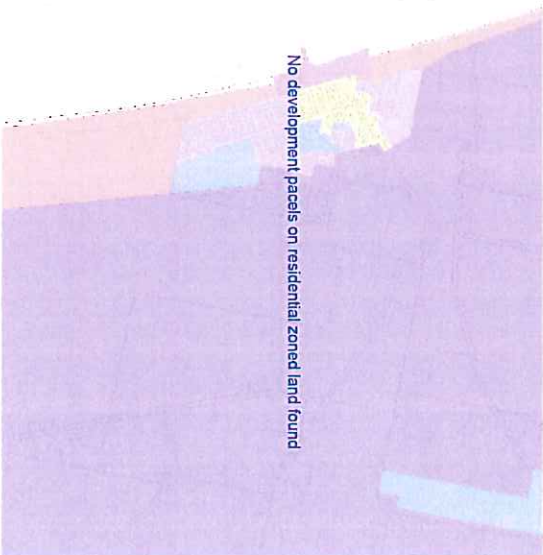


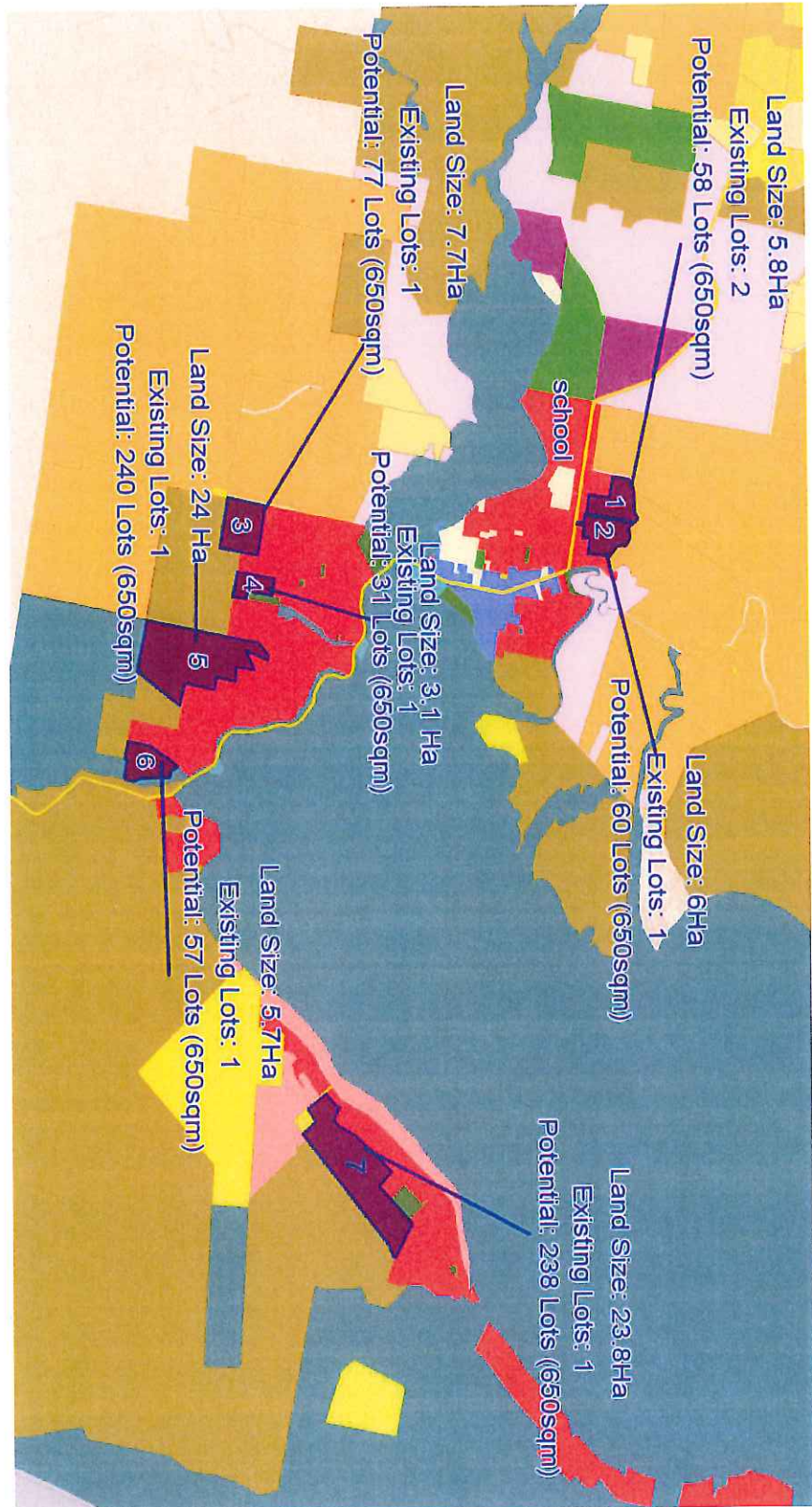
NTRLUS – Assessment of current and future potential to accommodate growth

Inside Current NTRLUS Growth Boundary	
Whitemark	
Consideration	Low - majority of land is zoned rural and there aren't any large parcels in town that could accommodate an increase in homes and jobs
Redevelopment Potential (Low, Moderate or High)	District Service Centre
Activity Centre under NTRLUS Settlement Type under NTRLUS	District Service Centre
Council Area	Flinders Council
Address/es	-
Ownership	-
Title Details	-
Land Area	-
Zoning (Since 2013 per current Planning Scheme)	Majority - Rural Zone (Flinders Council Zoning Scheme)
Planning/Environmental	
Land/Dev Impediments	1
Infrastructure/Service/Upgrades	Sewer Water - TASwater Electricity - Tas Networks Gas - Unknown Comms - NBN & V/Tras
Easements	Nil services
Access to transport	Flinders Island District High School
School catchments	
Population forecasts to the year 2037	0-39 age cohort - negative growth anticipated 40+ age cohort - negative growth anticipated
Major local employers	small town amenities including cafes, service station, chemist, primary schools;
Employment rate	5.7% FTE, 3.4% unemployed (ABS 2016)
Economic Opportunities/Challenges	Opportunities - Role - To provide predominantly non-urban communities with a range of goods and services to meet their daily and weekly needs. Provides that trips to larger centres are only required occasionally. Role - Highest concentration of employment for the sub-region, with a diversity of employment across business and industrial sectors.
Potential to support growth	No sites identified above 3Ha in size that has potential to support growth
Opportunities for sustainability & innovation	
Why hasn't development taken place?	Seek Council input



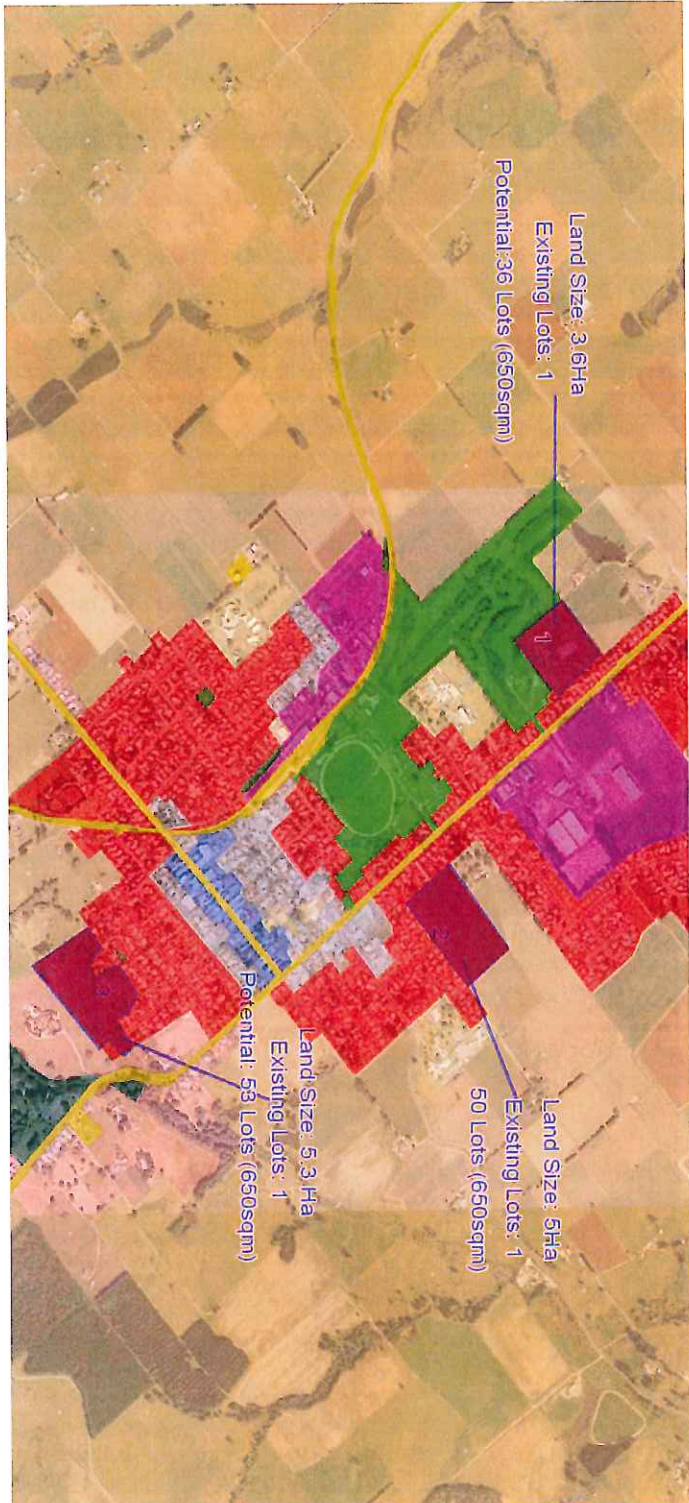
NRULS – Assessment of current and future potential to accommodate growth

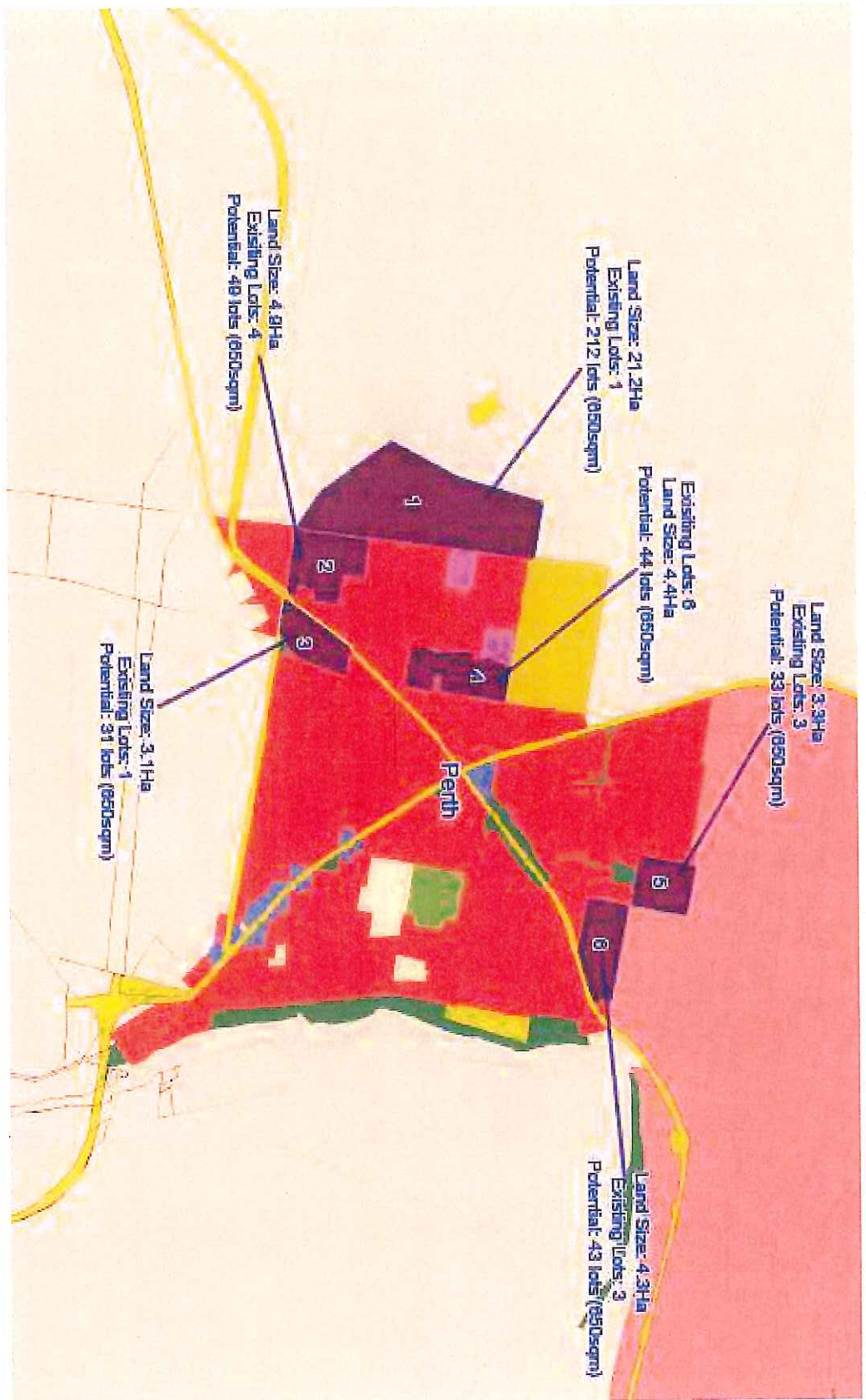
Generalisation Redevelopment Potential (Low, Moderate or High)	St Helens		Historic Curlew, NRULS Growth Boundary						
	1	2	3	4	5	6	7	8	
Activity Centre under NRULS Settlement Type under NRULS Council Area Address/s	District Service Centre District Service Centre Breck O Day Council Helsens	80 tons	77 Tons	51 Tons	240 Tons	57 Tons	228 tons		
Ownership Title Details	Multiple 17478/1 & 1584/7/2/3	Single 30396/1	Multiple 14085/2/01 & 1284/2/3	Single 14185/8	Multiple 15582/1 & 15582/2	Multiple 51202/1 16009/2 16009/1	Multiple 4525/2 5944/4 14589/1/2/3/4		
Land Use Zone(s) (since 2013 per current Planning Scheme)	Majority - General Residential zone Minority - Mainly environmental living or rural resource	General Residential	General Residential	General Residential	General Residential	General Residential	General Residential		
Planning/Environmental									
Land/Development		Land is relatively flat and unencumbered.	Small portion of site identified as low hazard risk, some sloping.	Land is vegetated and has low hazard risk.	Land is heavily vegetated and more unimproved as low hazard risk and sloping.	Land is heavily vegetated and has low hazard risk.	Land is vegetated and has low hazard risk. Some of the land has a conservation covenant on title.		
Infrastructure/Service/Upgrade	Sewer Water - Trowse Electricity - The Network Gas - Unknown Comms - BTM & VCs	Land is Limited Assumed Serviced	Land is Limited Assumed Serviced	Land is Limited Assumed Serviced	Land is Limited Assumed Serviced	Land is Limited Assumed Serviced	Land is Limited Assumed Serviced		
Access to Transport	Tram, Western Link & Translink bus services.								
School Catchment	St Helens District High School	St Helens District High School	St Helens District High School	St Helens District High School	St Helens District High School	St Helens District High School	St Helens District High School		
Population forecasts to the year 2037	0-29 age cohort - negative growth anticipated 40+ age cohort positive growth for next 40 years (aging population and negative growth in families, likely to impact school enrolment and increase demand for aged care services and support)								
Major local employer/shops/amenities	Local School, retail, academic, Golf Club, some hotels, taxi, service station.								
Employment Rate	40.4% FTE, 10.7% unemployed (ABS 2016)								
Economic Opportunity/Outcomes	Opportunities	Land is not mapped as suitable for agriculture zone	Land is not mapped as suitable for agriculture zone	Land is not mapped as suitable for agriculture zone	Land is not mapped as suitable for agriculture zone	Land is not mapped as suitable for agriculture zone	Land is not mapped as suitable for agriculture zone		
Potential to support growth	Low - decent potential for residential growth	Appears land could support land subdivision. The land is mapped as residential land use subdivision only.	Appears land could support land subdivision. The land is mapped as residential land use subdivision only.	Appears land could support land subdivision. The land is mapped as residential land use subdivision only.	Appears land could support land subdivision. The land is mapped as residential land use subdivision only.	Appears land could support land subdivision. The land is mapped as residential land use subdivision only.	Appears land could support land subdivision. The land is mapped as residential land use subdivision only.		
Opportunities for sustainability & innovation		Opportunities are restricted by the size of the land and limited by residential land use subdivision only.	Opportunities are restricted by the size of the land and limited by residential land use subdivision only.	Opportunities are restricted by the size of the land and limited by residential land use subdivision only.	Opportunities are restricted by the size of the land and limited by residential land use subdivision only.	Opportunities are restricted by the size of the land and limited by residential land use subdivision only.	Opportunities are restricted by the size of the land and limited by residential land use subdivision only.		
Why hasn't development taken place?	Seek Council input - would be good to understand if there is a submission approved for this at the present stage? Appears to be a 40% that is currently being employed.							Appears this land is currently being subdivided and redeveloped as land lots.	



NIPLUS – Assessment of current and future potential to accommodate growth

Consideration	Scottish	1	2	3
Redevelopment Potential (Low, Moderate or High)	Scottish	Low	Moderate	Moderate
Activity Centre under NIPLUS	General Service Centre			
Settlement Type under NIPLUS	General Service Centre			
Council Area	Dorset Council			
Address/Es		119 George St, Scottdale	21-49 Northburn St, Scottdale	Hedley St, Scottdale
Ownership		Single	Multiple	Single
Title Details		10765/1	1800/1	1328/6/8
Land Area	~200ha	~2.8 Hectares	~5 Hectares	~3.3 Hectares
Zone	Majority - General Residential zone	General Residential	General Residential	General Residential
Zone 2013 per current Planning Scheme)	Minority - Low Density Residential, Recreational, Open Space, Utilities, Rural Living			
Planning/Environmental		Site currently zoned as an established rural residential lot	Site is flat and relatively unencumbered.	Site is flat and relatively unencumbered.
Land/Dev Impediments		Site currently zoned as a large rural residential lot	Land is highly vegetated with 2 dams on site. Smaller lot is operated as the local hotel.	Land is highly vegetated with 2 dams on site. Smaller lot is operated as the local hotel.
Infrastructure/Services/Utilities	Sewer - Fully Serviced Water - Tapwater Electricity - Gas Networks Gas - Unknown Comms - NBN & Vics	Sewer - Fully Serviced Water - Fully serviced Assumed Service Unknown Unknown	Sewer - Fully Serviced Water - Fully serviced Assumed Service Unknown Unknown	Sewer - Fully Serviced Water - Fully serviced Assumed Service Unknown Unknown
Essential Access to transport	Metrolink bus services operate in the area	Nil	Nil	Nil
School catchment	Scottsdale Primary School	Scottsdale Primary School	Scottsdale Primary School	Scottsdale Primary School
Population forecasts to the year 2017	0-39 age cohort - negative growth anticipated 40+ age cohort positive growth forecast Ageing population and negative growth in families likely to impact school enrolment and increase demand for aged care services and support Small core services including cafes, shops, dentist, primary school.			
Other local employers	Opportunities - jobs to provide for mainly non-urban communities with a range of services and support Economic opportunities/challenges - Provides that tips to larger services are only required occasionally. Role - highest concentration of employment for the sub-region, with a diversity of employment across business and industrial sectors.	Land is not mapped as suitable for agriculture zone	Land is not mapped as suitable for agriculture zone	Land is not mapped as suitable for agriculture zone
Potential to support growth	Only 3 parcels in Scottdale's SPA with potential to accommodate up to 100 residential lots	Sustainability and innovation would be more readily achieved if redevelopment offered more than 'small' residential lots.	Sustainability and innovation would be more readily achieved if redevelopment offered more than 'small' residential lots.	Sustainability and innovation would be more readily achieved if redevelopment offered more than 'small' residential lots.
Opportunities for sustainability & innovation				
Why hasn't development taken place?	Seek Council input			

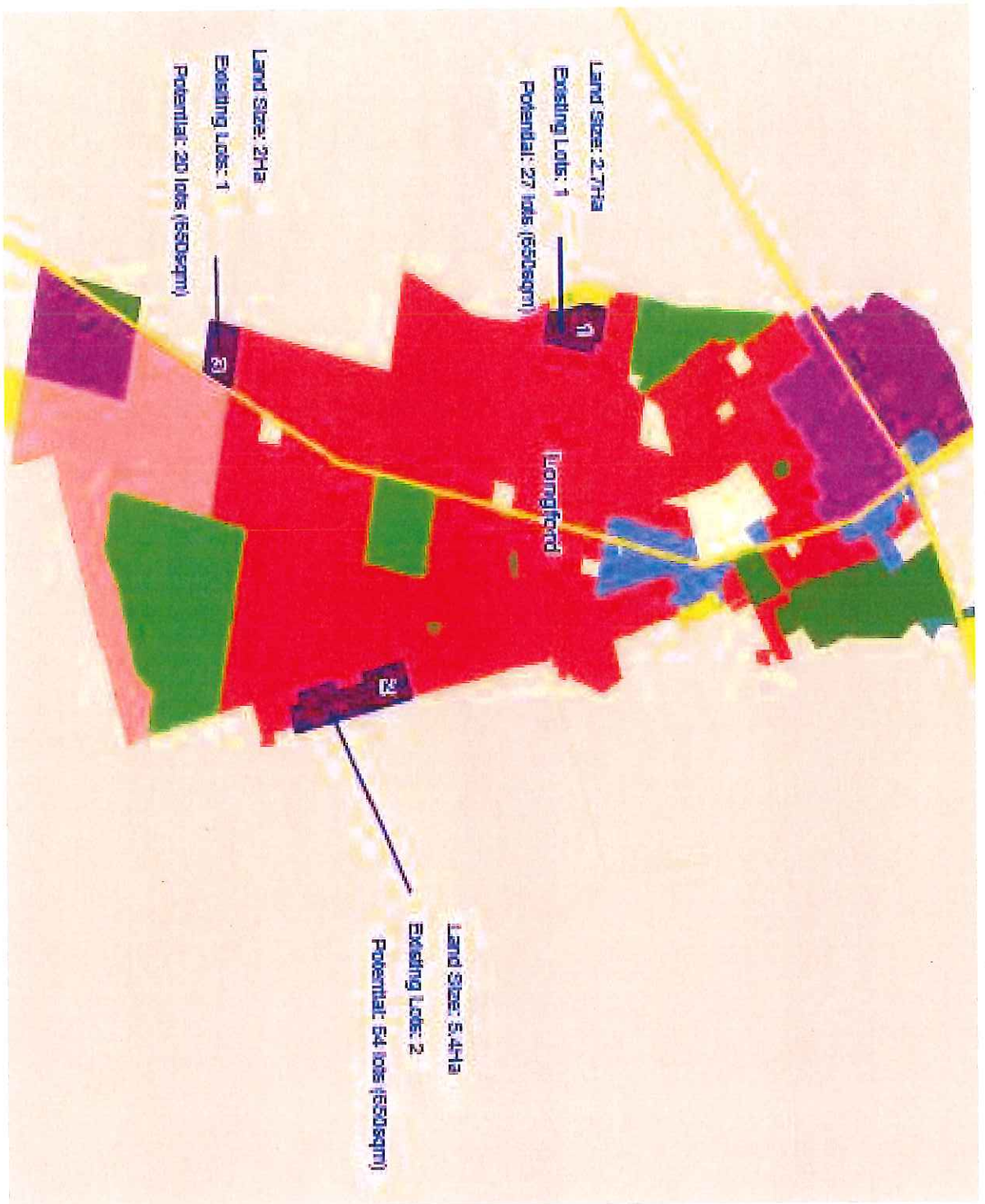




Northern Midlands Council, Tasmania – Assessment of current and future potential to accommodate growth

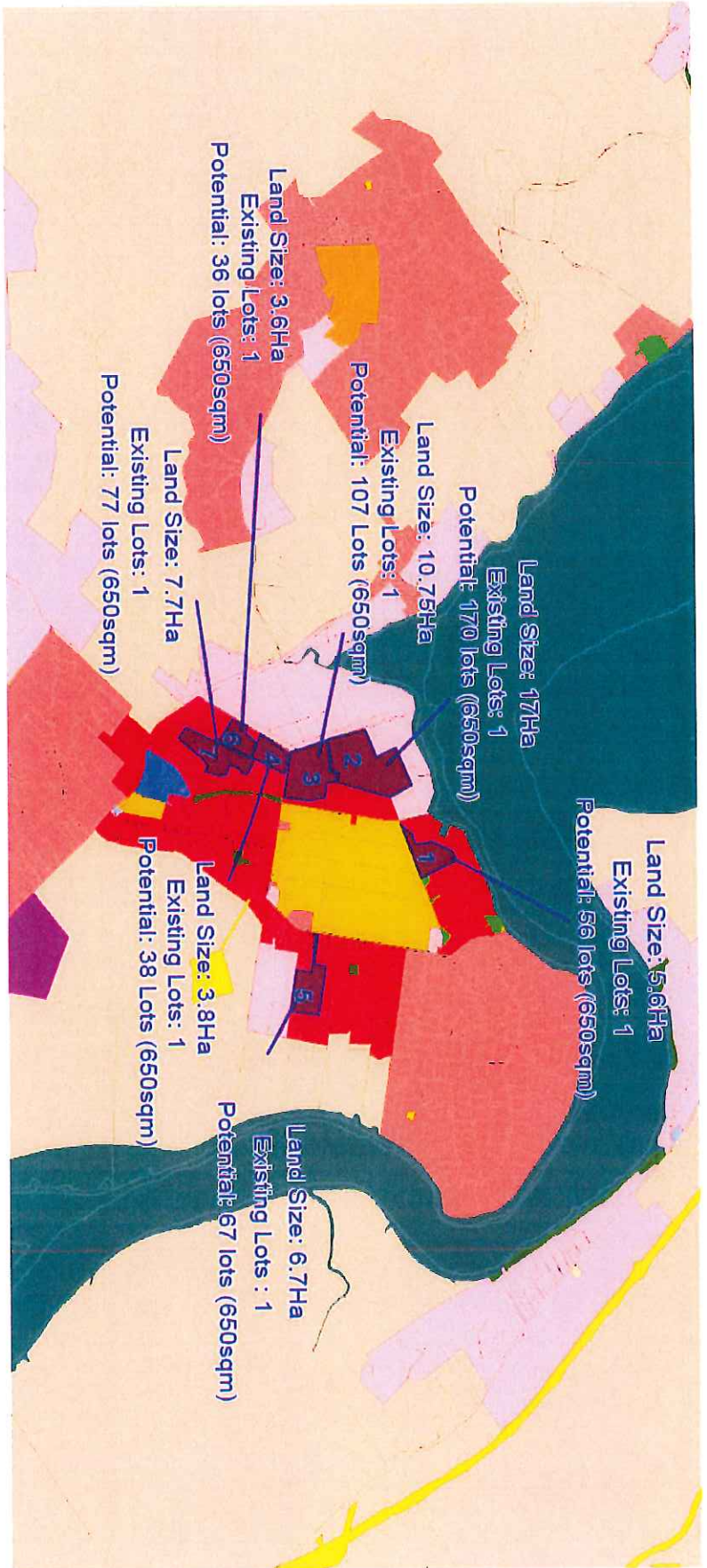
Inside Current NTRILUS Growth Boundary

	1	2	3
Consideration	Longford		
Redevelopment Potential (Low, Moderate or High)	Low	Low	Low
Activity Centre under NTRILUS Settlement Type under NTRILUS	27 single dwellings	54 single dwellings	20 single dwellings
Council Area			
Address/es	Paton Street	Part of 189-191 Wellington Street, Part of 205 Wellington Street	Cressy Road
Ownership	Fragmented	Multiple	Single
Title Details	Longford Township – ~1000 title details	158322/1	113038/1
Land Area	~422 Hectares	~2.7 Hectares	~5.4 Hectares
Zoning	Majority - General Residential zone	General Residential	General Residential
(Since 2013 per current Planning Scheme)	Minority - General Business, Recreational, Open Space, Utilities, Light Industrial, Particular Purpose and Community Purpose.		
Planning/Environmental	Longford Township NTRILUS 2013 Urban Growth Boundary		
Land/Dev Impediments	Longford Township Limited land supply now and in the future (within existing growth boundaries) Highly fragmented ownership Traffic and parking associated with new development Existing low-density character, low land supply in the centre and heritage restricts development potential		
Infrastructure/Service/Upgrades	Sewer – ~85% service to township, ~15% low density zoned land & Gen Industrial land appears unserviced Water – 95% service to township, ~5% low density zoned land appears unserviced Electricity – Tas Networks Gas – DBVD found no known gas supply. Comms – NBN & VICTAs	Serviced	Serviced
Easements			
Access to Transport	Train - Western Line & Tasalink Bus Services.		
School catchments	Longford Primary School		
Population forecasts to the year 2037	0-49 age cohort – negative growth anticipated 50+ age cohort positive growth forecast (ageing population and negative growth in families, likely to impact school enrolment and increase demand for aged care services and support)		
Major local employers	Launceston Airport, BSA Longford, Austral Bricks Longford, Perth, Escandale and Longford and Launceston centres		
Employment Rate	55.5% FTE, 6.9% unemployed (ABS 2016)		
Economic Opportunities/Challenges	Opportunities <ul style="list-style-type: none"> Diverse landscapes and tourist product; Proximity to major tourist destinations and state gateways; Proximity to Launceston Airport and CBD; Modern and large capacity domestic airport; Potential – limited potential for growth due to high fragmentation of land lots, low density and heritage character and very slow land supply coming online.		
Potential to support growth		27 single dwellings Land is under single ownership hence immediate redevelopment would be possible. However due to the capacity of the land support to growth is limited.	54 single dwellings Land is only under 2 ownerships hence immediate redevelopment would be possible. 20 single dwellings Land is under single ownership, hence immediate redevelopment would be possible. However due to the capacity of the land, support to growth is limited.
Opportunities for sustainability & innovation	There are several 2-5ha land parcels on the edge of Longford zoned General Residential that appear to have development potential. However, similar to Perth, these only have the potential to accommodate residential subdivisions and not a community style/masterplanned project supported by a mix of uses and jobs. The opportunity to integrate sustainability and innovation on a broad scale is therefore limited.	Opportunities are restricted by the size of the land.	Opportunities are restricted by the size of the land.
Why hasn't development taken place?	The existing growth boundary applies to the Longford Township which has very low development potential and a number of planning and environmental restrictions.		



NRLUS – Assessment of current and future potential to accommodate growth

Consideration (Low/Moderate/High) Activity Centre under NRLUS Statement Type under NRLUS	Urban Growth Potential							
	1 Low	2 Low to moderate	3 Moderate	4 Moderate	5 Low	6 Moderate	7 Moderate	
<p>Activity Centre under NRLUS</p> <p>Statement Type under NRLUS</p> <p>Central Area</p> <p>Address/ies</p> <p>Ownership</p> <p>Land Area</p> <p>Zone</p> <p>Since 2013 per current planning schemes</p>	<p>Urban</p> <p>Low to Moderate Redevelopment Potential – The NRLUS encourages growth and consolidation in Legana, which is ~20m north west of Jamieson. There are 7 development sites with potential to accommodate ~500 new lots.</p> <p>Urban is identified as a suitable settlement. It is a leading suburban activity centre and growth corridor.</p> <p>West Trimmer</p> <p>95 Beach Rd, Legana</p> <p>Fragmented</p> <p>1833/2</p> <p>1030</p> <p>200m² – General Residential zone</p> <p>Urban – Low Density Residential, Rural (High Rural Resource, Recreational, Open Space, Utilities, Light Industrial, Particular Purpose and Community Purpose).</p>	<p>Moderate</p> <p>56 single dwellings</p>	<p>Low to moderate</p> <p>170 single dwellings</p>	<p>Low</p> <p>107 single dwellings</p>	<p>Moderate</p> <p>38 single dwellings</p>	<p>Low</p> <p>67 single dwellings</p>	<p>Moderate</p> <p>58 single dwellings</p>	<p>Moderate</p> <p>77 single dwellings</p>
<p>Infrastructure/Service/Upgrades</p> <p>Access to Transport</p> <p>Schools/Childcare</p> <p>Population forecasts to the year 2037</p> <p>Major local employer/Industry/Amenities</p> <p>Employment Rate</p> <p>Economic Opportunity/Challenges</p> <p>Potential to support growth</p> <p>Opportunities for sustainability & innovation</p> <p>Why hasn't development taken place?</p>	<p>Water – Mains Electricity – The Networks Gas – Unknown Cemeter – NBN & W/RS</p> <p>Train – Western Line & Tassalite Bus Services.</p> <p>Brycedale Primary School</p> <p>0-39 age cohort – negative growth anticipated 40+ age cohort positive growth forecast (Ageing population and negative growth in families, likely to impact school enrolments and increase demand for after care services and support)</p> <p>Unemployed 10.1% Unemployed 15.2% Unemployed 19.2% Unemployed 23.2% Unemployed 27.2% Unemployed 31.2% Unemployed 35.2% Unemployed 39.2%</p> <p>Local retail, commercial, and community service functions. Full provision of utilities and urban infrastructure serviced by regional freight routes and road networks.</p> <p>Township – decent potential for residential growth</p>	<p>No sewer Water Serviced Electricity Serviced</p>	<p>No sewer Water Serviced Electricity Serviced</p>	<p>No sewer Water Serviced Electricity Serviced</p>	<p>No sewer Water Serviced Electricity Serviced</p>	<p>No sewer Water Serviced Electricity Serviced</p>	<p>No sewer Water Serviced Electricity Serviced</p>	<p>No sewer Water Serviced Electricity Serviced</p>
<p>Opportunities for sustainability & innovation</p>	<p>Opportunities are restricted by the size of the land and limited by residential land use subdivision only.</p>	<p>Opportunities are restricted by the size of the land and limited by residential land use subdivision only.</p>	<p>Opportunities are restricted by the size of the land and limited by residential land use subdivision only.</p>	<p>Opportunities are restricted by the size of the land and limited by residential land use subdivision only.</p>	<p>Opportunities are restricted by the size of the land and limited by residential land use subdivision only.</p>	<p>Opportunities are restricted by the size of the land and limited by residential land use subdivision only.</p>	<p>Opportunities are restricted by the size of the land and limited by residential land use subdivision only.</p>	
<p>Why hasn't development taken place?</p>	<p>State Council impact – would be good to undertake if there is a subdivision approval for this area given that 7 appears to be a stage that is currently being completed.</p>							



NTRLUS – Assessment of current and future potential to accommodate growth

		Inside Current NTRLUS Growth Boundary	
		Hadspen	1
Consideration Redevelopment Potential (Low, Moderate or High)	Low to Moderate Redevelopment Potential – There general residential zoned and available for subdivision of ~960 lots.		
Activity Centre under NTRLUS	Hadspen is identified as a Neighbourhood Centre		
Settlement Type under NTRLUS	Satellite		
Council Area	Meander Valley		
Address/es			30 Saunders Drive, Hadspen, Meander Valley Rd, Hadspen, 74 Saunders Drive, Hadspen, Bartley St, Hadspen, 3 Scott St, Hadspen, 9A Scott St, Hadspen
Ownership			multiple
Title Details			19016/2, 52360/1, 52360/2, 19016/3, 106965/1, 117185/1, 117185/4, 117185/4
Land Area	~388 Hectares		~96 Hectares
Zoning (Since 2013 per current Planning Scheme)	Majority - General Residential zone Minority - Low Density Residential, Recreational, Open Space, Utilities, Rural Living		Low Density Residential
Planning/Environmental			Adjoins Eucalypt forest to the east. Sparse vegetation exists on site.
Land/Dev Impediments			Land is sloping and would likely require significant cut and fill, some lots are not fully serviced and new infrastructure/upgrades and roads would be needed. Not clear whether there is demand for new land lots in this location given limited available services and amenities.
Infrastructure/Service/Upgrades	Sewer Water – TASwater Electricity – Tas Networks Gas – Unknown Comms – NBN & VicTras		Sewer - No Water - 4 of 8 lots serviced Unknown Unknown Unknown
Easements			Several 'right of way'/carriageway easements
Access to transport	Metro Tasmania bus services operate in the area		Metro Tasmania bus services operate in the area
School catchments	Hagley Farm Primary School		Hagley Farm Primary School
Population forecasts to the year 2037	0-39 age cohort – negative growth anticipated 40+ age cohort positive growth forecast (aging population and negative growth in families, likely to impact school enrollment and increase demand for aged care services and support)		
Major local employers	Likely Launceston CBD, there is no supermarket and very limited shops in Hadspen. Nearest supermarket is in Prospect, neighbouring suburb to the north.		
Employment Rate	55.5% FTE, 5.6% unemployed (ABS 2016)		
Economic Opportunities/Challenges	Opportunities Provide an extensive urban area independent of the Greater Launceston Urban Area with key local retail, commercial, and community services functions. Full provision of utilities and urban infrastructure serviced by regional freight routes and road networks.		
Potential to support growth			Sustainability and innovation would be more readily achieved if redevelopment offered more than residential land lots.
Opportunities for sustainability & innovation			Landform/topography, infrastructure upgrades and associated costs, possible limited demand for 'small' lot housing in this location
Why hasn't development taken place?	Seek Council input		



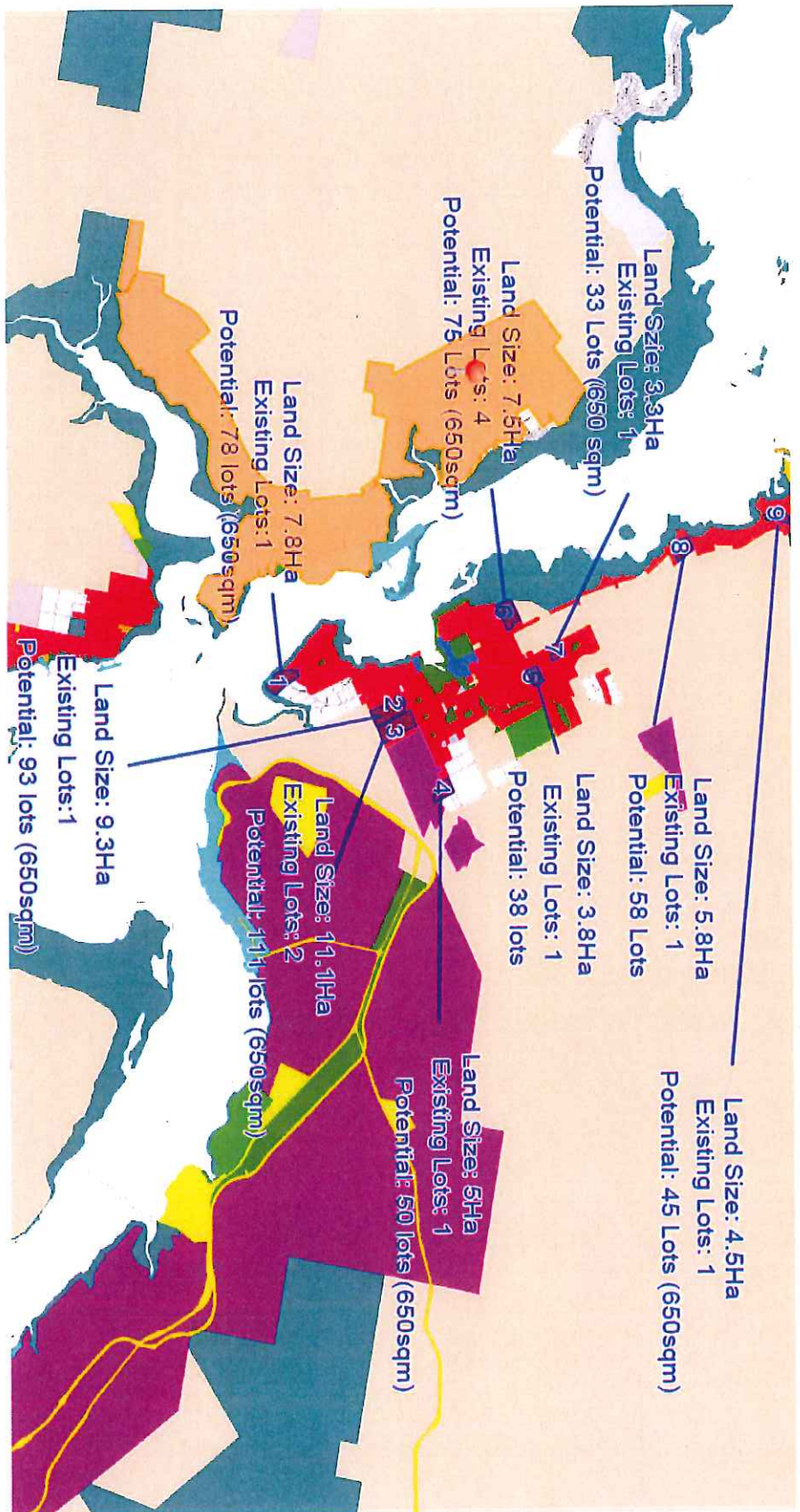
Land Size: 96 Ha
Existing Lots: 8
Potential: 960 Lots (650sqm)

3-613

NTRIUS - Assessment of current and future potential to accommodate growth

Category	Development Potential	1	2	3	4	5	6	7	8	9
Medium Density Residential (MDR) (see 2013 Performance Based Code)	Medium Density Residential (MDR)	77 lots	33 lots	111 lots	50 lots	33 lots	23 lots	33 lots	28 lots	49 lots
	Medium Density Residential (MDR)	77 lots	33 lots	111 lots	50 lots	33 lots	23 lots	33 lots	28 lots	49 lots
Single-Family Residential (SFR) (see 2013 Performance Based Code)	Single-Family Residential (SFR)	13,507/145	13,548/171	13,548/171	48,521	127,161/171	3,389/1,401/971, 429/9/1, 429/9/1	2,655/171	37,912	2,570/123
	Single-Family Residential (SFR)	13,507/145	13,548/171	13,548/171	48,521	127,161/171	3,389/1,401/971, 429/9/1, 429/9/1	2,655/171	37,912	2,570/123
Community Center (CC) (see 2013 Performance Based Code)	Community Center (CC)	-	-	-	-	-	-	-	-	-
	Community Center (CC)	-	-	-	-	-	-	-	-	-
Office (see 2013 Performance Based Code)	Office	-	-	-	-	-	-	-	-	-
	Office	-	-	-	-	-	-	-	-	-
Retail (see 2013 Performance Based Code)	Retail	-	-	-	-	-	-	-	-	-
	Retail	-	-	-	-	-	-	-	-	-
Industrial (see 2013 Performance Based Code)	Industrial	-	-	-	-	-	-	-	-	-
	Industrial	-	-	-	-	-	-	-	-	-
Public (see 2013 Performance Based Code)	Public	-	-	-	-	-	-	-	-	-
	Public	-	-	-	-	-	-	-	-	-
Other (see 2013 Performance Based Code)	Other	-	-	-	-	-	-	-	-	-
	Other	-	-	-	-	-	-	-	-	-
Total	Total	13,584	13,581	13,581	98,521	127,161	3,389/1,401/971, 429/9/1, 429/9/1	2,655	37,912	2,570/123
	Total	13,584	13,581	13,581	98,521	127,161	3,389/1,401/971, 429/9/1, 429/9/1	2,655	37,912	2,570/123

Legend: 1=Low, 2=Medium, 3=High, 4=Very High, 5=Very High, 6=Very High, 7=Very High, 8=Very High, 9=Very High



NTRULS – Assessment of current and future potential to accommodate growth

		Inside Current NTRULS Growth Boundary	
		1	2
Consideration	Exeter	Low	Low
Redevelopment Potential (Low, Moderate or High)			
Activity Centre under NTRULS	District Service Centre		
Settlement Type under NTRULS	District Service Centre		
Council Area	West Tamar		
Addresses/As			
Ownership			
Title Details	389 Hectares	Beaton St, Exeter	Lot 1 Wildemere Cr, Exeter & 122 Main Rd, Exeter (Exeter Hotel)
Land Area		Single	Multiple
Zone		11052/1	14490/1, 13362/2
(Since 2013 per current Planning Scheme)		12.9 Hectares	9.2 Hectares
Planning/Environmental	Majority - General Residential, Recreational, Open Space, Utilities, Rural Living	General Residential	General Residential
Land/Use Impediments		Mapped with medium and slip risk	Land is highly vegetated with 2 dams on site. Smaller lot is operated as the local hotel.
Infrastructure/Service/Upgrades	Sewer Water - TAswater Electricity - Tas Networks Gas - Unknown Comms - NBN & Vicsas	Sewer - Fully Serviced Water - Fully serviced Assumed Service Unknown Unknown	Sewer - Fully Serviced Water - Fully serviced Assumed Service Unknown Unknown
Essentials		Nil	2 right of drainage easements
Access to transport	Metro Tasmalia bus services operate in the area	Nil	Nil
School catchments	Exeter Primary School	Exeter Primary School	Exeter Primary School
Population forecasts to the year 2037	0-39 age cohort - negative growth anticipated 40+ age cohort positive growth forecast (aging population and negative growth in families, likely to impact school enrolment and increase demand for aged care services and support)		
Major local employers	small town amenities including cafes, service station, chemist, primary schools.		
Employment Rate	52.1% FTE, 4.9% unemployed (AS 2016)		
Economic Opportunities/Challenges	Opportunities Significant regional settlement areas with an important sub-regional role in terms of access to a wide range of services, education and employment opportunities. Employment within District Centres is strongly related to surrounding productive resources.	Land is not mapped as suitable for agriculture zone	Land is not mapped as suitable for agriculture zone
Potential to support growth			
Opportunities for sustainability & innovation		Sustainability and innovation would be more readily achieved if redevelopment offered more than residential land lots.	Sustainability and innovation would be more readily achieved if redevelopment offered more than residential land lots.
Why hasn't development taken place?	Seek Council Input	Landform/topography, infrastructure upgrades and associated costs, possible limited demand for 'small' lot housing in this location	Landform/topography, infrastructure upgrades and associated costs, possible limited demand for 'small' lot housing in this location



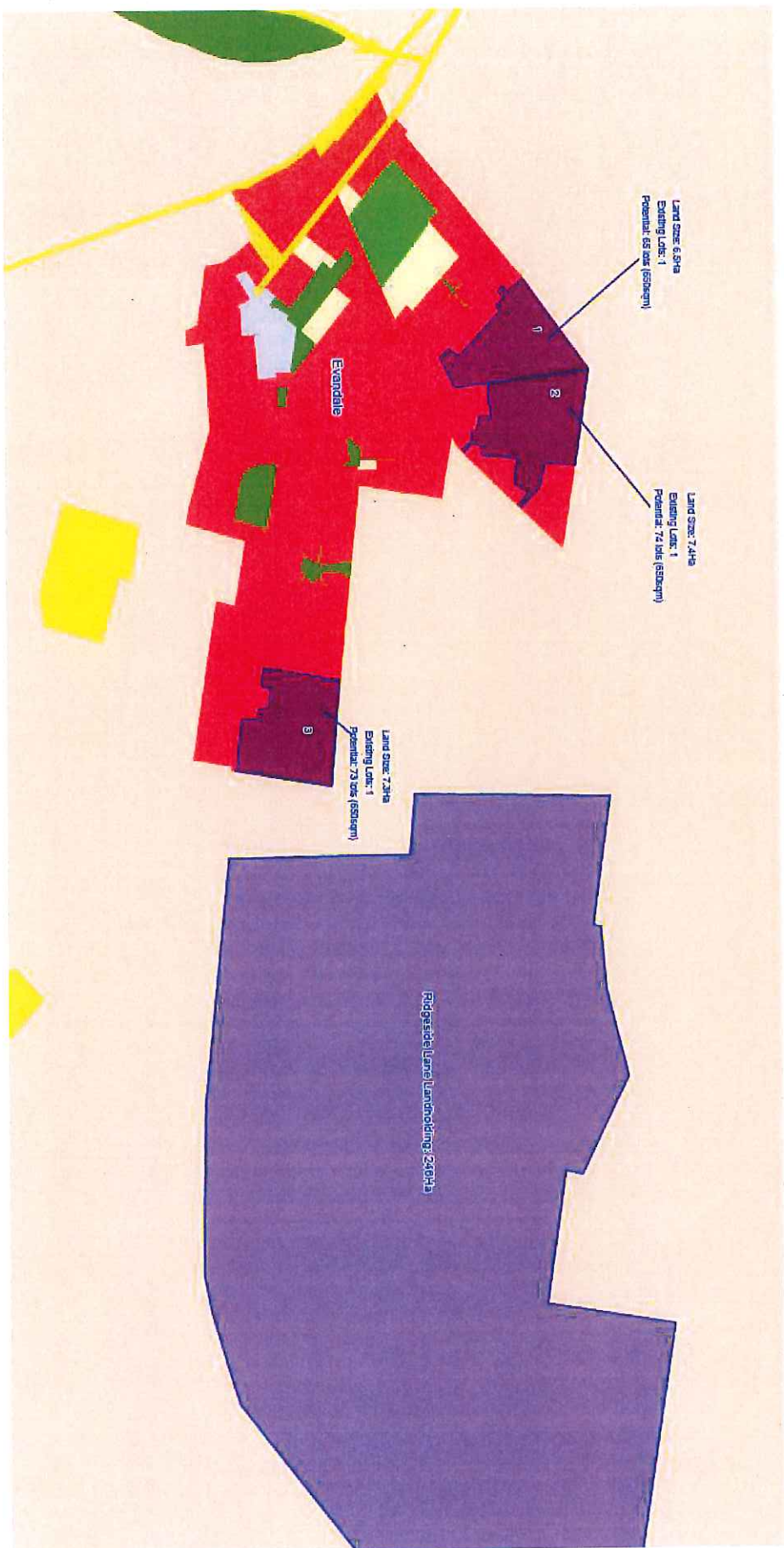
Northern Midlands Council, Tasmania – Assessment of current and future potential to accommodate growth

Considerations	Greater Growth	1	2	3	Greater Growth
<p>Land Use</p> <p>Low redevelopment potential – The existing township is highly fragmented land ownership, holdings significance, low-density character of township, very limited land supply or potential for subdivision.</p> <p>Total – 273 single dwellings</p>	Moderate	Moderate	Moderate	Moderate	High
<p>Activity Centre Under Review</p> <p>Settlement Type under Review</p> <p>Greater Township is located within the Urban Growth Boundary. Settlement is independent of Town Centre. Provide an extensive urban area independent of the Greater Launceston Urban Area with local retail, commercial and community service functions. Alignment in long term plan to impact stability of existing neighbourhood centres now and into the future.</p>	Within Growth Boundary	Within Growth Boundary	Within Growth Boundary	Within Growth Boundary	High
<p>Council Area</p> <p>Addresses</p> <p>Greater Township – 400 addresses</p>	Northern Midlands	Northern Midlands	Northern Midlands	Northern Midlands	High
<p>Conurbation</p> <p>Greater Township – 400 addresses</p>	Urban Fringe	Urban Fringe	Urban Fringe	Urban Fringe	High
<p>Land Use</p> <p>Greater Township – 400 addresses</p>	Urban Fringe	Urban Fringe	Urban Fringe	Urban Fringe	High
<p>Planning/Environmental</p> <p>Greater Township – 400 addresses</p>	Urban Fringe	Urban Fringe	Urban Fringe	Urban Fringe	High
<p>Land Use/Impediments</p> <p>Greater Township – 400 addresses</p>	Urban Fringe	Urban Fringe	Urban Fringe	Urban Fringe	High
<p>Infrastructure/Services/Upgrade</p> <p>Greater Township – 400 addresses</p>	Urban Fringe	Urban Fringe	Urban Fringe	Urban Fringe	High
<p>Existing</p> <p>Greater Township – 400 addresses</p>	Urban Fringe	Urban Fringe	Urban Fringe	Urban Fringe	High
<p>Access to Transport</p> <p>Greater Township – 400 addresses</p>	Urban Fringe	Urban Fringe	Urban Fringe	Urban Fringe	High
<p>School Estimates</p> <p>Greater Township – 400 addresses</p>	Urban Fringe	Urban Fringe	Urban Fringe	Urban Fringe	High
<p>Population forecast to the year 2037</p> <p>Greater Township – 400 addresses</p>	Urban Fringe	Urban Fringe	Urban Fringe	Urban Fringe	High
<p>Major local employers</p> <p>Greater Township – 400 addresses</p>	Urban Fringe	Urban Fringe	Urban Fringe	Urban Fringe	High
<p>Economic Opportunity/Challenges</p> <p>Greater Township – 400 addresses</p>	Urban Fringe	Urban Fringe	Urban Fringe	Urban Fringe	High
<p>Potential to support growth</p> <p>Greater Township – 400 addresses</p>	Urban Fringe	Urban Fringe	Urban Fringe	Urban Fringe	High
<p>Opportunities for sustainability or innovation</p> <p>Greater Township – 400 addresses</p>	Urban Fringe	Urban Fringe	Urban Fringe	Urban Fringe	High

Why hasn't development taken place?

The existing growth boundary applies to the Eumardale Township which has very low development potential and a number of planning and environmental restrictions.

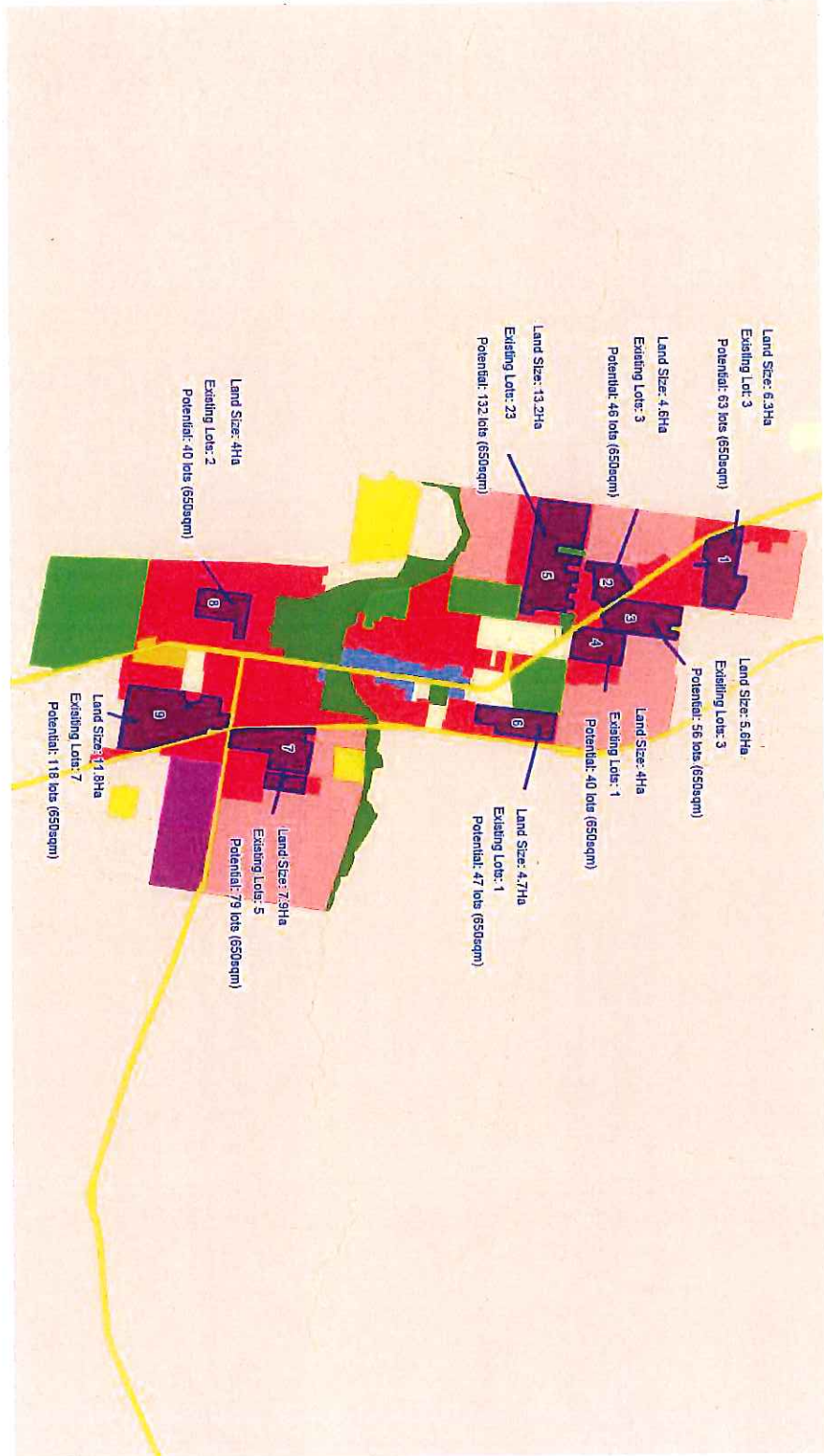
The existing growth boundary applies to the Eumardale Township only, which restricts the development potential at Ridgepark Lane. Ridgepark Lane was only recently purchased by Traders in Purple with aim to rezone and redevelop to be Australia's most sustainable community for 700+ homes and associated rural and local employment generating uses.



Northern Midlands Council, Tasmania – Assessment of current and future potential to accommodate growth

Contribution Potential (Low, Moderate or High)	Dorset			Dorset		
	1	2	3	1	2	3
Activity Centre under RILUS	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate
Statement Type under RILUS						
Council Area	West Gairdri St, Dorset	222-250 Wrenth Rd, 111 West St, Dorset	75 West Church St, Dorset			
Address/ies						
Ownership	Single	Multiple	Single			
Title Details	25277/1/1	11085/1, 11085/2, 12059/1	22059/1			
Land Area	~450 Ha	~1.7 hectares	~5 hectares			
Zoning	Majority - General Residential zone	General Residential	General Residential			
(Since 2013 per current Planning Scheme)	Minority - Low Density Residential, Recreational, Open Space, Utilities, Rural Living					
Planning/Environmental	Site is flat and relatively unencumbered.	Site is flat and relatively unencumbered.	Site is flat and relatively unencumbered.			
Land/Dev Impediments	Land is steep and vegetated, would likely require significant cut and fill/tree removal. New infrastructure/upgrades and roads would be needed. Not clear whether there is demand for new land in this location given limited suitable services and amenities. Medium Land Slip Risk.	Land is highly vegetated with 2 dams on site. Smaller lot is operated as the local hotel.	Land is highly vegetated with 2 dams on site. Smaller lot is operated as the local hotel.			
Infrastructure/Services/Upgrades	Sewer - Fully serviced Water - Fully serviced Assumed Service Unknown Unknown	Sewer - Fully serviced Water - Fully serviced Assumed Service Unknown Unknown	Sewer - Fully serviced Water - Fully serviced Assumed Service Unknown Unknown	Sewer - Fully serviced Water - Fully serviced Assumed Service Unknown Unknown		
Essentials	Nil	Nil	Nil			
Access to Transport	Major Tasmania bus services operate in the area	Nil	Nil			
School catchments	Dorset Primary School	Dorset Primary School	Dorset Primary School			
Population growth to the year 2037	0-39 age cohort – negative growth anticipated 40+ age cohort positive growth forecast. (aging population and negative growth in families, likely to impact school enrolments and increase demand for aged care services and support) Small town centres including care, service station, dental, primary schools.					
Major local employers	50/26/176, 53% (employee) (AS 2018)					
Economic Opportunities/Challenges	Opportunities - Rice - To provide predominantly non-urban communities with a range of goods and services to meet their daily and weekly needs. Provides the opportunity for a range of services, including retail, health, education, recreation, and employment for the site region, with a diversity of employment across business and industrial activities. Only 3 parcels on Dorset St with potential to accommodate up to 140 residential lots.	Land is not mapped as suitable for agriculture zone	Land is not mapped as suitable for agriculture zone	Land is not mapped as suitable for agriculture zone		
Potential to support growth						
Opportunities for sustainability & innovation		Sustainability and innovation would be more readily achieved if redevelopment offered more than small residential lots.	Sustainability and innovation would be more readily achieved if redevelopment offered more than small residential lots.	Sustainability and innovation would be more readily achieved if redevelopment offered more than small residential lots.		
Why hasn't development taken place?	Seek Council input					

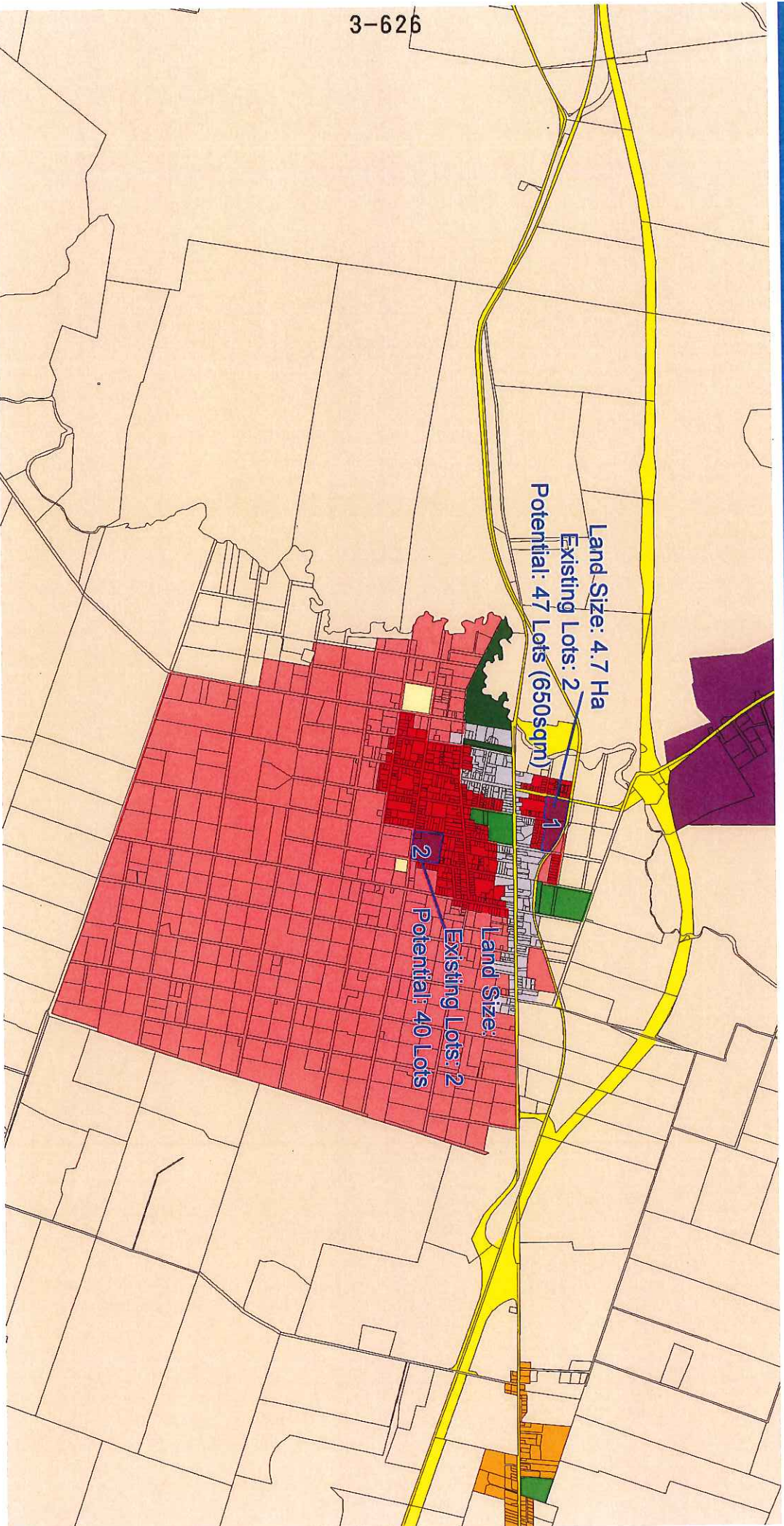




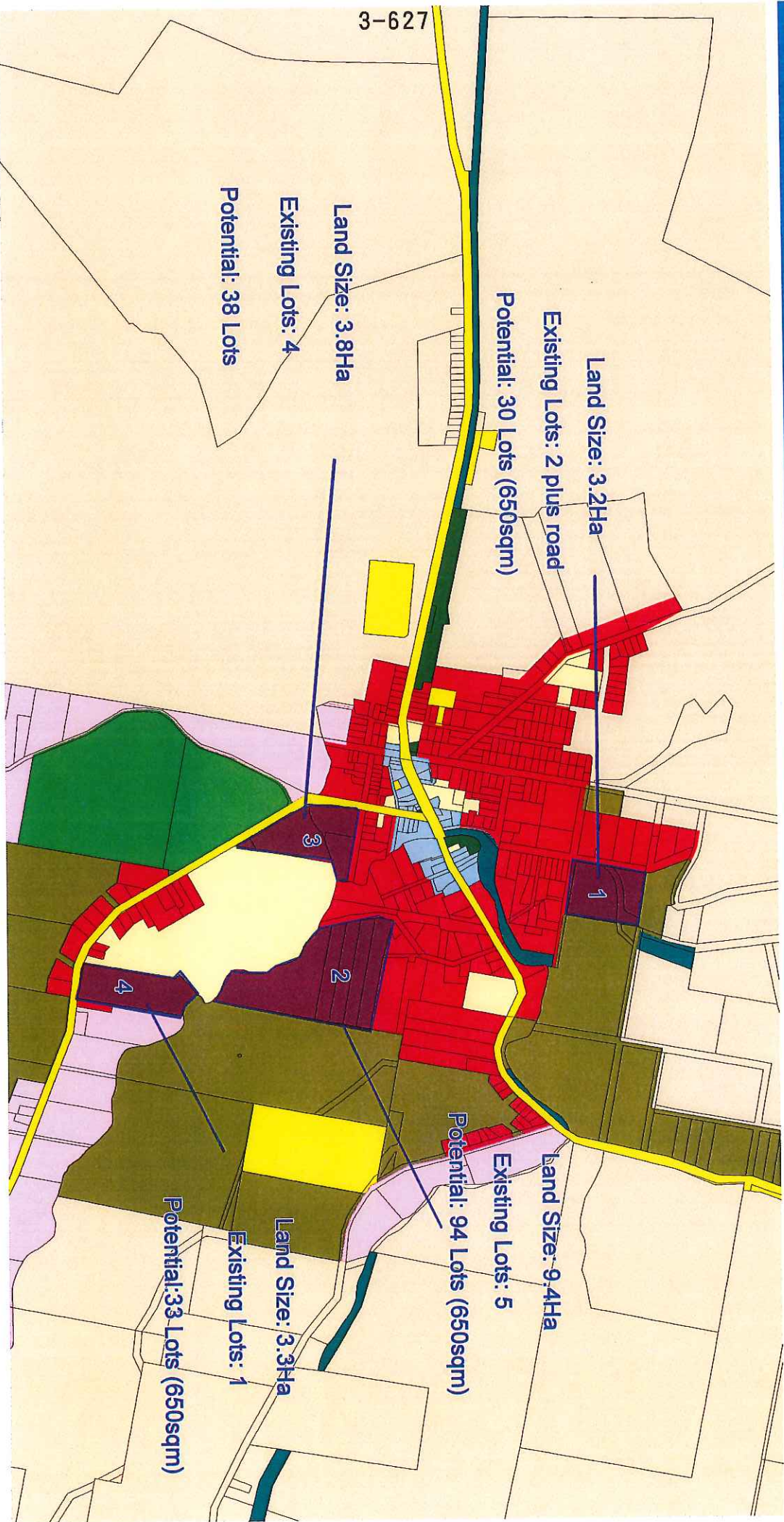
NTRLUS – Assessment of current and future potential to accommodate growth

		Inside Current NTRLUS Growth Boundary	
		Beaconsfield	1
Consideration	Beaconsfield	Low	Moderate
Redevelopment Potential (Low, Moderate or High)			
Activity Centre under NTRLUS	District Centre		
Settlement Type under NTRLUS	District Centre		
Council Area	West Tamar		
Address/es			
Ownership			
Title Details			
Land Area			
Zoning	Majority - General Residential zone Minority - Low Density Residential, Recreational, Open Space, Utilities, Rural Living		
(Since 2013 per current Planning Scheme)			
Planning/Environmental			
Land/Dev Impediments			Land is generally flat. There are some trees on site but the land appears relatively unencumbered and has main road access to 2 streets.
Infrastructure/Service/Upgrades	Sewer Water – TAswater Electricity – Tas Networks Gas – Unknown Comms – NBN & Victras		Sewer - Land is mapped as having no sewer but this would need further investigation. Water - Land is mapped as having no sewer but this would need further investigation. Unknown Unknown Unknown
Easements	Metro Tasmania bus services operate in the area	Nil	Nil
Access to transport		Nil	
School catchments	Beaconsfield Primary School		Beaconsfield Primary School
Population forecasts to the year 2037	0-39 age cohort – negative growth anticipated 40+ age cohort positive growth forecast (aging population and negative growth in families, likely to impact school enrolment and increase demand for aged care services and support)		
Major local employers	IGA, service station, Boral quarry, primary school, nursery		
Employment Rate	38.2% FTE, 15.3% unemployed (ABS 2016)		
Economic Opportunities/Challenges	Opportunities Provide an extensive urban area independent of the Greater Launceston Urban Area with key local retail, commercial, and community service functions. Full provision of utilities and urban infrastructure serviced by regional freight routes and road networks.		
Potential to support growth			Limited
Opportunities for sustainability & innovation			Sustainability and innovation would be more readily achieved if redevelopment offered more than residential land lots.
Why hasn't development taken place?	Seek Council input		

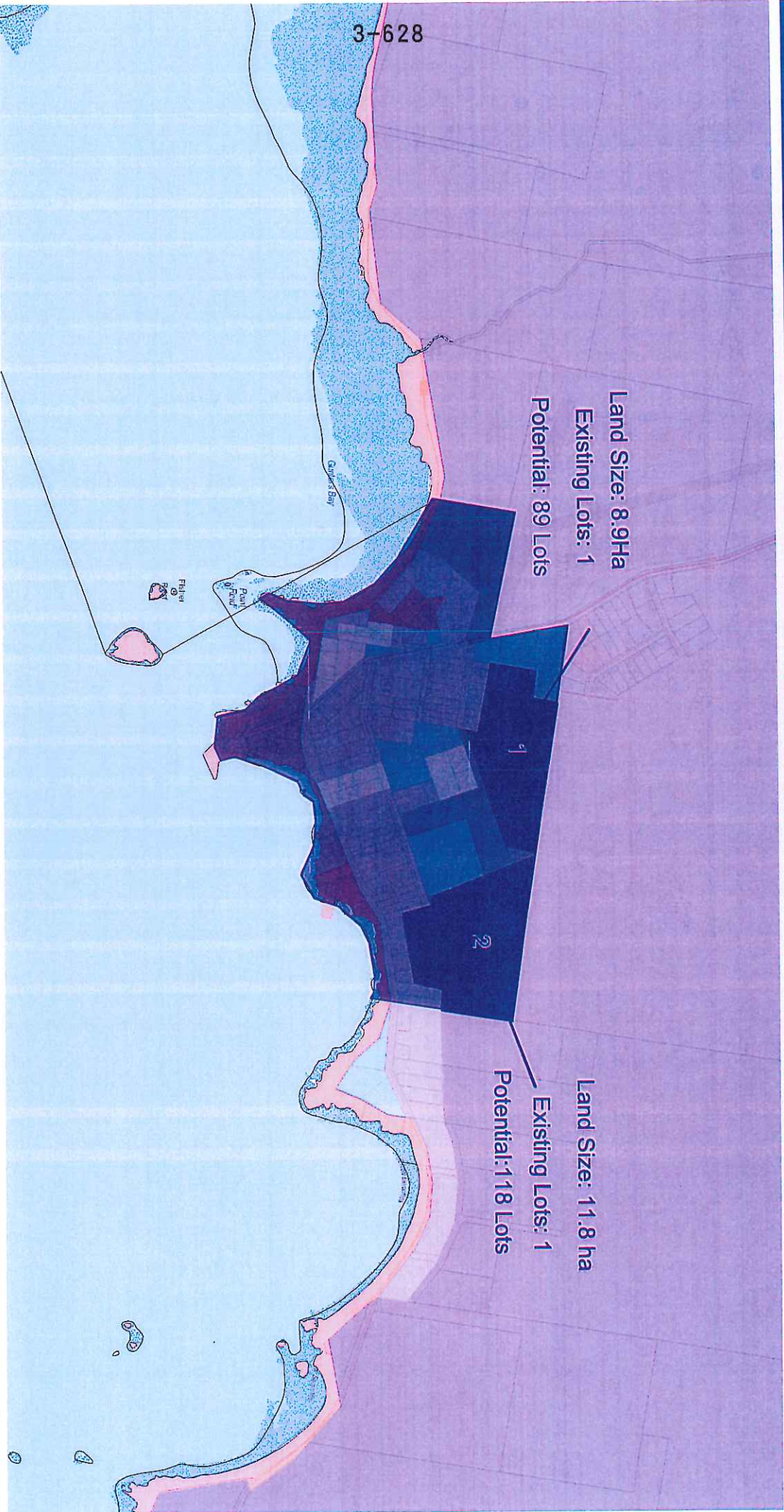
NTRILUS Rural Towns - Growth Potential Summary to 2037				
Council	Town	Potential (Lots)	Addresses	Comments
West Tamar	Beauty Point	150	Site 1: Lot 102 West Arm Rd, Beauty Point Site 2: 70 Oxford St, Beauty Point	Site 1 appears relatively unencumbered and developable subject to further DD Site 2 is heavily vegetated and has medium landslip risk, affecting likely yield
Meander Valley	Westbury	87	Site 1: Lot 1 William St & 1 Franklin St, Westbury Site 2: 97 & 99 Dexter St, Westbury	Site 1 appears land is being prepared as part of a subdivision Site 2 is Westbury Primary School and accordingly has low redevelopment potential
Dorset	Bridport	100	Site 1: 26 Albert St, Bridport 'Seaview Village' Site 2: 39 Frances St, Bridport 'Bridport Bayview Centre'	Site 1 appears to be an operating retirement village and accordingly has low redevelopment potential Site 2 appears to be operating as a function centre.
Flinders	Lady Barron	207	Site 1: Crown Land Site 2: Barr St, Lady Barron	Both sites are crown land, highly vegetated and have several roads through them
Break O Day	St. Marys	195	Site 1: 1-3 Franks St, St Marys Site 2: 11-23 Newman St, St. Marys Site 3: Gray Rd, St. Marys Site 4: 43-49 Gray Rd, St. Marys	Site 1 has an existing road passing through it, which would impact yield Site 2 is heavily vegetated and sloping (low landslide risk) Site 3 has a river traversing through the middle of the site and irregular shape. Also a school site (St. Marys District School). Site 4 appears relatively unencumbered and developable but further DD needed



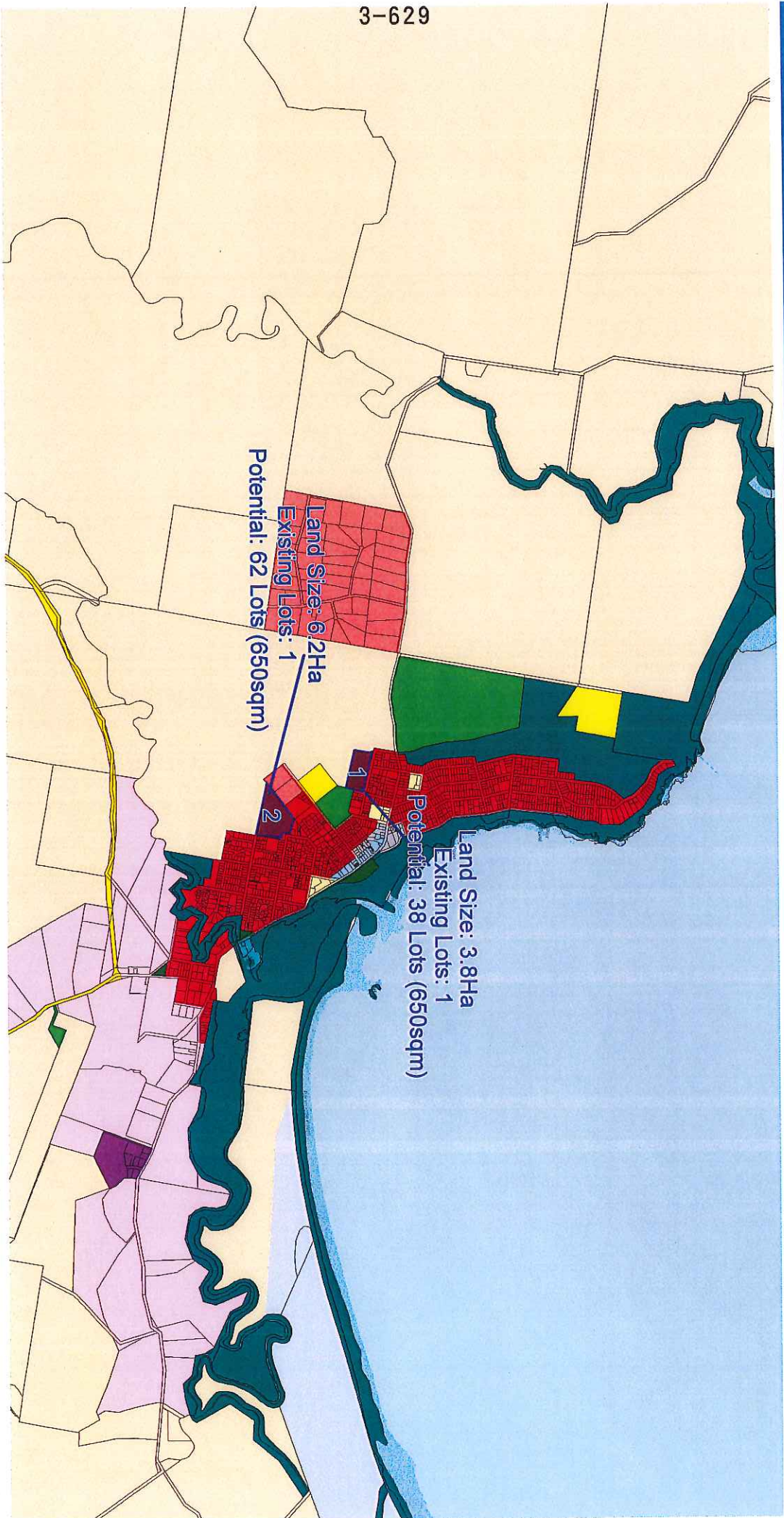
www.thelist.tas.gov.au



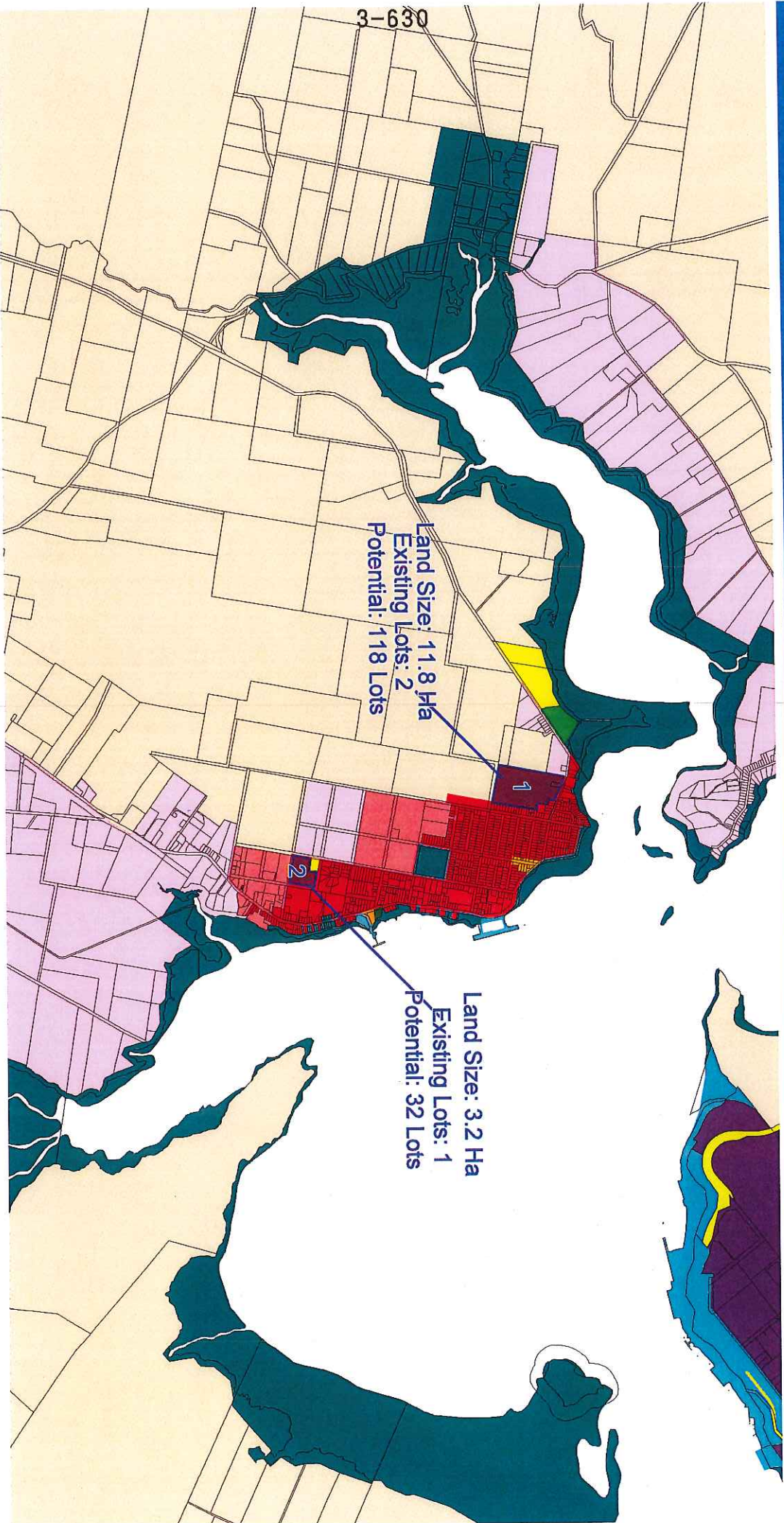
www.thelist.tas.gov.au



www.theilist.tas.gov.au



www.theлист.tas.gov.au



www.theist.tas.gov.au

© COPYRIGHT AND DISCLAIMER: Map data is compiled from a variety of sources and hence its accuracy is variable. If you wish to make decisions based on this data you should consult with the relevant authorities. Apart from any use permitted under the Copyright Act 1968, no part of the report may be copied without the permission of the General Manager, Land Tasmania, Department of Primary Industries, Parks, Water and Environment, GPO Box 44 Hobart 7001.

pitt&sherry

Ridgeside Lane, Evandale
Traffic Impact Assessment

Prepared for
Traders in Purple

Client representative
Brett Robinson

Date
1 July 2019

Rev 00



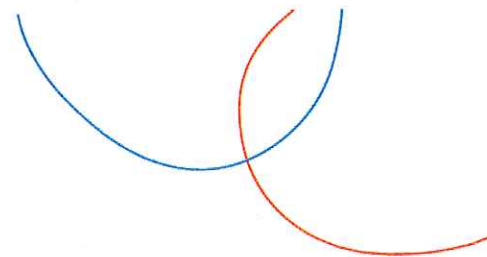


Table of Contents

1.	Introduction.....	1
2.	Existing Conditions	1
2.1	Site Location	1
2.2	Road Network	2
2.2.1	Overview.....	2
2.2.2	Road Widths and Carriageway Form	6
2.2.3	Road Function	7
2.2.4	Intersections	8
2.3	Traffic Volumes	9
2.3.1	Peak Hourly Intersection Traffic Volumes.....	9
2.3.2	Daily Mid-Block Traffic Volumes.....	13
2.4	Intersection Performance	13
2.4.1	Traffic Modelling Software.....	13
2.4.2	Traffic Modelling Intersection Layouts	14
2.4.3	Traffic Modelling Results – Weekday	14
2.4.4	Traffic Modelling Results – Sunday	20
2.5	Mid-Block Capacity.....	24
2.5.1	Parking Demand - Weekday	24
2.5.2	Parking Demand – Sunday	28
2.5.3	Mid-Block Traffic Capacity – Urban Roads	31
2.5.4	Mid-Block Traffic Capacity – Rural Roads	32
2.5.5	Mid-Block Capacity and Demand	33
2.6	Public Transport	38
2.7	Pedestrian and Cycling Facilities	38
3.	Development Proposal	39
3.1	Overview	39
3.2	Baker Group Development	40
4.	Traffic Impact Assessment.....	41
4.1	Traffic Generation Rates	41
4.2	Traffic Impact	44
4.2.1	Directional Split of Traffic	44
4.2.2	Traffic Distribution and Assignment.....	44
4.2.3	Level of Development to Reach Mid-Block Capacity	45
4.2.4	Intersection Operation.....	47
5.	Parking Assessment.....	52
5.1	Parking Provision	52
5.2	Car Parking Dimensional Requirements	55
6.	Conclusion.....	57

List of figures

Figure 1: Site in Local Context (Aerial Source: https://maps.thelist.tas.gov.au/listmap/app/list/map).....	2
Figure 2: Ridgeside Lane - Facing East (Image source: Google Street View, March 2010)	2
Figure 3: Ridgeside Lane - Facing West (Image source: Google Street View, March 2010).....	2
Figure 4: White Hills Road - Facing North-East (Image source: Google Street View, November 2016).....	3
Figure 5: White Hills Road - Facing South-West (Image source: Google Street View, November 2016)	3
Figure 6: Barclay Street - Facing East (Image source: Google Street View, March 2010).....	3

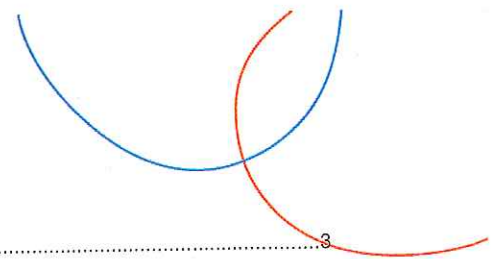


Figure 7: Barclay Street - Facing West (Image source: Google Street View, March 2010) 3

Figure 8: Cambock Lane - Facing North-East (Image source: Google Street View, January 2010) 4

Figure 9: Cambock Lane - Facing South-West (Image source: Google Street View, January 2010) 4

Figure 10: Logan Road - Facing East (Image source: Google Street View, March 2010) 4

Figure 11: Logan Road - Facing West (Image source: Google Street View, March 2010) 4

Figure 12: Russell Street - Facing East (Image source: Google Street View, November 2016) 5

Figure 13: Logan Road - Facing West (Image source: Google Street View, November 2016) 5

Figure 14: High Street - Facing North-West (Image source: Google Street View, November 2016) 5

Figure 15: High Street - Facing South-East (Image source: Google Street View, November 2016) 5

Figure 16: Tasmanian Local Government Road Hierarchy 7

Figure 17: Intersections Locations Relative to Site (Aerial Source: <https://maps.thelist.tas.gov.au>) 8

Figure 18: Existing (2019) Weekday AM Peak Hour Traffic Volumes 10

Figure 19: Existing (2019) Weekday PM Peak Hour Traffic Volumes 11

Figure 20: Existing (2019) Sunday Peak Hour Traffic Volumes 12

Figure 21: High Street/ Cambock Lane - Existing Weekday AM Peak Hour Approach LOS 14

Figure 22: High Street/ Cambock Lane Existing Weekday PM Peak Hour Approach LOS 14

Figure 23: High Street/ Barclay Street Existing Weekday AM Peak Hour Approach LOS 15

Figure 24: High Street/ Barclay Street Existing Weekday PM Peak Hour Approach LOS 15

Figure 25: High Street/ Russell Street Existing Weekday AM Peak Hour Approach LOS 16

Figure 26: High Street/ Russell Street Existing Weekday PM Peak Hour Approach LOS 16

Figure 27: Barclay Street/ Macquarie Street/ Cambock Lane Existing Weekday AM Peak Hour Approach LOS 17

Figure 28: Barclay Street/ Macquarie Street/ Cambock Lane Existing Weekday PM Peak Hour Approach LOS 17

Figure 29: Russell Street/ Macquarie Street Existing Weekday AM Peak Hour Approach LOS 18

Figure 30: Russell Street/ Macquarie Street Existing Weekday PM Peak Hour Approach LOS 18

Figure 31: High Street/ Cambock Lane Existing Sunday Peak Hour Approach LOS 20

Figure 32: High Street/ Russell Street Existing Sunday Peak Hour Approach LOS 21

Figure 33: Barclay Street/ Macquarie Street/ Cambock Lane Existing Sunday Peak Hour Approach LOS 22

Figure 34: Russell Street/ Macquarie Street Existing Sunday Peak Hour Approach LOS 23

Figure 35: Barclay Street Parking Survey Locations (Aerial Source: <https://maps.thelist.tas.gov.au/listmap/app/list/map>) 24

Figure 36: Russell Street Parking Survey Locations (Aerial Source: <https://maps.thelist.tas.gov.au/listmap/app/list/map>) 26

Figure 37: Cambock Lane West and East Parking Survey Locations (Aerial Source: <https://maps.thelist.tas.gov.au/listmap/app/list/map>) 30

Figure 38: Typical Carriageway Forms (Source: LGAT Standard Drawing TSD – R06 – v1) 31

Figure 39: Excerpt of RMS Environmental Capacity Performance Standards on Residential Streets 31

Figure 40: Traffic Distribution and Assignment 44

Figure 41: High Street/ Barclay Street – Post Residential Development Weekday AM Peak Hour Approach LOS 48

Figure 42: High Street/ Barclay Street – Post Residential Development Weekday PM Peak Hour Approach LOS 48

Figure 43: High Street/ Russell Street – Post Residential Development Weekday AM Peak Hour Approach LOS 49

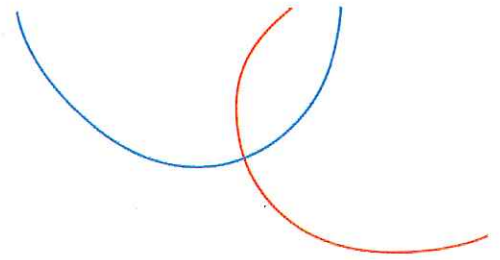
Figure 44: High Street/ Russell Street – Post Residential Development Weekday PM Peak Hour Approach LOS 49

Figure 45: Barclay Street/ Macquarie Street/ Cambock Lane – Post Residential Development Weekday AM Peak Hour Approach LOS 50

Figure 46: Barclay Street/ Macquarie Street/ Cambock Lane – Post Residential Development Weekday PM Peak Hour Approach LOS 50

Figure 47: Russell Street/ Macquarie Street – Post Residential Development Weekday AM Peak Hour Approach LOS 51

Figure 48: Russell Street/ Macquarie Street – Post Residential Development Weekday PM Peak Hour Approach LOS 51

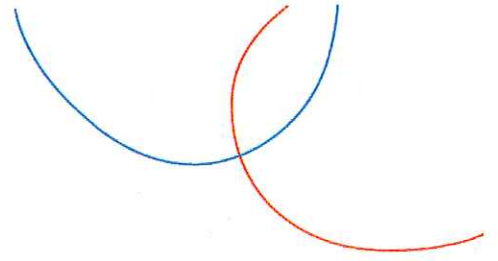


List of tables

Table 1: Road Widths and Classification	6
Table 2: Road Classification	8
Table 3: Daily Mid-Block Traffic Volumes	13
Table 4: SIDRA Intersection Level of Service (LOS) Criteria.....	13
Table 5: High Street/ Cambock Lane Existing Weekday Operation.....	15
Table 6:High Street/ Barclay Street Existing Weekday Operation	16
Table 7: High Street/ Russell Street Existing Weekday Operation	17
Table 8: Barclay Street/ Macquarie Street/ Cambock Lane Existing Weekday Operation	18
Table 9: Russell Street/ Macquarie Street Existing Weekday Operation	19
Table 10:High Street/ Cambock Lane Existing Sunday Operation	20
Table 11:High Street/ Russell Street Existing Sunday Operation	21
Table 12: Barclay Street/ Macquarie Street/ Cambock Lane Existing Sunday Operation	22
Table 13: Russell Street/ Macquarie Street Existing Sunday Operation.....	23
Table 14: Barclay Street Parking Survey Results - Weekday.....	25
Table 15: Russell Street Parking Survey Results - Weekday.....	26
Table 16: Barclay Street Parking Survey Results - Sunday	28
Table 17: Russell Street Parking Survey Results - Sunday.....	29
Table 18: Cambock Lane Parking Survey Results - Sunday.....	30
Table 19: Rural Road Traffic Capacity.....	32
Table 20: Existing Road Capacity - Weekday.....	33
Table 21: Existing Road Capacity – Weekday AM and PM Peak Hour	34
Table 22: Existing Road Capacity – Sunday Daily	36
Table 23: Existing Road Capacity – Sunday Peak Hour	37
Table 24: Development Schedule.....	39
Table 25: Traffic Generation Rates.....	41
Table 26: Residential Lots That Can be Developed Before Reaching Capacity	46
Table 27: High Street/ Barclay Street Existing Weekday Operation	48
Table 28: High Street/ Russell Street Existing Weekday Operation	49
Table 29: Barclay Street/ Macquarie Street/ Cambock Lane Existing Weekday Operation	50
Table 30: Russell Street/ Macquarie Street Existing Weekday Operation	51
It is noted that this table is included to provide guidance regarding parking supply requirements for the overall development. Table 31: Parking Rate Requirement	52
Table 32: Car Parking Dimension Requirements	55

Appendices

- Appendix A** — Development Masterplan
- Appendix B** — Existing Conditions SIDRA Results - Weekday
- Appendix C** — Existing Conditions SIDRA Results - Sunday
- Appendix D** — Post Development SIDRA Results - Weekday



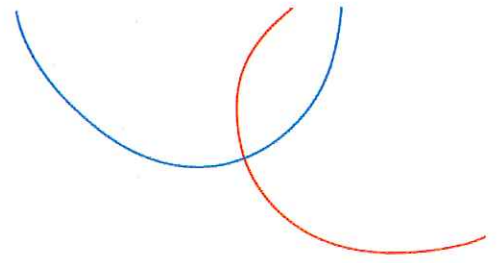
Prepared by — Leenah Ali/ Rebekah Ramm	<i>Leenah Ali Ramm</i>	Date — 01/07/2019
Reviewed by — Ross Mannering	<i>RS Mannering</i>	Date — 01/07/2019
Authorised by — Ross Mannering	<i>RS Mannering</i>	Date — 01/07/2019

Revision History

Rev No.	Description	Prepared by	Reviewed by	Authorised by	Date
A	Draft Traffic Impact Assessment	L. Ali/ R. Ramm	R. Mannering	R. Mannering	20/06/2019
B	Draft Traffic Impact Assessment	L. Ali/ R. Ramm	R. Mannering	R. Mannering	28/06/2019
00	Traffic Impact Assessment	L. Ali/ R. Ramm	R. Mannering	R. Mannering	01/07/2019

© 2019 pitt&sherry

This document is and shall remain the property of pitt&sherry. The document may only be used for the purposes for which it was commissioned and in accordance with the Terms of Engagement for the commission. Unauthorised use of this document in any form is prohibited.



Executive Summary

Traders in Purple have acquired a 242-hectare plot of land at Ridgeside Lane in Evandale. The vision for the site is to offer a mixed-use development which includes residential dwellings, accommodation, community facilities and open parklands.

It is initially intended that vehicle traffic uses the existing Evandale Road network to access the development site.

It is eventually intended to build a road so that traffic for the development bypasses the town of Evandale. There is existing available capacity on the Evandale Road network that can be utilised prior to the requirement to build the bypass road. As the bypass road is expected to be a quicker route, after development of the bypass it is expected that there would be little impact from the development on traffic movements in the town of Evandale so any traffic increases would be temporary.

Site Location

The Ridgeside Lane Development is located approximately 1.5 kilometers east of the Evandale Town Centre. Access to the site is currently from Ridgeside Lane which intersects with White Hills Road which becomes Barclay Street at the Evandale Town Centre. The site also has a frontage to Logan Road which becomes Russell Street at the Evandale Town Centre.

The Ridgeside Lane Development is a mixed-use development with the majority of the development to be accessed from Ridgeside Lane via Barclay Street and White Hills Road. 17 rural residential lots will be accessed from Logan Road, with most of these vehicles expected to use Russell Street. The 17 rural residential lots will use Logan Road permanently.

Development Accommodated

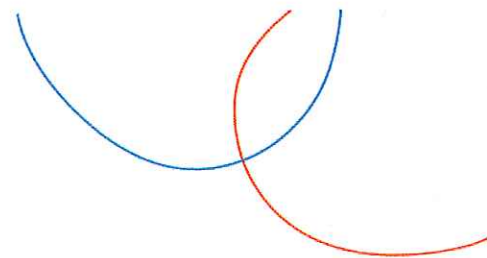
An assessment has been undertaken to determine the maximum number of residential lots than can be accommodated on the existing road network based on the available capacity of the roads in Evandale. Based on the assessment, up to 1,560 additional traffic movements (or in the order of 150 vehicle movements in a peak hour) could reasonably be accommodated on the road network. This is equivalent to approximately 211 residential dwellings.

SIDRA Intersection traffic modelling has been undertaken to determine the expected operation of the intersections in Evandale after addition of 1,560 vehicle movements per day. Intersections modelled include:

- High Street/ Barclay Street
- High Street/ Russell Street
- Barclay Street/ Macquarie Street/ Cambock Lane
- Russell Street/ Macquarie Street.

Based on the SIDRA modelling results, the modelled intersections would be expected to operate with minimal queues and delays in the post development scenario with the addition of the 1,560 vehicle movements per day.

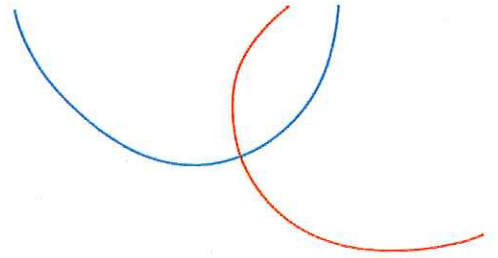
It is noted that the assessment above has taken into account the 110 lot Baker Group subdivision to be located west of the Ridgeside Lane development and accessed from White Hills Road and Cambock Lane. Based on the publicly available subdivision layout and the existing traffic movement patterns within Evandale, it would be expected that the majority of vehicles from this subdivision would use the Cambock Lane access point and hence the impact to White Hills Road and Barclay Street would be minimal.



Potential Road Modifications

As part of the assessment it was noted that Logan Road, to the east of No. 58, is currently carrying higher traffic volumes than the road's capacity due to its narrow width. The Ridgeside Lane development would add more traffic at this location from the 17 rural residential lots. Traders in Purple are committed to widening Logan Road 0.7m up to the eastern site boundary by 0.7m to provide a 6.0m road width and subsequently provide additional road capacity.

Ridgeside Lane currently provides access to a small number of properties and has a single travel lane. There is sufficient space within the road reservation to widen Ridgeside Lane to accommodate the expected vehicle movements that would be generated by the development.



1. Introduction

Traders in Purple have acquired a 242-hectare plot of land at Ridgeside Lane in Evandale. The vision for the site is to offer a mixed-use development which includes residential dwellings, accommodation, community facilities and open parklands.

It is initially intended that vehicle traffic uses the existing Evandale Road network to access the development site.

It is eventually intended to build a road so that traffic for the development bypasses the town of Evandale. There is existing available capacity on the Evandale Road network that can be utilised prior to the requirement to build the bypass road. As the bypass road is expected to be a quicker route, after development of the bypass it is expected that there would be little impact from the development on traffic movements in the town of Evandale so any traffic increases would be temporary.

Traders in Purple have engaged pitt&sherry to undertake a Traffic Impact Assessment (TIA) to assess the extent of development that can be built with traffic using the existing Evandale Road network to access the development. The assessment considers impacts to the safety, function and amenity of the existing Evandale road network.

2. Existing Conditions

2.1 Site Location

The site is located approximately 1.5 kilometers east of the Evandale Town Centre. The site is currently vacant and has a land use classification of 26.0 Rural Resource under the *Northern Midlands Interim Planning Scheme 2013*.

Access to the site is currently from Ridgeside Lane which intersects with White Hills Road which becomes Barclay Street at the Evandale Town Centre.

The site also has a frontage to Logan Road which becomes Russell Street at the Evandale Town Centre. Both Barclay Street and Russell Street intersect with High Street at the Evandale Town Centre. High Street connects Evandale with Launceston Airport and to the Midland Highway and Launceston.

Figure 1 shows the site in the local context.

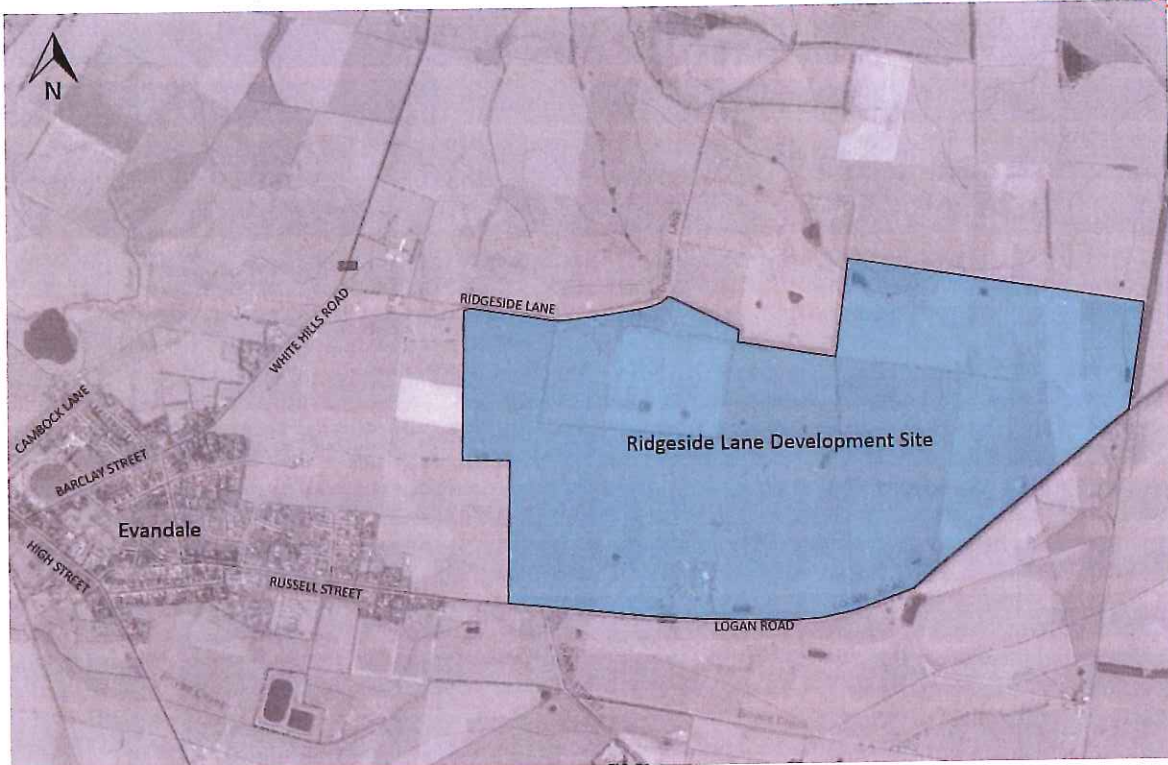
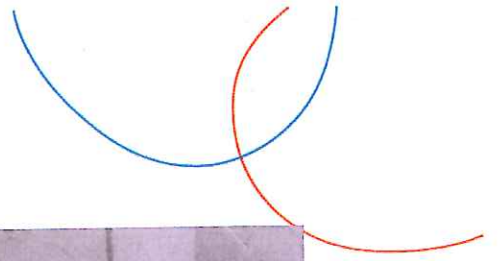


Figure 1: Site in Local Context (Aerial Source: <https://maps.thelist.tas.gov.au/listmap/app/list/map>)

2.2 Road Network

2.2.1 Overview

Ridgeside Lane

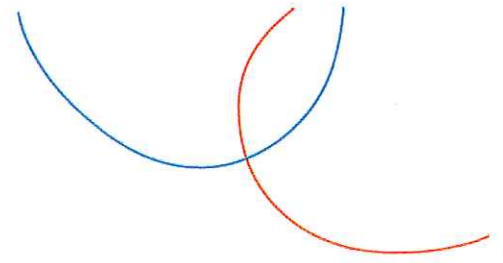
Ridgeside Lane (shown in Figure 2 and Figure 3) is a Council owned, two-way road configured with a single lane in each direction. The road travels in an east west direction for 1.3km after which it has a 90-degree left turn and continues in a north-south direction. Ridgeside Lane is a narrow no-through road that functions as a minor road connecting White Hills Road to the properties along its length. Ridgeside Lane is sealed for approximately 400m before becoming a gravel road along the rest of its length.



Figure 2: Ridgeside Lane - Facing East (Image source: Google Street View, March 2010)



Figure 3: Ridgeside Lane - Facing West (Image source: Google Street View, March 2010)



White Hills Road

White Hills Road (shown in Figure 4 and Figure 5) is a Council owned two-way rural road configured with a single lane in each direction. White Hills Road travels in a north-east south-west direction. Near the Evandale Town Centre, White Hills Road becomes Barclay Street.

White Hills Road in the vicinity of the site has a posted speed limit of 70km/h.



Figure 4: White Hills Road - Facing North-East (Image source: Google Street View, November 2016)



Figure 5: White Hills Road - Facing South-West (Image source: Google Street View, November 2016)

Barclay Street

Barclay Street (shown in Figure 6 and Figure 7) is a Council owned two-way road configured with a single lane in each direction. Barclay Street is an urban street that travels in an east west direction through the Evandale Town Centre. On the eastern outskirts of the Evandale Town Centre, Barclay Street becomes the rural White Hills Road.

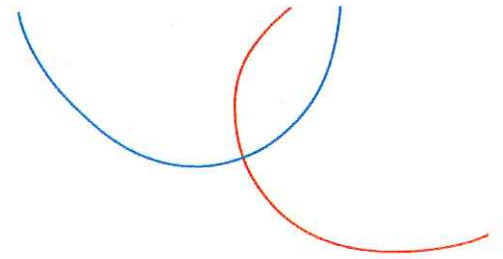
Barclay Street has a posted speed limit of 50km/h.



Figure 6: Barclay Street - Facing East (Image source: Google Street View, March 2010)



Figure 7: Barclay Street - Facing West (Image source: Google Street View, March 2010)



Cambock Lane

Cambock Lane (shown in Figure 8 and Figure 9) is a Council owned urban two-way road operating between High Street and Barclay Street. Cambock Lane is configured with a single lane in each direction. From its intersection with High Street, Cambock Lane travels in a north-east south west direction for approximately 500m. At this point, there is a 90-degree bend along the road, following which, Cambock Lane travels in a north-west south-east direction.

There are no posted speed limit signs present along Cambock Lane subjecting it to the Tasmanian Urban Speed Limit of 50km/h.



Figure 8: Cambock Lane - Facing North-East (Image source: Google Street View, January 2010)



Figure 9: Cambock Lane - Facing South-West (Image source: Google Street View, January 2010)

Logan Road

Logan Road (shown in Figure 10 and Figure 11) is a Council owned two-way road configured with a single lane in each direction. Logan Road travels in an east west direction in the vicinity of the site. Closer to the Evandale Town Centre, Logan Road becomes Russell Street.

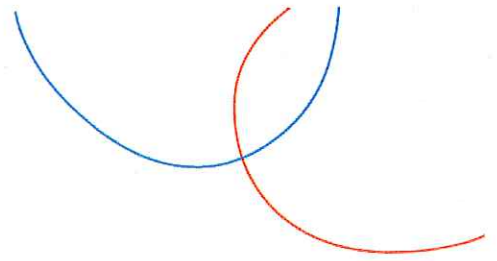
Near the Evandale Town Centre Logan Road has a posted speed limit of 50km/h. In the vicinity of the site, Logan Road operates with the Tasmania Open Speed Limit of 100km/h.



Figure 10: Logan Road - Facing East (Image source: Google Street View, March 2010)



Figure 11: Logan Road - Facing West (Image source: Google Street View, March 2010)



Russell Street

Russell Street (shown in Figure 12 and Figure 13) is a Council owned urban road that travels in an east west direction. Russell Street is configured with a single lane in each direction. Near the eastern outskirts of the Evandale Town Centre, Russell Street becomes Logan Road.

Russel Street has a posted speed limit of 50km/h.

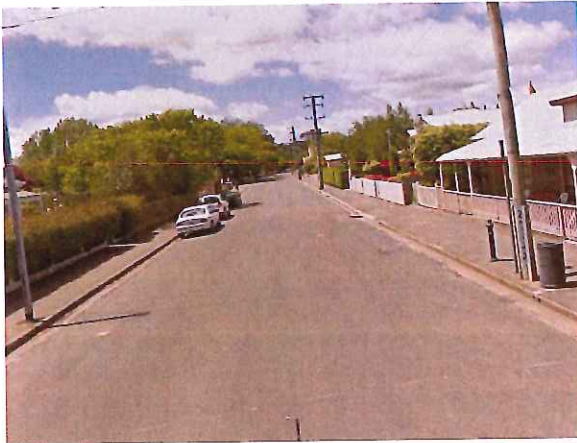


Figure 12: Russell Street - Facing East (Image source: Google Street View, November 2016)

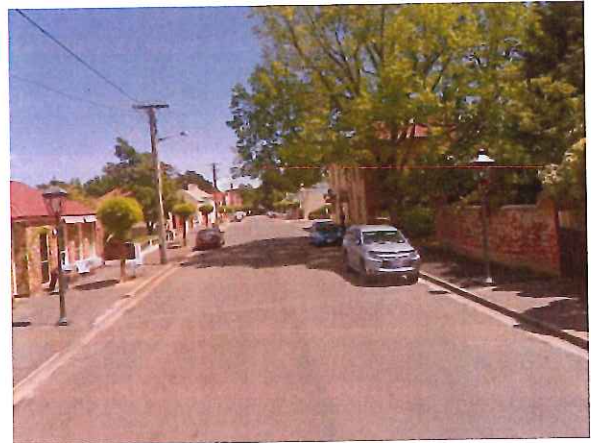


Figure 13: Logan Road - Facing West (Image source: Google Street View, November 2016)

High Street

High Street is a two-way road that travels in a north-west south-east direction. It is configured with a single lane in each direction and has a posted speed limit of 60km/h in the town of Evandale.

To the north of the High Street/ Russell Street intersection, the road is a Department of State Growth owned road known as Evandale Main Road. Evandale Road connects the town of Evandale to Launceston Airport as well as to Midland Highway which in turn connects to the Launceston and Hobart.

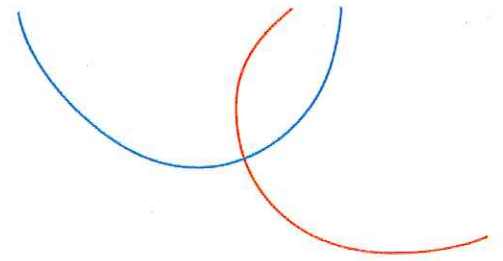
To the south of the High Street/ Russell Street intersection, the road is Council owned and is known as Nile Road.



Figure 14: High Street - Facing North-West (Image source: Google Street View, November 2016)



Figure 15: High Street - Facing South-East (Image source: Google Street View, November 2016)



2.2.2 Road Widths and Carriageway Form

The road width along each of the roads surrounding the site have been measured. The road width was observed to vary frequently and therefore in sections with varying road widths, the minimum (or worst case) road width was adopted. Road widths and classifications at several locations are detailed in Table 1.

Table 1: Road Widths and Classification

Road Name	Location	Minimum Measured Road Carriageway Width	Carriageway Form
Ridgeside Lane	White Hills Road to proposed development boundary	3.6m	One lane
White Hills Road	West of Ridgeside Lane	6.8m	Two lanes
	East of Ridgeside Lane	6.0m	Two lanes
Barclay Street	East of High Street	9.0m	One or two lanes, dependent on parked cars
	West of Cambock Lane	9.0m	One or two lanes, dependent on parked cars
Cambock Lane	East of High Street	9.0m	One or two lanes, dependent on parked cars
	North of Barclay Street	9.0m	One or two lanes, dependent on parked cars
Logan Road	West of No. 58	8.8m	Two lanes
	East of No. 58	5.3m	Two lanes
Russell Street	High Street to Logan Road	8.1m	One or two lanes, dependent on parked cars

2.2.3 Road Function

The Tasmanian Local Government Road Hierarchy, shown in Figure 16, gives guidance to the function of a road.

Tasmanian local government road hierarchy.
Source: Tasmanian Government Local Government Division: Department of Premier and Cabinet

Classification	1. Arterial	2. Collector	3. Link	4. Local Access	5. Minor Access	Unformed
Functional Criteria						
Function/ predominant purpose	Provide the principal links between urban centres and rural regions.	Connect arterial roads to local areas and supplement arterial roads in providing for traffic movements between urban areas, or in some cases rural population centres.	Provide a link between the arterial or collector roads and local access roads.	Provide access to residential properties and in some cases commercial properties and in some cases commercial properties, at a local level.	Provide access to residential properties and irregular access to community facilities such as parks and reserves.	Roads not maintained by the council or non constructed/ maintained road reserves or roads that have a very low level of services.
Connectivity description	High connectivity - connecting precincts, localities, suburbs, and rural population centres.	High connectivity - supplements arterial roads in connecting suburbs, business districts and localised facilities.	Medium connectivity - connects traffic at a neighbourhood level with collector and arterial roads.	Low - connects individual properties within a neighbourhood to link roads.	Low - provides access to properties.	Future roads or roads that have a very low level of service.
Guidance Metrics						
Average Annual Daily Traffic (AADT)	> 10000 vehicles per day (vpd)	3000-10000 vpd	1000-3000vpd	50-1000vpd	<50vpd	N/A
Heavy vehicles permitted	Yes - thoroughfare	Yes - thoroughfare	Yes - some through traffic	No thoroughfare, local access only	No thoroughfare, local access only	N/A
Average Annual Daily Truck Traffic or Equivalent Heavy Vehicles (AADTT/ EHV)	> 1000 AADTT or > 10% EHV	250-1000 AADTT or > 10% EHV	<250 AADTT or > 10% EHV	N/A	N/A	N/A
Public Transport Route	Yes	Yes	Yes	No	No	N/A
Carriageway form	2 or 4 lanes	2 lanes	2 lanes	1 or 2 lanes	Typically 1 lane	N/A
Running surface	Sealed	Sealed	Sealed	Sealed/ unsealed	Sealed/ unsealed	Unformed

Figure 16: Tasmanian Local Government Road Hierarchy

Based on the above, the classification of each of the roads surrounding the site based on their function and predominant purpose is shown in Table 2.

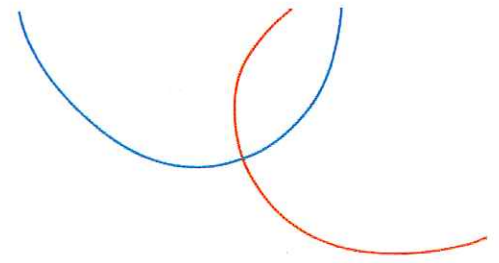


Table 2: Road Classification

Road Name	Road Classification
Ridgeside Lane	Local Access
White Hills Road	Link
Barclay Street	Link
Cambock Lane	Link
Logan Road	Link
Russell Street	Link

2.2.4 Intersections

Several intersections are present in the vicinity of the site. The larger intersections in the vicinity of the site are as follows:

- Russell Street/ Macquarie Street/ Rodgers Lane (sign-controlled cross intersection)
- Russell Street/ High Street (sign-controlled T-intersection)
- Barclay Street/ High Street (sign-controlled T-intersection)
- Barclay Street/ Murray Street (sign-controlled T-intersection)
- Barclay Street/ Macquarie Street (sign-controlled T-intersection).

The above intersections relative to the site are shown in Figure 17.

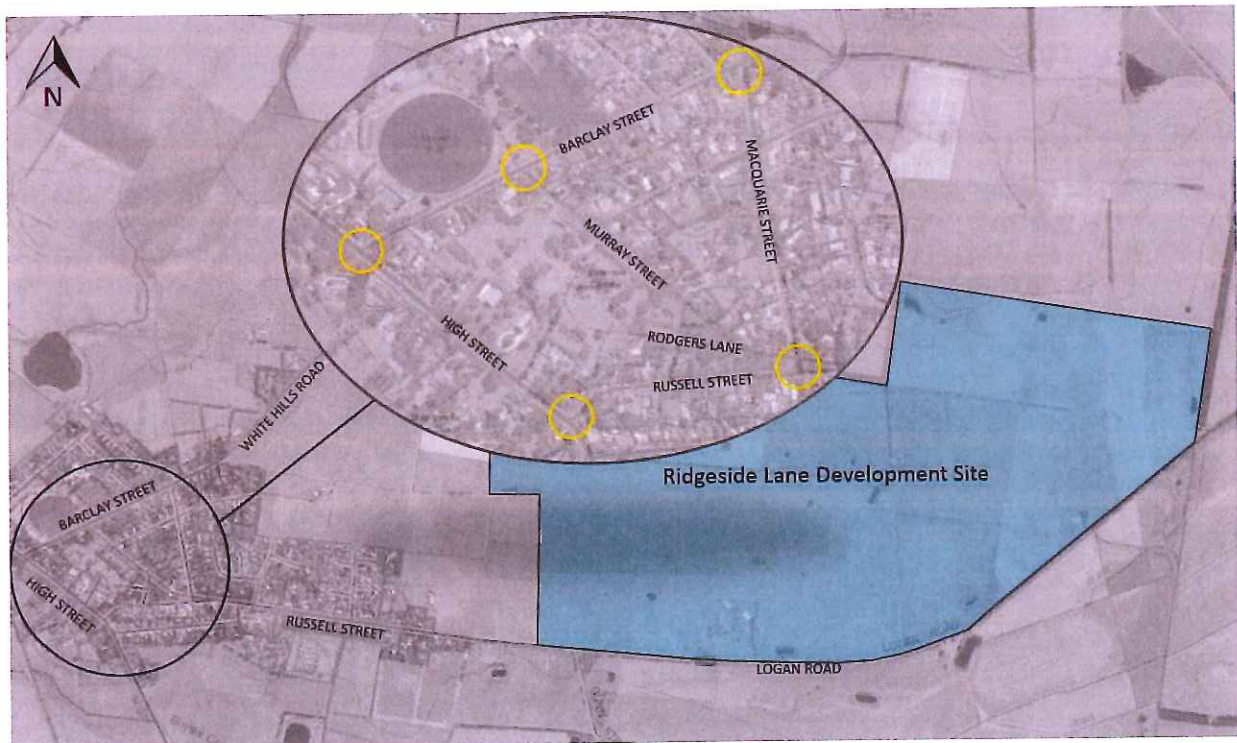
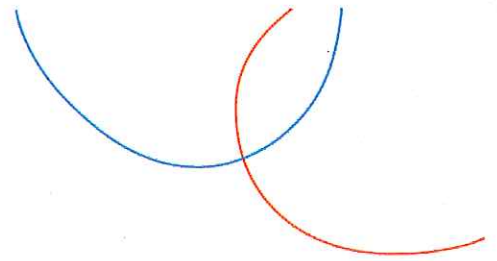


Figure 17: Intersections Locations Relative to Site (Aerial Source: <https://maps.thelist.tas.gov.au>)



2.3 Traffic Volumes

2.3.1 Peak Hourly Intersection Traffic Volumes

Vehicle turning movement counts were undertaken by Matrix Traffic and Transport Data on Thursday 4 April 2019 and on Sunday 7 April 2019. Surveys were undertaken for a 24-hour period at the following intersections:

- High Street/ Cambock Lane intersection (sign-controlled T-intersection)
- High Street/ Barclay Street intersection (sign-controlled T-intersection)
- High Street/ Russell Street intersection (sign-controlled T-intersection)
- Barclay Street/ Macquarie Street/ Cambock Lane intersection (sign-controlled cross intersection)
- Russel Street/ Macquarie Street intersection (sign-controlled T-intersection).

These intersections were chosen as they are expected to be impacted the most by the Ridgeside Lane Development. It is noted that there is no data for the Barclay Street/ High Street intersection for Sunday 7 April as the camera was tampered with.

It was determined from the survey data that the weekday network AM peak hour occurs between 8:30am and 9:30am and the weekday PM peak hour occurs between 4:45pm and 5:45pm. The Sunday midday peak hour was determined to occur between 10:30am and 11:30am.

A summary of the existing weekday AM and PM peak hour traffic volumes are shown in Figure 18 and Figure 19 while a summary of the Sunday midday peak hour traffic volumes are shown in Figure 20.

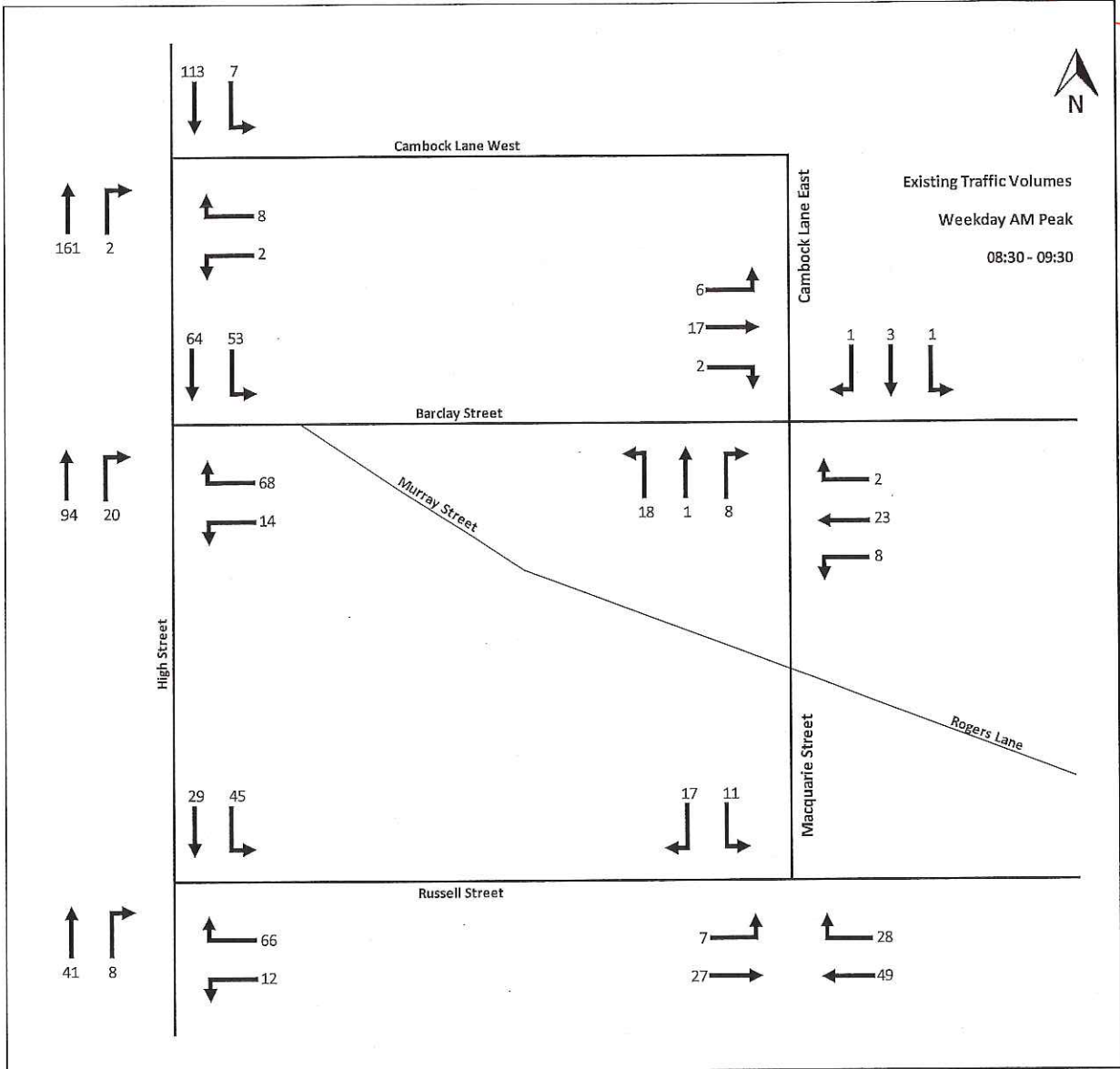
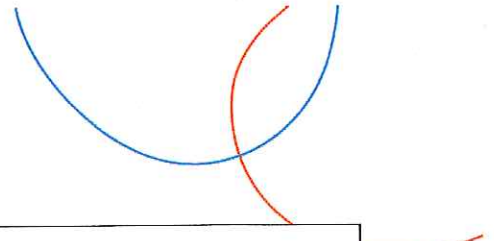


Figure 18: Existing (2019) Weekday AM Peak Hour Traffic Volumes

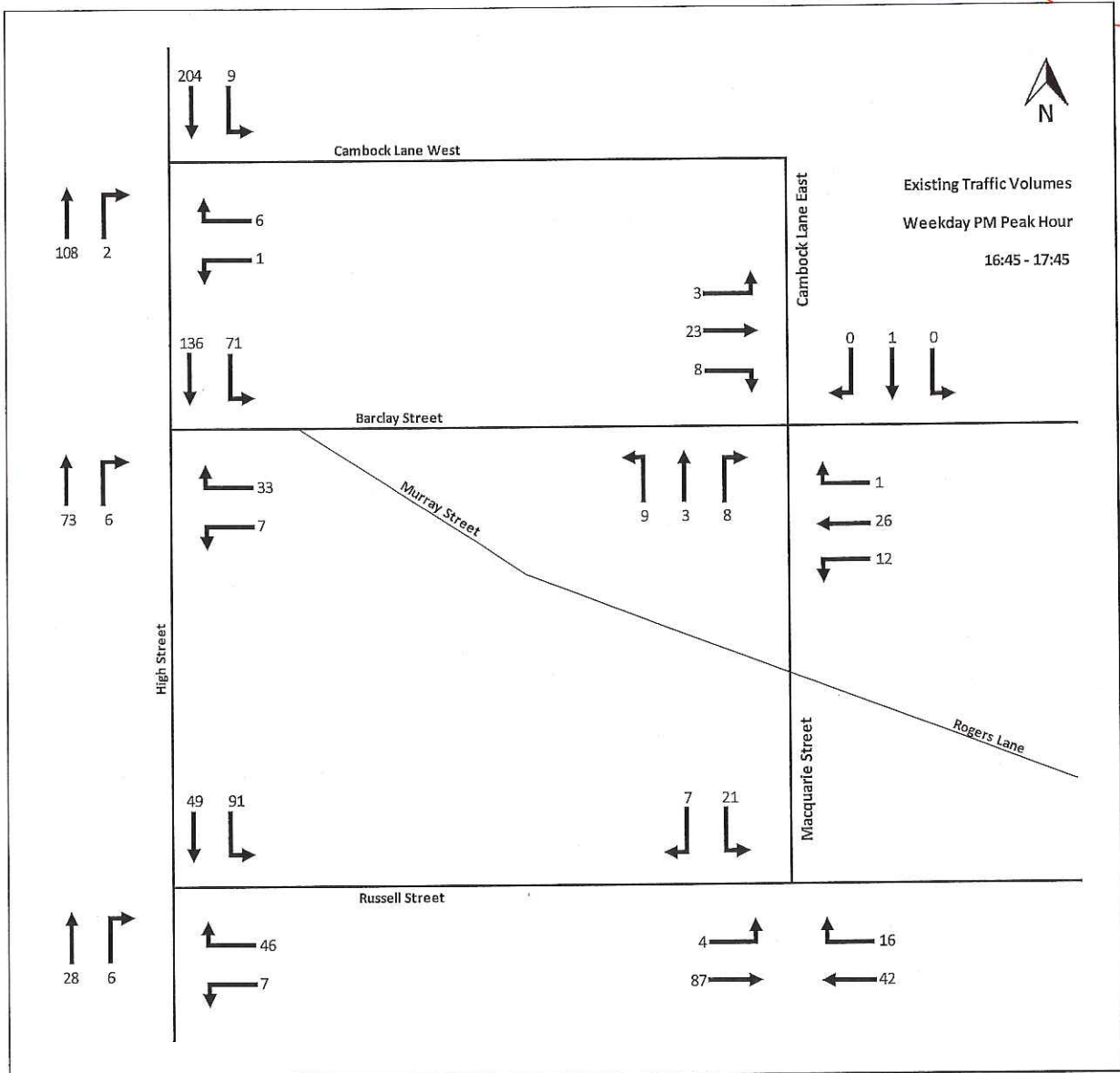
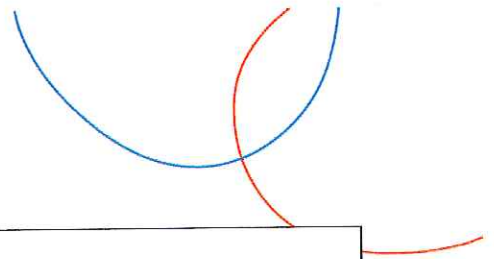


Figure 19: Existing (2019) Weekday PM Peak Hour Traffic Volumes

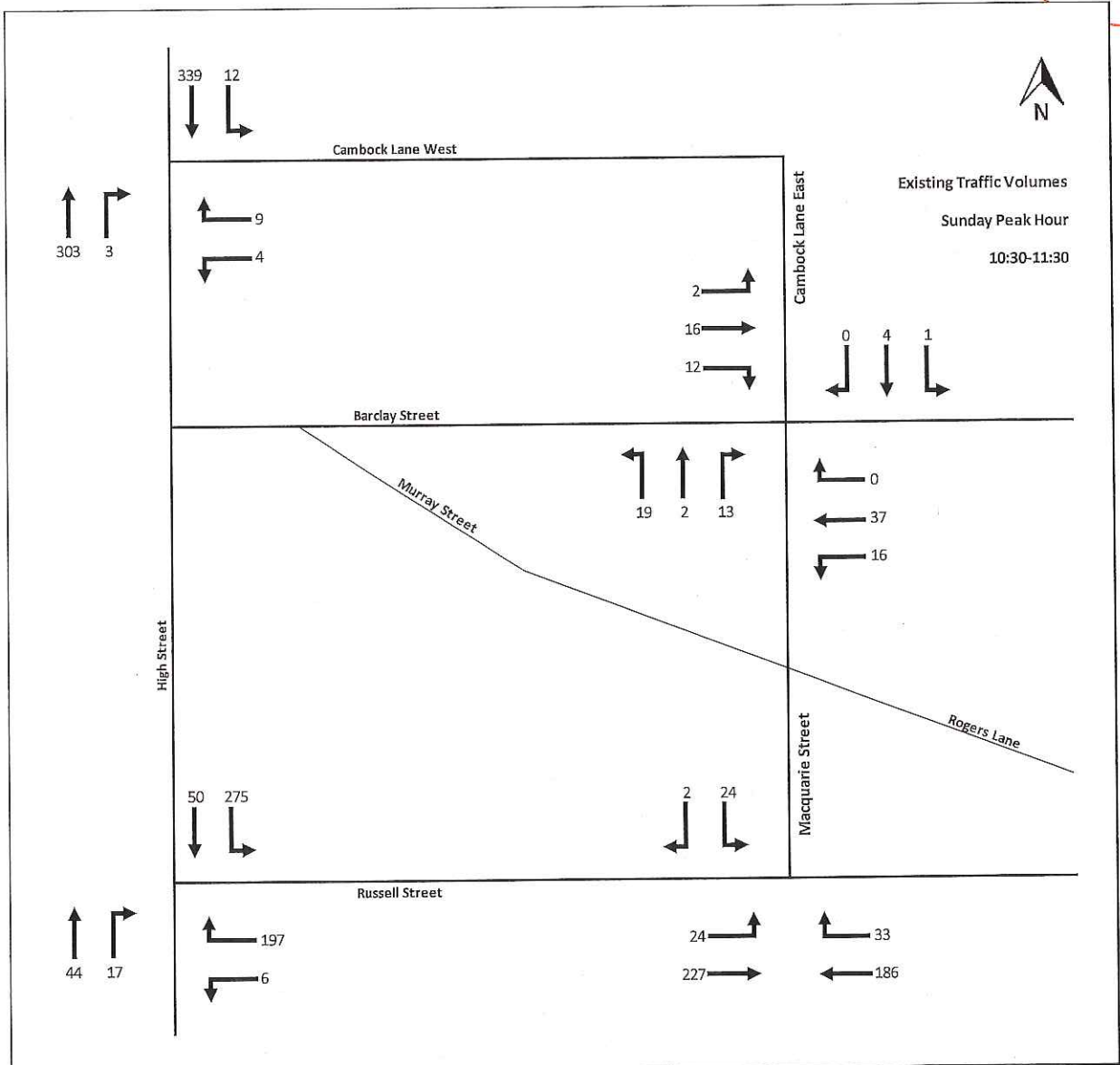
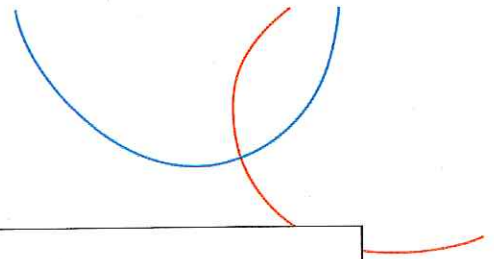
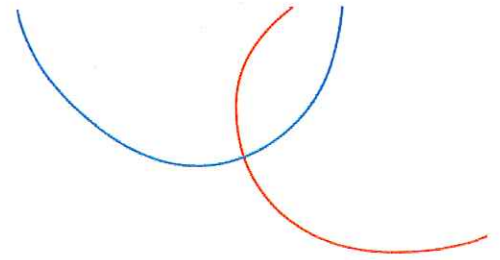


Figure 20: Existing (2019) Sunday Peak Hour Traffic Volumes



2.3.2 Daily Mid-Block Traffic Volumes

Daily mid-block traffic volume data is available based on the intersection turning movement counts and tube count data from June 2018 which was provided by the client. The daily mid-block traffic volumes are shown in Table 3.

Table 3: Daily Mid-Block Traffic Volumes

Road	Road Link	Data Source	Weekday Traffic Volume (vpd)	Sunday Traffic Volume (vpd)
Ridgeside Lane	White Hills Road to proposed development boundary	Estimate	10	10
White Hills Road	West of Ridgeside Lane	Tube count	517	438
	East of Ridgeside Lane	Tube count	487	391
Barclay Street	High Street to Murray Street	Turning movement count	1,472	1,500 (estimate)
	Murray Street to Macquarie Street	Turning movement count	877	767
	Macquarie Street to White Hills Road	Turning movement count	741	677
Cambock Lane	East of High Street	Turning movement count	258	251
	North of Barclay Street	Turning movement count	132	124
Logan Road	West of No. 58	Tube count	176	271
	East of No. 58	Tube count	133	173
Russell Street	High Street to Scone Street	Turning movement count	1,645	3,117
	Scone Street to Macquarie Street	Turning movement count	1,401	2,770
	Macquarie Street to Logan Road	Turning movement count	1,508	2,844

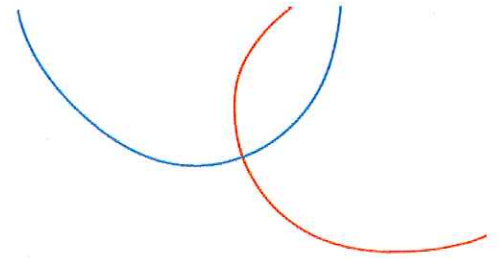
2.4 Intersection Performance

2.4.1 Traffic Modelling Software

The operation of the counted intersections has been modelled using SIDRA Intersection traffic modelling software. SIDRA Intersection rates the performance of the intersections based on the vehicle delay and the corresponding Level of Service (LOS). It is generally accepted that LOS D or better is an acceptable level of operation. Table 4 shows the criteria that SIDRA Intersection adopts in assessing the LOS.

Table 4: SIDRA Intersection Level of Service (LOS) Criteria

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 80	Greater than 50



2.4.2 Traffic Modelling Intersection Layouts

The geometry of the intersections used for the SIDRA intersection traffic models was developed with reference to aerial photography obtained from LISTmap. The aerial photography informed the number, width and length of trafficable lanes as well as speed limits.

It is noted that for a number of intersections, the model has been developed with two lanes on the minor approach to the intersection. The second lane is a short lane that provides sufficient width for two vehicles to queue side by side at the intersection.

2.4.3 Traffic Modelling Results – Weekday

High Street/ Cambock Lane Intersection

The LOS for each approach for the High Street/ Cambock Lane intersection is shown in Figure 21 and Figure 22. A summary of the SIDRA Intersection results for degree of saturation, average delay and 95th percentile queues is provided in Table 5. Full results are presented in Appendix B.

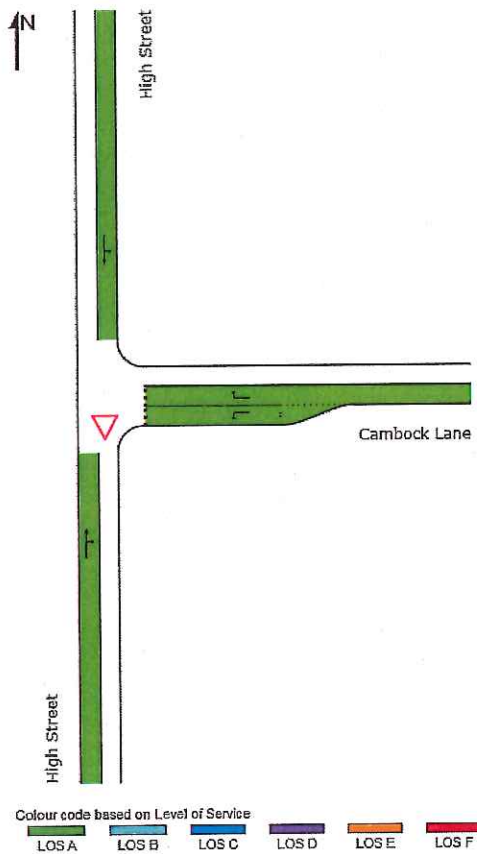


Figure 21: High Street/ Cambock Lane - Existing Weekday AM Peak Hour Approach LOS

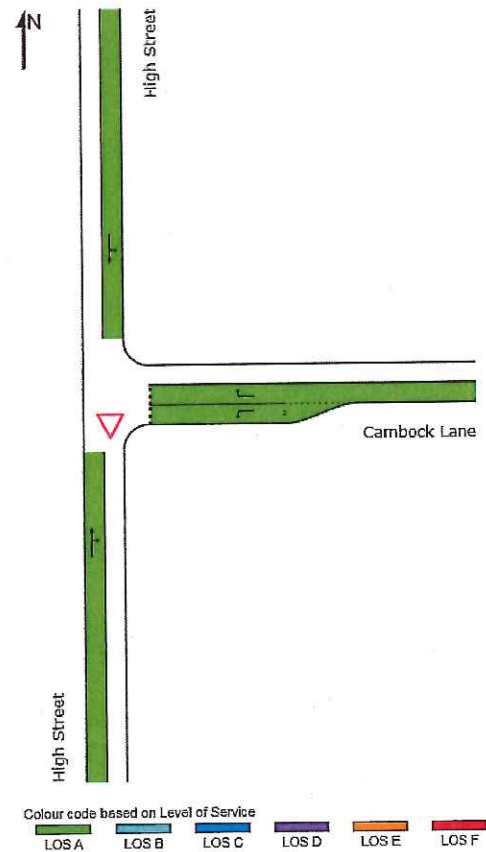


Figure 22: High Street/ Cambock Lane Existing Weekday PM Peak Hour Approach LOS

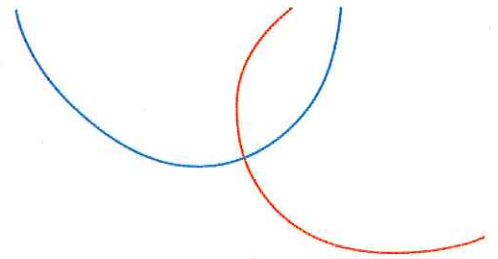


Table 5: High Street/ Cambock Lane Existing Weekday Operation

Leg	Peak	Degree of Saturation	Average Delay (secs)	95 th Percentile Queue (m)
South (High Street)	AM	0.09	0	0
East (Cambock Lane)		0.01	5	0
North (High Street)		0.07	0	0
All Movements		0.09	0	0
South (High Street)	PM	0.06	0	0
East (Cambock Lane)		0.01	5	0
North (High Street)		0.12	0	0
All Movements		0.12	0	0

High Street/ Barclay Street Intersection

The LOS for each approach for the High Street/ Barclay Street intersection is shown in Figure 23 and Figure 24. A summary of the SIDRA Intersection results for degree of saturation, average delay and 95th percentile queues is provided in Table 6. Full results are presented in Appendix B.



Figure 23: High Street/ Barclay Street Existing Weekday AM Peak Hour Approach LOS

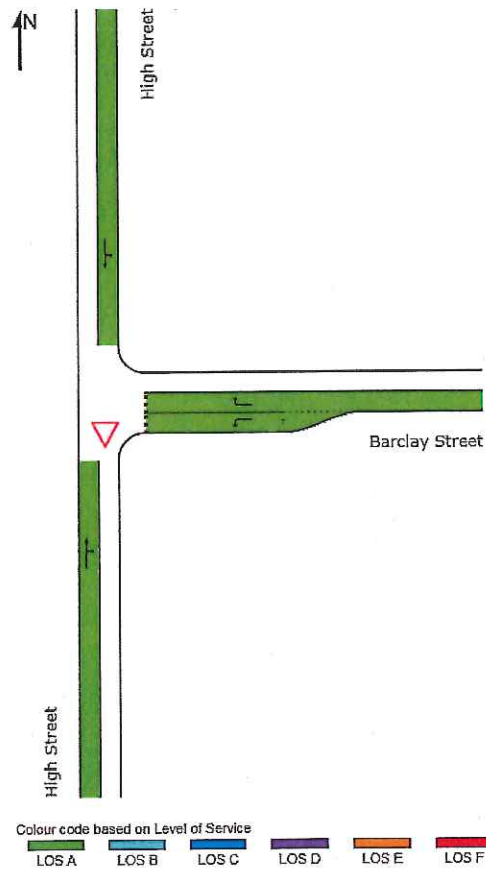


Figure 24: High Street/ Barclay Street Existing Weekday PM Peak Hour Approach LOS

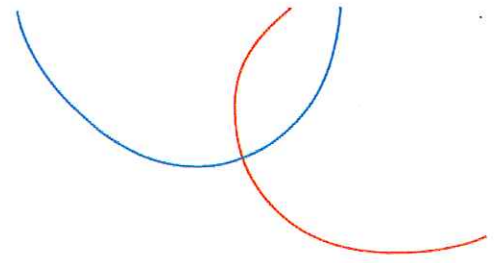


Table 6: High Street/ Barclay Street Existing Weekday Operation

Leg	Peak	Degree of Saturation	Average Delay (secs)	95 th Percentile Queue (m)
South (High Street)	AM	0.07	1	1
East (Barclay Street)		0.05	5	1
North (High Street)		0.07	3	0
All Movements		0.07	3	1
South (High Street)	PM	0.05	1	0
East (Barclay Street)		0.03	5	1
North (High Street)		0.12	2	0
All Movements		0.12	2	1

High Street/ Russell Street Intersection

The LOS for each lane at the High Street/ Russell Street intersection is shown in Figure 25 and Figure 26. A summary of the SIDRA Intersection results for degree of saturation, average delay and 95th percentile queues is provided in Table 7. Full results are presented in Appendix B.

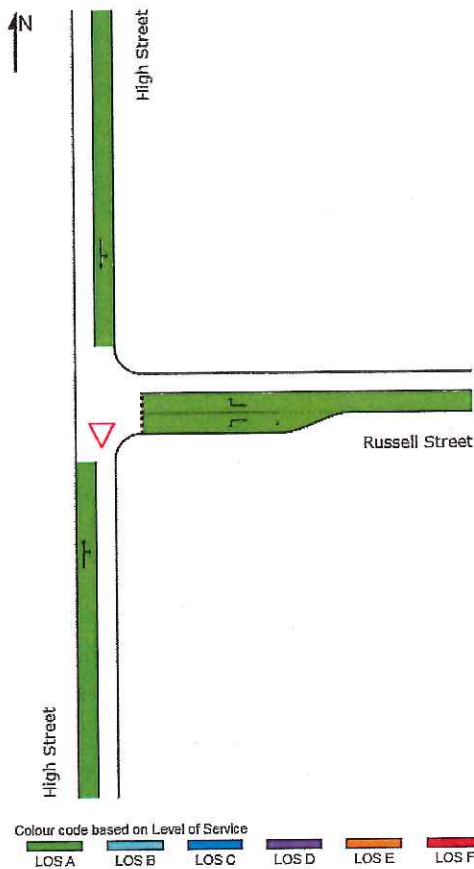


Figure 25: High Street/ Russell Street Existing Weekday AM Peak Hour Approach LOS

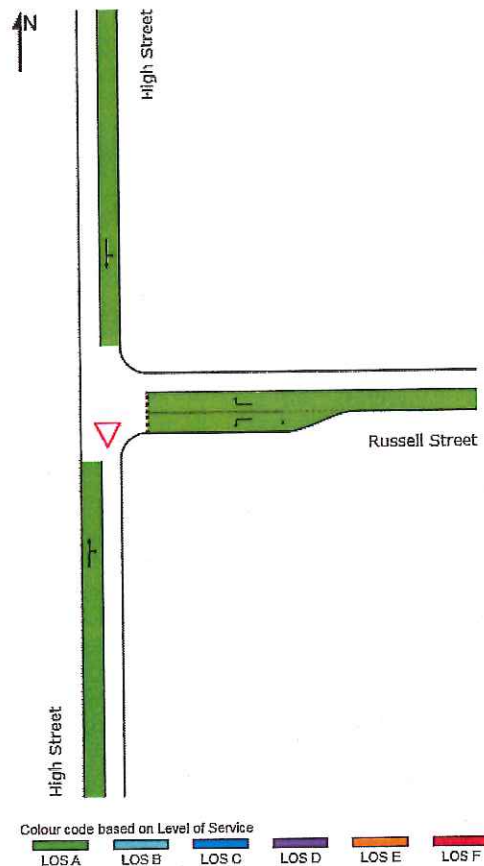


Figure 26: High Street/ Russell Street Existing Weekday PM Peak Hour Approach LOS

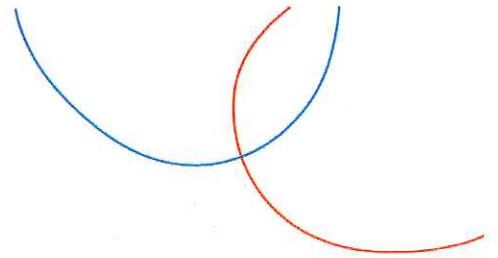


Table 7: High Street/ Russell Street Existing Weekday Operation

Leg	Peak	Degree of Saturation	Average Delay (secs)	95 th Percentile Queue (m)
South (High Street)	AM	0.03	1	0
East (Russell Street)		0.05	5	1
North (High Street)		0.04	3	0
All Movements		0.05	3	1
South (High Street)	PM	0.02	1	0
East (Russell Street)		0.04	5	1
North (High Street)		0.08	4	0
All Movements		0.08	4	1

Barclay Street/ Macquarie Street/ Cambock Lane Intersection

The LOS for each lane at the Barclay Street/ Macquarie Street/ Cambock Lane intersection is shown in Figure 27 and Figure 28. A summary of the SIDRA Intersection results for degree of saturation, average delay and 95th percentile queues is provided in Table 8. Full results are presented in Appendix B.



Figure 27: Barclay Street/ Macquarie Street/ Cambock Lane Existing Weekday AM Peak Hour Approach LOS

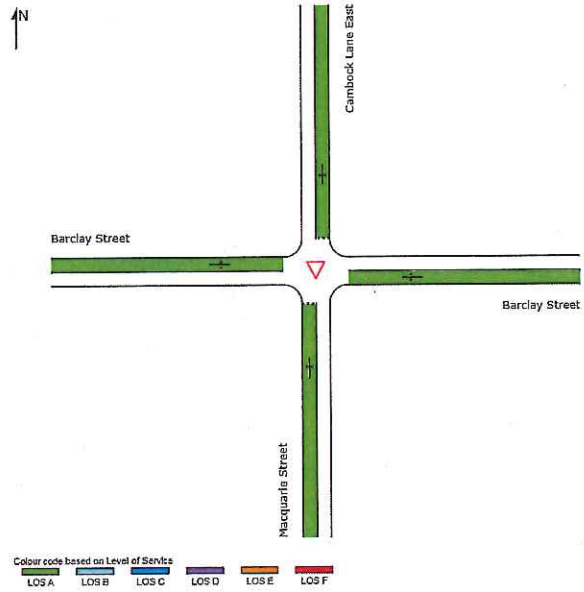


Figure 28: Barclay Street/ Macquarie Street/ Cambock Lane Existing Weekday PM Peak Hour Approach LOS

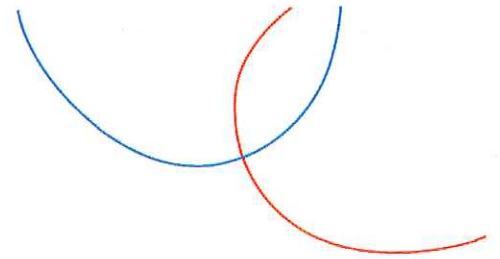


Table 8: Barclay Street/ Macquarie Street/ Cambock Lane Existing Weekday Operation

Leg	Peak	Degree of Saturation	Average Delay (secs)	95 th Percentile Queue (m)
South (Macquarie Street)	AM	0.01	1	0
East (Barclay Street)		0.00	4	0
North (Cambock lane East)		0.01	0	0
West (Barclay Street)		0.01	5	0
All Movements		0.01	1	0
South (Macquarie Street)	PM	0.01	1	0
East (Barclay Street)		0.00	4	0
North (Cambock lane East)		0.01	0	0
West (Barclay Street)		0.01	5	0
All Movements		0.01	1	0

Russell Street/ Macquarie Street Intersection

The LOS for each lane at the Russell Street/ Macquarie Street intersection is shown in Figure 29 and Figure 30. A summary of the SIDRA Intersection results for degree of saturation, average delay and 95th percentile queues is provided in Table 9. Full results are presented in Appendix B.

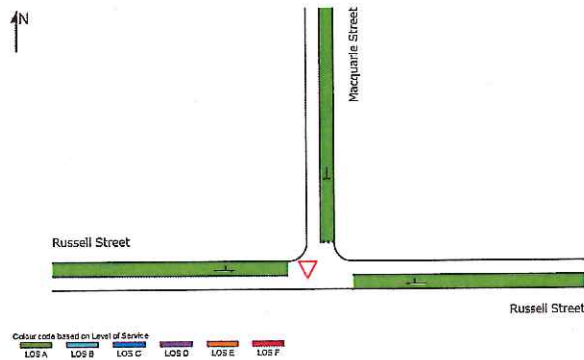


Figure 29: Russell Street/ Macquarie Street Existing Weekday AM Peak Hour Approach LOS

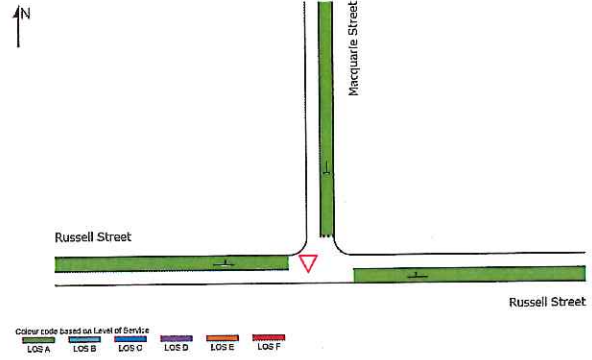


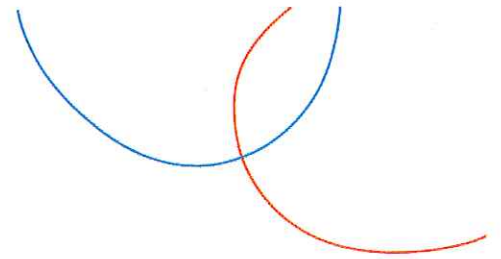
Figure 30: Russell Street/ Macquarie Street Existing Weekday PM Peak Hour Approach LOS

Table 9: Russell Street/ Macquarie Street Existing Weekday Operation

Leg	Peak	Degree of Saturation	Average Delay (secs)	95 th Percentile Queue (m)
East (Russell Street)	AM	0.04	2	1
North (Macquarie Street)		0.01	2	0
West (Russell Street)		0.02	1	0
All Movements		0.04	2	1
East (Russell Street)	PM	0.03	1	1
North (Macquarie Street)		0.02	2	0
West (Russell Street)		0.05	0	0
All Movements		0.05	1	1

Discussion

Based on the results above, all modelled intersections currently operate within minimal queues and delays. All intersections operate at LOS A during both the weekday AM and PM peak hours.



2.4.4 Traffic Modelling Results – Sunday

High Street/ Cambock Lane Intersection

The LOS for each approach for the High Street/ Cambock Lane intersection is shown in Figure 31. A summary of the SIDRA Intersection results for degree of saturation, average delay and 95th percentile queues is provided in Table 10. Full results are presented in Appendix C.

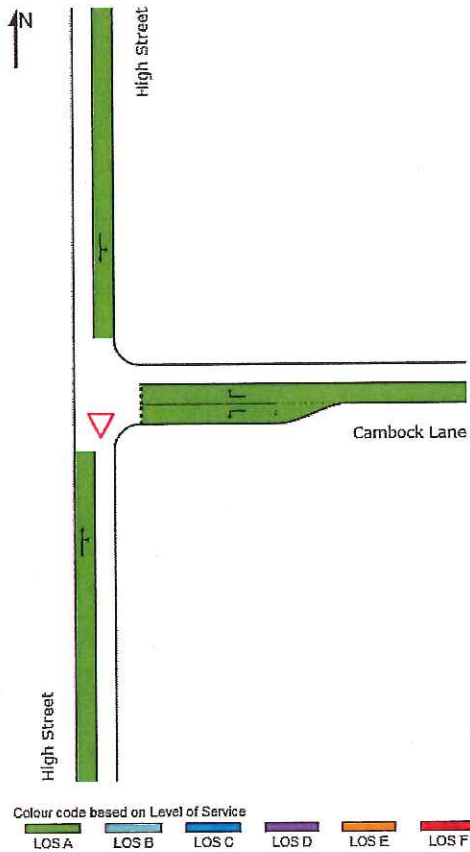
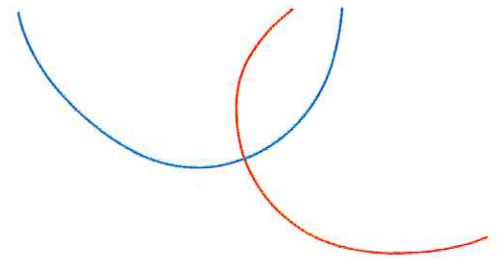


Figure 31: High Street/ Cambock Lane Existing Sunday Peak Hour Approach LOS

Table 10: High Street/ Cambock Lane Existing Sunday Operation

Leg	Peak	Degree of Saturation	Average Delay (secs)	95 th Percentile Queue (m)
South (High Street)	Sunday	0.17	0	0
East (Cambock Lane)		0.01	6	0
North (High Street)		0.19	0	0
All Movements		0.19	0	0



High Street/ Russell Street Intersection

The LOS for each lane at the High Street/ Russell Street intersection is shown in Figure 32. A summary of the SIDRA Intersection results for degree of saturation, average delay and 95th percentile queues is provided in Table 11. Full results are presented in Appendix C.

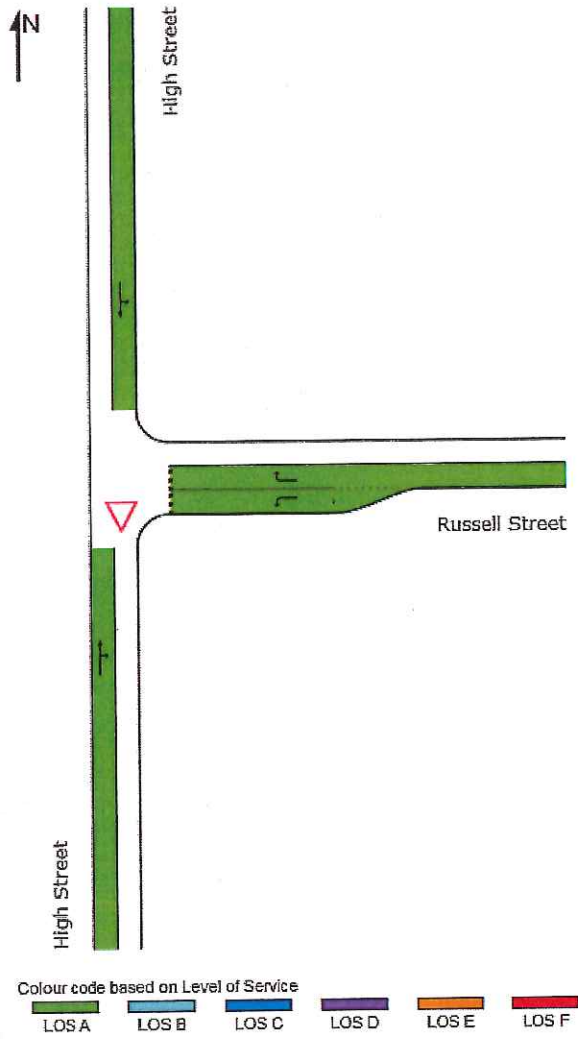
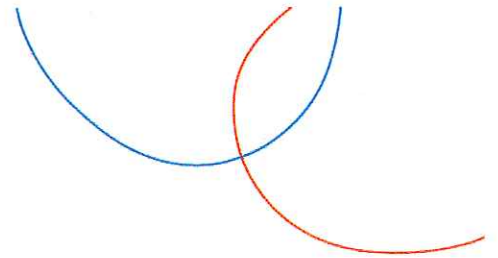


Figure 32: High Street/ Russell Street Existing Sunday Peak Hour Approach LOS

Table 11: High Street/ Russell Street Existing Sunday Operation

Leg	Peak	Degree of Saturation	Average Delay (secs)	95 th Percentile Queue (m)
South (High Street)	Sunday	0.04	2	1
East (Russell Street)		0.15	5	3
North (High Street)		0.19	5	0
All Movements		0.19	5	3



Barclay Street/ Macquarie Street/ Cambock Lane Intersection

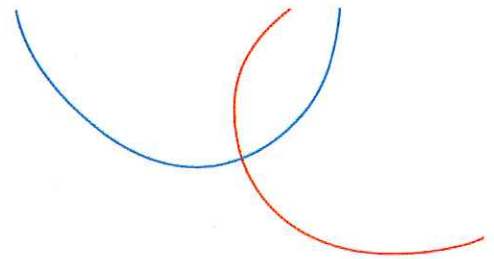
The LOS for each lane at the Barclay Street/ Macquarie Street/ Cambock Lane intersection is shown in Figure 33. A summary of the SIDRA Intersection results for degree of saturation, average delay and 95th percentile queues is provided in Table 12. Full results are presented in Appendix C.



Figure 33: Barclay Street/ Macquarie Street/ Cambock Lane Existing Sunday Peak Hour Approach LOS

Table 12: Barclay Street/ Macquarie Street/ Cambock Lane Existing Sunday Operation

Leg	Peak	Degree of Saturation	Average Delay (secs)	95 th Percentile Queue (m)
South (Macquarie Street)	Sunday	0.02	5	1
East (Barclay Street)		0.03	2	0
North (Cambock lane East)		0.01	5	0
West (Barclay Street)		0.02	3	0
All Movements		0.03	3	1



Russell Street/ Macquarie Street Intersection

The LOS for each lane at the Russell Street/ Macquarie Street intersection is shown in Figure 34. A summary of the SIDRA Intersection results for degree of saturation, average delay and 95th percentile queues is provided in Table 13. Full results are presented in Appendix C.

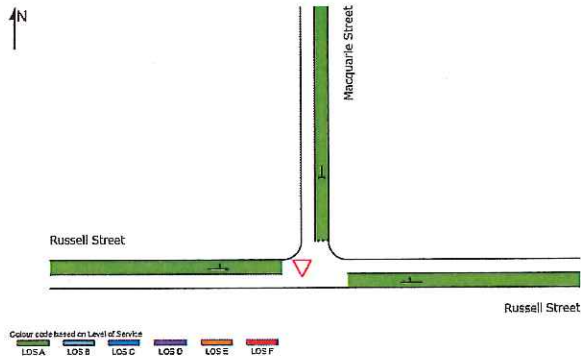


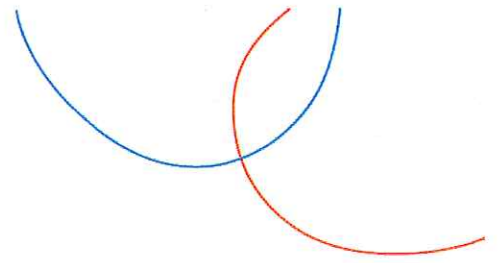
Figure 34: Russell Street/ Macquarie Street Existing Sunday Peak Hour Approach LOS

Table 13: Russell Street/ Macquarie Street Existing Sunday Operation

Leg	Peak	Degree of Saturation	Average Delay (secs)	95 th Percentile Queue (m)
East (Russell Street)	Sunday	0.12	1	2
North (Macquarie Street)		0.02	3	1
West (Russell Street)		0.14	1	0
All Movements		0.14	1	2

Discussion

Based on the results above, all modelled intersections currently operate within minimal queues and delays. All intersections operate at LOS A during the Sunday peak hour.



2.5 Mid-Block Capacity

2.5.1 Parking Demand - Weekday

Parking occupancy surveys were completed on Barclay Street and Russell Street on Wednesday 5 December 2018 which represents a typical weekday. The parking occupancy surveys were undertaken at regular intervals - every hour between 8:00am and 6:00pm. The parking supply was determined by measuring the road length where vehicles can park and then dividing the length by 6 metres. The result of the parking occupancy surveys is discussed in detail below.

Barclay Street

Parking occupancy surveys were taken along the length of Barclay Street. In order to understand how the parking demand changed along the road, the survey recorded the section of the road the car was parked on as well as the side of the road the car was parked on (north or south). The sections of the road where parking surveys were recorded along Barclay Street is shown in Figure 35 while the results of the parking surveys are summarised in Table 14.

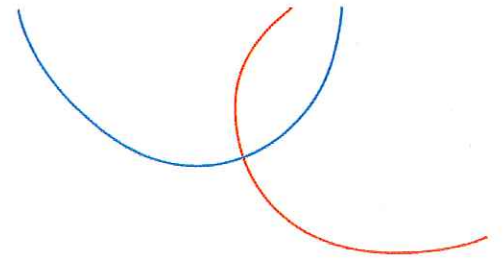


Figure 35: Barclay Street Parking Survey Locations (Aerial Source: <https://maps.thelist.tas.gov.au/listmap/app/list/map>)

Table 14: Barclay Street Parking Survey Results - Weekday

Parking Location	Time of Day	Parking Supply		Parking Demand			
		North	South	North	South	Total	Total %
1 – High Street to Murray Street	08:30	30	20	0	0	0	0%
	09:00			0	1	1	2%
	10:00			0	0	0	0%
	11:00			0	0	0	0%
	12:00			0	0	0	0%
	13:00			0	0	0	0%
	14:00			0	0	0	0%
	15:00			0	0	0	0%
	16:00			0	0	0	0%
	17:00			0	0	0	0%
	18:00			0	0	0	0%
2 – Murray Street to Macquarie Street	08:30	19	12	0	1	1	3%
	09:00			0	2	2	6%
	10:00			0	1	1	3%
	11:00			1	1	2	6%
	12:00			0	1	1	3%
	13:00			0	1	1	3%
	14:00			0	0	0	0%
	15:00			0	0	0	0%
	16:00			0	0	0	0%
	17:00			1	1	2	6%
	18:00			1	1	2	6%
3 – Macquarie Street to White Hills Road	08:30	21	13	0	3	3	9%
	09:00			1	2	3	9%
	10:00			0	2	2	6%
	11:00			0	2	2	6%
	12:00			0	3	3	9%
	13:00			0	3	3	9%
	14:00			0	3	3	9%
	15:00			0	3	3	9%
	16:00			0	3	3	9%
	17:00			0	2	2	6%
	18:00			0	1	1	3%

Based on the above, the parking demand on Barclay Street is low with less than 10% occupancy always on all sections.



Russell Street

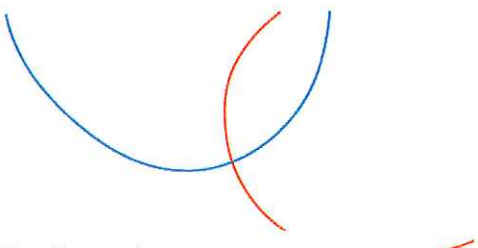
Parking occupancy surveys were also taken along the length of Russell Street. In order to understand how the parking demand changed along the road, the survey recorded the section of the road the car was parked on as well as the side of the road the car was parked on (north or south). The sections of the road where parking surveys were recorded along Barclay Street is shown in Figure 36 while the results of the parking surveys are summarised in Table 15.



Figure 36: Russell Street Parking Survey Locations (Aerial Source: <https://maps.thelist.tas.gov.au/listmap/app/list/map>)

Table 15: Russell Street Parking Survey Results - Weekday

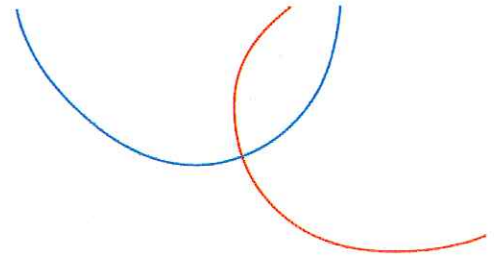
Parking Location	Time of Day	Parking Supply		Parking Demand			
		North	South	North	South	Total	Total %
1 – High Street to Scone Street	08:30	12	14	0	6	6	23%
	09:00			3	9	12	46%
	10:00			7	5	12	46%
	11:00			5	7	12	46%
	12:00			1	5	6	23%
	13:00			2	7	9	35%
	14:00			3	6	9	35%
	15:00			5	6	11	42%
	16:00			3	3	6	23%
	17:00			1	1	2	8%
	18:00			1	1	2	8%



Parking Location	Time of Day	Parking Supply		Parking Demand			
		North	South	North	South	Total	Total %
2 – Scone Street to Macquarie Street	08:30	21	19	2	4	6	15%
	09:00			1	3	4	10%
	10:00			5	5	10	25%
	11:00			5	10	15	38%
	12:00			7	7	14	35%
	13:00			9	9	18	45%
	14:00			3	6	9	23%
	15:00			4	3	7	18%
	16:00			2	8	10	25%
	17:00			5	7	12	30%
	18:00			1	3	4	10%
	3 – Macquarie Street to Coachmans Road			08:30	13	22	0
09:00		0	1	1			4%
10:00		3	0	3			11%
11:00		0	0	0			0%
12:00		0	0	0			0%
13:00		1	0	1			13%
14:00		0	0	0			0%
15:00		0	1	1			4%
16:00		1	1	2			7%
17:00		0	1	1			4%
18:00		0	2	2			7%

Based on the above, the overall parking demand on Russell Street is less than 50% at all times on all sections. It can be expected that the equivalent of not more than one side of the road is filled on a typical weekday.

It was noted during the parking survey that although the parking demand is low, parking was observed on both sides of the road near the café and hotel.



2.5.2 Parking Demand – Sunday

In addition to the weekday parking occupancy surveys presented above, parking occupancy surveys were also completed on Sunday 14 April 2019 on Barclay Street, Russell Street and Cambock Lane. Similar to the Weekday parking occupancy surveys, Sunday parking occupancy surveys were taken at regular intervals at least every hour between 8:00am and 2:00pm. The parking supply was determined by measuring the road length where vehicles can parallel park and then dividing the length by 6 metres. The result of the parking occupancy surveys on the Sunday is discussed in detail below.

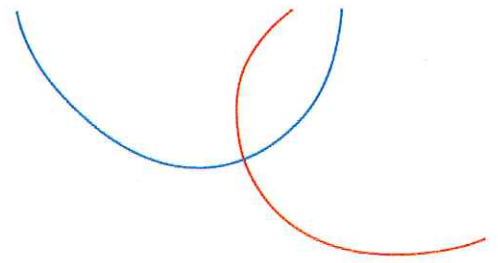
Barclay Street

Parking surveys were completed along the length of Barclay Street. Similar to the weekday parking surveys, the parking occupancy was recorded by the side of the road the car was parked (north or south) and which section of the road the car was parked. The sections for Barclay Street is shown in Figure 35 while the results of the Sunday parking occupancy survey are summarised in Table 16.

Table 16: Barclay Street Parking Survey Results - Sunday

Parking Location	Time of Day	Parking Supply		Parking Demand			
		North	South	North	South	Total	Total %
1 – High Street to Murray Street	08:00	30	20	0	0	0	0%
	09:00			0	0	0	0%
	10:00			0	0	0	0%
	11:00			0	0	0	0%
	12:00			0	0	0	0%
	13:00			0	0	0	0%
2 – Murray Street to Macquarie Street	08:00	19	12	0	1	1	5%
	09:00			0	1	1	5%
	10:00			0	0	0	0%
	11:00			0	0	0	0%
	12:00			0	0	0	0%
	13:00			1	0	1	5%
3 – Macquarie Street to White Hills Road	08:00	21	13	0	1	1	3%
	09:00			0	1	1	3%
	10:00			1	1	2	6%
	11:00			0	1	1	3%
	12:00			0	1	1	3%
	13:00			0	0	0	0%

Based on the above, the parking demand on Barclay Street is considered to be low with less than 10% occupancy at all times on all sections.



Russell Street

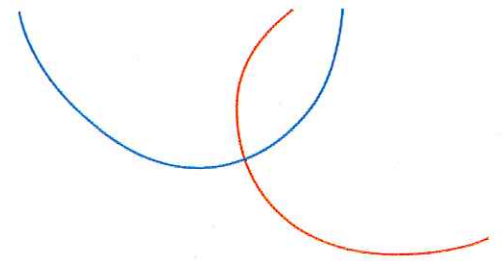
Parking surveys were completed along the length of Russell Street. Similar to the weekday parking surveys, the parking occupancy was recorded by the side of the road the car was parked (north or south) and which section of the road the car was parked. The sections for Russell Street is shown in Figure 36 while the results of the Sunday parking occupancy survey are summarised in Table 17.

Table 17: Russell Street Parking Survey Results - Sunday

Parking Location	Time of Day	Parking Supply		Parking Demand			
		North	South	North	South	Total	Total %
1 – High Street to Scone Street	08:00	12	14	2	1	3	12%
	09:00			4	4	8	31%
	10:00			9	7	16	62%
	11:00			10	12	22	85%
	12:00			11	12	23	88%
	13:00			9	11	20	77%
2 – Scone Street to Macquarie Street	08:00	21	19	1	4	5	13%
	09:00			19	11	30	75%
	10:00			19	15	34	85%
	11:00			19	16	35	88%
	12:00			19	11	30	75%
	13:00			19	14	33	83%
3 – Macquarie Street to White Hills Road	08:00	13	22	10	6	16	46%
	09:00			10	6	16	46%
	10:00			11	7	18	51%
	11:00			11	11	22	63%
	12:00			11	6	17	49%
	13:00			13	3	16	46%

Based on the above, the overall parking demand on Russell Street is generally high with demand typically exceeding 80% between 11:00am and 2:00pm.

It was noted during the parking survey that in Section 3 (between Huxtables Lane and Coachmans Road), a bus zone operated on the north side of the road on Sundays between 7:00am and 3:00pm and a parking restriction was present on the south side of the road between 7:00am and 3:00pm. It was also noted that a number of parking spaces in Section 1 were occupied with road works signage.



Cambock Lane

In addition to Barclay Street and Russell Street, Sunday occupancy parking surveys were also taken along the length of Cambock Lane West and East. To understand how the parking demand changes along the road, the parking occupancy was recorded by the side of the road the car was parked (north or south along Cambock Lane West and east and west along Cambock Lane East) and which section of road the car was parked. The sections for Cambock Lane West and East are shown in Figure 37 while results of the parking surveys are summarised in Table 18.

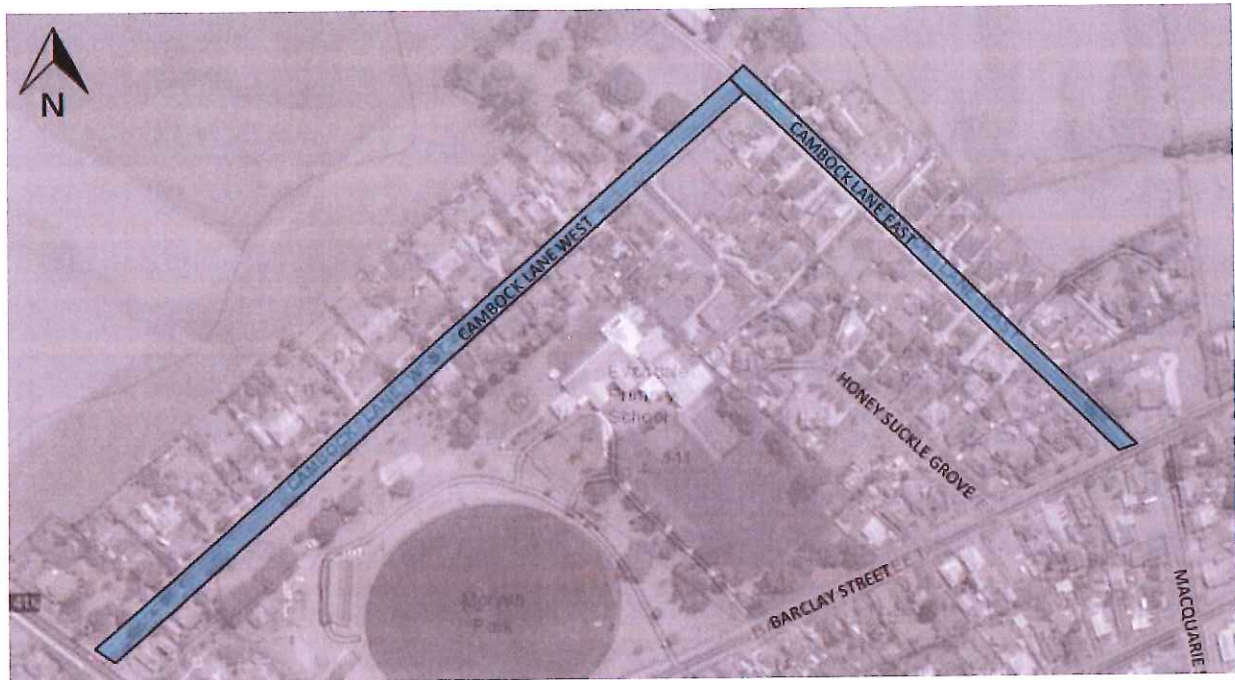
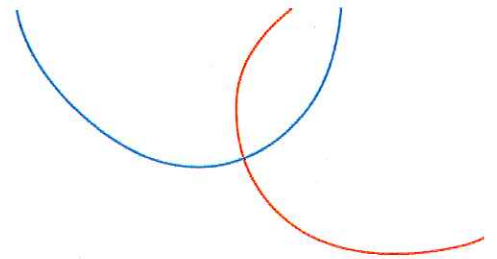


Figure 37: Cambock Lane West and East Parking Survey Locations (Aerial Source: <https://maps.thelist.tas.gov.au/listmap/app/list/map>)

Table 18: Cambock Lane Parking Survey Results - Sunday

Parking Location	Time of Day	Parking Supply		Parking Demand			
		North	South	North	South	Total	Total %
Cambock Lane West	08:00	57	63	5	4	9	8%
	09:00			5	5	10	8%
	10:00			6	5	11	9%
	11:00			5	4	9	8%
	12:00			5	5	10	8%
	13:00			5	4	9	8%
Cambock Lane East	08:00	24	32	1	0	1	2%
	09:00			1	0	1	2%
	10:00			1	1	2	4%
	11:00			1	0	1	2%
	12:00			1	0	1	2%
	13:00			2	2	4	7%

Based on the above, the parking demand on Cambock Lane West and East is considered to be low with less than 10% occupancy at all times.



2.5.3 Mid-Block Traffic Capacity – Urban Roads

Urban Roads

The traffic capacity of a road is generally impacted by the road width and carriageway form. Typical carriageway forms for different urban road widths are shown in the Local Government Association of Tasmania (LGAT) Standard Drawings. A visualisation from the LGAT drawings is shown in Figure 38.

Based on this, the parking data above assists with determining the road traffic mid-block demand. Cars parked on one side of the road would allow for two travel lanes whereas cars parked on both sides of the road would allow for one travel lane and therefore a significantly reduced road capacity.

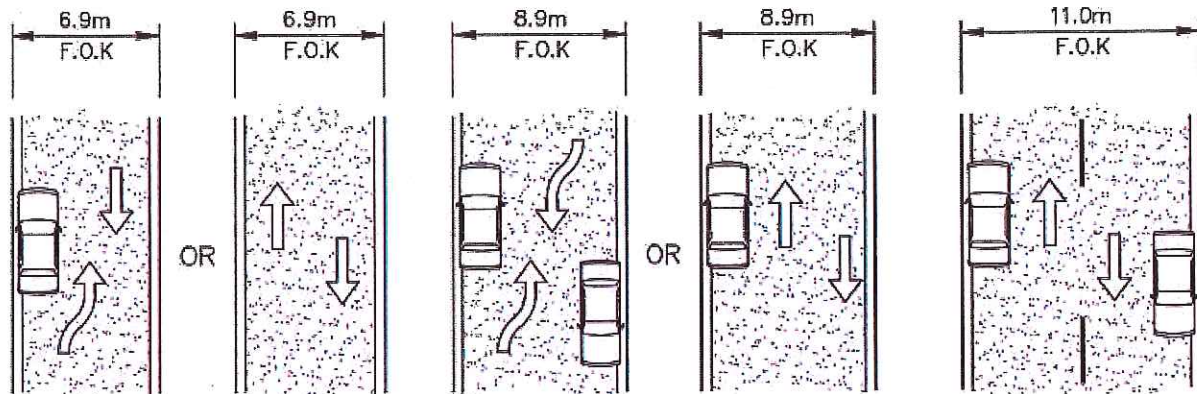


Figure 38: Typical Carriageway Forms (Source: LGAT Standard Drawing TSD – R06 – v1)

The Tasmanian Local Government Road Hierarchy, shown in Figure 16, gives guidance to the amount of traffic that should be travelling on each road classification based on several criteria and metrics including the road function and carriageway form. It is noted that the roads could physically carry more traffic than the guidance metric. However, these traffic volumes would be considered as appropriate for the road function and carriageway form from a safety and amenity perspective.

In addition, Table 4.6 in the *RMS Guide to Traffic Generating Developments* provides guidance regarding environmental capacity performance standards on residential streets. An excerpt of Table 4.6 from the RMS Guide is shown in Figure 39.

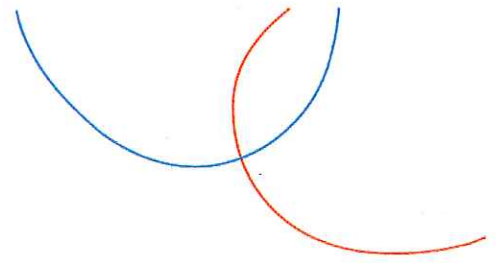
Table 4.6
Environmental capacity performance standards on residential streets

Road class	Road type	Maximum Speed (km/hr)	Maximum peak hour volume (veh/hr)
Local	Access way	25	100
	Street	40	200 environmental goal 300 maximum
Collector	Street	50	300 environmental goal 500 maximum

Figure 39: Excerpt of RMS Environmental Capacity Performance Standards on Residential Streets

The hierarchy, combined with the parking data above, has been used as the basis for determining the road capacity of the urban roads.

Car parking is generally not expected to impact the width of the rural roads as vehicles are permitted to park informally on the road verge.



2.5.4 Mid-Block Traffic Capacity – Rural Roads

The LGAT Standard Drawings specify the allowable daily traffic for different widths of road seal. The allowable traffic for each seal width is summarised in Table 19.

Table 19: Rural Road Traffic Capacity

Code	AADT	Existing Infrastructure	New Development
		(w) Sealed Traffic Width	(w) Sealed Traffic Width
S1	<30	4000 (s)	-
S2	30 – 100	4000 (s)	-
S3	100 – 300	5500 (D)	5500 (D)
S4	300 – 2000	6000 (D)	6000 (D)
S5	>2000	7000 (D)	7000 (D)

2.5.5 Mid-Block Capacity and Demand

Based on the information above, the mid-block capacity and demand for each road section is shown in Table 20 to Table 23.

Table 20: Existing Road Capacity - Weekday

Road Name	Location	Road Classification	Daily Maximum Parking Demand (%)	Available Traffic Lanes with Parking	Traffic Capacity (vpd)	Existing Traffic Volume (weekday) (vpd)	Spare Traffic Capacity (weekday) (vpd)
Ridgeside Lane	White Hills Road to proposed development boundary	Rural – S1	N/A	1	30	10 (estimate)	20
	White Hills Road	East of Barclay Street	N/A	2	2,000	517	1,483
Barclay Street	High Street to Murray Street	Urban – Link	7%	2	3,000	1,472	1,528
	Murray Street to Cambock Lane	Urban – Link	6%	2	3,000	877	2,123
Cambock Lane	Cambock Lane to White Hills Road	Urban – Link	9%	2	3,000	741	2,259
	East of High Street	Urban – Local Access	9%	2	1,000	258	742
Logan Road	North of Barclay Street	Urban – Local Access	7%	2	1,000	132	868
	West of No. 58	Rural – S5	N/A	2	2,000	176	1,824
	East of No. 58	Rural – S2	N/A	2	100	133	0
Russell Street	High Street to Scone Street	Urban – Link	46%	2	3,000	1,645	1,355
	Scone Street to Macquarie Street	Urban – Link	45%	2	3,000	1,041	1,959
Macquarie Street to Logan Road	Urban – Link	13%	2	3,000	1,508	1,492	

Table 21: Existing Road Capacity – Weekday AM and PM Peak Hour

Road Name	Location	Road Classification	Traffic Capacity (vph)	AM Peak Hour				PM Peak Hour			
				Peak Parking Demand (%)	Available Traffic Lanes with Parking	Existing Traffic Volume (vph)	Spare Traffic Capacity (vph)	Peak Parking Demand (%)	Available Traffic Lanes with Parking	Existing Traffic Volume (vph)	Spare Traffic Capacity (vph)
Ridgeside Lane	White Hills Road to proposed development boundary	Rural – S1	100	N/A	1	¹ (estimate)	9	N/A	1	¹ (estimate)	9
	West of Ridgeside Lane	Rural – S4	300	N/A	2	50	250	N/A	2	50	250
White Hills Road	East of Ridgeside Lane	Rural – S4	300	N/A	2	50	250	N/A	2	50	250
	High Street to Murray Street	Urban – Link	500	2%	2	155	345	0%	2	117	383
Barclay Street	Murray Street to Cambock Lane	Urban – Link	500	6%	2	67	433	6%	2	69	431
	Cambock Lane to White Hills Road	Urban – Link	500	9%	2	59	441	6%	2	47	453
Cambock Lane	East of High Street	Urban – Local Access	300	9%	2	19	281	9%	2	18	282
	North of Barclay Street	Urban – Local Access	300	7%	2	14	286	7%	2	8	292
Logan Road	West of No. 58	Rural – S5	300	N/A	2	20	280	N/A	2	20	280
	East of No. 58	Rural – S2	300	N/A	2	15	285	N/A	2	15	285

3-671

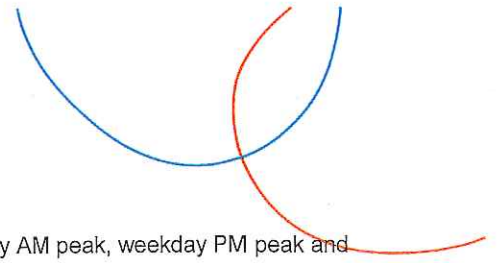
Road Name	Location	Road Classification	Traffic Capacity (vph)	AM Peak Hour				PM Peak Hour			
				Peak Parking Demand (%)	Available Traffic Lanes with Parking	Existing Traffic Volume (vph)	Spare Traffic Capacity (vph)	Peak Parking Demand (%)	Available Traffic Lanes with Parking	Existing Traffic Volume (vph)	Spare Traffic Capacity (vph)
Russell Street	High Street to Scone Street	Urban – Link	500	46%	2	131	369	8%	2	150	350
	Scone Street to Macquarie Street	Urban – Link	500	10%	2	100	400	30%	2	140	360
	Macquarie Street to Logan Road	Urban – Link	500	4%	2	115	385	4%	2	166	334

Table 22: Existing Road Capacity – Sunday Daily

Road Name	Location	Road Classification	Daily Maximum Parking Demand (%)	Available Traffic Lanes with Parking	Traffic Capacity (vpd)	Existing Traffic Volume (weekday) (vpd)	Spare Traffic Capacity (weekday) (vpd)
Ridgeside Lane	White Hills Road to proposed development boundary	Rural – S1	N/A	1	30	10 (estimate)	20
	West of Ridgeside Lane	Rural – S4	N/A	2	2,000	438	1,562
White Hills Road	East of Ridgeside Lane	Rural – S4	N/A	2	2,000	438	1,562
	High Street to Murray Street	Urban – Link	0%	2	3,000	1500 (approx.)	1,500
Barclay Street	Murray Street to Cambock Lane	Urban – Link	5%	2	3,000	767	2,233
	Cambock Lane to White Hills Road	Urban – Link	6%	2	3,000	677	2,323
Cambock Lane	East of High Street	Urban – Local Access	9%	2	1,000	251	749
	North of Barclay Street	Urban – Local Access	7%	2	1,000	124	876
Logan Road	West of No. 58	Rural – S5	N/A	2	2,000	271	1,729
	East of No. 58	Rural – S2	N/A	2	100	173	0
	High Street to Score Street	Urban – Link	85%	1	3,000	3,117	0
Russell Street	Score Street to Macquarie Street	Urban – Link	88%	1	3,000	2,770	230
	Macquarie Street to Logan Road	Urban – Link	63%	1	3,000	2,844	156

Table 23: Existing Road Capacity – Sunday Peak Hour

Road Name	Location	Road Classification	Daily Maximum Parking Demand (%)	Available Traffic Lanes with Parking	Traffic Capacity (vph)	Existing Traffic Volume (weekday) (vph)	Spare Traffic Capacity (weekday) (vph)
Ridgeside Lane	White Hills Road to proposed development boundary	Rural – S1	100	N/A	1	1 (estimate)	9
	West of Ridgeside Lane	Rural – S4	N/A	2	300	45	255
White Hills Road	East of Ridgeside Lane	Rural – S4	N/A	2	300	45	255
	High Street to Murray Street	Urban – Link	0%	2	500	180 (approx.)	320
Barclay Street	Murray Street to Cambock Lane	Urban – Link	5%	2	500	86	414
	Cambock Lane to White Hills Road	Urban – Link	3%	2	500	83	417
Cambock Lane	East of High Street	Urban – Local Access	8%	2	300	28	272
	North of Barclay Street	Urban – Local Access	2%	2	300	9	291
Logan Road	West of No. 58	Rural – S5	N/A	2	300	30	270
	East of No. 58	Rural – S2	N/A	2	300	20	280
Russell Street	High Street to Score Street	Urban – Link	85%	1	500	495	5
	Score Street to Macquarie Street	Urban – Link	88%	1	500	439	61
	Macquarie Street to Logan Road	Urban – Link	4%	2	500	470	30



Based on the results above, all road sections have spare capacity during the weekday AM peak, weekday PM peak and Sunday peak. With the exception of Logan Road east of no.58, all road sections also have spare capacity during the weekday daily and Sunday daily scenarios.

The spare traffic capacity is the number of vehicles that can be added to the road without unreasonably compromising the amenity, safety and efficiency of the road.

It is noted that Logan Road east of no.58 does not have spare capacity during the weekday daily and Sunday daily scenarios as it is currently carrying higher daily traffic volumes than that allowable under the LGAT guidance metrics. The Ridgeside Lane development would add more traffic at this location from the 17 rural residential lots. Traders in Purple are committed to widening Logan Road 0.7m up to the eastern site boundary by 0.7m to provide a 6.0m road width and subsequently significant additional road capacity.

Ridgeside Lane currently provides access to a small number of properties and has a single travel lane.

2.6 Public Transport

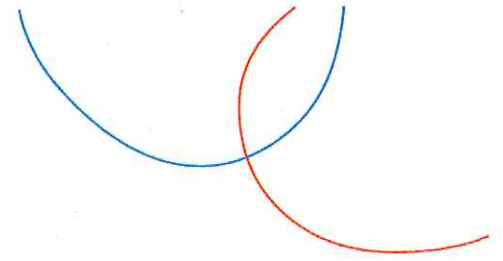
Public transport options within Evandale are limited with only one bus route available. The bus route is operated by Tassielink and travels between Launceston, Evandale, Perth, Longford and Cressy.

During weekdays, three buses in each direction operate on the Launceston – Evandale – Perth – Longford – Cressy Route.

2.7 Pedestrian and Cycling Facilities

Pedestrian and cycling facilities along White Hills Road and Logan Road in the vicinity of the site are limited as there are no footpaths or bike routes available.

Near the Evandale town centre, footpaths are present on one side of the road along all roads. No on-road cycle lanes are available in Evandale.



3. Development Proposal

3.1 Overview

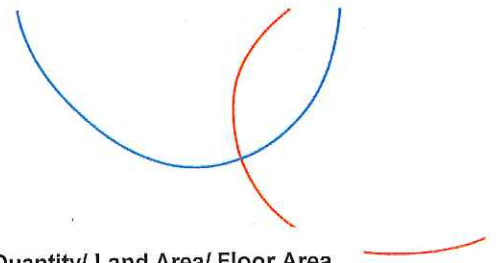
It is proposed to develop the 242-hectare land parcel at Ridgeside Lane in Evandale into a mixed-use development. The majority of the development will be accessed from Ridgeside Lane via Barclay Street and White Hills Road. The 17 Rural 'Zone B' lots will be accessed from Logan Road, with most of these vehicles expected to use Russell Street. Ridgeside Lane is currently a single lane laneway. There is space within the road reserve to upgrade this road to a 2-lane collector road to accommodate the development traffic.

It is intended to build a proportion of the residential lots first, based on the available capacity of the roads in Evandale. After this an Evandale Bypass Road will be constructed and then the remainder of the land developed.

The development schedule relevant to the TIA is shown in Table 24 and the Masterplan for the development is included in Appendix A.

Table 24: Development Schedule

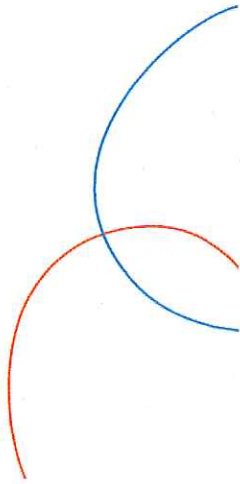
Masterplan Item Number	Use	Quantity/ Land Area/ Floor Area
Residential		
11, 12	Small residential lots	70 lots
14	General residential lots	346 lots
15	Super lots for smaller housing	160 dwelling
17, 27	Low density residential lots	81 lots
31	Rural 'Zone A' lots	27 lots
32	Rural 'Zone B' lots	17 lots
Hotel and Conference Facility		
21	4.5-star hotel	100 rooms
	Conference and wedding facility	100 guests
	Bar	N/A
	Café	N/A
	Education and training facility	25 students
Retirement Village		
22	Specialist aged care facility	45 beds
23,24	Independent living units	45 units
Health and Wellbeing		
25	Health and wellbeing retreat	N/A
Eco Accommodation		
26	Eco resort accommodation	20 villas



Masterplan Item Number	Use	Quantity/ Land Area/ Floor Area
<i>Sustainability, Education and Artisan Hub</i>		
8	Café	N/A
	Restaurant	N/A
	Cellar door	N/A
	Studios	N/A
	Workshops	N/A
	Classroom facilities	N/A
<i>Northern Tasmanian Demonstration Farm and Agribusiness Facility</i>		
9	Organic co-op store	N/A
	Plant nursery	N/A
	Farm workshop	N/A
	Café	N/A
<i>Childcare Centre</i>		
10	Childcare centre	N/A
<i>AFL/ Cricket Oval</i>		
7	AFL/ cricket oval	N/A
<i>Botanical Gardens</i>		
19	Botanical gardens	N/A
<i>Neighbourhood Parklands and Gardens</i>		
6	Linear neighbourhood parkland	N/A
13	Ornamental garden	N/A
18	Native garden	N/A

3.2 Baker Group Development

It is understood that a 110-lot residential development is proposed to the west of the Ridgeside Lane site. Based on the publicly available subdivision layout and the existing traffic movement patterns within Evandale, it would be expected that the majority of vehicles would use the Cambock Lane access point and that the impact to White Hills Road and Barclay Street would be minimal.



4. Traffic Impact Assessment

4.1 Traffic Generation Rates

Indicative traffic generation rates based on the provided Ridgeside Lane land uses are included in Table 25. Traffic Generation have been sought from the NSW Roads and Maritime Services *RMS Guide to Traffic Generating Developments 2002* (RMS Guide). The traffic generation rate for the residential dwellings has been sought from the *RMS Technical Direction TDT2013/04a* (RMS Technical Direction)

Where the RMS Guide does not supply rates, the *ITE Trip Generation Manual* from the United States of America has instead been used.

It is noted that the table below is included to provide guidance regarding the traffic generation for the overall development. This TIA is limited in scope to the assessment of the residential development possible with use of the existing Evandale road network.

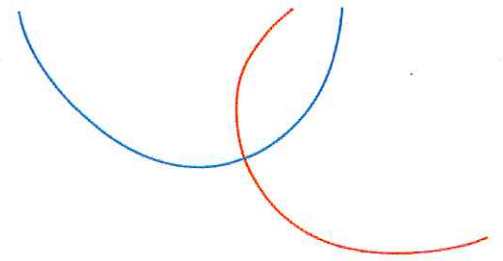
Table 25: Traffic Generation Rates

Use	Quantity	Source	Design Generation Rates			
			AM Peak Hour	PM Peak Hour	Sunday Peak Hour	Daily Weekday
Residential						
Small residential lots	70 lots					
General residential lots	346 lots					
Super lots for smaller housing	160 dwelling	RMS	0.71 trips per dwelling	0.78 trips per dwelling	N/A	7.4 trips per dwelling
Low density residential lots	81 lots					
Rural 'Zone A' lots	27 lots					
Rural 'Zone B' lots	17 lots					

Use	Quantity	Source	Design Generation Rates			
			AM Peak Hour	PM Peak Hour	Sunday Peak Hour	Daily Weekday
Hotel and Conference Facility						
4.5-star hotel	100 rooms	ITE	0.47 trips per room	0.60 trips per room	0.56 trips per room	8.36 trips per room
Conference and wedding facility	100 guests	ITE	1.96 trips per 100m ²	2.57 trips per 100m ²	1.64 trips per 100m ²	32.02 trips per 100m ²
Bar	-	ITE	N/A	12.62 trips per 100m ²	N/A	N/A
Café	-	RMS	5 trips per 100m ²	5 trips per 100m ²	N/A	60 trips per 100m ²
Education and training facility	25 students	ITE	0.11 trips per student	0.11 trips per student	N/A	1.15 trips per student
Retirement Village						
Specialist aged care facility	45 beds	ITE	0.19 trips per bed	0.26 trip per bed	0.28 trips per bed	2.60 trips per bed
Independent living units	45 units	RMS	0.40 trips per unit	0.40 trips per unit	N/A	2.10 trips per unit
Health and Wellbeing						
Health and wellbeing retreat	N/A	ITE	1.46 trips per 100m ²	3.83 trips per 100m ²	N/A	N/A
Eco Accommodation						
Eco resort accommodation	20 villas	ITE	0.32 trips per room	0.41 trips per room	N/A	N/A
Sustainability, Education and Artisan Hub						
Café	-	RMS	5 trips per 100m ²	5 trips per 100m ²	N/A	60 trips per 100m ²
Restaurant	-	RMS	N/A	5 trips per 100m ²	N/A	60 trips per 100m ²
Cellar door	-	ITE	2.30 trips per 100m ²	8.12 trips per 100m ²	41.83 trips per 100m ²	51 trips per 100m ²
Studios	-	ITE	0.11 trips per student	0.11 trips per student	N/A	1.15 trips per student
Workshops	-	ITE	0.11 trips per student	0.11 trips per student	N/A	1.15 trips per student
Classroom facilities	-	ITE	0.11 trips per student	0.11 trips per student	N/A	1.15 trips per student

Use	Quantity	Source	Design Generation Rates			
			AM Peak Hour	PM Peak Hour	Sunday Peak Hour	Daily Weekday
Northern Tasmanian Demonstration Farm and Agribusiness Facility						
Organic co-op store ¹	-	ITE	62.49 trips per 100m ²	54.6 trips per 100m ²	82.6 trips per 100m ²	847.0 trips per 100m ²
Plant nursery	-	ITE	2.70 trips per 100m ²	7.71 trips per 100m ²	20.84 trips per 100m ²	75.56 trips per 100m ²
Farm workshop	-	ITE	2.18 trips per 100m ²	2.50 trips per 100m ²	18.09 trips per 100m ²	N/A
Café	-	RMS	5 trips per 100m ²	5 trips per 100m ²	N/A	60 trips per 100m ²
Childcare Centre						
Childcare centre	-	RMS	0.80 trips per child	0.70 trips per child	N/A	N/A
AFL/ Cricket Oval						
AFL/ cricket oval	-	ITE	0.99 trips per field	16.43 trips per field	28.78 trips per field	71.33 trips per field
Botanical Gardens						
Botanical gardens	-	ITE	0.01 trips per 100m ²	0.01 trips per 100m ²	0.01 trips per 100m ²	0.02 trips per 100m ²
Neighbourhood Parklands and Gardens						
Linear neighbourhood parkland	-					
Ornamental garden	-	ITE	0.01 trips per 100m ²	0.01 trips per 100m ²	0.01 trips per 100m ²	0.02 trips per 100m ²
Native garden	-					

¹ Traffic generation calculated assuming a convenience store. This use may generate less depending on the exact nature of the co-op store.



4.2 Traffic Impact

4.2.1 Directional Split of Traffic

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

- AM Peak Hour 25% in/ 75% out
- PM Peak Hour 60% in/ 40% out

4.2.2 Traffic Distribution and Assignment

The distribution of the traffic generated by the development is based on a number of factors including:

- The location of major distribution roads around the site
- The location of traffic generating developments; and
- Existing traffic patterns.

Based on this, the expected distribution of movements to and from the development are shown in Figure 40.

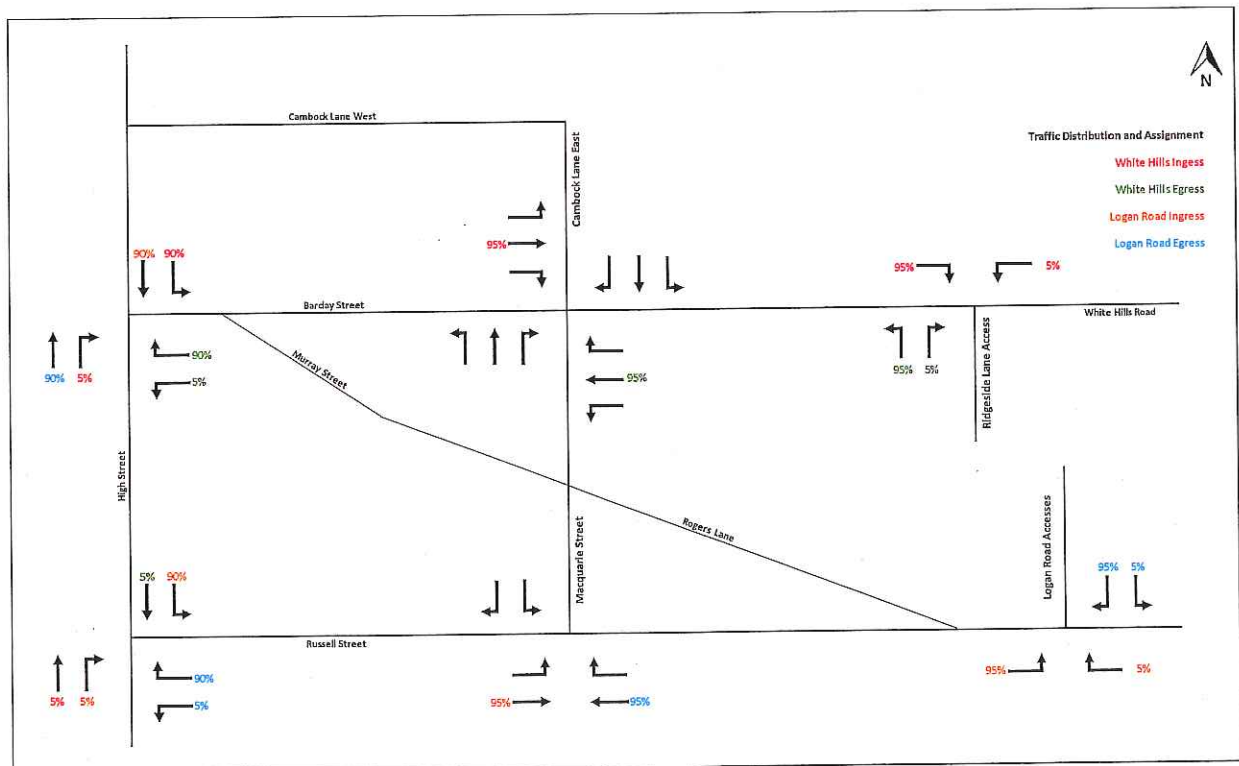
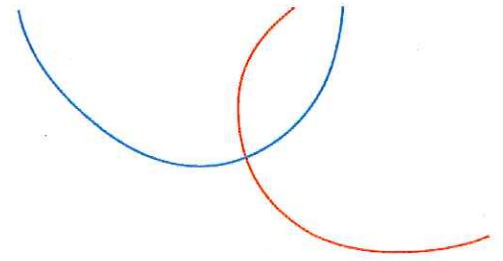


Figure 40: Traffic Distribution and Assignment



4.2.3 Level of Development to Reach Mid-Block Capacity

As discussed, it is intended to build a proportion of the residential lots first, based on the available capacity of the roads in Evandale.

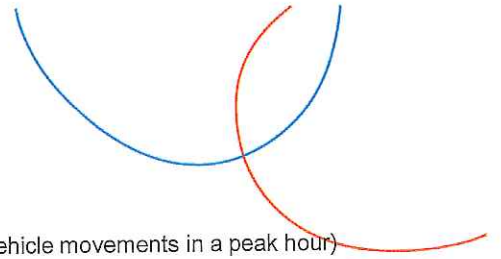
Based on the traffic distribution shown in Figure 40, 95% of traffic would be expected to travel to and from High Street to the west and 5% would be expected to travel from the east. Based on this, 95% of all traffic generated by the initial development would be expected to travel through the Evandale Town Centre.

The number of residential lots than can be accommodated based on the available capacity of the roads, and taking into account that 95% of traffic is expected to travel through the Evandale Town Centre, is shown in Table 26.

Table 26: Residential Lots That Can be Developed Before Reaching Capacity

Road Name	Location	Weekday		Sunday		AM Peak Hour		PM Peak Hour		Sunday Peak Hour	
		Spare Traffic Capacity	Residential Lots that Can be Developed	Spare Traffic Capacity	Residential Lots that Can be Developed	Spare Traffic Capacity	Residential Lots that Can be Developed	Spare Traffic Capacity	Residential Lots that Can be Developed	Spare Traffic Capacity	Residential Lots that Can be Developed
Ridgeside Lane	White Hills Road to development boundary	To be upgraded									
White Hills Road	East of Barclay Street	1,483	211	1,562	2222	250	371	250	337	255	344
	High Street to Murray Street	1,528	217	1,500	213	345	511	383	517	320	432
	Murray Street to Cambock Lane	2,123	302	2,233	318	433	642	431	582	414	559
Barclay Street	Cambock Lane to White Hills Road	2,259	321	2,323	330	441	654	453	611	417	563
	West of No. 58	1,824	211	1,729	246	280	415	280	378	270	364
Logan Road	East of No. 58	0	0	0	0	285	423	285	385	280	378
	High Street to Scone Street	1,355	193	0	0	369	547	350	472	5	7
	Scone Street to Macquarie Street	1,959	279	230	33	400	593	360	486	61	82
Russell Street	Macquarie Street to Logan Road	1,492	212	156	22	385	571	334	451	30	40

3-683



Based on Table 26, up to 1,560 additional traffic movements (or in the order of 150 vehicle movements in a peak hour) could reasonably be accommodated on the road network. This is equivalent to approximately 211 residential dwellings.

The 17 lots accessing directly onto Logan Road would be expected to generate approximately 126 additional traffic movements on Logan Road and Russell Street per day. The proposed upgrades to Logan Road would be expected to accommodate the additional traffic.

Russell Street has spare capacity to accommodate the 126 additional traffic movements on a weekday. On a Sunday, when the market is taking place, there is no spare capacity to accommodate the additional traffic movements from an amenity perspective. However, the additional movements generated by the residential dwellings is considered to be minimal. It is also worth noting that when the market is taking place the traffic generation of the residential dwellings would be expected to be significantly lower than that one a weekday as many residents would likely attend the market, and many may walk or cycle.

The Ridgeside Lane road reserve is approximately 12.0 to 14.0m wide. It is proposed to convert Ridgeside Lane into a rural collector road to accommodate the development traffic. The LGAT standards specify that a rural road can carry high volumes of traffic (>2000 vehicles per day) with the following travel lane and shoulder widths:

- 7.0m trafficable width (two lanes)
- 0.5m sealed shoulder on each side
- 0.5m of gravel verge on each side.

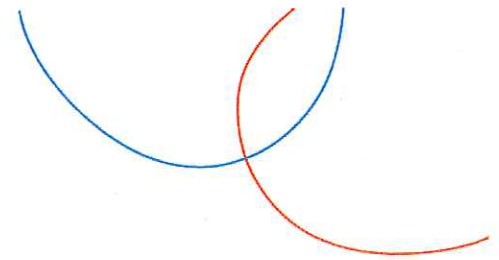
The above results in a total of 9.0m of road pavement width with 1.5m to 2.5m of clearance on each side. Based on this there is sufficient space to accommodate a rural road at Ridgeside Lane that can carry the traffic that is expected to be generated by the site.

4.2.4 Intersection Operation

Based on the table above, 211 lots could reasonably be accommodated along White Hills Road in addition to the 17 lots along Logan Road. The expected intersection operation of all counted intersections under the 211 residential lots along White Hills Road and 17 residential lots along Logan Road scenario is shown below.

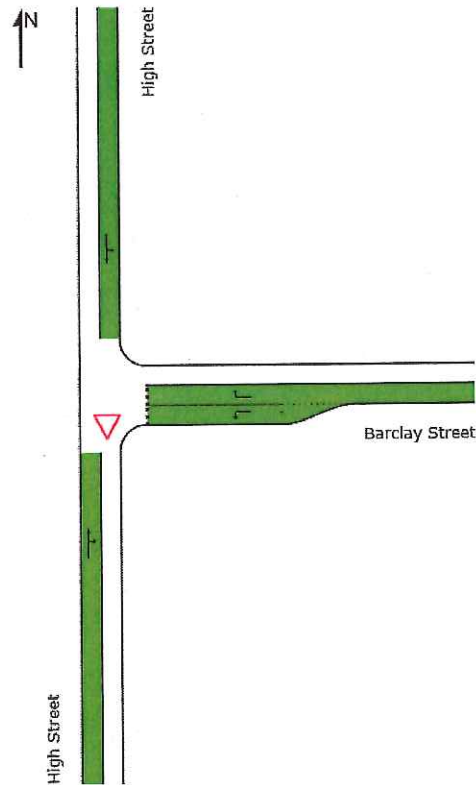
High Street/ Barclay Street Intersection

The LOS for each approach for the High Street/ Barclay Street intersection is shown in Figure 23 and Figure 24. A summary of the SIDRA Intersection results for degree of saturation, average delay and 95th percentile queues is provided in Table 6. Full results are presented in Appendix D.



Colour code based on Level of Service
 LOS A LOS B LOS C LOS D LOS E LOS F

Figure 41: High Street/ Barclay Street – Post Residential Development Weekday AM Peak Hour Approach LOS



Colour code based on Level of Service
 LOS A LOS B LOS C LOS D LOS E LOS F

Figure 42: High Street/ Barclay Street – Post Residential Development Weekday PM Peak Hour Approach LOS

Table 27: High Street/ Barclay Street Existing Weekday Operation

Leg	Peak	Degree of Saturation	Average Delay (secs)	95 th Percentile Queue (m)
South (High Street)	AM	0.07	1	1
East (Barclay Street)		0.15	5	3
North (High Street)		0.09	3	0
All Movements		0.15	4	3
South (High Street)	PM	0.05	1	1
East (Barclay Street)		0.07	5	1
North (High Street)		0.18	3	0
All Movements		0.18	3	1

High Street/ Russell Street Intersection

The LOS for each lane at the High Street/ Russell Street intersection is shown in Figure 25 and Figure 26. A summary of the SIDRA Intersection results for degree of saturation, average delay and 95th percentile queues is provided in Table 7. Full results are presented in Appendix D.

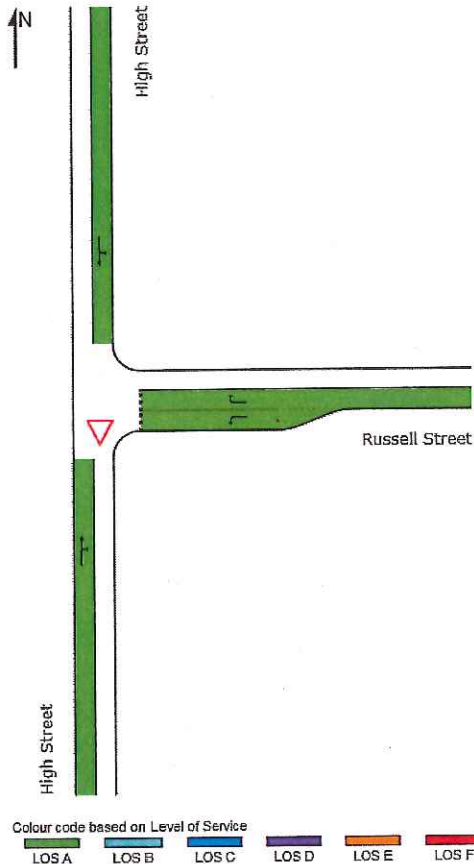
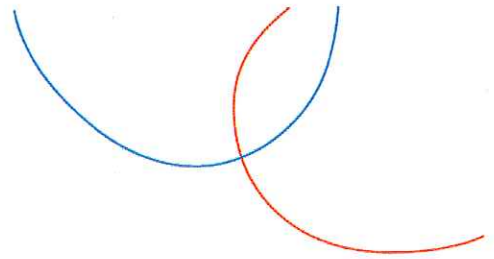


Figure 43: High Street/ Russell Street – Post Residential Development Weekday AM Peak Hour Approach LOS

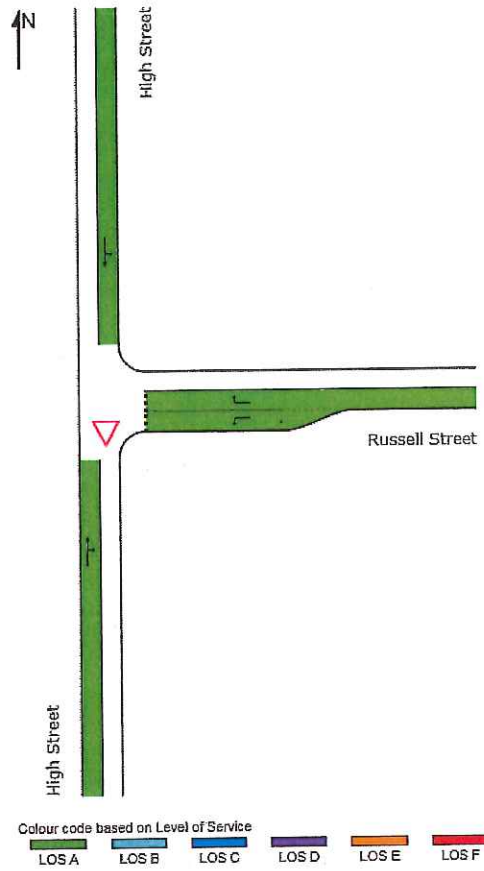


Figure 44: High Street/ Russell Street – Post Residential Development Weekday PM Peak Hour Approach LOS

Table 28: High Street/ Russell Street Existing Weekday Operation

Leg	Peak	Degree of Saturation	Average Delay (secs)	95 th Percentile Queue (m)
South (High Street)	AM	0.03	1	0
East (Russell Street)		0.06	5	1
North (High Street)		0.05	3	0
All Movements		0.06	3	1
South (High Street)	PM	0.02	1	0
East (Russell Street)		0.04	5	1
North (High Street)		0.09	4	0
All Movements		0.09	3	1

Barclay Street/ Macquarie Street/ Cambock Lane Intersection

The LOS for each lane at the Barclay Street/ Macquarie Street/ Cambock Lane intersection is shown in Figure 27 and Figure 28. A summary of the SIDRA Intersection results for degree of saturation, average delay and 95th percentile queues is provided in Table 8. Full results are presented in Appendix D.

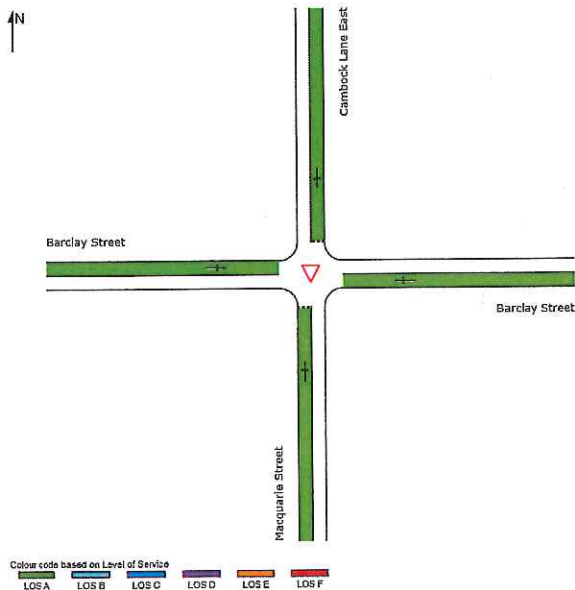


Figure 45: Barclay Street/ Macquarie Street/ Cambock Lane – Post Residential Development Weekday AM Peak Hour Approach LOS

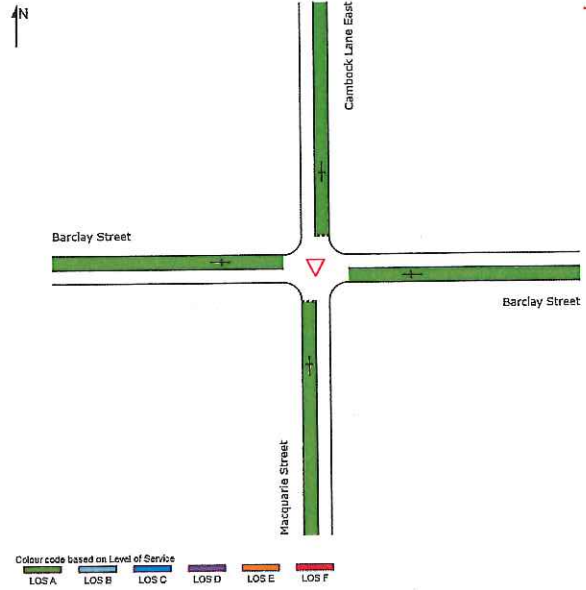


Figure 46: Barclay Street/ Macquarie Street/ Cambock Lane – Post Residential Development Weekday PM Peak Hour Approach LOS

Table 29: Barclay Street/ Macquarie Street/ Cambock Lane Existing Weekday Operation

Leg	Peak	Degree of Saturation	Average Delay (secs)	95 th Percentile Queue (m)
South (Macquarie Street)	AM	0.02	5	1
East (Barclay Street)		0.09	1	0
North (Cambock lane East)		0.01	6	0
West (Barclay Street)		0.04	1	0
All Movements		0.09	1	1
South (Macquarie Street)	PM	0.02	5	0
East (Barclay Street)		0.06	1	0
North (Cambock lane East)		0.00	6	0
West (Barclay Street)		0.07	1	0
All Movements		0.07	1	0

Russell Street/ Macquarie Street Intersection

The LOS for each lane at the Russell Street/ Macquarie Street intersection is shown in Figure 29 and Figure 30. A summary of the SIDRA Intersection results for degree of saturation, average delay and 95th percentile queues is provided in Table 9. Full results are presented in Appendix D.

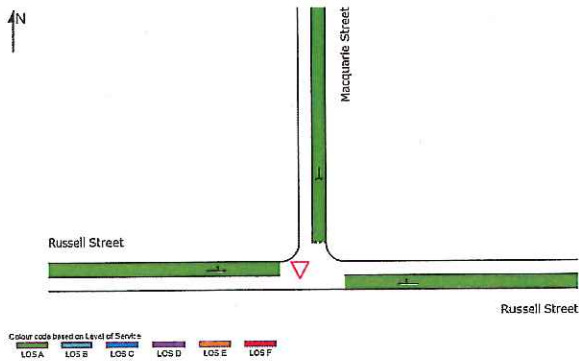


Figure 47: Russell Street/ Macquarie Street – Post Residential Development Weekday AM Peak Hour Approach LOS

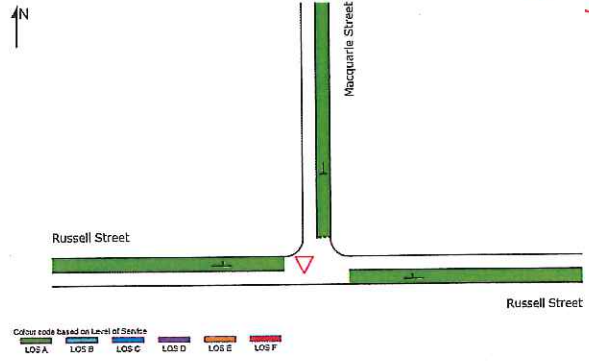


Figure 48: Russell Street/ Macquarie Street – Post Residential Development Weekday PM Peak Hour Approach LOS

Table 30: Russell Street/ Macquarie Street Existing Weekday Operation

Leg	Peak	Degree of Saturation	Average Delay (secs)	95 th Percentile Queue (m)
East (Russell Street)	AM	0.05	2	1
North (Macquarie Street)		0.02	2	0
West (Russell Street)		0.02	1	0
All Movements		0.05	2	1
East (Russell Street)	PM	0.04	1	1
North (Macquarie Street)		0.02	2	0
West (Russell Street)		0.06	0	0
All Movements		0.06	1	1

Discussion

Based on the results above, all modelled intersections are expected to continue to operate with minimal queues and delays at LOS A in the peak hours with the additional 1,560 vehicle movements per day.

5. Parking Assessment

5.1 Parking Provision

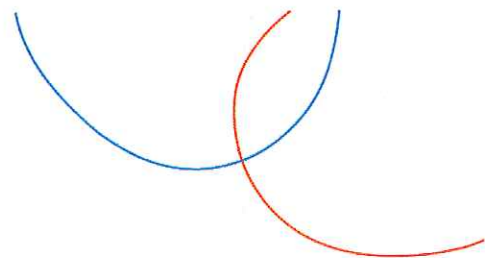
The Planning Scheme parking rate requirement for each of the land uses is shown in Table 31.

It is noted that this table is included to provide guidance regarding parking supply requirements for the overall development. Table 31: Parking Rate Requirement

Use	Quantity	Parking Use Name	Car Parking Rate	Bicycle Parking Rate
Residential				
Small residential lots	70 lots	Residential	2 spaces per dwelling + 1 visitor space per 4 dwellings	1 space per unit
General residential lots	346 lots			
Super lots for smaller housing	160 dwelling			
Low density residential lots	81 lots			
Rural 'Zone A' lots	27 lots			
Rural 'Zone B' lots	17 lots			
Hotel and Conference Facility				
4-5-star hotel	100 rooms	Hotel Industry	1 space per 20m ² of net public area + 1 space per bedroom + 6 spaces for drive-in bottle shop	1 space per 100m ² net floor area
Conference and wedding facility	100 guests	Community meeting and entertainment - conference	1 space per 20m ² of public area or 1 space per 4 seats, whichever is greater	1 space per 50m ² net floor area or 1 space per 40 seats, whichever is greater
Bar	N/A	Food services	1 space per 15m ² net floor area + 6 queuing spaces for drive through	1 space per 75m ² net floor area
Café	N/A			
Education and training facility	25 students	Educational and occasional care	1 space per employee + 1 space per 6 tertiary or training students	1 space per 5 staff and students

Use	Quantity	Parking Use Name	Car Parking Rate	Bicycle Parking Rate
Retirement Village				
Specialist aged care facility	45 beds	N/A		
Independent living units	45 units	N/A		
Health and Wellbeing				
Health and wellbeing retreat	N/A	Community meeting and entertainment - conference	1 space per 20m ² of public area or 1 space per 4 seats, whichever is greater	1 space per 50m ² net floor area or 1 space per 40 seats, whichever is greater
Eco Accommodation				
Eco resort accommodation	20 villas	Visitor Accommodation	1 space per unit or 1 space per 4 beds, whichever is greater	1 space per 10 beds
Sustainability, Education and Artisan Hub				
Café	N/A	Food services	1 space per 15m ² net floor area + 6 queuing spaces for drive through	1 space per 75m ² net floor area
Restaurant	N/A			
Cellar door	N/A	Educational and occasional care	1 space per employee + 1 space per 6 tertiary or training students	1 space per 5 staff and students
Studios	N/A			
Workshops	N/A			
Classroom facilities	N/A			

Use	Quantity	Parking Use Name	Car Parking Rate	Bicycle Parking Rate
Northern Tasmanian Demonstration Farm and Agribusiness Facility				
Organic co-op store	N/A	Retail and hire	1 space per 20m ² net floor area	1 space per 100m ² net floor area
Plant nursery	N/A			
Farm workshop	N/A	Service Industry	1 space per 80m ² or 2 spaces per 3 employees, whichever is greater	1 space per 5 employees
Café	N/A	Food services	1 space per 15m ² net floor area + 6 queuing spaces for drive through	1 space per 75m ² net floor area
Childcare Centre				
Childcare centre	N/A	Educational and occasional care	1 space per employee + 1 space per 6 tertiary or training students	1 space per 5 staff and students
AFL/Cricket Oval				
AFL/cricket oval	N/A	Sportsground	1 space per 5 spectator places and a drop-off and pickup area	1 space per 50 spectator places
Botanical Gardens				
Botanical gardens	N/A	N/A		
Neighbourhood Parklands and Gardens				
Linear neighbourhood parkland	N/A	N/A		
Ornamental garden	N/A	N/A		
Native garden	N/A	N/A		



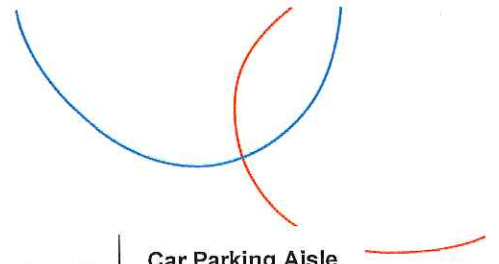
5.2 Car Parking Dimensional Requirements

The car parking layouts provided throughout the development are required to comply with the *Australian Standard for Off Street Car Parking (AS/NZS2890.1:2004 and AS/NZS2890.6:2009)* car parking requirements. The Australian Standard car parking requirements for 90-degree parking for the various uses are shown in Table 32.

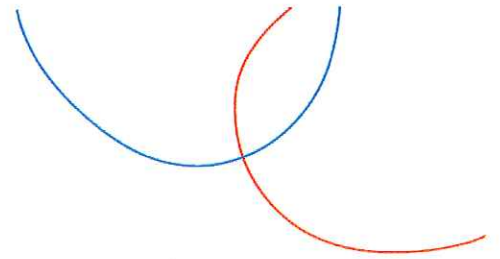
It is noted that this table is included to provide guidance regarding car parking dimensional requirements for the overall development.

Table 32: Car Parking Dimension Requirements

Use	Australian Standard User Class	Car Parking Width	Car Parking Length	Car Parking Aisle Width
Hotel and Conference Facility				
4.5-star hotel	2	2.5m	5.4m	5.8m
Conference and wedding facility				
Bar	3	2.6m	5.4m	5.8m
Café				
Education and training facility	2	2.5m	5.4m	5.8m
Retirement Village				
Specialist aged care facility	1A	2.4m	5.4m	5.8m
Independent living units				
Health and Wellbeing				
Health and wellbeing retreat	1A	2.4m	5.4m	5.8m
Eco Accommodation				
Eco resort accommodation	1A	2.4m	5.4m	5.8m
Sustainability, Education and Artisan Hub				
Café	3	2.6m	5.4m	5.8m
Restaurant				
Cellar door				
Studios	2	2.5m	5.4m	5.8m
Workshops				
Classroom facilities				



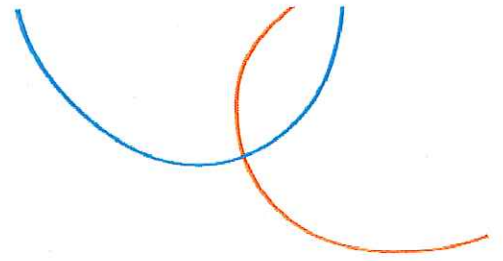
Use	Australian Standard User Class	Car Parking Width	Car Parking Length	Car Parking Aisle Width
Northern Tasmanian Demonstration Farm and Agribusiness Facility				
Organic co-op store	3	2.6m	5.4m	5.8m
Plant nursery				
Farm workshop	2	2.5m	5.4m	5.8m
Café	3	2.6m	5.4m	5.8m
Childcare Centre				
Childcare centre	1	2.4m	5.4m	6.2m
AFL/ Cricket Oval				
AFL/ cricket oval	2	2.5m	5.4m	5.8m
Botanical Gardens				
Botanical gardens	2	2.5m	5.4m	5.8m
Neighbourhood Parklands and Gardens				
Linear neighbourhood parkland	2	2.5m	5.4m	5.8m
Ornamental garden				
Native garden				



6. Conclusion

A TIA has been undertaken for the Ridgeside Lane Development in Evandale. The TIA assesses the level of development that can be built with traffic using the existing Evandale Road network to access the development, taking into consideration impacts to the safety, function and amenity of the existing Evandale road network. The analysis and discussions presented in this report can be summarised as follows:

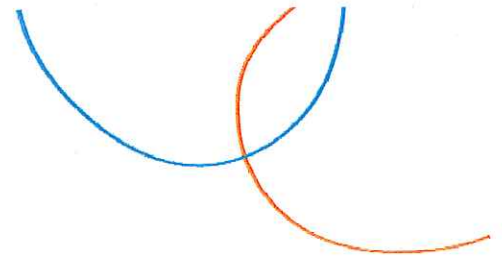
- There is spare capacity to accommodate an additional 1,560 vehicle movements on White Hills Road and Barclay Street, which is equivalent to approximately 211 residential lots
- All modelled intersections in Evandale continue to operate with minimal queues and delays after 211 lots are developed
- Logan Road, to the east of No. 58, is currently carrying higher traffic volumes than the road's capacity due to its narrow width, Traders in Purple are committed to widening Logan Road 0.7m up to the eastern site boundary by 0.7m to provide a 6.0m road width and subsequently significant additional road capacity
- With the proposed widening of Logan Road, both Logan Road and Russell Street have spare capacity to accommodate the proposed 17 lots
- Ridgeside Lane currently provides access to a small number of properties and has a single travel lane. There is sufficient space within the road reservation to widen Ridgeside Lane to accommodate the expected vehicle movements that would be generated by the development
- Parking for the proposed development will need to be provided in accordance with the *Northern Midlands Council Interim Planning Scheme 2013*
- All provided parking spaces will need to comply with the *Australian Standard for Off Street Car Parking (AS/NZS2890.1:2004 and AS/NZS2890.6:2009)* car parking requirement.



Appendix A



Development Masterplan



Appendix B



Existing Conditions SIDRA Results – Weekday

MOVEMENT SUMMARY

▽ Site: 101 [High Street/ Cambock Lane Intersection - Existing Weekday AM Peak]

8:30-9:30

Site Category: (None)

Giveaway / Yield (Two-Way)

Movement Performance - Vehicles												
Mov ID	Turn	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Back of Queue Distance m	Prop. Queued	Effective Stop Rate	Aver No. Cycles	Average Speed km/h
South: High Street												
5	T1	169	10.0	0.094	0.0	LOS A	0.0	0.1	0.01	0.01	0.01	59.9
6	R2	2	2.0	0.094	5.9	LOS A	0.0	0.1	0.01	0.01	0.01	53.6
Approach		172	9.9	0.094	0.1	NA	0.0	0.1	0.01	0.01	0.01	59.8
East: Cambock Lane												
7	L2	2	2.0	0.001	4.8	LOS A	0.0	0.0	0.21	0.47	0.21	49.2
9	R2	8	2.0	0.006	5.0	LOS A	0.0	0.1	0.21	0.55	0.21	48.8
Approach		11	2.0	0.006	5.0	LOS A	0.0	0.1	0.21	0.53	0.21	48.9
North: High Street												
10	L2	7	2.0	0.069	5.6	LOS A	0.0	0.0	0.00	0.03	0.00	57.9
11	T1	119	10.0	0.069	0.0	LOS A	0.0	0.0	0.00	0.03	0.00	59.6
Approach		126	9.5	0.069	0.3	NA	0.0	0.0	0.00	0.03	0.00	59.5
All Vehicles		308	9.5	0.094	0.3	NA	0.0	0.1	0.01	0.04	0.01	59.2

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

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: 101 [High Street/ Barclay Street Intersection - Existing Weekday AM Peak]

8:30-9:30

Site Category: (None)

Giveaway / Yield (Two-Way)

Movement Performance - Vehicles												
Mov ID	Turn	Demand Flows Total veh/h	Flows HV %	Deg Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Back of Queue Distance m	Prop. Queued	Effective Stop Rate	Aver No. Cycles	Average Speed km/h
South: High Street												
5	T1	99	10.0	0.065	0.1	LOS A	0.1	0.9	0.10	0.10	0.10	58.7
6	R2	21	10.0	0.065	6.0	LOS A	0.1	0.9	0.10	0.10	0.10	52.5
Approach		120	10.0	0.065	1.1	NA	0.1	0.9	0.10	0.10	0.10	57.5
East: Barclay Street												
7	L2	15	10.0	0.008	4.8	LOS A	0.0	0.3	0.16	0.49	0.16	49.0
9	R2	72	10.0	0.054	5.0	LOS A	0.1	0.9	0.18	0.56	0.18	48.5
Approach		86	10.0	0.054	5.0	LOS A	0.1	0.9	0.18	0.55	0.18	48.6
North: High Street												
10	L2	56	10.0	0.069	5.7	LOS A	0.0	0.0	0.00	0.27	0.00	55.6
11	T1	67	10.0	0.069	0.0	LOS A	0.0	0.0	0.00	0.27	0.00	57.6
Approach		123	10.0	0.069	2.6	NA	0.0	0.0	0.00	0.27	0.00	56.7
All Vehicles		329	10.0	0.069	2.7	NA	0.1	0.9	0.08	0.28	0.08	54.6

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

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.