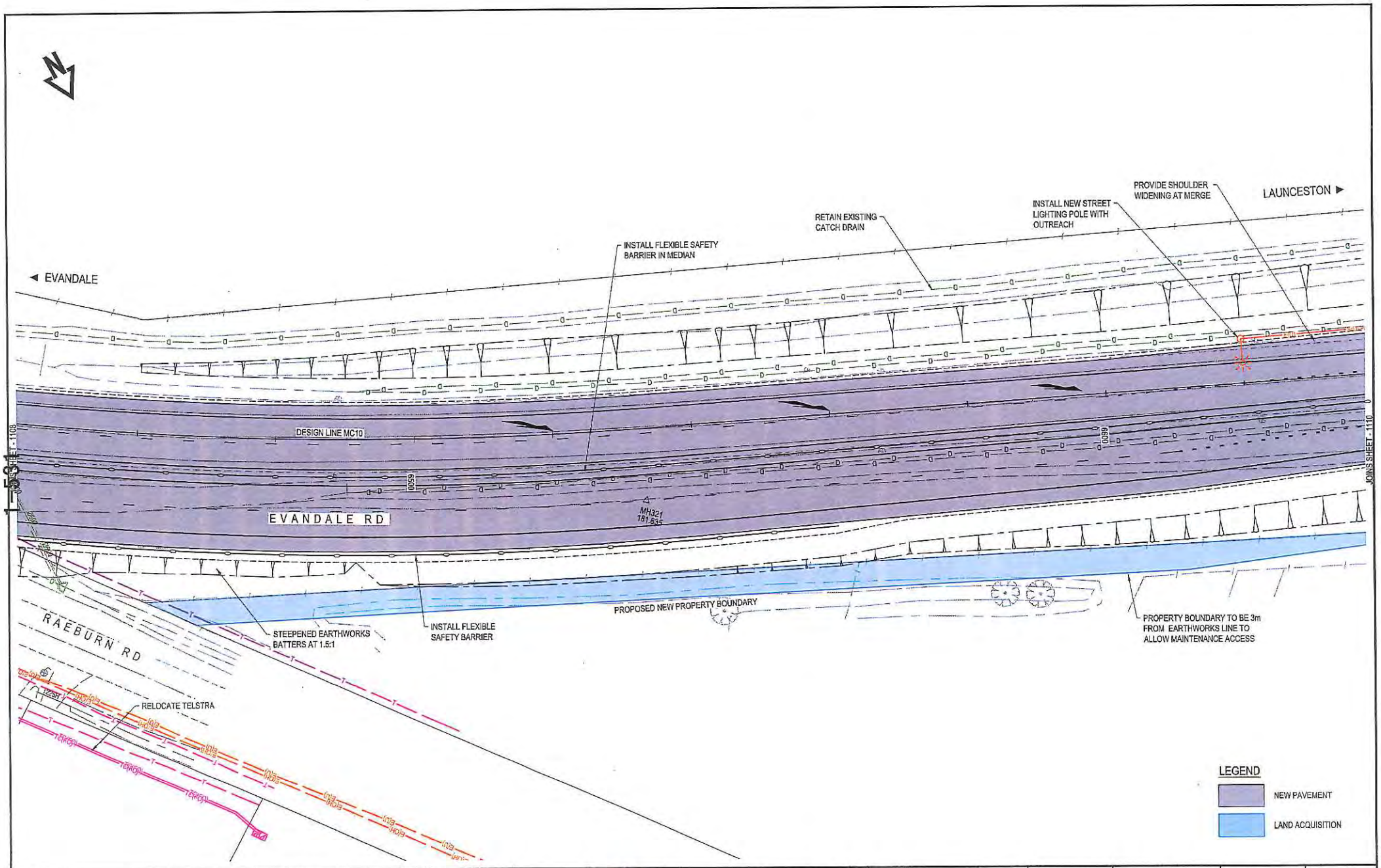
EVANDALE MAIN ROAD (A1109)
BREADALBANE TO LAUNCESTON AIRPORT
ROADWORKS

GENERAL ARRANGEMENT - DRG 8

CONTRACT No.	DRAWING	PRINTED DATE	SHEET No.
-	HB18139-P28	05-Jun-20, 3:44 PM	P28

REGISTRATION NUMBER
HB18139-P28

REVISION A



No.	Amendment Description	Initials	Date
A	CONCEPT DESIGN	R.T.	-

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SCALE IN METRES - 1:500

Co-ordinate System: MGA ZONE 55 | Height Datum: A.H.D.

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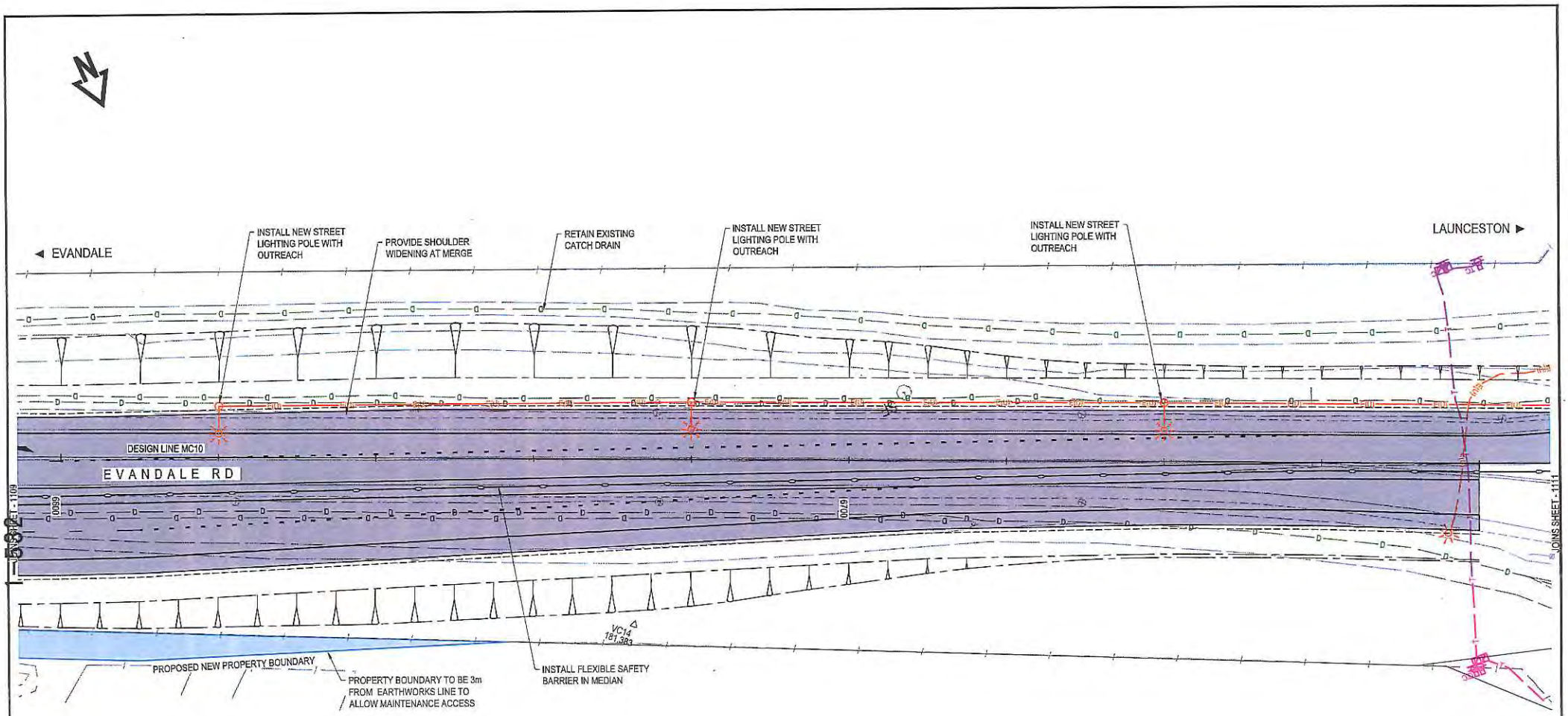
EVANDALE MAIN ROAD (A1109)
BREADALBANE TO LAUNCESTON AIRPORT
ROADWORKS
GENERAL ARRANGEMENT - DRG 9

CONTRACT No.	DRAWING	PRINTED DATE	SHEET No.
-	HB18139-P29	05-Jun-20, 3:45 PM	P29

REGISTRATION NUMBER
HB18139-P29

REVISION A



LEGEND

NEW PAVEMENT

LAND ACQUISITION

No.	Amendment Description	Initials	Date
A	CONCEPT DESIGN	R.T.	-

A3 original | This sheet may be prepared using colour and may be incomplete if copied

SCALES
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SCALE IN METRES - 1:500

Co-ordinate System: MGA ZONE 55 | Height Datum: A.H.D.

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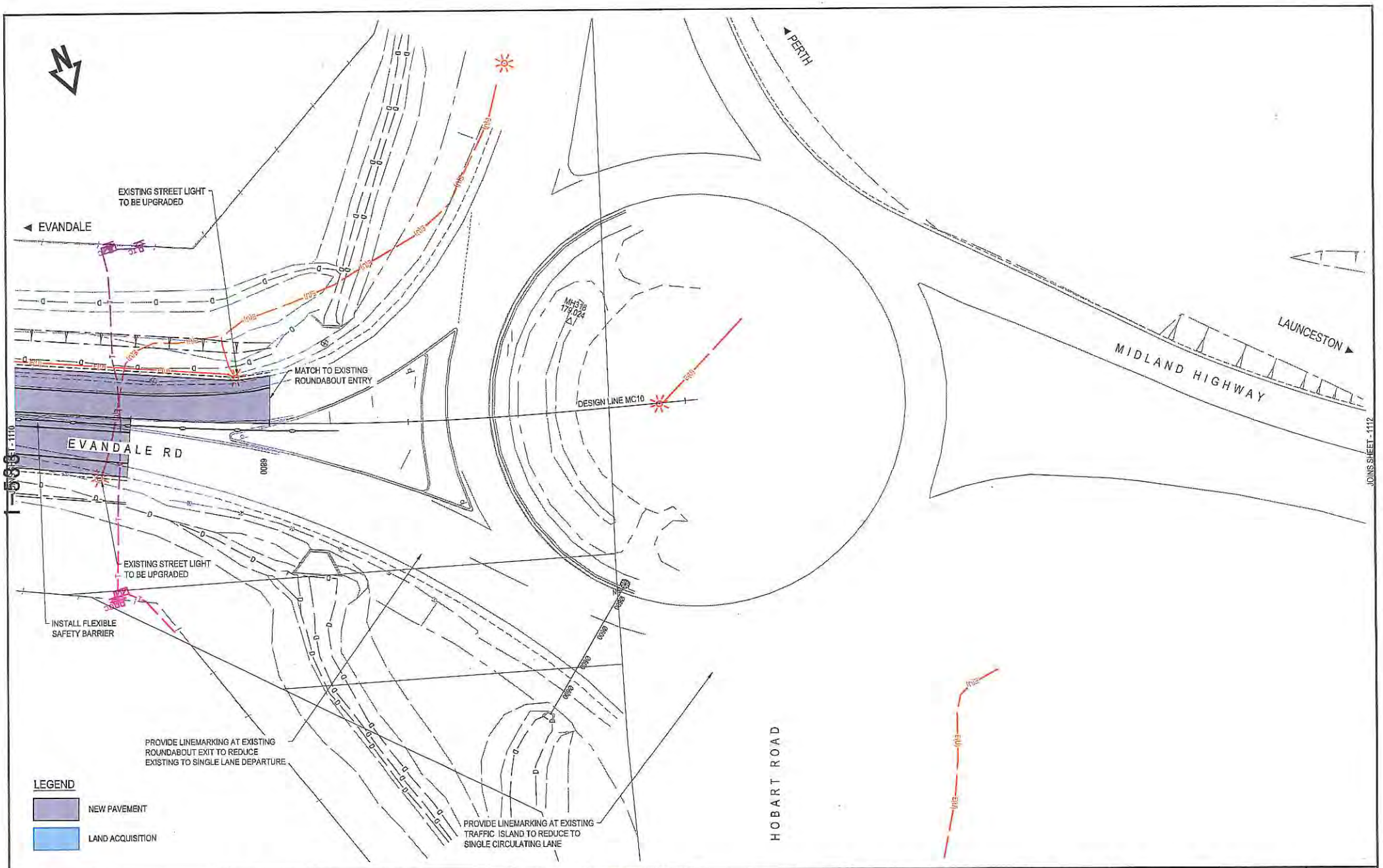
EVANDALE MAIN ROAD (A1109)
BREADALBANE TO LAUNCESTON AIRPORT
ROADWORKS

GENERAL ARRANGEMENT - DRG 10

CONTRACT No.	DRAWING	PRINTED DATE	SHEET No.
-	HB18139-P30	05-Jun-20, 3:45 PM	P30

REGISTRATION NUMBER
HB18139-P30

REVISION A



No.	Amendment Description	Initials	Date
A	CONCEPT DESIGN	R.T.	-

A3 original | This sheet may be prepared using colour and may be incomplete if copied

SCALES
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SCALE IN METRES - 1:500

Co-ordinate System: MGA ZONE 55 | Height Datum: A.H.D.

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EVANDALE MAIN ROAD (A1109)
BREADALBANE TO LAUNCESTON AIRPORT
ROADWORKS

GENERAL ARRANGEMENT - DRG 11

CONTRACT No.	DRAWING	PRINTED DATE	SHEET No.
-	HB18139-P31	05-Jun-20, 3:45 PM	P31

REGISTRATION NUMBER
HB18139-P31

REVISION A

SIDRA Results - Existing Layout Operation 2020

Appendix B

MOVEMENT SUMMARY

Site: 2 [Evandale Road/ Richard Street/ Translink Avenue - Existing AM Peak]

07:45-08:45
Site Category: (None)
Roundabout

Movement Performance - Vehicles

Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Evandale Road												
4	L2	18	5.0	0.301	6.8	LOS A	1.8	13.9	0.42	0.57	0.42	57.2
5	T1	327	10.0	0.301	7.5	LOS A	1.8	13.9	0.42	0.57	0.42	63.2
6	R2	4	2.0	0.301	11.9	LOS B	1.8	13.9	0.42	0.57	0.42	55.8
6u	U	1	2.0	0.301	14.3	LOS B	1.8	13.9	0.42	0.57	0.42	66.0
Approach		351	9.6	0.301	7.5	LOS A	1.8	13.9	0.42	0.57	0.42	62.9
East: Richard Street												
7	L2	2	2.0	0.087	5.7	LOS A	0.4	4.4	0.62	0.71	0.62	50.3
8	T1	9	30.0	0.087	6.4	LOS A	0.4	4.4	0.62	0.71	0.62	32.6
9	R2	44	60.0	0.087	12.1	LOS B	0.4	4.4	0.62	0.71	0.62	41.6
9u	U	1	2.0	0.087	12.0	LOS B	0.4	4.4	0.62	0.71	0.62	46.1
Approach		57	51.8	0.087	10.9	LOS B	0.4	4.4	0.62	0.71	0.62	40.8
North: Evandale Road												
10	L2	63	20.0	0.390	6.3	LOS A	3.0	22.4	0.25	0.53	0.25	54.3
11	T1	391	5.0	0.390	6.6	LOS A	3.0	22.4	0.25	0.53	0.25	65.0
12	R2	104	15.0	0.390	11.4	LOS B	3.0	22.4	0.25	0.53	0.25	42.4
12u	U	1	2.0	0.390	13.5	LOS B	3.0	22.4	0.25	0.53	0.25	66.5
Approach		559	8.6	0.390	7.5	LOS A	3.0	22.4	0.25	0.53	0.25	59.8
West: Translink Avenue												
1	L2	35	30.0	0.090	5.4	LOS A	0.5	4.0	0.54	0.63	0.54	45.3
2	T1	9	60.0	0.090	6.0	LOS A	0.5	4.0	0.54	0.63	0.54	43.7
3	R2	32	10.0	0.090	9.5	LOS A	0.5	4.0	0.54	0.63	0.54	51.8
3u	U	1	20.0	0.090	11.5	LOS B	0.5	4.0	0.54	0.63	0.54	17.6
Approach		77	25.3	0.090	7.2	LOS A	0.5	4.0	0.54	0.63	0.54	47.2
All Vehicles		1043	12.5	0.390	7.7	LOS A	3.0	22.4	0.35	0.56	0.35	58.6

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: SIDRA Roundabout LOS.
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 3 [Evandale Road/ Airport Main Access/ Hudson Fysh Drive - Existing AM Peak]

07:45-08:45
Site Category: (None)
Roundabout

Movement Performance - Vehicles

Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Evandale Road												
4	L2	4	2.0	0.211	6.8	LOS A	1.2	8.7	0.42	0.59	0.42	53.8
5	T1	201	5.0	0.211	7.5	LOS A	1.2	8.7	0.42	0.59	0.42	64.1
6	R2	35	2.0	0.211	12.0	LOS B	1.2	8.7	0.42	0.59	0.42	42.0
6u	U	1	2.0	0.211	14.4	LOS B	1.2	8.7	0.42	0.59	0.42	65.5
Approach		241	4.5	0.211	8.1	LOS A	1.2	8.7	0.42	0.59	0.42	60.9
East: Airport Main Access												
7	L2	17	2.0	0.138	3.8	LOS A	0.7	5.2	0.37	0.59	0.37	52.8
8	T1	14	2.0	0.138	3.7	LOS A	0.7	5.2	0.37	0.59	0.37	43.9
9	R2	131	2.0	0.138	8.2	LOS A	0.7	5.2	0.37	0.59	0.37	54.1
9u	U	1	2.0	0.138	10.1	LOS B	0.7	5.2	0.37	0.59	0.37	18.8
Approach		162	2.0	0.138	7.4	LOS A	0.7	5.2	0.37	0.59	0.37	52.7
North: Evandale Road												
10	L2	227	2.0	0.285	6.0	LOS A	1.8	13.0	0.23	0.55	0.23	58.8
11	T1	112	10.0	0.285	6.7	LOS A	1.8	13.0	0.23	0.55	0.23	64.3
12	R2	60	10.0	0.285	11.3	LOS B	1.8	13.0	0.23	0.55	0.23	56.5
12u	U	2	2.0	0.285	13.5	LOS B	1.8	13.0	0.23	0.55	0.23	67.3
Approach		401	5.4	0.285	7.0	LOS A	1.8	13.0	0.23	0.55	0.23	60.2
West: Hudson Fysh Drive												
1	L2	25	30.0	0.055	5.2	LOS A	0.3	2.2	0.50	0.55	0.50	48.0
2	T1	17	2.0	0.055	4.6	LOS A	0.3	2.2	0.50	0.55	0.50	45.5
3	R2	7	15.0	0.055	9.4	LOS A	0.3	2.2	0.50	0.55	0.50	51.1
3u	U	1	2.0	0.055	10.9	LOS B	0.3	2.2	0.50	0.55	0.50	48.4
Approach		51	17.9	0.055	5.7	LOS A	0.3	2.2	0.50	0.55	0.50	47.9
All Vehicles		855	5.3	0.285	7.3	LOS A	1.8	13.0	0.33	0.57	0.33	58.3

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: SIDRA Roundabout LOS.
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 2 [Evandale Road/ Richard Street/ Translink Avenue - Existing PM Peak]

16:30-17:30
Site Category: (None)
Roundabout

Movement Performance - Vehicles

Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Evandale Road												
4	L2	22	2.0	0.413	6.4	LOS A	3.0	21.0	0.38	0.53	0.38	57.7
5	T1	521	2.0	0.413	7.0	LOS A	3.0	21.0	0.38	0.53	0.38	65.6
6	R2	4	2.0	0.413	11.6	LOS B	3.0	21.0	0.38	0.53	0.38	56.0
6u	U	1	2.0	0.413	14.0	LOS B	3.0	21.0	0.38	0.53	0.38	66.3
Approach		548	2.0	0.413	7.1	LOS A	3.0	21.0	0.38	0.53	0.38	65.3
East: Richard Street												
7	L2	6	2.0	0.074	6.7	LOS A	0.4	3.1	0.67	0.72	0.67	49.9
8	T1	3	2.0	0.074	6.6	LOS A	0.4	3.1	0.67	0.72	0.67	32.5
9	R2	45	10.0	0.074	11.4	LOS B	0.4	3.1	0.67	0.72	0.67	49.1
9u	U	1	2.0	0.074	13.0	LOS B	0.4	3.1	0.67	0.72	0.67	45.8
Approach		56	8.5	0.074	10.6	LOS B	0.4	3.1	0.67	0.72	0.67	48.3
North: Evandale Road												
10	L2	20	25.0	0.445	6.5	LOS A	3.7	27.0	0.32	0.51	0.32	54.1
11	T1	546	2.0	0.445	6.7	LOS A	3.7	27.0	0.32	0.51	0.32	65.7
12	R2	66	11.0	0.445	11.5	LOS B	3.7	27.0	0.32	0.51	0.32	42.4
12u	U	1	2.0	0.445	13.7	LOS B	3.7	27.0	0.32	0.51	0.32	66.3
Approach		634	3.7	0.445	7.2	LOS A	3.7	27.0	0.32	0.51	0.32	63.0
West: Translink Avenue												
1	L2	88	10.0	0.183	6.4	LOS A	1.1	8.0	0.66	0.72	0.66	50.2
2	T1	3	2.0	0.183	6.1	LOS A	1.1	8.0	0.66	0.72	0.66	43.6
3	R2	59	2.0	0.183	10.6	LOS B	1.1	8.0	0.66	0.72	0.66	54.1
3u	U	1	2.0	0.183	12.5	LOS B	1.1	8.0	0.66	0.72	0.66	17.2
Approach		152	6.7	0.183	8.1	LOS A	1.1	8.0	0.66	0.72	0.66	51.2
All Vehicles		1389	3.5	0.445	7.4	LOS A	3.7	27.0	0.40	0.55	0.40	62.2

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: SIDRA Roundabout LOS.
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 3 [Evandale Road/ Airport Main Access/ Hudson Fysh Drive - Existing PM Peak]

16:30-17:30
Site Category: (None)
Roundabout

Movement Performance - Vehicles

Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Evandale Road												
4	L2	8	25.0	0.201	8.5	LOS A	1.2	8.7	0.56	0.67	0.56	52.9
5	T1	161	5.0	0.201	8.4	LOS A	1.2	8.7	0.56	0.67	0.56	63.2
6	R2	26	2.0	0.201	12.9	LOS B	1.2	8.7	0.56	0.67	0.56	41.4
6u	U	1	2.0	0.201	15.3	LOS B	1.2	8.7	0.56	0.67	0.56	64.5
Approach		197	5.4	0.201	9.0	LOS A	1.2	8.7	0.56	0.67	0.56	60.0
East: Airport Main Access												
7	L2	23	2.0	0.316	4.3	LOS A	2.0	14.0	0.49	0.64	0.49	51.8
8	T1	18	2.0	0.316	4.3	LOS A	2.0	14.0	0.49	0.64	0.49	43.3
9	R2	316	2.0	0.316	8.8	LOS A	2.0	14.0	0.49	0.64	0.49	53.0
9u	U	1	2.0	0.316	10.6	LOS B	2.0	14.0	0.49	0.64	0.49	18.5
Approach		358	2.0	0.316	8.3	LOS A	2.0	14.0	0.49	0.64	0.49	52.2
North: Evandale Road												
10	L2	403	2.0	0.439	6.1	LOS A	3.4	24.5	0.29	0.53	0.29	59.0
11	T1	194	2.0	0.439	6.7	LOS A	3.4	24.5	0.29	0.53	0.29	66.8
12	R2	35	20.0	0.439	11.6	LOS B	3.4	24.5	0.29	0.53	0.29	56.4
12u	U	3	2.0	0.439	13.6	LOS B	3.4	24.5	0.29	0.53	0.29	67.4
Approach		635	3.0	0.439	6.6	LOS A	3.4	24.5	0.29	0.53	0.29	61.8
West: Hudson Fysh Drive												
1	L2	57	5.0	0.105	5.6	LOS A	0.6	4.2	0.59	0.62	0.59	52.4
2	T1	29	2.0	0.105	5.5	LOS A	0.6	4.2	0.59	0.62	0.59	45.3
3	R2	7	2.0	0.105	10.0	LOS A	0.6	4.2	0.59	0.62	0.59	53.8
3u	U	1	2.0	0.105	11.8	LOS B	0.6	4.2	0.59	0.62	0.59	48.3
Approach		95	3.8	0.105	6.0	LOS A	0.6	4.2	0.59	0.62	0.59	50.8
All Vehicles		1284	3.1	0.439	7.4	LOS A	3.4	24.5	0.41	0.59	0.41	58.0

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: SIDRA Roundabout LOS.
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

SIDRA Results – Existing Layout Operation 2021 and 2031

Appendix C

MOVEMENT SUMMARY

Site: 2 [Evandale Road/ Richard Street/ Translink Avenue - Existing Layout 2021 AM Peak]

07:45-08:45
Site Category: (None)
Roundabout

Movement Performance - Vehicles

Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Evandale Road												
4	L2	29	5.0	0.729	10.0	LOS A	9.1	68.9	0.80	0.77	0.92	54.0
5	T1	766	10.0	0.729	10.8	LOS B	9.1	68.9	0.80	0.77	0.92	60.8
6	R2	5	2.0	0.729	15.0	LOS B	9.1	68.9	0.80	0.77	0.92	54.0
6u	U	1	2.0	0.729	17.4	LOS B	9.1	68.9	0.80	0.77	0.92	63.4
Approach		802	9.8	0.729	10.8	LOS B	9.1	68.9	0.80	0.77	0.92	60.6
East: Richard Street												
7	L2	2	2.0	0.157	8.9	LOS A	0.9	9.2	0.81	0.87	0.81	47.6
8	T1	12	30.0	0.157	10.1	LOS B	0.9	9.2	0.81	0.87	0.81	30.8
9	R2	54	60.0	0.157	16.3	LOS B	0.9	9.2	0.81	0.87	0.81	39.8
9u	U	1	2.0	0.157	15.2	LOS B	0.9	9.2	0.81	0.87	0.81	43.8
Approach		68	52.2	0.157	15.0	LOS B	0.9	9.2	0.81	0.87	0.81	38.8
North: Evandale Road												
10	L2	79	20.0	0.636	6.8	LOS A	7.4	55.8	0.50	0.54	0.50	53.2
11	T1	623	5.0	0.636	7.1	LOS A	7.4	55.8	0.50	0.54	0.50	63.6
12	R2	171	15.0	0.636	11.9	LOS B	7.4	55.8	0.50	0.54	0.50	41.4
12u	U	1	2.0	0.636	14.0	LOS B	7.4	55.8	0.50	0.54	0.50	65.0
Approach		874	8.3	0.636	8.0	LOS A	7.4	55.8	0.50	0.54	0.50	58.5
West: Translink Avenue												
1	L2	59	30.0	0.278	10.5	LOS B	1.9	15.9	0.89	0.91	0.89	41.1
2	T1	16	60.0	0.278	11.9	LOS B	1.9	15.9	0.89	0.91	0.89	39.8
3	R2	54	10.0	0.278	14.1	LOS B	1.9	15.9	0.89	0.91	0.89	46.4
3u	U	1	20.0	0.278	16.4	LOS B	1.9	15.9	0.89	0.91	0.89	15.5
Approach		129	25.3	0.278	12.2	LOS B	1.9	15.9	0.89	0.91	0.89	42.8
All Vehicles		1874	11.7	0.729	9.7	LOS A	9.1	68.9	0.67	0.67	0.72	57.4

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: SIDRA Roundabout LOS.
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 3 [Evandale Road/ Airport Main Access/ Hudson Fysh Drive - Existing Layout 2021 AM Peak]

07:45-08:45
Site Category: (None)
Roundabout

Movement Performance - Vehicles

Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Evandale Road												
4	L2	22	2.0	0.785	15.8	LOS B	11.6	84.3	0.98	1.07	1.42	48.5
5	T1	634	5.0	0.785	16.6	LOS B	11.6	84.3	0.98	1.07	1.42	56.7
6	R2	37	2.0	0.785	21.0	LOS C	11.6	84.3	0.98	1.07	1.42	36.7
6u	U	1	2.0	0.785	23.4	LOS C	11.6	84.3	0.98	1.07	1.42	57.8
Approach		694	4.7	0.785	16.8	LOS B	11.6	84.3	0.98	1.07	1.42	55.4
East: Airport Main Access												
7	L2	18	2.0	0.255	7.5	LOS A	1.8	12.5	0.82	0.84	0.82	49.2
8	T1	15	2.0	0.255	7.5	LOS A	1.8	12.5	0.82	0.84	0.82	41.4
9	R2	138	2.0	0.255	12.0	LOS B	1.8	12.5	0.82	0.84	0.82	50.3
9u	U	1	2.0	0.255	13.8	LOS B	1.8	12.5	0.82	0.84	0.82	17.4
Approach		172	2.0	0.255	11.2	LOS B	1.8	12.5	0.82	0.84	0.82	49.1
North: Evandale Road												
10	L2	240	2.0	0.736	7.8	LOS A	9.2	68.7	0.77	0.67	0.79	54.0
11	T1	328	10.0	0.736	8.6	LOS A	9.2	68.7	0.77	0.67	0.79	60.7
12	R2	319	10.0	0.736	13.2	LOS B	9.2	68.7	0.77	0.67	0.79	53.8
12u	U	2	2.0	0.736	15.3	LOS B	9.2	68.7	0.77	0.67	0.79	63.3
Approach		889	7.8	0.736	10.0	LOS B	9.2	68.7	0.77	0.67	0.79	56.5
West: Hudson Fysh Drive												
1	L2	140	30.0	0.539	14.0	LOS B	4.8	38.5	0.97	1.08	1.19	43.5
2	T1	94	2.0	0.539	12.5	LOS B	4.8	38.5	0.97	1.08	1.19	39.1
3	R2	41	15.0	0.539	17.7	LOS B	4.8	38.5	0.97	1.08	1.19	46.1
3u	U	1	2.0	0.539	18.9	LOS B	4.8	38.5	0.97	1.08	1.19	43.8
Approach		276	18.1	0.539	14.1	LOS B	4.8	38.5	0.97	1.08	1.19	42.8
All Vehicles		2031	7.7	0.785	13.0	LOS B	11.6	84.3	0.87	0.87	1.06	53.4

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: SIDRA Roundabout LOS.
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 2 [Evandale Road/ Richard Street/ Translink Avenue - Existing Layout 2021 PM Peak]

16:30-17:30
Site Category: (None)
Roundabout

Movement Performance - Vehicles

Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Evandale Road												
4	L2	33	2.0	0.644	7.3	LOS A	6.3	44.9	0.65	0.61	0.65	55.5
5	T1	760	2.0	0.644	7.9	LOS A	6.3	44.9	0.65	0.61	0.65	63.9
6	R2	6	2.0	0.644	12.5	LOS B	6.3	44.9	0.65	0.61	0.65	54.7
6u	U	1	2.0	0.644	14.9	LOS B	6.3	44.9	0.65	0.61	0.65	64.5
Approach		800	2.0	0.644	7.9	LOS A	6.3	44.9	0.65	0.61	0.65	63.6
East: Richard Street												
7	L2	6	2.0	0.247	15.9	LOS B	1.8	13.8	1.00	0.97	1.00	44.2
8	T1	4	2.0	0.247	15.9	LOS B	1.8	13.8	1.00	0.97	1.00	28.5
9	R2	65	10.0	0.247	21.0	LOS C	1.8	13.8	1.00	0.97	1.00	43.6
9u	U	1	2.0	0.247	22.2	LOS C	1.8	13.8	1.00	0.97	1.00	41.0
Approach		77	8.8	0.247	20.3	LOS C	1.8	13.8	1.00	0.97	1.00	42.9
North: Evandale Road												
10	L2	29	25.0	0.824	7.8	LOS A	14.2	102.0	0.80	0.55	0.80	52.1
11	T1	998	2.0	0.824	7.7	LOS A	14.2	102.0	0.80	0.55	0.80	62.7
12	R2	107	11.0	0.824	12.6	LOS B	14.2	102.0	0.80	0.55	0.80	40.3
12u	U	1	2.0	0.824	14.7	LOS B	14.2	102.0	0.80	0.55	0.80	63.3
Approach		1136	3.4	0.824	8.2	LOS A	14.2	102.0	0.80	0.55	0.80	60.5
West: Translink Avenue												
1	L2	137	10.0	0.397	10.0	LOS B	2.9	21.7	0.90	0.94	0.94	46.4
2	T1	5	2.0	0.397	9.6	LOS A	2.9	21.7	0.90	0.94	0.94	40.7
3	R2	91	2.0	0.397	14.1	LOS B	2.9	21.7	0.90	0.94	0.94	49.7
3u	U	1	2.0	0.397	16.0	LOS B	2.9	21.7	0.90	0.94	0.94	15.7
Approach		234	6.7	0.397	11.6	LOS B	2.9	21.7	0.90	0.94	0.94	47.3
All Vehicles		2246	3.5	0.824	8.9	LOS A	14.2	102.0	0.76	0.63	0.77	59.6

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: SIDRA Roundabout LOS.
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 3 [Evandale Road/ Airport Main Access/ Hudson Fysh Drive - Existing Layout 2021 PM Peak]

16:30-17:30
Site Category: (None)
Roundabout

Movement Performance - Vehicles

Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Evandale Road												
4	L2	41	25.0	0.555	12.2	LOS B	5.0	36.9	0.85	0.90	0.98	51.4
5	T1	380	5.0	0.555	11.8	LOS B	5.0	36.9	0.85	0.90	0.98	61.0
6	R2	27	2.0	0.555	16.3	LOS B	5.0	36.9	0.85	0.90	0.98	39.8
6u	U	1	2.0	0.555	18.7	LOS B	5.0	36.9	0.85	0.90	0.98	62.3
Approach		449	6.6	0.555	12.2	LOS B	5.0	36.9	0.85	0.90	0.98	58.8
East: Airport Main Access												
7	L2	24	2.0	0.714	18.8	LOS B	8.5	60.7	1.00	1.22	1.49	39.3
8	T1	19	2.0	0.714	18.8	LOS B	8.5	60.7	1.00	1.22	1.49	34.2
9	R2	334	2.0	0.714	23.3	LOS C	8.5	60.7	1.00	1.22	1.49	40.0
9u	U	1	2.0	0.714	25.1	LOS C	8.5	60.7	1.00	1.22	1.49	13.8
Approach		378	2.0	0.714	22.8	LOS C	8.5	60.7	1.00	1.22	1.49	39.5
North: Evandale Road												
10	L2	426	2.0	1.015	42.2	LOS D	58.2	423.4	1.00	1.34	2.35	30.1
11	T1	625	2.0	1.015	42.8	LOS D	58.2	423.4	1.00	1.34	2.35	40.6
12	R2	168	20.0	1.015	48.4	LOS D	58.2	423.4	1.00	1.34	2.35	36.5
12u	U	3	2.0	1.015	49.8	LOS D	58.2	423.4	1.00	1.34	2.35	40.8
Approach		1223	4.5	1.015	43.4	LOS D	58.2	423.4	1.00	1.34	2.35	36.8
West: Hudson Fysh Drive												
1	L2	272	5.0	0.648	14.0	LOS B	7.0	50.6	0.96	1.14	1.33	47.0
2	T1	141	2.0	0.648	13.8	LOS B	7.0	50.6	0.96	1.14	1.33	38.8
3	R2	35	2.0	0.648	18.4	LOS B	7.0	50.6	0.96	1.14	1.33	48.1
3u	U	1	2.0	0.648	20.2	LOS C	7.0	50.6	0.96	1.14	1.33	43.6
Approach		448	3.8	0.648	14.3	LOS B	7.0	50.6	0.96	1.14	1.33	45.1
All Vehicles		2499	4.4	1.015	29.5	LOS C	58.2	423.4	0.97	1.21	1.79	41.8

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: SIDRA Roundabout LOS.
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 2 [Evandale Road/ Richard Street/ Translink Avenue - Existing Layout 2031 AM Peak]

07:45-08:45
Site Category: (None)
Roundabout

Movement Performance - Vehicles

Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Evandale Road												
4	L2	29	5.0	0.813	12.1	LOS B	13.4	101.5	0.92	0.85	1.14	51.8
5	T1	861	10.0	0.813	12.9	LOS B	13.4	101.5	0.92	0.85	1.14	59.1
6	R2	5	2.0	0.813	17.1	LOS B	13.4	101.5	0.92	0.85	1.14	52.6
6u	U	1	2.0	0.813	19.5	LOS B	13.4	101.5	0.92	0.85	1.14	61.6
Approach		897	9.8	0.813	12.9	LOS B	13.4	101.5	0.92	0.85	1.14	58.9
East: Richard Street												
7	L2	2	2.0	0.188	10.6	LOS B	1.1	11.6	0.87	0.92	0.87	46.4
8	T1	12	30.0	0.188	12.1	LOS B	1.1	11.6	0.87	0.92	0.87	29.9
9	R2	54	60.0	0.188	18.6	LOS B	1.1	11.6	0.87	0.92	0.87	38.9
9u	U	1	2.0	0.188	16.9	LOS B	1.1	11.6	0.87	0.92	0.87	42.8
Approach		68	52.2	0.188	17.2	LOS B	1.1	11.6	0.87	0.92	0.87	37.9
North: Evandale Road												
10	L2	79	20.0	0.714	7.0	LOS A	9.9	73.8	0.59	0.53	0.59	52.9
11	T1	736	5.0	0.714	7.2	LOS A	9.9	73.8	0.59	0.53	0.59	63.1
12	R2	171	15.0	0.714	12.0	LOS B	9.9	73.8	0.59	0.53	0.59	41.1
12u	U	1	2.0	0.714	14.1	LOS B	9.9	73.8	0.59	0.53	0.59	64.5
Approach		986	7.9	0.714	8.0	LOS A	9.9	73.8	0.59	0.53	0.59	58.7
West: Translink Avenue												
1	L2	59	30.0	0.340	12.3	LOS B	2.4	20.6	0.96	0.97	0.96	39.8
2	T1	16	60.0	0.340	13.9	LOS B	2.4	20.6	0.96	0.97	0.96	38.6
3	R2	54	10.0	0.340	15.7	LOS B	2.4	20.6	0.96	0.97	0.96	44.8
3u	U	1	20.0	0.340	18.0	LOS B	2.4	20.6	0.96	0.97	0.96	14.9
Approach		129	25.3	0.340	13.9	LOS B	2.4	20.6	0.96	0.97	0.96	41.4
All Vehicles		2081	11.3	0.813	10.8	LOS B	13.4	101.5	0.76	0.71	0.86	56.8

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: SIDRA Roundabout LOS.
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 3 [Evandale Road/ Airport Main Access/ Hudson Fysh Drive - Existing Layout 2031 AM Peak]

07:45-08:45
Site Category: (None)
Roundabout

Movement Performance - Vehicles

Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Evandale Road												
4	L2	22	2.0	0.913	27.8	LOS C	21.7	158.3	1.00	1.36	2.16	41.9
5	T1	695	5.0	0.913	28.6	LOS C	21.7	158.3	1.00	1.36	2.16	47.9
6	R2	51	2.0	0.913	32.9	LOS C	21.7	158.3	1.00	1.36	2.16	30.6
6u	U	1	2.0	0.913	35.3	LOS D	21.7	158.3	1.00	1.36	2.16	48.7
Approach		768	4.7	0.913	28.8	LOS C	21.7	158.3	1.00	1.36	2.16	46.7
East: Airport Main Access												
7	L2	26	2.0	0.368	8.2	LOS A	2.7	19.6	0.90	0.90	0.90	48.6
8	T1	21	2.0	0.368	8.1	LOS A	2.7	19.6	0.90	0.90	0.90	41.0
9	R2	179	2.0	0.368	12.7	LOS B	2.7	19.6	0.90	0.90	0.90	49.7
9u	U	1	2.0	0.368	14.5	LOS B	2.7	19.6	0.90	0.90	0.90	17.2
Approach		227	2.0	0.368	11.7	LOS B	2.7	19.6	0.90	0.90	0.90	48.5
North: Evandale Road												
10	L2	316	2.0	0.823	9.5	LOS A	13.9	103.6	0.91	0.71	0.99	52.9
11	T1	363	10.0	0.823	10.4	LOS B	13.9	103.6	0.91	0.71	0.99	59.9
12	R2	319	10.0	0.823	15.0	LOS B	13.9	103.6	0.91	0.71	0.99	53.1
12u	U	2	2.0	0.823	17.1	LOS B	13.9	103.6	0.91	0.71	0.99	62.4
Approach		1000	7.5	0.823	11.6	LOS B	13.9	103.6	0.91	0.71	0.99	55.7
West: Hudson Fysh Drive												
1	L2	145	30.0	0.632	20.6	LOS C	6.2	50.8	1.00	1.19	1.41	40.4
2	T1	84	2.0	0.632	18.9	LOS B	6.2	50.8	1.00	1.19	1.41	35.0
3	R2	41	15.0	0.632	24.2	LOS C	6.2	50.8	1.00	1.19	1.41	42.6
3u	U	1	2.0	0.632	25.3	LOS C	6.2	50.8	1.00	1.19	1.41	40.7
Approach		272	18.9	0.632	20.7	LOS C	6.2	50.8	1.00	1.19	1.41	39.5
All Vehicles		2267	7.4	0.913	18.5	LOS B	21.7	158.3	0.95	1.01	1.43	49.2

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: SIDRA Roundabout LOS.
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 2 [Evandale Road/ Richard Street/ Translink Avenue - Existing Layout 2031 PM Peak]

16:30-17:30
Site Category: (None)
Roundabout

Movement Performance - Vehicles

Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Evandale Road												
4	L2	39	2.0	0.778	8.8	LOS A	11.1	78.8	0.82	0.68	0.88	54.0
5	T1	916	2.0	0.778	9.4	LOS A	11.1	78.8	0.82	0.68	0.88	62.8
6	R2	6	2.0	0.778	14.0	LOS B	11.1	78.8	0.82	0.68	0.88	53.9
6u	U	1	2.0	0.778	16.4	LOS B	11.1	78.8	0.82	0.68	0.88	63.3
Approach		962	2.0	0.778	9.4	LOS A	11.1	78.8	0.82	0.68	0.88	62.5
East: Richard Street												
7	L2	6	2.0	0.411	29.5	LOS C	3.4	25.5	1.00	1.06	1.13	38.1
8	T1	4	2.0	0.411	29.5	LOS C	3.4	25.5	1.00	1.06	1.13	24.3
9	R2	68	10.0	0.411	34.9	LOS C	3.4	25.5	1.00	1.06	1.13	37.6
9u	U	1	2.0	0.411	35.8	LOS D	3.4	25.5	1.00	1.06	1.13	35.6
Approach		80	8.8	0.411	34.2	LOS C	3.4	25.5	1.00	1.06	1.13	36.9
North: Evandale Road												
10	L2	32	25.0	0.922	8.4	LOS A	25.1	180.9	1.00	0.53	1.00	51.3
11	T1	1158	2.0	0.922	8.2	LOS A	25.1	180.9	1.00	0.53	1.00	61.6
12	R2	111	11.0	0.922	13.1	LOS B	25.1	180.9	1.00	0.53	1.00	39.5
12u	U	1	2.0	0.922	15.2	LOS B	25.1	180.9	1.00	0.53	1.00	62.1
Approach		1301	3.3	0.922	8.7	LOS A	25.1	180.9	1.00	0.53	1.00	59.6
West: Translink Avenue												
1	L2	137	10.0	0.508	16.2	LOS B	4.5	33.3	1.00	1.10	1.22	41.2
2	T1	7	2.0	0.508	15.7	LOS B	4.5	33.3	1.00	1.10	1.22	36.7
3	R2	77	2.0	0.508	20.2	LOS C	4.5	33.3	1.00	1.10	1.22	43.8
3u	U	1	2.0	0.508	22.0	LOS C	4.5	33.3	1.00	1.10	1.22	13.6
Approach		222	6.9	0.508	17.6	LOS B	4.5	33.3	1.00	1.10	1.22	41.7
All Vehicles		2565	3.3	0.922	10.5	LOS B	25.1	180.9	0.93	0.65	0.98	58.1

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: SIDRA Roundabout LOS.
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 3 [Evandale Road/ Airport Main Access/ Hudson Fysh Drive - Existing Layout 2031 PM Peak]

16:30-17:30
Site Category: (None)
Roundabout

Movement Performance - Vehicles

Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Evandale Road												
4	L2	41	25.0	0.686	16.3	LOS B	7.9	58.4	0.97	1.06	1.31	48.7
5	T1	427	5.0	0.686	15.8	LOS B	7.9	58.4	0.97	1.06	1.31	57.2
6	R2	36	2.0	0.686	20.2	LOS C	7.9	58.4	0.97	1.06	1.31	37.1
6u	U	1	2.0	0.686	22.6	LOS C	7.9	58.4	0.97	1.06	1.31	58.3
Approach		505	6.4	0.686	16.2	LOS B	7.9	58.4	0.97	1.06	1.31	55.1
East: Airport Main Access												
7	L2	32	2.0	0.848	27.0	LOS C	13.8	98.4	1.00	1.42	1.93	34.4
8	T1	24	2.0	0.848	27.0	LOS C	13.8	98.4	1.00	1.42	1.93	30.4
9	R2	427	2.0	0.848	31.5	LOS C	13.8	98.4	1.00	1.42	1.93	34.9
9u	U	1	2.0	0.848	33.3	LOS C	13.8	98.4	1.00	1.42	1.93	12.0
Approach		484	2.0	0.848	31.0	LOS C	13.8	98.4	1.00	1.42	1.93	34.6
North: Evandale Road												
10	L2	546	2.0	1.165	162.3	LOS F	157.1	1138.6	1.00	3.11	6.17	11.3
11	T1	681	2.0	1.165	162.9	LOS F	157.1	1138.6	1.00	3.11	6.17	17.5
12	R2	168	20.0	1.165	168.4	LOS F	157.1	1138.6	1.00	3.11	6.17	16.7
12u	U	5	2.0	1.165	169.9	LOS F	157.1	1138.6	1.00	3.11	6.17	17.5
Approach		1401	4.2	1.165	163.4	LOS F	157.1	1138.6	1.00	3.11	6.17	15.1
West: Hudson Fysh Drive												
1	L2	272	5.0	0.779	25.7	LOS C	11.1	80.1	1.00	1.38	1.85	40.9
2	T1	141	2.0	0.779	25.5	LOS C	11.1	80.1	1.00	1.38	1.85	32.1
3	R2	35	2.0	0.779	30.0	LOS C	11.1	80.1	1.00	1.38	1.85	41.8
3u	U	1	2.0	0.779	31.8	LOS C	11.1	80.1	1.00	1.38	1.85	38.3
Approach		448	3.8	0.779	26.0	LOS C	11.1	80.1	1.00	1.38	1.85	38.7
All Vehicles		2839	4.1	1.165	92.9	LOS F	157.1	1138.6	0.99	2.18	3.90	22.3

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: SIDRA Roundabout LOS.
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

SIDRA Results – Proposed Layout

Appendix D

MOVEMENT SUMMARY

Site: 2 [Evandale Road/ Richard Street/ Translink Avenue - 2021 AM Peak]

07:45-08:45
Site Category: (None)
Roundabout

Movement Performance - Vehicles

Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Evandale Road												
4	L2	29	5.0	0.300	6.2	LOS A	1.9	14.5	0.45	0.52	0.45	59.9
5	T1	766	10.0	0.300	6.6	LOS A	1.9	14.5	0.47	0.54	0.47	65.9
6	R2	5	2.0	0.300	13.7	LOS B	1.8	13.9	0.48	0.56	0.48	59.1
6u	U	1	2.0	0.300	16.8	LOS B	1.8	13.9	0.48	0.56	0.48	69.9
Approach		802	9.8	0.300	6.7	LOS A	1.9	14.5	0.47	0.54	0.47	65.8
East: Richard Street												
7	L2	2	2.0	0.114	4.2	LOS A	0.4	4.2	0.58	0.77	0.58	51.5
8	T1	12	30.0	0.114	4.2	LOS A	0.4	4.2	0.58	0.77	0.58	43.7
9	R2	54	60.0	0.114	11.8	LOS B	0.4	4.2	0.58	0.77	0.58	43.7
9u	U	1	2.0	0.114	11.9	LOS B	0.4	4.2	0.58	0.77	0.58	49.2
Approach		68	52.2	0.114	10.3	LOS B	0.4	4.2	0.58	0.77	0.58	44.0
North: Evandale Road												
10	L2	79	20.0	0.285	5.8	LOS A	2.0	14.9	0.27	0.44	0.27	56.5
11	T1	623	5.0	0.285	5.7	LOS A	2.0	14.9	0.28	0.48	0.28	67.9
12	R2	171	15.0	0.285	13.0	LOS B	1.9	14.6	0.30	0.55	0.30	44.7
12u	U	1	2.0	0.285	15.8	LOS B	1.9	14.6	0.30	0.55	0.30	68.8
Approach		874	8.3	0.285	7.1	LOS A	2.0	14.9	0.28	0.49	0.28	62.5
West: Translink Avenue												
1	L2	59	30.0	0.187	5.0	LOS A	0.8	6.5	0.61	0.76	0.61	47.0
2	T1	16	60.0	0.187	5.3	LOS A	0.8	6.5	0.61	0.76	0.61	45.9
3	R2	54	10.0	0.187	10.1	LOS B	0.8	6.5	0.61	0.76	0.61	54.5
3u	U	1	20.0	0.187	12.5	LOS B	0.8	6.5	0.61	0.76	0.61	19.2
Approach		129	25.3	0.187	7.2	LOS A	0.8	6.5	0.61	0.76	0.61	49.5
All Vehicles		1874	11.7	0.300	7.1	LOS A	2.0	14.9	0.40	0.54	0.40	62.2

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: SIDRA Roundabout LOS.
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 3 [Evandale Road/ Airport Main Access/ Hudson Fysh Drive - 2021 AM Peak]

07:45-08:45
Site Category: (None)
Roundabout

Movement Performance - Vehicles

Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Evandale Road												
4	L2	22	2.0	0.663	10.7	LOS B	7.4	54.1	0.85	0.88	1.04	53.2
5	T1	634	5.0	0.663	11.1	LOS B	7.4	54.1	0.85	0.88	1.04	63.9
6	R2	37	2.0	0.663	18.0	LOS B	7.4	54.1	0.85	0.88	1.04	43.0
6u	U	1	2.0	0.663	21.1	LOS C	7.4	54.1	0.85	0.88	1.04	66.5
Approach		694	4.7	0.663	11.5	LOS B	7.4	54.1	0.85	0.88	1.04	62.5
East: Airport Main Access												
7	L2	18	2.0	0.229	5.8	LOS A	1.3	9.5	0.71	0.79	0.71	51.4
8	T1	15	2.0	0.229	5.1	LOS A	1.3	9.5	0.71	0.79	0.71	43.9
9	R2	138	2.0	0.229	11.4	LOS B	1.3	9.5	0.71	0.79	0.71	53.8
9u	U	1	2.0	0.229	13.5	LOS B	1.3	9.5	0.71	0.79	0.71	19.8
Approach		172	2.0	0.229	10.3	LOS B	1.3	9.5	0.71	0.79	0.71	52.3
North: Evandale Road												
10	L2	240	2.0	0.198	6.1	LOS A	1.2	8.9	0.42	0.55	0.42	61.2
11	T1	328	10.0	0.422	6.2	LOS A	3.5	26.4	0.48	0.59	0.48	63.3
12	R2	319	10.0	0.422	13.2	LOS B	3.5	26.4	0.48	0.59	0.48	57.1
12u	U	2	2.0	0.422	16.2	LOS B	3.5	26.4	0.48	0.59	0.48	67.1
Approach		889	7.8	0.422	8.7	LOS A	3.5	26.4	0.46	0.58	0.46	60.3
West: Hudson Fysh Drive												
1	L2	140	30.0	0.436	9.2	LOS A	3.6	28.9	0.93	0.94	1.00	47.3
2	T1	94	2.0	0.436	7.4	LOS A	3.6	28.9	0.93	0.94	1.00	44.5
3	R2	41	15.0	0.436	14.3	LOS B	3.6	28.9	0.93	0.94	1.00	50.7
3u	U	1	2.0	0.436	15.8	LOS B	3.6	28.9	0.93	0.94	1.00	49.2
Approach		276	18.1	0.436	9.4	LOS A	3.6	28.9	0.93	0.94	1.00	47.1
All Vehicles		2031	7.7	0.663	9.9	LOS A	7.4	54.1	0.68	0.75	0.75	58.4

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: SIDRA Roundabout LOS.
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 2 [Evandale Road/ Richard Street/ Translink Avenue - 2021 PM Peak]

07:45-08:45
Site Category: (None)
Roundabout

Movement Performance - Vehicles

Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Evandale Road												
4	L2	36	2.0	0.272	5.9	LOS A	1.7	12.2	0.37	0.48	0.37	61.0
5	T1	760	2.0	0.272	6.1	LOS A	1.7	12.2	0.38	0.49	0.38	68.8
6	R2	6	2.0	0.272	13.2	LOS B	1.7	11.8	0.40	0.51	0.40	59.6
6u	U	1	2.0	0.272	16.3	LOS B	1.7	11.8	0.40	0.51	0.40	70.6
Approach		803	2.0	0.272	6.2	LOS A	1.7	12.2	0.38	0.49	0.38	68.5
East: Richard Street												
7	L2	6	2.0	0.110	4.9	LOS A	0.4	3.3	0.63	0.82	0.63	51.1
8	T1	4	2.0	0.110	4.2	LOS A	0.4	3.3	0.63	0.82	0.63	44.2
9	R2	65	10.0	0.110	10.8	LOS B	0.4	3.3	0.63	0.82	0.63	51.1
9u	U	1	2.0	0.110	12.7	LOS B	0.4	3.3	0.63	0.82	0.63	48.8
Approach		77	8.8	0.110	10.0	LOS B	0.4	3.3	0.63	0.82	0.63	50.8
North: Evandale Road												
10	L2	29	25.0	0.367	6.0	LOS A	2.8	20.2	0.33	0.45	0.33	56.1
11	T1	998	2.0	0.367	5.8	LOS A	2.8	20.2	0.34	0.48	0.34	68.7
12	R2	107	11.0	0.367	13.1	LOS B	2.7	19.7	0.36	0.51	0.36	45.3
12u	U	1	2.0	0.367	16.0	LOS B	2.7	19.7	0.36	0.51	0.36	69.8
Approach		1136	3.4	0.367	6.5	LOS A	2.8	20.2	0.34	0.48	0.34	66.3
West: Translink Avenue												
1	L2	137	10.0	0.287	4.7	LOS A	1.2	9.2	0.61	0.75	0.61	53.2
2	T1	5	2.0	0.287	3.8	LOS A	1.2	9.2	0.61	0.75	0.61	46.6
3	R2	91	2.0	0.287	10.1	LOS B	1.2	9.2	0.61	0.75	0.61	58.8
3u	U	1	2.0	0.287	12.2	LOS B	1.2	9.2	0.61	0.75	0.61	19.2
Approach		234	6.7	0.287	6.8	LOS A	1.2	9.2	0.61	0.75	0.61	54.9
All Vehicles		2249	3.4	0.367	6.5	LOS A	2.8	20.2	0.39	0.52	0.39	65.4

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: SIDRA Roundabout LOS.
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 3 [Evandale Road/ Airport Main Access/ Hudson Fysh Drive - 2021 PM Peak]

07:45-08:45
Site Category: (None)
Roundabout

Movement Performance - Vehicles

Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Evandale Road												
4	L2	41	2.0	0.467	8.4	LOS A	3.7	26.9	0.79	0.73	0.81	53.6
5	T1	380	5.0	0.467	8.8	LOS A	3.7	26.9	0.79	0.73	0.81	64.5
6	R2	27	2.0	0.467	15.7	LOS B	3.7	26.9	0.79	0.73	0.81	43.4
6u	U	1	2.0	0.467	18.8	LOS B	3.7	26.9	0.79	0.73	0.81	67.2
Approach		449	4.5	0.467	9.2	LOS A	3.7	26.9	0.79	0.73	0.81	62.2
East: Airport Main Access												
7	L2	24	2.0	0.611	12.6	LOS B	5.8	41.5	0.95	1.12	1.28	44.5
8	T1	19	2.0	0.611	11.9	LOS B	5.8	41.5	0.95	1.12	1.28	38.9
9	R2	334	2.0	0.611	18.2	LOS B	5.8	41.5	0.95	1.12	1.28	46.4
9u	U	1	2.0	0.611	20.3	LOS C	5.8	41.5	0.95	1.12	1.28	17.2
Approach		378	2.0	0.611	17.5	LOS B	5.8	41.5	0.95	1.12	1.28	45.7
North: Evandale Road												
10	L2	426	2.0	0.349	6.3	LOS A	2.6	18.2	0.51	0.58	0.51	60.4
11	T1	625	10.0	0.534	6.5	LOS A	5.0	37.9	0.58	0.56	0.58	64.1
12	R2	168	10.0	0.534	13.5	LOS B	5.0	37.9	0.58	0.56	0.58	57.7
12u	U	4	2.0	0.534	16.4	LOS B	5.0	37.9	0.58	0.56	0.58	68.0
Approach		1224	7.2	0.534	7.5	LOS A	5.0	37.9	0.56	0.57	0.56	62.1
West: Hudson Fysh Drive												
1	L2	272	30.0	0.611	12.0	LOS B	6.3	51.6	0.94	1.08	1.25	45.9
2	T1	141	2.0	0.611	10.1	LOS B	6.3	51.6	0.94	1.08	1.25	42.4
3	R2	35	15.0	0.611	17.0	LOS B	6.3	51.6	0.94	1.08	1.25	49.1
3u	U	1	2.0	0.611	18.5	LOS B	6.3	51.6	0.94	1.08	1.25	47.7
Approach		448	20.0	0.611	11.8	LOS B	6.3	51.6	0.94	1.08	1.25	45.3
All Vehicles		2500	8.2	0.611	10.1	LOS B	6.3	51.6	0.73	0.77	0.83	56.1

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: SIDRA Roundabout LOS.
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 2 [Evandale Road/ Richard Street/ Translink Avenue - 2031 AM Peak]

07:45-08:45
Site Category: (None)
Roundabout

Movement Performance - Vehicles

Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Evandale Road												
4	L2	29	5.0	0.336	6.3	LOS A	2.2	16.8	0.47	0.53	0.47	59.7
5	T1	861	10.0	0.336	6.7	LOS A	2.2	16.8	0.48	0.54	0.48	65.8
6	R2	5	2.0	0.336	13.7	LOS B	2.1	16.1	0.50	0.56	0.50	59.0
6u	U	1	2.0	0.336	16.8	LOS B	2.1	16.1	0.50	0.56	0.50	69.7
Approach		897	9.8	0.336	6.7	LOS A	2.2	16.8	0.48	0.54	0.48	65.7
East: Richard Street												
7	L2	2	2.0	0.120	4.5	LOS A	0.4	4.5	0.61	0.79	0.61	51.3
8	T1	12	30.0	0.120	4.6	LOS A	0.4	4.5	0.61	0.79	0.61	43.4
9	R2	54	60.0	0.120	12.2	LOS B	0.4	4.5	0.61	0.79	0.61	43.6
9u	U	1	2.0	0.120	12.2	LOS B	0.4	4.5	0.61	0.79	0.61	49.0
Approach		68	52.2	0.120	10.6	LOS B	0.4	4.5	0.61	0.79	0.61	43.9
North: Evandale Road												
10	L2	79	20.0	0.321	5.8	LOS A	2.4	17.5	0.29	0.44	0.29	56.4
11	T1	736	5.0	0.321	5.7	LOS A	2.4	17.5	0.30	0.48	0.30	67.9
12	R2	171	15.0	0.321	13.0	LOS B	2.3	17.1	0.31	0.54	0.31	44.8
12u	U	1	2.0	0.321	15.8	LOS B	2.3	17.1	0.31	0.54	0.31	69.0
Approach		986	7.9	0.321	7.0	LOS A	2.4	17.5	0.30	0.49	0.30	63.1
West: Translink Avenue												
1	L2	59	30.0	0.197	5.3	LOS A	0.8	6.9	0.63	0.78	0.63	46.8
2	T1	16	60.0	0.197	5.6	LOS A	0.8	6.9	0.63	0.78	0.63	45.6
3	R2	54	10.0	0.197	10.4	LOS B	0.8	6.9	0.63	0.78	0.63	54.2
3u	U	1	20.0	0.197	12.8	LOS B	0.8	6.9	0.63	0.78	0.63	19.1
Approach		129	25.3	0.197	7.5	LOS A	0.8	6.9	0.63	0.78	0.63	49.2
All Vehicles		2081	11.3	0.336	7.0	LOS A	2.4	17.5	0.41	0.54	0.41	62.6

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: SIDRA Roundabout LOS.
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 3 [Evandale Road/ Airport Main Access/ Hudson Fysh Drive - 2031 AM Peak]

07:45-08:45
Site Category: (None)
Roundabout

Movement Performance - Vehicles

Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Evandale Road												
4	L2	22	2.0	0.753	13.6	LOS B	10.6	77.1	0.93	1.01	1.32	51.1
5	T1	692	5.0	0.753	14.1	LOS B	10.6	77.1	0.93	1.01	1.32	60.9
6	R2	47	2.0	0.753	20.9	LOS C	10.6	77.1	0.93	1.01	1.32	40.8
6u	U	1	2.0	0.753	24.0	LOS C	10.6	77.1	0.93	1.01	1.32	63.3
Approach		762	4.7	0.753	14.5	LOS B	10.6	77.1	0.93	1.01	1.32	59.5
East: Airport Main Access												
7	L2	23	2.0	0.306	6.3	LOS A	1.9	13.4	0.76	0.83	0.76	50.8
8	T1	19	2.0	0.306	5.6	LOS A	1.9	13.4	0.76	0.83	0.76	43.5
9	R2	177	2.0	0.306	11.9	LOS B	1.9	13.4	0.76	0.83	0.76	53.2
9u	U	1	2.0	0.306	14.0	LOS B	1.9	13.4	0.76	0.83	0.76	19.6
Approach		220	2.0	0.306	10.8	LOS B	1.9	13.4	0.76	0.83	0.76	51.8
North: Evandale Road												
10	L2	308	2.0	0.251	6.1	LOS A	1.7	11.8	0.44	0.56	0.44	61.0
11	T1	360	10.0	0.447	6.3	LOS A	3.8	28.6	0.50	0.59	0.50	63.3
12	R2	319	10.0	0.447	13.3	LOS B	3.8	28.6	0.50	0.59	0.50	57.1
12u	U	2	2.0	0.447	16.2	LOS B	3.8	28.6	0.50	0.59	0.50	67.1
Approach		989	7.5	0.447	8.5	LOS A	3.8	28.6	0.48	0.58	0.48	60.4
West: Hudson Fysh Drive												
1	L2	140	30.0	0.517	13.2	LOS B	4.8	38.8	1.00	1.08	1.21	45.1
2	T1	94	2.0	0.517	11.2	LOS B	4.8	38.8	1.00	1.08	1.21	41.3
3	R2	41	15.0	0.517	18.1	LOS B	4.8	38.8	1.00	1.08	1.21	48.1
3u	U	1	2.0	0.517	19.6	LOS B	4.8	38.8	1.00	1.08	1.21	46.8
Approach		276	18.1	0.517	13.3	LOS B	4.8	38.8	1.00	1.08	1.21	44.6
All Vehicles		2247	7.3	0.753	11.4	LOS B	10.6	77.1	0.73	0.81	0.88	57.0

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: SIDRA Roundabout LOS.
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 2 [Evandale Road/ Richard Street/ Translink Avenue - 2031 PM Peak]

07:45-08:45
Site Category: (None)
Roundabout

Movement Performance - Vehicles

Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Evandale Road												
4	L2	36	2.0	0.324	5.9	LOS A	2.1	15.2	0.39	0.49	0.39	60.8
5	T1	911	2.0	0.324	6.2	LOS A	2.1	15.2	0.40	0.50	0.40	68.6
6	R2	6	2.0	0.324	13.3	LOS B	2.1	14.7	0.42	0.51	0.42	59.5
6u	U	1	2.0	0.324	16.4	LOS B	2.1	14.7	0.42	0.51	0.42	70.5
Approach		954	2.0	0.324	6.2	LOS A	2.1	15.2	0.40	0.50	0.40	68.4
East: Richard Street												
7	L2	6	2.0	0.118	5.3	LOS A	0.5	3.6	0.66	0.84	0.66	50.8
8	T1	4	2.0	0.118	4.6	LOS A	0.5	3.6	0.66	0.84	0.66	43.8
9	R2	65	10.0	0.118	11.3	LOS B	0.5	3.6	0.66	0.84	0.66	50.8
9u	U	1	2.0	0.118	13.1	LOS B	0.5	3.6	0.66	0.84	0.66	48.6
Approach		77	8.8	0.118	10.4	LOS B	0.5	3.6	0.66	0.84	0.66	50.5
North: Evandale Road												
10	L2	29	25.0	0.418	6.0	LOS A	3.4	24.6	0.35	0.45	0.35	56.0
11	T1	1156	2.0	0.418	5.8	LOS A	3.4	24.6	0.37	0.48	0.37	68.5
12	R2	107	11.0	0.418	13.1	LOS B	3.3	23.9	0.38	0.51	0.38	45.3
12u	U	1	2.0	0.418	16.0	LOS B	3.3	23.9	0.38	0.51	0.38	69.8
Approach		1294	3.3	0.418	6.5	LOS A	3.4	24.6	0.37	0.48	0.37	66.4
West: Translink Avenue												
1	L2	137	10.0	0.308	5.1	LOS A	1.3	10.0	0.65	0.79	0.65	52.8
2	T1	5	2.0	0.308	4.1	LOS A	1.3	10.0	0.65	0.79	0.65	46.4
3	R2	91	2.0	0.308	10.4	LOS B	1.3	10.0	0.65	0.79	0.65	58.4
3u	U	1	2.0	0.308	12.5	LOS B	1.3	10.0	0.65	0.79	0.65	19.1
Approach		234	6.7	0.308	7.2	LOS A	1.3	10.0	0.65	0.79	0.65	54.5
All Vehicles		2558	3.3	0.418	6.5	LOS A	3.4	24.6	0.41	0.53	0.41	65.7

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: SIDRA Roundabout LOS.
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 3 [Evandale Road/ Airport Main Access/ Hudson Fysh Drive - 2031 PM Peak]

07:45-08:45
Site Category: (None)
Roundabout

Movement Performance - Vehicles

Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Evandale Road												
4	L2	41	2.0	0.589	11.3	LOS B	6.1	44.0	0.92	0.94	1.10	52.7
5	T1	427	5.0	0.589	11.7	LOS B	6.1	44.0	0.92	0.94	1.10	63.2
6	R2	36	2.0	0.589	18.6	LOS B	6.1	44.0	0.92	0.94	1.10	42.5
6u	U	1	2.0	0.589	21.7	LOS C	6.1	44.0	0.92	0.94	1.10	65.7
Approach		505	4.5	0.589	12.2	LOS B	6.1	44.0	0.92	0.94	1.10	60.9
East: Airport Main Access												
7	L2	32	2.0	0.854	29.0	LOS C	13.8	98.0	1.00	1.50	2.14	34.1
8	T1	24	2.0	0.854	28.3	LOS C	13.8	98.0	1.00	1.50	2.14	30.7
9	R2	427	2.0	0.854	34.6	LOS C	13.8	98.0	1.00	1.50	2.14	35.2
9u	U	1	2.0	0.854	36.8	LOS D	13.8	98.0	1.00	1.50	2.14	13.0
Approach		484	2.0	0.854	34.0	LOS C	13.8	98.0	1.00	1.50	2.14	34.8
North: Evandale Road												
10	L2	546	2.0	0.445	6.5	LOS A	3.6	25.6	0.57	0.60	0.57	59.9
11	T1	681	10.0	0.576	6.6	LOS A	5.7	43.0	0.62	0.57	0.62	63.9
12	R2	168	10.0	0.576	13.7	LOS B	5.7	43.0	0.62	0.57	0.62	57.5
12u	U	4	2.0	0.576	16.5	LOS B	5.7	43.0	0.62	0.57	0.62	67.8
Approach		1400	6.9	0.576	7.5	LOS A	5.7	43.0	0.60	0.58	0.60	61.8
West: Hudson Fysh Drive												
1	L2	272	30.0	0.729	20.9	LOS C	9.6	78.4	1.00	1.32	1.67	41.4
2	T1	141	2.0	0.729	18.8	LOS B	9.6	78.4	1.00	1.32	1.67	36.3
3	R2	35	15.0	0.729	25.8	LOS C	9.6	78.4	1.00	1.32	1.67	44.0
3u	U	1	2.0	0.729	27.2	LOS C	9.6	78.4	1.00	1.32	1.67	42.9
Approach		448	20.0	0.729	20.6	LOS C	9.6	78.4	1.00	1.32	1.67	40.4
All Vehicles		2838	7.7	0.854	14.9	LOS B	13.8	98.0	0.79	0.92	1.12	51.9

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
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Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

pitt&sherry

Evandale Main Road Duplication – Launceston Airport to Breadalbane

Contact

Leenah Ali-Lavroff
(03) 6210 1419
lali@pittsh.com.au

Pitt & Sherry (Operations) Pty Ltd
ABN 67 140 184 309

Phone 1300 748 874
info@pittsh.com.au
pittsh.com.au

Located nationally —
Melbourne
Sydney
Brisbane
Hobart
Launceston
Newcastle
Devonport
Wagga Wagga

Appendix F

Title Details

RECORDER OF TITLES

Issued Pursuant to the Land Titles Act 1980

Tasmanian Government

SEARCH OF TORRENS TITLE

VOLUME	FOLIO
143903	1
EDITION	DATE OF ISSUE
3	24-Jul-2019

SEARCH DATE : 26-Jun-2020
SEARCH TIME : 04.31 PM

DESCRIPTION OF LAND

Parish of BREADALBANE Land District of CORNWALL
Lot 1 on Plan 143903
Being the land secondly described in Assent No. 42/4552
Excepting thereout See Plan
Derivation : Part of 582A-23R-0Ps Gtd to J. Sinclair
Derived from A14059
Prior CT 132214/1

SCHEDULE 1

C442149 APPLICATION: THE CROWN Registered 24-Jul-2019 at noon

SCHEDULE 2

Reservations and conditions in the Crown Grant if any

UNREGISTERED DEALINGS AND NOTATIONS

No unregistered dealings or other notations

RECORDER OF TITLES

Issued Pursuant to the Land Titles Act 1980

Tasmanian Government

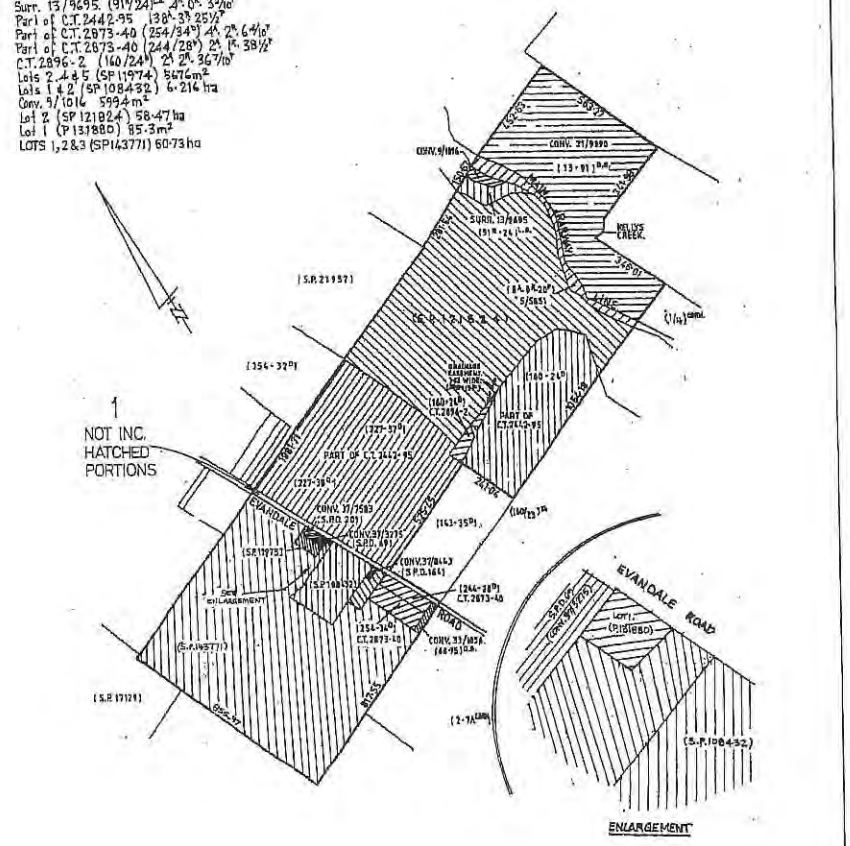
OWNER TASMANIAN TRUSTEES LIMITED FOLIO REFERENCE (C.T.132214-1) GRANTEE PART OF 582A 3R 0P GTD. TO JOHN SINCLAIR.	PLAN OF TITLE LOCATION LAND DISTRICT OF CORNWALL PARISH OF BREADALBANE CONVERTED BY PLAN No P.108671 COMPILED BY G.J. WALKEM & CO. NOT TO SCALE LENGTHS IN METRES	Registered Number P 143903 APPROVED 26 MAY 2005 Recorder of Titles

MAPSHEET MUNICIPAL CODE No 123	LAST UPI No FHT 87	LAST PLAN No P.132214	ALL EXISTING SURVEY NUMBERS TO BE CROSS REFERENCED ON THIS PLAN

SKETCH BY WAY OF ILLUSTRATION ONLY
"EXCEPTED LANDS"

BALANCE PLAN

Surr. 13/9695. (91°24') 4A. 0R. 32/10P
Part of C.T. 2442-95 138A. 3R. 25½P
Part of C.T. 2873-40 (254/34°) 1A. 2R. 64/10P
Part of C.T. 2873-40 (244/28°) 2A. 1R. 38½P
C.T. 2896-2 (160/24°) 2A. 2R. 36⅞P
Lots 2, 4 & 5 (SP 119774) 5676m²
Lots 1 & 2 (SP 108432) 6.214 ha
Conv. 9/1016 5994m²
Lot 2 (SP 121824) 58.47 ha
Lot 1 (P 131880) 85.3m²
LOTS 1, 2 & 3 (SP143771) 60.73 ha



Our Ref: 04.475

10th May 2005

Land Titles Office
GPO Box 541
HOBART TAS 7001

Dear Sir

SP143771 – BALANCE
TASMANIAN TRUSTEES LTD – C.T. 132214/1

Enclosed is the requested balance plan for this survey.

The balance land left appears to be Evandale Road. I have not put an area on the balance as the title showed 58.03ha and my survey was 60.43ha.

Yours faithfully
G J WALKEM & CO

Rod Tait
Registered Land Surveyor

RVT.NLD

Enc

LAND TITLES OFFICE
11 MAY 2005
TASMANIA

1-560

GJ WALKEM&CO
DIVISION OF BULLOCK CONSULTING
ABN 27 014 609 900

AUTHORISED LAND, MINING & ENGINEERING SURVEYORS, PLANNERS

STRATA TITLE SUBDIVISION

GEOGRAPHIC INFORMATION SERVICES GIS/GPS

268 York Street
PO Box 63
Riverside
Tasmania 7250

Telephone
(03) 6331 2990

Facsimile
(03) 6334 1409

Email
info@walkem.com.au

Offices also at:
Burnie
10 Strahan Street
Burnie
Ph: (03) 6431 3000

Queenstown
23 Orr Street
Queenstown
Ph: (03) 6471 1019

LQMS ISO 9001 Approved Company

Document I:\2004\04475\General\L 05-05-10 LTO - Balance Plan as Requested.doc

SEARCH OF TORRENS TITLE

VOLUME	FOLIO
143771	3
EDITION	DATE OF ISSUE
3	24-Jul-2019

SEARCH DATE : 26-Jun-2020
SEARCH TIME : 04.36 PM

DESCRIPTION OF LAND

Parish of BREADALBANE Land District of CORNWALL
Lot 3 on Sealed Plan 143771
Derivation : Part of 582A-23R-0Ps Gtd to J. Sinclair
Prior CT 132214/1

SCHEDULE 1

C442149 APPLICATION: THE CROWN Registered 24-Jul-2019 at noon

SCHEDULE 2

Reservations and conditions in the Crown Grant if any

UNREGISTERED DEALINGS AND NOTATIONS

No unregistered dealings or other notations

OWNER TASMANIAN TRUSTEES LIMITED

FOLIO REFERENCE C.T.132214–1

GRANTEE PART OF 562A 3R 0P GRANTED TO JOHN SINCLAIR

PLAN OF SURVEY

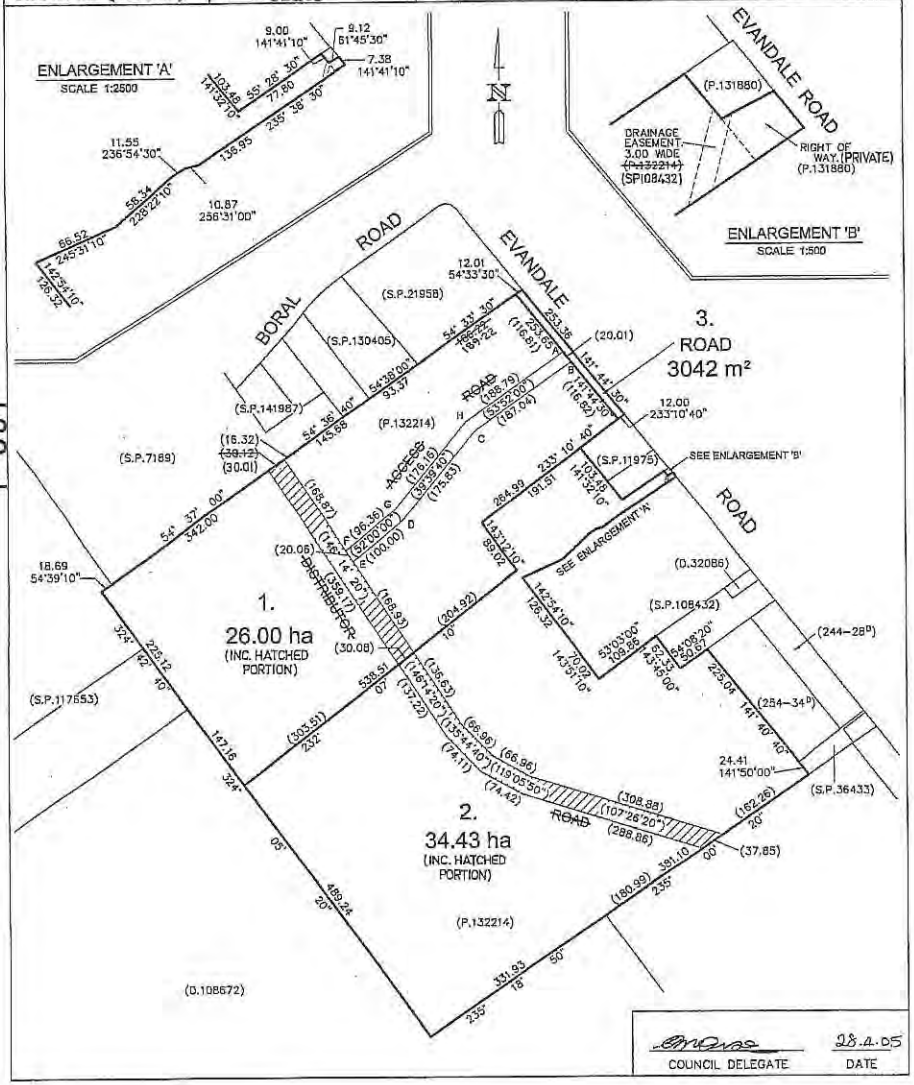
BY SURVEYOR R.V.TAIT
LOCATION
LAND DISTRICT OF CORNWALL
PARISH OF BREADALBANE
SCALE 1:5000 LENGTHS IN METRES

G. I. WALKEM & CO.

REGISTERED NUMBER
SP143771

~~APPROVED~~ EFFECTIVE FROM 26 MAY 2005
Alice Kenna
Recorder of Titles

MAPSHEET MUNICIPAL CODE No 123 (5040-55) | LAST UPI No GEQ02 GEQ03 | LAST PLAN No P.132214 | ALL EXISTING SURVEY NUMBERS TO BE CROSS REFERENCED ON THIS PLAN



COUNCIL DELEGATE 28.4.05 DATE

1-561

SCHEDULE OF EASEMENTS

NOTE: THE SCHEDULE MUST BE SIGNED BY THE OWNERS & MORTGAGEES OF THE LAND AFFECTED. SIGNATURES MUST BE ATTESTED.

Registered Number
SP 143771

PAGE 1 OF 1 PAGE/S

EASEMENTS AND PROFITS

Each lot on the plan is together with:-
(1) such rights of drainage over the drainage easements shown on the plan (if any) as may be necessary to drain the stormwater and other surplus water from such lot; and
(2) any easements or profits a prendre described hereunder.
Each lot on the plan is subject to:-
(1) such rights of drainage over the drainage easements shown on the plan (if any) as passing through such lot as may be necessary to drain the stormwater and other surplus water from any other lot on the plan; and
(2) any easements or profits a prendre described hereunder.
The direction of the flow of water through the drainage easements shown on the plan is indicated by arrows.

Provision
Fencing ~~Covenant~~

Perpetual

In respect of Lots 1 and 2 on the plan the Vendor Tasmanian Trustees Limited shall not be required to fence.

Easements

Lot 2 on the plan is subject to a right of drainage over the drainage easement 3.00 wide shown on the plan and also shown on Plan No. 132214 appurtenant to Lots 1 and 2 on Sealed Plan No. 108432.

Lot 2 on the plan is subject to a Right of Carriage Way over that portion of Lot 2 which is also shown and marked "right of way" (PRIVATE) on the plan ~~and on Plan No. 132214~~ appurtenant to Lot 1 on Plan No. 131880.

THE COMMON SEAL of TASMANIAN PERPETUAL TRUSTEES LIMITED as registered proprietor of the land comprised in Folio of the Register Volume 132214 Folio 1 was hereunto affixed in the presence of:

COMMON
TASMANIAN PERPETUAL TRUSTEES LIMITED
A.C.N. 009 475 629
SEAL

Authorised Officer:

~~Secretary~~
Authorised Officer

(USE ANNEXURE PAGES FOR CONTINUATION)

SUBDIVIDER: Tasmanian Perpetual Trustees Ltd. FOLIO REF: C.T. 132214 / 1 SOLICITOR & REFERENCE: Shields Heritage Mrs. J. French	PLAN SEALED BY: DATE: 28-4-05 27/003/346 REF NO. Council Delegate

NOTE: The Council Delegate must sign the Certificate for the purposes of identification.

SURVEY NOTES

SHEET 1 OF 2 SHEETS

Registered Number **SP 143771**

CROSS REFERENCE PLAN NUMBERS USED AS PART OF THIS SURVEY	DESCRIBE BY REPORT THE EVIDENCE USED TO DETERMINE BOUNDARIES

SURVEY CERTIFICATE

I *Roderick Vincent Tait* of *Launceston*

in Tasmania a registered surveyor HEREBY CERTIFY that:

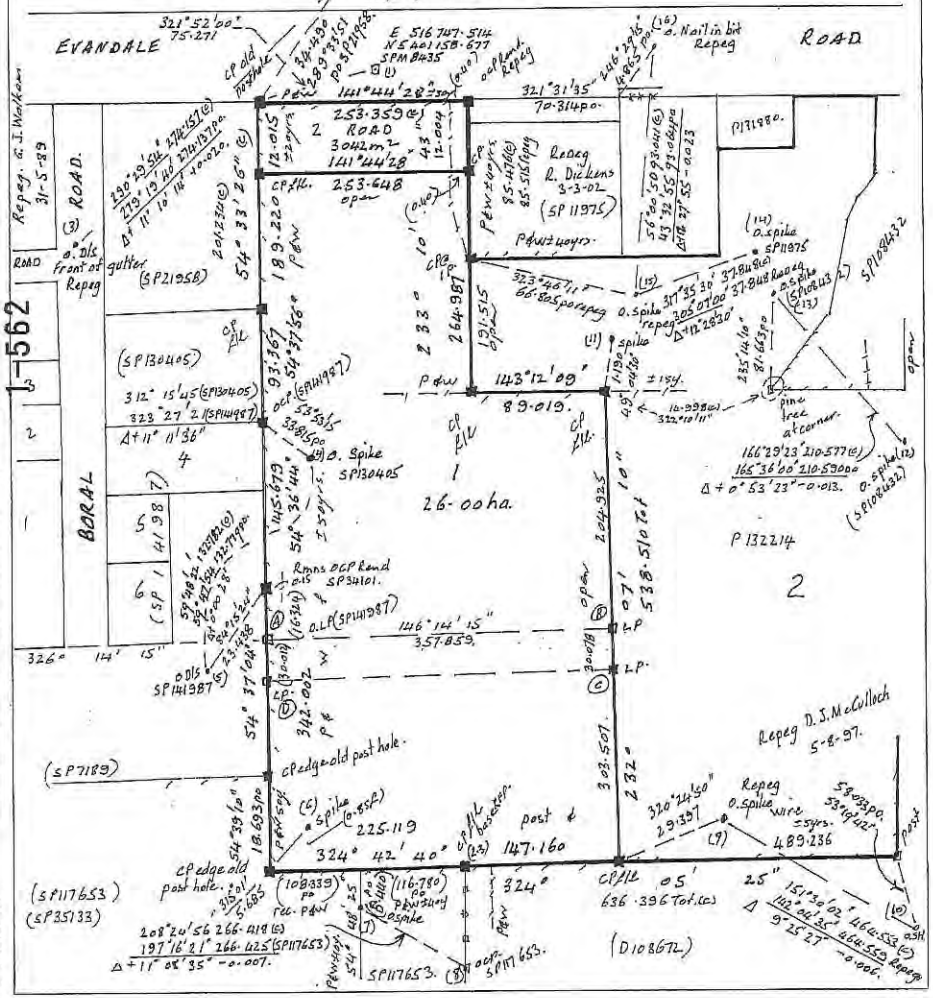
(a) this survey is based upon the best evidence that the nature of the case admits
(b) the survey notes have been truly compiled from surveys made by me or made under my supervision; and
(c) this survey and accompanying survey notes comply with the relevant legislation affecting surveys and are correct for the purpose required.

Signature *R.V.Tait* Date 3/12/04

Surveyors Reference: 04-475

Survey Notes by surveyor R.V. Tait
LAND DISTRICT OF CORNWALL
PARISH OF BREADALBANE
Part of 582-3-0. granted to. John Sinclair
Tasmanian Trustees Limited - owner
CT 132214-1

Survey commenced: 4-11-04 completed: 25/11/04
The apparent age of all old marks found is consistent with their attributed origin
DATUM is MGA per. C.Ps with SPM R135 as origin



SURVEY NOTES
ANNEXURE SHEET

SHEET 2 OF 2 SHEETS

OWNER: *Tasmanian Trustees Limited*
FOLIO REFERENCE: *CT 132214-1.*

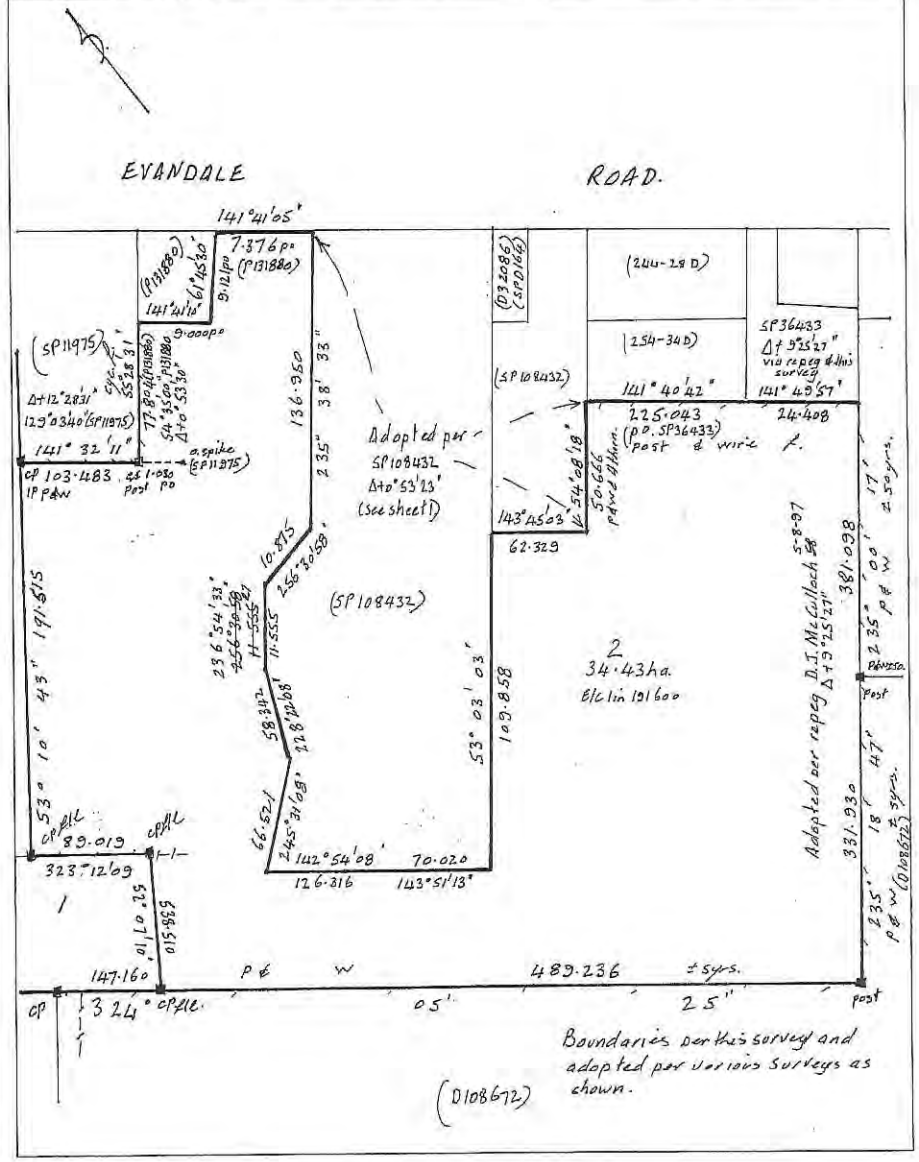
THIS ANNEXURE SHEET FORMS PART OF THE ATTACHED PLAN. THE SURVEYORS CERTIFICATE EXTENDS TO THE DETAILS ON THIS SHEET

Registered Surveyor *R.V.Tait* date 3/12/04

Registered Number **SP 143771**

LENGTHS IN METRES

CROSS REFERENCE PLAN NUMBERS USED AS PART OF THIS SURVEY



Registered Number
SP143771

1-563

COUNCIL APPROVAL

(Insert any qualification to the permit under section 83(5), section 109 or section 111 of the Local Government (Building & Miscellaneous Provisions) Act 1993)
The subdivision shown in this plan is approved

In witness whereof the common seal of has been affixed, pursuant to a resolution of the Council of the said municipality passed the 28TH day of APRIL 2005, in the presence of us

~~Member~~
Member (mayor) [signature]
Council Delegate (General manager) [signature] Council Reference 27/003/346

NORTHERN MIDLANDS COUNCIL 1993

NOMINATIONS

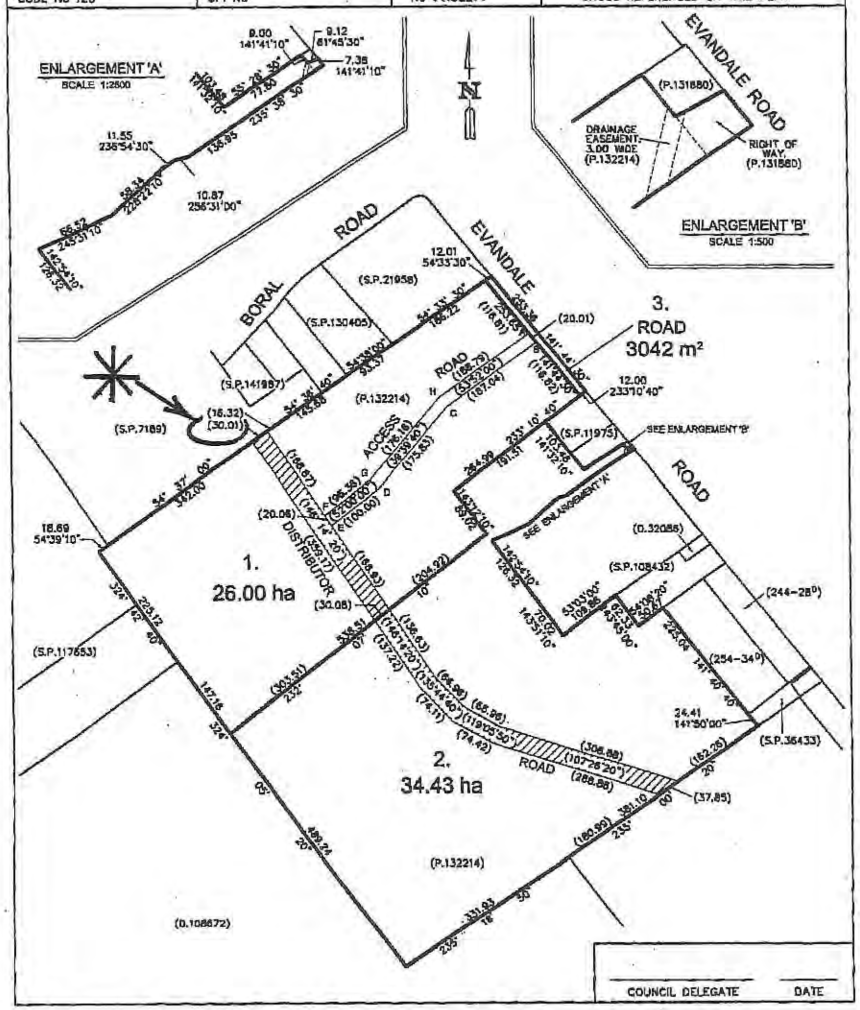
For the purpose of Section 88 of the Local Government (Building & Miscellaneous Provisions) Act 1993 the owner has nominated

ARCHER BUSHBY .... Solicitor to act for the owner
G.J. WALKEM & CO. .... Surveyor to act for the owner

OFFICE EXAMINATION: Indexed .... Computed [signature] 12/5/05 Examined [signature] 12/5/05

18/05 '05 12:11 FAX 03 6334 1409 GJ WALKEM & CO 001

OWNER TASMANIAN TRUSTEES LIMITED FOLIO REFERENCE C.T.132214-1 GRANTEE PART OF 582a 3r 0p GRANTED TO JOHN SINCLAIR	**PLAN OF SURVEY** BY SURVEYOR R.V.TAIT LOCATION LAND DISTRICT OF CORNWALL PARISH OF BREADALBANE SCALE 1:5000 LENGTHS IN METRES	Registered Number SP143771 APPROVED EFFECTIVE FROM Recorder of Titles
MAPSHEET MUNICIPAL CODE No 123 / LAST UPI No	LAST PLAN No P.132214	ALL EXISTING SURVEY NUMBERS TO BE CROSS REFERENCED ON THIS PLAN



COUNCIL DELEGATE DATE

RECORDER OF TITLES

Issued Pursuant to the Land Titles Act 1980

Tasmanian Government

SEARCH OF TORRENS TITLE

VOLUME	FOLIO
148609	1
EDITION	DATE OF ISSUE
1	21-Jun-2007

SEARCH DATE : 26-Jun-2020
SEARCH TIME : 04.39 PM

DESCRIPTION OF LAND

Parish of BREADALBANE Land District of CORNWALL
Lot 1 on Plan 148609
Derivation : Part of 324 Acres Gtd to Thomas Gee
Prior CT 21958/2

SCHEDULE 1

C441505 APPLICATION: THE CROWN Registered 21-Jun-2007 at noon

SCHEDULE 2

Reservations and conditions in the Crown Grant if any

UNREGISTERED DEALINGS AND NOTATIONS

No unregistered dealings or other notations

RECORDER OF TITLES

Issued Pursuant to the Land Titles Act 1980

Tasmanian Government

A4064

OWNER: PATRICIA MAY NEWTON, EDWARD ELWELL NEWTON, ALEXANDER MCGREGOR

FOLIO REFERENCE: FR. 21958 – 2, FR. 34101 – 1 FR. 34101 – 2

GRANTEE: ~~PART OF 84a. 2r. 19p GRANTED TO LILLIAN WILSON,~~ PART OF 324 ACRES GRANTED TO THOMAS GEE

PLAN OF SURVEY

BY SURVEYOR M.R.ROSE OF 2/3 WALDEN STREET, NEWSTEAD 7250

LOCATION LAND DISTRICT OF CORNWALL PARISHES OF BREADALBANE ~~& PERTH~~

SCALE 1: 800 LENGTHS IN METRES

REGISTERED NUMBER **P148609**

APPROVED EFFECTIVE FROM -5 JUN 2007

Alice Kawa Recorder of Titles

MAPSHEET MUNICIPAL CODE No 123 /5040-55

LAST UPI No FET94 FET95 4700475

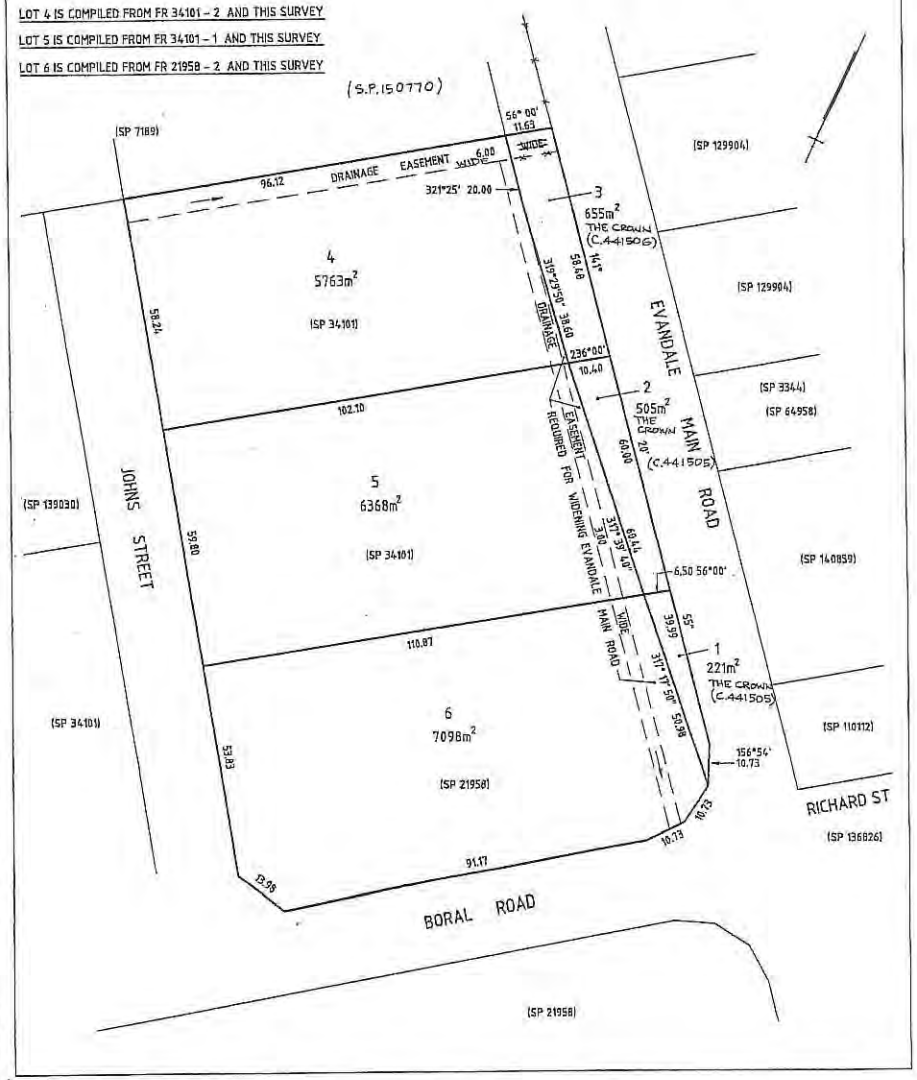
LAST PLAN: SP 21958 SP 34101

ALL EXISTING SURVEY NUMBERS TO BE CROSS REFERENCED ON THIS PLAN

LOT 4 IS COMPILED FROM FR 34101 – 2 AND THIS SURVEY

LOT 5 IS COMPILED FROM FR 34101 – 1 AND THIS SURVEY

LOT 6 IS COMPILED FROM FR 21958 – 2 AND THIS SURVEY



1-565

SURVEY NOTES

SHEET 1 OF 1 SHEETS

Registered Number **P148609**

CROSS REFERENCE PLAN NUMBERS USED AS PART OF THIS SURVEY	DESCRIBE BY REPORT THE EVIDENCE USED TO DETERMINE BOUNDARIES

ALL CORNER MARKS ARE CP'S UNLESS OTHERWISE SHOWN. ALL BOUNDARIES ARE OPEN UNLESS OTHERWISE SHOWN. THE AGE OF THE MARKS FOUND APPEARS CONSISTENT WITH THE ORIGIN NOTED.

REPORT MGA datum per SP. 141987
4,5,7,8,9,10,11 & 12 fixed per SP. 21958 applying mean Δ 11°10'15". 8,9 & 12 not marked being within proposed road widening.
5-6 fixed on road widening alignment per SP. 7189 Δ 11°10'40"

SURVEY CERTIFICATE

I, MICHAEL R. ROSE of NEWSTEAD

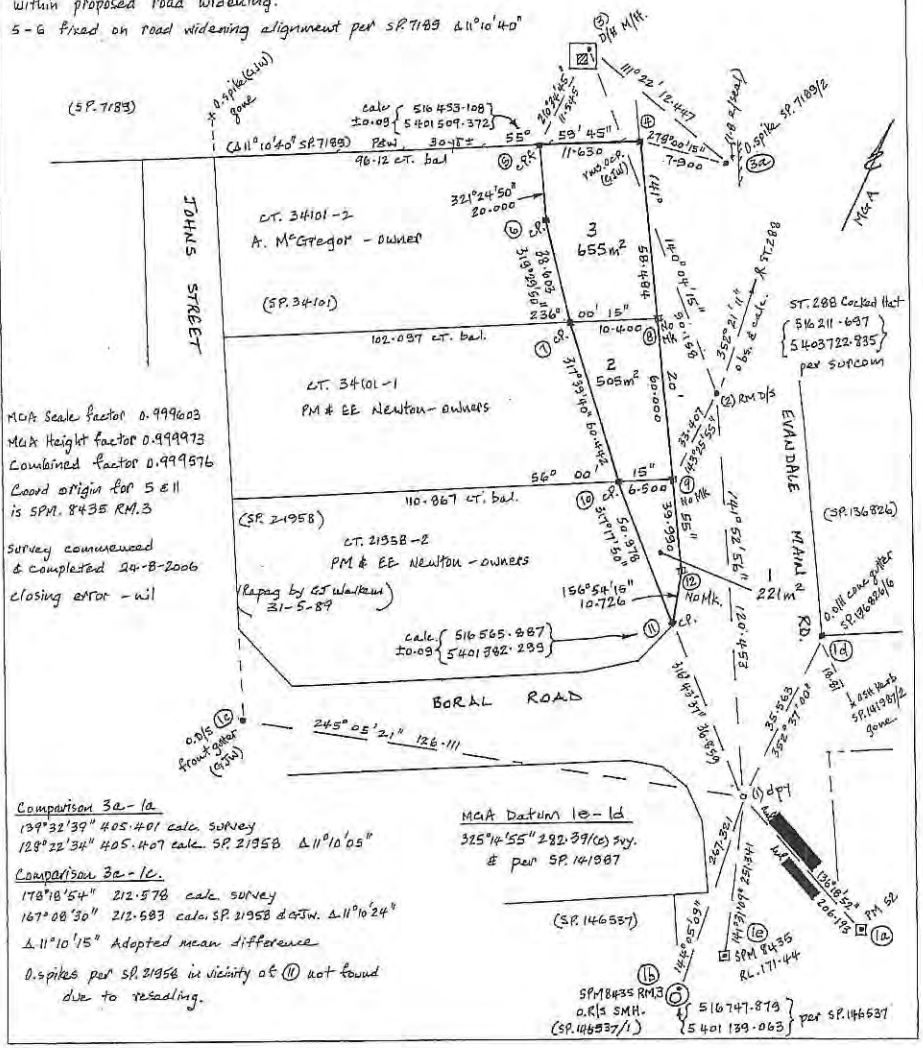
in Tasmania a registered land surveyor HEREBY CERTIFY that:

(a) this survey is based upon the best evidence that the nature of the case admits
(b) the survey notes have been truly compiled from surveys made by me or made under my supervision; and
(c) this survey and accompanying survey notes comply with the relevant legislation affecting surveys and are correct for the purpose required.

Signature

Date 12 / 9 / 2006

Surveyors Reference: 923



RECORDER OF TITLES
Issued Pursuant to the Land Titles Act 1980
Tasmanian Government

SEARCH OF TORRENS TITLE

VOLUME	FOLIO
148609	2
EDITION	DATE OF ISSUE
1	21-Jun-2007

SEARCH DATE : 26-Jun-2020
SEARCH TIME : 04.40 PM

DESCRIPTION OF LAND

Parish of BREADALBANE Land District of CORNWALL
Lot 2 on Plan 148609
Derivation : Part of 324 Acres Gtd. to Thomas Gee.
Prior CT 34101/1

SCHEDULE 1

C441505 APPLICATION: THE CROWN Registered 21-Jun-2007 at noon

SCHEDULE 2

Reservations and conditions in the Crown Grant if any

UNREGISTERED DEALINGS AND NOTATIONS

No unregistered dealings or other notations

A4064

OWNER: PATRICIA MAY NEWTON, EDWARD ELWELL NEWTON, ALEXANDER MCGREGOR

FOLIO REFERENCE: FR. 21958 – 2, FR. 34101 – 1, FR. 34101 – 2

GRANTEE: ~~PART OF 81, 2r 19p GRANTED TO WILLIAM WILSON~~ PART OF 324 ACRES GRANTED TO THOMAS GEE

PLAN OF SURVEY

BY SURVEYOR: M.R.ROSE OF 2/3 WALDEN STREET, NEWSTEAD 7250

LOCATION: LAND DISTRICT OF CORNWALL, PARISHES OF BREADALBANE ~~& PERTH~~

SCALE 1: 800 LENGTHS IN METRES

REGISTERED NUMBER **P148609**

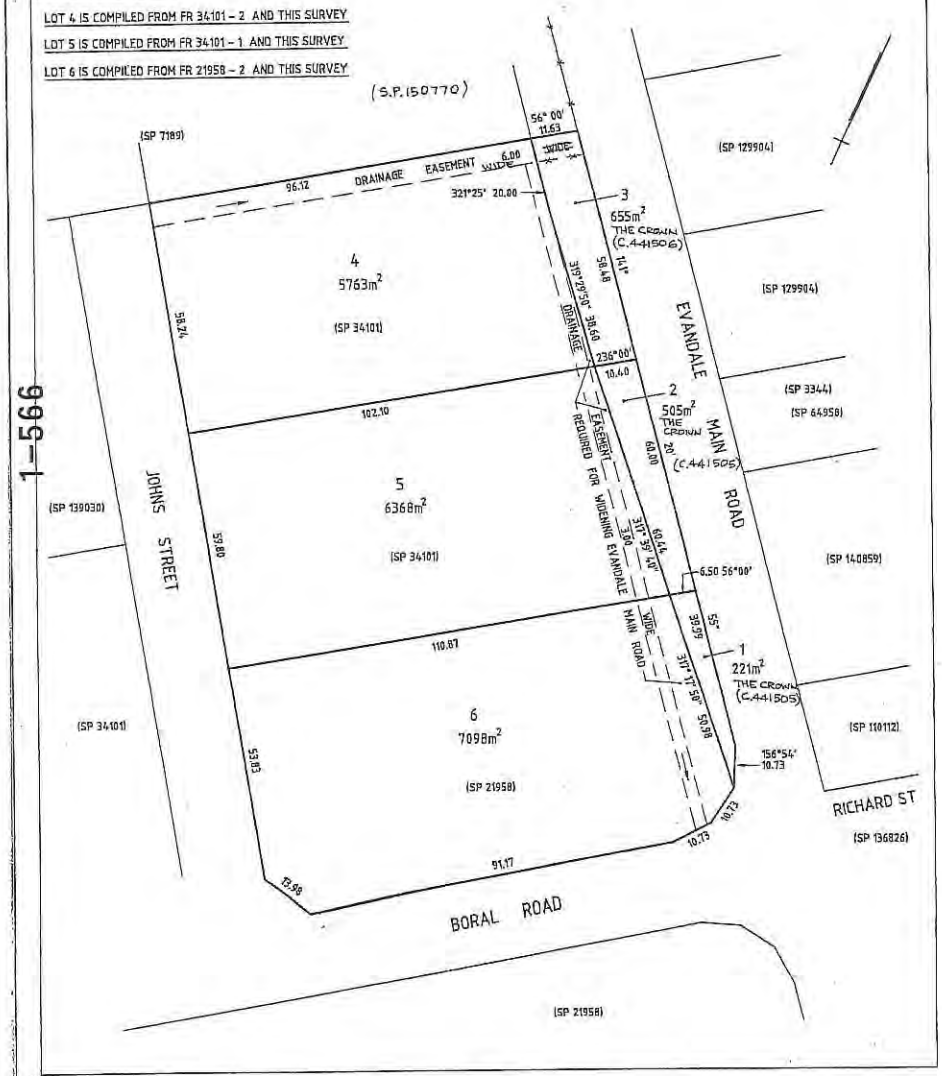
APPROVED EFFECTIVE FROM -5 JUN 2007
Alice Kawa
Recorder of Titles

MAPSHEET MUNICIPAL CODE No	LAST UPI No	LAST PLAN	ALL EXISTING SURVEY NUMBERS TO BE CROSS REFERENCED ON THIS PLAN
123 /5040 – 55	~~PET 94~~ PET 95 4500275	SP 21958 SP 34101	

LOT 4 IS COMPILED FROM FR 34101 – 2 AND THIS SURVEY

LOT 5 IS COMPILED FROM FR 34101 – 1 AND THIS SURVEY

LOT 6 IS COMPILED FROM FR 21958 – 2 AND THIS SURVEY



1–566

RECORDER OF TITLES
Issued Pursuant to the Land Titles Act 1980
Tasmanian Government

SURVEY NOTES

SHEET 1 OF 1 SHEETS

Registered Number **P148609**

CROSS REFERENCE PLAN NUMBERS USED AS PART OF THIS SURVEY

DESCRIBE BY REPORT THE EVIDENCE USED TO DETERMINE BOUNDARIES

ALL CORNER MARKS ARE CP'S UNLESS OTHERWISE SHOWN. ALL BOUNDARIES ARE OPEN UNLESS OTHERWISE SHOWN. THE AGE OF THE MARKS FOUND APPEARS CONSISTENT WITH THE ORIGIN NOTED.

SURVEY CERTIFICATE

I, MICHAEL R. ROSE of NEWSTEAD

In Tasmania a registered land surveyor HEREBY CERTIFY that:

(a) this survey is based upon the best evidence that the nature of the case admits
(b) the survey notes have been truly compiled from surveys made by me or made under my supervision; and
(c) this survey and accompanying survey notes comply with the relevant legislation affecting surveys and are correct for the purpose required.

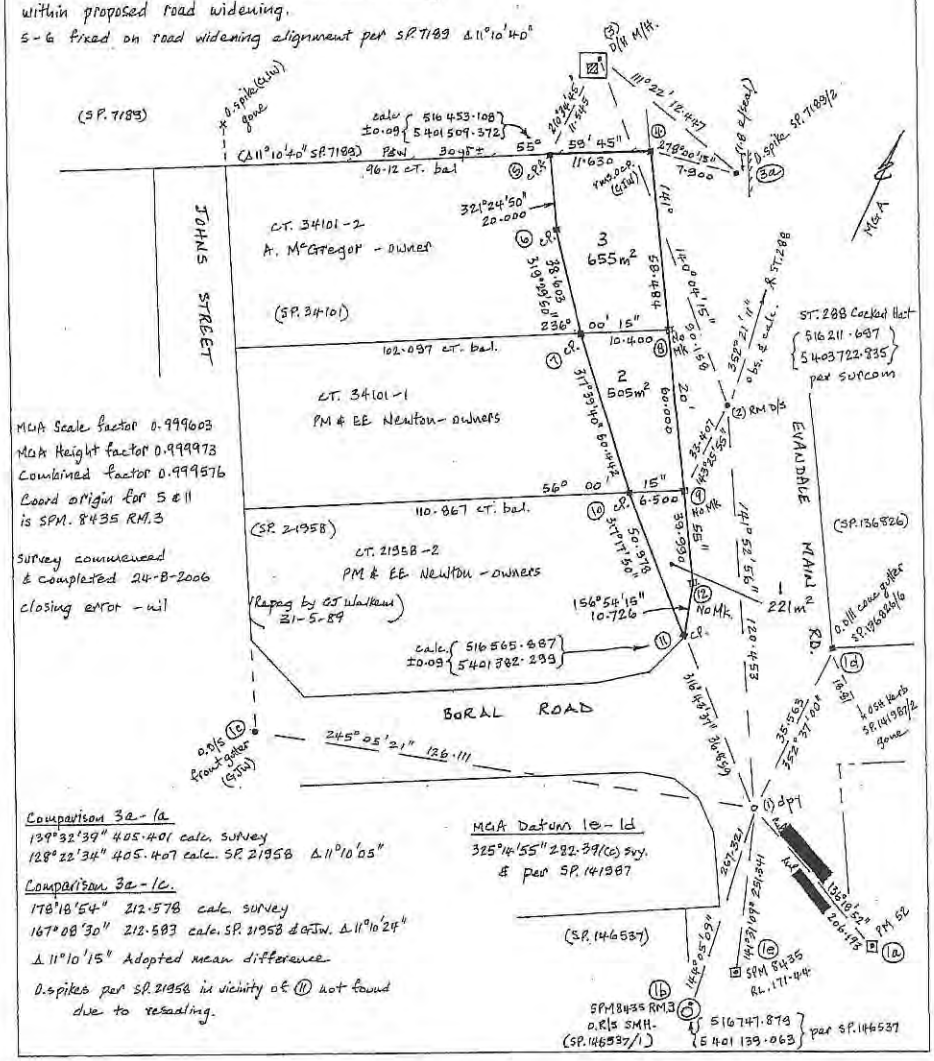
Signature Date 12 / 9 / 2006

Surveyors Reference: 923

REPORT MGA datum per SP. 141987

45, 7, 8, 9, 10, 11 & 12 fixed per SP. 213518 applying mean Δ 11°10'15". 8, 9 & 12 not marked being within proposed road widening.

5–6 fixed on road widening alignment per SP. 7189 Δ 11°10'40"



Search Date: 26 Jun 2020 Search Time: 04:40 PM Volume Number: 148609 Revision Number: 01 Page 1 of 1
Department of Primary Industries, Parks, Water and Environment www.thelist.tas.gov.au

Registered Number
P 148609

COUNCIL APPROVAL

(Insert any qualification to the permit under section 83(5), section 109 or section 111 of the Local Government (Building & Miscellaneous Provisions) Act 1993)

The subdivision shown in this plan is approved

In witness whereof the common seal of

has been affixed, pursuant to a resolution of the Council of the said municipality

passed the day of 20 , in the presence of us

Member .....

Member .....

Council Delegate ..... Council Reference .....

NOMINATIONS

For the purpose of section 88 of the Local Government (Building & Miscellaneous Provisions) Act 1993 the owner has nominated

..... Solicitor to act for the owner

MICK ROSE ..... Surveyor to act for the owner

OFFICE EXAMINATION: Indexed ..... Computed 5/6/07 Examined 5/6/07

1-567

SEARCH OF TORRENS TITLE

VOLUME	FOLIO
148609	3
EDITION	DATE OF ISSUE
1	21-Jun-2007

SEARCH DATE : 26-Jun-2020
SEARCH TIME : 04.40 PM

DESCRIPTION OF LAND

Parish of BREADALBANE Land District of CORNWALL
Lot 3 on Plan 148609
Derivation : Part of 324 Acres Gtd to T Gee
Prior CT 34101/2

SCHEDULE 1

C441506 APPLICATION: THE CROWN Registered 21-Jun-2007 at 12.01 PM

SCHEDULE 2

Reservations and conditions in the Crown Grant if any

UNREGISTERED DEALINGS AND NOTATIONS

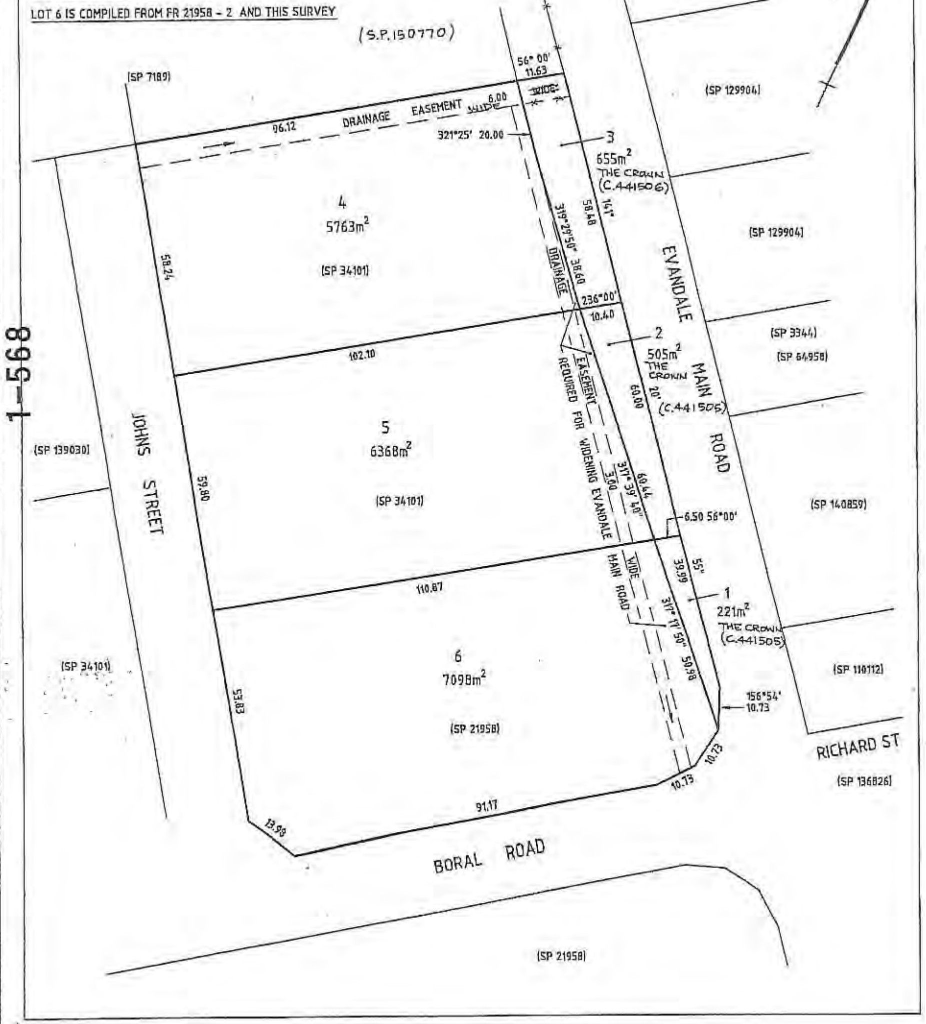
No unregistered dealings or other notations

A4064

OWNER: PATRICIA MAY NEWTON, EDWARD ELWELL NEWTON, ALEXANDER MCGREGOR FOLIO REFERENCE: FR. 21958 - 2, FR. 34101 - 1, FR. 34101 - 2 GRANTEE: ~~PART OF 5½ - 2r - 19p GRANTED TO WILLIAM KITSON,~~ PART OF 324 ACRES GRANTED TO THOMAS GEE	PLAN OF SURVEY BY SURVEYOR M.R.ROSE OF 2/3 WALDEN STREET, NEWSTEAD 7250 LOCATION LAND DISTRICT OF CORNWALL PARISHES OF BREADALBANE ~~& PERTH~~ SCALE 1: 800 LENGTHS IN METRES	REGISTERED NUMBER **P148609** APPROVED EFFECTIVE FROM -5 JUN 2007 Alice Kawa Recorder of Titles
MAPSHEET MUNICIPAL CODE No 123 /5040-55 — LAST UPI No FET94 FET95 A100475	LAST PLAN: SP 21958 SP 34101	ALL EXISTING SURVEY NUMBERS TO BE CROSS REFERENCED ON THIS PLAN

LOT 4 IS COMPILED FROM FR 34101 - 2 AND THIS SURVEY
LOT 5 IS COMPILED FROM FR 34101 - 1 AND THIS SURVEY
LOT 6 IS COMPILED FROM FR 21958 - 2 AND THIS SURVEY

1-568



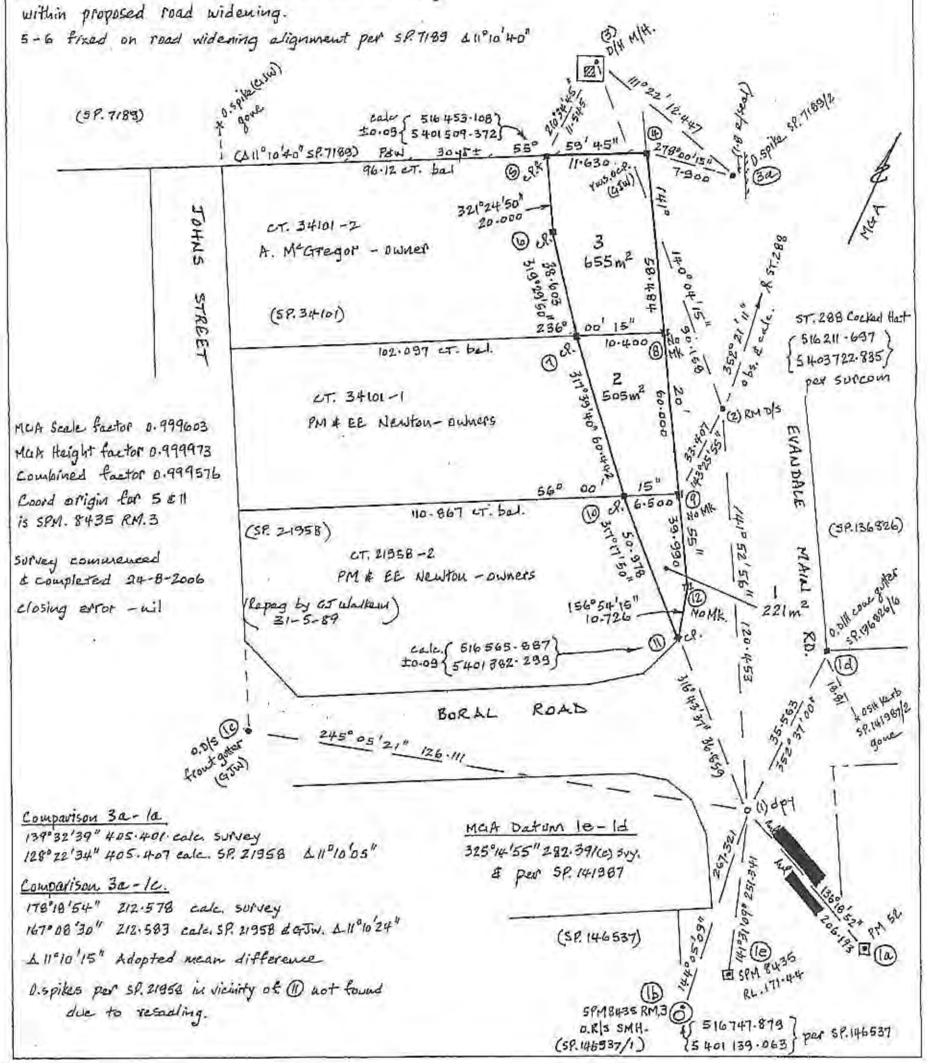
SURVEY NOTES SHEET 1 OF 1 SHEETS	Registered Number **P148609**	SURVEY CERTIFICATE
CROSS REFERENCE PLAN NUMBERS USED AS PART OF THIS SURVEY	DESCRIBE BY REPORT THE EVIDENCE USED TO DETERMINE BOUNDARIES	

ALL CORNER MARKS ARE CP'S UNLESS OTHERWISE SHOWN. ALL BOUNDARIES ARE OPEN UNLESS OTHERWISE SHOWN. THE AGE OF THE MARKS FOUND APPEARS CONSISTENT WITH THE ORIGIN NOTED.

I, MICHAEL R. ROSE of NEWSTEAD
in Tasmania a registered land surveyor HEREBY CERTIFY that:
(a) this survey is based upon the best evidence that the nature of the case admits
(b) the survey notes have been truly compiled from surveys made by me or made under my supervision; and
(c) this survey and accompanying survey notes comply with the relevant legislation affecting surveys and are correct for the purpose required.

Signature [signature] Date 12 / 9 / 2006
Surveyors Reference: 923

REPORT MGA datum per SP. 141987
4, 5, 7, 8, 9, 10, 11 & 12 fixed per SP. 21958 applying mean Δ 11°10'15". 8, 9 & 12 not marked being within proposed road widening.
5-6 fixed on road widening alignment per SP. 7189 Δ11°10'40"



COUNCIL APPROVAL

Registered Number
P 148609

{Insert any qualification to the permit under section 83(5), section 109 or section 111 of the Local Government (Building & Miscellaneous Provisions) Act 1993}

The subdivision shown in this plan is approved

In witness whereof the common seal of

has been affixed, pursuant to a resolution of the Council of the said municipality

passed the day of 20 , in the presence of us

Member .....

Member .....

Council Delegate ..... Council Reference .....

1-569

NOMINATIONS

For the purpose of section 88 of the Local Government (Building & Miscellaneous Provisions) Act 1993 the owner has nominated

..... Solicitor to act for the owner

MICK ROSE ..... Surveyor to act for the owner

OFFICE EXAMINATION: Indexed ..... Computed 5/6/07 Examined 5/6/07

RECORDER OF TITLES
Issued Pursuant to the Land Titles Act 1980
Tasmanian Government

SEARCH OF TORRENS TITLE

VOLUME	FOLIO
150770	100
EDITION	DATE OF ISSUE
3	12-Nov-2008

SEARCH DATE : 26-Jun-2020
SEARCH TIME : 04.41 PM

DESCRIPTION OF LAND

Parish of BREADALBANE Land District of CORNWALL
Lot 100 on Sealed Plan 150770
Derivation : Part of 324 Acres Gtd. to Thomas Gee
Prior CT 7189/2

SCHEDULE 1

C558132 TRANSFER to NOVAK INTERNATIONAL PTY LTD Registered 26-Oct-2004 at 12.01 PM

SCHEDULE 2

Reservations and conditions in the Crown Grant if any
SP150770 EASEMENTS in Schedule of Easements
SP150770 FENCING PROVISION in Schedule of Easements

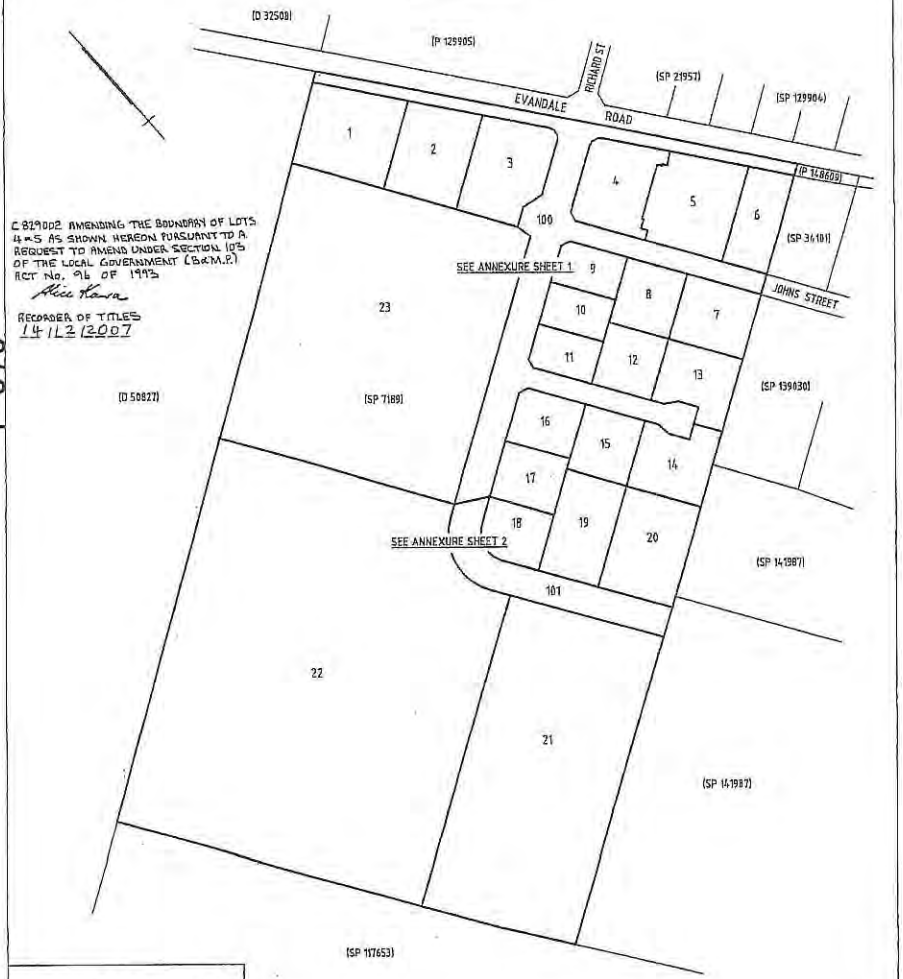
UNREGISTERED DEALINGS AND NOTATIONS

No unregistered dealings or other notations

OWNER: NOVAK INTERNATIONAL PTY. LTD. FOLIO REFERENCE: FR. 7189 – 2 GRANTEE: PART OF 81a – 2r – 19p GRANTED TO WILLIAM KITSON, PART OF 324 ACRES GRANTED TO THOMAS GEE	**PLAN OF SURVEY** BY SURVEYOR M.R.ROSE OF 2/3 WALDEN STREET, NEWSTEAD 7250 LOCATION LAND DISTRICT OF CORNWALL PARISHES OF BREADALBANE & PERTH SCALE 1: 3000 LENGTHS IN METRES	Registered Number SP 150770 APPROVED EFFECTIVE FROM - 3 MAY 2007 Alice Kawa Recorder of Titles

MAPSHEET MUNICIPAL CODE No: 123 (5040-55)	LAST UPI No: 4700470	LAST PLAN: SP. 7189	ALL EXISTING SURVEY NUMBERS TO BE CROSS REFERENCED ON THIS PLAN

NEW INDEX PLAN



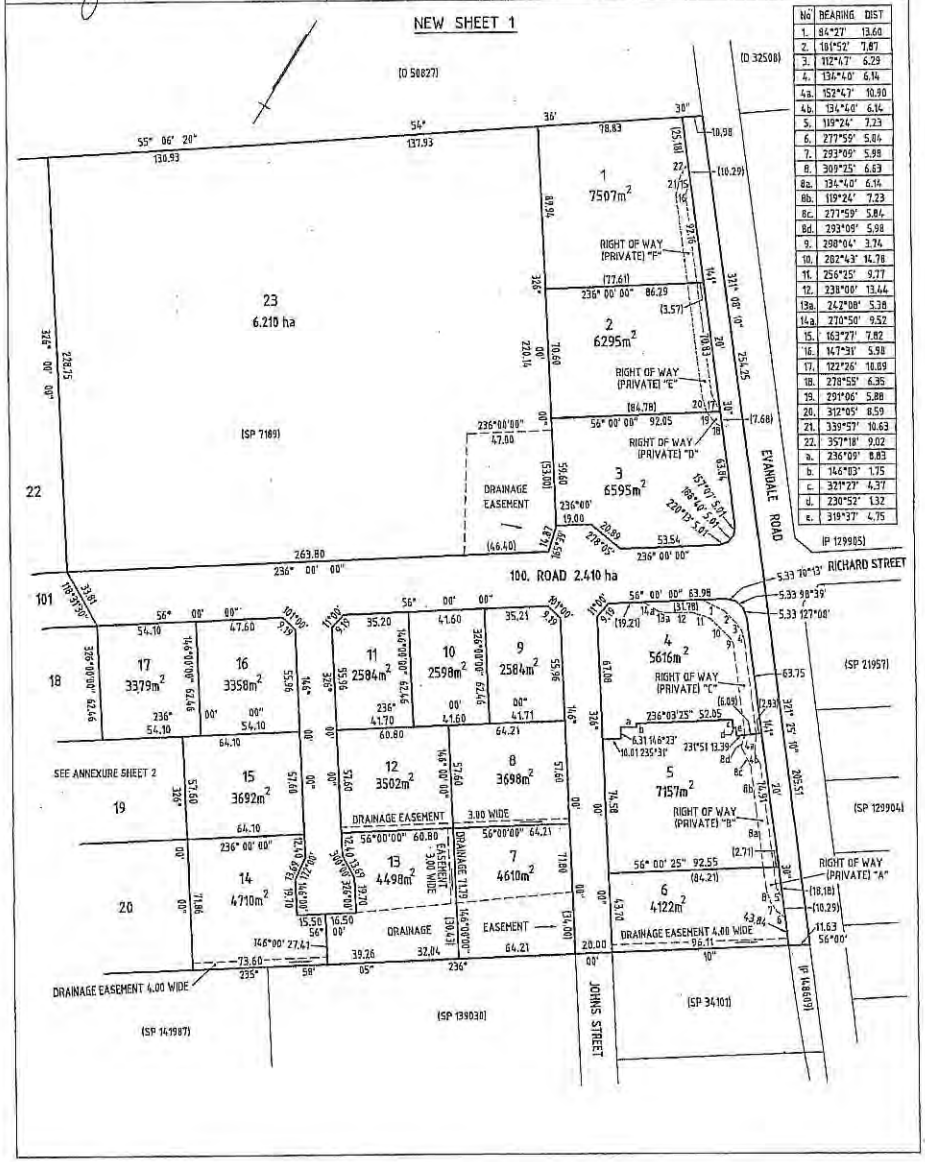
C 829002 AMENDING THE BOUNDARY OF LOTS 4 & 5 AS SHOWN HEREON PURSUANT TO A REQUEST TO AMEND UNDER SECTION 103 OF THE LOCAL GOVERNMENT (B&M.P.) ACT No. 96 OF 1993
Alice Kawa
RECORDER OF TITLES
14/12/2007

1-570

COUNCIL DELEGATE 15.11.07 DATE

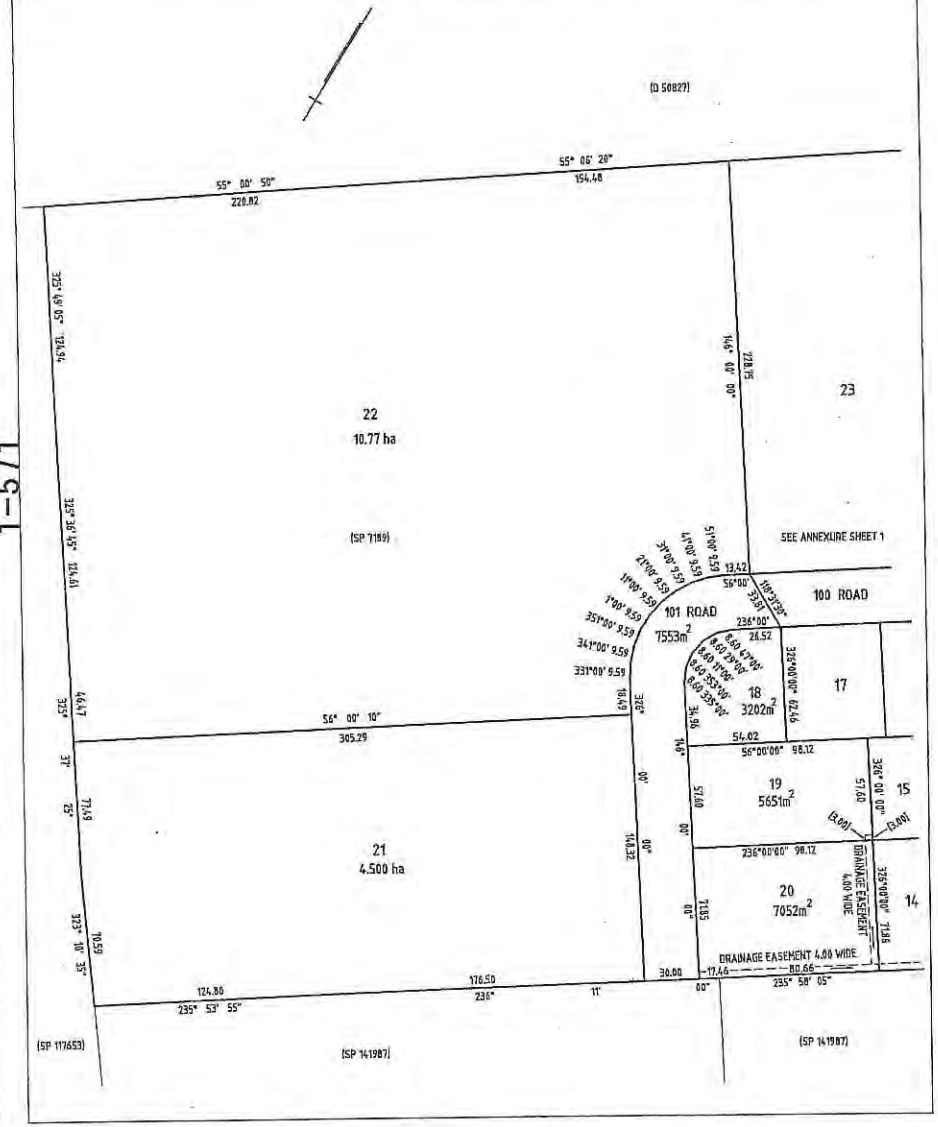
PLAN OF SURVEY **ANNEXURE SHEET** NEW SHEET 1 OF 2 SHEETS SIGNED FOR IDENTIFICATION PURPOSES. Council Delegate 15-11-2007 Date	OWNER: NOVAK INTERNATIONAL PTY. LTD. FOLIO REFERENCE: FR. 7189 – 2 SCALE 1: 1250 LENGTHS IN METRES THIS ANNEXURE SHEET FORMS PART OF THE ATTACHED INDEX PLAN. THE SURVEYORS CERTIFICATE EXTENDS TO THE DETAILS ON THIS SHEET. M. R. ROSE 14-11-2007 Registered Land Surveyor Date	Registered Number SP 150770 APPROVED EFFECTIVE FROM - 3 MAY 2007 Alice Kawa Recorder of Titles

NEW SHEET 1



No	BEARING	DIST
1.	84°27'	13.60
2.	181°52'	7.87
3.	112°47'	6.28
4.	134°40'	6.14
4a.	152°47'	10.90
4b.	134°40'	6.14
5.	119°24'	7.23
6.	277°59'	5.84
7.	293°09'	5.98
8.	309°25'	6.63
8a.	134°40'	6.14
8b.	119°24'	7.23
8c.	277°59'	5.84
8d.	293°09'	5.98
9.	298°04'	3.74
10.	282°43'	14.78
11.	256°25'	9.77
12.	238°00'	13.44
13a.	242°08'	5.38
14a.	270°50'	9.52
15.	163°27'	7.82
16.	147°31'	5.98
17.	122°26'	10.69
18.	278°55'	6.35
19.	291°06'	5.88
20.	312°05'	8.59
21.	339°57'	10.63
22.	357°18'	9.02
a.	236°09'	8.83
b.	146°13'	1.75
c.	321°27'	4.37
d.	230°52'	1.32
e.	319°37'	4.75

PLAN OF SURVEY ANNEXURE SHEET SHEET 2 OF 2 SHEETS	OWNER: NOVAK INTERNATIONAL PTY. LTD. FOLIO REFERENCE: FR. 7189 - 2 SCALE 1: 1750 LENGTHS IN METRES	Registered Number SP 150770
SIGNED FOR IDENTIFICATION PURPOSES. Council Delegate 30/3/07 Date	THIS ANNEXURE SHEET FORMS PART OF THE ATTACHED INDEX PLAN. THE SURVEYORS CERTIFICATE EXTENDS TO THE DETAILS ON THIS SHEET. Registered Land Surveyor 20-03-2007 Date	APPROVED EFFECTIVE FROM - 3 MAY 2007 Alice Kawa Recorder of Titles



1-571

RECORDER OF TITLES
Issued Pursuant to the Land Titles Act 1980
Tasmanian Government

SCHEDULE OF EASEMENTS NOTE: THE SCHEDULE MUST BE SIGNED BY THE OWNERS & MORTGAGEES OF THE LAND AFFECTED. SIGNATURES MUST BE ATTESTED.	Registered Number SP 150770

PAGE 1 OF 3 PAGE/S

EASEMENTS AND PROFITS

Each lot on the plan is together with:-
(1) such rights of drainage over the drainage easements shown on the plan (if any) as may be necessary to drain the stormwater and other surplus water from such lot; and
(2) any easements or profits a prendre described hereunder.
Each lot on the plan is subject to:-
(1) such rights of drainage over the drainage easements shown on the plan (if any) as passing through such lot as may be necessary to drain the stormwater and other surplus water from any other lot on the plan; and
(2) any easements or profits a prendre described hereunder.
The direction of the flow of water through the drainage easements shown on the plan is indicated by arrows.

Lots 6, 7, 8, 12, 13, 14, 19, 20 and 23 are subject to a right of drainage (appurtenant to the Northern Midlands Council) over the lands marked DRAINAGE EASEMENT 3.00 WIDE, DRAINAGE EASEMENT 4.00 WIDE and DRAINAGE EASEMENT passing through those lots on the plan

Lot 1 is subject to a right of carriageway (appurtenant to lots 2 and 3) over the land marked RIGHT OF WAY (PRIVATE) "F" passing through that lot on the plan

Lot 1 is together with a right of carriageway over the land marked RIGHT OF WAY (PRIVATE) "D" and RIGHT OF WAY (PRIVATE) "E" on the plan

Lot 2 is subject to a right of carriageway (appurtenant to lots 1 and 3) over the land marked RIGHT OF WAY (PRIVATE) "E" passing through that lot on the plan

Lot 2 is together with a right of carriageway over the land marked RIGHT OF WAY (PRIVATE) "D" and RIGHT OF WAY (PRIVATE) "F" on the plan

Lot 3 is subject to a right of carriageway (appurtenant to lots 1 and 2) over the land marked RIGHT OF WAY (PRIVATE) "D" passing through that lot on the plan

(USE ANNEXURE PAGES FOR CONTINUATION)

SUBDIVIDER: NOVAK INTERNATIONAL PTY LTD FOLIO REF: FR. 7189 - 2 SOLICITOR & REFERENCE: RAE & PARTNERS (P. Lebski)	PLAN SEALED BY: ~~GLENORCHY CITY~~ NORTHERN MIDLANDS COUNCIL DATE: DA REF NO. 27/003/322 P03-1447 Council Delegate
NOTE: The Council Delegate must sign the Certificate for the purposes of identification.	

ANNEXURE TO SCHEDULE OF EASEMENTS PAGE 2 OF 3 PAGES	Registered Number SP 150770
SUBDIVIDER: NOVAK INTERNATIONAL PTY LTD FOLIO REFERENCE: FR. 7189 - 2	

Lot 3 is together with a right of carriageway over the land marked RIGHT OF WAY (PRIVATE) "E" and RIGHT OF WAY (PRIVATE) "F" on the plan

Lot 4 is subject to a right of carriageway (appurtenant to lots 5 and 6) over the land marked RIGHT OF WAY (PRIVATE) "C" passing through that lot on the plan

Lot 4 is together with a right of carriageway over the land marked RIGHT OF WAY (PRIVATE) "A" and RIGHT OF WAY (PRIVATE) "B" on the plan

Lot 5 is subject to a right of carriageway (appurtenant to lots 4 and 6) over the land marked RIGHT OF WAY (PRIVATE) "B" passing through that lot on the plan

Lot 5 is together with a right of carriageway over the land marked RIGHT OF WAY (PRIVATE) "A" and RIGHT OF WAY (PRIVATE) "C" on the plan

Lot 6 is subject to a right of carriageway (appurtenant to lots 4 and 5) over the land marked RIGHT OF WAY (PRIVATE) "A" passing through that lot on the plan

Lot 6 is together with a right of carriageway over the land marked RIGHT OF WAY (PRIVATE) "B" and RIGHT OF WAY (PRIVATE) "C" on the plan

Fencing provision

~~The owners of the lots on the plan are subject to the fencing provision created and set forth in Sealed Plan No 7189~~

In respect to the lots on the plan the vendor (NOVAK INTERNATIONAL PTY LTD) shall not be required to fence

1-572

NOTE: Every annexed page must be signed by the parties to the dealing or where the party is a corporate body be signed by the persons who have attested the affixing of the seal of that body to the dealing.

ANNEXURE TO SCHEDULE OF EASEMENTS PAGE 3 OF 3 PAGES	Registered Number SP 150770
SUBDIVIDER: NOVAK INTERNATIONAL PTY LTD FOLIO REFERENCE: FR. 7189 - 2	

Signed under Section 127 (1) of the Corporations Act 2001 by NOVAK INTERNATIONAL PTY. LTD. being the registered proprietors in folio of the Register volume 7189 folio 2 in the presence of-

) x
) (PAUL NOVAK)
) x (Director/Secretary)

Witness: .....
name: Alan James Robb
address: Level 28 Anz Place 10 Eagle St Brisbane
occupation: Certified Practising Accountant

EXECUTED by BANK OF WESTERN AUSTRALIA LTD ABN 22 050 494 454 by its duly constituted Attorney under Power of Attorney No. 72/6137 dated 10 April 2001 who has no notice of revocation of such Power of Attorney in the presence of:

An Officer of the Bank
Name (please print): Alison Madonna Rice C.dec 85558

BANK OF WESTERN AUSTRALIA LTD by its Attorney:

Signature Beverley Lewis Manager Operations Team
Name and Title (please print)

NOTE: Every annexed page must be signed by the parties to the dealing or where the party is a corporate body be signed by the persons who have attested the affixing of the seal of that body to the dealing.

SURVEY NOTES

SHEET 1 OF 3 SHEETS

Registered Number

SP 150770

CROSS REFERENCE PLAN NUMBERS USED AS PART OF THIS SURVEY

DESCRIBE BY REPORT THE EVIDENCE USED TO DETERMINE BOUNDARIES

ALL CORNER MARKS ARE DP'S UNLESS OTHERWISE SHOWN. ALL BOUNDARIES ARE OPEN UNLESS OTHERWISE SHOWN.

REPORT - MGA datum per GPS observations with coord origin at 22 per P 148609.

34 fixed by proportion per comparison 31-35 per SP 141987.

35-36-38-39-40 fixed by proportion per comparison 35-11 per SP 7189.

40-41-43-45-46-47-21 fixed by proportion per comparison 21-40 per SP 7189.

45-108 & 50-22 on road widening alignment defined per SP 7189.

46 & 47 not marked being within proposed road widening.

MGA scale factor 0.999603 Height factor: 0.999973 csf: 0.999576

Estimated positional error revised from P. 148609 after Auspos processing of GPS data

GJW denotes regeg by GJ Watkins dated 31-5-1989

SURVEY CERTIFICATE

I, MICHAEL R. ROSE of NEWSTEAD

in Tasmania a registered land surveyor HEREBY CERTIFY that:

(a) this survey is based upon the best evidence that the nature of the case admits

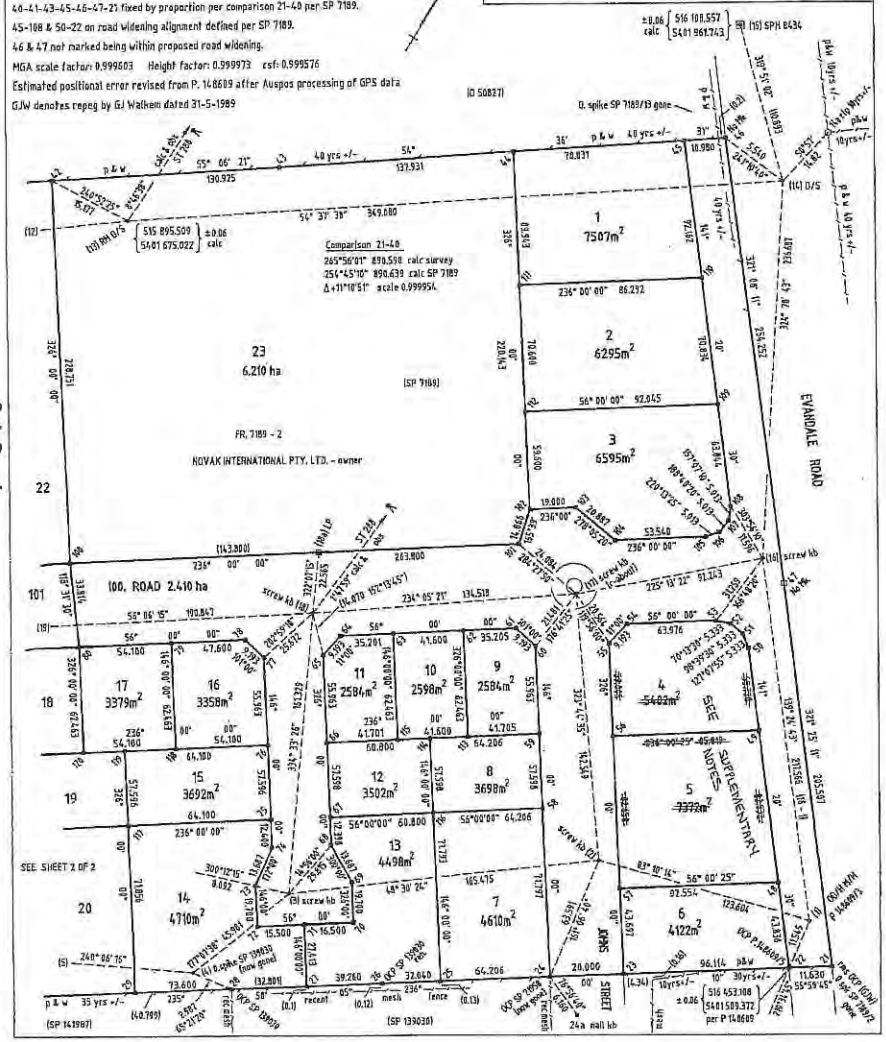
(b) the survey notes have been truly compiled from surveys made by me or made under my supervision; and

(c) this survey and accompanying survey notes comply with the relevant legislation affecting surveys and are correct for the purpose required.

Signature

Date 20 / 3 / 2007

Surveyors Reference: 948



SURVEY NOTES
ANNEXURE SHEET

SHEET 2 OF 2 SHEETS

CROSS REFERENCE PLAN NUMBERS USED AS PART OF THIS SURVEY

OWNER: NOVAK INTERNATIONAL PTY. LTD.

FOLIO REFERENCE: FR 7189 - 2

THIS ANNEXURE SHEET FORMS PART OF THE ATTACHED PLAN. THE SURVEYORS CERTIFICATE EXTENDS TO THE DETAILS ON THIS SHEET

Registered Land Surveyor

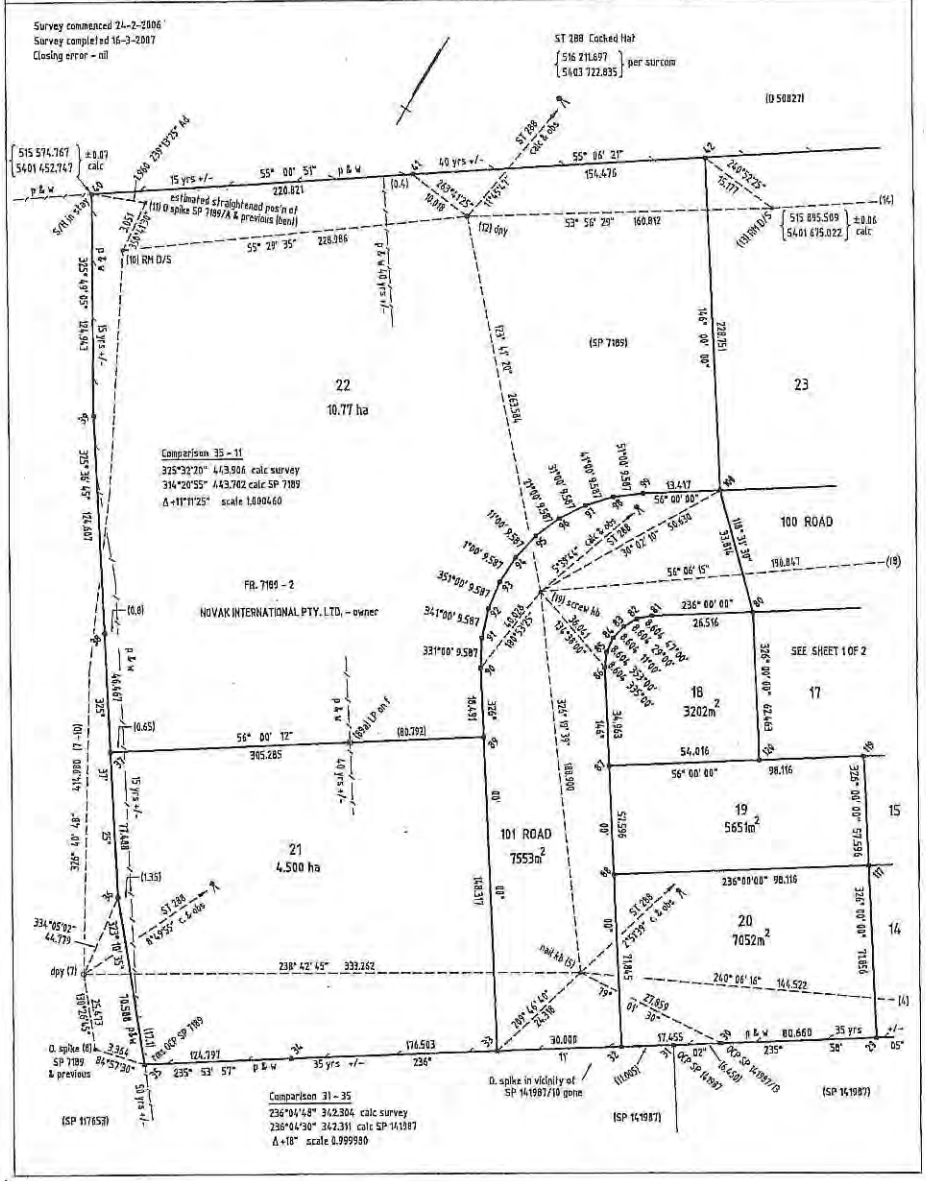
20-3-2007
Date

Registered Number

SP 150770

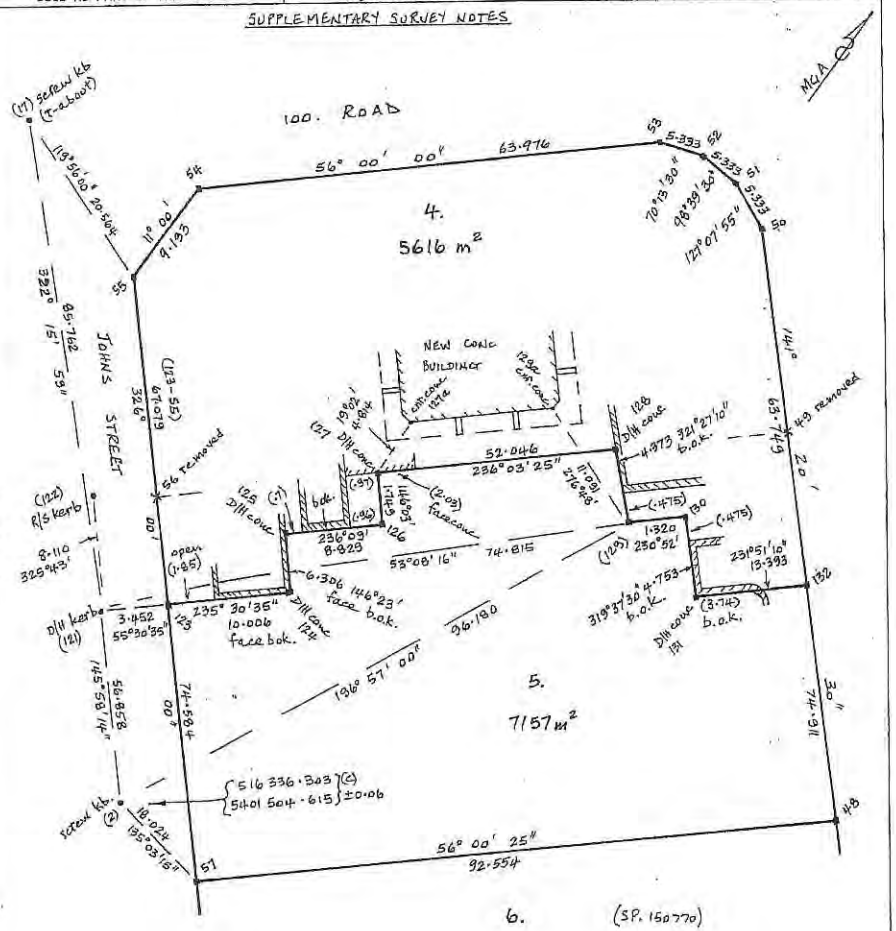
LENGTHS IN METRES

Survey commenced 24-2-2006
Survey completed 16-3-2007
Closing error - nil



SURVEY NOTES ANNEXURE SHEET SHEET 3 OF 3 SHEETS	OWNER: FOLIO REFERENCE: THIS ANNEXURE SHEET FORMS PART OF THE ATTACHED PLAN. THE SURVEYORS CERTIFICATE EXTENDS TO THE DETAILS ON THIS SHEET Registered Land Surveyor — Date: 14-11-2007	Registered Number SP 150770 LENGTHS IN METRES
CROSS REFERENCE PLAN NUMBERS USED AS PART OF THIS SURVEY		

SUPPLEMENTARY SURVEY NOTES



SUPPLEMENTARY SURVEY COMMENCED 16-3-2007
COMPLETED 13-11-2007

ALL CORNER MARKS CP'S UNLESS SHOWN OTHERWISE

1-574

HOBART
A.M. Peacock, B. APP. SC. (SURV), M.I.S. AUST. (Director)
C.M. Terry, B. SURV. (Tas.), M.I.S. AUST. (Director)
D. Panton, B.E. M.I.E. AUST., C.P.ENG. (Director)
H. Clement, B. SURV. (Tas.), M.SSI (Director)
M. McQueen, B.E., M.I.E. AUST. (Associate)
KINGSTON
A.P. (Lex) McIndoe, B. SURV. (Tas.), M.I.S. AUST. (Director)
LAUNCESTON
J.W. Dent, OAM, B. SURV. (Tas.), M.I.S. AUST. (Director)
P.N. Anderson, L.S., M.I.S. AUST. (Consultant)
BURNIE
A. J. Hudson, B. SURV. (Tas.), M.I.S. AUST. (Director)
B.J. Rollins, L.S., M.I.S. AUST. (Director)

PDA
PEACOCK DARCEY & ANDERSON PTY. LTD.
Surveyors, Engineers & Planners

127 Bathurst Street
Hobart Tasmania, 7000
Phone (03) 6234 3217
ABN 71 217 806 325
Fax (03) 6234 5095
Email: pda.hbt@pda.com.au
www.pda.com.au

Our Ref :
L100701_M906M - Enc copy Survey Plan & Notes

1st July, 2010

Recorder of Titles
Land Titles Office
GPO Box 541
HOBART TAS 7001

Dear Sir

Lease Survey
Proposed Telstra Site – Hughes Court, Breadalbane

Please find attached copy of Plan and Survey Notes, forwarded in accordance with Section 3.3.1.1(b) of the Survey Directions 2002.

Yours faithfully
Peacock Darcey & Anderson Pty Ltd

Per:

Mark Peacock
DIRECTOR

Encs

Sec. 3.3.1.1.(b)
1/3

OFFICES ALSO AT:
- 26 Church Street, Kingston, 7050 (03) 6229 2131
- 6 Queen Street, Burnie, 7320 (03) 6431 4400

TRADING AS CAMPBELL SMITH PHELPS PEDLEY WITH OFFICES AT:
- 3/23 Brisbane Street, Launceston, 7250 (03) 6331 4099
- 16 Emu Bay Road, Deloraine, 7304 (03) 6362 2993

OWNER : ICENA DAIRIES PTY. LTD.

FOLIO REFERENCE : 150770/14

GRANTEE : PART OF 324 ACRES GTD. TO THOMAS GEE

PLAN OF SURVEY

BY SURVEYOR ANTHONY MARK PEACOCK of PEACOCK, DARCEY & ANDERSON PTY LTD 127 BATHURST STREET, HOBART

LAND DISTRICT OF CORNWALL

PARISH OF BREADALBANE

Registered Number SUR. 3.3.1.1.(b) 2/3

APPROVED EFFECTIVE FROM .....

Recorder of Titles

SCALE: 1:400	LENGTHS IN METRES	SURVEYORS REF: M908M
MAPSHEET MUNICIPAL CODE No.	LAST UPI No	LAST PLAN No.
ALL EXISTING SURVEY NUMBERS TO BE CROSS REFERENCED ON THIS PLAN		

SURVEY FOR LEASE HOLD ESTATE ONLY

COUNCIL DELEGATE ..... DATE .....

SURVEY NOTES

SHEET 1 OF 1 SHEET

Registered Number SUR. 3.3.1.1.(b) 3/3

CROSS REFERENCE PLAN NUMBERS USED AS PART OF THIS SURVEY	DESCRIBE BY REPORT THE EVIDENCE USED TO DETERMINE BOUNDARIES

SURVEY COMMENCED 19/05/2010 AND COMPLETED 20/05/2010
REGISTERED GRADUATE: MARTIN HEATLEY

SURVEY CERTIFICATE

I, Anthony Mark Peacock of Hobart in Tasmania a Registered Land Surveyor HEREBY CERTIFY that:
(a) this survey is based upon the best evidence that the nature of the case admits
(b) the survey notes have been truly compiled from surveys made by me or made under my supervision; and
(c) this survey and accompanying survey notes comply with relevant legislation affecting surveys and are correct for the purpose required.

Signature ..... Date 30, 6, 2010

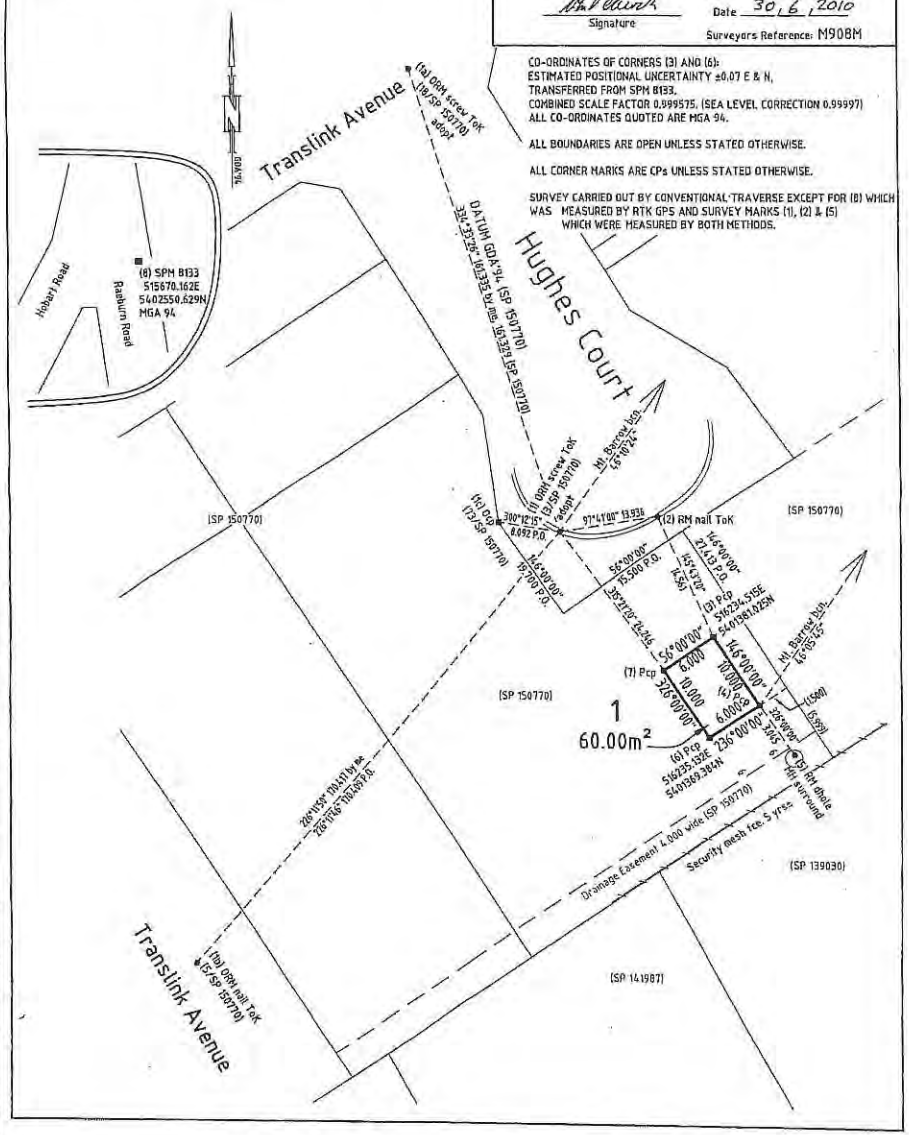
Surveyors Reference: M908M

CO-ORDINATES OF CORNERS (3) AND (6):
ESTIMATED POSITIONAL UNCERTAINTY ±0.07 E & N,
TRANSFERRED FROM SPM 8133.
COMBINED SCALE FACTOR 0.999575. (SEA LEVEL CORRECTION 0.99997)
ALL CO-ORDINATES QUOTED ARE MGA 94.

ALL BOUNDARIES ARE OPEN UNLESS STATED OTHERWISE.

ALL CORNER MARKS ARE CPs UNLESS STATED OTHERWISE.

SURVEY CARRIED OUT BY CONVENTIONAL TRAVERSE EXCEPT FOR (8) WHICH WAS MEASURED BY RTK GPS AND SURVEY MARKS (1), (2) & (5) WHICH WERE MEASURED BY BOTH METHODS.



1-576

OWNER: PREMIUM CONSTRUCTIONS (TAS) PTY. LTD.

FOLIO REFERENCE: 150770/13

GRANTEE: PART OF 324 ACRES GTD. TO THOMAS GEE

PLAN OF SURVEY

BY SURVEYOR JOHN WILLIAM DENT of CAMPBELL SMITH PHELPS PEDLEY 3/23 BRISBANE STREET, LAUNCESTON

LOCATION LAND DISTRICT OF CORNWALL PARISH OF BREADALBANE

Filed with SP150770

SIO 162828

APPROVED EFFECTIVE FROM ....

SCALE: 1:400	LENGTHS IN METRES	SURVEYORS REF: 190/11	Recorder of Titles
MAPSHEET MUNICIPAL CODE No.	LAST UPI No	LAST PLAN No.	ALL EXISTING SURVEY NUMBERS TO BE CROSS REFERENCED ON THIS PLAN

SURVEY FOR LEASE HOLD ESTATE ONLY

LODGED AS SIO TO SUPPORT LEASES D5966 & D5967

COUNCIL DELEGATE DATE

SURVEY NOTES

SHEET 1 OF 1 SHEET

Filed with SP150770

SIO 162828

CROSS REFERENCE PLAN NUMBERS USED AS PART OF THIS SURVEY	DESCRIBE BY REPORT THE EVIDENCE USED TO DETERMINE BOUNDARIES

SURVEY COMMENCED AND COMPLETED 22/06/2011
REGISTERED GRADUATE: MARTIN HEATLEY

SURVEY CERTIFICATE

I, John William Dent of Launceston in Tasmania a Registered Land Surveyor HEREBY CERTIFY that:
(a) this survey is based upon the best evidence that the nature of the case admits
(b) the survey notes have been truly compiled from surveys made by me or made under my supervision; and
(c) this survey and accompanying survey notes comply with relevent legislation affecting surveys and are correct for the purpose required.

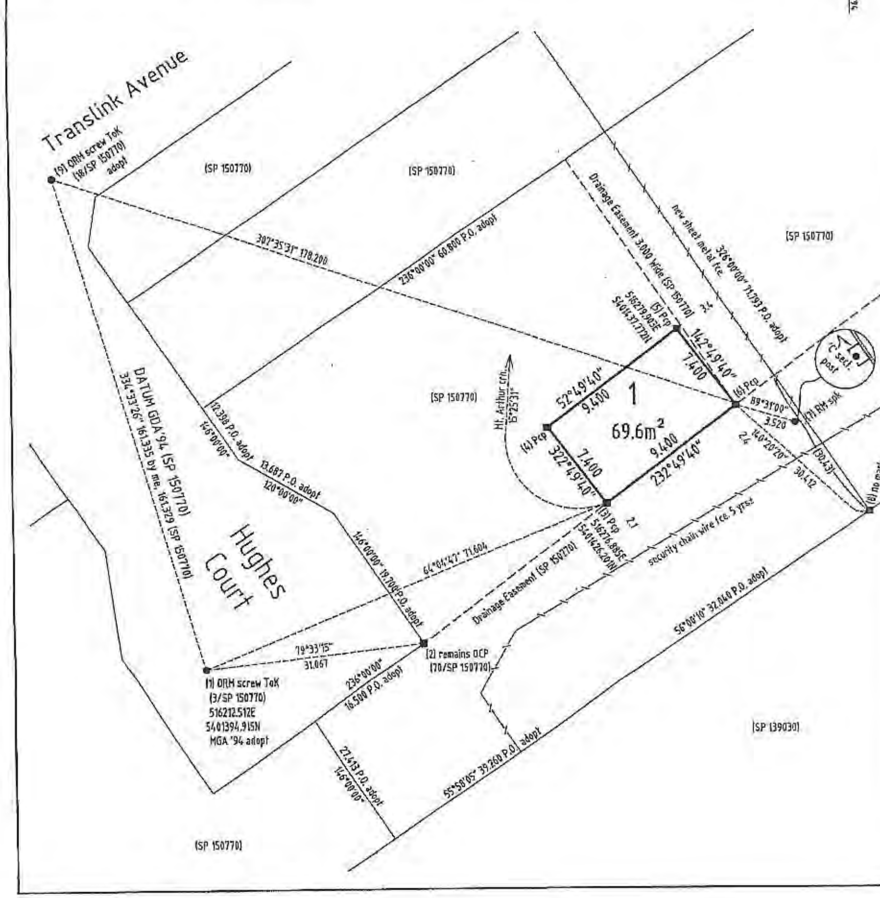
Signature Date 6 7 2011

Surveyors Reference: 190/11

CO-ORDINATES OF ORM (1), AND CORNERS (3) AND (7): ESTIMATED POSITIONAL UNCERTAINTY ±0.07 E & N. TRANSFERRED FROM SPM 8133 VIA LEASE HOLD ESTATE ONLY SURVEY BY MR. ANTHONY PEACOCK 20/05/2010, SURVEYORS REFERENCE M908M. COMBINED SCALE FACTOR 0.999575. ISEA LEVEL CORRECTION 0.99997). ALL COORDINATES QUOTED ARE MGA '94.

ALL BOUNDARIES ARE OPEN UNLESS STATED OTHERWISE.

ALL CORNER MARKS ARE CPs UNLESS STATED OTHERWISE.



COUNCIL APPROVAL

Registered Number

SP 150770

[Insert any qualification to the permit under section 83(5), section 109 or section 111 of the Local Government (Building & Miscellaneous Provisions) Act 1993]

The subdivision shown in this plan is approved

NORTHERN MIDLANDS COUNCIL 1993

In witness whereof the common seal of NORTHERN MIDLANDS COUNCIL has been affixed, pursuant to a resolution of the Council of the said municipality passed the 30 day of MARCH 2007, in the presence of us

MAYOR ~~Member~~ .....

~~Member~~ .....

Council Delegate (GENERAL MANAGER) .....

Council Reference 27/003/322 P03-447

NOMINATIONS

For the purpose of section 88 of the Local Government (Building & Miscellaneous Provisions) Act 1993 the owner has nominated

RAE & PARTNERS ..... Solicitor to act for the owner

MICK ROSE ..... Surveyor to act for the owner

OFFICE EXAMINATION: Indexed .....

Computed MK 26/4/07

Examined MK 26/4/07

1-577

RECORDER OF TITLES
Issued Pursuant to the Land Titles Act 1980
Tasmanian Government

SEARCH OF TORRENS TITLE

VOLUME	FOLIO
23720	3
EDITION	DATE OF ISSUE
2	13-Aug-1999

SEARCH DATE : 26-Jun-2020
SEARCH TIME : 04.42 PM

DESCRIPTION OF LAND

Town of BREADALBANE
Lot 3 on Diagram 23720
Derivation : Part of 556 Acres originally granted to Thomas Scott and duly acquired by Application No. A941239
Prior CT 4277/51

SCHEDULE 1

THE CROWN

SCHEDULE 2

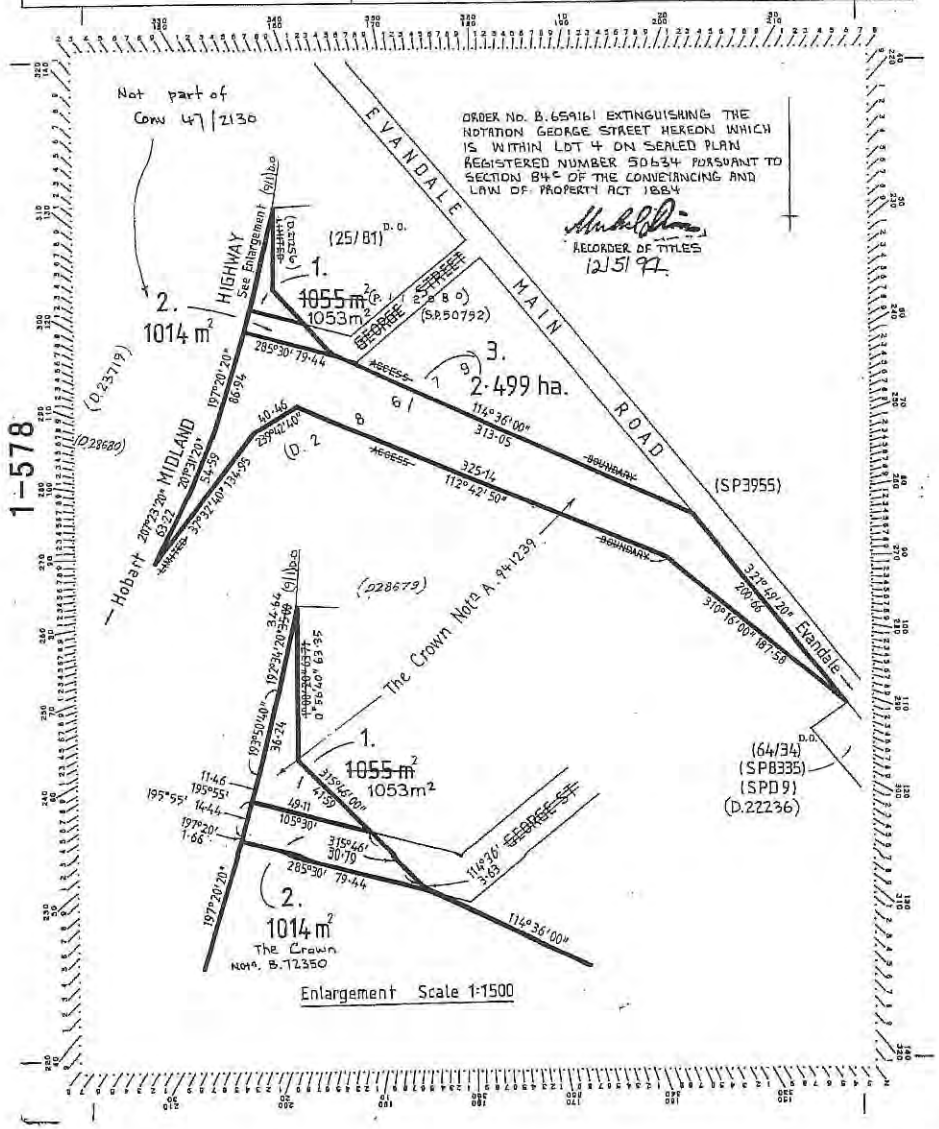
Reservations and conditions in the Crown Grant if any

UNREGISTERED DEALINGS AND NOTATIONS

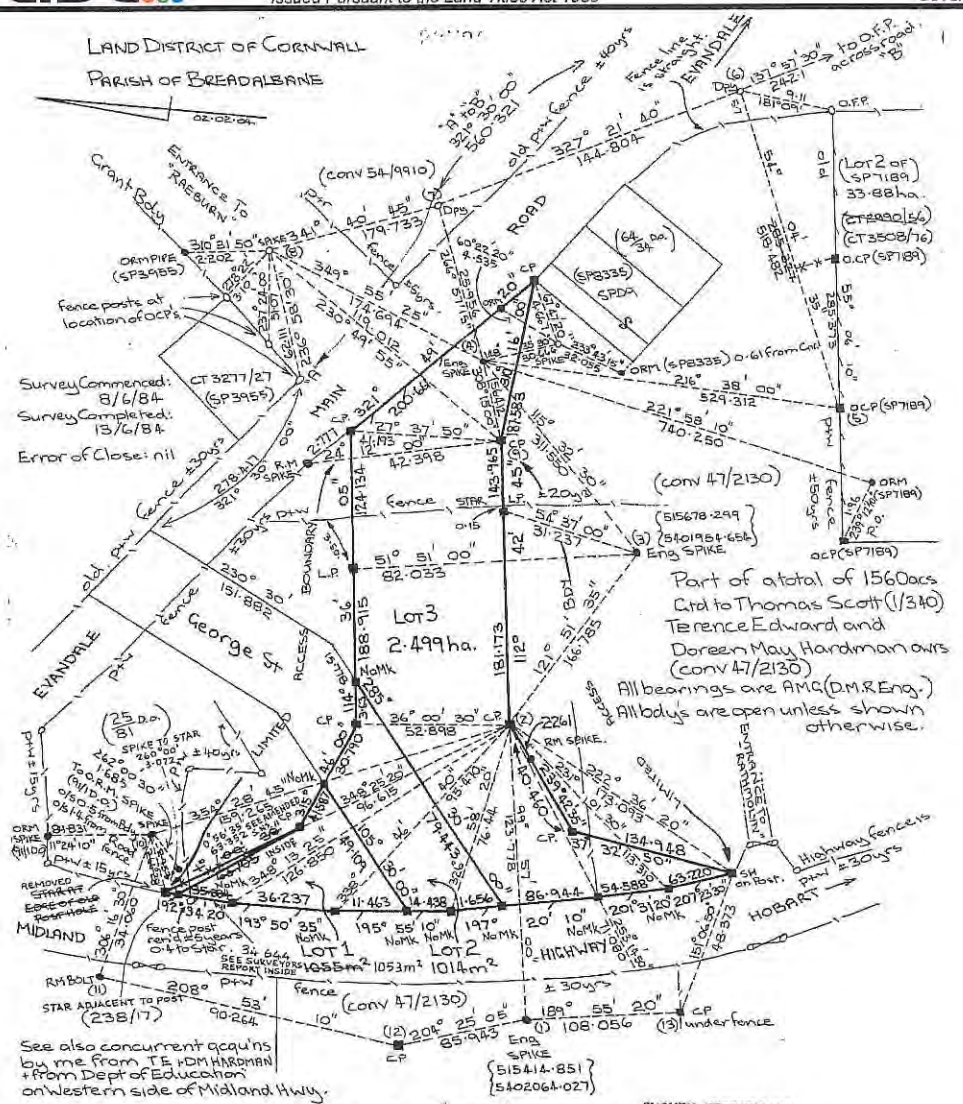
No unregistered dealings or other notations

D23720

Owner: Lots 1 & 3. Terence Edward Hardman and Doreen May Hardman. ~~Lot 2. Unknown.~~	PLAN OF SURVEY by Surveyor G.D. WHERRETT of land situated in the LAND DISTRICT OF CORNWALL PARISH OF BREADALBANE & TOWN OF BREADALBANE SCALE 1: 3000 MEASUREMENTS IN METRES	Registered Number: D23720
Title Reference: Lots 1 & 3. Conv. 47-2130		Effective from: - 7 JUL 1986
Grantee: Part ~~of a total~~ of ~~1560~~ 556 ac. Gtd to Thomas Scott.		Recorder of titles



RECORDER OF TITLES
Issued Pursuant to the Land Titles Act 1980
Tasmanian Government



Survey notes of Lot 1 (1055m²) and Lot 3 (2.499ha) being land owned by Terence Edward and Doreen May Hardman, and of Lot 2 (1014m²) being land known Pringle St (not constructed)
All lots are land to be acquired by the Dept of Main Roads for road purposes
Note: Pringle and George Sts have been positioned from original distance from Grant Cnr. "A" maintaining angles and distances per subdivision plan prepared by the late James Reid Scott.

SURVEY CERTIFICATE

I Grant Douglas Wherrett of Riverside in Tasmania a registered surveyor HEREBY CERTIFY that:

(a) this survey is based upon the best evidence that the nature of the case admits;
(b) the survey notes have been truly compiled from surveys made by me or made under my supervision; and
(c) this survey and accompanying survey notes comply with the relevant legislation affecting surveys and are correct for the purpose required.

G. Doug. Wherrett
Registered Surveyor
Date 14.06.1984

J Alexander Graduate Surveyor

DEPARTMENT OF MAIN ROADS, TASMANIA

PA/SM

All communications to be addressed to:
313 Wellington Street,
Launceston. 7249
Officer: P. Alexander Telephone: 44 2401
Our File No.: Your Reference:
Date: 23rd August, 1985

Chief Draughtsman,
Lands Titles Office,
G.P.O. Box 541 F,
HOBART,
Tasmania. 7001

12 SEP 1985

Dear Sir,

I enclose a photostat of the field notes for (91/1) D.O. and for (25/81) D.O., previously unregistered.

On page (4) (my numbering) of F.N.'s (91/1) D.O. it would appear that in setting out the boundary per (25/81) D.O. an error has been made of 3.18 feet, due to the boundary chainage being commenced at the O.R.M. Thus the pre-acquisition Midland Highway frontages of the 2 lots under survey appear to be displaced Eastward by this amount. Consequently the pegged position of the South-Eastern corner is 0.36m North of the location as indicated by (25/81) D.O.

I have recalculated a position for the S.E. corner of Lot 7 (91/1) D.O. from the adjacent O.R.M., have moved my star (D23720) accordingly and have adopted this position in my current survey also. This alteration gives a much closer agreement with the Southern boundary of (25/81) D.O. 53.639 p.o. 53.613 this survey and (91/1) D.O. as amended.

If you concur with this redefinition would you please make the appropriate amendments to (D23720).

Yours faithfully,

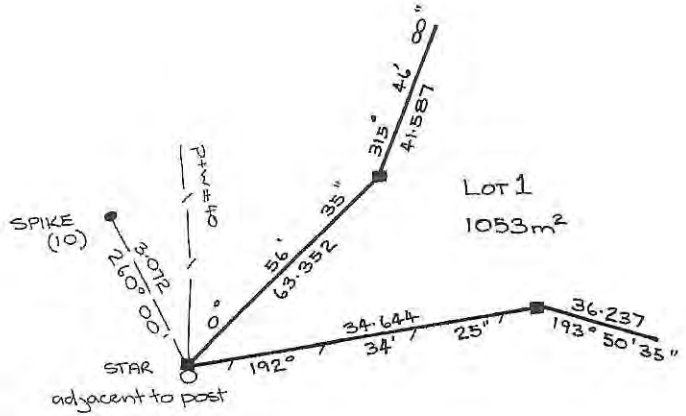
P.J. Alexander

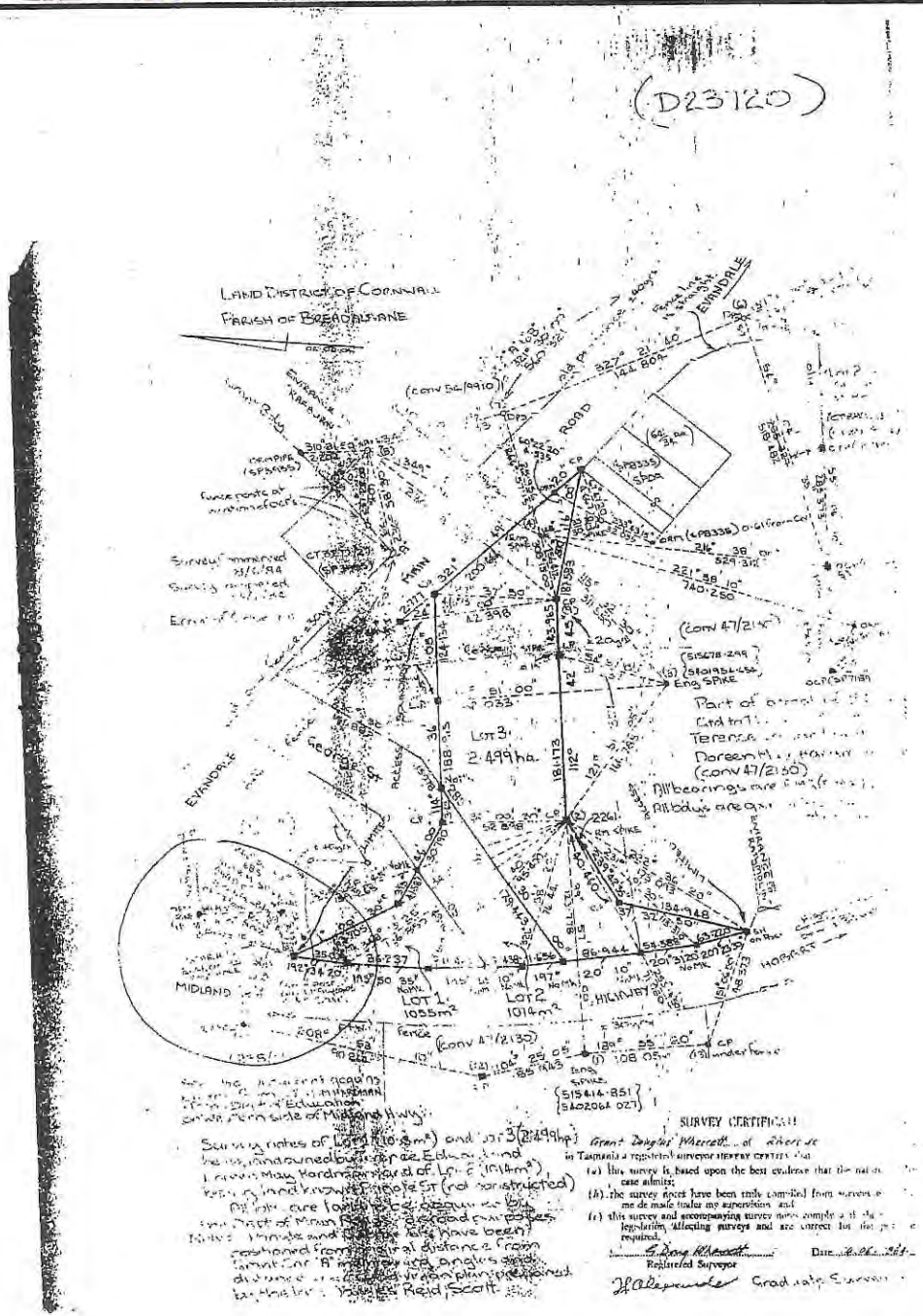
(P.J. Alexander)
SURVEYOR

1-579

RECORDER OF TITLES
Issued Pursuant to the Land Titles Act 1980
Tasmanian Government

PROPOSED AMENDMENT TO (D23720)





SEARCH OF TORRENS TITLE

VOLUME	FOLIO
128763	1
EDITION	DATE OF ISSUE
8	04-Sep-2014

SEARCH DATE : 26-Jun-2020
SEARCH TIME : 04.43 PM

DESCRIPTION OF LAND

Parish of BREADALBANE, Land District of CORNWALL
Lot 1 on Plan 128763
Derivation : Parts of 806A-0R-0Ps. & 800 ac.Gtd. to J. Kirkby., Part of 324 ac. Gtd. to T. Gee Part of 582A-3R-0Ps. Gtd. to J. Sinclair.
Prior CTs 198334/1 and 198335/1

SCHEDULE 1

C124556 THE COMMONWEALTH OF AUSTRALIA Registered 05-Oct-1998 at noon

SCHEDULE 2

Reservations and conditions in the Crown Grant if any
BENEFITING EASEMENT: the right for the Commonwealth its successors and assigns and the owners and occupiers for the time being of the land marked C.D.E.F.G.H.J.K. on Plan No. 198334 to go pass and repass at all times with or without horses cattle carts or other vehicles through over or along the strip of land marked "Right of Way 9.14 wide" on Plan No. 128763 and with the right to erect use and maintain overhead power transmission lines through over and along the strip of land and to lay use and maintain underground cables through under and along the said strip of land and the strip of land marked "Easement 1.52m wide" on Plan No. 128763 and with the right for its workmen servants and others to enter into and upon the said two strips of land for the purpose of erecting laying amending or repairing and such overhead power transmission lines or underground cables.
BENEFITING EASEMENT: the full free right and liberty for the Commonwealth its successors and assigns and the owners andoccupiers for the time being of the lands marked G.H.L.M.N.O.P., N.Q.R.S.t.U.V.W.X.Y.Z.A. and A1., B1., C1.,D1., E1., F1., G1., H1., J1. and A1 on Plan No. 128763 and as appurtenant thereto for the

free and uninterrupted passage of stormwater or other surface water through over under and along the strips of land marked "Drainage Easement 3.02 m wide" on Plan No. 128763 and with the right to enter upon the said strips of land by their officers servants workmen contractors and agents with or without horses carts and other vehicles for the purpose of constructing laying using and maintaining open drains or covered pipe drains or any part or parts thereof and of removing therefrom any obstruction and for the purposes aforesaid or any of them and as often as may be necessary to bring and place upon the said strips of land and to remove therefrom all goods materials machinery tools implements appliances and articles and to do and perform all other such incidental acts and things as may be reasonably necessary or required doing as little damage as possible to the said strips of land and forthwith making good all damage that may be done thereto in exercise of the rights and authorities hereby reserved.

BENEFITING EASEMENT: the right for the Commonwealth its successors and assigns and the owners and occupiers for the time being of that portion of the said land within described containing 52.24ha and shown on Plan No. 128763 to pass discharge and conductall such surface percolating and other drainage waters sewage and soil from such portion of land by means of open or covered drains or such line or lines of pipes as it or they may consider desirable or expedient through under along and upon the three strips of land marked "Drain Reserve" on Plan No. 128763 and with the right to enter into or upon the said three strips of land by its or their workmen servants and others for the purpose of excavating constructing laying cleansing amending or repairing any such open or covered drains or line or lines of pipes without doing any unnecessary damage to the adjoining land of William Stuart Hogarth.

1-581

BENEFITING EASEMENT: (appurtenant to the land marked D1.,E1., F1.,G1.,H1.,J1.,D1., on Plan No. 128763 a right of drainage (including the right of construction of drains) for the Commonwealth or the owner or owners for the time being of the said land for the purpose of carrying away stormwater and other surplus water from the said land over and under the strip of land marked "Drainage Easement 291/8D" through all sewers and drains which may hereafter be made or passing under through and along the said strip of land and with the right of the Commonwealth and owner or owners and its his or their surveyors and workmen from time to time and at all times hereafter if it he

or they should think fit to enter into and upon the said strip of land and to inspect repair cleanse and amend any such sewer or drain without doing unnecessary damage to the said strip of land.

BENEFITING EASEMENT: the right for the Commonwealth its successors and assigns and the owners and occupiers for the time being of the lands marked G.H.L.M.N.O.P.G. and D1.,E1.,F1.,G1.,H1.,J1.,D1., on Plan No. 128763 and as appurtenant thereto to erect lay use and maintain an approach lighting system and to lay gravel tracks through under over and along the lands marked "Easement For Approach Lighting System 6.04 ms. wide" on Plan No. 128763 and with the right to enter into and upon the said lands by its workmen servants and others with or without horses and other animals carts and other vehicles for the purpose of excavating erecting laying amending or repairing such approach lighting system or tracks with the right to install gates in any fences adjoining or crossing the said lands and with the right to go pass and repass with or without horses and other animals carts and other vehicles through over and along lands marked "Access Easement" and "Access Easement 376/20D" on Plan No. 128763.

BENEFITING EASEMENT: a right of carriage way over the land marked "Access Easement 454/18D" on Plan No. 128763.

C108262 BURDENING EASEMENT: A right of carriageway (appurtenant to Lot 2 on SP 121824) over the land marked RIGHT OF WAY `P' and RIGHT OF WAY `R' on P. 128763 Registered 07-Aug-1998 at 12.02 PM

C108259 BURDENING EASEMENT: A right of carriageway (appurtenant to Lot 1 on P.128762) over the land marked RIGHT OF WAY `B' on P.128763 Registered 07-Aug-1998 at 12.04 PM

C70476 FENCING PROVISION in Transfer

B954892 LEASE to AIRSERVICES AUSTRALIA of a leasehold estate for the term of 39 years less 5 days from 6-Jul-1995 in such part of the within land shown on the plan thereon. Registered 25-Jun-1996 at 12.06 PM

B954893 LEASE to AIRSERVICES AUSTRALIA of a leasehold estate for the term of 39 years less 5 days from 6-Jul-1995 in such part of the within land shown on the plan thereon Registered 25-Jun-1996 at 12.07 PM

B954894 LEASE to AIRSERVICES AUSTRALIA of a leasehold estate for the term of 39 years less 5 days from 6-Jul-1995 in such part of the within land shown on the plan thereon. Registered 25-Jun-1996 at 12.08 PM

C42907 ADHESION ORDER under Section 110 of the Local Government (Building and Miscellaneous Provisions) Act 1993 Registered 18-Dec-1997 at 12.02 PM

C108890 LEASE to AIRSERVICES AUSTRALIA of a leasehold estate

of portion of the said land within described as shown by a diagram on the said lease for the term of 39 years less 5 days commencing from the 6th-July-1995
Registered 16-Jul-1998 at noon

C403607 CAVEAT by Southern Australia Airlines Pty Limited against portion of the above land as desribed therein
Registered 10-Sep-2002 at 12.01 PM

D14738 CAVEAT by Westpac Administration Pty Ltd Registered 27-May-2011 at noon

UNREGISTERED DEALINGS AND NOTATIONS

153637 PLAN Lodged by DEPT OF INF, EN & RE on 22-Jan-2008
BP: 153637

1-582

OWNER

FOLIO REFERENCE F/R - 198334/1
- 198335/1

GRANTEE

PLAN OF TITLE

LOCATION
CORNWALL - BREADALBANE

FIRST SURVEY PLAN No.

COMPILED BY L.T.O.

SCALE 1:10000 LENGTHS IN METRES

REGISTERED NUMBER
P.128763

APPROVED 10 DEC 1997
Recorder of Titles

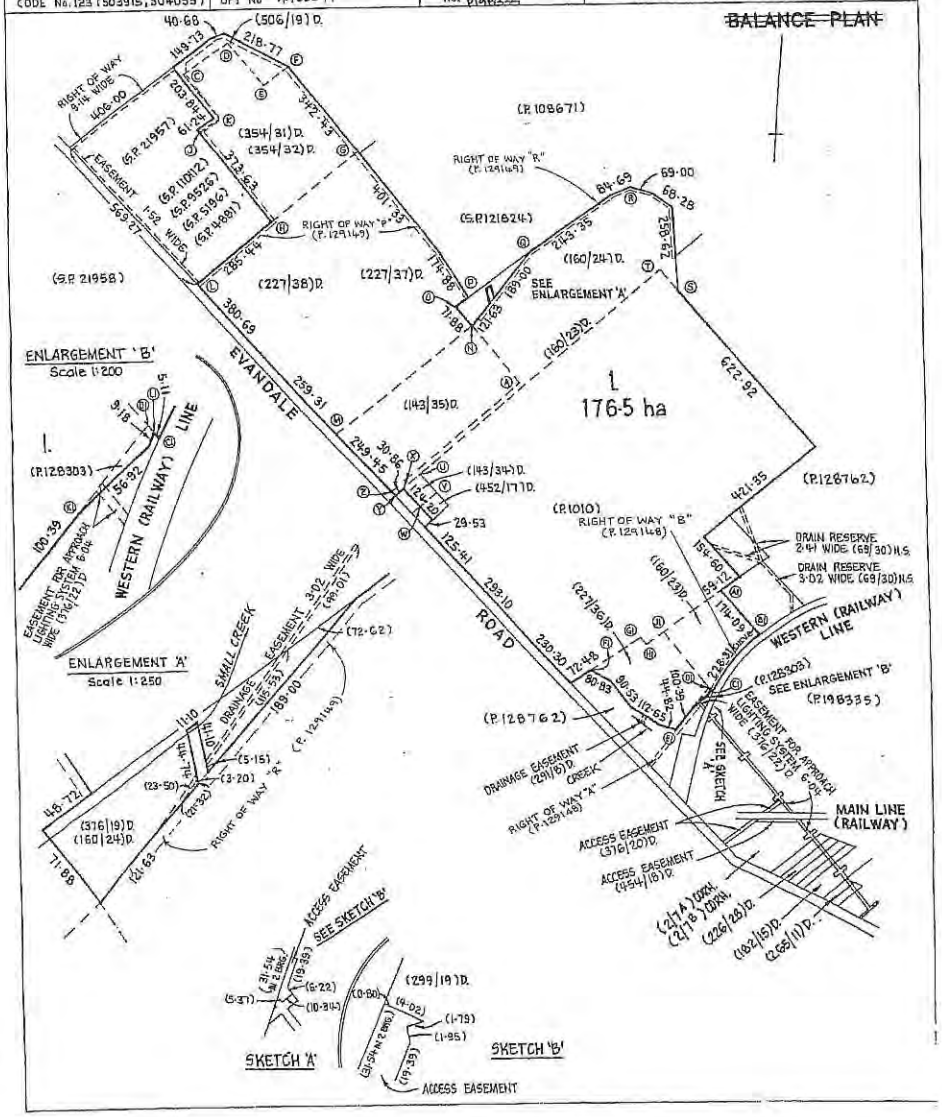
MAPSHEET MUNICIPAL CODE No.123 (503915,504055)

LAST UPI No FBN50 4700041

LAST PLAN No. P198334, P198335

ALL EXISTING SURVEY NUMBERS TO BE CROSS REFERENCED ON THIS PLAN

BALANCE PLAN



UNREGISTERED DEALINGS REPORT

SEARCH DATE : 26-Jun-2020
SEARCH TIME : 04:43 pm

CT: 128763/1

153637 PLAN Lodged by DEPT OF INF, EN & RE on 22-Jan-2008

BP: 153637

1-583

RECORDER OF TITLES
Issued Pursuant to the Land Titles Act 1980
Tasmanian Government

SEARCH OF TORRENS TITLE

VOLUME	FOLIO
21958	1
EDITION	DATE OF ISSUE
4	01-Sep-2006

SEARCH DATE : 07-Aug-2020
SEARCH TIME : 11.51 AM

DESCRIPTION OF LAND

Parish of BREADALBANE, Land District of CORNWALL
Parish of PERTH, Land District of CORNWALL
Lot 1 on Sealed Plan 21958
Derivation : Part of 81A-2R-19Ps Gtd to W Kitson and Part of 324 Acres Gtd to Thomas Gee
Prior CT 4061/73

SCHEDULE 1

B975704 TRANSFER to FAWKNER PTY LTD Registered 06-Sep-1996 at noon

SCHEDULE 2

Reservations and conditions in the Crown Grant if any
SP 21958 EASEMENTS in Schedule of Easements
SP 21958 COVENANTS in Schedule of Easements
SP 7189 & SP 21958 FENCING COVENANT in Schedule of Easements
C689613 BURDENING Electricity Infrastructure Easement with the benefit of a restriction as to user of land in favour of Aurora Energy Pty Ltd over the Electricity Infrastructure Easement shown on P. 146439 Registered 01-Sep-2006 at noon
C539272 MORTGAGE to Australia and New Zealand Banking Group Limited Registered 29-Mar-2004 at 12.01 PM

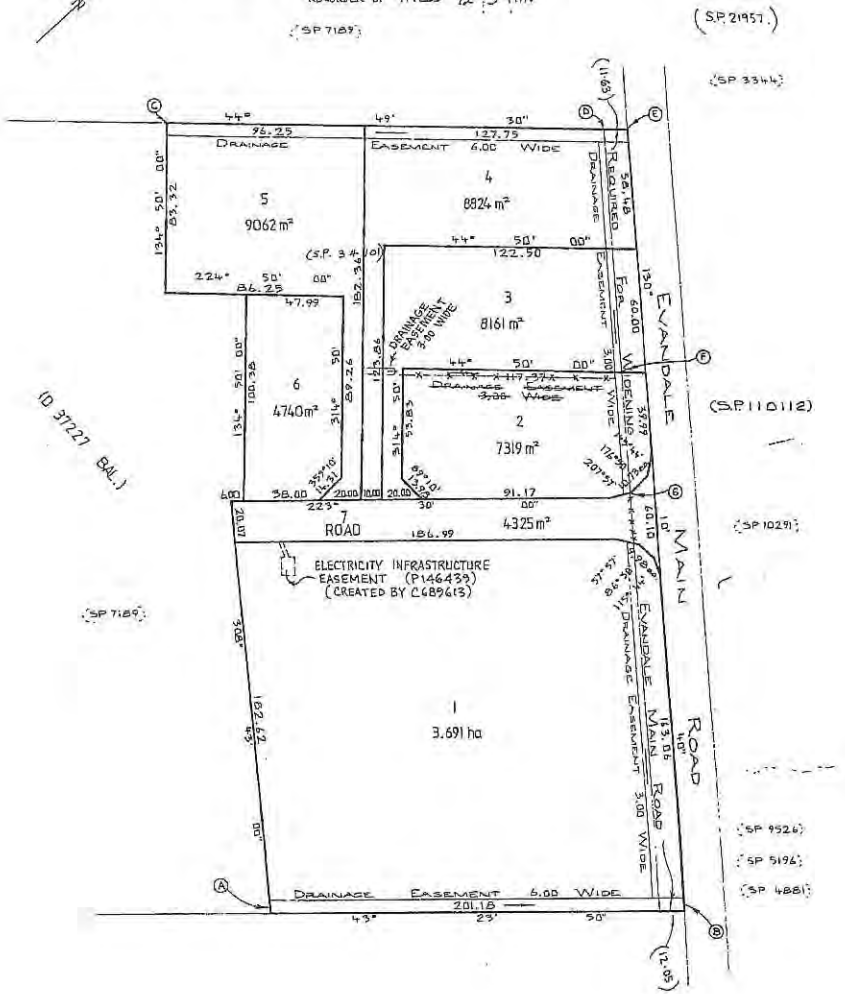
UNREGISTERED DEALINGS AND NOTATIONS

No unregistered dealings or other notations

C/T 1/114/7

Owner: JOHNS PERRY LIMITED	PLAN OF SURVEY by Surveyor G.J. WALKEM of land situated in the LAND DISTRICT OF CORNWALL PARISHES OF BREADALBANE AND PERTH SCALE 1:1500 MEASUREMENTS IN METRES	Registered Number: S.P21958 Approved Effective from: 20 DEC 1983 ACTING DEPUTY Recorder of Titles
Title Reference: C.T. 3508-75		
Grantee: PART OF 814.2.19P GRANTED TO W. KITSON AND PART OF 324 ACRES GRANTED TO THOMAS GEE		

DRAINAGE EASEMENT 3.00 WIDE ALONG NORTH WEST BOUNDARY OF LOT 2 HEREON WAS DELETED BY ME PURSUANT TO A REQUEST TO AMEND No B 291505 A MADE UNDER SECTION 481 OF THE LOCAL GOVERNMENT ACT 1962.
RECORDER OF TITLES 12/3/1990



RECORDER OF TITLES
Issued Pursuant to the Land Titles Act 1980
Tasmanian Government

SCHEDULE OF EASEMENTS

PLAN NO. 21958

NOTE:—The Town Clerk or Council Clerk must sign the certificate on the back page for the purpose of identification.

The Schedule must be signed by the owners and mortgagees of the land affected. Signatures should be attested.

THIS SCHEDULE CONSISTS OF 2 PAGE(S)

EASEMENTS AND PROFITS

Each lot on the plan is together with:—

(1) such rights of drainage over the drainage easements shewn on the plan (if any) as may be necessary to drain the stormwater and other surplus water from such lot; and

(2) any easements or profits à prendre described hereunder.

Each lot on the plan is subject to:—

(1) such rights of drainage over the drainage easements shewn on the plan (if any) as passing through such lot as may be necessary to drain the stormwater and other surplus water from any other lot on the plan; and

(2) any easements or profits à prendre described hereunder.

The direction of the flow of water through the drainage easements shewn on the plan is indicated by arrows.

Lot 1 on the Plan is subject to a right of drainage (appurtenant to the balance) over the Drainage Easement 6.00 wide marked A.B. on the Plan.

Lots 2,3,4 and 5 on the Plan are each subject to a right of drainage (appurtenant to the balance) over such portion of the Drainage Easements marked ~~C.D.B.F.G.H~~ on the Plan shown passing through such Lot.
C.D.E. AND D.F.G.

INTERPRETATION
Balance means the land remaining in Certificate of Title 3508/75 at the date of acceptance hereof excluding the lots on the Plan.

FENCING COVENANT.
The owner of each lot on the Plan covenants with the Vendor (Johns Perry Limited) that the Vendor shall not be required to fence.

COVENANTS.
The owner of each lot on the Plan except Lot 2 covenants with the Vendor Johns Perry Limited and the owners for the time being of every other lot on the Plan except Lot 2 to the intent that the burden of these covenants may run with and bind the covenantor's lot and every part thereof, and that the benefit thereof may be annexed to and devolve with each and every part of every other lot shown on the Plan except Lot 2 and with the residue of the land comprised in Certificate of Title Volume 3508 Folio 75 and each and every part thereof to observe the following stipulations:-

(a) That they will not erect or cause to be erected on such lot any building or buildings within 10 metres of any frontage to access road.

(b) That they will not erect or cause to be erected on such lot any building or buildings other than a building of which the whole (save for provision for windows and doors) of the front wall of the foremost building is constructed of brick masonry or concrete.

(c) That in the construction of any building or buildings on such lot they will not use or permit to be used for the purposes of walls any corrugated sheets where the corrugations have a round or circular type profile.

(d) That they will not erect or cause to be erected on such lot any advertising signs or notices other than a sign or notice not exceeding 8 metres in height and which state no more than the name and/or type of business being conducted on such lot.

(e) That they will not use or permit to be used the area between the front boundary of such lot and the front alignment of any building erected thereon for any purpose other than that of garden or entry or provision for parking of private motor cars and where such lot has a frontage to access road then not to use or permit to be used the front 10 metres of the said area for any purpose other than that of garden or entry.

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The owner of Lot 2 on the Plan covenants with the Vendor Boral Johns Perry Limited and the owners for the time being of every other lot on the Plan to the intent that the burden of these covenants may run with and bind the covenantor's lot and every part thereof, and that the benefit thereof may be annexed to and devolve with each and every part of every other lot shown on the Plan and with the residue of the land comprised in Certificate of Title Volume 4061 Folio 80 and each and every part thereof to observe the following stipulations:-
(a) that no vehicular access shall be provided or allowed from Lot 2 to Evandale Main Road.
(b) that they will not erect or cause to be erected on Lot 2 any building or buildings within 50 metres of the frontage of such lot to Evandale Main Road.
As relates to Lot 2 on the plan existing covenants deleted and new covenants above added by me pursuant to a Request to Amend No. B160432 made under Section 481 of the Local Government Act 1962.

THE COMMON SEAL OF
JOHNS PERRY LIMITED
was hereunto affixed
in the presence of:-

..... Director

..... Secretary

Recorder of Titles
20/9/1988.

RECORDER OF TITLES
Issued Pursuant to the Land Titles Act 1980
Tasmanian Government

This is the schedule of easements attached to the plan of .....
(Insert Subdivider's Full Name)
.....affecting land in
.....
(Insert Title Reference)
Sealed by ..... on .....19.....

Solicitor's Reference .....
Council Clerk/Town Clerk

1-586

SURVEY NOTES

SURVEYOR GRAEME JOHN WALKEM

Land District of Cornwall
Parishes of Breadalbane and Perth

Johns Perry Limited Owner
C.T. 3508/75

Part of 81A 2R 19P Granted To
W. Kitson and Part of 324 Acres
Granted to Thomas Gee

Survey Commenced:

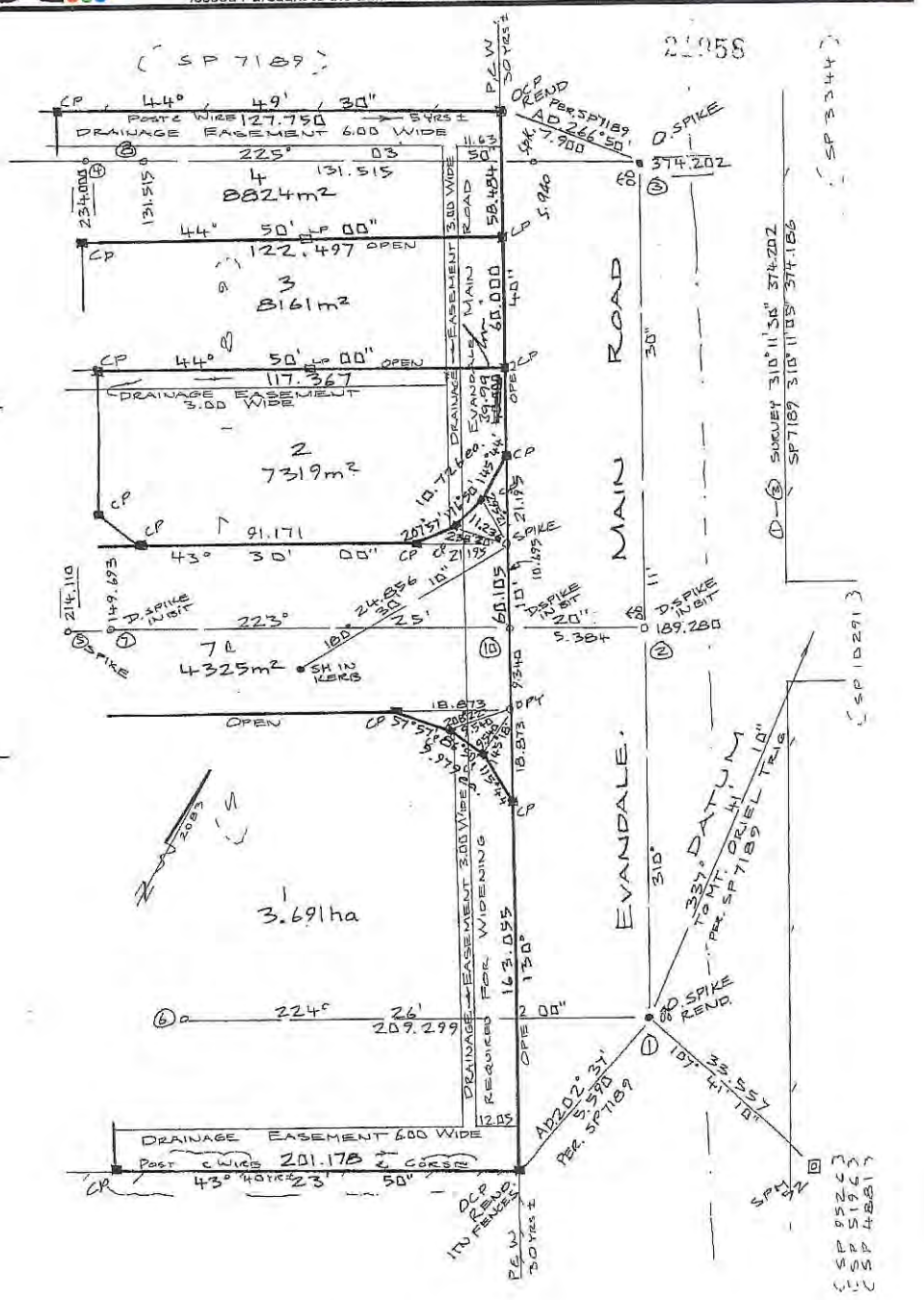
Survey Completed:

I Graeme J. Walkem of Launceston
in Tasmania a registered surveyor HEREBY CERTIFY that:

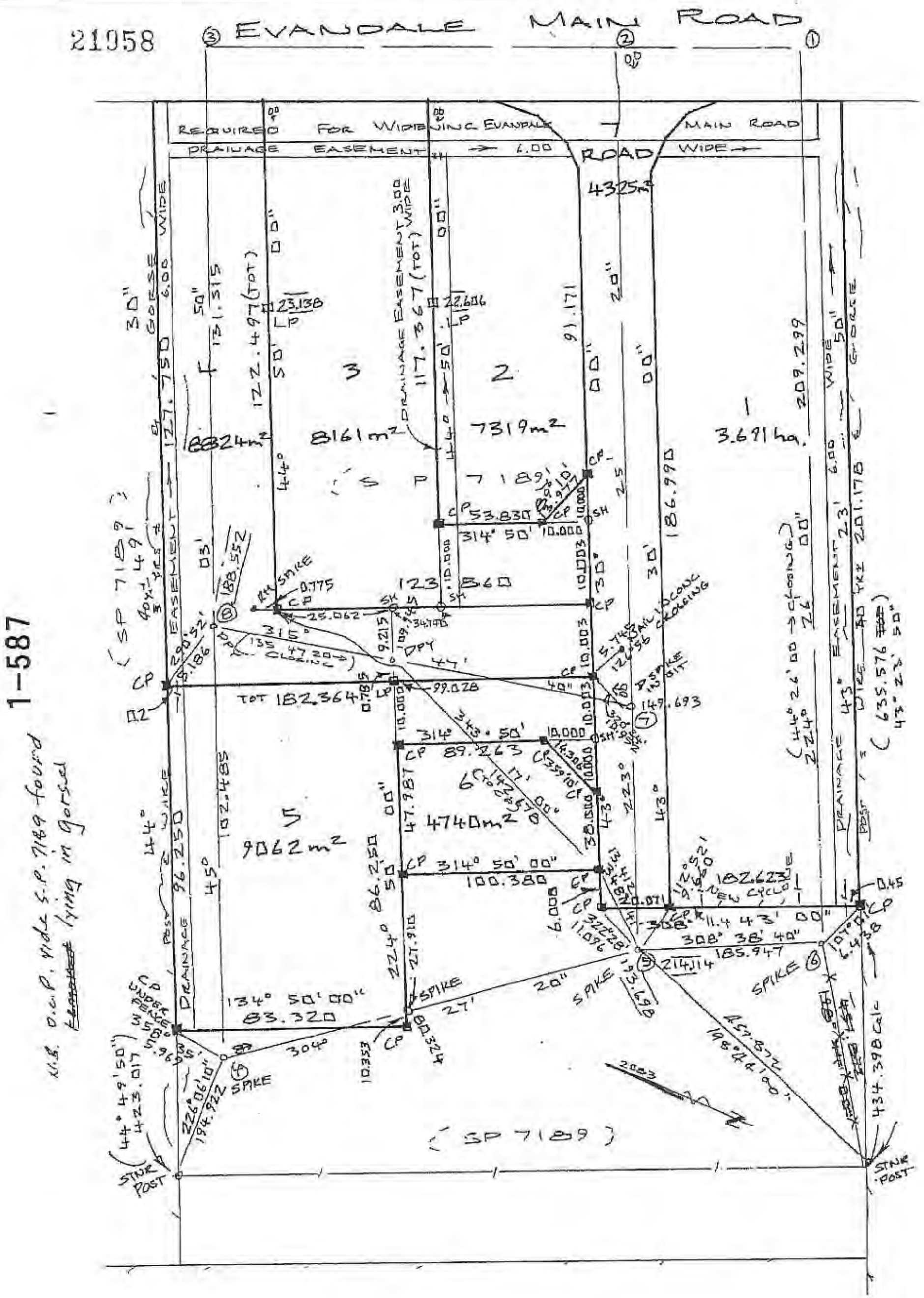
(a) this survey is based upon the best evidence that the nature of the case admits;
(b) the survey notes have been truly compiled from surveys made by me or made under my supervision; and
(c) this survey and accompanying survey notes comply with the relevant legislation affecting surveys and are correct for the purpose required.

Date 20/11/87

G. J. WALKEM &
SURVEYORS & PLA
22 ELIZABETH ST
LAUNCESTON
TELEPHONE 31



21958



21958

APPROVAL BY LOCAL AUTHORITY

The subdivision shown in this Plan is approved ——————

Seal

Insert here any qualification to the approval under section 468 (12), section 472 or section 477B of the Local Government Act 1962. Rule through any blank space.

In witness whereof the common seal of The Warden, Councillors and Electors of the Municipality of Evandale (Tasmania)

has been hereunto affixed, pursuant to a resolution of the Council of the said municipality passed the 8th *day of* August, 1983, *in the presence of us* this 8th day of August, 1983.

.... *Members*

.... *Council Clerk*

Council's Reference ....

TO BE COMPLETED WHEN ADDITIONAL SHEETS ARE ANNEXED

Detailed drawings of the parcels shown in this plan are contained in the additional sheet(s) annexed hereto and signed by us

.... *Surveyor*

.... *Council Clerk*

TO BE COMPLETED AND SIGNED BY COUNCIL CLERK OR OWNER

For the purposes of section 464 of the Local Government Act 1962, the owner has nominated/I nominate

As his/~~my~~ Solicitor LEWIS, HAND & OGILVIE

As his/~~my~~ Surveyor G. J. WALKEM & CO.

.... *Council Clerk/Owner*

TO BE FILLED IN BY SURVEYOR

Survey commenced 21ST JUNE 1983

Survey finished 6th JULY 1983

Error of Close SEE CALCS

OFFICE EXAMINATION

Plot Checked B 8-12-83

Mathematically Checked B 8-12-83

Examined as to Boundaries JC 8.12.'83

Entered on Card ....

DS-K 1110

Surveyor's Certificate

I, GRAEME JOHN WALKEM *of* LAUNCESTON *in Tasmania, registered surveyor, hereby certify that this plan:*

1. *Has been made from surveys executed by me or a registered pupil under my personal supervision, inspection, and field-check, and that both plan and survey are correct and have been made in accordance with the Land Surveyors By-Laws 1966;*
2. *Complies with all statutory provisions relating to anything appearing thereon; and*
3. *Requires the approval of the local authority, which has been obtained (~~or does not require the approval of any local authority~~)*

Dated this 7th *day of* June *19*83

.... *Registered Surveyor*

Surveyor's Reference 2083

RECORDER OF TITLES

Issued Pursuant to the Land Titles Act 1980

Tasmanian Government

SEARCH OF TORRENS TITLE

VOLUME	FOLIO
148609	6
EDITION	DATE OF ISSUE
2	21-Feb-2020

SEARCH DATE : 26-Jun-2020
SEARCH TIME : 04.44 PM

DESCRIPTION OF LAND

Parish of BREADALBANE Land District of CORNWALL
Lot 6 on Plan 148609
Derivation : Part of 324 Acres Gtd to Thomas Gee
Prior CT 21958/2

SCHEDULE 1

C320267 & E209894 EDWARD ELWELL NEWTON Registered 21-Feb-2020 at 12.01 PM

SCHEDULE 2

Reservations and conditions in the Crown Grant if any
SP 21958 BURDENING EASEMENT: a right of drainage (appurtenant to Lot 5 on SP 21958, Lots 4 & 5 on P.148609 and the balance of the land comprised in Certificate of Title Volume 3508 Folio 75 at the date of acceptance of the Sealed Plan) over the Drainage Easement 3.00 wide shown passing through the said land within described
SP 21958 COVENANTS in Schedule of Easements
SP 7189 & SP 21958 FENCING COVENANT in Schedule of Easements
E209891 MORTGAGE to Commonwealth Bank of Australia Registered 21-Feb-2020 at 12.02 PM

UNREGISTERED DEALINGS AND NOTATIONS

No unregistered dealings or other notations

RECORDER OF TITLES

Issued Pursuant to the Land Titles Act 1980

Tasmanian Government

A4064

OWNER: PATRICIA MAY NEWTON, EDWARD ELWELL NEWTON, ALEXANDER MCGREGOR

FOLIO REFERENCE: FR. 21958 - 2, FR. 34101 - 1 FR. 34101 - 2

GRANTED: ~~PART OF 81a. 2r. 19p GRANTED TO WILLIAM WITSON,~~ PART OF 324 ACRES GRANTED TO THOMAS GEE

PLAN OF SURVEY

BY SURVEYOR M.R.ROSE OF 2/3 WALDEN STREET, NEWSTEAD 7250

LOCATION LAND DISTRICT OF CORNWALL PARISHES OF BREADALBANE ~~& PERTH~~

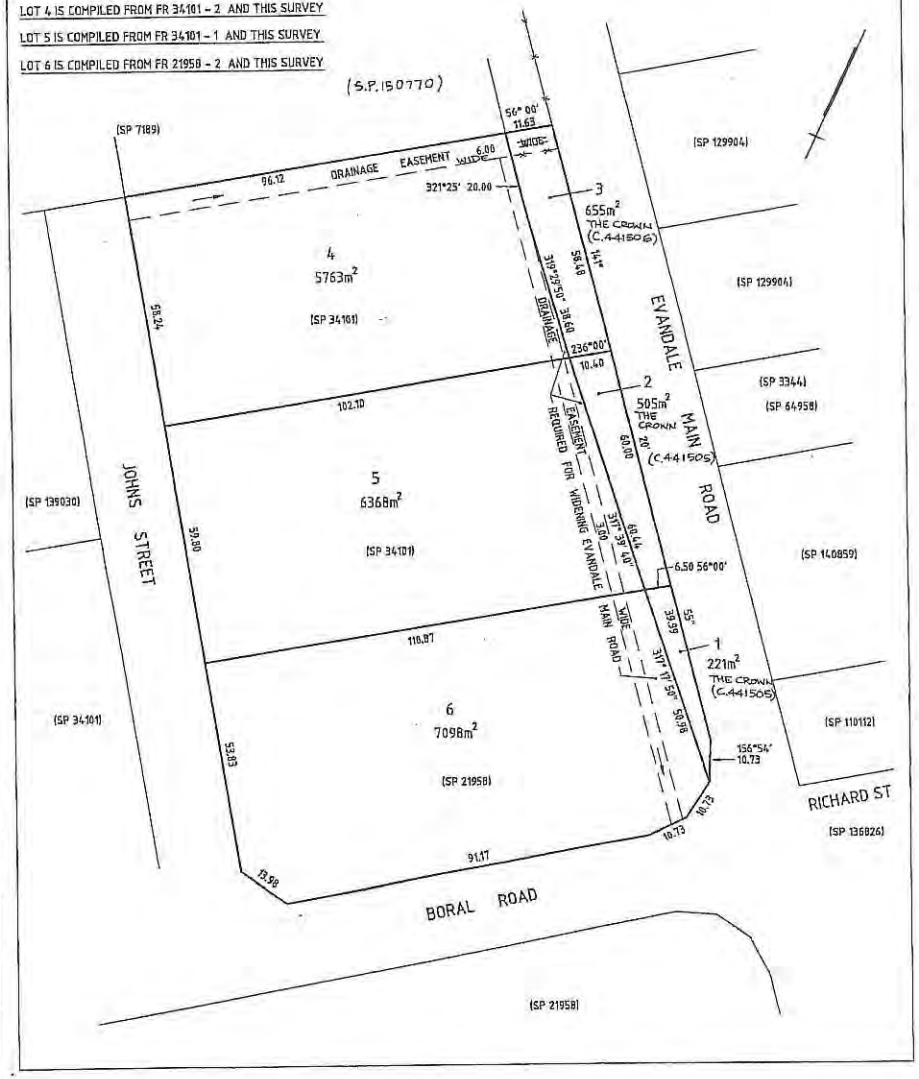
SCALE 1: 800 LENGTHS IN METRES

REGISTERED NUMBER **P148609**

APPROVED EFFECTIVE FROM -5 JUN 2007
Alice Kawa
Recorder of Titles

MAPSHEET MUNICIPAL CODE No 123 /5040-55 | LAST UPI No FST94 FST95 4700475 | LAST PLAN: SP 21958 SP 34101 | ALL EXISTING SURVEY NUMBERS TO BE CROSS REFERENCED ON THIS PLAN

LOT 4 IS COMPILED FROM FR 34101 - 2 AND THIS SURVEY
LOT 5 IS COMPILED FROM FR 34101 - 1 AND THIS SURVEY
LOT 6 IS COMPILED FROM FR 21958 - 2 AND THIS SURVEY



SURVEY NOTES	Registered Number
SHEET 1 OF 1 SHEETS	P148609
CROSS REFERENCE PLAN NUMBERS USED AS PART OF THIS SURVEY	DESCRIBE BY REPORT THE EVIDENCE USED TO DETERMINE BOUNDARIES

ALL CORNER MARKS ARE CP'S UNLESS OTHERWISE SHOWN. ALL BOUNDARIES ARE OPEN UNLESS OTHERWISE SHOWN. THE AGE OF THE MARKS FOUND APPEARS CONSISTENT WITH THE ORIGIN NOTED.

REPORT MGA datum per SP. 141987
4,5,7,8,9,10,11 & 12 fixed per SP. 219518 applying mean Δ 11°10'15". 8,9 & 12 not marked being within proposed road widening.
5-6 fixed on road widening alignment per SP.7189 & 11°10'40"

SURVEY CERTIFICATE

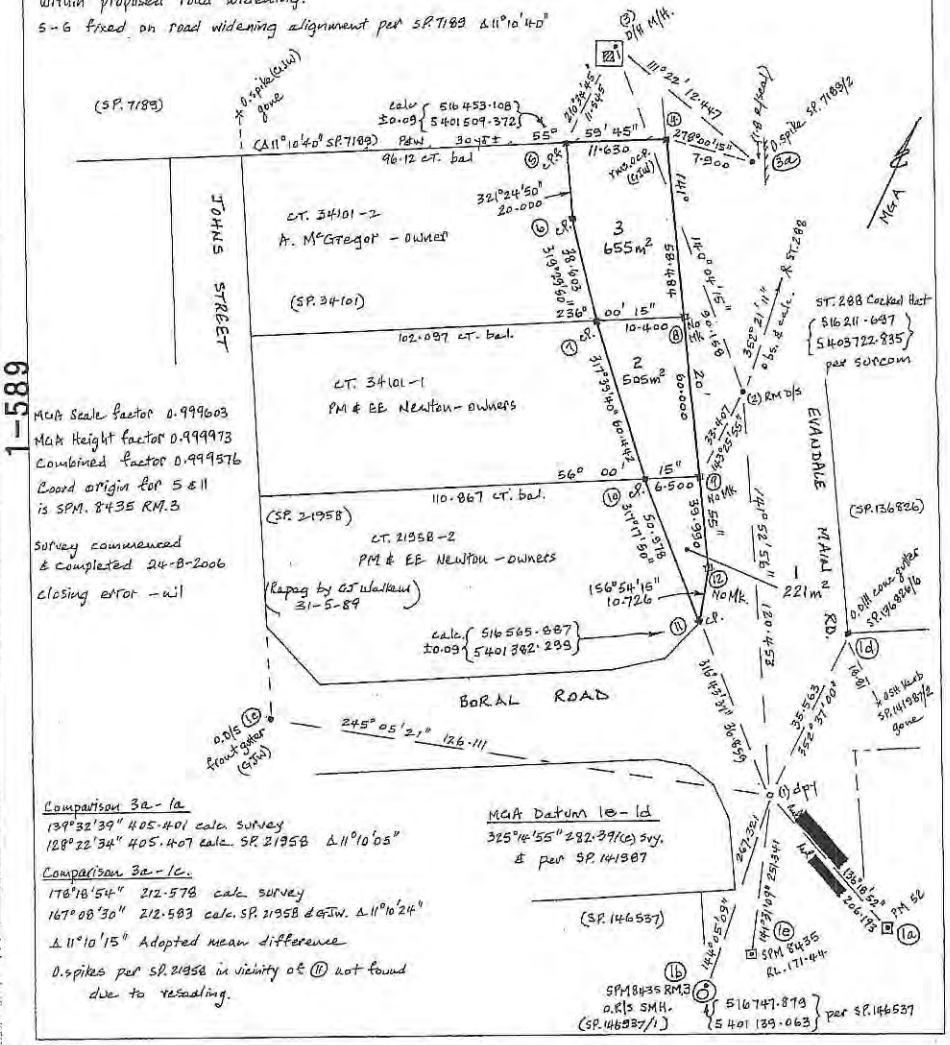
I, MICHAEL R. ROSE of NEWSTEAD

in Tasmania a registered land surveyor HEREBY CERTIFY that:

(a) this survey is based upon the best evidence that the nature of the case admits
(b) the survey notes have been truly compiled from surveys made by me or made under my supervision; and
(c) this survey and accompanying survey notes comply with the relevant legislation affecting surveys and are correct for the purpose required.

Signature Date 12/9/2006

Surveyors Reference: 923



1-589

RECORDER OF TITLES
Issued Pursuant to the Land Titles Act 1980
Tasmanian Government

SEARCH OF TORRENS TITLE

VOLUME	FOLIO
148609	5
EDITION	DATE OF ISSUE
2	21-Feb-2020

SEARCH DATE : 26-Jun-2020
SEARCH TIME : 04.44 PM

DESCRIPTION OF LAND

Parish of BREADALBANE Land District of CORNWALL
Lot 5 on Plan 148609
Derivation : Part of 324 Acres Gtd. to Thomas Gee.
Prior CT 34101/1

SCHEDULE 1

C320267 & E209894 EDWARD ELWELL NEWTON Registered 21-Feb-2020 at 12.01 PM

SCHEDULE 2

Reservations and conditions in the Crown Grant if any
SP 34101 BURDENING EASEMENT: a right of drainage (appurtenant to Lot 4 on Plan 148609, Lots 3 & 5 on SP 34101 and the balance of the land comprised in Folio of the Register Volume 4061 Folio 80) over the Drainage Easement 3.00 wide shown passing through the said land within described
SP 34101 BENEFITING EASEMENT: a right of drainage over the Drainage Easement 3.00 wide shown passing through Lot 6 on Plan 148609
SP 34101 COVENANTS in Schedule of Easements
SP 34101 FENCING COVENANT in Schedule of Easements
SP 21958 COVENANTS in Schedule of Easements
SP 21958 FENCING COVENANT in Schedule of Easements
SP 7189 FENCING COVENANT in Schedule of Easements
NOTICE: This Folio is affected as to amended easements/covenants pursuant to Request to Amend No B291505A made under Section 481 of the Local Government Act 1962. Search Sealed Plan No 34101 .
E209891 MORTGAGE to Commonwealth Bank of Australia Registered 21-Feb-2020 at 12.02 PM

UNREGISTERED DEALINGS AND NOTATIONS

No unregistered dealings or other notations