Transport Impact Statement

Regents Garden Padbury: Residential Aged Care Facility

Lot 23 (77) Gibson Avenue, Padbury

City of Joondalup

Prepared for: Regents Garden Group

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1 INTRODUCTION

This Transport Impact Statement (**TIS**) has been prepared on behalf of the landowner, Regents Care Pty Ltd, in support of a Residential Care Facility located on Lot 23 (No. 77) Gibson Avenue, Padbury (**subject site**).

This TIS has been prepared in accordance with the Western Australian Planning Commission (**WAPC**) *Transport Impact Assessment Guidelines for Developments: Volume 4 – Individual Developments* (2016).

2 OVERVIEW

2.1 Description of Proposal

The proposed development is summarised as follows:

- A Residential Care Facility comprising 108 beds in a building of up to four levels (due to the slope) with three level presentation when viewed from the street;
- Full range of care services including different levels of assisted care, respite care, palliative care and a dedicated dementia ward;
- Up to 25 staff members at any one time;
- 49 car parking bays and a single crossover and access from Gibson Avenue;
- High quality landscaping, communal open space, communal open space mostly in an undercroft configuration and building form;
- A high level and quality of services, such as a kitchen on the ground floor and a servery on each floor, a gym, banquet room, café, laundry, hair salon etc; and
- The services and utilities required by a residential care development.

2.2 Site Description

The subject site is situated within the suburb of Padbury, approximately 18km north of the Perth CBD.

The subject site is situated on the north-western side of Gibson Avenue between Coles Place and Warburton Avenue.

The subject site predominantly adjoins non-residential land uses with commercial development along the south-western boundary, open space to the north-west (Leichhardt Park), and drainage to the north-west, with the balance of the north-western boundary adjoining the rear boundaries of three single residential dwellings which front Coles Place. The subject site is parkland cleared with several trees remaining.

Refer to **Figure 1** for a Location Plan.

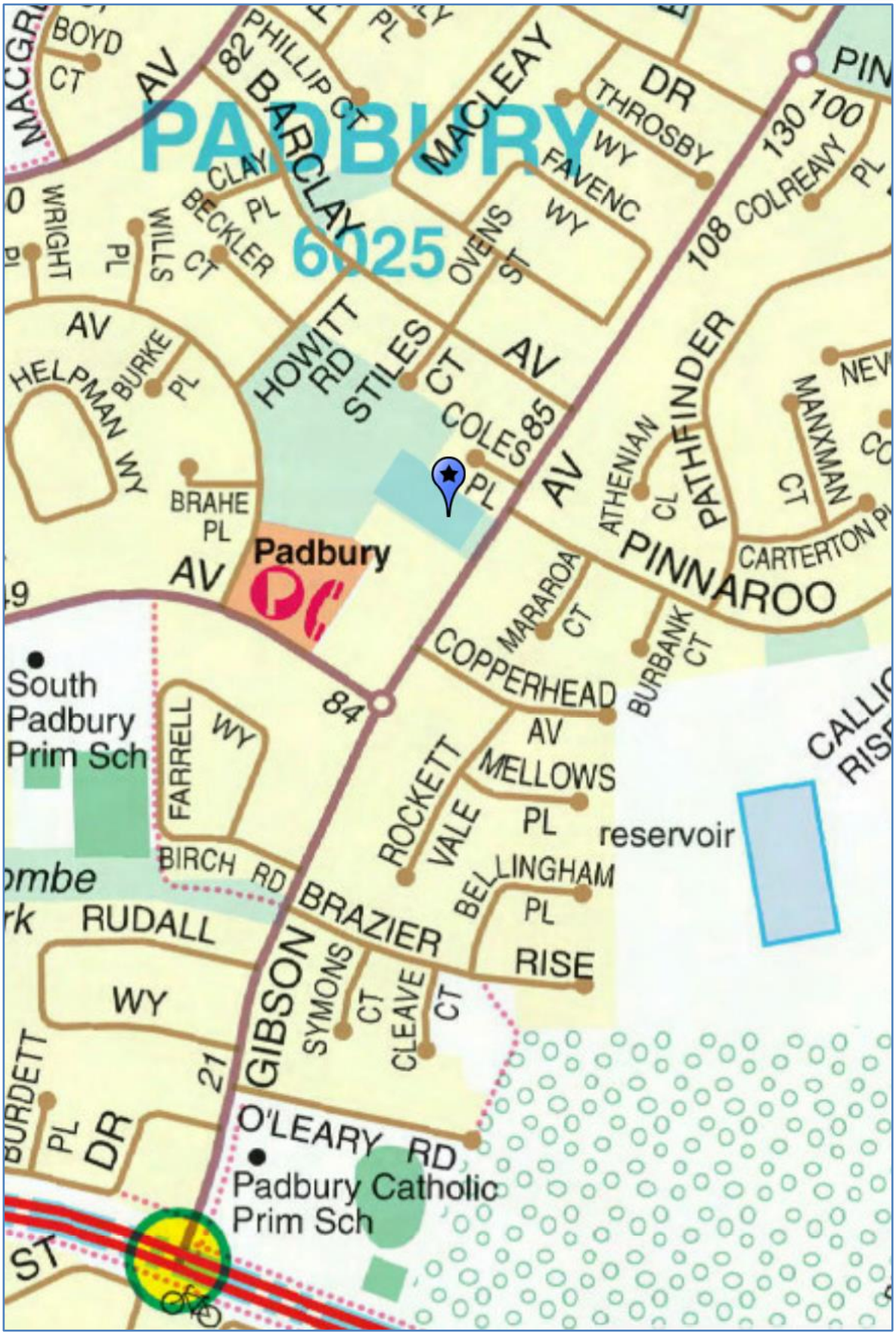

Figure 1 – Location Plan

2.3 Existing Road Network

The surrounding road network can be described as follows based on the Main Roads WA Functional Road Hierarchy (refer **Figure 2**):

- Gibson Avenue (immediately south-east of subject site) – *Local Distributor* – A two-lane, two-way divided carriageway that runs generally in a north to south alignment connecting Whitfords Avenue to the north to Hepburn Avenue to the south. The subject site is located in the southern portion of Gibson Avenue which carries local traffic from connecting Access Roads and Local Distributor Roads such as Warburton Avenue and Barclay Avenue;

- Whitfords Avenue (north of subject site) – *Distributor A* – Whitfords Avenue forms part of the regional road network carrying large volumes of traffic to the east and west, including providing for connection to the Mitchell Freeway to the east of the subject site and connections to Marmion Avenue and Westfield Whitfords City to the north-west; and

- Hepburn Avenue (south of subject site) – *Distributor A* – Hepburn Avenue forms part of the regional road network carrying large volumes of traffic to the east and west, including providing for connection to the Mitchell Freeway to the east of the subject site and connections to Marmion Avenue and Hillarys Boat Harbour to the west.

Figure 2 – Main Roads Western Australia Road Information Mapping

2.4 Existing Traffic Volumes

Existing traffic volumes for Gibson Avenue are not available within the Main Roads Metropolitan Traffic Digest. The traffic volumes for the section of Gibson Avenue south of Pinnaroo Drive adjacent to the subject site were obtained from the City of Joondalup in June 2023. The traffic volumes provided were taken for the period between 18 October 2022 and 1 November 2022 and represent the latest available data for these locations. A copy of the traffic volumes data is provided at **Annexure 1**.

Under the Main Roads WA Road Hierarchy Criteria, Gibson Avenue as a *Local Distributor* within a built up area has a maximum desirable volume 6,000 vehicles per day (**vpd**).

The data at **Annexure 1** demonstrates that, at the time the counts were taken, this section of Gibson Avenue was carrying average weekday total vehicle movements below the maximum desirable volume 6,000 vpd as demonstrated below:

- Average weekday total vehicle movements (12am to 12pm) – 4,751.6 vehicle movements;
- Average weekly total vehicle movements (12am to 12pm) – 4,311.8 vehicle movements;
- Average weekday AM peak (8am to 9am) – 511.3 vehicle movements; and
- Average weekday PM peak (3pm to 4pm) – 451.7 vehicle movements.

These existing volumes will be considered as part of this TIS.

3 VEHICULAR ACCESS AND PARKING

3.1 Access Arrangements

Vehicle access is proposed via a double width entrance from Gibson Avenue located adjacent to the northern boundary of the subject site allowing for vehicles to enter and exit the site in opposite directions. Vehicles will enter the site in forward gear and move along the main 7.5m wide driveway positioned along the north-eastern boundary to gain access to staff and visitor car parking bays positioned throughout the development. Vehicles will exit the site in forward gear along the main driveway and out onto Gibson Avenue. Within each of the three individual parking areas, a turning bay has been identified to provide space for turning movements in the event that parking bays are fully occupied (refer **Figure 3**).

As part of the preliminary design exercise, consideration was given to the linking of car parking areas throughout the development. This design element was ultimately abandoned due to the requirement to step the separated parking areas to follow the gradient of the land.

3.2 Parking Provision

As demonstrated in **Figure 3** below, the development incorporates a total of 49 car bays, which are distributed throughout the site as follows:

- 23 car bays (inclusive of turning bay) located in the undercroft space in the front portion of the subject site;
- 9 car bays (inclusive of a delivery bay and turning bay) located in the central undercroft area adjacent to the main lobby; and
- 17 car bays (inclusive of turning bay) located towards the rear of the subject site adjacent to the administrative areas of the development.

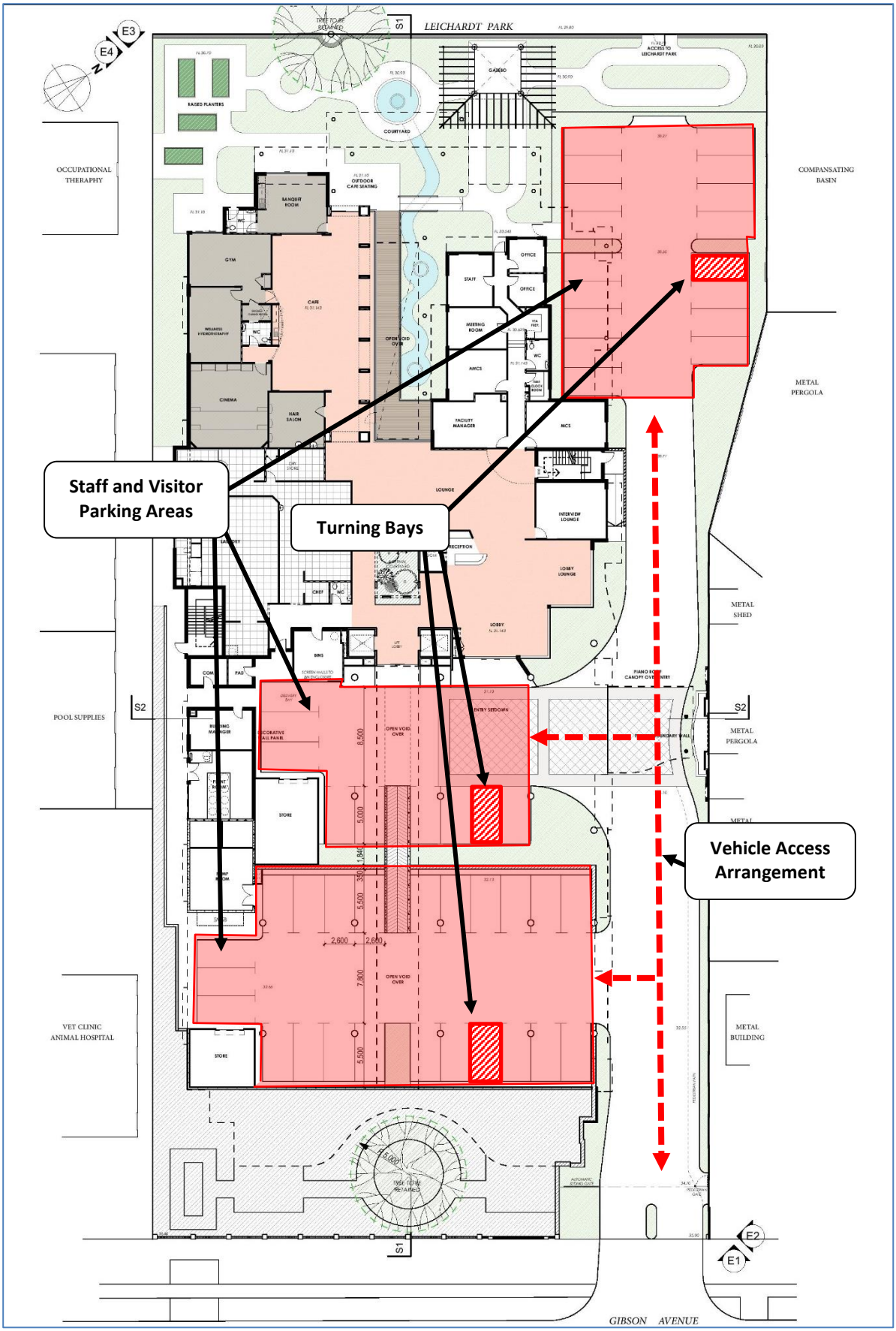

Figure 3 – Proposed Parking Layout

Clause 4.4 (Parking and Access) of the *City of Joondalup Non-residential Development in the Residential Zone Local Planning Policy* contains the following car parking standards for a Residential Aged Care Facility:

- *1 per 5 beds plus 1 staff member on duty.*

With a development comprising 108 beds and up to 25 staff at any one time, the technical parking requirement has been calculated as 47 (46.6) car bays for the proposed development. The proposed development provides for 46 car bays (including a delivery bay) and is therefore generally consistent with this policy provision.

The on-site parking arrangement has been reviewed internally to confirm that the design provides for safe and efficient movements to and from the site and internally within the site. It has been confirmed that the parking arrangement complies with Australian Standard AS2890.1 *Parking facilities Part 1: Off-street car parking.*

It is considered that the proposed parking arrangement will sufficiently cater for the parking demand generated by the proposed residential aged car facility. This is also noting that the generation of parking and traffic for such facilities is typically lower than that of a comparably scaled residential facility and is generally limited to:

- Staff members who work at the facility;
- Visitors to residents within the facility; and
- Service vehicles.

4 SERVICE VEHICLES

Waste collection for the subject site will be undertaken on site, with waste collection vehicles entering the subject site from Gibson Avenue in forward gear and passing through the car parking area to the bin store located within the central parking area. Waste collection vehicles will reverse into the central parking area to access the bin store, collect the waste, then exit in forward gear. Waste will be collected during early morning periods three days a week.

A waste collection diagram has been prepared to demonstrate that the waste collection vehicle can manoeuvre through the site (refer **Annexure 2**).

5 TRAFFIC VOLUMES

5.1 Traffic Generation

Trip generation has been calculated for the subject site based on the trip generation rates contained within the *Institute of Transportation Engineers (ITE) "Trip Generation" 10th Ed.* **Table 1** contains the peak hour trip generation rate, **Table 2** contains the directional distribution and **Table 3** contains the total potential trip generation associated with the proposal.

Table 1 – Peak Hour Trip Generation Rate

Land Use	ITE Code	Daily	Weekday AM Peak	Weekday PM Peak
Nursing Home	620	3.06 trips per bed	0.22 trips per bed	0.37 trips per bed

Table 2 – Directional Trip Distribution

Land Use	Weekday AM Peak		Weekday PM Peak	
Nursing Home	In	Out	In	Out
	63%	37%	41%	59%

Table 3 – Total Potential Trip Generation

Land Use	Daily	AM Peak		PM Peak	
Nursing Home	331	In	Out	In	Out
		15	9	16	24

All figures were rounded up if required.

Trip generation from the proposed development has been calculated at approximately 24 vehicles in the AM peak, 40 vehicles in the PM peak and 331 vehicles daily. The traffic volume generated from the proposed development is considered to be low and is likely to have negligible impact on adjacent roads and intersections.

Traffic will be distributed to the north and south of the subject site from Gibson Avenue. Given the position of the subject site in the southern section of Gibson Avenue, it is anticipated that a larger proportion of traffic generated by the proposal will be distributed in a southerly direction towards Hepburn Avenue, then on to Marmion Avenue or the Mitchell Freeway.

5.2 Service Vehicles

Waste collection vehicles are planned to service the subject site three times per week for the collection of general waste and recycling. Given the anticipated timing of the waste collection being during early morning hours, the proposed frequency of waste collection is not anticipated to result in traffic conflict either internally within the site or externally within the public road network.

6 PUBLIC TRANSPORT ACCESS

The subject site is serviced by the local bus network in close proximity with the Gibson Avenue and Pinnaroo Drive bus stop is located directly adjacent to the Gibson Avenue frontage of the subject site. Bus Route 444 operates along Gibson Avenue connecting the subject site to Whitfords Train Station to the north and Warwick Train Station to the south.

7 PEDESTRIAN ACCESS AND FACILITIES

A pedestrian footpath traverses along both sides of Gibson Avenue in proximity to the subject site, linking to the nearby Padbury commercial centre. The subject site is proposed to be connected to the existing footpath network via a pedestrian footpath located along the north-eastern side of the main driveway. A new gated pedestrian access is also proposed to be provided to the adjacent Leichardt Park to the north-west of the subject site.

The existing and proposed pedestrian access arrangements are considered to provide for a safe and functional pedestrian environment.

8 CYCLE ACCESS AND FACILITIES

Bicycle and end of trip facilities are not provided as part of the development and are not considered necessary due to the typical requirements of a residential aged care facility.

9 SUMMARY AND CONCLUSIONS

The TIS has considered the transport related aspects of the proposed development including existing and proposed traffic operations, access, car parking, public transport, pedestrian movements and cycle facilities.

From review of the local traffic and pedestrian environment, the proposal is not considered to result in any safety impacts as a result of the minor increases in traffic generated by the proposal.

The peak and total vehicle trips generated by the proposed development are negligible having regard to the existing street network and the utilisation of a double width entrance from Gibson Avenue will further improve functionality of any increased movements resulting from the proposal.

ANNEXURE 1

Local Traffic Data

MetroCount Traffic Executive
Weekly Vehicle Counts (Virtual Week)

VirtWeeklyVehicle-35 -- English (ENA)

Datasets:

Site:	**[131_000793_001450] GIBSON AVE, S OF PINNAROO DR (NORTH)**
Attribute:	[-31.806859 +115.771527]
Direction:	1 - North bound, A trigger first. **Lane:** 0
Survey Duration:	13:18 Tuesday, 18 October 2022 => 14:41 Tuesday, 1 November 2022,
Zone:	
File:	131_000793_001450 0 2022-11-01 1440.EC0 (Plus B)
Identifier:	ED02QRRT MC56-L5 [MC55] (c)Microcom 19Oct04
Algorithm:	Factory default axle (v5.07)
Data type:	Axle sensors - Paired (Class/Speed/Count)

Site:	**[131_000793_001450] GIBSON AVE, S OF PINNAROO DR (NORTH)**
Attribute:	[-31.806857 +115.771525]
Direction:	3 - South bound, A trigger first. **Lane:** 0
Survey Duration:	13:19 Tuesday, 18 October 2022 => 14:43 Tuesday, 1 November 2022,
Zone:	
File:	131_000793_001450 0 2022-11-01 1442.EC0 (Plus B)
Identifier:	R71313JP MC56-L5 [MC55] (c)Microcom 19Oct04
Algorithm:	Factory default axle (v5.07)
Data type:	Axle sensors - Paired (Class/Speed/Count)

Profile:

Filter time:	**14:00 Tuesday, 18 October 2022 => 14:00 Tuesday, 1 November 2022 (14)**
Included classes:	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12
Speed range:	10 - 160 km/h.
Direction:	North, East, South, West (bound), P = North, Lane = 0-16
Separation:	Headway > 0 sec, Span 0 - 100 metre
Name:	Default Profile
Scheme:	Vehicle classification (AustRoads94)
Units:	Metric (metre, kilometre, m/s, km/h, kg, tonne)
In profile:	Vehicles = 60365 / 60735 (99.39%)

Weekly Vehicle Counts (Virtual Week)

VirtWeeklyVehicle-35
Site: 131_000793_001450.0.0N 131_000793_001450.0.0S
Description: **Multiple sites - See Header sheet for site descriptions.**
Filter time: **14:00 Tuesday, 18 October 2022 => 14:00 Tuesday, 1 November 2022**
Scheme: Vehicle classification (AustRoads94)
Filter: Cls(1-12) Dir(NESW) Sp(10,160) Headway(>0) Span(0 - 100) Lane(0-16)

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Averages 1 - 5	Averages 1 - 7
Hour									
0000-0100	10.0	4.5	4.0	6.0	9.5	14.5	23.0	6.8	10.2
0100-0200	4.0	5.0	4.5	2.0	4.0	14.0	18.0	3.9	7.4
0200-0300	6.0	3.0	2.0	1.0	4.0	10.5	16.0	3.2	6.1
0300-0400	5.5	4.5	5.5	4.5	7.0	5.5	11.5	5.4	6.3
0400-0500	14.5	20.0	18.5	15.5	14.5	11.5	10.0	16.6	14.9
0500-0600	82.5	78.0	89.5	72.0	86.5	23.0	21.0	81.7	64.6
0600-0700	247.5	240.5	249.5	225.0	224.0	87.5	47.0	237.3	188.7
0700-0800	386.0	394.0	445.0	383.0	390.5	157.5	98.5	399.7	322.1
0800-0900	**498.5**	**509.0**	**518.0**	**533.0**	**498.0**	235.5	159.0	**511.3**	**421.6**
0900-1000	284.0	287.5	249.5	286.5	316.0	289.0	237.5	284.7	278.6
1000-1100	249.5	260.0	270.0	271.5	280.0	328.5	**264.0**	266.2	274.8
1100-1200	254.5	242.0	273.0	253.0	271.0	**368.0**	254.0	258.7	273.6
1200-1300	247.0	244.0	235.0	264.0	265.5	**326.0**	**256.0**	251.1	262.5
1300-1400	243.0	210.0	222.0	236.5	261.0	267.5	238.5	234.5	239.8
1400-1500	351.0	326.5	372.5	317.5	349.0	244.0	203.0	343.3	309.1
1500-1600	**467.5**	**464.0**	**397.0**	**461.5**	**468.5**	227.0	218.0	**451.7**	**386.2**
1600-1700	427.5	462.0	394.0	398.0	401.0	225.0	207.0	416.5	359.2
1700-1800	377.0	405.0	371.0	382.5	364.0	242.5	205.5	379.9	335.4
1800-1900	241.0	259.0	218.0	229.5	256.0	189.5	128.0	240.7	217.3
1900-2000	144.0	168.5	139.0	154.0	146.0	120.5	80.5	150.3	136.1
2000-2100	94.0	92.0	106.5	88.5	134.5	67.5	61.0	103.1	92.0
2100-2200	41.5	64.5	53.0	48.5	96.5	67.5	27.0	60.8	56.9
2200-2300	19.5	26.0	21.0	28.5	47.5	50.5	13.0	28.5	29.4
2300-2400	15.5	13.0	12.0	11.0	27.0	44.5	10.5	15.7	19.1
Totals									
0700-1900	4026.5	4063.0	3965.0	4016.5	4120.5	3100.0	2469.0	4038.3	3680.1
0600-2200	4553.5	4628.5	4513.0	4532.5	4721.5	3443.0	2684.5	4589.8	4153.8
0600-0000	4588.5	4667.5	4546.0	4572.0	4796.0	3538.0	2708.0	4634.0	4202.3
0000-0000	4711.0	4782.5	4670.0	4673.0	4921.5	3617.0	2807.5	4751.6	4311.8
AM Peak	0800	0800	0800	0800	0800	1100	1000		
	498.5	509.0	518.0	533.0	498.0	368.0	264.0		
PM Peak	1500	1500	1500	1500	1500	1200	1200		
	467.5	464.0	397.0	461.5	468.5	326.0	256.0		

*** - No data.**