Spotto
CONSULTING
people-oriented traffic and transport solutions

Traffic Impact Assessment

Commercial/Residential Building and Multi-Storey Car Park

580-584 Smollett, Albury NSW

March 2020

Prepared by:

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For:

Zauner Construction

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P0027	A	13 March 2020	Draft	SWS
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CONTENTS

1 INTRODUCTION

Spotto Consulting have been engaged by Zauner Construction to complete a Traffic Impact Assessment. The study is in response to a proposed development at 580-584 Smollett Street, Albury. The development involves construction of an eight storey mixed use building on 580 Smollett Street (comprising a total of 4,414m^2 GFA of commercial space and 25 apartments), as well as a five storey car park on 584 Smollett Street (with 473 off-street parking spaces). Access to the site will continue to be via entry only off Smollett Street and exit only to Townsend Street.

The purpose of the assessment is to review the existing conditions in the vicinity of the site, including traffic, parking and servicing, as well as the performance of the surrounding road network. An evaluation is then required of the traffic and parking requirements for the proposed development, and the impacts on the surrounding road network.

The assessment concluded that:

- Parking surveys carried out on a typical weekday show that there is a high demand for on-street and off-street parking in the vicinity of the site, while demand is being adequately met by off-street parking;
- Traffic surveys and modelling of nearby intersections show that the intersections currently operate at a Level of Service of good (LOS B) or better, with midblock level of service on Smollett Street and Townsend Street near the site also being good (LOS B) or better;
- The proposed development will generate an additional 606 vehicle trips per day, with 121 of these in the AM peak period and 116 in the PM peak period, which will not have a significant impact on the performance of the surrounding road network (including site entry, exit and nearby intersections);
- The provision of 477 off-street parking spaces meets the minimum requirements of the proposed development under Albury DCP Part 17, plus the requirement for provision of parking to service other nearby sites. Adequate provision has been made for persons with a disability;
- Adequate provision has been made for parking for bicycles and motorcycles; and
- Adequate provision has been made for servicing and delivery vehicles.

The assessment recommended that:

- Raised concrete islands be constructed adjacent to the exit driveway from the site onto Townsend Street to improve visibility and safety; and
- Consideration be given by Council to provision of short term (15 minute) parking on-street in either Townsend Street or Smollett Street adjacent to the site to provide convenient access for servicing and delivery vehicles.

2 EXISTING CONDITIONS

2.1 Site

The site is located in the south-west of the Albury CBD, on the northern side of Smollett Street between Wodonga Place and Townsend Street. Figure 2-1 shows the location of the site.

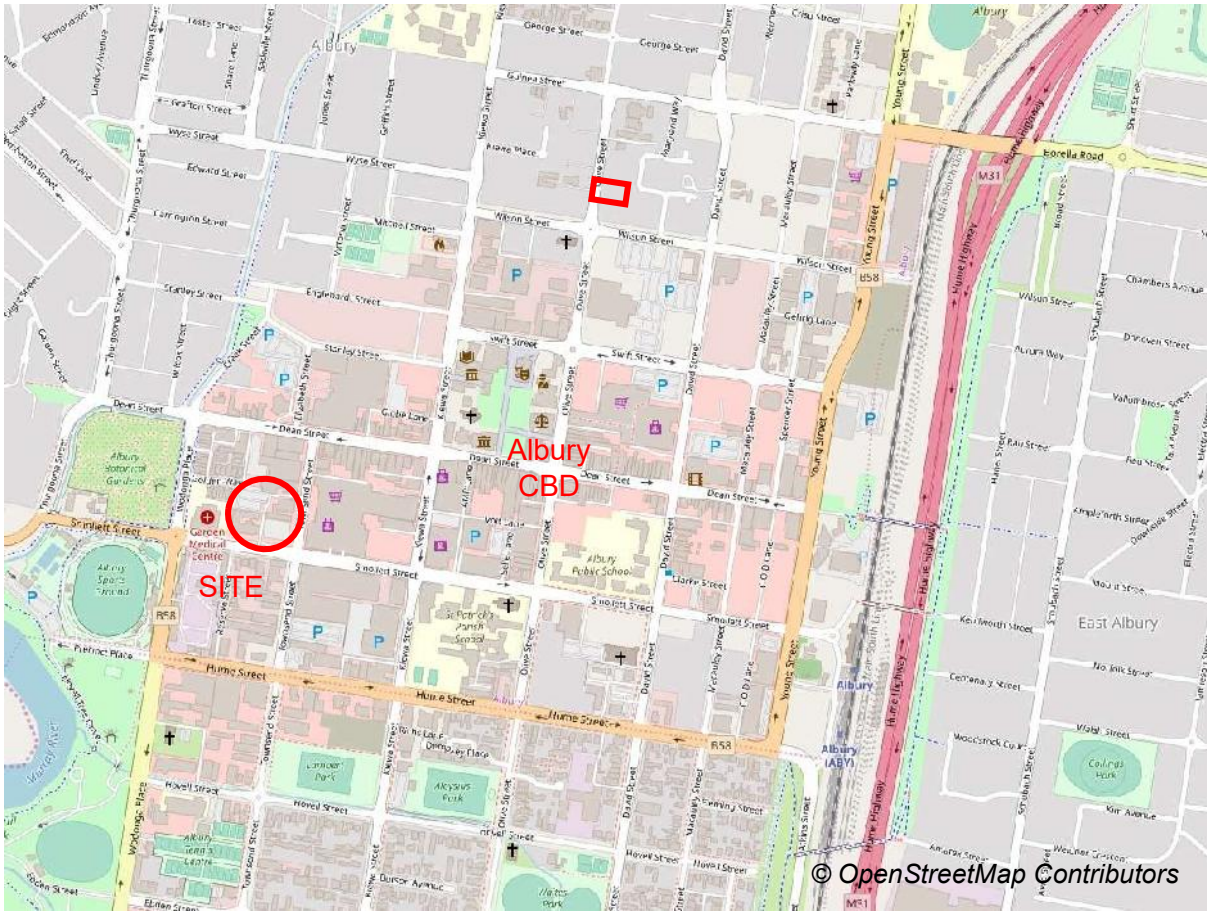

Figure 2-1: Locality Plan: Locality Plan

The site comprises the following lots:

- Lots 201 and 203 DP1243276 (580-584 Smollett Street); and
- Lot 60 DP1115982 (470 Wodonga Place).

580-584 Smollett Street are currently used for at-grade car parking. Vehicular entry to the site is currently from Smollett Street, with exit to Townsend Street. Pedestrian and cyclist access is available from Smollett Street and Townsend Street.

470 Wodonga Place is currently occupied by a multi-level commercial building with associated car parking (the Gardens Medical Centre). Vehicular access to the site is currently from Smollett Street. Pedestrian and cyclist access is available from Smollett Street and Wodonga Place.

Figure 2-2: Looking north-east at 580 Smollett Street, with site entry driveway on left hand side

Figure 2-3: Looking south-west across 594 Smollett Street towards 470 Wodonga Place

2.2 Surrounding Land Use

The site and immediate surrounds are currently zoned B3 Commercial Core and B4 Mixed Use under the Albury Local Environmental Plan 2010 (Albury LEP). Surrounding land uses include a range of commercial and retail premises, such as health and community services, office space, shops and restaurants plus some residential. Figure 2-4, extracted from the Albury LEP, shows the location of the site and the surrounding land zonings.

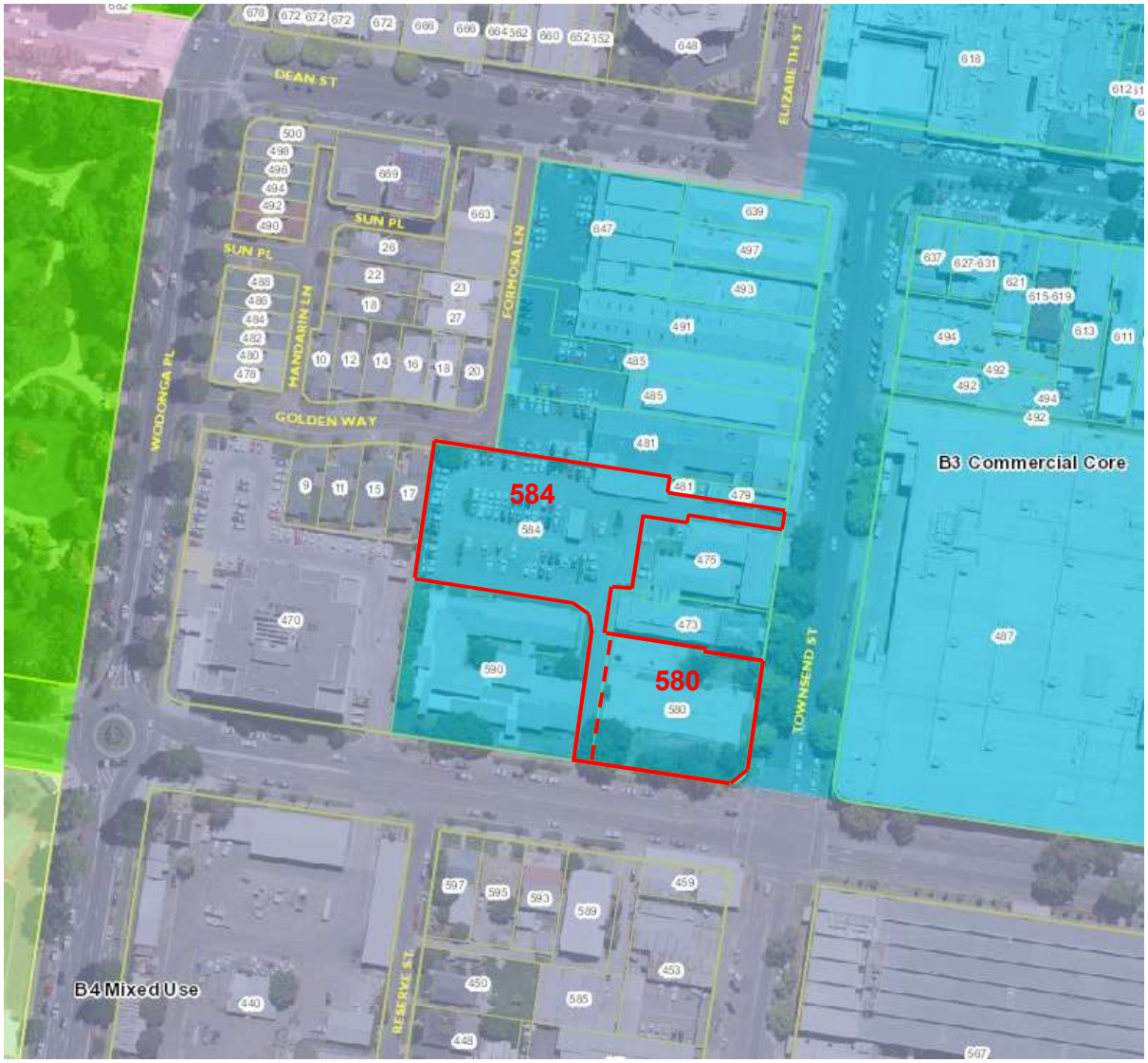

Figure 2-4: Land zoning for site and surrounds (Source: Albury City Council)

2.3 Road Network

2.3.1 Smollett Street

Smollett Street is an important east-west road in the local road network. It provides access across the southern part of the Albury CBD between the Riverina Highway at Young Street and Wodonga Place. It is a local road under the control of Albury City Council.

In the vicinity of the site, Smollett Street is a four-lane, two-way sealed urban road that forms the southern boundary of the site. Contained within a 30m-wide road reserve, Smollett Street has a 19.5m-wide carriageway defined by upright kerb and gutter, and in each direction it has two through lanes, a parallel on-street parking lane and a kerbside cycle lane. Footpaths are provided on both sides of the road, with overhead power and street lighting present on the southern side. The default urban speed limit of 50km/h applies.

Smollett Street provides direct access to properties, but as noted also provides some through movement across the south of the Albury CBD. Under the Albury CBD Masterplan, Smollett

Street is intended to establish priority for pedestrians and cyclists, and its intended role therefore balances access and through movement.

Figure 2-5: Looking west along Smollett Street adjacent to the site

2.3.2 Wodonga Place

Wodonga Place is an important north-south road in the local network. It provides access south to Wodonga (via the Riverina Highway and Lincoln Causeway), and is the south-western gateway into the Albury CBD.

In the vicinity of the site (between Smollett Street and Dean Street), Wodonga Place is a two-lane, two-way sealed urban road under the control of Albury City Council. Contained within a 30m-wide road reserve, Wodonga Place has a 19.0m-wide carriageway defined by upright kerb and getter, and in each direction it has a through lane with 45 degree angle on-street parking (with some parallel parking on-street). Footpaths are provided on both sides of the street (the path on the western side is a shared pedestrian/cyclist path), and overhead street lighting is present. The default urban speed limit of 50km/h applies.

Direct access into properties is limited along Wodonga Place through the presence of raised medians. The Albury CBD Masterplan identifies Wodonga Place as the principal south-western gateway into the Albury CBD, and it's role therefore favours through movement over access.

Figure 2-6: Looking south along Wodonga Place towards Smollett Street

2.3.3 Townsend Street

Townsend Street runs south from Dean Street, across Smollett Street and south to the Riverina Highway (Hume Street) and South Albury. It is a local road under the control of Albury City Council.

In the vicinity of the site, Townsend Street is a two-lane, two-way sealed urban road that forms the eastern boundary of the site. Contained within a 30m-wide road reserve, Townsend Street has a 19.5m-wide carriageway defined by upright kerb and gutter, and in each direction it has it has a through lane with 45 degree angle on-street parking (with some parallel parking on-street, including bus bays). Footpaths and street lighting are provided on both sides of the road. The default urban speed limit of 50km/h applies.

Townsend Street provides generally unrestricted direct access to properties, and limited through movement. Its role therefore favours access over through movement.

Figure 2-7: Looking north along Townsend Street adjacent to the site, showing exit driveway on left hand side

2.3.4 Intersections

The intersection of Smollett Street and Townsend Street is located immediately to the south-east of the site. It is a four-leg signalised intersection, with the signals being under the control of Transport for NSW (TfNSW).

Figure 2-8: Looking north at the signalised intersection of Smollett Street and Townsend Street

The intersection of Smollett Street and Wodonga Place is located to the south-west of the site. It is a four-leg roundabout, with the southern and western legs forming part of the Riverina Highway and being under the control of TfNSW, and the northern and eastern legs being under the control of Albury City Council.

Figure 2-9: Looking south-west at the roundabout intersection of Smollett Street and Wodonga Place

The intersection of Dean Street and Townsend Street is located to the north-east of the site. It is a three-leg “T” intersection under the control of Albury City Council, with Dean Street having priority over Townsend Street.

Figure 2-10: Looking north-west at the T-intersection of Dean Street and Townsend Street

2.4 Existing Traffic Conditions

2.4.1 Data Collection

Turning movement surveys were undertaken at the following intersections:

- Smollett Street and Townsend Street;
- Smollett Street and Wodonga Place; and
- Dean Street and Townsend Street.

The traffic entering and exiting the site at 580-584 Smollett Street was also recorded.

The surveys were undertaken on Wednesday 4 March 2020, which was within NSW school term dates. Surveys were undertaken during the morning and afternoon peak periods between 8:00AM-9:30AM and 4:00PM-5:30PM. This allowed the peak hour within each period to be determined. Signal phasing data was also collected at Smollett Street and Townsend Street as part of these surveys.

The existing parking in the vicinity of the site was also surveyed to determine the number of available and occupied spaces. Surveys were completed on Wednesday 4 March 2020, and involved manually counting the number of vehicles parked at two hour intervals across the day (from 8AM to 8PM).

2.4.2 Intersections

The turning movements for the busiest one-hour period in both the AM Peak (8:15-9:15AM) and PM Peak (4:30PM-5:30PM) periods are summarised in Figure 2-11 and Figure 2-12, below.

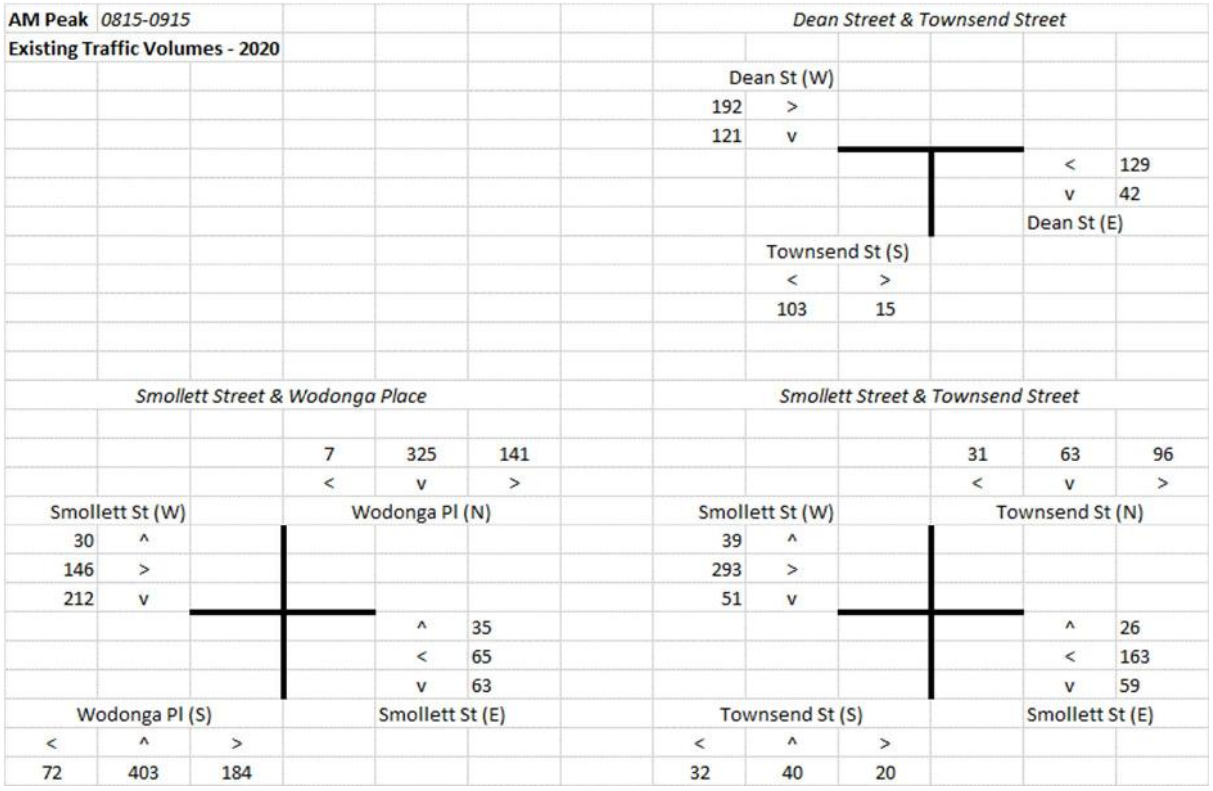

Figure 2-11: AM Peak Hour Turning Movement Summaries - Existing Conditions

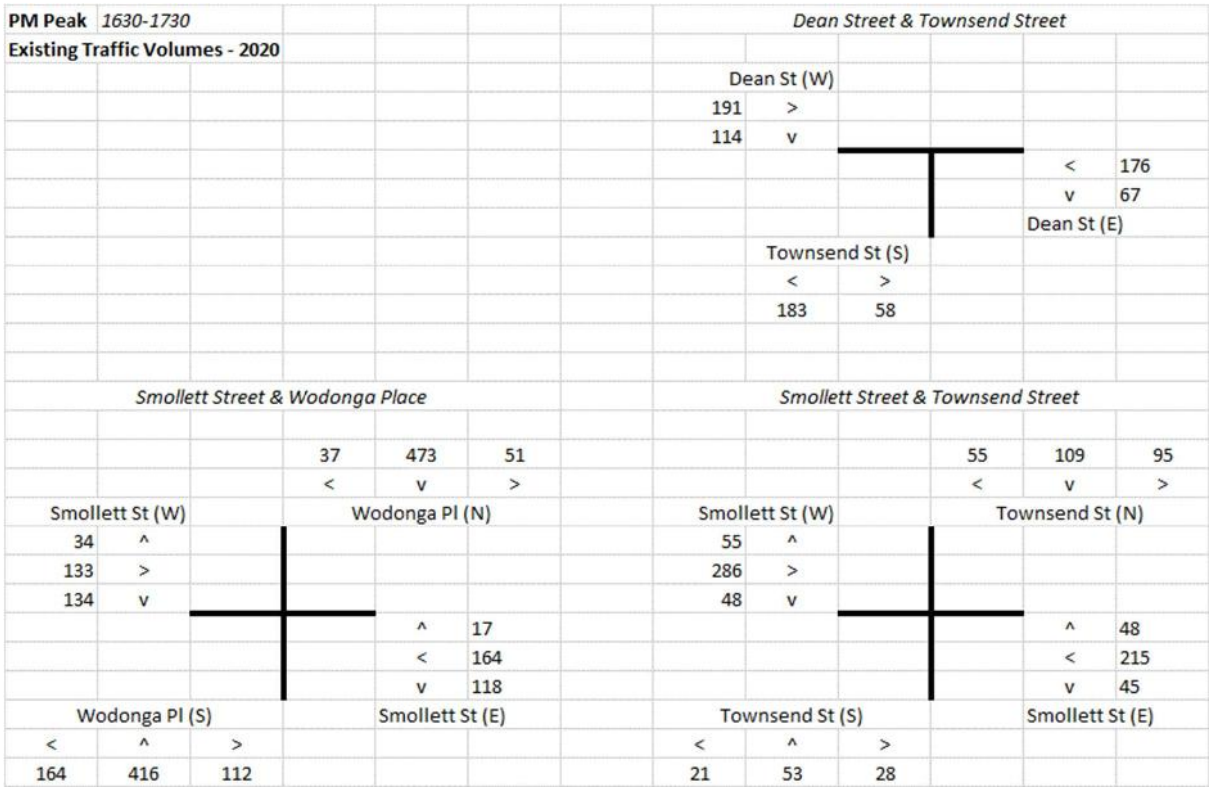

Figure 2-12: PM Peak Hour Turning Movement Summaries - Existing Conditions

The performance of all three intersections was modelled using the intersection analysis program SIDRA Intersection. Full results for the existing AM and PM peak periods are included in Appendix A, and summarised Table 2-1 below.

Table 2-1: Intersection performance summary - existing conditions

Intersection	Total Flow (veh/h)	Degree of Saturation	Average Delay (sec)	Level of Service*
Smollett & Townsend				
AM	961	0.329	13.6	A
PM	1,114	0.414	16.1	B
Smollett & Wodonga				
AM	1,772	0.333	5.9	A
PM	1,948	0.452	5.6	A
Dean & Townsend				
AM	634	0.195	2.6	A
PM	831	0.196	3.1	A

** Level of Service (LOS) is a qualitative assessment of the quantitative effect of factors such as speed, volume of traffic, geometric features, traffic interruptions, delays and freedom to manoeuvre. It ranges from A (best) to F (worst), and is calculated using average delay (as per RMS Guidelines).*

The analysis indicates that all three intersections currently operate at an excellent or good Level of Service (LOS A or B) in both the AM and PM peak periods, with low levels of saturation and minimal delays.

2.4.3 Midblock

Existing midblock data was not available for the surrounding streets, however it is possible to estimate daily traffic volume using the turning movement data. The *RMS Traffic Modelling Guidelines* state that "in general, peak hour is assumed to be around 10% of AADT" (daily volume). The daily traffic volume for a road can therefore be estimated using the following equation:

$$Daily\ Volume = 10 \times \frac{AM\ Peak\ Hour\ Volume + PM\ Peak\ Hour\ Volume}{2}$$

A summary of the midblock data for the streets in the vicinity of the site, including weekday traffic volumes (in vehicles per day), peak hour traffic volumes (in vehicles per hour) and Level of Service (LOS) is provided in Table 2-2 below.

Table 2-2: Midblock traffic data – existing conditions

Location	Weekday	Weekday AM Peak 08:15-09:15		Weekday PM Peak 16:30-17:30	
	Veh/d	Veh/h	LOS	Veh/h	LOS
Smollett Street (West of Townsend St)	6,435	608		679	
Eastbound		382	A	389	A
Westbound		226	A	290	A
Townsend Street (North of Smollett St)	3,545	294		415	
Northbound		105	A	156	A
Southbound		189	A	259	B

Note: Level of Service calculated based on typical midblock capacities from Austroads Guide to Traffic Management Part 3: Traffic Studies and Analysis.

In general levels of service for all key segments of road analysed are good to excellent, operating at either the highest level (A) or second highest level (B). This indicates that there is adequate midblock capacity in the surrounding roads at present.

2.4.4 Site Access and Traffic

As noted in Section 2.1, vehicular access to 580-584 Smollett Street is currently entry only from Smollett Street and exit only onto Townsend Street.

The traffic counts detailed in Section 2.4.1 can be used to determine peak traffic generation for the existing site, enabling a comparison to be made to the rates specified in guidelines published for traffic generation at various land uses. The following peak hour traffic generation rates have been identified as relevant for the existing site:

- Office and Commercial – 2 trips per 100m^2 Gross Floor Area (GFA) (*RTA Guide to Traffic Generating Developments 2002* and *South Australian Department of Planning, Transport and Infrastructure Trip Generation Rates for Assessment of Development Proposals 2014*).

A comparison of expected and observed traffic generation for 580-584 Smollett Street is summarised in Table 2-3 below.

Table 2-3: Traffic Generated – Existing (580-584 Smollett Street Only)

Element	Trip Rate	GFA (m^2)	Theoretical Traffic (veh/h)	Observed Traffic	
				AM	PM
590 Smollett St (NSW Health)	2 per	1,430	29		
473 Townsend St (Kia Ora)	100m^2	490	10		
475 Townsend St (NSW Health)	GFA	790	16		
Total			*55*	*79*	*46*

Table 2-3 shows that the traffic generated at 580-584 Smollett Street is slightly higher than expected in the AM peak, and roughly in line with that expected in the PM peak. This is most likely due to the fact that parking at 580 Smollett Street is allocated to businesses at 470 Wodonga Place (The Gardens Medical Centre), while the theoretical traffic rate is based on the scale of premises immediately adjacent to the car parks at 580-584 Smollett Street. The peak number of vehicles parked at 580 Smollett Street was 30, compared to a peak of 65 at 584 Smollett Street, indicating that around 1/3 of the traffic entering or exiting 580-584 Smollett Street. If the observed traffic generated at 580-584 Smollett Street is discounted by 1/3 to reflect this, the observed traffic values would be 53 in the AM peak and 31 in the PM peak, which is in line with the 55 veh/h expected based on published rates.

In conclusion, the current level of traffic generated at 580-584 Smollett Street is in line with that expected from published standards (when allowing for the fact that 1/3 of the vehicles parked on the site are associated with other locations).

2.5 Parking Supply and Demand

The parking surveys completed on Wednesday 4 March 2020 allow both the supply and demand of parking in the vicinity of the site to be determined, as well as the usage across the day. Some on-street parking bays in the area are not delineated using linemarking, and in order to determine the maximum number of available spaces, the total length/width of available parking was determined (excluding areas such as bus zones, no stopping zones, driveways and intersections), or maximum numbers determined by observation. Parking restrictions including No Stopping zones, time limits or special parking conditions such as disabled parking were also noted.

Full details of the parking surveys are included in Appendix B, with results for key areas relating to the site summarised in Table 2-4 below.

Table 2-4: Summary of parking Survey Results

Location	Utilisation (%) for Time Period								
	8 AM	10 AM	12 PM	2 PM	4 PM	6 PM	8 PM	Avg 10-4	Peak
Off-Street									
Gardens Medical	21	70	61	60	48	24	1	60	70
580 Smollett	7	30	33	34	34	8	1	33	34
584 Smollett	22	51	46	61	61	21	14	55	61
On-Street									
Smollett St	52	84	68	75	31	37	10	64	84
Wodonga Pl	43	94	88	78	65	29	3	81	94
Townsend St	30	72	58	55	46	56	35	58	72
Golden Wy	0	0	25	0	0	0	0	0	25
Reserve St	46	92	96	81	65	12	73	85	96

The key findings of the parking surveys include:

- Off-street parking demand at 580-584 Smollett Street and the Gardens Medical Centre is within acceptable limits. A peak usage of 85% is generally considered high (Austroads Guide to Traffic Management Part 11: Parking and AlburyCity Parking Strategy 2010-2015), and none of the off-street areas exceeded this level (either collectively or separately);
- There is some spare capacity in existing off-street parking at 580-584 Smollett Street, and also at 470 Wodonga Place (Gardens Medical Centre);
- On-street parking demand in almost all streets is relatively high, with Smollett Street, Wodonga Place and Reserve Street, as well as some parts of Townsend Street all exceeding a peak usage of 85%. The exception to this was Golden Way, however it is noted that only four parking spaces are present in this street; and
- There is limited spare capacity in existing on-street parking in the vicinity of the site.

In relation to existing car parking, it should also be noted that 97 of the car parking at 584 Smollett Street is specifically dedicated to surrounding properties under title arrangements as follows:

- 590 Smollett Street (NSW Health) – 63 parking spaces;
- 473 Townsend Street (Kia Ora House) – 8 parking space; and
- 475 Townsend Street (NSW Health) – 26 parking spaces.

2.6 Public Transport

The nearest public transport to the site are the town bus services provided by Martins Albury and Dysons. A range of bus routes area available, providing access to other suburbs in Albury, as well as connections to Wodonga. The nearest bus stop is on Townsend Street, directly opposite the site.

Inter-city coach and rail services are available from the Albury Train Station, which is located approximately 1km east of the site on the eastern edge of the Albury CBD.

2.7 Pedestrians and Cyclists

Pedestrians can utilise footpaths on both sides of the surrounding streets to access the site, providing access in all directions.

Cycle lanes are present on Smollett Street adjacent to the site, while the nearest off-road cycle path is the shared path on the western side of Wodonga Place. These facilities can be used by cyclists to access the broader Albury path network.

3 PROPOSED DEVELOPMENT

The proposed development consists of the following components:

- Construction of an eight storey mixed use building on 580 Smollett Street, comprising a total of 4,414m^2 GFA of commercial space and 25 apartments (13 three-bedroom and 12 one-bedroom);
- Construction of a five storey car park on 584 Smollett Street with 473 off-street parking spaces.

Vehicular access to the site will continue to be entry only off Smollett Street, and exit only onto Townsend Street.

In addition, there will be a pedestrian connection between Level 1 of the proposed car park on 584 Smollett Street and the Gardens Medical Centre. This will result in the loss of one off-street parking space at the centre, while twenty of the car parking spaces in the proposed car park will be provided for the centre.

The buildings at 590 Smollett Street, 473 and 475 Townsend Street as well as 470 Wodonga Place will remain unaltered.

Plans of the proposed development are included in Appendix C.

4 IMPACT OF PROPOSED DEVELOPMENT

4.1 Road Network

4.1.1 Traffic Generation and Distribution

The *RMS Guide to Traffic Generating Developments* and its subsequent update *RMS Technical Direction TDT2013/04a Guide to Traffic Generating Developments – Updated Traffic Surveys* can be used to estimate the additional traffic generated by the proposed development. The guide notes that the generation rate for office and commercial development is:

- Daily vehicle trips = 10 per 100m^2 Gross Floor Area (GFA); and
- Evening peak hour vehicle trips = 2 per 100m^2 GFA.

The guide also notes the following generation rates for high density residential flat dwellings in regional areas:

- Weekday daily vehicle trips = 4.6 per unit;
- Weekday average morning peak hour vehicle trips = 0.53 per unit; and
- Weekday average evening peak hour vehicle trips = 0.32 per unit.

The proposed car park building replaces some existing car parking on 580 and 584 Smollett Street. This traffic has already been considered as part of the proposed development. However it is noted that an additional 20 parking spaces will be dedicated to the Gardens Medical Centre within the car park. It is assumed that this will generate an additional 20 vehicle movements per hour in the AM peak hour, and 50 vehicle movements per day.

The total traffic generated by the proposed development, is presented in Table 4-1 below.

Table 4-1: Total traffic generation – Proposed development

Element	Weekday	Weekday AM Peak	Weekday PM Peak
	Veh/d	Veh/h	Veh/h
Commercial	441	88	88
Units	115	13	8
Gardens Parking	50	20	20
Total	*606*	*121*	*116*

Other assumptions used to determine traffic generation and distribution for the site are that:

- 75% of commercial and Gardens Parking traffic will be inbound, and 25% outbound in the AM Peak (in line with typical distributions for commercial properties, as employees typically travel inbound in the morning to work, and depart in the evening), with these values reversed in the PM Peak;
- 75% of residential unit traffic will be outbound, and 25% inbound in the AM Peak (in line with typical distributions for residential properties, as residents typically travel outbound in the morning to work, and return in the evening), with these values reversed in the PM Peak;
- Traffic entering the site will be split 70/30 from the west (left turn in) and east (right turn in), in line with splits observed during traffic surveys;
- Traffic exiting the site will be split 30/70 to the north (left turn out) and south (right turn out), in line with splits observed during traffic surveys; and
- Directional splits at intersections will be in line with existing splits observed during traffic surveys for AM and PM peak periods.

The existing and anticipated traffic volumes for the proposed development, along with the net anticipated change in traffic volumes for the AM and PM peak periods, are summarised in Figure 4-1 and Figure 4-2, below.

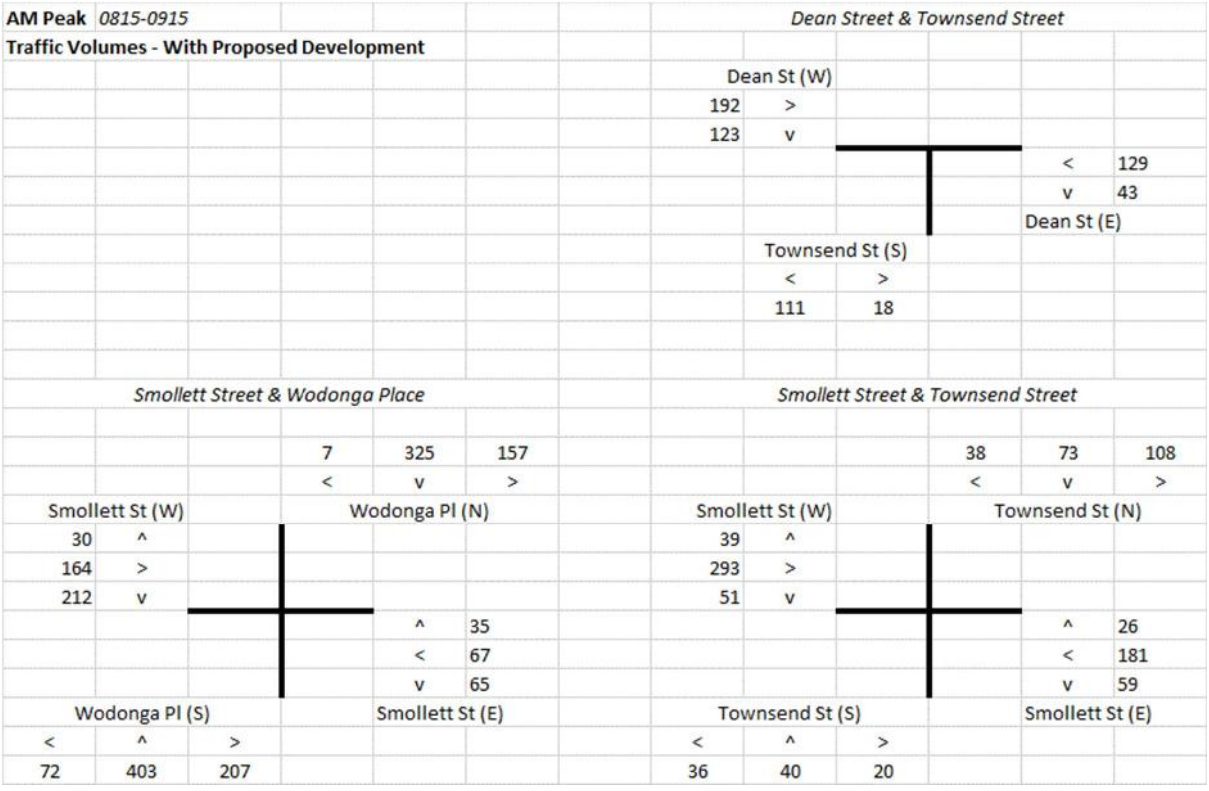

Figure 4-1: AM Peak Hour Turning Movement Summaries – With Proposed Development

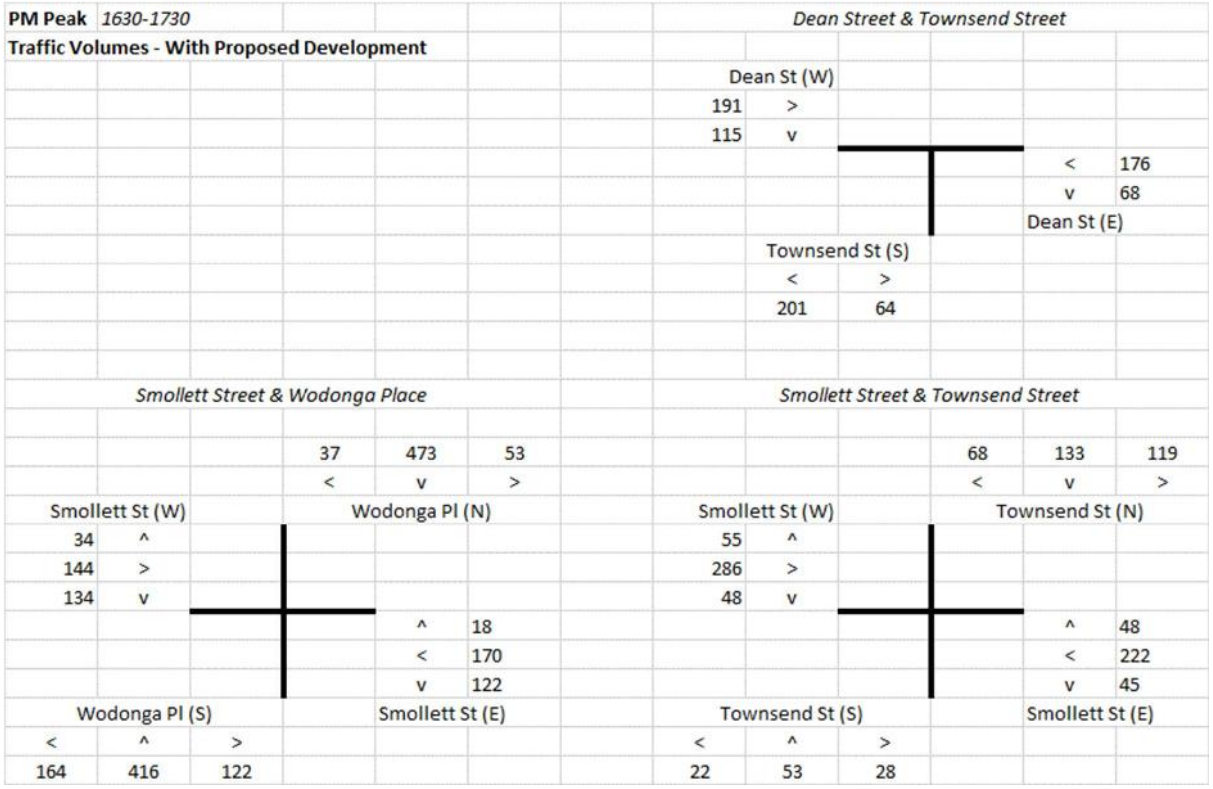

Figure 4-2: PM Peak Hour Turning Movement Summaries – With Proposed Development

4.1.2 Traffic Impact at Intersections

The performance of the three key intersections near the site was modelled using the intersection analysis program SIDRA Intersection. Full results for the AM and PM peak periods with the proposed development are included in Appendix D, and summarised Table 2-1 below.

Table 4-2: Intersection performance summary – with proposed development

Intersection	Total Flow (veh/h)	Degree of Saturation	Average Delay (sec)	Level of Service*
Smollett & Townsend				
AM	1,015	0.370	14.1	A
PM	1,186	0.509	17.2	B
Smollett & Wodonga				
AM	1,836	0.334	6.0	A
PM	1,986	0.455	5.7	A
Dean & Townsend				
AM	648	0.197	2.6	A
PM	858	0.197	3.2	A

The analysis indicates that all three intersections will continue to operate at an excellent or good Level of Service (LOS A or B) in both the AM and PM peak periods in the future. It is concluded that traffic from the proposed development can be accommodated at key intersections in the vicinity of the site.

As vehicles travel further throughout the network, traffic generated by the proposed development becomes more dispersed, and hence has a lower net impact on other

intersections. Hence if the impact at nearby intersections is within acceptable limits, then beyond these the impact will be even lower.

It is concluded that there will be no significant impacts on intersections as a result of the proposed development.

4.1.3 Traffic Impact Midblock

The additional traffic generated by the proposed development was added to the existing traffic volumes on nearby streets. The total traffic volume is summarised in Table 4-3, below.

Table 4-3: Midblock traffic data – with proposed development

Location	Weekday	Weekday AM Peak 08:15-09:15		Weekday PM Peak 16:30-17:30	
	Veh/d	Veh/h	LOS	Veh/h	LOS
Smollett Street (West of Townsend St)	6,685	637		700	
Eastbound		382	A	389	A
Westbound		255	A	311	A
Townsend Street (North of Smollett St)	3,995	323		476	
Northbound		105	A	156	A
Southbound		218	B	320	B

The analysis shows that the only change as a consequence of the proposed development is a slight deterioration in Level of Service southbound on Townsend Street in the AM peak period (from LOS A to LOS B). However both Townsend Street and Smollett Street will operate at either an excellent or good level (LOS A or B), even with the additional traffic generated by the proposed development.

Similar to impacts at intersections, as vehicles travel further throughout the network, traffic generated by the proposed development becomes more dispersed, and hence has a lower net impact on other roads. Hence if the impact on the roads surrounding the site is within acceptable limits, then beyond these roads the impact will be even lower.

It is concluded that there will be no significant impact on roads surrounding the site or further afield as a result of the proposed development.

4.2 Site Access, Parking and Queuing

Site entry will continue to be via the one-way access driveway from Smollett Street. The traffic volume entering at this point in the AM peak is anticipated to increase from 69 veh/h to 180 veh/h, with 70% (126 veh/h, up from 49) of this turning left into the site and 30% (54 veh/h, up from 20) turning right into the site. Entering volumes in the PM peak are substantially less (increasing from 7 veh/h to 34 veh/h). Vehicles are able to complete this movement from the right-most westbound lane on Smollett Street, with through traffic on Smollett Street able to minimise delays by using the left-most westbound through lane (SIDRA analysis indicates that only 1/3 of the westbound traffic in the AM peak period uses the right-most lane, with more vehicles using the left-most lane and avoiding vehicles turning right from Smollett Street into Townsend Street). It is noted that other sections of Smollett Street to the east and west only contain a single through lane in each direction with some auxiliary turning lanes to access

developments. With two lanes of travel in each direction along Smollett Street at the moment, through traffic is able to change lanes to avoid turning vehicles, and auxiliary turning lanes are not warranted by the proposed development. Should Council decide to reconfigure Smollett Street in future (in line with the direction given in Council's Albury CBD Masterplan, and other sections of Smollett Street), auxiliary lanes would need to be considered by Council as part of a holistic upgrade of this section of Smollett Street (noting that access would be required not only into the proposed development site, but also into Reserve Street, Council's depot and the Gardens Medical Centre).

Site exit will continue to be via the one-way exit driveway onto Townsend Street. The traffic volume exiting at this point in the PM peak is anticipated to increase from 40 veh/h to 121 veh/h, with 70% (85 veh/h) turning right out of the site and 30% (36 veh/h) turning left. Sight distance along Townsend Street at the exit driveway could be improved through construction of raised concrete areas in the on-street car parks either side of the access driveway (similar to other installations in Albury at the Quest Serviced Apartments on Townsend Street and the exit from Volt Lane onto Olive Street). This would improve visibility and safety at the exit driveway.

Albury Development Control Plan (DCP) Part 17 – Off Street Car Parking specifies the minimum parking spaces required for a development, depending on the land use type. The development is considered a mixture of Office Premises and Residential Flat building under Albury DCP Part 17. In addition, a number of spaces are proposed to be provided as reserved parking for other adjacent and nearby buildings. There will also be a reduction in the number of existing spaces as a result of construction on the two sites.

The total number of parking spaces required for the proposed development is summarised in Table 4-4 below.

Table 4-4: Car Parking Requirements

Land Use	Rate	Unit	Car Parking Spaces Required
Commercial	1 per 40m^2 GFA	4,414m^2 GFA	110
Residential Residents Visitors	 1 per 1 or 2 bedroom unit 2 per 3 bedroom or larger unit 3 plus 1 per 3 units above 8	 12 x 1 bedroom units 13 x 3 bedroom units 25 units	 12 26 9
Subtotal Required – New Development			*157*
Provision (Other Sites) 590 Smollett 473 Townsend 475 Townsend 470 Wodonga			 63 8 26 20
Subtotal Required – Provision for Other Sites			*117*
Total Spaces Required			*274*

It is also noted that the proposed development will result in a reduction in spaces (due to construction on 580 and 584 Smollett Street, as well as the path connecting to the Gardens Medical Centre). The total spaces lost as a result of the proposed development is 195 spaces (87 on 580 Smollett Street, 107 on 584 Smollett Street and 1 at the Gardens Medical Centre).

The proposed development provides a total of 477 off-street parking spaces. Twenty of the spaces are proposed to be provided on the ground floor of the mixed use building on 580

Smollett Street, with 457 provided in the five storey car park building on 584 Smollett Street. It therefore has sufficient parking to meet the minimum number of spaces required under Albury DCP Part 17, provide for other nearby sites and cater for the loss of existing parking spaces caused by the development.

Access into the off-street car park will be controlled via a boom gate. This is to be located approximately 50m north of Smollett Street along the entry driveway, giving sufficient room for vehicles to queue in the access driveway without impacting on Smollett Street. Tenants and those with designated parking spaces will be issued with swipe cards for access, while visitors will be able to contact building management via an intercom located near the boom gate.

A 14m-long area located on the eastern side of the access driveway will cater for short term parking, such as drop off/pick up and deliveries. Other nearby developments (including the Gardens Medical Centre at 470 Wodonga Place and the Albury Eye Clinic at 669 Dean Street) have on-street parking provided for this purpose, and it is also noted that short term parking is in place on the southern side of Smollett Street to facilitate access to business premises. Access for delivery and servicing vehicles is discussed in more detail in Section 4.3, below.

Seventeen of the off-street parking spaces are designated for persons with a disability – one in the mixed use building and 16 in the car park building. Albury DCP Part 17 requires a minimum of 3% of parking spaces to be designated for persons with a disability, which for the proposed 477 off-street parking spaces equals 15 spaces. The provision of 17 spaces therefore exceeds the requirements of Albury DCP Part 17.

Bicycle racks are proposed on the ground floor of the car park building, and also adjacent to the Smollett Street frontage of the mixed use building. Provision has been made to park up to 25 bicycles in these racks. Albury DCP Part 17 requires a minimum of one bicycle parking space for each 10 car parking spaces, and the provision of 25 bicycle spaces is adequate to meet the requirements for the 157 parking spaces required for the commercial and residential components of the development.

It is noted that no dedicated motorcycle parking has been provided within the development. Albury DCP Part 17 requires a minimum of one motorcycle space per 30 car parks, meaning the proposed development should have 16 spaces dedicated to motorcycles. However it is noted that the development already provides 114 parking spaces more than required under Albury DCP Part 17. It is further noted that during parking surveys of the nearby Gardens Medical Centre, there were no motorcycles observed parking in any of the dedicated motorcycle spaces. Motorcycles are able to park in regular vehicle parking spaces, which maximises choice and flexibility for motorists and motorcyclists. Given that demand for motorcycle parking is low for this type of development in Albury, and that there are adequate numbers of parking spaces available, it is considered that appropriate provision has been made for motorcyclists without needing to dedicate spaces.

The off-street car park is classified as a mix of User Class 1A under *Australian Standard AS2890 Part 1: Off-street car parking* (residential, domestic and employee parking). This specifies a minimum parking space dimension of 2.4m wide x 5.4m long, and an aisle width of 5.8m. All of the dimensions in the proposed development satisfy these minimum requirements.

It is concluded that the proposed development complies with the requirements of Albury DCP Part 17, and there is adequate parking to meet the needs of tenants, residents, visitors, disabled persons, motorcyclists and bicycles without significant adverse effect on the surrounding road network. In addition, the layout of the off-street parking area complies with the requirements of AS2890.

4.3 Service and Delivery Vehicles

Service and delivery vehicles include deliveries of goods and services such as trades or maintenance persons, as well as collection of refuse.

Deliveries of goods and services are most likely to be in standard vehicles or small trucks, able to park in the short-term off-street parking provided in the access driveway. Vehicles would also be able to park in Townsend Street or Smollett Street in the vicinity of the proposed development and would not have a significant impact on the availability of on-street car parking.

Refuse collection and other occasional service vehicles be more likely to be larger vehicles. A dedicated space has been provided for refuse collection on Smollett Street, with collections able to be timed to occur in off-peak times under an agreement with a commercial contractor, therefore having minimal effect on traffic.

It is considered that the development provides appropriate facilities for service vehicles.

4.4 Pedestrian and Cyclist Impact

Pedestrian access is available to the site from both Smollett Street and Townsend Street frontages. This includes an accessible ramp into the mixed use building entry from Smollett Street. A bollarded walkway is provided connecting Townsend Street to the car park building, safely separating pedestrians and cyclists walking their bicycles from vehicles exiting the site. A footpath is also available from Smollett Street, while a walkway connects the mixed use building with the car park building at level 1.

It is not proposed to make any significant change to the layout of the footpaths around the site, and therefore it is not anticipated that there would be any significant impact on pedestrians as a result of the proposed development.

It is likewise not proposed to make any significant changes to the layout of cyclist facilities in the vicinity of the site, and as discussed in Section 4.2, the proposed development provides adequate off-street parking for bicycles.

It is concluded that adequate provision has been made for pedestrians and cyclists within the site, and that there is no adverse effect on nearby cyclist and pedestrian facilities as a result of the proposed development.

5 CONCLUSIONS AND RECOMMENDATIONS

It is concluded that:

- Parking surveys carried out on a typical weekday show that there is a high demand for on-street and off-street parking in the vicinity of the site, while demand is being adequately met by off-street parking;
- Traffic surveys and modelling of nearby intersections show that the intersections currently operate at a Level of Service of good (LOS B) or better, with midblock level of service on Smollett Street and Townsend Street near the site also being good (LOS B) or better;
- The proposed development will generate an additional 606 vehicle trips per day, with 121 of these in the AM peak period and 116 in the PM peak period, which will not have a significant impact on the performance of the surrounding road network (including site entry, exit and nearby intersections);
- The provision of 477 off-street parking spaces meets the minimum requirements of the proposed development under Albury DCP Part 17, plus the requirement for provision of parking to service other nearby sites. Adequate provision has been made for persons with a disability;
- Adequate provision has been made for parking for bicycles and motorcycles; and
- Adequate provision has been made for servicing and delivery vehicles.

It is recommended that:

- Raised concrete islands be constructed adjacent to the exit driveway from the site onto Townsend Street to improve visibility and safety; and
- Consideration be given by Council to provision of short term (15 minute) parking on-street in either Townsend Street or Smollett Street adjacent to the site to provide convenient access for servicing and delivery vehicles.

APPENDIX A – INTERSECTION ANALYSIS – EXISTING

LANE SUMMARY

Site: [Smollett-Townsend_AM_Existing]

Smollett Street & Townsend Street, Albury
AM Peak Period
Existing Volumes - 2020
Site Category: (None)
Signals - Fixed Time Isolated Cycle Time = 70 seconds (Site User-Given Phase Times)

Lane Use and Performance

	Demand Flows		Cap.	Deg. Satn	Lane Util.	Average Delay	Level of Service	95% Back of Queue		Lane Config	Lane Length	Cap. Adj.	Prob. Block.
	Total veh/h	HV %	veh/h	v/c	%	sec		Veh	Dist m		m	%	%
South: Townsend (S)													
Lane 1	34	5.0	307	0.110	49[5]	31.8	LOS C	1.0	7.3	Short (P)	30	0.0	NA
Lane 2	63	5.0	282	0.224	100	23.8	LOS B	1.7	12.5	Full	500	0.0	0.0
Approach	97	5.0		0.224		26.5	LOS B	1.7	12.5				
East: Smollett (E)													
Lane 1	62	5.0	1178	0.053	100	9.1	LOS A	0.7	5.4	Short (P)	30	0.0	NA
Lane 2	114	5.0	1241	0.092	100	4.6	LOS A	1.4	10.2	Full	500	0.0	0.0
Lane 3	85	5.0	928	0.092	100	6.6	LOS A	1.1	8.0	Short	35	0.0	NA
Approach	261	5.0		0.092		6.3	LOS A	1.4	10.2				
North: Townsend (N)													
Lane 1	101	5.0	307	0.329	100	33.2	LOS C	3.2	23.1	Short (P)	30	0.0	NA
Lane 2	21	5.0	324	0.066	23[6]	26.8	LOS B	0.6	4.6	Short	60	0.0	NA
Lane 3	78	5.0	266	0.292	100	30.5	LOS C	2.4	17.7	Full	500	0.0	0.0
Approach	200	5.0		0.329		31.5	LOS C	3.2	23.1				
West: Smollett (W)													
Lane 1	41	5.0	1178	0.035	100	9.1	LOS A	0.5	3.5	Short (P)	25	0.0	NA
Lane 2	308	5.0	1241	0.249	100	5.3	LOS A	4.3	31.3	Full	500	0.0	0.0
Lane 3	54	5.0	747	0.072	100	9.6	LOS A	0.7	5.0	Full	500	0.0	0.0
Approach	403	5.0		0.249		6.2	LOS A	4.3	31.3				
Intersection	961	5.0		0.329		13.6	LOS A	4.3	31.3				

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Lane LOS values are based on average delay per lane.
Intersection and Approach LOS values are based on average delay for all lanes.
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.

5 Lane under-utilisation found by the program
6 Lane under-utilisation due to downstream effects

LANE SUMMARY

Site: [Smollett-Wodonga_AM_Existing]

Smollett Street & Wodonga Place, Albury
AM Peak Period
Existing Volumes - 2020
Site Category: (None)
Roundabout

Lane Use and Performance

	Demand Flows		Cap.	Deg. Satn	Lane Util.	Average Delay	Level of Service	95% Back of Queue		Lane Config	Lane Length	Cap. Adj.	Prob. Block.
	Total veh/h	HV %	veh/h	v/c	%	sec		Veh	Dist m		m	%	%
South: Wodonga (S)													
Lane 1[d]	500	5.0	1501	0.333	100	3.8	LOS A	2.3	17.1	Full	500	0.0	0.0
Lane 2	194	5.0	1114	0.174	100	7.9	LOS A	1.0	7.3	Full	500	0.0	0.0
Approach	694	5.0		0.333		5.0	LOS A	2.3	17.1				
East: Smollett (E)													
Lane 1	66	5.0	807	0.082	100	5.8	LOS A	0.3	2.5	Full	500	0.0	0.0
Lane 2[d]	105	5.0	963	0.109	100	6.5	LOS A	0.5	3.5	Full	500	0.0	0.0
Approach	172	5.0		0.109		6.2	LOS A	0.5	3.5				
North: Wodonga (N)													
Lane 1[d]	260	5.0	967	0.269	100	5.5	LOS A	1.3	9.3	Short	30	0.0	NA
Lane 2	238	5.0	885	0.269	100	5.7	LOS A	1.3	9.2	Full	500	0.0	0.0
Approach	498	5.0		0.269		5.6	LOS A	1.3	9.3				
West: Smollett (W)													
Lane 1	185	5.0	833	0.222	94[5]	5.9	LOS A	1.0	7.1	Short	30	0.0	NA
Lane 2[d]	223	5.0	941	0.237	100	9.5	LOS A	1.1	7.9	Full	500	0.0	0.0
Approach	408	5.0		0.237		7.8	LOS A	1.1	7.9				
Intersection	1772	5.0		0.333		5.9	LOS A	2.3	17.1				

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

5 Lane under-utilisation found by the program
d Dominant lane on roundabout approach

LANE SUMMARY

Site: [Dean-Townsend_AM_Existing]

Dean Street & Townsend Street, Albury
AM Peak Period
Existing Volumes - 2020
Site Category: (None)
Giveway / Yield (Two-Way)

Lane Use and Performance

	Demand Flows		Cap.	Deg. Satn	Lane Util.	Average Delay	Level of Service	95% Back of Queue		Lane Config	Lane Length	Cap. Adj.	Prob. Block.
	Total veh/h	HV %	veh/h	v/c	%	sec		Veh	Dist m		m	%	%
South: Townsend (S)													
Lane 1	108	5.0	1414	0.077	100	5.1	LOS A	0.3	2.3	Short	20	0.0	NA
Lane 2	16	5.0	772	0.020	100	6.8	LOS A	0.1	0.5	Full	500	0.0	0.0
Approach	124	5.0		0.077		5.3	LOS A	0.3	2.3				
East: Dean (E)													
Lane 1	180	5.0	1864	0.097	100	1.1	LOS A	0.0	0.0	Full	500	0.0	0.0
Approach	180	5.0		0.097		1.1	NA	0.0	0.0				
West: Dean (W)													
Lane 1	329	5.0	1689	0.195	100	2.3	LOS A	0.9	6.2	Full	500	0.0	0.0
Approach	329	5.0		0.195		2.3	NA	0.9	6.2				
Intersection	634	5.0		0.195		2.6	NA	0.9	6.2				

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Lane LOS values are based on average delay per lane.
Minor Road Approach LOS values are based on average delay for all lanes.
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 lanes.
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.

LANE SUMMARY

Site: [Smollett-Townsend_PM_Existing]

Smollett Street & Townsend Street, Albury
PM Peak Period
Existing Volumes - 2020
Site Category: (None)
Signals - Fixed Time Isolated Cycle Time = 84 seconds (Site User-Given Phase Times)

Lane Use and Performance

	Demand Flows		Cap.	Deg. Satn	Lane Util.	Average Delay	Level of Service	95% Back of Queue		Lane Config	Lane Length	Cap. Adj.	Prob. Block.
	Total veh/h	HV %	veh/h	v/c	%	sec		Veh	Dist m		m	%	%
South: Townsend (S)													
Lane 1	22	5.0	384	0.058	23[5]	33.1	LOS C	0.7	5.3	Short (P)	30	0.0	NA
Lane 2	85	5.0	338	0.252	100	26.3	LOS B	2.7	19.6	Full	500	0.0	0.0
Approach	107	5.0		0.252		27.7	LOS B	2.7	19.6				
East: Smollett (E)													
Lane 1	47	5.0	1153	0.041	100	10.4	LOS A	0.7	5.1	Short (P)	30	0.0	NA
Lane 2	166	5.0	1214	0.137	100	6.2	LOS A	2.6	19.2	Full	500	0.0	0.0
Lane 3	111	5.0	808	0.137	100	9.7	LOS A	1.9	14.1	Short	35	0.0	NA
Approach	324	5.0		0.137		8.0	LOS A	2.6	19.2				
North: Townsend (N)													
Lane 1	100	5.0	384	0.260	100	34.8	LOS C	3.5	25.4	Short (P)	30	0.0	NA
Lane 2	38	5.0	405	0.094	23[6]	28.8	LOS C	1.3	9.2	Short	60	0.0	NA
Lane 3	135	5.0	325	0.414	100	33.7	LOS C	4.9	36.0	Full	500	0.0	0.0
Approach	273	5.0		0.414		33.4	LOS C	4.9	36.0				
West: Smollett (W)													
Lane 1	58	5.0	1153	0.050	100	10.4	LOS A	0.9	6.3	Short (P)	25	0.0	NA
Lane 2	301	5.0	1214	0.248	100	6.8	LOS A	5.2	37.8	Full	500	0.0	0.0
Lane 3	51	5.0	666	0.076	100	12.4	LOS A	0.9	6.4	Full	500	0.0	0.0
Approach	409	5.0		0.248		8.0	LOS A	5.2	37.8				
Intersection	1114	5.0		0.414		16.1	LOS B	5.2	37.8				

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Lane LOS values are based on average delay per lane.
Intersection and Approach LOS values are based on average delay for all lanes.
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.

5 Lane under-utilisation found by the program
6 Lane under-utilisation due to downstream effects

LANE SUMMARY

Site: [Smollett-Wodonga_PM_Existing]

Smollett Street & Wodonga Place, Albury
PM Peak Period
Existing Volumes - 2020
Site Category: (None)
Roundabout

Lane Use and Performance

	Demand Flows		Cap.	Deg. Satn	Lane Util.	Average Delay	Level of Service	95% Back of Queue		Lane Config	Lane Length	Cap. Adj.	Prob. Block.
	Total veh/h	HV %	veh/h	v/c	%	sec		Veh	Dist m		m	%	%
South: Wodonga (S)													
Lane 1[d]	611	5.0	1350	0.452	100	4.6	LOS A	3.5	25.5	Full	500	0.0	0.0
Lane 2	118	5.0	864	0.137	100	8.9	LOS A	0.7	5.3	Full	500	0.0	0.0
Approach	728	5.0		0.452		5.3	LOS A	3.5	25.5				
East: Smollett (E)													
Lane 1	122	5.0	763	0.160	100	6.2	LOS A	0.7	4.8	Full	500	0.0	0.0
Lane 2[d]	191	5.0	920	0.207	100	5.7	LOS A	0.9	6.7	Full	500	0.0	0.0
Approach	313	5.0		0.207		5.9	LOS A	0.9	6.7				
North: Wodonga (N)													
Lane 1[d]	305	5.0	1055	0.289	100	4.8	LOS A	1.4	10.1	Short	30	0.0	NA
Lane 2	286	5.0	989	0.289	100	5.4	LOS A	1.4	10.0	Full	500	0.0	0.0
Approach	591	5.0		0.289		5.1	LOS A	1.4	10.1				
West: Smollett (W)													
Lane 1[d]	166	5.0	944	0.175	100	5.3	LOS A	0.8	6.0	Short	30	0.0	NA
Lane 2	151	5.0	863	0.175	100	9.2	LOS A	0.8	5.8	Full	500	0.0	0.0
Approach	317	5.0		0.175		7.1	LOS A	0.8	6.0				
Intersection	1948	5.0		0.452		5.6	LOS A	3.5	25.5				

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

d Dominant lane on roundabout approach

LANE SUMMARY

Site: [Dean-Townsend_PM_Existing]

Dean Street & Townsend Street, Albury
PM Peak Period
Existing Volumes - 2020
Site Category: (None)
Giveway / Yield (Two-Way)

Lane Use and Performance

	Demand Flows		Cap.	Deg. Satn	Lane Util.	Average Delay	Level of Service	95% Back of Queue		Lane Config	Lane Length	Cap. Adj.	Prob. Block.
	Total veh/h	HV %	veh/h	v/c	%	sec		Veh	Dist m		m	%	%
South: Townsend (S)													
Lane 1	193	5.0	1349	0.143	100	5.3	LOS A	0.6	4.5	Short	20	0.0	NA
Lane 2	61	5.0	729	0.084	100	7.3	LOS A	0.3	2.0	Full	500	0.0	0.0
Approach	254	5.0		0.143		5.8	LOS A	0.6	4.5				
East: Dean (E)													
Lane 1	256	5.0	1861	0.137	100	1.3	LOS A	0.0	0.0	Full	500	0.0	0.0
Approach	256	5.0		0.137		1.3	NA	0.0	0.0				
West: Dean (W)													
Lane 1	321	5.0	1637	0.196	100	2.5	LOS A	0.9	6.4	Full	500	0.0	0.0
Approach	321	5.0		0.196		2.5	NA	0.9	6.4				
Intersection	831	5.0		0.196		3.1	NA	0.9	6.4				

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Lane LOS values are based on average delay per lane.
Minor Road Approach LOS values are based on average delay for all lanes.
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 lanes.
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.

APPENDIX B – PARKING SURVEYS

Parking Study
Smollett Street, Albury NSW

Wednesday 4 March 2020

Location			Parking		Time of Day							Avg (All)	Avg (10-4)	Peak
					8:00	10:00	12:00	14:00	16:00	18:00	20:00			
On-Street														
Smollett Street	Padman-Wodonga	North	Spaces	No	15	15	15	15	15	15	15	15	15	15
			Occ	No	14	14	14	14	2	5	0	9	11	14
				%	93%	93%	93%	93%	13%	33%	0%	60%	73%	93%
		South	Spaces	No	21	21	21	21	21	21	21	21	21	21
			Occ	No	21	21	17	19	1	14	0	13	15	21
				%	100%	100%	81%	90%	5%	67%	0%	62%	71%	100%
	Wodonga-Townsend	North	Spaces	No	14	14	14	14	14	14	14	14	14	14
			Occ	No	2	13	11	13	10	4	2	8	12	13
				%	14%	93%	79%	93%	71%	29%	14%	57%	86%	93%
		South	Spaces	No	15	15	15	15	15	15	15	15	15	15
			Occ	No	7	10	4	7	1	2	4	5	6	10
				%	47%	67%	27%	47%	7%	13%	27%	33%	40%	67%
	Townsend-Kiewa	North	Spaces	No	5	5	5	5	5	5	5	5	5	5
			Occ	No	0	3	4	3	3	2	1	2	3	4
				%	0%	60%	80%	60%	60%	40%	20%	40%	60%	80%
		South	Spaces	No	17	17	17	17	17	17	17	17	17	17
			Occ	No	1	12	9	9	10	5	2	7	10	12
				%	6%	71%	53%	53%	59%	29%	12%	41%	59%	71%
Wodonga Place	Hume-Smollett	East	Spaces	No	23	23	23	23	23	23	23	23	23	23
			Occ	No	12	21	21	20	15	4	0	13	19	21
				%	52%	91%	91%	87%	65%	17%	0%	57%	83%	91%
		West	Spaces	No	15	15	15	15	15	15	15	15	15	15
			Occ	No	8	13	12	13	11	9	0	9	12	13
				%	53%	87%	80%	87%	73%	60%	0%	60%	80%	87%
	Smollett-Dean	East	Spaces	No	23	23	23	23	23	23	23	23	23	23
			Occ	No	7	22	21	22	20	3	1	14	21	22
				%	30%	96%	91%	96%	87%	13%	4%	61%	91%	96%
		West	Spaces	No	25	25	25	25	25	25	25	25	25	25
			Occ	No	10	25	22	12	10	9	2	13	17	25
				%	40%	100%	88%	48%	40%	36%	8%	52%	68%	100%
Townsend Street	Hume-Smollett	East	Spaces	No	19	19	19	19	19	19	19	19	19	19
			Occ	No	3	15	12	12	10	10	10	10	12	15
				%	16%	79%	63%	63%	53%	53%	53%	53%	63%	79%
		West	Spaces	No	19	19	19	19	19	19	19	19	19	19
			Occ	No	4	18	14	13	8	6	7	10	13	18
				%	21%	95%	74%	68%	42%	32%	37%	53%	68%	95%
	Smollett-Dean	East	Spaces	No	21	21	21	21	21	21	21	21	21	21
			Occ	No	15	16	8	12	12	17	9	13	12	17
				%	71%	76%	38%	57%	57%	81%	43%	62%	57%	81%
		West	Spaces	No	34	34	34	34	34	34	34	34	34	34
			Occ	No	6	18	20	14	13	19	7	14	16	20
				%	18%	53%	59%	41%	38%	56%	21%	41%	47%	59%
Golden Way	Wodonga-Formosa	South	Spaces	No	4	4	4	4	4	4	4	4	4	4
			Occ	No	0	0	1	0	0	0	0	0	0	1
				%	0%	0%	25%	0%	0%	0%	0%	0%	0%	25%
Reserve Street	Hume-Smollett	East	Spaces	No	19	19	19	19	19	19	19	19	19	19
			Occ	No	9	18	19	16	13	2	12	13	17	19
				%	47%	95%	100%	84%	68%	11%	63%	68%	89%	100%
		West	Spaces	No	7	7	7	7	7	7	7	7	7	7
			Occ	No	3	6	6	5	4	1	7	5	5	7
				%	43%	86%	86%	71%	57%	14%	100%	71%	71%	100%

Parking Study
Smollett Street, Albury NSW

Wednesday 4 March 2020

Location			Parking		Time of Day							Avg (All)	Avg (10-4)	Peak
					8:00	10:00	12:00	14:00	16:00	18:00	20:00			
Off-Street														
Gardens Medical Centre	Basement	2P	Spaces	No	99	99	99	99	99	99	99	99	99	99
			Occ	No	14	73	61	54	39	27	0	38	57	73
				%	14%	74%	62%	55%	39%	27%	0%	38%	58%	74%
		Permit	Spaces	No	78	78	78	78	78	78	78	78	78	78
			Occ	No	21	55	48	50	35	20	3	33	47	55
				%	27%	71%	62%	64%	45%	26%	4%	42%	60%	71%
		Disabled	Spaces	No	5	5	5	5	5	5	5	5	5	5
			Occ	No	1	1	4	3	2	1	0	2	3	4
				%	20%	20%	80%	60%	40%	20%	0%	40%	60%	80%
	Level One	Regular	Spaces	No	57	57	57	57	57	57	57	57	57	57
			Occ	No	15	42	38	42	42	12	0	27	41	42
				%	26%	74%	67%	74%	74%	21%	0%	47%	72%	74%
		Disabled	Spaces	No	4	4	4	4	4	4	4	4	4	4
			Occ	No	1	3	3	1	2	1	0	2	2	3
				%	25%	75%	75%	25%	50%	25%	0%	50%	50%	75%
		LZ/Taxi	Spaces	No	2	2	2	2	2	2	2	2	2	2
			Occ	No	0	2	0	0	0	0	0	0	1	2
				%	0%	100%	0%	0%	0%	0%	0%	0%	50%	100%
		Motorcycle	Spaces	No	7	7	7	7	7	7	7	7	7	7
			Occ	No	0	0	0	0	0	0	0	0	0	0
				%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
584 Smollett Street		Regular	Spaces	No	63	63	63	63	63	63	63	63	63	63
			Occ	No	7	38	34	43	43	7	0	25	40	43
				%	11%	60%	54%	68%	68%	11%	0%	40%	63%	68%
		Disabled	Spaces	No	3	3	3	3	3	3	3	3	3	3
			Occ	No	0	1	0	2	0	0	0	0	1	2
				%	0%	33%	0%	67%	0%	0%	0%	0%	33%	67%
		Fleet	Spaces	No	32	32	32	32	32	32	32	32	32	32
			Occ	No	17	15	14	19	21	15	15	17	17	21
				%	53%	47%	44%	59%	66%	47%	47%	53%	53%	66%
		Kia Ora	Spaces	No	9	9	9	9	9	9	9	9	9	9
			Occ	No	0	1	1	1	1	0	0	1	1	1
				%	0%	11%	11%	11%	11%	0%	0%	11%	11%	11%
580 Smollett Street		Regular	Spaces	No	84	84	84	84	84	84	84	84	84	84
			Occ	No	6	26	29	30	30	7	1	18	29	30
				%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
		Disabled	Spaces	No	3	3	3	3	3	3	3	3	3	3
			Occ	No	1	1	1	1	0	0	0	1	1	1
				%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

APPENDIX C – PLANS OF PROPOSED DEVELOPMENT

AREA CALCULATION

LOT 201	COMMERCIAL GFA m2	APARTMENT Nos
Ground Floor	941	Nil
Level 1	673	3 Bed Aparts x 1 1 Bed Aparts x 2
Level 2	560	3 Bed Aparts x 2 1 Bed Aparts x 2
Level 3	560	3 Bed Aparts x 2 1 Bed Aparts x 2
Level 4	560	3 Bed Aparts x 2 1 Bed Aparts x 2
Level 5	560	3 Bed Aparts x 2 1 Bed Aparts x 2
Level 6	560	3 Bed Aparts x 2 1 Bed Aparts x 2
Level 7	Nil	3 Bed Aparts x 2
Roof	Nil	Nil
Total	**4414**	**25**
LOT 201	4414	25
LOT 203	NIL	NIL
TOTAL	**4414**	**25**
Land Size Lot 201	**2338**	
Land Size Lot 203	**4263**	
Total Land Area	**6601**	

CAR PARKING CALCULATION

		COMMERCIAL	RESIDENTIAL	TOTAL
LOT 201 GROUND FLOOR	PARKING	3	15	18
	ACCESSIBLE	1	-	1
	VISITOR[1]	-	1	1
	TOTAL	4	16	**20**
LOT 203 GROUND FLOOR	PARKING	87	-	87
	ACCESSIBLE	4		4
	VISITOR[1]	-	8	8
	TOTAL	91	8	**99**
LEVEL 1	PARKING	51	23	74
	ACCESSIBLE	4	-	4
	VISITOR	-	-	
	TOTAL	55	23	**78**
LEVEL 2	PARKING	84	-	84
	ACCESSIBLE	4	-	4
	VISITOR		-	
	TOTAL	88		**88**
LEVEL 3	PARKING	100	-	100
	ACCESSIBLE	4		4
	VISITOR	-	-	
	TOTAL	104		**104**
LEVEL 4	PARKING	100	-	100
	ACCESSIBLE	4	-	4
	VISITOR	-	-	
	TOTAL	104		**104**
LOT 203 TOTAL		442	31	**473**
LOTS 201 + 203 TOTAL		446[2]	47[3]	493

[1] Required for residential only
[2] Total commercial car parking required is 111 spaces (4414 ÷40m² GFA)
[3] Total residential car parking required is 47 including 9 visitor car parking spaces (38+9=47)

PROJECT STATISTICS

APARTMENT DESIGN DETAILS

APT NO	LEVEL	BEDRMS	SIZE m²	CAR PARKING	DAYLIGHT [1]	X-VENT[2]	SIZE[3]	BALCONIES m²[4]	STORAGE[5]
1	1	3	170	2	✓	✓	✓	25	✓
2	1	1	76	1	✓	x	✓	9.5	✓
3	1	1	72	1	✓	x	✓	9.5	✓
4	2	3	170	2	✓	✓	✓	25	✓
5	2	1	76	1	✓	x	✓	9.5	✓
6	2	1	72	1	✓	x	✓	9.5	✓
7	2	3	178	2	✓	✓	✓	25	✓
8	3	3	170	2	✓	✓	✓	25	✓
9	3	1	76	1	✓	x	✓	9.5	✓
10	3	1	72	1	✓	x	✓	9.5	✓
11	3	3	178	2	✓	✓	✓	25	✓
12	4	3	170	2	✓	✓	✓	25	✓
13	4	1	76	1	✓	x	✓	9.5	✓
14	4	1	72	1	✓	x	✓	9.5	✓
15	4	3	178	2	✓	✓	✓	25	✓
16	5	3	170	2	✓	✓	✓	25	✓
17	5	1	76	1	✓	x	✓	9.5	✓
18	5	1	72	1	✓	x	✓	9.5	✓
19	5	3	178	2	✓	✓	✓	25	✓
20	6	3	170	2	✓	✓	✓	25	✓
21	6	1	76	1	✓	✓[2a]	✓	9.5	✓
22	6	1	72	1	✓	✓[2a]	✓	9.5	✓
23	6	3	178	2	✓	✓	✓	25	✓
24	7	3	200	2	✓	✓	✓	83	✓
25	7	3	200	2	✓	✓	✓	87	✓
Total 3 Bedroom		13		26					
Total 1 Bedroom		12		12					
TOTAL		25		38					

[1]Daylight provided as per 4a of ADG; 3 hours minimum on 22 June
[2]Cross ventilation as per 4b of ADG; 50% provided.
[2a]Cross ventilation for apartments 21 and 22 stack vent through roof
[3]Minimum sizes for 1 bedroom; 50m² and for 3 bedrooms 90m²
[4]Minimum sizes for balconies; 1 bedroom 8m² and 3 bedrooms 12m²
[5]Storage cubicles provided on Ground floor and Level 7; minimum size 6m³ and 10m³

A 11/02/20 AREA TABLE

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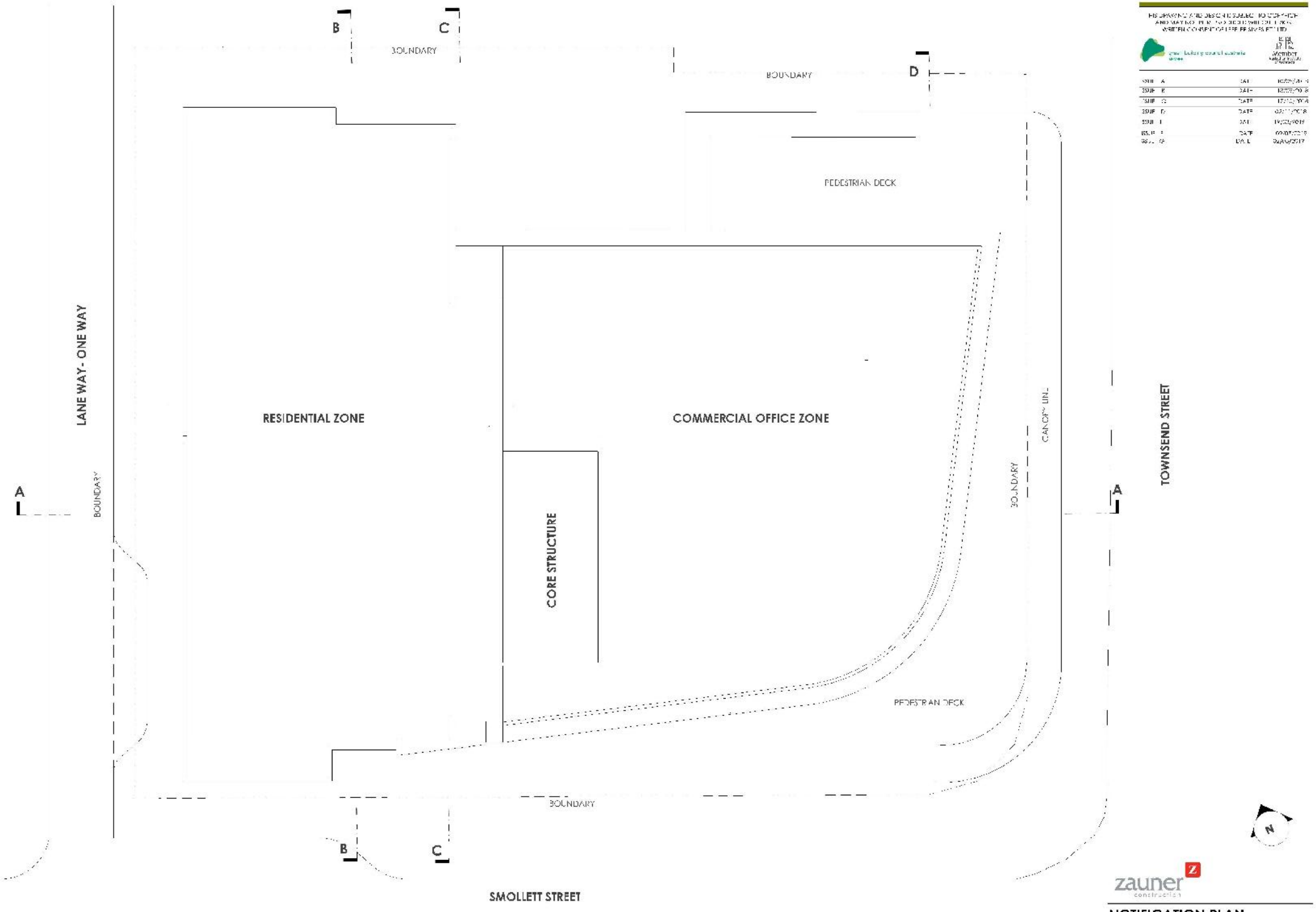
VIEW + STATISTICS

PROPOSED MIXED USE DEVELOPMENT
580 SMOLLETT STREET, ALBURY NSW

JOB NO: 4524 DATE: DEC 2019 DRAWN: GMB
580DA04 A

LEFFLER SIMES ARCHITECTS



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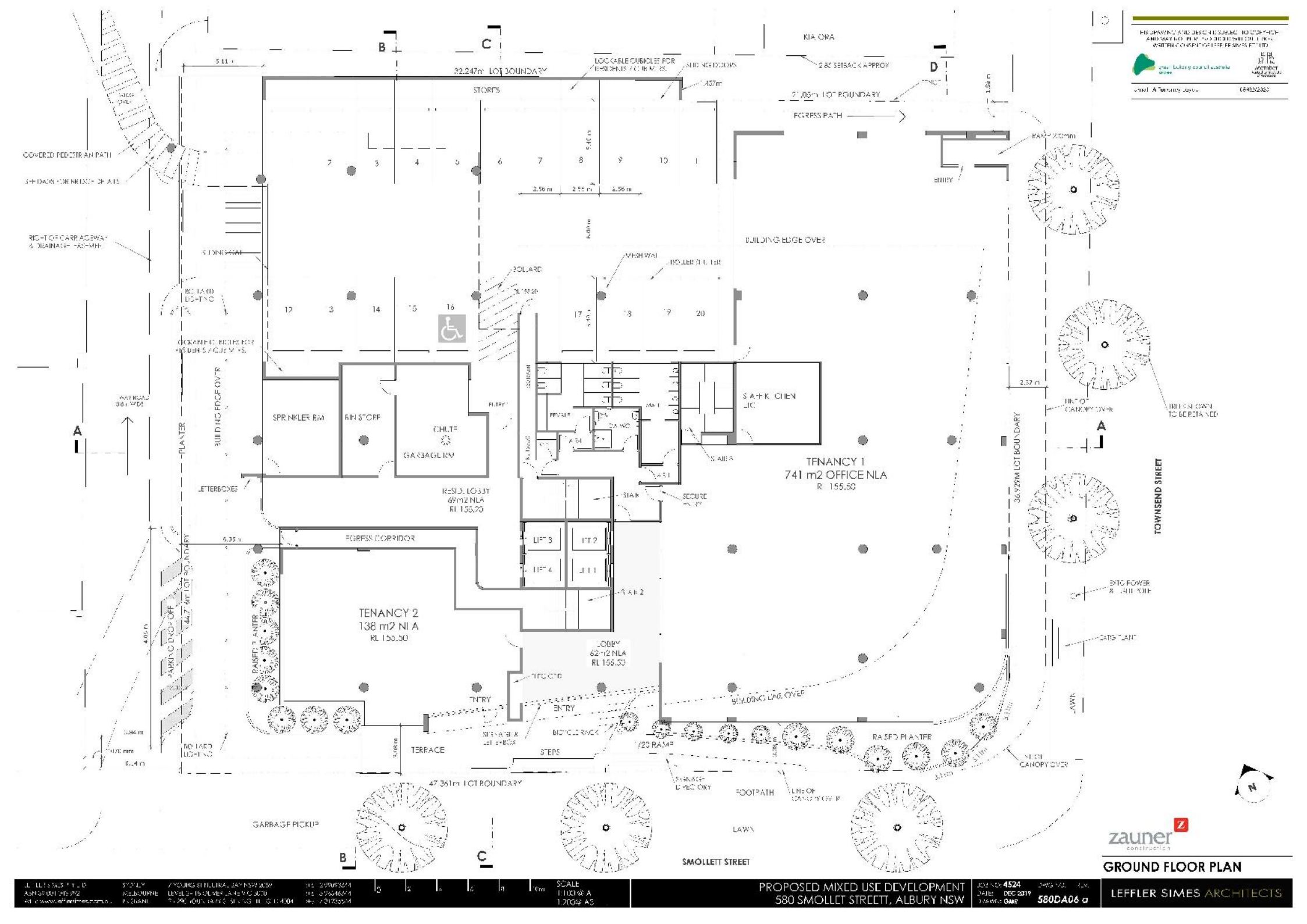
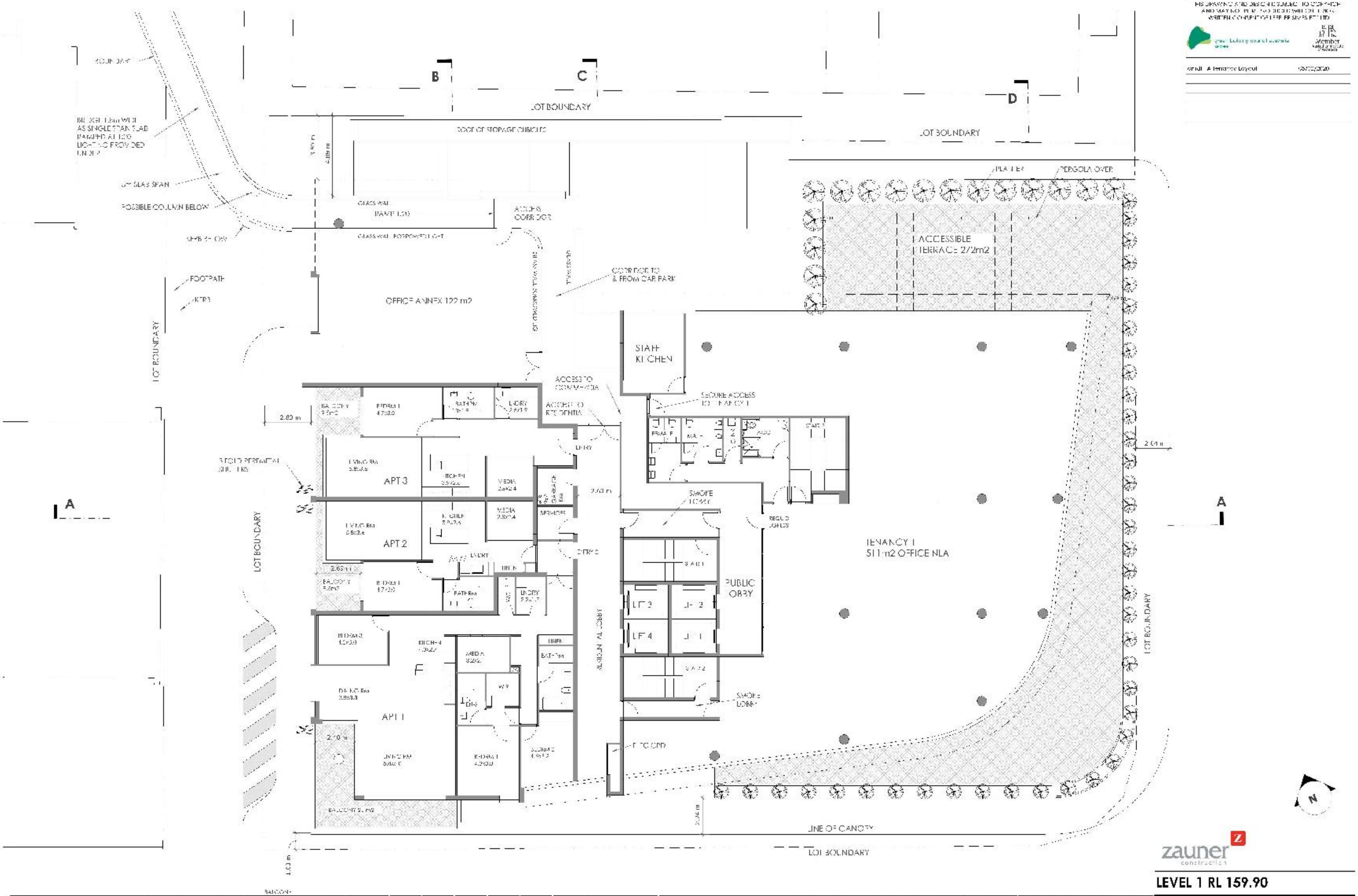
NOTIFICATION PLAN

PROPOSED MIXED USE DEVELOPMENT
580 SMOLLET STREETT, ALBURY NSW

JOB NO: 4524
DATE: DEC 2019
DRAWN: GMR
580DA05

LEFFLER SIMES ARCHITECTS


KIA ORA
32.247m LOT BOUNDARY
LOCKABLE CUBICLES FOR RESIDENTS (10 IN TOTAL)
STORES
27.05m LOT BOUNDARY
EGRESS PATH
COVERED PEDESTRIAN PATH
RIGHT OF CARRIAGEWAY & DRAINAGE EASEMENT
BUILDING EDGE OVER
BOLLARD LIGHTING
LOCKABLE CUBICLES FOR RESIDENTS / VISITORS
SPRINKLER RM
BIN STORE
CHUTE
GARBAGE RM
RESID. LOBBY
69m2 NLA
RL 155.20
TENANCY 1
741 m2 OFFICE NLA
RL 155.50
SWITCHBOARD
TO BE RETAINED
TOWNSEND STREET
TENANCY 2
138 m2 NLA
RL 155.50
LOBBY
62m2 NLA
RL 155.50
RAISED PLANTER
TERRACE
STEPS
BICYCLE RACK
SIGNAGE DIRECTORY
FOOTPATH
LAWN
GARBAGE PICKUP
SMOLLETT STREET
GROUND FLOOR PLAN
PROPOSED MIXED USE DEVELOPMENT
580 SMOLLETT STREET, ALBURY NSW
LEFFLER SIMES ARCHITECTS
580DA06 a



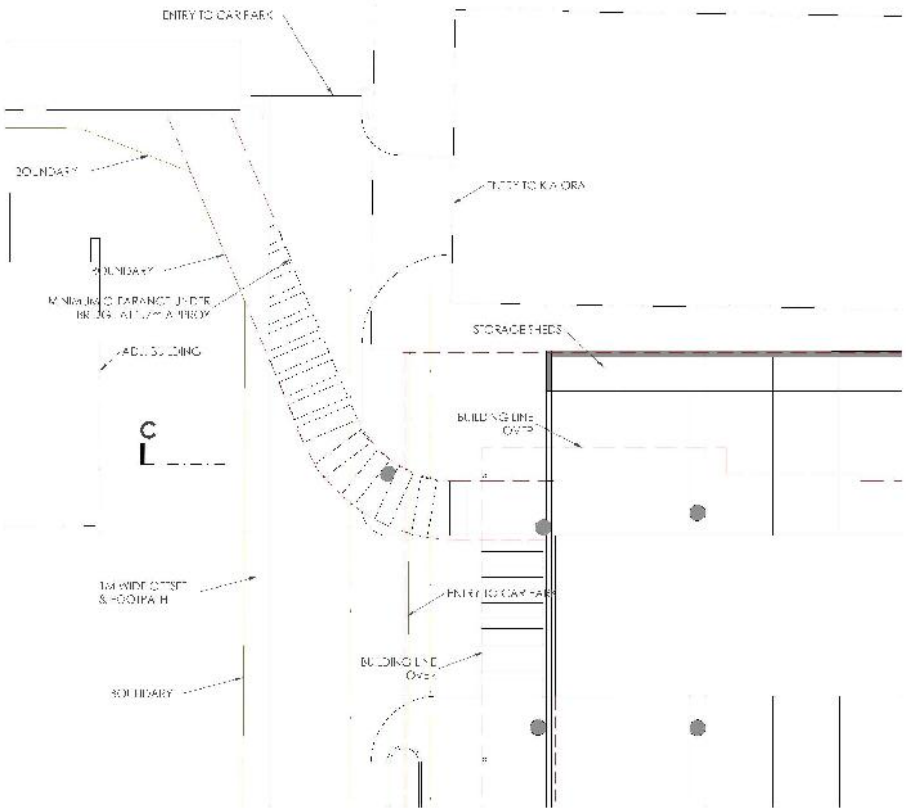
LEVEL 1 RL 159.90

PROPOSED MIXED USE DEVELOPMENT
580 SMOLLET STREET, ALBURY NSW

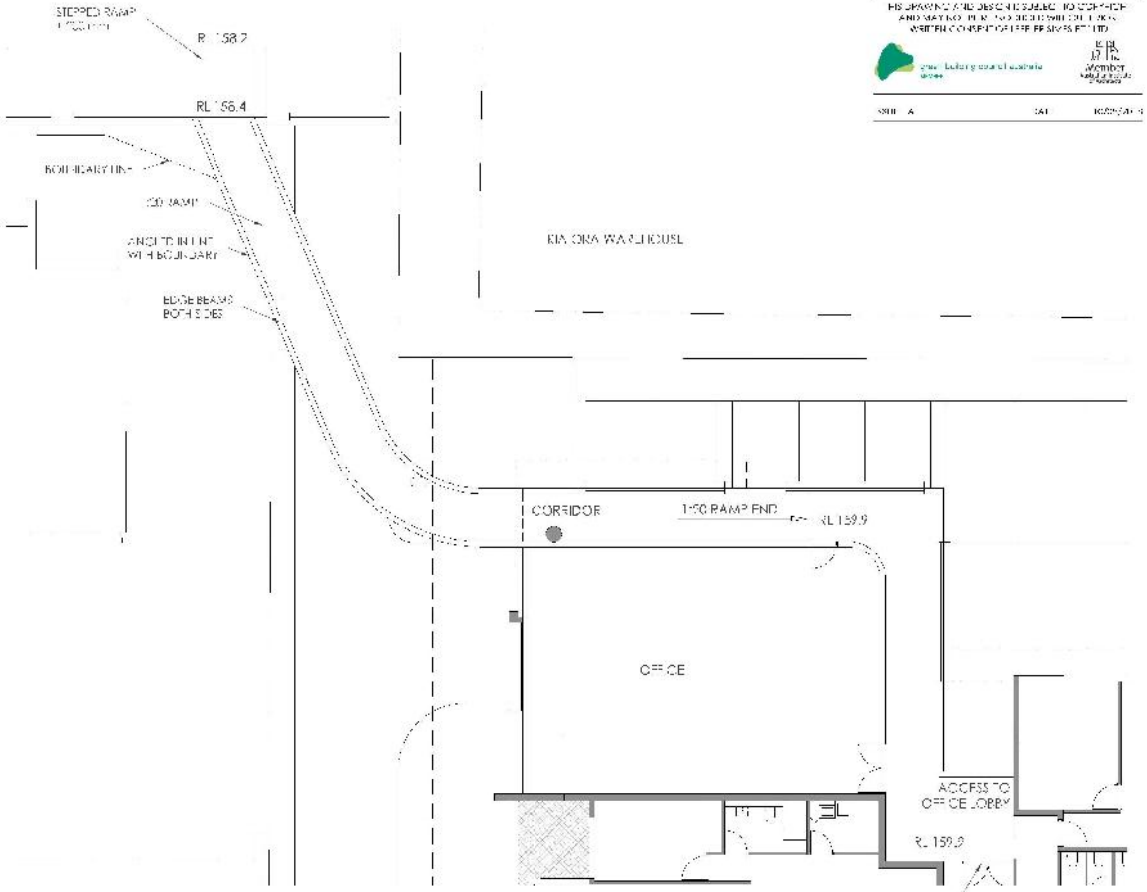
SCALE 1:100 @ A1 1:200 @ A3

JOB NO: 4524
DATE: DEC 2019
DRAWING NO. 580DA07 a

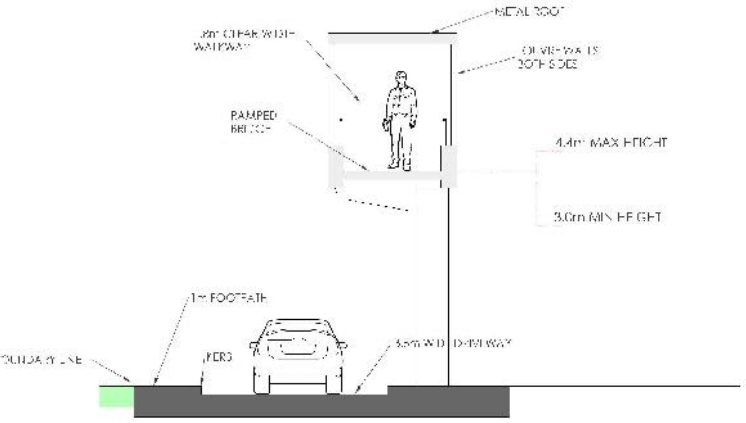
LEFFLER SIMES ARCHITECTS



BRIDGE ZONE GROUND FLR PLAN 1:100



BRIDGE ZONE FIRST FLR PLAN 1:100



SECTION C 1:50

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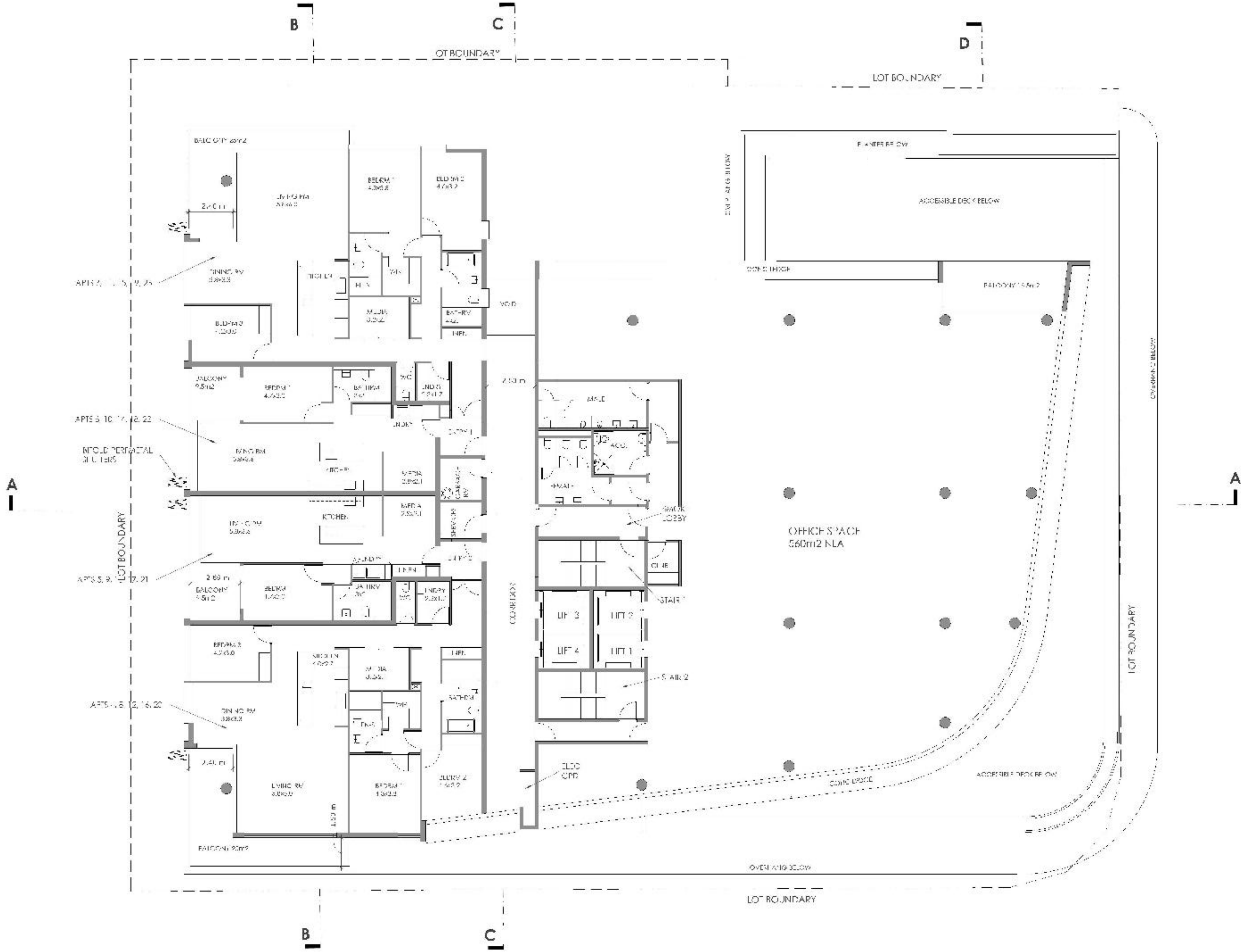
BRIDGE ZONE

PROPOSED MIXED USE DEVELOPMENT
580 SMOLLET STREETT, ALBURY NSW

JOB NO: 4524
DATE: DEC 2019
DRAWN: GMR
580DA08

LEFFLER SIMES ARCHITECTS

SCALE
1:100 @ A
1:200@ A3



LEVELS 2-6 PLAN

LEFFLER SIMES PTY LTD	SYDNEY	7 YOUNG ST NEUTRAL BAY NSW 2089	
ABN 39 001 045 992	MELBOURNE	LEVEL 2-15 OLIVER LANE VIC 3000	
www.lefflersimes.com.au	BRISBANE		

SCALE 1:100 @ A1, 1:200 @ A3

PROPOSED MIXED USE DEVELOPMENT
580 SMOLLETT STREETT, ALBURY NSW

JOB NO: 4524
DATE: DEC 2019
DRAWN: GMR
DWG NO.: 580DA09

LEFFLER SIMES ARCHITECTS

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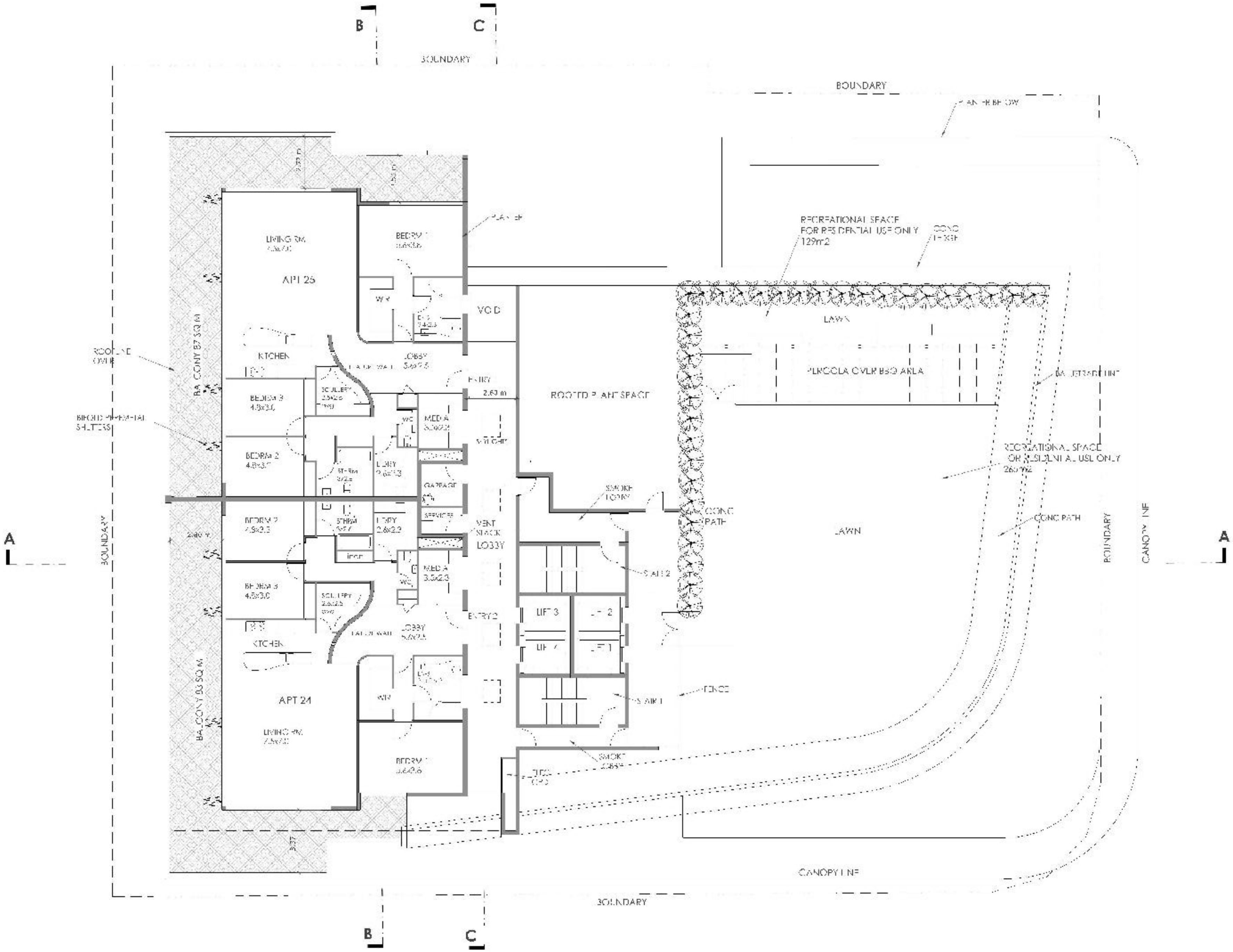

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LEVEL 7 PLAN

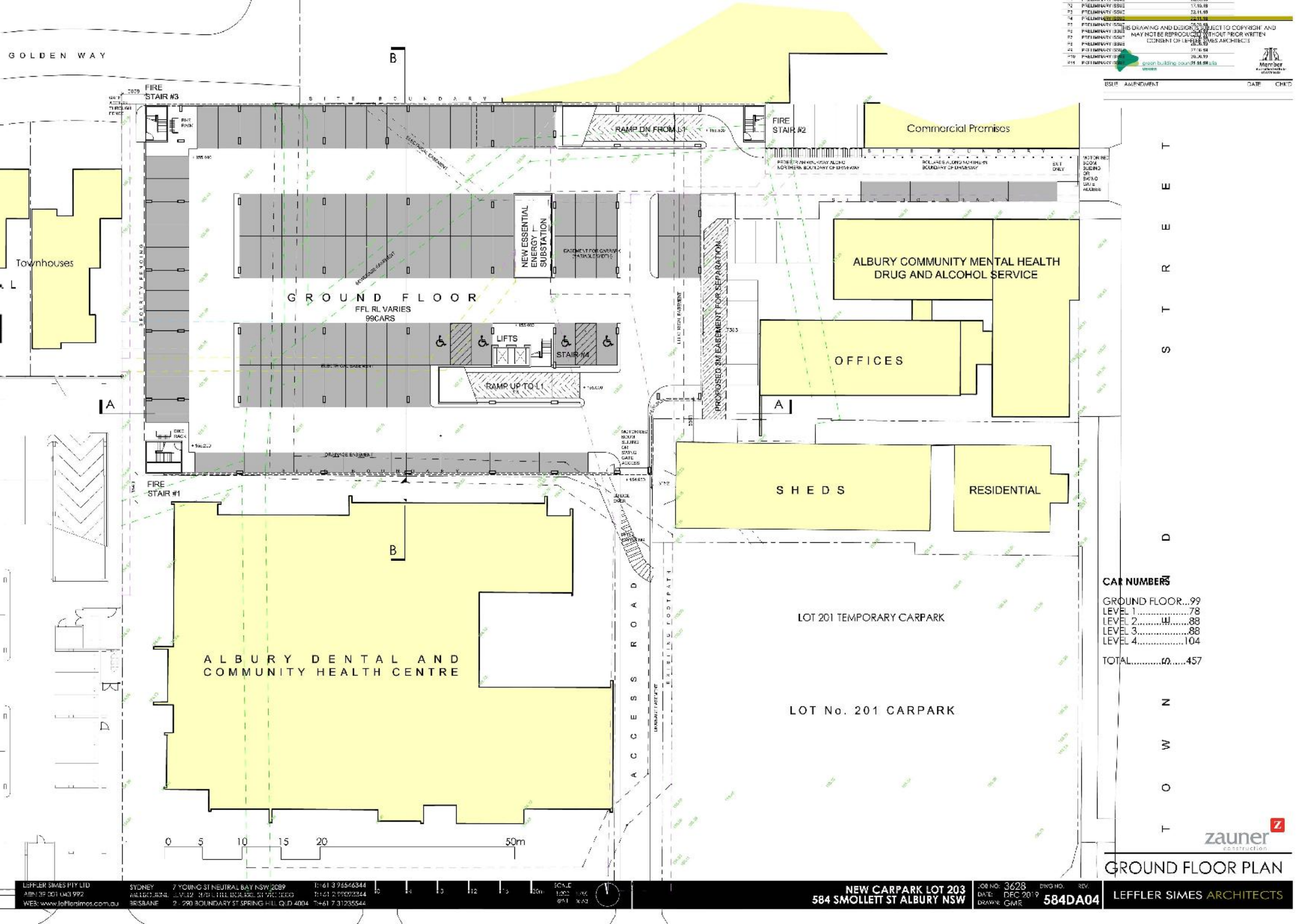
LEFFLER SIMES ARCHITECTS

SYDNEY
MELBOURNE
BRISBANE

SCALE 1:100 @ A 1:200@ A3

PROPOSED MIXED USE DEVELOPMENT
580 SMOLLET STREET, ALBURY NSW

JOB NO: 4524
DATE: DEC 2019
DRAWN: GMR
DWG NO. REV.
580DA10



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ISSUE	AMENDMENT	DATE	CHKD

CAR NUMBERS

GROUND FLOOR...99
LEVEL 1.....78
LEVEL 2.....88
LEVEL 3.....88
LEVEL 4.....104

TOTAL.....457

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GROUND FLOOR PLAN

LEFFLER SIMES PTY LTD
ABN 39 001 043 992
WEB: www.lefflersimes.com.au

SYDNEY 7 YOUNG ST NEUTRAL BAY NSW 2089 T: +61 2 99546344
MELBOURNE LEVEL 12, 379 COLLINS ST MELBOURNE VIC 3000 T: +61 3 [illegible]
BRISBANE 2 - 290 BOUNDARY ST SPRING HILL QLD 4004 T: +61 7 31235544

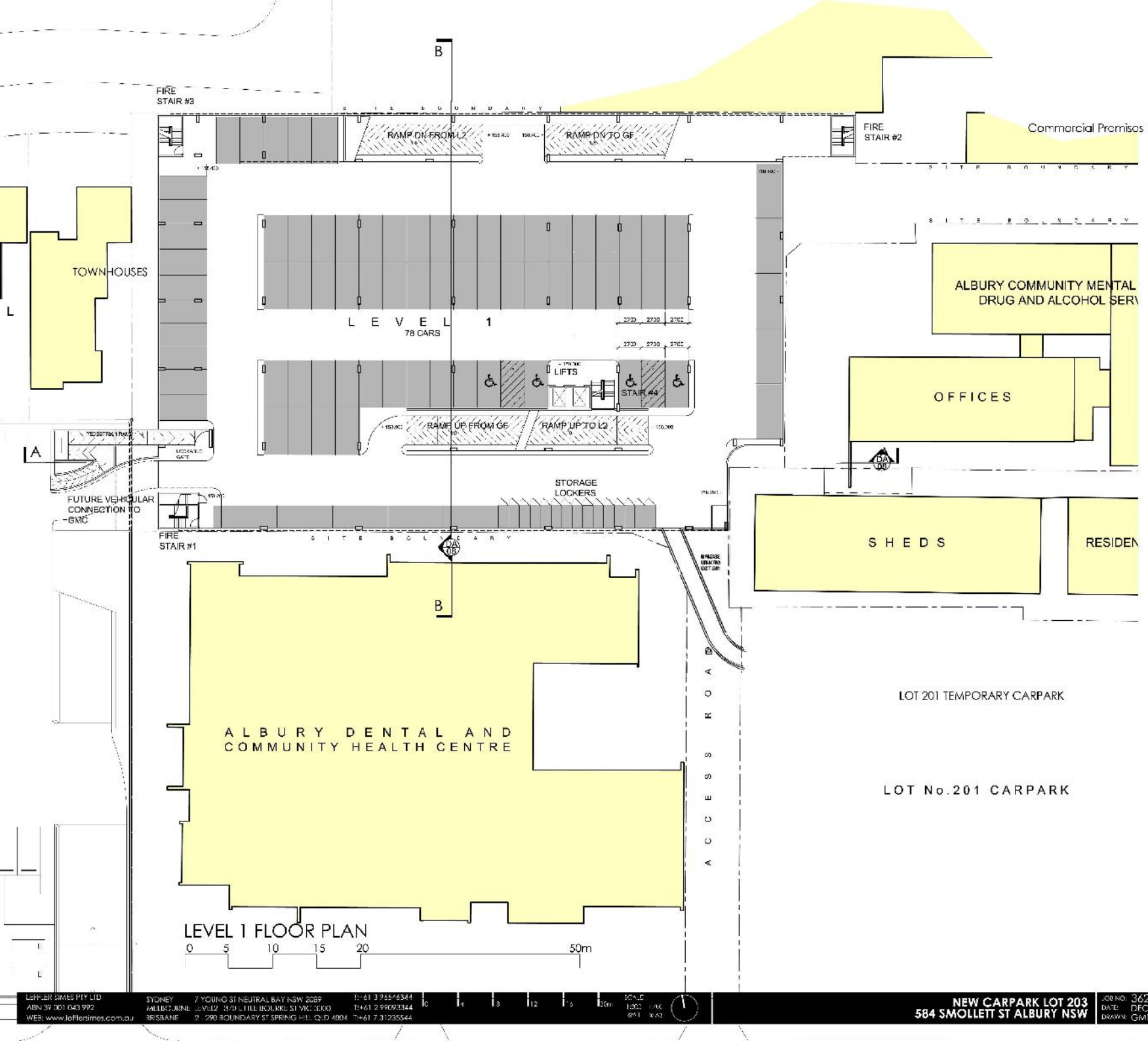
SCALE 1:200 @A1 1:400 @A3

NEW CARPARK LOT 203
584 SMOLLETT ST ALBURY NSW

JOB NO: 3628
DATE: DEC 2019
DRAWN: GMR
DWG NO. 584DA04
REV.

LEFFLER SIMES ARCHITECTS

ISSUE	AMENDMENT	DATE	CHKD



CAR NUMBERS

GROUND FLOOR...99
LEVEL 1.....78
LEVEL 2.....88
LEVEL 3.....88
LEVEL 4.....104

TOTAL.....457

zauner construction

LEVEL 1 PLAN

LEFFLER SIMES PTY LTD
ABN 39 001 043 992
WEB: www.lefflersimes.com.au
SYDNEY 7 YOUNG ST NEUTRAL BAY NSW 2089 T+61 2 99543344
MELBOURNE LEVEL 12, 360 C.T.I.L. BOURKE ST VIC 3000 T+61 2 99093344
BRISBANE 2 - 290 BOUNDARY ST SPRING HILL QLD 4004 T+61 7 31235544

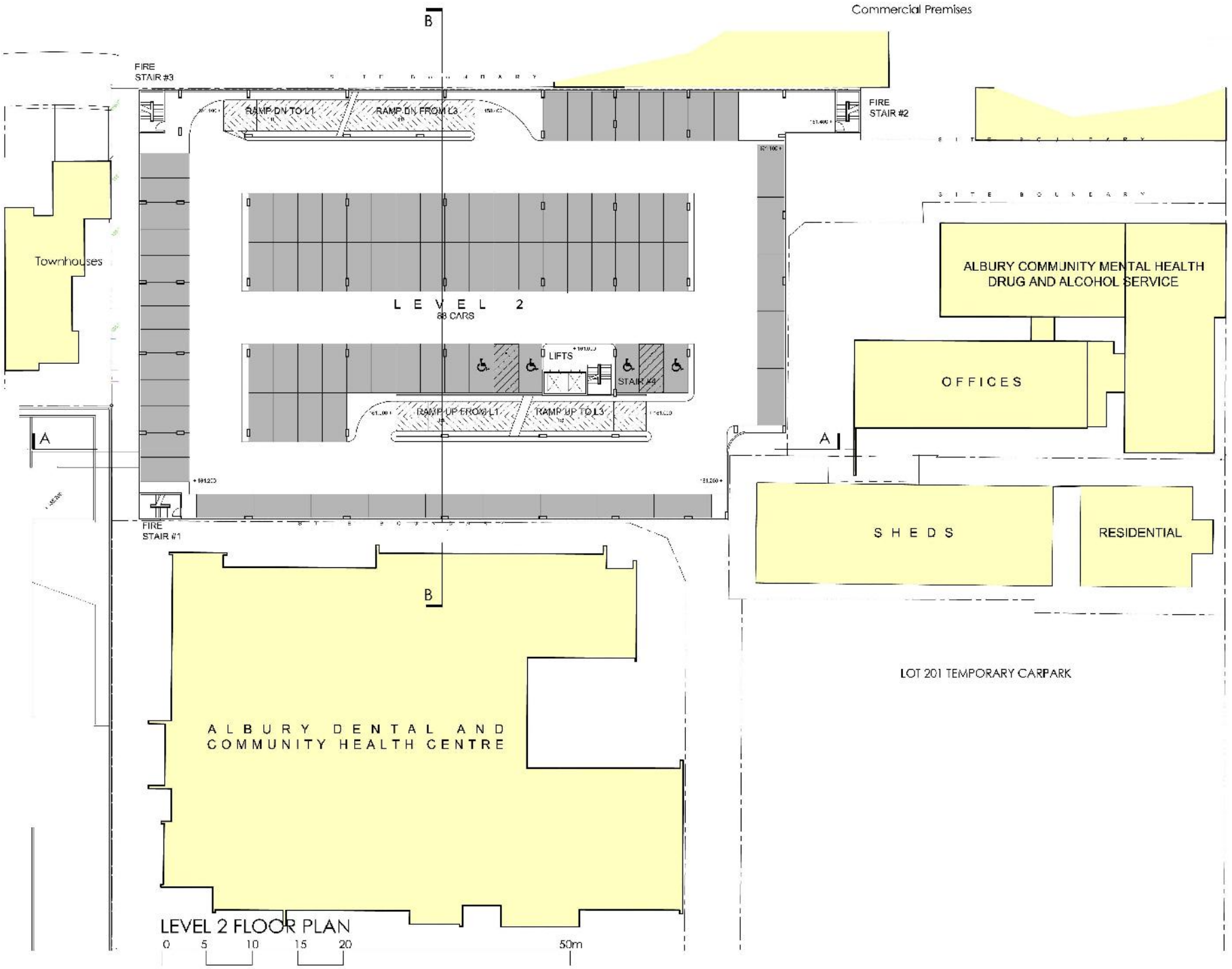
SCALE 1:200 @A1 1:400 @A3

NEW CARPARK LOT 203
584 SMOLLETT ST ALBURY NSW

JOB NO: 3628 DWG NO. 584DA05 REV.
DATE: DEC 2019
DRAWN: GMR

LEFFLER SIMES ARCHITECTS

ISSUE	AMENDMENT	DATE	CHKD



CAR NUMBERS

GROUND FLOOR...99
LEVEL 1.....78
LEVEL 2.....88
LEVEL 3.....88
LEVEL 4.....104

TOTAL.....457

zauner construction

LEVEL 2 PLAN

LEFFLER SIMES PTY LTD
ABN 39 001 043 992
WEB: www.lefflersimes.com.au
SYDNEY 7 YOUNG ST NEUTRAL BAY NSW 2089 T: +61 2 99546344
MELBOURNE LEVEL 12, 360 C.T.I.L. BOURKE ST VIC 3000 T: +61 2 99093344
BRISBANE 2 - 290 BOUNDARY ST SPRING HILL QLD 4004 T: +61 7 31235544

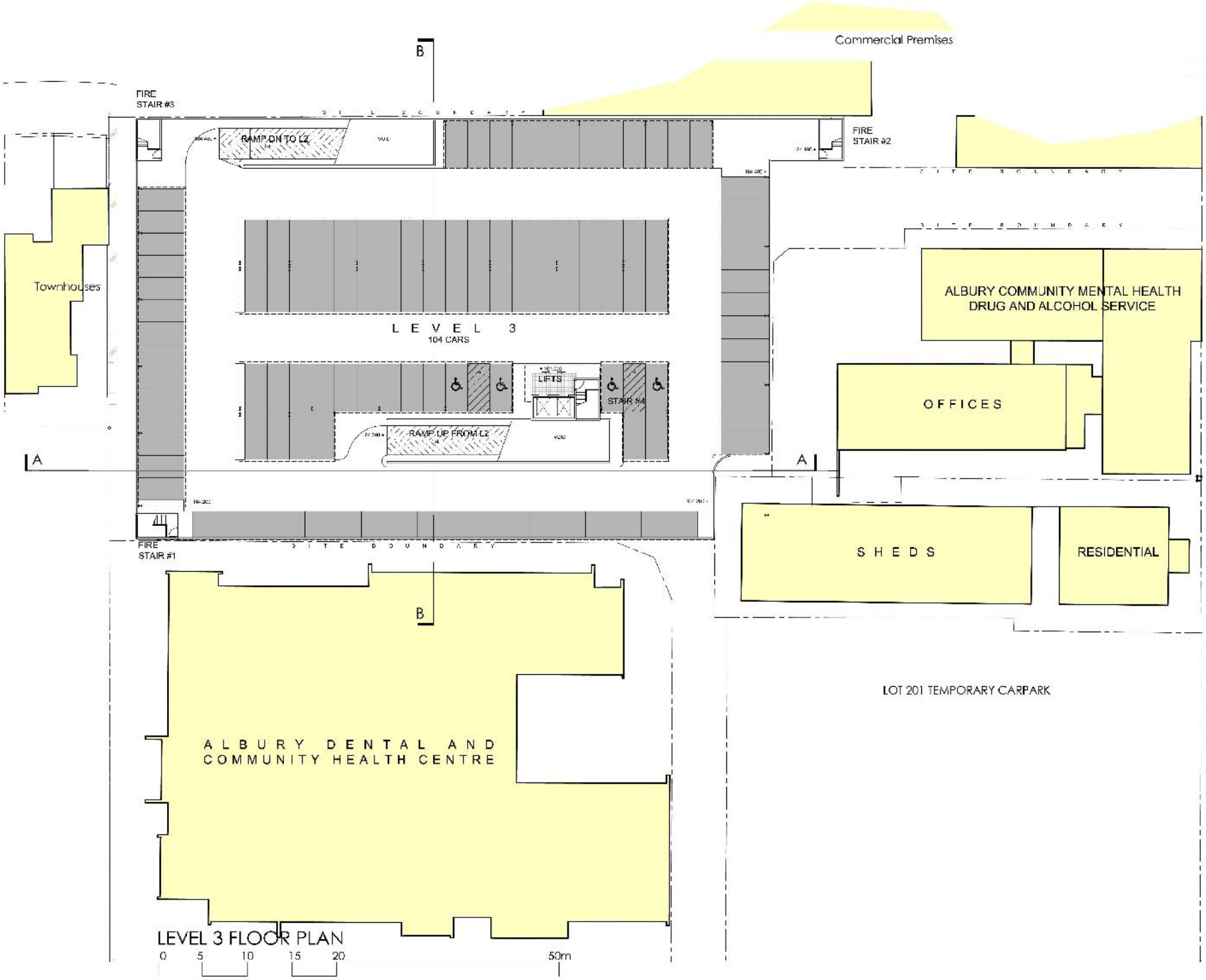
SCALE 1:200 @A1 1:400 @A3

NEW CARPARK LOT 203
584 SMOLLETT ST ALBURY NSW

JOB NO: 3628 DWG NO. REV.
DATE: DEC 2019 584DA06
DRAWN: GMR

LEFFLER SIMES ARCHITECTS

ISSUE	AMENDMENT	DATE	CHKD



CAR NUMBERS

GROUND FLOOR...99
LEVEL 1.....78
LEVEL 2.....88
LEVEL 3.....88
LEVEL 4.....104

TOTAL.....457

zauner construction

LEVEL 3 PLAN

LEFFLER SIMES PTY LTD
ABN 39 001 043 992
WEB: www.lefflersimes.com.au
SYDNEY 7 YOUNG ST NEUTRAL BAY NSW 2089 T+61 2 99546344
MELBOURNE LEVEL 12, 360 C.T.I.L. BOURKE ST VIC 3000 T+61 2 99093344
BRISBANE 2 - 290 BOUNDARY ST SPRING HILL QLD 4004 T+61 7 31235544

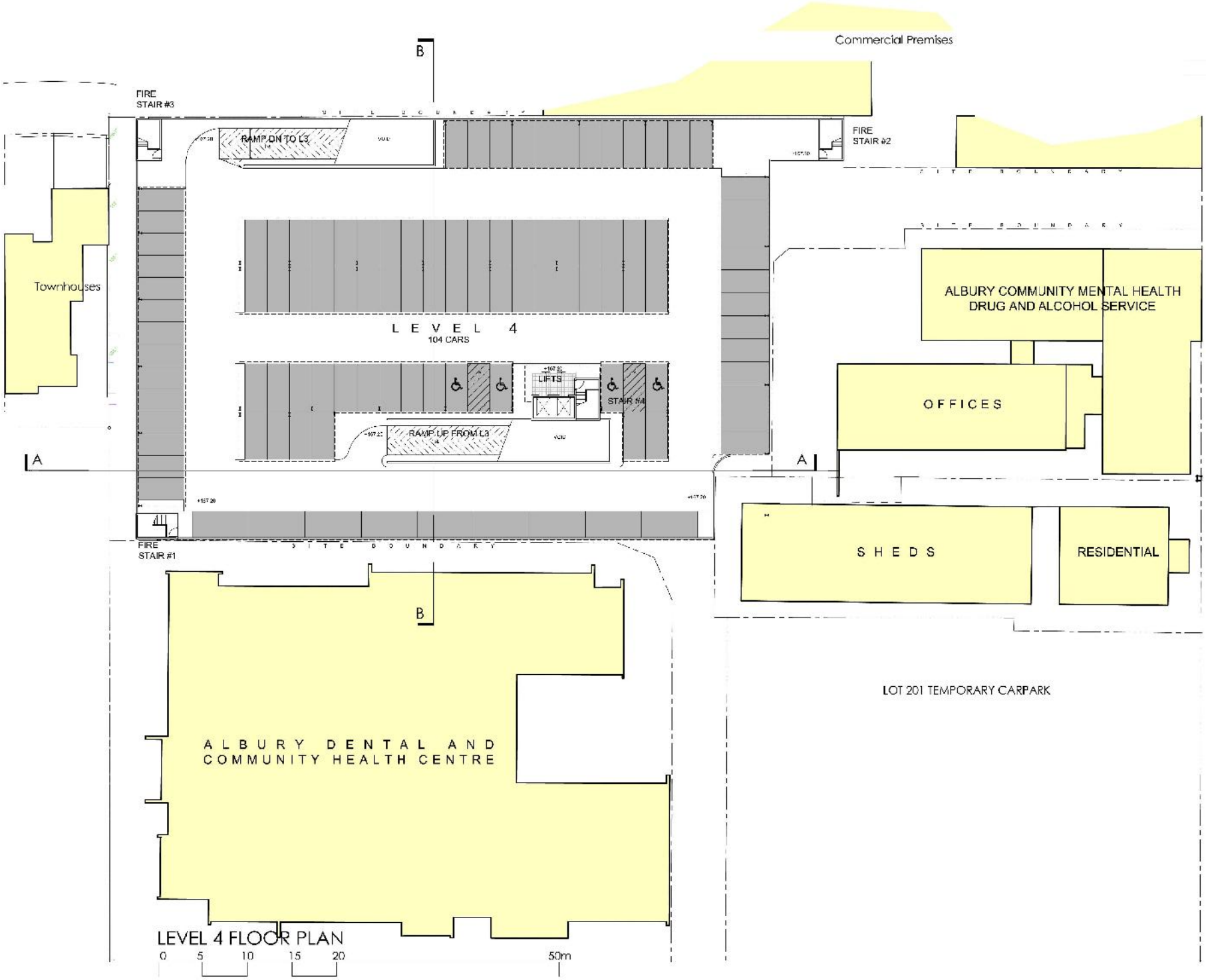
SCALE 1:200 @A1 1:400 @A3

NEW CARPARK LOT 203
584 SMOLLETT ST ALBURY NSW

JOB NO: 3628
DATE: DEC 2019
DRAWN: GMR
DWG NO. 584DA07
REV.

LEFFLER SIMES ARCHITECTS

ISSUE	AMENDMENT	DATE	CHKD



CAR NUMBERS

GROUND FLOOR...99
LEVEL 1.....78
LEVEL 2.....88
LEVEL 3.....88
LEVEL 4.....104

TOTAL.....457

zauner construction

LEVEL 4 PLAN

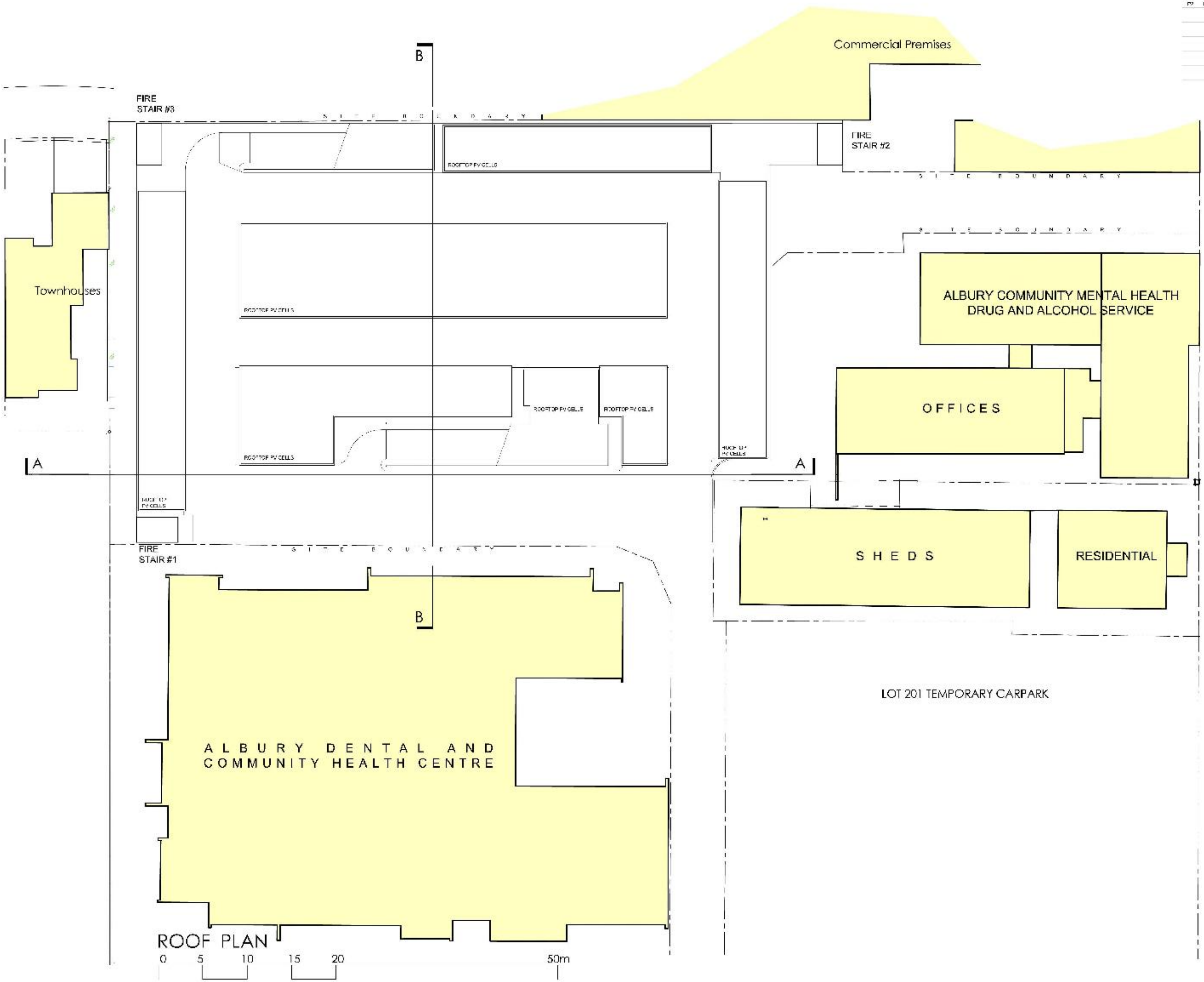
LEFFLER SIMES PTY LTD
ABN 39 001 043 992
WEB: www.lefflersimes.com.au
SYDNEY 7 YOUNG ST NEUTRAL BAY NSW 2089 T+61 2 99546344
MELBOURNE LEVEL 12, 360 C.T.I.L. BOURKE ST VIC 3000 T+61 2 99093344
BRISBANE 2 - 290 BOUNDARY ST SPRING HILL QLD 4004 T+61 7 31235544

SCALE 1:200 @A1 1:400 @A3

NEW CARPARK LOT 203
584 SMOLLETT ST ALBURY NSW

JOB NO: 3628
DATE: DEC 2019
DRAWN: GMR
DWG NO. REV. 584DA08

LEFFLER SIMES ARCHITECTS



green building council australia

ISSUE	AMENDMENT	DATE	CHK'D

CAR NUMBERS

GROUND FLOOR...99
LEVEL 1....................78
LEVEL 2....................88
LEVEL 3....................88
LEVEL 4..................104

TOTAL.....................457

zauner construction

ROOF PLAN

LEFFLER SIMES PTY LTD
ABN 39 001 043 992
WEB: www.lefflersimes.com.au
SYDNEY 7 YOUNG ST NEUTRAL BAY NSW 2089 T:+61 2 9909 3344
MELBOURNE LEVEL 2 370 LITTLE BOURKE ST VIC 3000 T:+61 3 96546344
BRISBANE 2 / 290 BOUNDARY ST SPRING HILL QLD 4004 T:+61 7 31235544

SCALE 1:200 @A1

NEW CARPARK LOT 203
584 SMOLLETT ST ALBURY NSW

JOB NO: 3628
DATE: DEC 2019
DRAWN: GMR
DWG NO. 584DA09
REV.

LEFFLER SIMES ARCHITECTS

APPENDIX D – INTERSECTION ANALYSIS – WITH DEVELOPMENT

LANE SUMMARY

Site: [Smollett-Townsend_AM_With Development]

Smollett Street & Townsend Street, Albury
AM Peak Period
With Proposed Development - 2020
Site Category: (None)
Signals - Fixed Time Isolated Cycle Time = 70 seconds (Site User-Given Phase Times)

Lane Use and Performance

	Demand Flows		Cap.	Deg. Satn	Lane Util.	Average Delay	Level of Service	95% Back of Queue		Lane Config	Lane Length	Cap. Adj.	Prob. Block.
	Total veh/h	HV %	veh/h	v/c	%	sec		Veh	Dist m		m	%	%
South: Townsend (S)													
Lane 1	38	5.0	307	0.123	54[5]	31.9	LOS C	1.1	8.3	Short (P)	30	0.0	NA
Lane 2	63	5.0	277	0.228	100	23.8	LOS B	1.7	12.6	Full	500	0.0	0.0
Approach	101	5.0		0.228		26.8	LOS B	1.7	12.6				
East: Smollett (E)													
Lane 1	62	5.0	1178	0.053	100	9.1	LOS A	0.7	5.4	Short (P)	30	0.0	NA
Lane 2	123	5.0	1241	0.099	100	4.7	LOS A	1.5	11.1	Full	500	0.0	0.0
Lane 3	95	5.0	952	0.099	100	6.4	LOS A	1.2	9.0	Short	35	0.0	NA
Approach	280	5.0		0.099		6.3	LOS A	1.5	11.1				
North: Townsend (N)													
Lane 1	114	5.0	307	0.370	100	33.4	LOS C	3.6	26.2	Short (P)	30	0.0	NA
Lane 2	25	5.0	324	0.078	23[6]	26.9	LOS B	0.7	5.4	Short	60	0.0	NA
Lane 3	91	5.0	264	0.347	100	31.0	LOS C	2.9	21.2	Full	500	0.0	0.0
Approach	231	5.0		0.370		31.7	LOS C	3.6	26.2				
West: Smollett (W)													
Lane 1	41	5.0	1178	0.035	100	9.1	LOS A	0.5	3.5	Short (P)	25	0.0	NA
Lane 2	308	5.0	1241	0.249	100	5.3	LOS A	4.3	31.3	Full	500	0.0	0.0
Lane 3	54	5.0	732	0.073	100	9.7	LOS A	0.7	5.0	Full	500	0.0	0.0
Approach	403	5.0		0.249		6.2	LOS A	4.3	31.3				
Intersection	1015	5.0		0.370		14.1	LOS A	4.3	31.3				

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Lane LOS values are based on average delay per lane.
Intersection and Approach LOS values are based on average delay for all lanes.
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.

5 Lane under-utilisation found by the program
6 Lane under-utilisation due to downstream effects

LANE SUMMARY

Site: [Smollett-Wodonga_AM_With Development]

Smollett Street & Wodonga Place, Albury
AM Peak Period
With Proposed Development - 2020
Site Category: (None)
Roundabout

Lane Use and Performance

	Demand Flows		Cap.	Deg. Satn	Lane Util.	Average Delay	Level of Service	95% Back of Queue		Lane Config	Lane Length	Cap. Adj.	Prob. Block.
	Total veh/h	HV %	veh/h	v/c	%	sec		Veh	Dist m		m	%	%
South: Wodonga (S)													
Lane 1[d]	500	5.0	1498	0.334	100	3.8	LOS A	2.4	17.2	Full	500	0.0	0.0
Lane 2	218	5.0	1146	0.190	100	7.9	LOS A	1.1	8.1	Full	500	0.0	0.0
Approach	718	5.0		0.334		5.1	LOS A	2.4	17.2				
East: Smollett (E)													
Lane 1	68	5.0	807	0.085	100	5.8	LOS A	0.4	2.6	Full	500	0.0	0.0
Lane 2[d]	107	5.0	960	0.112	100	6.5	LOS A	0.5	3.6	Full	500	0.0	0.0
Approach	176	5.0		0.112		6.2	LOS A	0.5	3.6				
North: Wodonga (N)													
Lane 1[d]	270	5.0	947	0.285	100	5.6	LOS A	1.4	10.0	Short	30	0.0	NA
Lane 2	245	5.0	861	0.285	100	5.9	LOS A	1.3	9.8	Full	500	0.0	0.0
Approach	515	5.0		0.285		5.7	LOS A	1.4	10.0				
West: Smollett (W)													
Lane 1	202	5.0	836	0.242	100	5.9	LOS A	1.1	7.8	Short	30	0.0	NA
Lane 2[d]	225	5.0	933	0.242	100	9.5	LOS A	1.1	8.0	Full	500	0.0	0.0
Approach	427	5.0		0.242		7.8	LOS A	1.1	8.0				
Intersection	1836	5.0		0.334		6.0	LOS A	2.4	17.2				

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

d Dominant lane on roundabout approach

LANE SUMMARY

Site: [Dean-Townsend_AM_With Development]

Dean Street & Townsend Street, Albury
AM Peak Period
With Proposed Development - 2020
Site Category: (None)
Giveway / Yield (Two-Way)

Lane Use and Performance

	Demand Flows		Cap.	Deg. Satn	Lane Util.	Average Delay	Level of Service	95% Back of Queue		Lane Config	Lane Length	Cap. Adj.	Prob. Block.
	Total veh/h	HV %	veh/h	v/c	%	sec		Veh	Dist m		m	%	%
South: Townsend (S)													
Lane 1	117	5.0	1414	0.083	100	5.1	LOS A	0.3	2.5	Short	20	0.0	NA
Lane 2	19	5.0	770	0.025	100	6.8	LOS A	0.1	0.6	Full	500	0.0	0.0
Approach	136	5.0		0.083		5.3	LOS A	0.3	2.5				
East: Dean (E)													
Lane 1	181	5.0	1864	0.097	100	1.2	LOS A	0.0	0.0	Full	500	0.0	0.0
Approach	181	5.0		0.097		1.2	NA	0.0	0.0				
West: Dean (W)													
Lane 1	332	5.0	1686	0.197	100	2.4	LOS A	0.9	6.3	Full	500	0.0	0.0
Approach	332	5.0		0.197		2.4	NA	0.9	6.3				
Intersection	648	5.0		0.197		2.6	NA	0.9	6.3				

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Lane LOS values are based on average delay per lane.
Minor Road Approach LOS values are based on average delay for all lanes.
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 lanes.
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.

LANE SUMMARY

Site: [Smollett-Townsend_PM_With Development]

Smollett Street & Townsend Street, Albury
PM Peak Period
With Proposed Development - 2020
Site Category: (None)
Signals - Fixed Time Isolated Cycle Time = 84 seconds (Site User-Given Phase Times)

Lane Use and Performance

	Demand Flows		Cap.	Deg. Satn	Lane Util.	Average Delay	Level of Service	95% Back of Queue		Lane Config	Lane Length	Cap. Adj.	Prob. Block.
	Total veh/h	HV %	veh/h	v/c	%	sec		Veh	Dist m		m	%	%
South: Townsend (S)													
Lane 1	23	5.0	384	0.060	23[5]	33.1	LOS C	0.8	5.6	Short (P)	30	0.0	NA
Lane 2	85	5.0	323	0.264	100	26.4	LOS B	2.7	19.7	Full	500	0.0	0.0
Approach	108	5.0		0.264		27.8	LOS B	2.7	19.7				
East: Smollett (E)													
Lane 1	47	5.0	1153	0.041	100	10.4	LOS A	0.7	5.1	Short (P)	30	0.0	NA
Lane 2	170	5.0	1214	0.140	100	6.2	LOS A	2.7	19.6	Full	500	0.0	0.0
Lane 3	114	5.0	817	0.140	100	9.6	LOS A	2.0	14.6	Short	35	0.0	NA
Approach	332	5.0		0.140		8.0	LOS A	2.7	19.6				
North: Townsend (N)													
Lane 1	125	5.0	384	0.326	100	35.3	LOS C	4.4	32.4	Short (P)	30	0.0	NA
Lane 2	47	5.0	405	0.115	23[6]	29.0	LOS C	1.6	11.4	Short	60	0.0	NA
Lane 3	165	5.0	324	0.509	100	34.5	LOS C	6.2	45.2	Full	500	0.0	0.0
Approach	337	5.0		0.509		34.0	LOS C	6.2	45.2				
West: Smollett (W)													
Lane 1	58	5.0	1153	0.050	100	10.4	LOS A	0.9	6.3	Short (P)	25	0.0	NA
Lane 2	301	5.0	1214	0.248	100	6.8	LOS A	5.2	37.8	Full	500	0.0	0.0
Lane 3	51	5.0	660	0.077	100	12.4	LOS A	0.9	6.4	Full	500	0.0	0.0
Approach	409	5.0		0.248		8.0	LOS A	5.2	37.8				
Intersection	1186	5.0		0.509		17.2	LOS B	6.2	45.2				

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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.

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LANE SUMMARY

Site: [Smollett-Wodonga_PM_With Development]

Smollett Street & Wodonga Place, Albury
PM Peak Period
With Proposed Development - 2020
Site Category: (None)
Roundabout

Lane Use and Performance

	Demand Flows		Cap.	Deg. Satn	Lane Util.	Average Delay	Level of Service	95% Back of Queue		Lane Config	Lane Length	Cap. Adj.	Prob. Block.
	Total veh/h	HV %	veh/h	v/c	%	sec		Veh	Dist m		m	%	%
South: Wodonga (S)													
Lane 1[d]	611	5.0	1340	0.455	100	4.6	LOS A	3.5	25.7	Full	500	0.0	0.0
Lane 2	128	5.0	858	0.150	100	9.0	LOS A	0.8	5.9	Full	500	0.0	0.0
Approach	739	5.0		0.455		5.4	LOS A	3.5	25.7				
East: Smollett (E)													
Lane 1	128	5.0	765	0.168	100	6.2	LOS A	0.7	5.1	Full	500	0.0	0.0
Lane 2[d]	198	5.0	918	0.216	100	5.8	LOS A	1.0	7.1	Full	500	0.0	0.0
Approach	326	5.0		0.216		5.9	LOS A	1.0	7.1				
North: Wodonga (N)													
Lane 1[d]	306	5.0	1042	0.294	100	4.9	LOS A	1.4	10.3	Short	30	0.0	NA
Lane 2	286	5.0	975	0.294	100	5.5	LOS A	1.4	10.1	Full	500	0.0	0.0
Approach	593	5.0		0.294		5.2	LOS A	1.4	10.3				
West: Smollett (W)													
Lane 1[d]	172	5.0	938	0.183	100	5.3	LOS A	0.9	6.2	Short	30	0.0	NA
Lane 2	157	5.0	856	0.183	100	9.1	LOS A	0.8	6.1	Full	500	0.0	0.0
Approach	328	5.0		0.183		7.1	LOS A	0.9	6.2				
Intersection	1986	5.0		0.455		5.7	LOS A	3.5	25.7				

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PM Peak Period
With Proposed Development - 2020
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Giveway / Yield (Two-Way)

Lane Use and Performance

	Demand Flows		Cap.	Deg. Satn	Lane Util.	Average Delay	Level of Service	95% Back of Queue		Lane Config	Lane Length	Cap. Adj.	Prob. Block.
	Total veh/h	HV %	veh/h	v/c	%	sec		Veh	Dist m		m	%	%
South: Townsend (S)													
Lane 1	212	5.0	1349	0.157	100	5.3	LOS A	0.7	5.0	Short	20	0.0	NA
Lane 2	67	5.0	727	0.093	100	7.3	LOS A	0.3	2.2	Full	500	0.0	0.0
Approach	279	5.0		0.157		5.8	LOS A	0.7	5.0				
East: Dean (E)													
Lane 1	257	5.0	1861	0.138	100	1.3	LOS A	0.0	0.0	Full	500	0.0	0.0
Approach	257	5.0		0.138		1.3	NA	0.0	0.0				
West: Dean (W)													
Lane 1	322	5.0	1635	0.197	100	2.5	LOS A	0.9	6.4	Full	500	0.0	0.0
Approach	322	5.0		0.197		2.5	NA	0.9	6.4				
Intersection	858	5.0		0.197		3.2	NA	0.9	6.4				

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