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17 December 2018

P1250 BC Willowdale Aged Care Facility TIA

Bolton Clarke
Level 3, 44 Musk Avenue
Kelvin Grove
QLD 4059

Attn: Steven Carter

Dear Steven,

Proposed Willowdale Aged Care Development, Denham Court, NSW

Following our site visit and review of the documentation provided for the proposed residential aged care facility at Denham Court, NSW, we provide the following traffic impact assessment. This assessment has been prepared in accordance with the Austroads Guidelines and Section 2.3 of the RMS Guide to Traffic Generating Developments which provides the structure for the reporting of key issues to be addressed when determining the impacts of traffic associated with a development. This guide indicates that the use of this format and checklist ensures that the most significant matters are considered by the relevant road authority.

The report has also taken into consideration the planning requirements outlined in the Campbelltown Growth Centres Development Control Plan (2013) and SEPP (Housing for Seniors or People with a Disability) 2004. Reference to the Australian Standard for Parking Facilities (AS2890) has been included where appropriate.

The subject site is located at 247 Jamboree Avenue, Denham Court as shown in Figure 1 to follow. The site forms part of the Willowdale Residential Development Masterplan, adjacent to the existing Willowdale Retirement Village.

Prior traffic assessments for the area reviewed as part of this assessment include:

- Willowdale Retirement Village Traffic Impact Assessment (Cardno August 2014) and
- East Leppington Precinct Traffic Assessment (Cardno June 2013). This assessment was completed for the previously titled East Leppington Masterplan, now referred to as the Willowdale Residential Development Masterplan.

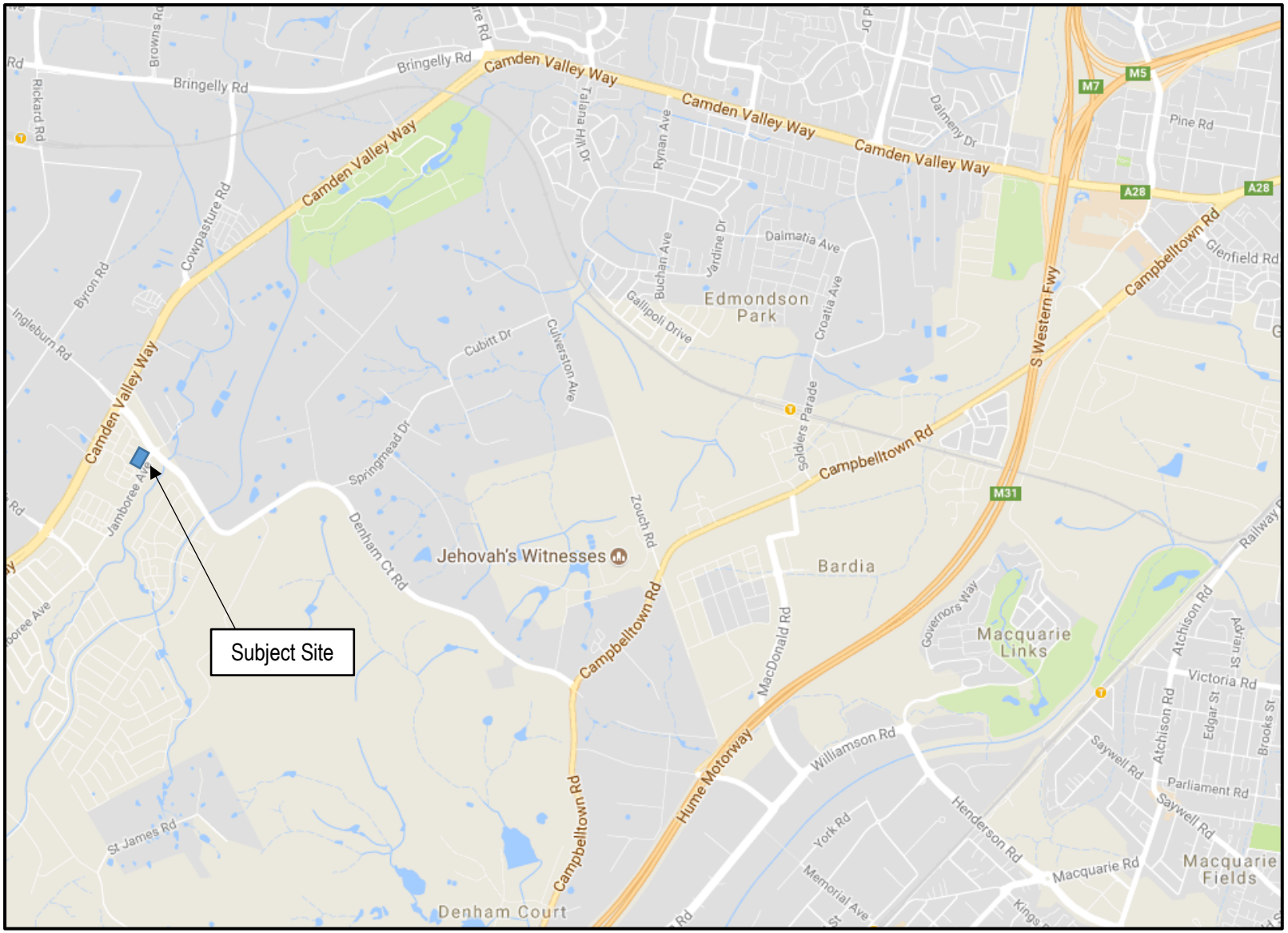

Figure 1 – Location of the subject site in the context of the external road network (Source: Nearmap)

Table 1 – Traffic Impact Assessment

Item	Comment
Existing Situation	
2.1.1 Site Location and Access	The proposed development is located within the Willowdale Residential Development Masterplan (formerly the East Leppington Masterplan), with frontage to Jamboree Avenue which runs along the eastern boundary of the site. It also has frontage to Denham Court Road along the northern boundary, with the remainder of the site bounded by the existing Willowdale Retirement Village. Access to the site will be off Jamboree Avenue only, with no access off Denham Court Road and no internal links to the adjacent retirement village to be provided.
2.2.1 Road Hierarchy	**Jamboree Avenue** is a collector road for the Willowdale Residential Development, operating under the posted speed limit of 50km/hr. It provides a single lane of travel in each direction with kerb and guttering and a pavement width in the order of 11 metres. There are opportunities for kerbside parking and street lighting is also provided. A shared path is provided along the western roadside, with a footpath also available along the eastern side. At its northern end, it meets Denham Court Road at a signalised four-way intersection. On the approach to this intersection it widens to provide a high angle left turn slip lane, as well as a through lane and a right turn lane. **Denham Court Road** provides an east-west connection between Camden Valley Way and Campbelltown Road. At its intersection with Jamboree Avenue it provides 2 through lanes eastbound and westbound, with a left turn slip provided on the westbound approach to allow for turns into Jamboree Avenue clear of the traffic signals. It operates under the posted speed limit of 70 km/hr. To the south of the site Jamboree Avenue meets **Willowdale Drive** at a roundabout intersection. Willowdale Drive is also collector road for the Willowdale Residential Development, providing access to Camden Valley Way to the west. It provides a similar standard to Jamboree Avenue operating under the posted speed limit of 50km/hr.
2.2.2 Current and Proposed Roadworks, Traffic Management Works and Bikeways	The site forms part of the recently constructed Willowdale Residential Development, which includes the construction of a number of local roads, as well as upgrades to existing roads to cater for the masterplan development. This has included intersection upgrades to cater for the increase in traffic flows, including the installation of traffic signals at the intersection of Denham Court Road and Jamboree Avenue. There are further roadworks to be undertaken to the east of the subject site, however no further roadworks or traffic management are required in the vicinity of the site off Jamboree Avenue. Cyclists are accommodated by the shared path along the western side of Jamboree Avenue, which continues to the north along Denham Court Road and Camden Valley Way and toward Willowdale Drive to the south.

Item	Comment
	The intersection of Denham Court Road and Jamboree Avenue includes line marking for on-road cyclists.
2.3 Traffic Flows	From observations during the site work, traffic flows along Jamboree Avenue are low in the afternoon peak period, with less than 200 vehicles per hour based on a 15 minute spot check. The traffic flows in the area may increase once further development has been completed within the Masterplan area. The traffic assessment for the previously titled East Leppington Masterplan (Cardno 2013) included traffic projections for the road network. The land pertaining to the subject site and adjacent retirement village, was initially assessed as low-density dwellings as part of this assessment. Based on this assessment the daily traffic flows along Jamboree Avenue at full development were determined to be 1,800 vehicles per day, giving in the order of 180 vehicles in the peak hours. This land was subsequently assessed as part of the traffic assessment undertaken for the Willowdale Retirement Village, with traffic generation completed for up to 280 dwellings. The peak hour traffic generation for the retirement village was determined as 112vph. This assessment also included provision for a future aged care facility (subject of this TIA) catering for up to 250 beds, with further assumptions made in this assessment determining 65vph for this development.
2.3.1 Daily Traffic Flows	The Willowdale Residential Development Masterplan included the following traffic generation for the future design horizon (2036) with full development and background growth: • 1,800 vehicles per day along Jamboree Avenue • 18,000 vehicles per day along Denham Court Road, west of Jamboree Avenue • 21,000 vehicles per day along Denham Court Road, east of Jamboree Avenue • 6,500 vehicles per day along Willowdale Drive, west of Jamboree Avenue
2.3.2 AADT	There is no AADT data available within the immediate locality of the subject site.
2.3.3 Daily Traffic Flow Distribution	Given the residential nature of the surrounding development, traffic flows along Jamboree Avenue would be reasonably balanced throughout the day with the majority being outbound in the morning for travel to work/school and inbound travelling home in the evening.
2.3.4 Vehicle Speeds	No speed surveys were completed as part of the survey work, however observations on site indicate that drivers typically travel at the posted speed limit passing the site due to the gradient of the road, straight alignment and minimal interaction with driveways or intersections in this location.

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Item	Comment
2.3.5 Existing Site Flows	The subject site is currently vacant and does not generate traffic demands.
2.3.6 Heavy Vehicle Flows	Given the nature of this area being primarily residential, the local roads do not create a high demand for heavy vehicles. There is a retail precinct to the south of Willowdale Drive that would generate demand for heavy vehicles associated with deliveries, however the route for these vehicles would likely be off Camden Valley Way onto Willowdale Drive, thereby not passing the subject site. There is an existing bus route along Jamboree Avenue.
2.3.7 Current Road Network Operation	Observations on site indicate that the local roads operate well with minimal delays and congestion. Major intersections in the locality were assessed as part of the Masterplan and upgraded where required to ensure adequate capacity.
2.4 Traffic Safety and Accident History	A review of accident data provided by the RMS (Attachment B) indicates that there have been 4 accidents recorded along the local roads in the locality of the site in the 5 year period from January 2013 to December 2017. Two of these accidents occurred along Denham Court Road near the signalised intersection with Jamboree Avenue, relating to rear end collisions. One of these related to 2 westbound vehicles, with the other relating to 2 eastbound vehicles. A further accident occurred along Jamboree Avenue, being a vehicle travelling northbound colliding with parked vehicles off-road to the left. Speeding was determined as a factor in this accident. The remaining accident involved a motorcycle going off-road to the right at the roundabout intersection of Willowdale Drive and Jamboree Avenue. Overall it is considered that the local roads provide an acceptable level of road safety, having been recently designed in accordance with Council and RMS requirements.
2.5 Parking Supply and Demand	
2.5.1 On-street Parking Provision	Parking is available along both sides of Jamboree Avenue in the vicinity of the subject site. There is no stopping permitted along Denham Court Road to the north of the site.
2.5.2 Off-street Parking Provision	There is currently no public off-street parking available within the immediate locality of the subject site. There is a retail precinct located to the south of the site which provides off-street parking for patrons.
2.5.3 Current Parking Demand and Utilisation	Observations on site indicate that there is a low demand for on-street parking in this location, with parking demands accounted for within the surrounding lots.
2.5.4 Short term set down or pick up areas	No formal set down or pick up areas noted in the locality of the site.
2.6 Modal Split	It is considered the majority if commuters in the area travel via private vehicle, however a bus route runs through the locality along Jamboree Avenue.

Item	Comment
	There is a well-developed network of internal shared paths and footpaths for the subdivision allowing for trips internal to the subdivision to be completed without driving.
2.7 Public Transport	
2.7.1 Rail Station Locations	The nearest railway station is Leppington Station, approximately 2.5 kilometres north of the site.
2.7.2 Bus Stops and Associated Facilities	The nearest bus stops are located along Jamboree Avenue, within 100m south of the site. Further bus stops are also located around 500m north of the site along Camden Valley Way. These bus stops provided no seating or shelter.
2.7.3 Transport Services	There is one local bus route that operates along Jamboree Avenue. Route 841 services Jamboree Avenue between Leppington Station and Narellan every 30 minutes during weekday peak periods and hourly outside weekday peak periods including weekends. Leppington Station is located on the Inner West and Leppington Line (T2) as well as the Cumberland Line (T5). The Inner west and Leppington Line provides services from Leppington to the City every 15 minutes (more frequent during peak hours) whilst the Cumberland Line provides half hourly services between Leppington and Schofield/Richmond.
2.8 Pedestrians Network	There is a shared path along the western side of Jamboree Avenue, with a footpath also available along the eastern side. These paths continue through the local area including along Denham Court Road to the north and Willowdale Drive to the south.
2.9 Other Proposed Developments	There is ongoing development of the Willowdale Residential Development Masterplan, including development to the north of Denham Court Road.
The Development	
3.1.1 Nature of Development	The proposal entails the construction of a Residential Aged Care facility comprising of 144 single bed units. Parking is to be provided on-site to cater for staff and visitors, with a service area allowing for waste collection and other servicing demands to occur on site. A total of 50 staff are anticipated to be on site at any one time for the development. A site plan for the proposed development is included in Attachment A.
3.1.2 Access and Circulation Requirements	Campbelltown Development Control Plan 2014 requires that all service vehicles shall be able enter and exit the site in a forward direction. Driveways to the site and the internal site layout shall be consistent with planning requirements outlined within AS2890 and Council DCP.
3.2 Access	
3.2.1 Driveway Location	Access to the site is proposed off Jamboree Avenue only, with a combined entry/exit driveway located approximately 70 metres south of the intersection with Denham Court Road.

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Item	Comment
3.2.2 Sight Distances	Sight distance requirements for an access driveway are prescribed AS2890.1. For the posted speed limit of 50 km/hr along Jamboree Avenue a minimum sight distance of 45 metres is required, with 69 metres desirable. Visibility to the left out of the site access extends to the intersection of Denham Court Road and Jamboree Avenue, being approximately 70 metres. Visibility to the right extends at least 150 metres, with Jamboree Avenue providing a straight road alignment along its length. As such, sight lines in both directions out of the proposed access driveway satisfy the requirements of AS2890.
3.2.3 Service Vehicle Access	The site will require servicing associated with laundry and food deliveries, with waste collection to also be undertaken on site. Waste collection is to be completed by a private contractor, with the waste vehicle able to access the site from the local road network and travel a short distance through the external parking area to access the loading bay area as required. The site layout will allow for sufficient manoeuvring (ingress and egress) for the waste vehicle accessing the loading bay off Jamboree Avenue. The loading bay includes a turntable to enable the waste vehicle to turn 180° to then exit in a forward direction. The operational waste management plan for the site proposes waste collection be competed three times a week.
3.2.4 Queuing at entrance to site	No vehicles queues expected at the site entry due to the low demand for traffic entering the site. There is at least 6 metres available on site prior to a potential hold point (parking) allowing for a vehicle entering the site to hold within the site boundary whilst waiting for a vehicle to park if required. Any queues that may form in association with staff at the end of a shift shall be contained within the site. Traffic flows on Jamboree Avenue are low and so shall create minimal delays for vehicles exiting the site.
3.2.5 Comparison with existing site access	There is no existing access to the site, which is currently vacant.
3.2.6 Access to Public Transport	The nearest bus stops are located on Jamboree Avenue within walking distance of the subject site (less than 400 metres). There are pedestrian facilities on both sides of the road allowing for connection to the nearby bus stops.
3.3 Circulation	
3.3.1 Pattern of circulation	The ground floor external parking area provides 90° angle parking to the eastern side of the internal road (8 spaces), with a minimum of 6.6 metres to allow for manoeuvring in/out of spaces. This road also provides access to the loading area to the south, as well as a drop off loop road adjacent to the main entry to the north. The basement car park shall allow for two-way movements through the single parking aisle, with 90° parking to either side. A turning bay is required under AS2890 at the end of the blind aisle to the north, to allow

Item	Comment
	provision for a vehicle to turn around and exit the parking aisle, should no spaces be available.
3.3.2 Road width	Internal roads shall be designed to allow for two-way movements in accordance with AS2890. For circulation roadways and driveways, a minimum of 3 metres between kerbs is required for one-way movements, whilst a minimum 5.5 metres is required for two-way movements. The driveway for the development provides a width of 7 metres upon entry into the site, with kerb splays on Jamboree Avenue to assist with turning movements into/out of the site. The ramp access to the basement car park provides a width in the order of 6.3 metres, allowing for two-way movements.
3.3.3 Internal Bus Movements	No requirement for buses to access the development. There may be the need for Coaster style buses to access the site associated with resident services.
3.3.4 Service Area Layout	The service area is to include a turntable (9 metre diameter) to allow service vehicles having entered in a forward direction, to turn around and exit the area in a forward direction. The layout for this area is to be confirmed during the detailed design for the project.
3.4 Parking	
3.4.1 Proposed Supply	Parking is to be provided within the basement level with 43 spaces, including 2 accessible spaces. There is further off-street parking available on site external to the building, with 8 spaces plus a dedicated ambulance bay provided. This gives a total of 52 spaces for the development.
3.4.2 Authority Parking	SEPP (Housing for Seniors or People with a Disability) 2004 provides minimum standards for parking, above which a development consent cannot be refused. The following is required for aged care facilities: • 1 parking space per 10 beds (or 1 per 15 where the facilities provides care only for people with dementia); • 1 parking space per 2 staff on duty at any time; plus • 1 space suitable for an ambulance
3.4.3 Parking Layout	The basement car park provides 90° angle parking along both sides of a single parking aisle, allowing for two-way movements. The external parking also allows for 90° angle parking. The layout for all parking spaces and aisles will comply with the minimum requirements of AS2890.1 and the relevant requirements outlined within the SEPP. Under AS2890.1 staff parking is classified as user class 1A, which requires 90° parking spaces to be a minimum of 2.4 x 5.4 metres. Visitor parking can be classified as medium term, being user class 2, requiring the following for 90° angle parking: • Minimum 2.4 x 5.4 metre parking spaces,

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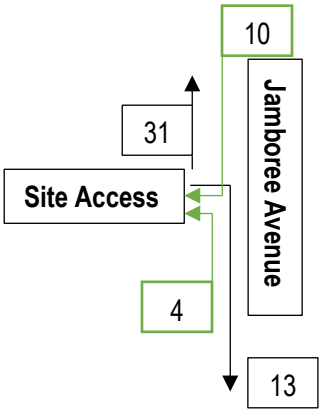
Item	Comment
	• Minimum 5.8 metre aisle widths (for both one-way and two-way). • At the end of the blind aisle, the aisle shall be extended a minimum of 1 metre beyond the last parking space to allow for manoeuvring • In addition to the 1 metre extension, provision must be made to allow a vehicle to turn around the end of the blind aisle All parking spaces within a parking aisle are to have the same dimensions, with the basement parking providing dimensions of 2.5 x 5.4 metres to cater for staff and visitors.
3.4.4 Parking Demand	A review of the plans indicates that the proposed RACF will provide 144 single bed rooms. Allowing for 50 staff gives the following parking requirements to meet the authority requirements: • 40 parking spaces; plus • 1 space suitable for an ambulance. Residential care facilities come under class 9c of the BCA, which specifies 1 accessible space for every 100 or part thereof. Therefore 1 accessible space is required. In total 52 spaces are proposed including two accessible spaces and one suitable for an ambulance.
3.4.5 Service Vehicle Parking	Servicing completed by smaller vehicles (eg HiAce style van) will be able to park within the visitor parking provided on site. There is sufficient area to cater for the private contractor waste vehicle within the loading bay. A suitable parking space has been provided for an ambulance.
3.4.6 Pedestrian and Bicycle Facilities	The site shall allow for pedestrian connection to the shared path along the site frontage on Jamboree Avenue.
Traffic Assessment	
4.1 Traffic Generation	Standard traffic generation rates provided by the RMS Guide to Traffic Generating Developments have been used as a basis for determining the future traffic flows associated with the development. For seniors living developments, using RMS rates (TDT 2013/04A), a peak generation rate of 0.4 vehicles per dwelling in the evening peak and 2.1 trips per dwelling per day is specified. This compares with the rate for Housing for Aged and Disabled persons of 0.1-0.2 trips per dwelling and 1-2 daily trips. Accounting for 144 dwellings for the proposed development, this would generate 58 trips in the evening peak and 303 trips per day. It is noted that the evening peak generally represent the highest traffic demands for this type of development, relating to staff movements and visitors. These rates are at the higher end of the traffic generation allowing for a degree of independent living which is unlikely given the degree of care provided in the proposed RACF. Traffic associated with the site has previously been assessed as part of the TIA for the Willowdale Retirement Village. The assumptions made in

<table>
<tr><th>Item</th><th>Comment</th></tr>
<tr><td></td><td>this assessment resulted in 65 peak hour trips associated with the site, being 7 additional trips over the traffic generation outlined above.</td></tr>
<tr><td>4.1.1 Daily and Seasonal Factors</td><td>Minimal daily and seasonal variation in traffic movements associated with the development.</td></tr>
<tr><td>4.1.2 Pedestrian Movements</td><td>Pedestrian movements associated with the development would primarily be associated with access to the bus stops located on Jamboree Avenue. There may be some demand for staff and visitors walking to the retail precinct located on Jamboree Avenue to the south of the site. The existing pedestrian infrastructure on Jamboree Avenue will cater for these movements.</td></tr>
<tr><td>4.2 Hourly distribution of trips</td><td></td></tr>
<tr><td>4.2.1 Origin / destinations assignment</td><td>Traffic has been assigned as per the approved Masterplan, which assigned traffic as per Table 2.
Table 2 – Origin/destination assignment
<table>
<tr><th>Road</th><th>Destination / Origin</th><th>Assignment</th></tr>
<tr><td>Camden Valley Way (South)</td><td>Camden, Picton</td><td>20%</td></tr>
<tr><td>Heath Road</td><td>Leppington</td><td>5%</td></tr>
<tr><td>Ingleburn Road</td><td>Leppington</td><td>10%</td></tr>
<tr><td>Cowpasture Road</td><td>Leppington</td><td>5%</td></tr>
<tr><td>Camden Valley Way (North)</td><td>Liverpool, Bankstown, Auburn, Burwood, City</td><td>30%</td></tr>
<tr><td>Denham Court Road</td><td>Denham Court, Ingleburn, Minto, Campbelltown, M7 Southbound</td><td>30%</td></tr>
<tr><td>Total</td><td></td><td>100%</td></tr>
</table>
Applying the above to Jamboree Avenue would see 75% to/from the north, with the remaining 25% to/from the south.

The majority of traffic flow during the evening is expected to be outbound for the development, relating to day staff travelling home. Inbound flows in this period will relate to evening staff and visitors. A split of 70% outbound / 30% inbound has been applied in the critical PM peak period. This results in the following distribution of traffic at the site access on Jamboree Avenue for the 58 trips generated in the PM peak:

</td></tr>
</table>

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Item	Comment
4.3 Impact on Road Safety	The development includes a new driveway access off Jamboree Avenue which shall allow for all turning movements into/out of the site. This access shall operate in a similar manner to the existing access for the retirement village approximately 90 metres to the south, which operates in a safe and efficient manner given the low traffic flows along Jamboree Avenue. Overall the local roads provide an acceptable level of road safety having been recently designed in accordance with Council and RMS Guidelines as required. Traffic associated with the proposed development can be incorporated on the local road network, with negligible change to the existing level of road safety.
4.4 Impact of Generated Traffic	
4.4.1 Impact on Daily Traffic Flows	While there are no specific limits on daily traffic flows, The RTA Guide to Traffic Generating Developments provides advice regarding the mid-block capacity of an urban road based upon the peak hour traffic volumes. Daily traffic flows through the area were assessed as part of the Masterplan, as outlined previously in Section 2.3.1. This assessment allowed for development on the subject site (low-density) as well as background growth, with in the order of 180 vehicles in the peak hour assigned along Jamboree Avenue. The RMS Guide provides advice regarding the environmental capacity of residential collector roads, based upon a maximum hourly capacity. The Guide indicates an environmental capacity of 500 vehicles per hour with 300 vehicles per hour being desirable. Allowing for the development traffic (58 trips) on top of the projected 180vph (associated with the area masterplan which made allowance for traffic generated by the subject site), Jamboree Avenue remains well within the environmental goal at 238 vph. Overall the development will have an acceptable impact upon the local roads with traffic flows being less than that previously allowed for and well within the capacity of the surrounding road network.
4.4.2 Peak Hour Impacts on Intersections	All existing and proposed intersections in the locality were assessed as part of the Masterplan, with upgrades required to cater for the increase in flows associated with the development having been completed. As stated previously, the traffic generation for the land pertaining to the subject site was assessed as low density dwellings. The TIA for the adjacent Willowdale Retirement Village stated that as a result of the retirement village/aged care facility that the total traffic volumes on the intersections at Camden Valley Way with Denham Court Road/Ingleburn Road and Heath Road are anticipated to decrease in both the AM and PM peak periods. This is a result of the lower traffic generation rates for this type of development compared with low density dwellings. It was subsequently determined in this assessment that the traffic impact on the intersections compared to the assessment undertaken as a part of the East Leppington Traffic Impact Assessment is considered negligible

Item	Comment
	and as such the assessments undertaken as a part of the Masterplan remain valid. The peak traffic generation outlined in the Willowdale Retirement Village for the future aged care component was 65 trips per hour. The actual flows to be generated by the proposed development are 58 trips in the evening peak, thereby being a reduction of 7 vehicles over that previously assessed in the approved retirement village. Given this, the proposed development shall see no increase in traffic at key intersections in the locality over that previously assessed and approved. The access driveway for the development shall be able to operate in a safe and efficient manner given the low traffic volumes along Jamboree Avenue.
4.4.3 Impact of Construction Traffic	During construction, there will be a requirement for construction vehicles to access the site as well as additional traffic movements associated with workers. These movements can be catered for within the local road network. Parking for construction vehicles and staff can be generally contained within the site.
4.4.4 Other Developments	There is ongoing development in the surrounding Willowdale Residential Development Masterplan. Traffic associated with ongoing development in the locality has been assessed as part of the Masterplan and allowed for within the road infrastructure.
4.5 Public Transport	
4.5.1 Options for improving services	None required. The existing services in the area can cater for any increased demands created by the development.
4.5.2 Pedestrian Access to Bus Stops	Pedestrian facilities are available along Jamboree Avenue providing access to bus stops on this road.
4.6 Recommended Works	
4.6.1 Improvements to Access and Circulation	The new access on Jamboree Avenue is sufficient to cater for turning movements into and out of the site.
4.6.2 Improvements to External Road Network	None required.
4.6.3 Improvements to Pedestrian Facilities	None required.
4.6.4 Effect of Recommended Works on Adjacent Developments	No works proposed that will impact on adjacent developments.
4.6.5 Effect of Recommended Works on Public Transport Services	None.
4.6.6 Provision of LATM Measures	None Required
4.6.7 Funding	All external works shall be funded by the developer.

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Site Photos:

Photo 1 – Visibility looking right (south) along Jamboree Avenue from the proposed site access.

Photo 2 – Visibility looking left (north) along Jamboree Avenue from the proposed site access.

Photo 3 – Path along the eastern side of Jamboree Avenue.

Conclusion:

From the site work undertaken and the review of the development proposal and associated plans against the requirements of the RMS Guide to Traffic Generating Developments and Council DCP, it is considered that the proposed development application should have no objections raised on traffic and access grounds. The additional traffic movements generated by the development are less than previously assessed and will have an acceptable impact on the surrounding road network.

Parking will be provided on site in accordance with SEPP (Housing for Seniors or People with a Disability) 2004 to accommodate the parking demands of the proposal. A total of 52 spaces are provided, being 11 in excess of that required under the SEPP. Access to the loading area can be achieved for the suitable design vehicle, ensuring waste collection, food and laundry services can be completed on site.

Please feel free to contact our office on 4032 7979, should you have any queries.

Yours sincerely,

Tyler Neve
Traffic Engineer

Attached: A – Site Plan
B – Accident Data

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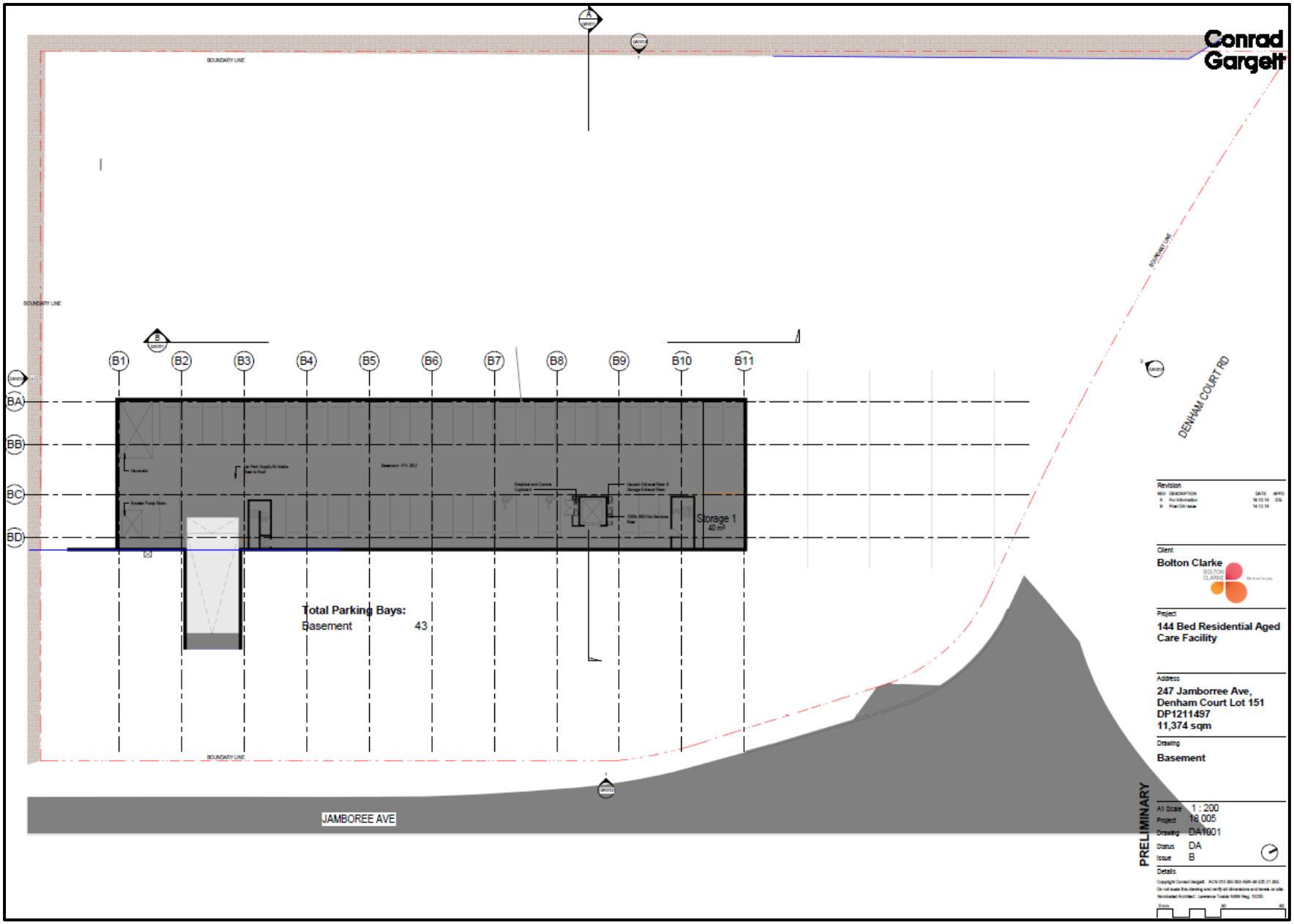
Attachment A: Site Plan


Conrad Gargett
BOUNDARY LINE
BOUNDARY LINE
BOUNDARY LINE
DENHAM COURT RD
B1
B2
B3
B4
B5
B6
B7
B8
B9
B10
B11
BA
BB
BC
BD
Storage 1
40 m²
Total Parking Bays:
Basement 43
JAMBOREE AVE
Revision
Client
Bolton Clarke
Project
144 Bed Residential Aged Care Facility
Address
247 Jamborree Ave,
Denham Court Lot 151
DP1211497
11,374 sqm
Drawing
Basement
PRELIMINARY
A1 Scale 1 : 200
Project 18 005
Drawing DA1901
Status DA
Issue B
Details


Conrad Gargett
Landscaping Buffer
18 Resident Bedrooms
10 Resident Bedrooms
8 Resident Bedrooms
11 Resident Bedrooms
14 Resident Bedrooms
10 Resident Bedrooms
Landscaping
Ambulance bay
Acoustic Screen Wall 2.7m height
Visitors Parking
Acoustic Barrier
DENHAM COURT RD
JAMBOREE AVE
Client
Bolton Clarke
Project
144 Bed Residential Aged Care Facility
Address
247 Jamboree Ave, Denham Court Lot 151 DP1211497 11,374 sqm
Drawing
Ground Floor
PRELIMINARY
A1 Scale 1 : 200
Project 18 005
Drawing DA1002
Status DA
Issue B


Conrad Gargett
18 Resident Bedrooms
10 Resident Bedrooms
8 Resident Bedrooms
11 Resident Bedrooms
16 Resident Bedrooms
10 Resident Bedrooms
Courtyard Below
Courtyard Below
Dock Void
DENHAM COURT RD
JAMBOREE AVE
PRELIMINARY
Bolton Clarke
144 Bed Residential Aged Care Facility
247 Jamboree Ave, Denham Court Lot 151 DP1211497
11,374 sqm
First Floor
A1 Scale 1 : 200
Project 18 005
Drawing DA1003
Status DA
Issue B

Attachment B: Accident Data

Summary Crash Report

Transport for NSW — Centre for Road Safety

# Crash Type		
Car Crash	3	75.0%
Light Truck Crash	1	25.0%
Rigid Truck Crash	0	0.0%
Articulated Truck Crash	0	0.0%
'Heavy Truck Crash	(0)	(0.0%)
Bus Crash	1	25.0%
"Heavy Vehicle Crash	(0)	(0.0%)
Emergency Vehicle Crash	0	0.0%
Motorcycle Crash	1	25.0%
Pedal Cycle Crash	0	0.0%
Pedestrian Crash	0	0.0%

' Rigid or Artic. Truck " Heavy Truck or Heavy Bus
These categories are NOT mutually exclusive

Location Type		
*Intersection	2	50.0%
Non intersection	2	50.0%

* Up to 10 metres from an intersection

Collision Type		
Single Vehicle	1	25.0%
Multi Vehicle	3	75.0%

Road Classification		
Freeway/Motorway	0	0.0%
State Highway	0	0.0%
Other Classified Road	0	0.0%
Unclassified Road	4	100.0%

Contributing Factors		
Speeding	1	25.0%
Fatigue	0	0.0%

Weather		
Fine	4	100.0%
Rain	0	0.0%
Overcast	0	0.0%
Fog or mist	0	0.0%
Other	0	0.0%

Road Surface Condition		
Wet	0	0.0%
Dry	4	100.0%
Snow or ice	0	0.0%

Natural Lighting		
Dawn	0	0.0%
Daylight	3	75.0%
Dusk	0	0.0%
Darkness	1	25.0%

Crash Movement		
Intersection, adjacent approaches	0	0.0%
Head-on (not overtaking)	0	0.0%
Opposing vehicles; turning	0	0.0%
U-turn	0	0.0%
Rear-end	2	50.0%
Lane change	0	0.0%
Parallel lanes; turning	0	0.0%
Vehicle leaving driveway	0	0.0%
Overtaking; same direction	0	0.0%
Hit parked vehicle	0	0.0%
Hit railway train	0	0.0%
Hit pedestrian	0	0.0%
Permanent obstruction on road	0	0.0%
Hit animal	0	0.0%
Off road, on straight	0	0.0%
Off road on straight, hit object	2	50.0%
Out of control on straight	0	0.0%
Off road, on curve	0	0.0%
Off road on curve, hit object	0	0.0%
Out of control on curve	0	0.0%
Other crash type	0	0.0%

Speed Limit					
40 km/h or less	0	0.0%	80 km/h zone	0	0.0%
50 km/h zone	2	50.0%	90 km/h zone	0	0.0%
60 km/h zone	0	0.0%	100 km/h zone	0	0.0%
70 km/h zone	2	50.0%	110 km/h zone	0	0.0%

~ 07:30-09:30 or 14:30-17:00 on school days	~ 40km/h or less		~ School Travel Time Involvement		
	0	0.0%		0	0.0%

Day of the Week												
Monday	0	0.0%	Wednesday	1	25.0%	Friday	1	25.0%	Sunday	1	25.0%	WEEKEND	2	50.0%
Tuesday	0	0.0%	Thursday	0	0.0%	Saturday	1	25.0%	WEEKDAY	2	50.0%			

CRASHES	4	
Fatal	0	0.0%
Serious inj.	2	50.0%
Moderate inj.	0	0.0%
Minor/Other inj.	1	25.0%
Uncategorised inj.	0	0.0%
Non-casualty	1	25.0%

Self Reported Crash	2	50%

Time Group		% of Day	
00:01 - 02:59	0	0.0%	12.5%
03:00 - 04:59	0	0.0%	8.3%
05:00 - 05:59	0	0.0%	4.2%
06:00 - 06:59	0	0.0%	4.2%
07:00 - 07:59	0	0.0%	4.2%
08:00 - 08:59	0	0.0%	4.2%
09:00 - 09:59	0	0.0%	4.2%
10:00 - 10:59	0	0.0%	4.2%
11:00 - 11:59	1	25.0%	4.2%
12:00 - 12:59	0	0.0%	4.2%
13:00 - 13:59	2	50.0%	4.2%
14:00 - 14:59	0	0.0%	4.2%
15:00 - 15:59	0	0.0%	4.2%
16:00 - 16:59	0	0.0%	4.2%
17:00 - 17:59	0	0.0%	4.2%
18:00 - 18:59	0	0.0%	4.2%
19:00 - 19:59	0	0.0%	4.2%
20:00 - 21:59	0	0.0%	8.3%
22:00 - 24:00	1	25.0%	8.3%

Street Lighting Off/Nil		% of Dark
0	of 1	in Dark 0.0%

CASUALTIES	3	
Killed	0	0.0%
Seriously inj.	2	66.7%
Moderately inj.	0	0.0%
Minor/Other inj.	1	33.3%
Uncategorised inj.	0	0.0%
^ Unrestrained	0	0.0%

^ Belt fitted but not worn, No restraint fitted to position OR No helmet worn

Crashes		Casualties
3	2017	2
1	2016	1

McLean Periods		% Week	
A	0	0.0%	17.9%
B	0	0.0%	7.1%
C	1	25.0%	17.9%
D	1	25.0%	3.5%
E	1	25.0%	3.6%
F	0	0.0%	10.7%
G	0	0.0%	7.1%
H	0	0.0%	7.1%
I	1	25.0%	12.5%
J	0	0.0%	10.7%

#Holiday Periods																				
New Year	0	0.0%	Easter	0	0.0%	Queen's BD	0	0.0%	Christmas	0	0.0%	Easter SH	0	0.0%	Sept./Oct. SH	0	0.0%			
Aust. Day	0	0.0%	Anzac Day	0	0.0%	Labour Day	0	0.0%	January SH	0	0.0%	June/July SH	0	0.0%	December SH	1	25.0%			

Detailed Crash Report

NSW Transport for NSW — Centre for Road Safety

NOTES: 8289 - Denham Court Rd, Jamboree Ave & Willowdale Dr, Denham Court Crash Data - 1 Jan 2013 to 31 Dec 2017

Crash No.	Data Source	Date	Day of Week	Time	Distance		ID Feature	Loc Type	Alignment	Weather	Surface Condition	Speed Limit	No. of Tus	Tu Type/Obj	Age/Sex	Street Travelling	Speed Travelling	Manoeuvre	Degree of Crash-Detailed	Killed	Seriously Inj.	Moderately Inj.	Minor/Other Inj.	Uncateg'd Inj.	Factors	S F
Sydney Region																										
Campbelltown LGA																										
Denham Court																										
Jamboree Ave																										
1157641	P	20/12/2017	Wed	23:11	200 m	S	DENHAM COURT RD	2WY	STR	Fine	Dry	50	3	CAR	M32	N in JAMBOREE AVE	80	Proceeding in lane	NC	0	0	0	0	0	S	
E65862525								RUM	71	Off rd left => obj				CAR		N in JAMBOREE AVE	0	Parked								
														4WD		N in JAMBOREE AVE	0	Parked								
1146616	P	12/03/2017	Sun	13:20		at	WILLOWDALE AVE	RDB	STR	Fine	Dry	50	1	M/C	M39	N in JAMBOREE AVE	40	Proceeding in lane	SC	0	1	0	0	0		
E65570280								RUM	73	Off rd rght => obj				Traffic island etc												
Liverpool LGA																										
Leppington																										
Denham Court Rd																										
1112727	S	30/07/2016	Sat	11:55		at	JAMBOREE AVE	XJN	STR	Fine	Dry	70	2	UTE	M26	E in DENHAM COURT RD	Unk	Proceeding in lane	OC	0	0	0	1	0		
E63032339								RUM	31	Left rear				TRK	M63	E in DENHAM COURT RD	0	Waiting turn left								
1154069	S	10/11/2017	Fri	13:05	50 m	E	JAMBOREE AVE	2WY	STR	Fine	Dry	70	2	CAR	F62	W in DENHAM COURT RD	Unk	Proceeding in lane	SC	0	1	0	0	0		
E66321633								RUM	30	Rear end				BUS	M58	W in DENHAM COURT RD	0	Stationary								

Report Totals: Crashes: 4 Fatal Crashes(FC): 0 Serious Injury Crashes(SC): 2 Moderate Injury Crashes(MC): 0 Minor/Other Injury Crashes(OC): 1 Uncategorised Injury Crashes(UC): 0 Non-Casualty Crashes(NC): 1

Killed(K): 0 Seriously Injured(S): 2 Moderately Injured(M): 0 Minor/Other Injured(O): 1 Uncategorised Injured(U): 0

Crashid dataset 8289 - Denham Court Rd, Jamboree Ave & Willowdale Dr, Denham Court Crash Data - 1 Jan 2013 to 31 Dec 2017

Note: *Data for the 9 month period prior to the generated date of this report are incomplete and are subject to change.*

Crash self reporting, including self reported injuries began Oct 2014. Trends from 2014 are expected to vary from previous yrs. More unknowns are expected in self reported data.
Reporting yrs 1996-2004 and 2018 onwards contain uncategorised inj crashes.

SECAsolution
ABN: 14164611652
Ground Floor, 161 Scott Street
Newcastle NSW 2300
Ph: (02)4032 7979
admin@secasolution.com.au

6 September 2019

P1250 BC Willowdale Aged Care Facility RFI

Bolton Clarke
Level 3, 44 Musk Avenue
Kelvin Grove QLD 4059

Attn: Steven Carter

Dear Steven,

Response to Council Comments, Willowdale Aged Care Facility, Denham Court, NSW

The following letter has been provided in response to items raised by Campbelltown City Council regarding access and parking for the proposed Willowdale Aged Care Facility. The relevant items and responses are as follows.

The plans reviewed in conjunction with this document are:

Drawing: DA1002 - Issue D (4/9/19)

Council comment: The ambulance bay and parking spaces adjacent to the driveway do not appear to be practical in terms of vehicle maneuverability e.g. single maneuver entry and exit. Swept paths showing how vehicles would use the site were not provided. The visitor parking spaces have not been line marked.

The ambulance bay has been relocated. The new location has been assessed using Autoturn, with the swept paths provided in **Attachment A**. As shown, a 7.3 metre Bariatric Ambulance is able to manoeuvre in/out of the space and exit the site in a forward direction as required.

The updated plans have reduced the number of visitor spaces located on the ground level. Of the previous 8 spaces, 4 have been relocated to the basement level, whilst line marking is provided for the 4 spaces remaining on the ground floor. These spaces have been provided in accordance with AS2890.1 for Class 3 parking, catering for short-term parking for visitors, which requires dimensions of 2.6 x 5.4m with a minimum 5.8m aisle width, extended by 300mm as required. As such, these allow for appropriate manoeuvring.

Council comment: The end basement parking space has not been provided with a blind aisle.

The updated plans for the basement include a 1 metre extension past the end spaces of the blind aisle in order to allow for manoeuvring in accordance with AS2890.1.

Council comment: The proposed driveway appears to conflict with the existing bus stop, and the bus stop has not been proposed to be appropriately relocated.

The bus stop is proposed to be relocated 25 metres south of its existing location.

This location can allow for a bus zone in accordance with the State Transit Bus Infrastructure Guide. Standard bus zones are 30 metres, which include “No Stopping” 20 metres before and 10 metres after the bus stop, which can be achieved along Jamboree Avenue including adequate clearance from the new driveway access for the development located approximately 11 metres after the stop.

Quality Traffic Advice

Council comment: Council's waste and recycling services section have reviewed the proposal and requests amended plans that address the following concerns:

- *Vehicle dock access is unsuitable for waste collection purposes.*
- *Swept path for 10.4m long truck not satisfactory.*
- *Loading dock roller shutter requires min 4m height clearance (provided the truck can gain access to the dock area).*
- *Turntable must be fitted with manual override mechanism.*
- *Visitor parking located opposite loading dock is undesirable because of potential for damage to parked cars, obstruction to collection vehicles and limitation of turning area. Direct driveway access to the loading dock is more preferable.*

Waste collection for the site is to be completed by a private contractor. This contractor shall be selected on the basis that the collection vehicle to be used is no larger than a Medium Rigid Vehicle (MRV) and is able to access the loading dock with sufficient clearance to utilise the turntable provided.

No swept paths for the loading dock had been included in the TIA previously prepared by Seca Solution. Swept paths for manoeuvring between the site access and the loading dock have been confirmed for an MRV, with these provided in **Attachment A**.

It can be seen from the swept paths that the MRV can access the loading dock without encroaching into the visitor parking spaces. As stated in the TIA, the operational waste management plan for the site proposes waste collection be completed three times a week. Allowing for the low demand for waste collection services there will be very low risk for vehicles to be obstructed or for the potential for vehicular conflicts.

It is noted that the 4 metre vertical clearance has been provided.

The specifications for the turntable, including the manual override mechanism shall be confirmed as part of the detailed design.

The visitor parking opposite the loading dock has been relocated into the basement.

We trust that the above satisfies Council's request for further information.

Please feel free to contact our office on 4032 7979 should there be any further queries.

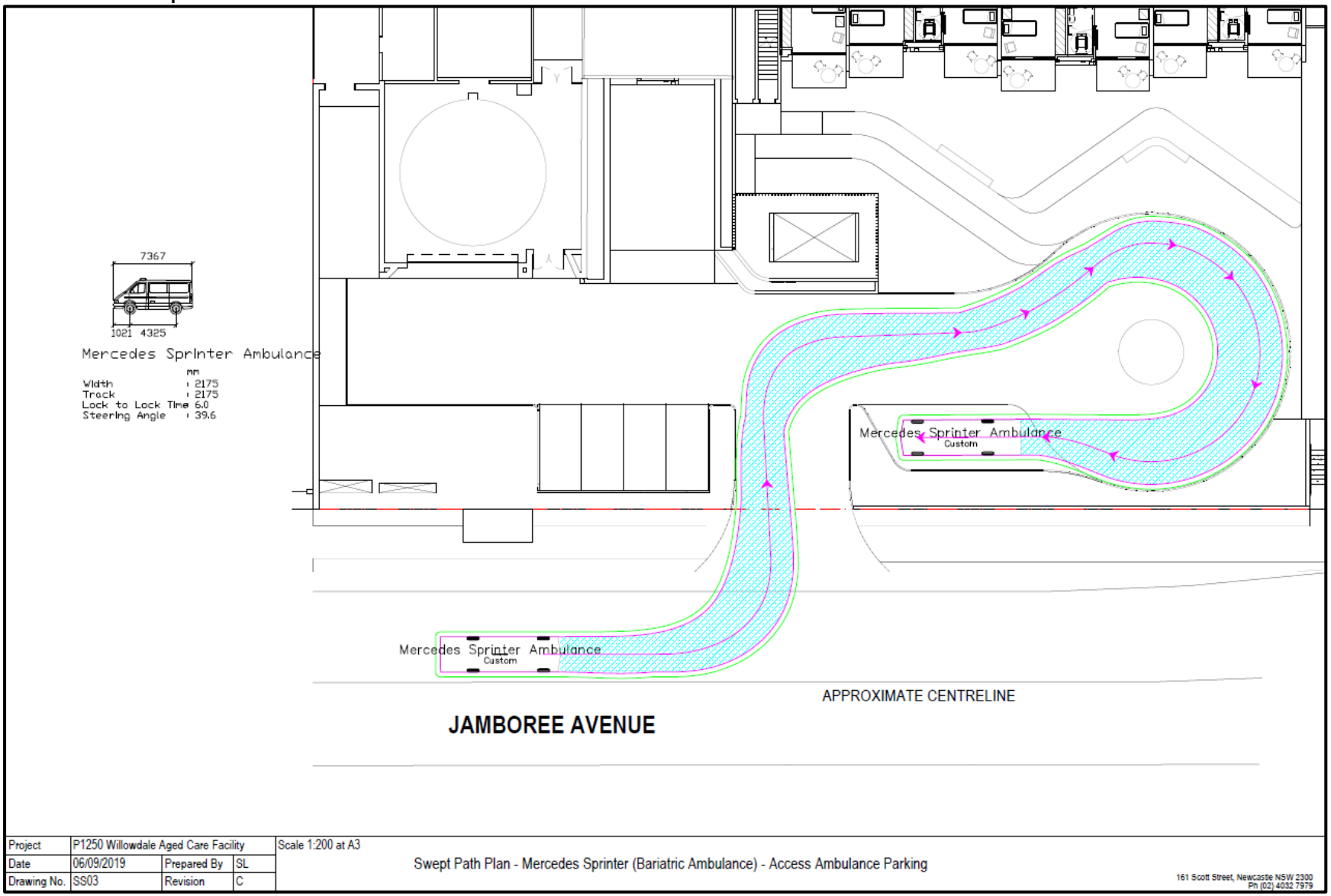
Yours sincerely

Tyler Neve
Traffic Engineer

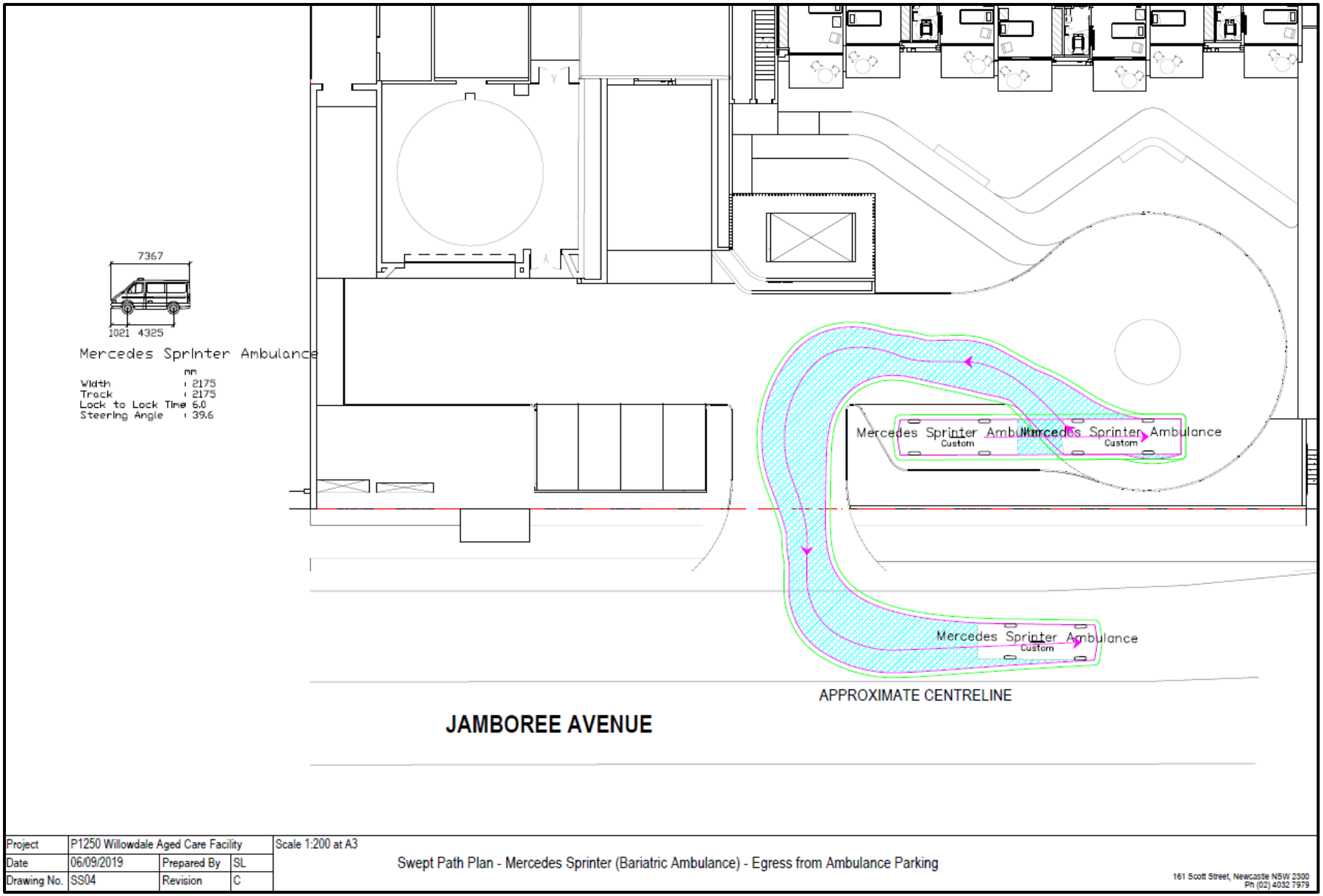
Attachment A – Swept Paths

SECAsolution

Attachment A: Swept Paths



Quality Traffic Advice

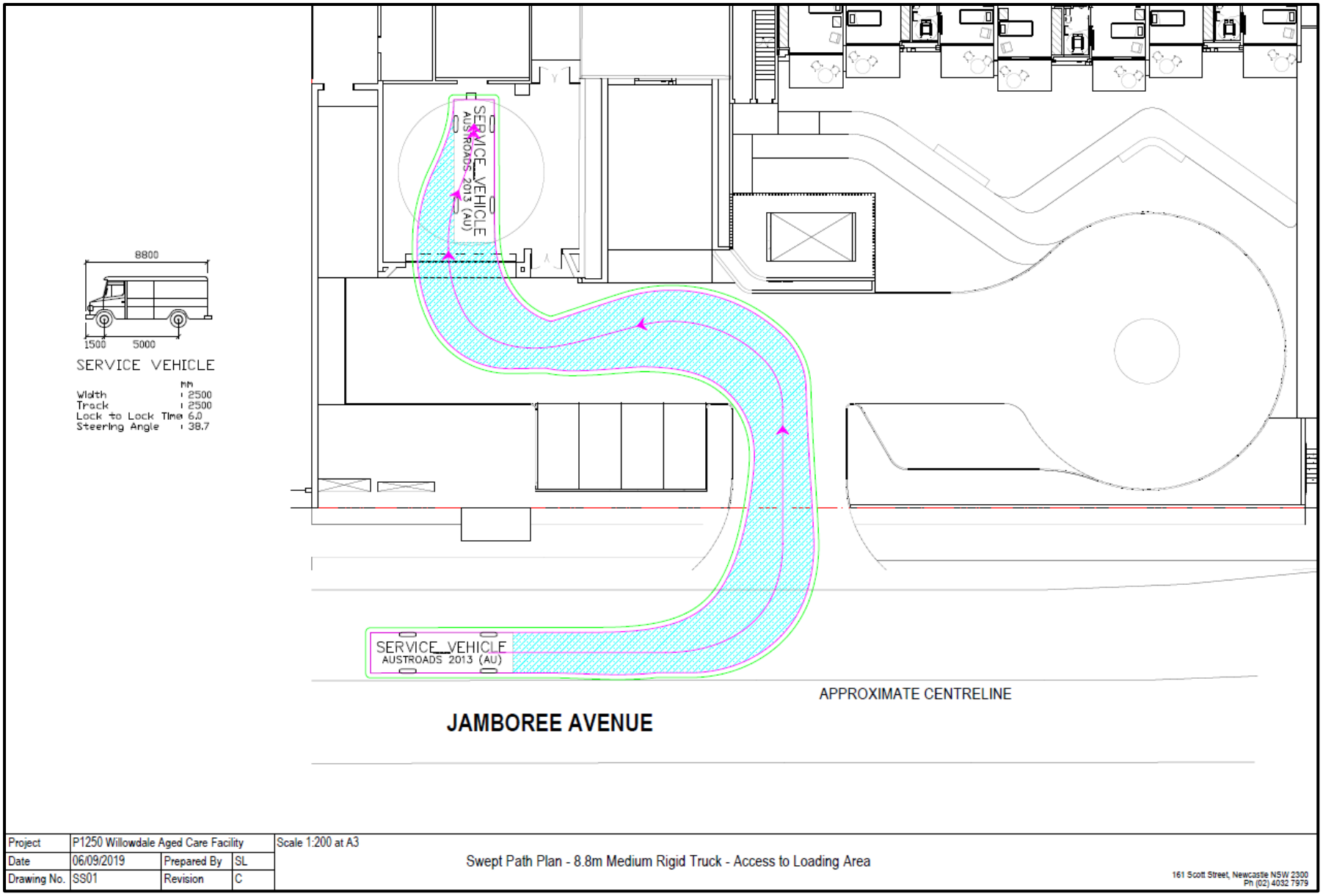


Project	P1250 Willowdale Aged Care Facility		Scale 1:200 at A3
Date	06/09/2019	Prepared By	SL
Drawing No.	SS04	Revision	C

Swept Path Plan - Mercedes Sprinter (Bariatric Ambulance) - Egress from Ambulance Parking

161 Scott Street, Newcastle NSW 2300
Ph (02) 4032 7979

SECAsolution

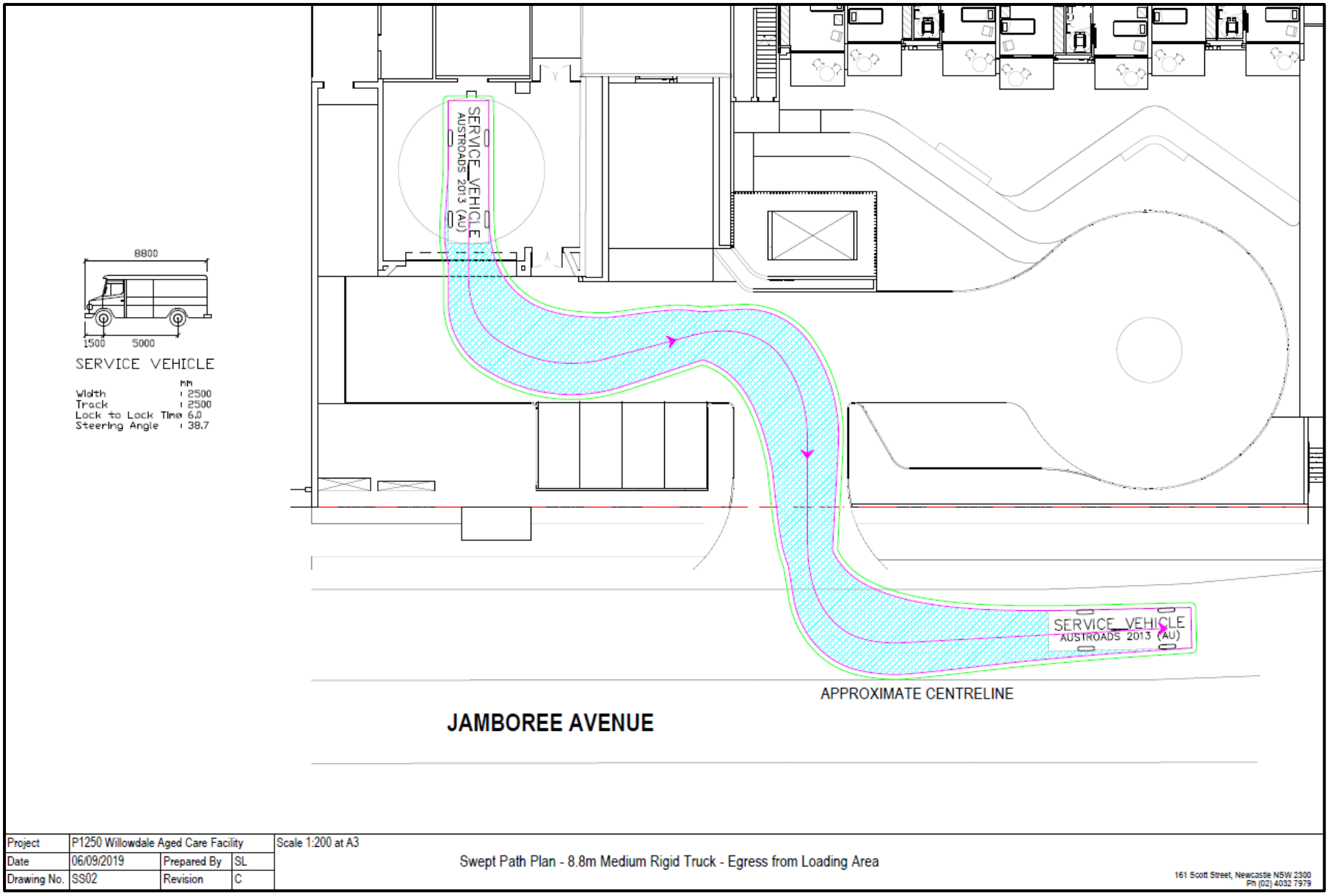


Project	P1250 Willowdale Aged Care Facility		Scale 1:200 at A3
Date	06/09/2019	Prepared By	SL
Drawing No.	SS01	Revision	C

Swept Path Plan - 8.8m Medium Rigid Truck - Access to Loading Area

161 Scott Street, Newcastle NSW 2300
Ph (02) 4032 7979

Quality Traffic Advice



Project	P1250 Willowdale Aged Care Facility			Scale 1:200 at A3
Date	06/09/2019	Prepared By	SL	Swept Path Plan - 8.8m Medium Rigid Truck - Egress from Loading Area
Drawing No.	SS02	Revision	C	

161 Scott Street, Newcastle NSW 2300
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