

26 March 2019

P0660 LL Kincumber Aged Care Facility Scaysbrook Drive

Lend Lease

Level 14, Tower Three, International Towers Sydney  
Exchange Place, 300 Barangaroo Avenue,  
Barangaroo NSW 2000

**Attn: Numa Miller**

Dear Numa,

**Proposed Residential Aged Care Facility, Kincumber, NSW.**

Further to your request we have now completed our review of the documentation for the proposed aged care facility located at 290 Avoca Drive, Kincumber and provide the following assessment of traffic, parking and access. This assessment has been completed in accordance the RTA Guide to Traffic Generating Developments and the Gosford City Council Development Control Plan 2013 (GDGP).

Consideration has also been given to SEPP (Housing for Seniors or People with a Disability 2004) and Australian Standard AS2890.

**Background**

The subject site is located at 290 Avoca Drive, Kincumber within the Brentwood Retirement Village as shown in Figure 1. The surrounding area is predominately residential consisting of low density housing and independent living units (ILUs).

Access to the existing 54 ILUs on site is currently provided via an existing access driveway off Scaysbrook Drive with an emergency access (unsealed) provided from Avoca Drive.



Figure 1 – Location of the subject site in the context of the local road network.

### Road Hierarchy

The main road through the locality is **Avoca Drive** which provides a major connection between the Central Coast Highway (north) and Kincumber as well as to beachside suburbs to the east. It carries a reasonably high volume of traffic and forms part of the regional road network (Gazetted Road 504) with RMS required to provide concurrence for any works or new access along this road, with Council being the road authority. In the vicinity of the subject site it provides a single lane of travel in each direction (3 meters wide) with a sealed shoulder and an unsealed verge. Kerb and guttering is provided inconsistently and there are no pedestrian footpaths although street lighting is available. Avoca Drive operates under the posted speed limit of 60 km/hr.

Avoca Drive forms a 'Give Way' controlled T-intersection with Melville Street to the west of the subject site where Avoca Drive has priority. This intersection is well laid out and allows for all turning movements.

**Melville Street** is a local road in the order of 11 meters wide which allows for a single lane of travel with kerbside parking in each direction. It has sealed shoulders with kerb and guttering along both sides of the street. A pedestrian footpath is provided along the eastern side of the roadway and street lighting is provided. Melville Street is discontinuous with the northern section of the road becoming Oberton Street to the south and the southern section continuing through to Cullens Road. There is no direct vehicle access between these two sections. The posted speed limit along Melville Street is 50 km/hr.

Melville Street forms a priority-controlled T-intersection with Scaysbrook Drive to the west of the project site where Melville Street has priority.

**Scaysbrook Drive** is a local road in the order of 11 meters wide which allows for a single lane of travel in each direction with sealed shoulders allowing for kerbside parking to both sides of the street. It has kerb and guttering along the majority of its length and street lighting is provided. A sealed footpath is provided along the southern side of the roadway. The posted speed limit along Scaysbrook Drive is 50 km/hr.

The remaining roads are all local streets with the Central Coast Council as the relevant road authority.

### Existing Traffic Flows

As part of the project work Seca Solution collected traffic data at the intersection of Avoca Drive and Melville Street during a typical weekday afternoon/evening to determine the current peak hour traffic flows along these roads. This traffic survey was completed on Thursday 1<sup>st</sup> February 2018. The peak hour two-way flows in the vicinity of the site frontage (east of the intersection) were 1,551 vehicles per hour (vph) with the peak hour determined as being 4:30PM-5:30PM. Afternoon flows showed a bias eastbound with flows being 849vph eastbound (55%) and 702vph westbound (45%).

This count also showed that peak hour flows along Melville Street (to the immediate south of Avoca Drive) were 224 vehicles during the evening peak hour which were split between 83 vehicles northbound and 141 vehicles southbound.

Seca Solution also collected traffic data at the intersection of Melville Street and Scaysbrook Drive during a typical weekday afternoon/evening to determine the current peak hour traffic flows along these roads on Friday 1<sup>st</sup> July 2016. The current peak hour flows along Melville Street (north of Scaysbrook Drive) were 236 vehicles during the evening peak hour (between 4:30pm to 5:30pm) which were split between 166 vehicles northbound and 70 vehicles southbound. Peak hour flows along Scaysbrook Drive (east of Melville Street) were lower with 120 vehicles split between 76 vehicles eastbound and 44 vehicles westbound.

RMS guidelines indicate that peak hours typically represent around 10% of the daily traffic flows. This would indicate that the daily traffic flows along Avoca Drive east of Melville Street would be in the order of 15,500 vehicles per day with Melville Street (north of Scaysbrook Drive) being in the order of 2,300 vehicles per day. Daily flows along Scaysbrook Drive (east of Melville Street) would be 1,200 vehicles per day.

### Existing Site Flows

The subject site currently provides 54 independent living units as part of the Brentwood Retirement Village. The RMS Guide to Traffic Generating Developments – Updates Traffic Surveys (Technical Direction TDT 2013/04a) provides the following traffic generation rate for housing for seniors:

- Weekday daily vehicle trips – 2.1 per dwelling
- Weekday peak hour vehicle trips – 0.4 per dwelling<sup>1</sup>

<sup>1</sup> Note that morning peak hour traffic from the site generally does not occur within the network peak hour.

Based on there being 54 dwellings, the existing site flows could be in the order of 22 vehicles per hour during the afternoon/evening peak with 114 vehicle movements daily. This is consistent with the observations on site.

### Road Safety & Crash History

A review of crash data provided by the RMS indicates that there were 15 reported crashes along Avoca Drive between Melville Street and Scenic Drive during the 5 year period from June 2012 to July 2017. Five of these crashes occurred at or near the Avoca Drive / Melville Street intersection, 8 crashes were due to loss of control in wet weather in the section immediately west of the Scenic Drive roundabout where there is a combination of steep grades and sharp bends and only two occurred near the proposed access to the site, both being head-on crashes due to loss of control in wet weather. During the period from mid-December 2016 to July 2017 there were no further crashes recorded possibly due to improvements to the road pavement to increase safety in wet weather.

There was only a single crash along the local roads in the locality of the project site during this time. This crash involved a vehicle running off the road. Due to the low traffic flows and good road alignment it is considered that the local road network surrounding the site operates in a safe and appropriate manner.

### Proposal

The proposal involves redevelopment of the site to allow for the construction of a 108 bed residential aged care facility to be located opposite the existing Brentwood Retirement Village. Approximately 40 staff would be employed at the site on any given day.

The proposal also includes modifications to the existing access and the development of new hardstand parking areas within the site. Land to the eastern boundary is the subject of a separate development application which has been approved for subdivision into five residential lots.

A concept plan for the proposed development is included in Attachment B.

### Assessment of Traffic Impacts

Based upon the traffic generation rates for housing for seniors above, the proposal for 108 bedrooms would produce traffic flows of 227 vehicles per day with 44 vehicle movements during the evening peak hour. These rates recognise a level of independent living for seniors.

The RMS Guide to Traffic Generating Developments also provides rates for Housing for Aged and Disabled persons. These figures offer a range of 0.1-0.2 trips in the peak hour with daily trips of 1-2 per dwelling. At the lower end the rates concentrate on subsidised developments (often run by religious organisations). Generation rates of resident funded developments are often greater, as indicated at the higher end of the range. Given that this development provides a high level of care and includes 36 dementia beds the rates for Aged and Disabled housing are appropriate and although the proposal is by a religious organisation the higher rate in the range has been applied.

This would therefore represent development traffic of:

- 216 vehicles per day with 22 vehicle movements during the evening peak hour.

This represents an increase over the existing site flows of an additional 102 vehicle movements per day with the evening peak hour equivalent to the previous trip demands for the site (22 vehicle movements) and therefore no change to the peak hour flows.

Servicing of the site would include waste removal and food deliveries to the commercial kitchen on site. These would include medium rigid vehicle 8.8m long as well as waste vehicles up to 10.8m. Of the above traffic, servicing could represent up to 5 deliveries per day (5 inbound and 5 outbound).

Given the nature of the development being for an aged care facility, traffic flows would consist primarily of staff and visitors / family of the residents who live at the site. It is considered that the majority of these movements would be right out of the site towards Melville Street and then north along Melville Street to Avoca Drive with inbound movements being in the reverse direction. Allowing for 90% of traffic to follow this route, the two way flows along Scaysbrook Drive (east of Melville Street) would see no significant change during the afternoon peak but could increase by 92 vehicles per day with flows along Melville Street (north of Scaysbrook Drive) increasing by a similar amount.

As the proposed development does not generate additional peak hour traffic over the existing use there shall be minimal impact on the performance of the local road network and on its capacity. Therefore, there shall also be minimal impact on the performance of intersections in the vicinity of the site including at Avoca Drive and Melville Street.

### Impact of Other Developments

In addition to the aged care facility there is an approved development adjacent to the site that shall provide up to 5 residential lots. The traffic associated with these lots would equate to:

- 37 vehicles per day with an additional 4 vehicles movements during the evening peak hour.

The cumulative traffic over the existing situation shall therefore be:

- 4 additional movements in the evening peak hour and 140 additional vehicles per day.

The RMS Guide to Traffic Generating Developments provides advice for the environmental capacity along a local residential street as being less than 300 vehicles per hour. Allowing for the traffic distribution above, the proposed development plus adjacent residential subdivision could increase the traffic flows along Scaysbrook Drive (east of Melville Street) by 4 vehicles per hour to 124 vehicles during the evening peak. This is well within the environmental capacity of this road.

The increased flows associated with the development shall have minimal impact during the evening peak with daily flows well within the capacity of the local road network and would have a minimal impact for existing road users.

### Assessment of Parking

Gosford City Council Development Control Plan 2013 does not provide specific parking requirements for a development of this nature. Parking rates have therefore been adopted as those specified in the SEPP (Housing for Seniors or People with a Disability) which provides the minimum standards which cannot be used to refuse development consent for a residential aged care facility. The SEPP specifies the following rates for parking to be provided at the site:

- 1 space per 10 beds within the residential care facility;
- 1 space per 15 beds for dementia care facilities; plus
- 1 space per 2 people employed in conjunction with the development and on duty at any one time; plus
- 1 space suitable for an ambulance.

The aged care facility will provide 108 beds (36 dementia care, 72 for high care patients) with the potential for up to 40 staff on duty, therefore the total parking demand would be for 30 car parking spaces with one additional space suitable for an ambulance. The proposed supply is for 38 spaces plus the ambulance bay being 8 spaces more than required under the SEPP. This ensures adequate parking can be provided within the site without impacting upon the adjacent streets.

Disabled parking for an aged care facility is also required under the Building Code of Australia (BCA) at the rate 1 space for every 100 car parking spaces or part thereof. Therefore at least one parking space would be suitable for a person with a disability in accordance with AS2890.6.

There are three carparking areas proposed for the site providing a total of 38 spaces. One area is adjacent to the main entry and Port Cochere to the front of the facility, providing for an undercover drop off zone, ambulance parking, a space in accordance with AS2890.6 Disabled parking and 11 other parking spaces. A lower level car park is provided for staff to the east of the site which allows for 23 parking spaces whilst three spaces are provided near the loading dock/back of house area. A service area for general servicing and waste collection is accessed from the driveway off Scaysbrook Drive. This is consistent with the parking requirements under the SEPP and the BCA.

A review of the internal site layout indicates that the proposed carparks have been designed in accordance with AS2890 including ramps being designed to cater for Medium and Heavy Rigid Vehicles. All parking spaces provide the minimum dimensions for a Class 1A parking facility and the disabled parking space includes an appropriate shared space. Access for an ambulance to park and circulate through the Port Cochere has been assessed using Autoturn including allowing for a passenger vehicle to pass a parked ambulance and an ambulance to pass a vehicle setting down passengers adjacent to the entry. The provision of only five spaces within a blind aisle on the

upper car park is compliant with AS2890 and does not require a turning bay whilst the lower level car park has provided a suitable turning space.

### Assessment of Access

The existing driveway access off Scaysbrook Drive is to be upgraded and shall provide access for staff and visitors to the new RACF as well as giving access for service and emergency vehicles. The width shall be reduced to 5.5m in accordance with AS2890. Sight distance requirements for an egress driveway are specified by *Australian Standard AS2890.1:2004 Parking Facilities: Off-street Car Parking* which for the posted speed limit of 50 km/hr along Scaysbrook Drive, indicates a minimum entering sight distance of 45 metres. Sight distances at the existing driveway have been reviewed on site and available however are impacted upon by existing vegetation along the verge to either side. With the removal of some existing vegetation, including two trees to the east of the driveway and one to the west, adequate sight lines can be achieved in either direction along Scaysbrook Drive.

With regards to pedestrian sight distances, there are no existing provisions for pedestrians along the site frontage. To ensure adequate sight distance for pedestrians, any vegetation or landscaping located within the sight triangles per Figure 3.3 (AS2890.1) shall be less than 1.15 metres in height. This shall only be required on the eastern side of the driveway and can be achieved in conjunction with the detailed design phase of the project.

An Autoturn Simulation has also been completed to confirm that a 10.8m waste vehicle will be able to access the service area for general servicing and waste collection. The swept paths for this movement are shown in Attachment C, which shows that service vehicles would be able to enter the site in a forward direction, and reverse into the service area. Vehicles would then leave via a single movement and exit the site in a forward direction.

### Emergency Access

Access for ambulances will be via the main access with an ambulance parking bay and turning area provided near the main entry to the building. The swept turning paths for an ambulance are provided at Attachment C which indicate that an ambulance will be able to park in the ambulance bay, but also enter the undercover Port Cochere as necessary to provide for the movement of patients.

Fire-fighting access to the site can be provided via Scaysbrook Drive. In addition, the existing access track off Avoca Drive will provide the primary firefighting access route in the north through the central portion of the property. This road will be upgraded to fire trail standards and will provide a turning head at its termination.



### Conclusion

From our study work it is concluded that the proposed development would have a minimal impact upon the local road network with the development creating minimal *additional* traffic movements that would be well within the environmental capacity of the local roads. The on-site car parking provision is consistent with the requirements of the SEPP with additional parking provided (8 spaces) and accessible parking in accordance with the BCA. The layout of the carparks and proposed access driveways are consistent with AS2890 and the GDCP. Access for emergency and maintenance vehicles is provided.

Overall it is considered that there is no impediment to the approval of the proposed development on traffic, parking or access grounds.

Please feel free to contact me on 4032 7979 should you have any further queries.

Yours sincerely,



**Sean Morgan**

*Director*

*Attachment A – Photos*

*Attachment B - Site Plans*

*Attachment C – Swept Paths*

*Attachment D – Crash Data*

*Attachment E – Survey Data*

## Attachment A: Site Photos



Photo 1 – Sight line looking west along Scaysbrook Drive from exiting driveway access (shows vegetation to be removed)



Photo 2 – Sight line looking east along Scaysbrook Drive from exiting driveway access (shows vegetation to be removed)





Photo 3 – Existing driveway access off Scaysbrook Drive



Photo 4 – Existing landscaping to eastern side of existing driveway which shall be managed to accommodate pedestrian sight lines





Photo 5 – Looking north along Melville Street from Scaysbrook Drive.



Photo 6 – Looking south along Melville Street from Scaysbrook Drive.



Attachment B Site Plans

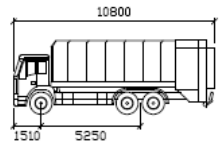












10.8 Garbage Truck

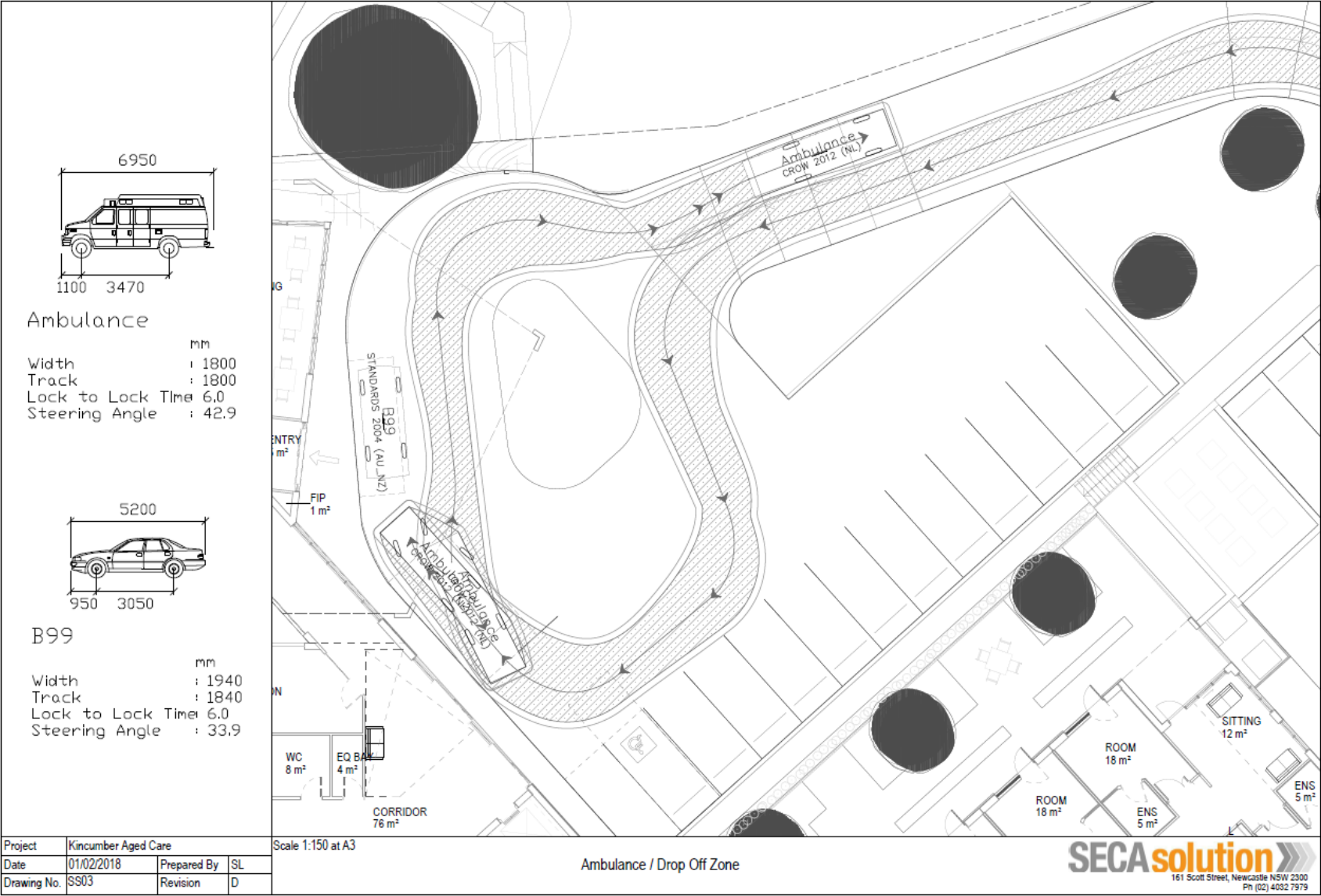
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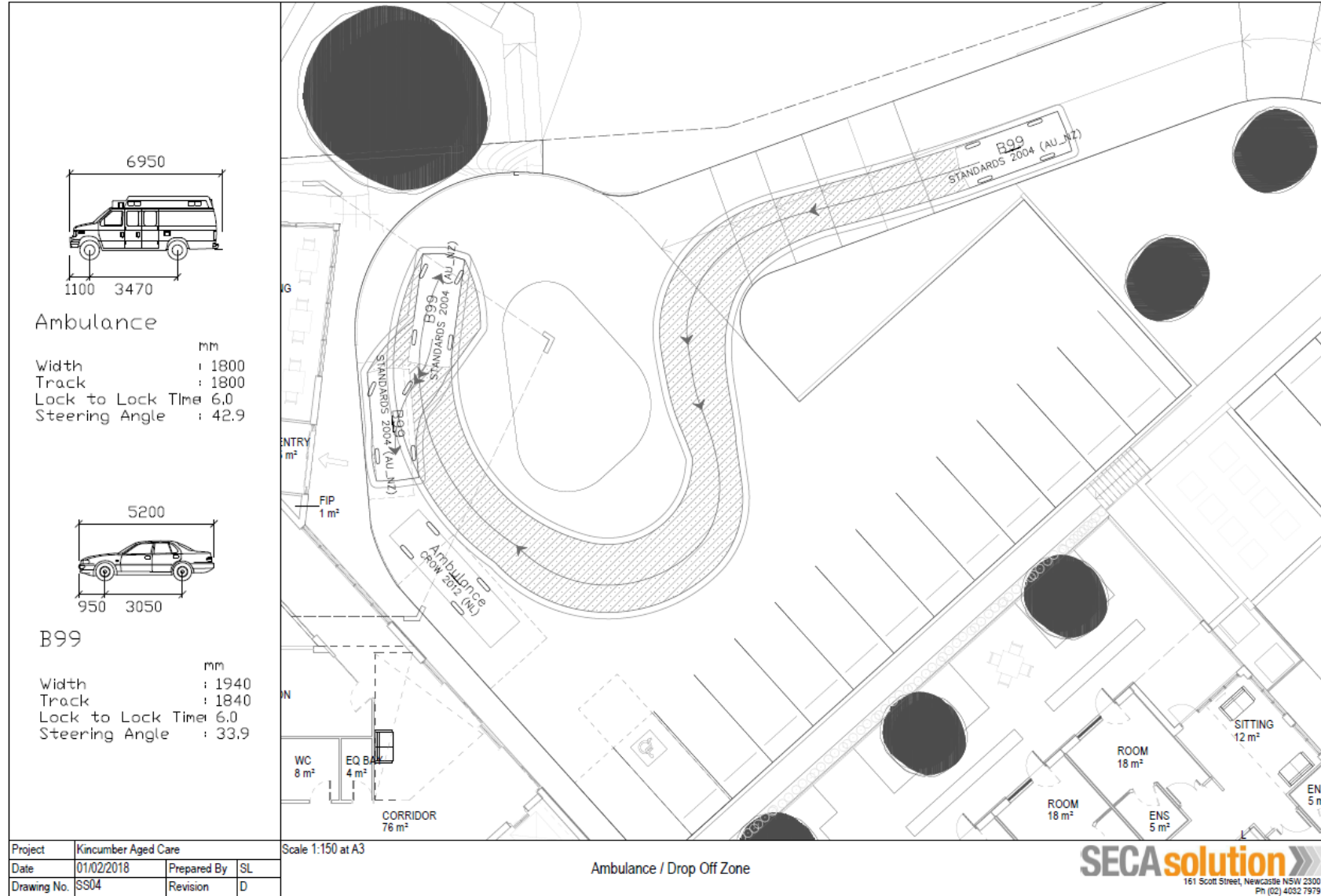


Project	Kincaumber Aged Care		
Date	01/02/2018	Prepared By	SL
Drawing No.	SS02	Revision	D

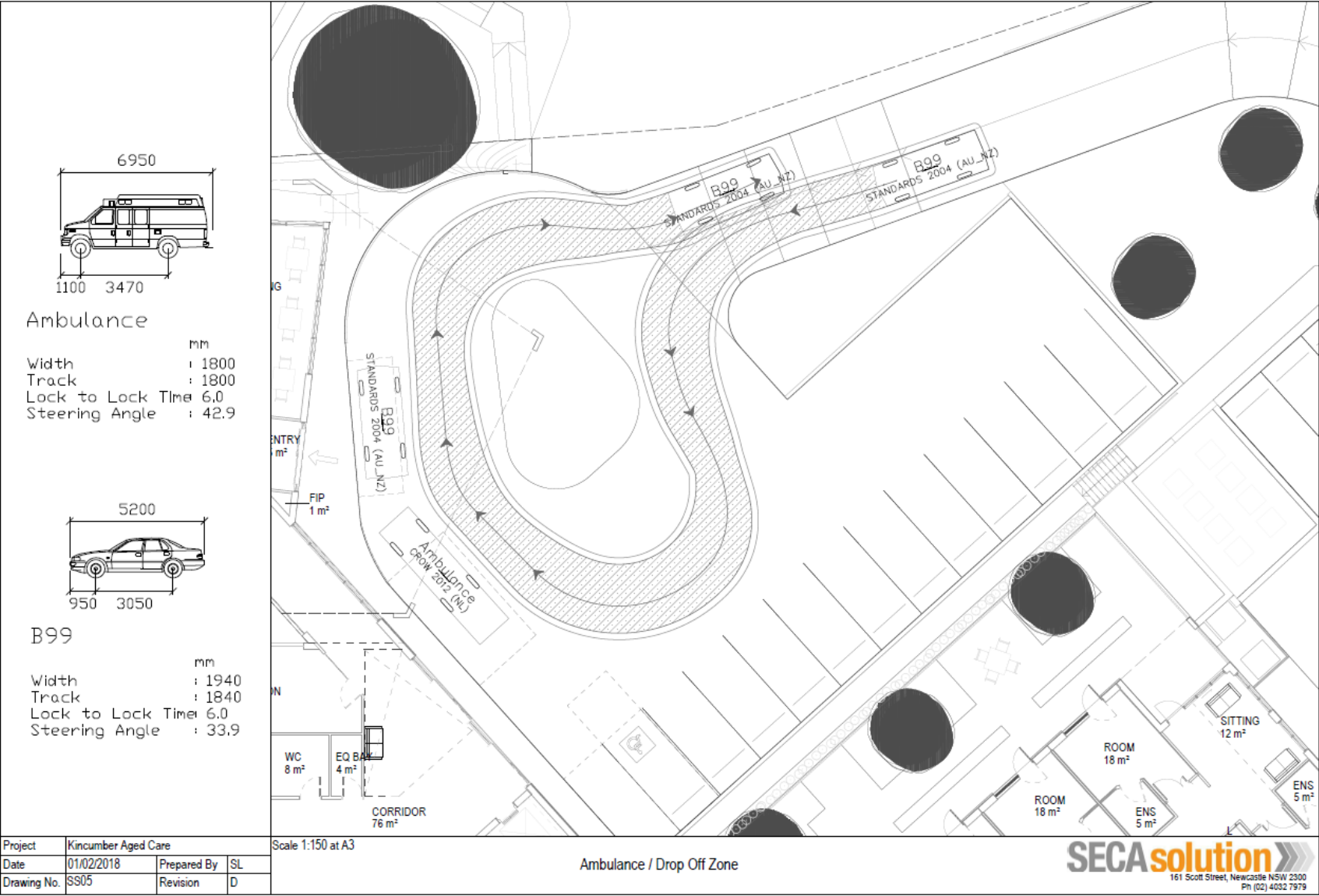
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10.8m Waste Vehicle

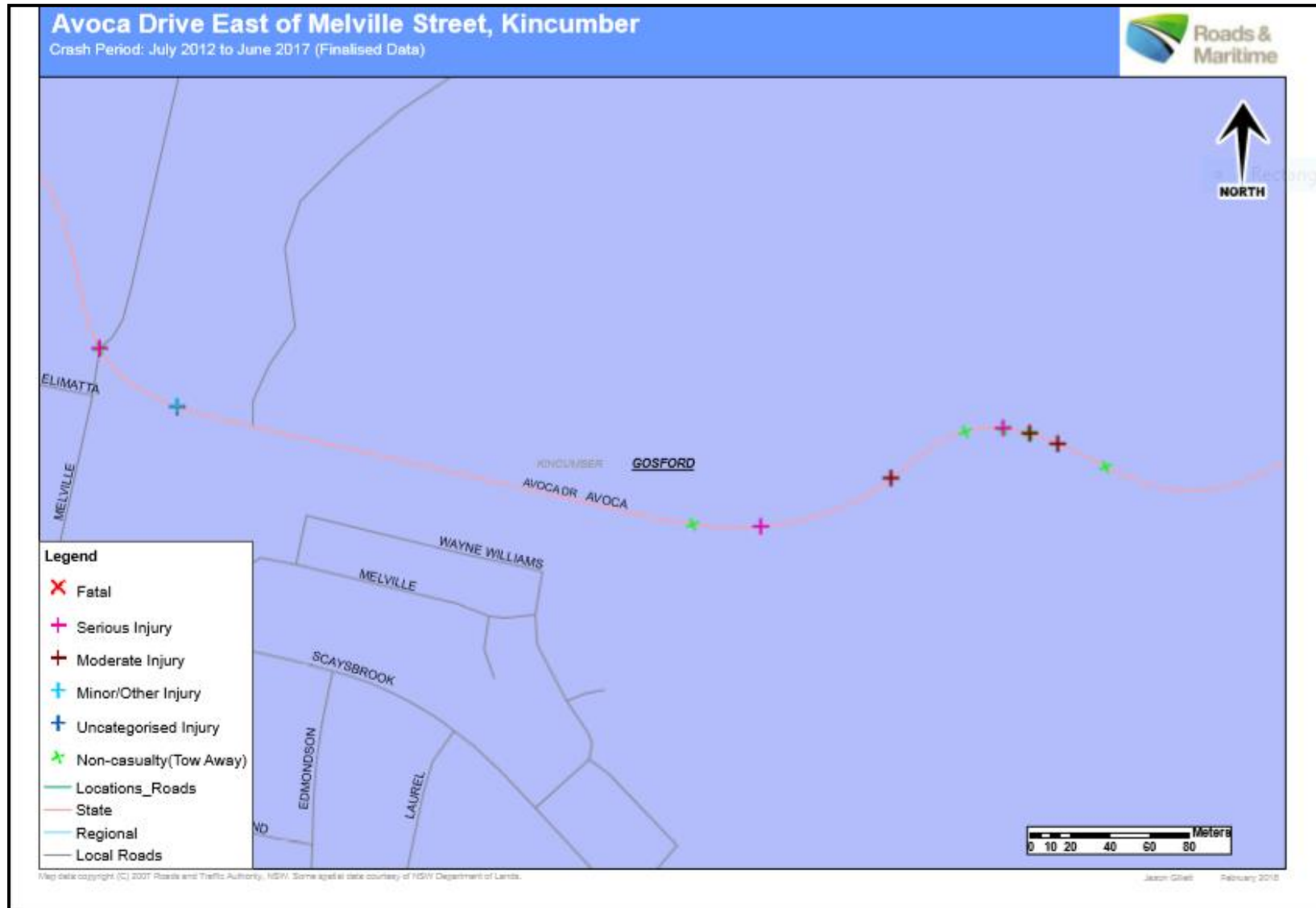






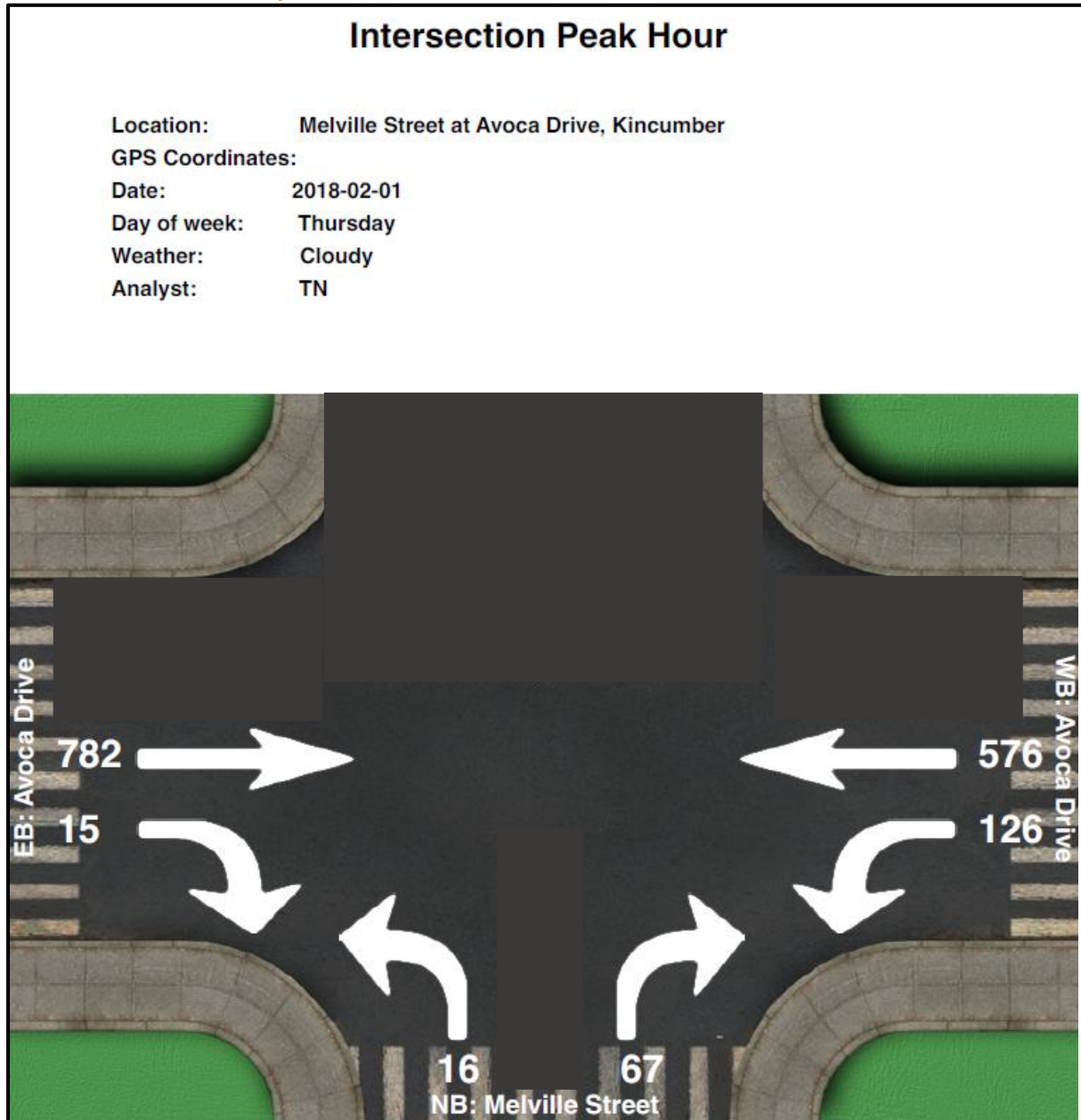


Attachment D Crash Data





## Attachment E - Survey Data





## Intersection Peak Hour

16:35 - 17:35

	SouthBound			Westbound			Northbound			Eastbound			Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
Vehicle Total	0	0	0	126	576	0	16	0	67	0	782	15	1582
Factor	0.00	0.00	0.00	0.58	0.81	0.00	0.44	0.00	0.56	0.00	0.86	0.31	0.92
Approach Factor	0.00			0.78			0.63			0.83			

## Peak Hour Vehicle Summary

Vehicle	SouthBound			Westbound			Northbound			Eastbound			Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
Car	0	0	0	126	572	0	16	0	64	0	776	15	1569
Truck	0	0	0	0	4	0	0	0	3	0	6	0	13

## Peak Hour Pedestrians

	NE			NW			SW			SE			Total
	Left	Right	Total	Left	Right	Total	Left	Right	Total	Left	Right	Total	
Pedestrians	0	0	0	0	0	0	0	0	0	0	0	0	0