



SECTION 96A OF THE PLANNING AND ENVIRONMENT ACT 1987

Appendix F Traffic Impact Assessment

PREPARED FOR 108 & 110 PARR STREET PTY LTD

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SPOT
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Traffic Engineering

Proposed Planning Scheme Amendment
Planning Permit for Residential Subdivision
108 - 110 Parr Street Leongatha
Traffic Impact Assessment



1 Introduction and Scope

Rural Subdivision Specialists is seeking a Planning Scheme Amendment to rezone land located on the southern side of Parr Street in Leongatha, and a Planning Permit to allow subdivision of the subject land. This report provides an assessment of the traffic and transport implications of the proposal, and concludes that, subject to conditions, there are no transport or traffic engineering reasons for refusal of either the rezoning or the issue of a planning permit as requested.

2 The Subject Land and Planning Scheme Zones

Figure 1 shows the subject land, currently included in the Farming Zone of the South Gippsland Planning Scheme, and the extent of the land under the control of Rural Subdivision Specialists.

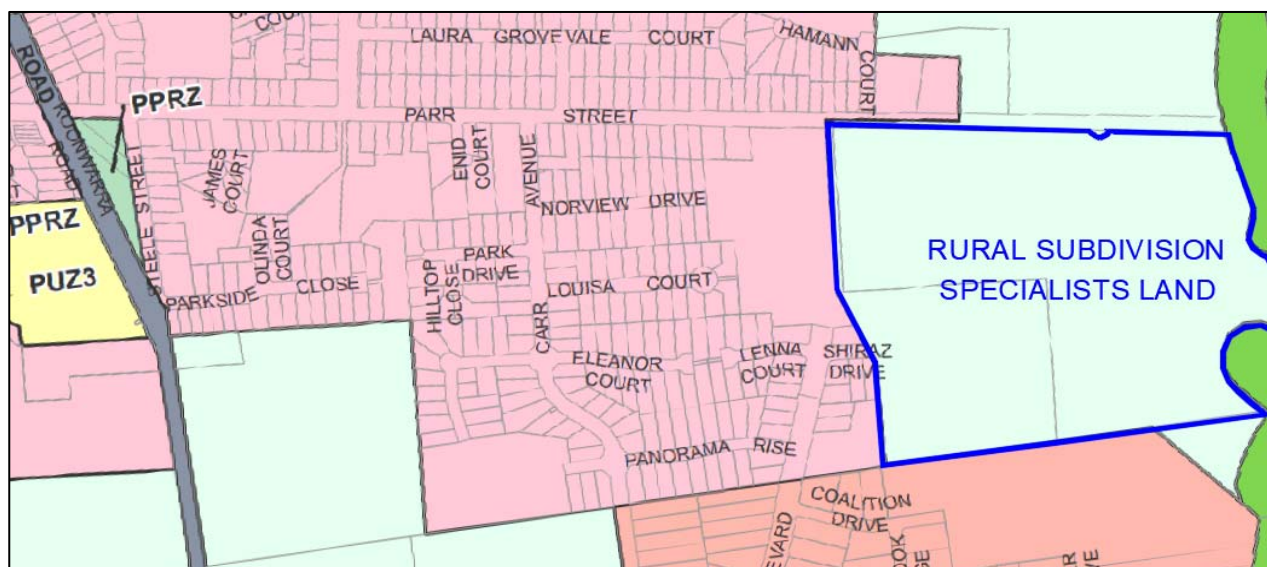


FIGURE 1 : THE SUBJECT LAND SHOWN IN PART OF SOUTH GIPPSLAND PLANNING SCHEME ZONE MAP

The subject land is bounded to the east by Public Conservation and Resource Zone, to the south mainly by the Low Density Residential Zone and a small abuttal to Farming Zone land, to the west by General Residential Zoned land, and by Parr Street to the north.

2 Strategic Transport Context

The South Gippsland Planning Scheme (SGPS) at Clause 21.12 sets out requirements for rezoning and development in Leongatha. The Leongatha Structure Plan is included in that section of the SGPS, and is the basis of the Southern Leongatha Outline Development Plan (ODP) which has been applied to guide development of land in the vicinity of the subject property. In all relevant planning documents the subject area is designated for “future urban residential development” or similar, subject to analysis of environmental factors particularly including flooding and related matters.

Clause 21.12 sets out requirements for applications for rezoning or development including that traffic impacts must be addressed, and that any development agreements are to address improvements to South Gippsland Highway intersections including the Parr Street intersection.

Record

No.	Author	Reviewed/Approved	Description	Date
1.	J. Higgs	D. Hancox	Proposed Subdivision Parr Street Leongatha	02/05/2022
2.	J. Higgs	D. Hancox	Amended Plan	16/11/23

The subject land is most of Area K as noted in the South Leongatha Structure Plan (SLSP) and as copied to the diagram at Figure 2 below.

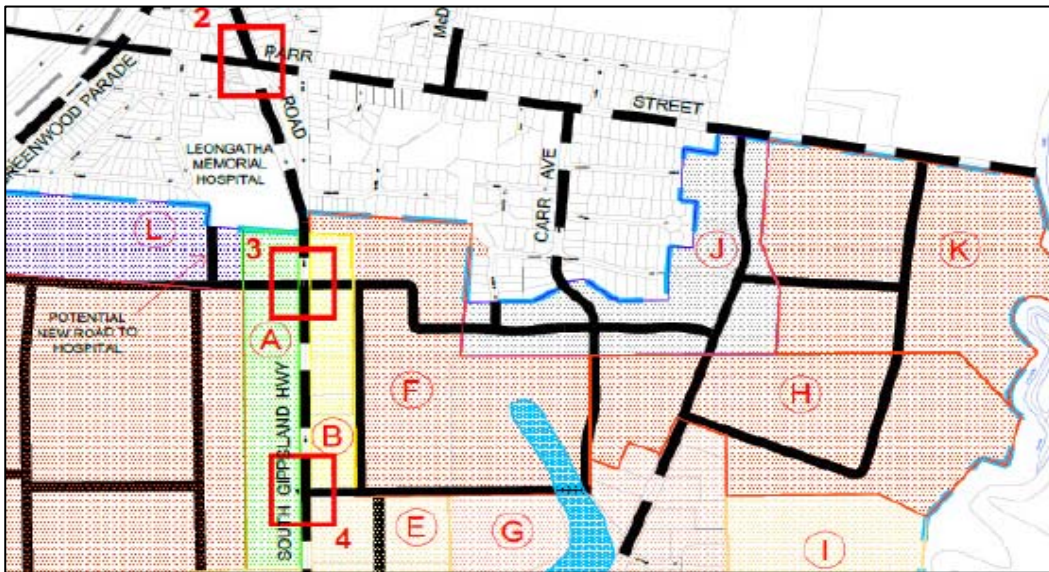


FIGURE 2 : COPY OF INDICATIVE ROAD NETWORK AND LAND USE PLAN FROM SLSP

The intersection of Parr Street at the South Gippsland Highway is marked point 2 in Figure 2.

2 The Proposed Subdivision Plan

Figure 3 shows the proposed plan for the subdivision. 171 lots are indicated.

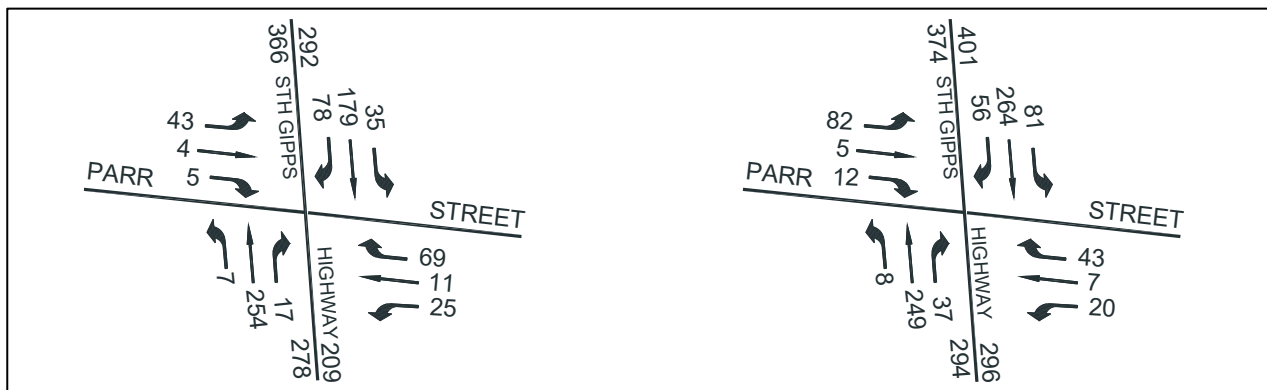


FIGURE 3 : PROPOSED PLAN OF SUBDIVISION

3 Existing Traffic Facilities and Conditions

3.1 Traffic Counts

On 23 February and 06 April 2022 TTM Consulting (Vic) Pty Ltd conducted traffic count at the intersection of Parr Street and South Gippsland Highway (SGH) between 7:30 and 9:15 AM and between 4:00 and 5:40 PM. The AM peak hour was identified as 8:00 to 9:00, and the PM peak hour was between 4:10 and 5:10 PM. The recorded vehicle movements in those hours are set out at Figure 4.



AM PEAK HOUR VEHICLE MOVEMENTS

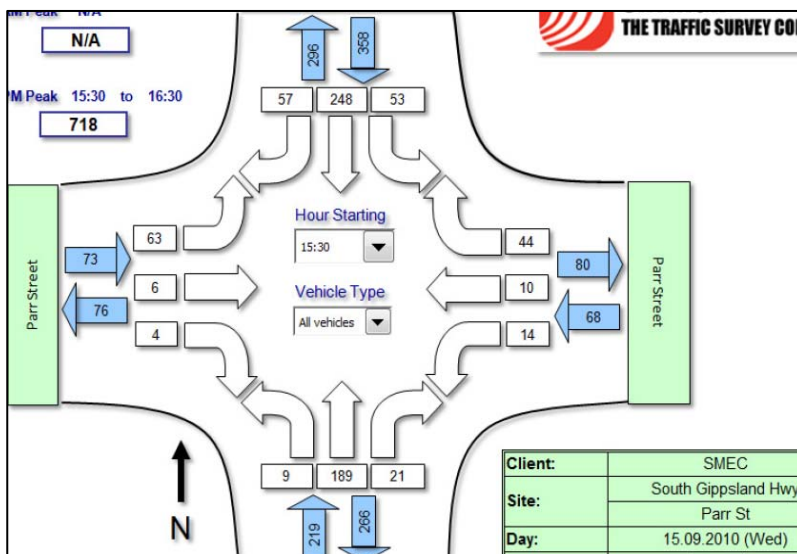
PM PEAK HOUR VEHICLE MOVEMENTS

FIGURE 4:

Total AM and PM peak hour traffic on Parr Street is around 160 and 190 vehicle movements respectively. That indicates a daily volume of around 1,750 vehicle movements on the basis that the peak hour represent around 10% of total daily traffic.

North of Parr Street the AM and PM peak hour traffic volumes on South Gippsland Highway were 658 and 775 vehicle movements respectively, indicating a daily volume of around 8,000 vehicle movements on the basis that peak period traffic is around 9% of total daily traffic.

The Traffic Impact Assessment Report provided by SMEC in association with the SLSP records a PM peak hour traffic count at the intersection of Parr Street and South Gippsland Highway in 2010, as copied below



PM peak hour volume on SGH north of Parr Street was 664 vehicle movements. South of Parr Street the total volume was 485 vehicle movements per hour.

Parr Street east of SGH had 148 vehicle movements in the peak hour.

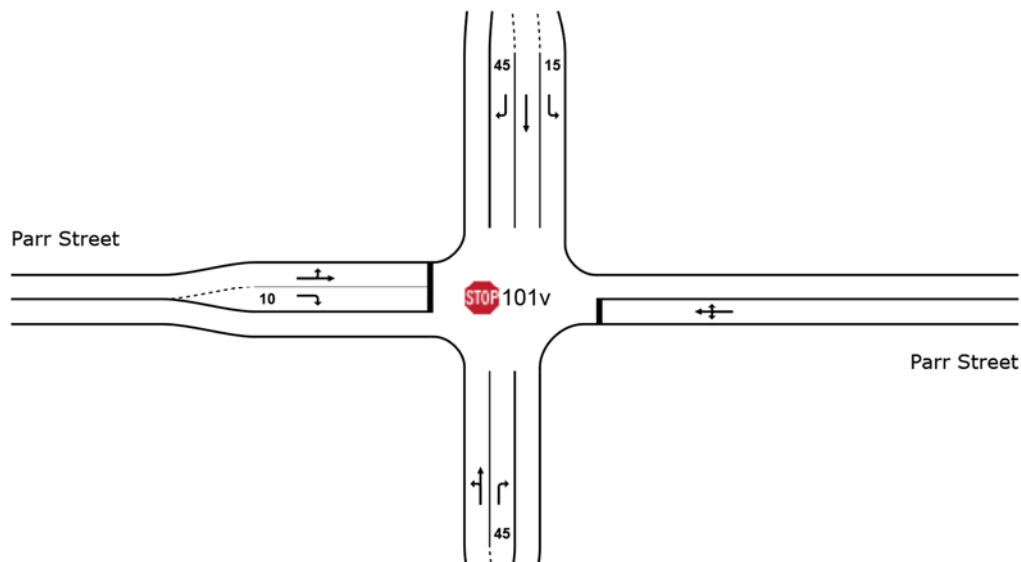
The SGH north of Parr Street increase is 17% over a 12 year period, or about 1.5% per annum, in line with typical expectations.

The TTM counts indicate traffic in Parr Street distributed approximately 65% to the peak direction in both AM and PM peak hours. The 2010 counts indicate approximately 55% to the peak direction.

The critical period for assessment for the impact of nearby residential development on the intersection is the AM peak hour due to the need for outbound movements to be absorbed by both northbound and southbound traffic streams on SGH. Consequently we will adopt the 65/35 distribution to the peak direction in this analysis.

SIDRA analysis of the performance of the intersection under current loadings is provided below.

SITE LAYOUT Parr Street at SGH Existing AM Peak 2022



LANE SUMMARY Parr Street at SGH Existing AM Peak

Lane Use and Performance													
	Demand Flows		Cap.	Deg.	Lane	Average	Level of	95% Back of Queue		Lane	Lane	Cap.	Prob.
	Total	HV		Satn	Util.	Delay	Service	Veh	Dist	Config	Length	Adj.	Block.
	veh/h	%	veh/h	v/c	%	sec			m		m	%	%
South: South Gippsland Highway													
Lane 1	275	0.0	1924	0.143	100	0.2	LOS A	0.1	0.4	Full	500	0.0	0.0
Lane 2	18	0.0	1157	0.015	100	6.3	LOS A	0.1	0.4	Short	45	0.0	NA
Approach	293	0.0		0.143		0.5	NA	0.1	0.4				
East: Parr Street													
Lane 1	111	0.0	394	0.280	100	15.5	LOS C	1.0	7.2	Full	500	0.0	0.0
Approach	111	0.0		0.280		15.5	LOS C	1.0	7.2				
North: South Gippsland Highway													
Lane 1	37	0.0	1857	0.020	100	5.5	LOS A	0.0	0.0	Short	15	0.0	NA
Lane 2	188	0.0	1939	0.097	100	0.0	LOS A	0.0	0.0	Full	500	0.0	0.0
Lane 3	82	0.0	1396	0.059	100	6.4	LOS A	0.3	1.8	Short	45	0.0	NA
Approach	307	0.0		0.097		2.4	NA	0.3	1.8				
West: Parr Street													
Lane 1	49	0.0	789	0.063	100	9.9	LOS A	0.2	1.5	Full	500	0.0	0.0
Lane 2	5	0.0	344	0.015	100	14.4	LOS B	0.0	0.3	Short	10	0.0	NA
Approach	55	0.0		0.063		10.4	LOS B	0.2	1.5				
Intersection	765	0.0		0.280		4.1	NA	1.0	7.2				

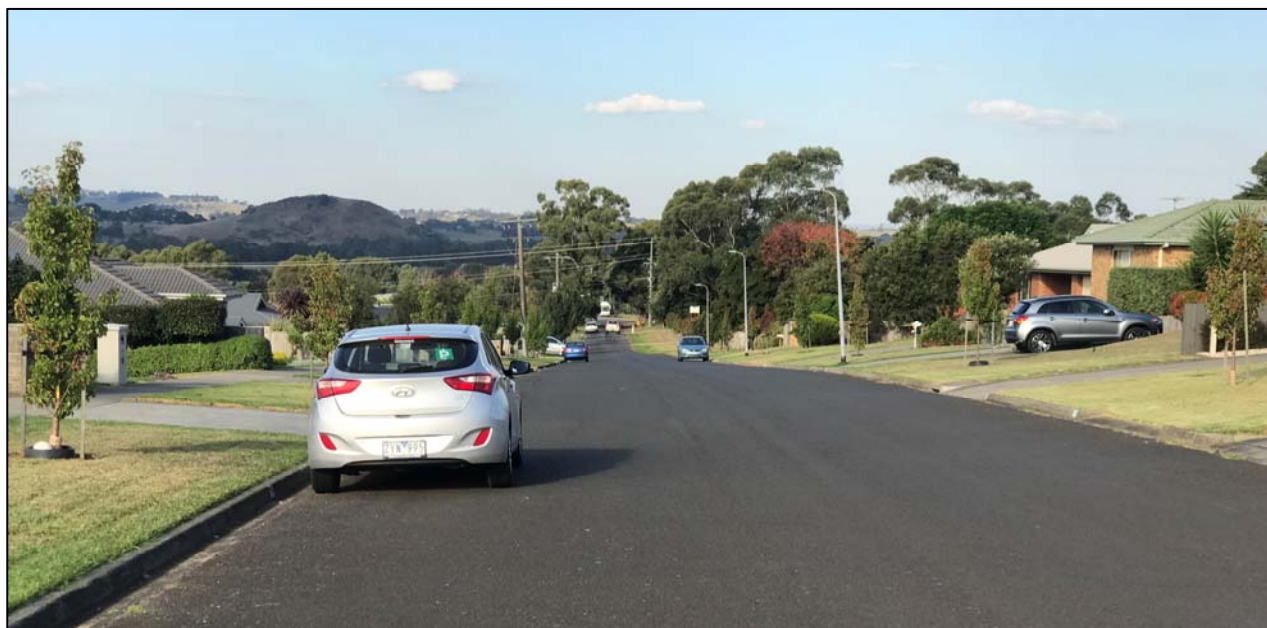
LANE SUMMARY Parr Street at SGH Existing PM Peak

Lane Use and Performance													
	Demand Total veh/h	Flows HV %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Average Delay sec	Level of Service	95% Back of Queue Veh	Queue Dist m	Lane Config	Lane Length m	Cap. Adj. %	Prob. Block. %
South: South Gippsland Highway													
Lane 1	271	9.8	1811	0.149	100	0.2	LOS A	0.1	0.5	Full	500	0.0	0.0
Lane 2	39	20.0	863	0.045	100	7.7	LOS A	0.2	1.4	Short	45	0.0	NA
Approach	309	11.1		0.149		1.1	NA	0.2	1.4				
East: Parr Street													
Lane 1	74	3.0	304	0.242	100	18.4	LOS C	0.8	5.8	Full	500	0.0	0.0
Approach	74	3.0		0.242		18.4	LOS C	0.8	5.8				
North: South Gippsland Highway													
Lane 1	85	3.0	1818	0.047	100	5.6	LOS A	0.0	0.0	Short	15	0.0	NA
Lane 2	278	5.0	1875	0.148	100	0.0	LOS A	0.0	0.0	Full	500	0.0	0.0
Lane 3	59	3.0	1357	0.043	100	6.5	LOS A	0.2	1.4	Short	45	0.0	NA
Approach	422	4.3		0.148		2.0	NA	0.2	1.4				
West: Parr Street													
Lane 1	92	3.0	765	0.120	100	10.3	LOS B	0.4	3.1	Full	500	0.0	0.0
Lane 2	13	3.0	283	0.045	100	17.1	LOS C	0.1	0.9	Short	10	0.0	NA
Approach	104	3.0		0.120		11.1	LOS B	0.4	3.1				
Intersection	909	6.4		0.242		4.1	NA	0.8	5.8				

The SIDRA analyses show Degree of Saturation (broadly the extent to which the capacity of the intersection is utilized under the demand flows) indicating substantial scope for accommodation of additional traffic, and queue lengths and delays well within acceptable limits.

3.2 Parr Street

Parr Street between SGH and property No. 99 has a kerbed and sealed carriageway 9.4 metres wide in a reservation of 20.1 metres width. There is footpath along one side.



3.3 Tarwin Ridge Boulevard

Tarwin Ridge Boulevard has a carriageway width of 7.3 metres located in a 24 metres wide reservation where it is constructed – south from a point approximately co-incident with the southern boundary of the subject land. It can be reasonably expected that this configuration will be continued north to Parr Street, as shown on the endorsed plans under Permit 2004/346/F. A 2.5 metres wide shared use path is proposed along the western side of Tarwin Ridge Boulevard in the section immediately west of the subject land.

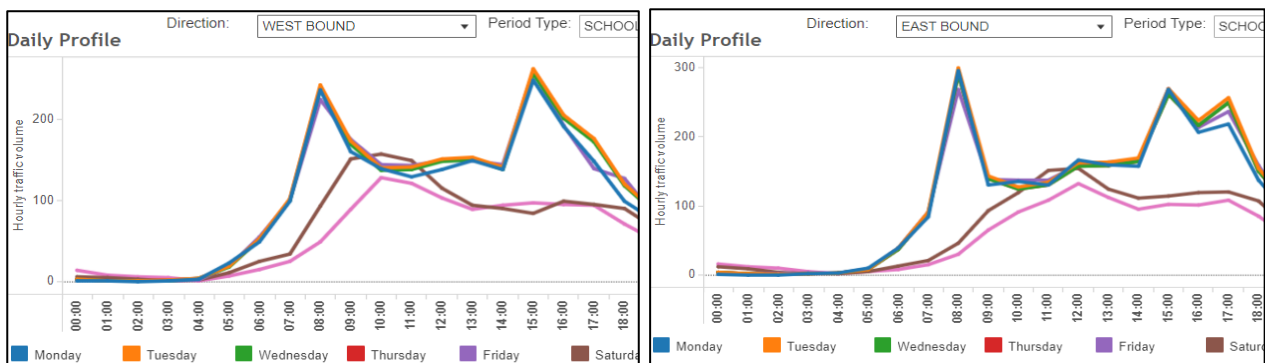
3.4 McDonald Street

McDonald Street has a carriageway width of about 10 metres in a reservation 20.1 metres wide and provides access for around 160 dwellings located along the street and in courts and minor streets connecting with McDonald Street, including 37 units in the Grange Retirement Village. At the northern end close to Ogilvy Street we estimate daily traffic at around 2,200 vehicle movements.

3.5 Ogilvy Street

Ogilvy Street has a wide carriageway with separate parking lanes and turn lanes in key locations in particular near the several schools that are present along the northern side of the street, and with generally two clear travel lanes for through movements. With traffic signal control at the intersection of Ogilvy Street and Bair Street the use of McDonald Street and Ogilvy Street for movement between the subject land and the Leongatha Town Centre is an attractive alternative to Parr Street and SGH.

The VicRoads portal shows traffic volumes for 2016 for Ogilvy Street east of Bair Street but not in a nominated location, as indicated in the following extracts from the website. Because of the volumes nominated we consider it highly likely that the values have been taken the SCATS system at the traffic signal controlled intersection at Bair Street.



Westbound AM peak hour volume is around 250 vehicles per hour and total peak hour volumes are around 550 vehicle movements in both AM and PM peaks. Figure 5 shows estimates of peak period turning movements at the McDonald Street intersection based on an extremely conservative extrapolation of the VicRoads recorded volumes to that intersection.

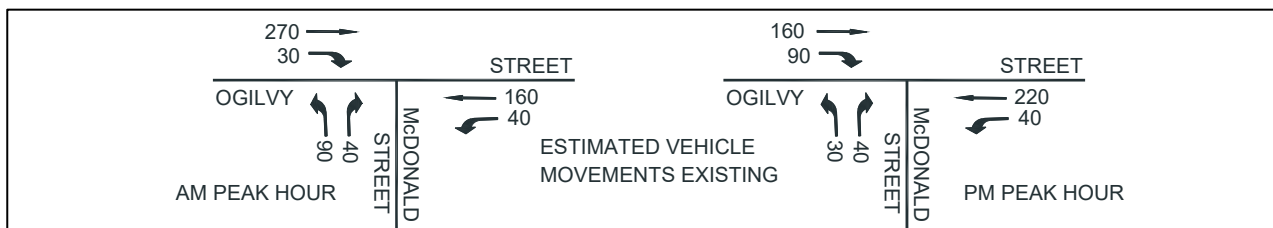


FIGURE 5:

4 Traffic Generation and Distribution to Street Network

To assess the traffic impact of the development within the area proposed for rezoning we consider it prudent to allow for traffic generated from currently approved development in the area relevant to the subject site.

The “Panorama Estate” and “Springs Estate” are both approved to significant extents but are only partially developed. Stages 5 – 8 of Springs Estate contain 52 lots. In Stages 1 – 4 there are around 12 vacant lots at present. Stages 10, 11, 13, 14, 15, 16 and 17 of Panorama Estate are not developed and include a total of 67 lots that are not developed. In summary we estimate that the traffic loading on the street network for which impacts should be assessed should be based in 171 lots in the proposed rezone/permit area and a further 135 lots currently vacant or in undeveloped stages of approved subdivisions, a total of 306 lots.

Copies of face sheets from the engineering drawings for both of those estates are appended to this report.

That may be conservative because in future further development west of the Panorama Estate will lead to a connection with SGH south of Parr Street as indicated on the indicative road network and land use plan from the SLSP pat reproduced at Figure 2 to this report. Consequently traffic from some of the areas described above will be likely to use that connection to SGH.

If IDM is used to estimate traffic generation the outcome will be 10 vehicle trips per day per dwelling. A more realistic estimate is around 8 daily trips per dwelling per day, but South Gippsland Shire will want the traffic estimates based on IDM, and thus the following analysis will be so based. The additional traffic on that basis will be around 3,000 daily vehicle movements.

We estimate that around 90% of traffic generated from the development of housing within the subdivision will reach the intersection of SGH and Parr Street or the intersection of McDonald Street and Ogilvy Street, with the distribution between those two connection points being 55% (1500 vehicle trips per day) to McDonald Street and 45% (1200 vehicle trips per day) to SGH via Parr Street. The remaining 10% is estimated to be distributed to and from the south and internally within neighbourhoods around Parr Street and Panorama Drive.

The net impact on Parr Street will be to increase the volume at the SGH approach from the current level of around 1,750 daily vehicle movements to around 3,000 daily vehicle movements, well within the capacity of the street and at an acceptable traffic based amenity level.

Parr Street will need to be constructed to an appropriate standard east of the current full construction form. That is addressed in Section 10 of this report.

On McDonald Street the net impact will be to increase the volume at the Ogilvy Street approach from the current level of around 2,200 daily vehicle movements to around 3,700 daily vehicle movements, also well within the capacity of the street and at an acceptable traffic based amenity level.

Clause 56.06-8 in the South Gippsland Planning Scheme indicates an acceptable amenity level for an Access Street Level 1 with 7.3 metre width carriageway at 3,000 daily vehicle trips. The form of both McDonald Street and Parr Street is of a higher order than Access Street Level 1, and consequently the impacts are acceptable.

5 External Intersection Traffic Loadings

To assess the traffic impacts at intersections peak hour movements are analysed. Peak period traffic impacts are very conservatively estimated on the basis of 0.85 peak hour trips per dwelling, leading to the following volumes at SGH/Parr Street intersection and McDonald Street/Ogilvy Street intersection:

AM Peak Hour at Parr Street/SGH

- Outbound $0.65 \times 0.85 \times 300 \times 0.4 = 66 \text{ vph}$
Distribution based on current turning movement count is

to north	43 vph
to south	15vph
to west	7 vph
- Inbound $0.35 \times 0.85 \times 300 \times 0.4 = 36 \text{ vph}$
Distribution based on current turning movement count is

from north	23 vph
from south	10 vph
from west	3 vph

AM Peak Hour at McDonald Street/Ogilvy Street

- Outbound $0.65 \times 0.85 \times 300 \times 0.5 = 83 \text{ vph}$

to west	38 vph
to east	45 vph
- Inbound $0.35 \times 0.85 \times 300 \times 0.5 = 45 \text{ vph}$

from west	25 vph
from east	20 vph

PM Peak Hour at Parr Street/SGH

- Outbound $0.35 \times 0.85 \times 300 \times 0.4 = 36 \text{ vph}$
Distribution based on current turning movement count is

to north	23 vph
to south	10 vph
to west	3 vph
- Inbound $0.65 \times 0.85 \times 300 \times 0.4 = 66 \text{ vph}$
Distribution based on current turning movement count is

from north	43 vph
from south	10 vph
from west	3vph

PM Peak Hour at McDonald Street/Ogilvy Street

- Outbound $0.35 \times 0.85 \times 300 \times 0.5 = 45 \text{ vph}$

to west	20 vph
to east	25 vph
- Inbound $0.65 \times 0.85 \times 300 \times 0.5 = 83 \text{ vph}$

from west	68 vph
from east	15 vph

Note The distribution of movements at the McDonald Street/Ogilvy Street intersection is notional, based on the significant presence of schools and TAFE to the east of the intersection. The actual distribution is not critical because of the low base volumes involved, as is demonstrated below.

Figure 6 and Figure 7 show the peak period traffic generation estimates from 300 dwellings at the intersections described above.

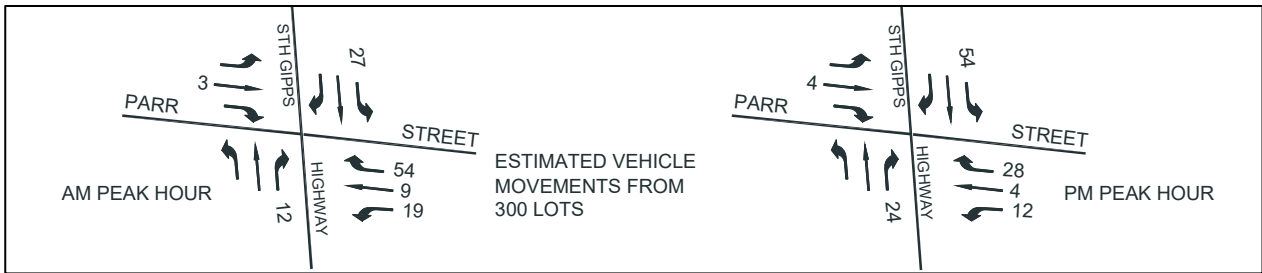


FIGURE 6

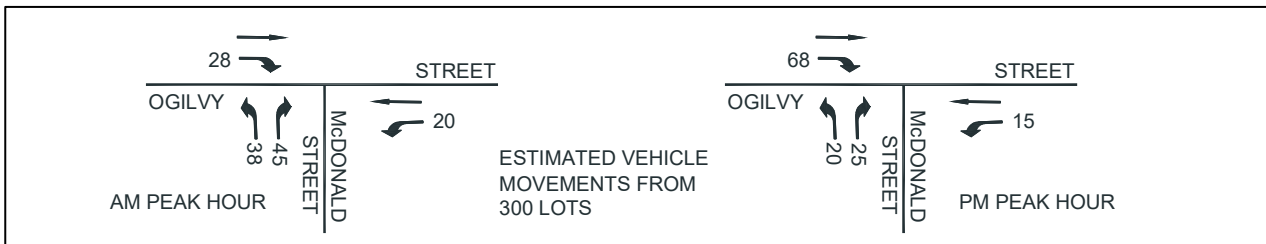


FIGURE 7

6 Traffic Impacts at South Gippsland Highway

It is typical to allow for 10 years of underlying growth in base traffic volumes when estimating impacts at intersections on roads under the jurisdiction of the Department of Transport. In this case we have a measured growth rate of approximately 1.5% per annum. To be appropriately conservative an increase of 20% in base volumes during the peak hours will be applied to allow for growth. That increase will be applied to all movements on the SGH and on Parr Street west of the intersection, as shown in Figure 8.

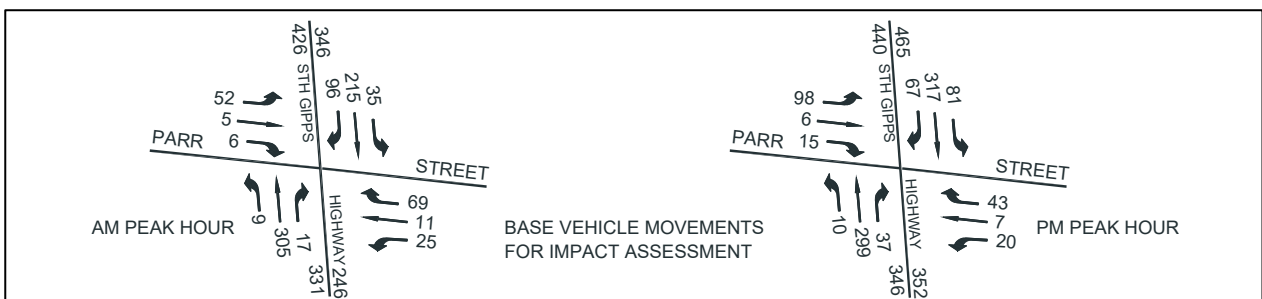


FIGURE 8

The traffic generation estimates from the proposed development as shown in Figure 6 are added to the "Design Base" vehicle movements shown in Figure 8 to determine the values used in the impact assessment as shown in Figure 9.

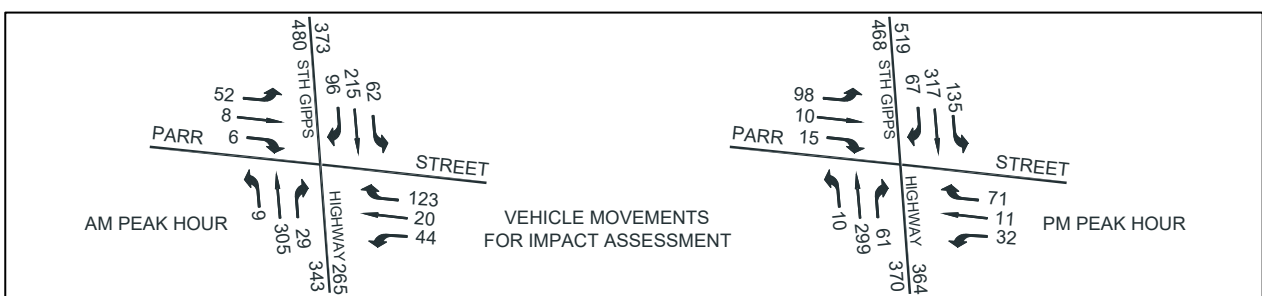


FIGURE 9

The SIDRA program is then applied to assess the operation of the intersection under the “design” traffic loadings, with outputs summarized in the Lane Summary tables as follows:

LANE SUMMARY Site Parr Street at SGH Assessment AM Peak

Lane Use and Performance													
	Demand Total veh/h	Flows HV %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Average Delay sec	Level of Service	95% Back Veh	Queue Dist m	Lane Config	Lane Length m	Cap. Adj. %	Prob. Block. %
South: South Gippsland Highway													
Lane 1	331	0.0	1918	0.172	100	0.2	LOS A	0.1	0.6	Full	500	0.0	0.0
Lane 2	26	0.0	1079	0.024	100	6.6	LOS A	0.1	0.7	Short	45	0.0	NA
Approach	357	0.0		0.172		0.7	NA	0.1	0.7				
East: Parr Street													
Lane 1	197	0.0	310	0.634	100	25.1	LOS D	3.5	24.3	Full	500	0.0	0.0
Approach	197	0.0		0.634		25.1	LOS D	3.5	24.3				
North: South Gippsland Highway													
Lane 1	65	0.0	1857	0.035	100	5.5	LOS A	0.0	0.0	Short	15	0.0	NA
Lane 2	226	0.0	1936	0.117	100	0.0	LOS A	0.0	0.0	Full	500	0.0	0.0
Lane 3	103	0.0	1316	0.078	100	6.7	LOS A	0.3	2.4	Short	45	0.0	NA
Approach	395	0.0		0.117		2.7	NA	0.3	2.4				
West: Parr Street													
Lane 1	63	0.0	651	0.097	100	11.1	LOS B	0.3	2.3	Full	500	0.0	0.0
Lane 2	6	0.0	265	0.024	100	17.7	LOS C	0.1	0.5	Short	10	0.0	NA
Approach	69	0.0		0.097		11.7	LOS B	0.3	2.3				
Intersection	1018	0.0		0.634		6.9	NA	3.5	24.3				

LANE SUMMARY Site: Parr Street at SGH Assessment PM Peak

	Demand Total veh/h	Flows HV %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Average Delay sec	Level of Service	95% Back Veh	Queue Dist m	Lane Config	Lane Length m	Cap. Adj. %	Prob. Block. %
South: South Gippsland Highway													
Lane 1	325	9.8	1808	0.180	100	0.2	LOS A	0.1	0.6	Full	500	0.0	0.0
Lane 2	64	20.0	745	0.086	100	8.6	LOS A	0.3	2.7	Short	45	0.0	NA
Approach	389	11.5		0.180		1.6	NA	0.3	2.7				
East: Parr Street													
Lane 1	120	3.0	212	0.567	100	31.7	LOS D	2.4	17.5	Full	500	0.0	0.0
Approach	120	3.0		0.567		31.7	LOS D	2.4	17.5				
North: South Gippsland Highway													
Lane 1	142	3.0	1818	0.078	100	5.6	LOS A	0.0	0.0	Short	15	0.0	NA
Lane 2	334	5.0	1872	0.178	100	0.0	LOS A	0.0	0.0	Full	500	0.0	0.0
Lane 3	71	3.0	1276	0.055	100	6.7	LOS A	0.2	1.7	Short	45	0.0	NA
Approach	546	4.2		0.178		2.3	NA	0.2	1.7				
West: Parr Street													
Lane 1	114	3.0	606	0.187	100	11.9	LOS B	0.7	4.7	Full	500	0.0	0.0
Lane 2	16	3.0	207	0.076	100	22.0	LOS C	0.2	1.6	Short	10	0.0	NA
Approach	129	3.0		0.187		13.1	LOS B	0.7	4.7				
Intersection	1185	6.3		0.567		6.2	NA	2.4	17.5				

This is an adequate operational scenario, with ample spare capacity, and demonstration that no works are necessary at the subject intersection.

7 Traffic Impacts at Ogilvy Street

The use of traffic data from the VicRoads portal for Ogilvy Street as a basis for impact assessment at the McDonald Street intersection gives a substantial allowance for growth in volumes at the actual site, given that the recorded volumes are for a location well west of the site. Traffic volumes at the site will be well below those recorded. Accordingly the base volumes for assessment are those as shown in Figure 5.

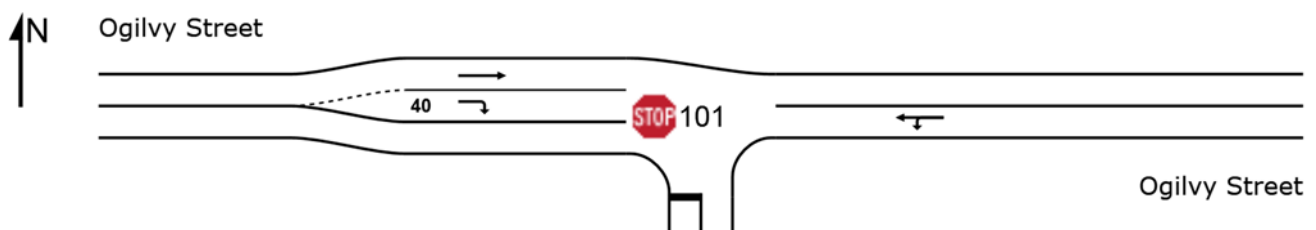
The traffic generation estimates from the proposed development as shown in Figure 6 are added to the vehicle movements shown in Figure 5 to determine the values used in the impact assessment as shown in Figure 10.



FIGURE 10

The SIDRA program is then applied to assess the operation of the intersection under the “design” traffic loadings, with outputs summarized in the Lane Summary tables as follows:

SITE LAYOUT Site: McDonald Street at Ogilvy Street



LANE SUMMARY Site: McDonald Street at Ogilvy Street AM Peak

Lane Use and Performance													
	Demand Flows Total veh/h	HV %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Average Delay sec	Level of Service	95% Back of Queue Veh	95% Back of Queue Dist m	Lane Config	Lane Length m	Cap. Adj. %	Prob. Block. %
South: McDonald Street													
Lane 1	224	0.0	881	0.255	100	9.8	LOS A	1.0	7.0	Full	500	0.0	0.0
Approach	224	0.0		0.255		9.8	LOS A	1.0	7.0				
East: Ogilvy Street													
Lane 1	253	0.0	1918	0.132	100	1.9	LOS A	0.0	0.0	Full	500	0.0	0.0
Approach	253	0.0		0.132		1.9	NA	0.0	0.0				
West: Ogilvy Street													
Lane 1	284	0.0	1938	0.147	100	0.0	LOS A	0.0	0.0	Full	500	0.0	0.0
Lane 2	61	0.0	1428	0.043	100	6.2	LOS A	0.2	1.3	Short	40	0.0	NA
Approach	345	0.0		0.147		1.1	NA	0.2	1.3				
Intersection	822	0.0		0.255		3.7	NA	1.0	7.0				

LANE SUMMARY Site: McDonald Street at Ogilvy Street PM Peak

Lane Use and Performance													
	Demand Total veh/h	Flows HV %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Average Delay sec	Level of Service	95% Back of Veh	Queue Dist m	Lane Config	Lane Length m	Cap. Adj. %	Prob. Block. %
South: McDonald Street													
Lane 1	121	0.0	754	0.161	100	10.2	LOS B	0.6	3.9	Full	500	0.0	0.0
Approach	121	0.0		0.161		10.2	LOS B	0.6	3.9				
East: Ogilvy Street													
Lane 1	289	0.0	1931	0.150	100	1.1	LOS A	0.0	0.0	Full	500	0.0	0.0
Approach	289	0.0		0.150		1.1	NA	0.0	0.0				
West: Ogilvy Street													
Lane 1	168	0.0	1932	0.087	100	0.0	LOS A	0.0	0.0	Full	500	0.0	0.0
Lane 2	166	0.0	1375	0.121	100	6.5	LOS A	0.6	3.9	Short	40	0.0	NA
Approach	335	0.0		0.121		3.2	NA	0.6	3.9				
Intersection	745	0.0		0.161		3.5	NA	0.6	3.9				

With very low Degree of Saturation and negligible queues and delays predicted for both AM and PM peak periods the impacts at this intersection are of no significant consequence.

8. Subdivision Design Considerations

Local traffic generation will be around 1360 daily vehicle movements (based on 8 trips per day per dwelling) or 1710 trips based on IDM. Some externally generated traffic is likely to pass through the site from Area H as shown in Figure 2, and some of the subject site generated traffic will use Tarwin Ridge Boulevard and potentially other local streets.

Figure 11 provides our estimate of daily vehicle movements on the street network local to the subject land at full development of the subject land and the adjacent Springs Estate and Panorama Estate.

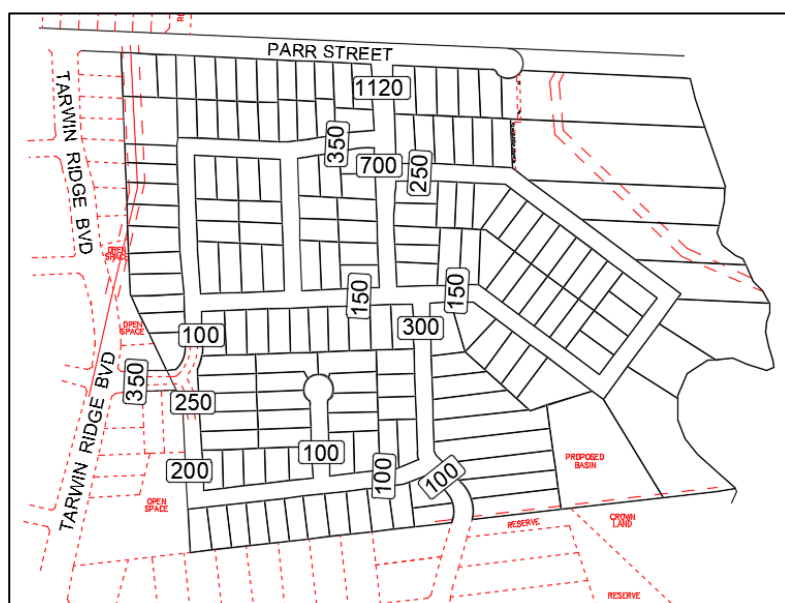


FIGURE 11 : ESTIMATED DAILY VEHICLE MOVEMENTS ON STREETS

South Gippsland Shire will apply the provisions of IDM to determination of appropriate street form within the subdivision, but Clause 56.06-8 of the South Gippsland Planning Scheme is a statutory control.

Our design preference for all streets with houses to be located on both sides and daily traffic at less than 2000 vehicle movements is that the typical form is per access Street Level 1 in Clause 56.06-8. That is a street with 1.5 m footpaths on both sides, carriageway 7.3 metres wide and reservation width of 16 metres. That will be the case for all streets shown in the plan proposed.

The single street connection to Parr Street is shown with reservation width of 20 metres. That will allow some feature land scaping in the entry area, but additional carriageway width is not necessary.

9. Parr Street along Site Frontage

Parr Street along the site frontage is not currently constructed to an appropriate standard for development of the land, as is the case along the frontage of that part of the Panorama Estate that fronts Parr Street. Traffic volumes will be low enough such that a carriageway of 7.3 metres width will be adequate east of the existing full width construction given that eastward extension will not occur because of topographical and drainage related reasons.

If a transition from 9.4 metres of carriageway width to 7.3 metres width is to occur it should be arranged such that the carriageway widens in the direction travel, and the transition should be reasonably abrupt so that the street form is clearly apparent to the user.

A narrower carriageway would allow design of driveways and footpaths more scope to deal with the level differences across the reservation than would be the case with continuation of the existing carriageway of 9.4 metres width.

10. Summary and Conclusions

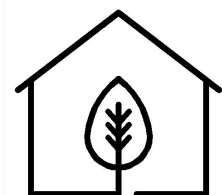
Analysis of the plan and the expected traffic impacts of the development indicates that:

- The plan is generally as would be expected; with appropriate levels of connectivity and no concentrations of likely vehicle movements such that residential amenity would be impacted negatively beyond reasonable expectations.
- No ameliorating works are necessary at the intersection of Parr Street and South Gippsland Highway consequent to the subject development.
- No ameliorating works are necessary at the intersection of McDonald Street and Ogilvy Street consequent to the subject development.
- Appropriate traffic related amenity levels in both Parr Street and McDonald Street will not be exceeded consequent to the development of the land that is the subject of the rezoning proposal and the existing approved but undeveloped or vacant developed land in the vicinity of the subject land.

In conclusion we see no traffic engineering or related reasons for refusal of the sought Planning Scheme Amendment and permit to allow development of the subject land.



J. D Higgs

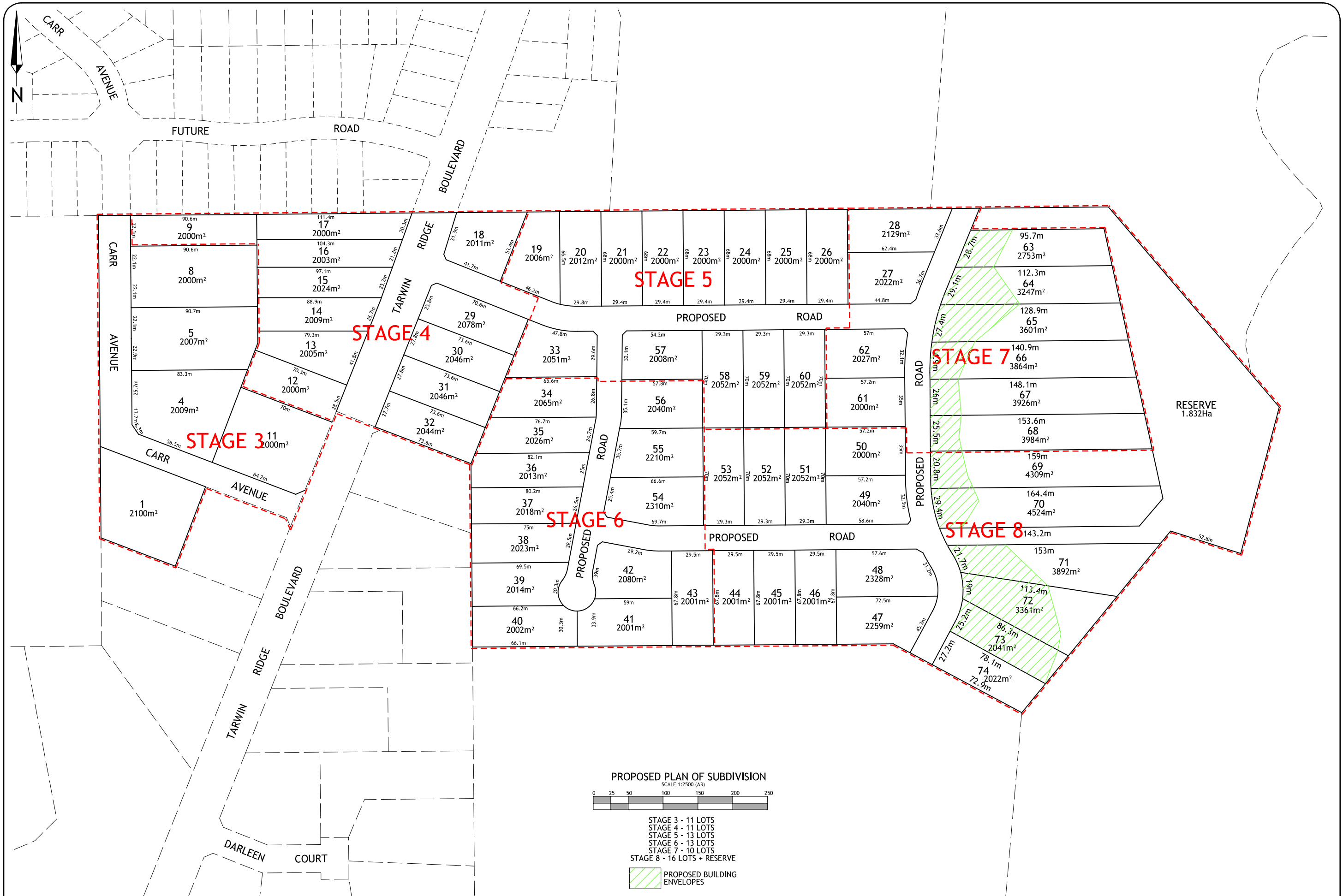


**RURAL SUBDIVISION
SPECIALISTS**

POTENTIAL SUBDIVISION DESIGN LAYOUT
108 & 110 PARR STREET LEONGATHA
PREPARED BY SAXIL TUXEN
Ph. 0428 858 060 e: saxil.jnr@ruralsubs.com.au
(Not to be reproduced or used without express permission)

- 1 in 100 FLOOD EXTENT PROVIDED BY WG CMA
- PROPOSED WETLAND / BASIN / EXISTING DAM
- DECLARED WATERWAY
- BUILDING ENVELOPE
- - - BUSHFIRE DEFENDABLE SPACE BOUNDARY

CONTOUR INTERVAL - 0.5m



E			
D			
C			
B			
A	6/1/2016	BUILDING ENVELOPES ADDED TO PLAN	MB
INDEX	DATE	REVISION	APPD.



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MUNICIPALITY:	SOUTH GIPPSLAND SHIRE COUNCIL	BES DRAWING NUMBER	REV
SCHEME	'SPRINGS ESTATE', LEONGATHA - STAGES 3-8 PROPOSED PLAN OF SUBDIVISION	14043/PPS	A
CLIENT:	BOAGS PROPERTIES PTY LTD	SHEET 1 OF 1	

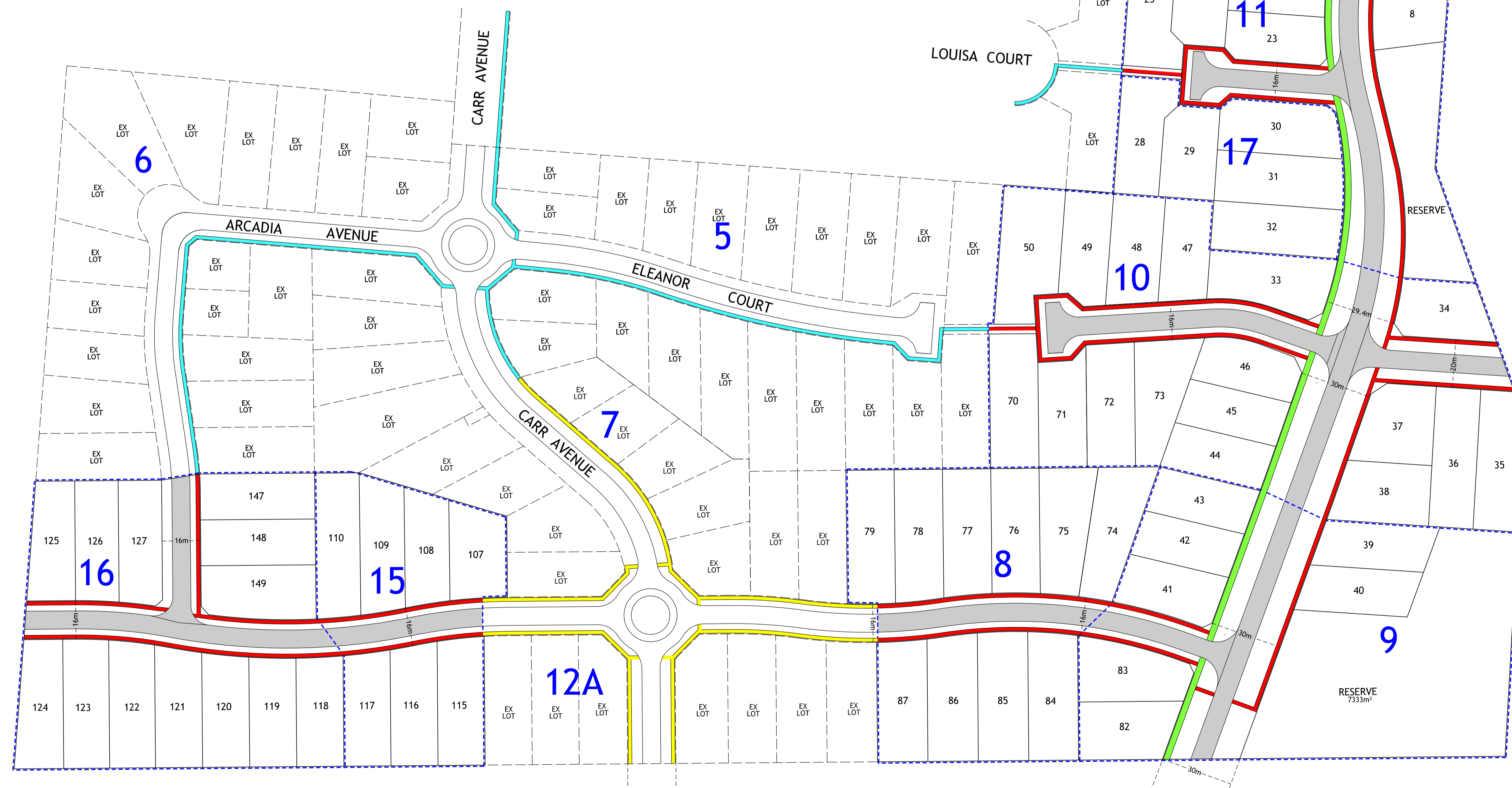


LEGEND

	EXISTING 1.4m WIDE FOOTPATH
	EXISTING 1.5m WIDE FOOTPATH
	PROPOSED 1.5m WIDE FOOTPATH
	PROPOSED 2.5m WIDE FOOTPATH

STAGING

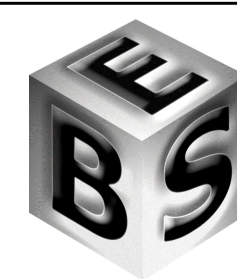
STAGE NUMBER	NUMBER OF LOTS
8	10
9	7
10	17
11	5
13	16
14	4
15	7
16	13
17	5
TOTAL	84



SOUTH GIPPSLAND SHIRE COUNCIL
Amended Endorsed Plan 1 of 1
Planning Permit Number 2004/346/F
Date Approved: 12/11/2019
Approved by: Tanya Cooper

OVERALL DEVELOPMENT PLAN
NOT TO SCALE

J	1.05.2019	AMENDED AS REQUESTED BY SOUTH GIPPSLAND SHIRE COUNCIL	JT
I	2.04.2019	AMENDED FOOTPATH ALIGNMENT FRONTING SOUTH EASTERN RESERVE	JT
H	6.02.2019	AMENDED ROAD RESERVE WIDTH OF TARWIN RIDGE BOULEVARD	MB
G	15.9.2017	STAGING ORDER REVISED AND ADDITIONAL STAGE ADDED	MB
F	16.8.2017	STAGING ORDER REVISED	MB
INDEX	DATE	REVISION	APPD.



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(PO BOX 865 WONTHAGGI VIC 3995)
P 03 5672 5777 E info@broseng.com.au

SGSC PLANNING PERMIT: 2010/231	
SURVEY	RCS
DESIGN	M.BROSNAN
CHECKED	B.WILSON

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SCHEME	PANORAMA ESTATE, LEONGATHA OVERALL DEVELOPMENT PLAN
CLIENT:	LOUISA PANORAMA PTY LTD

BES DRAWING No.	1148/ODP (J)
SHEET	1 OF 1