Inspiring Innovation in Transport

Regis Aged Care Extension, Greenmount
Transport Impact Statement

Project number 11092

August 2025

LEVEL 5 DESIGN

Contents

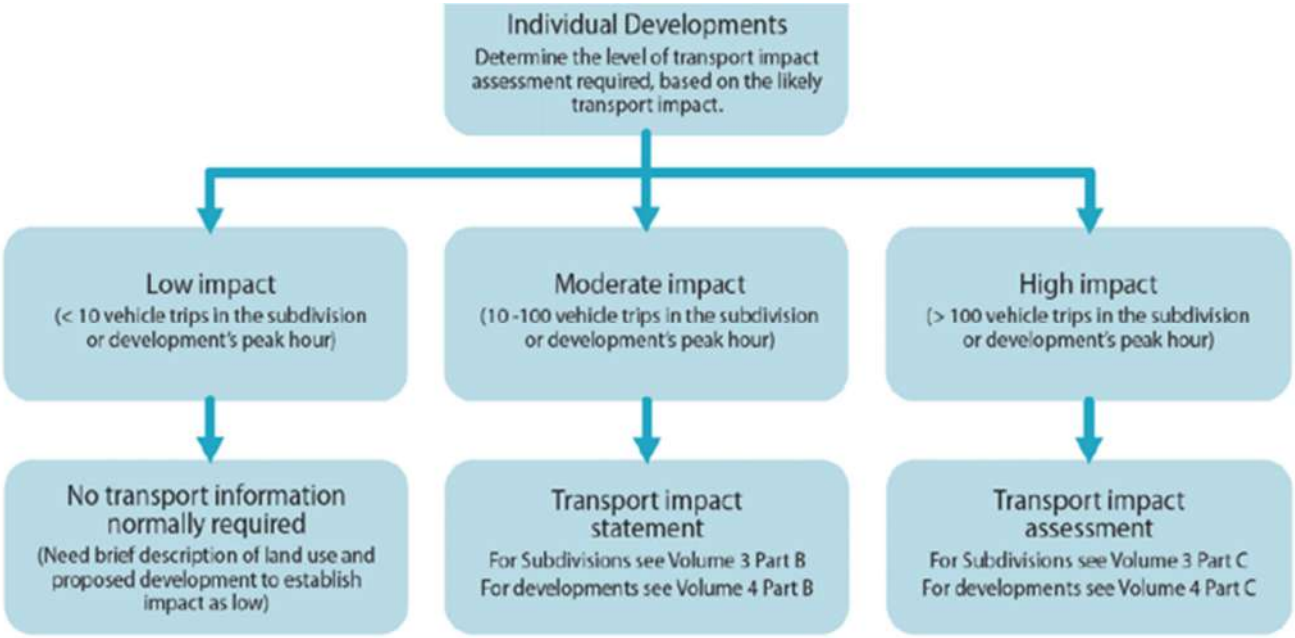
1 Introduction

Level5Design has been engaged by Regis Aged Care to prepare a Transport Impact Statement (TIS) of the proposed residential extension for Regis Greenmount in Greenmount in support of a Development Application (DA).

This TIS has been prepared in accordance with the Department of Planning, Lands and Heritage (DPLH) and Western Australian Planning Commission (WAPC) *Transport Impact Assessment Guidelines for Developments: Volume* 4 - Individual *Developments* (2016) and the checklist is included in Appendix A. The Guidelines promote a three-level assessment process, where the required level of assessment is dependent on the likely level of impact, as follows (and as shown in Figure 1.1):

- Low impact – less than 10 peak hour trips, no assessment required,
- Moderate impact – between 10 and 100 peak hour trips, Transport Impact Statement required, and
- High Impact – more than 100 peak hour trips, full Transport Impact Assessment required.

Figure 1.1 - Level of transport impact assessment required.



Source: WAPC Transport Impact Assessment Guidelines 2016

The traffic generated by the Site has been determined to be less than 10 additional vehicle trips in the peak hour, which equates to a low impact. While no assessment is typically required where the impact is assessed as low, a 'Transport Impact Statement' has been prepared to confirm the proposals are safe and functional to support the DA.

As part of the investigations, a site visit was conducted on 2 April 2025 to observe the site conditions and to identify any traffic and parking issues that may be associated with this development proposal.

2 Background

2.1 Existing Site

The subject site (the 'Site') is located approximately 23 km northeast of the Perth CBD in the suburb of Greenmount within the Shire of Mundaring (see Figure 2.1). The adjacent parcel of land next to the existing Regis facility was previously developed but the aged care building on it has since been demolished. This plot of land has been fenced off and the formerly intersecting roads have been kerbed to restrict access to the land.

Figure 2.1 - Site location within the context of Greenmount

Source: Apple Maps 2025 (Annotated)

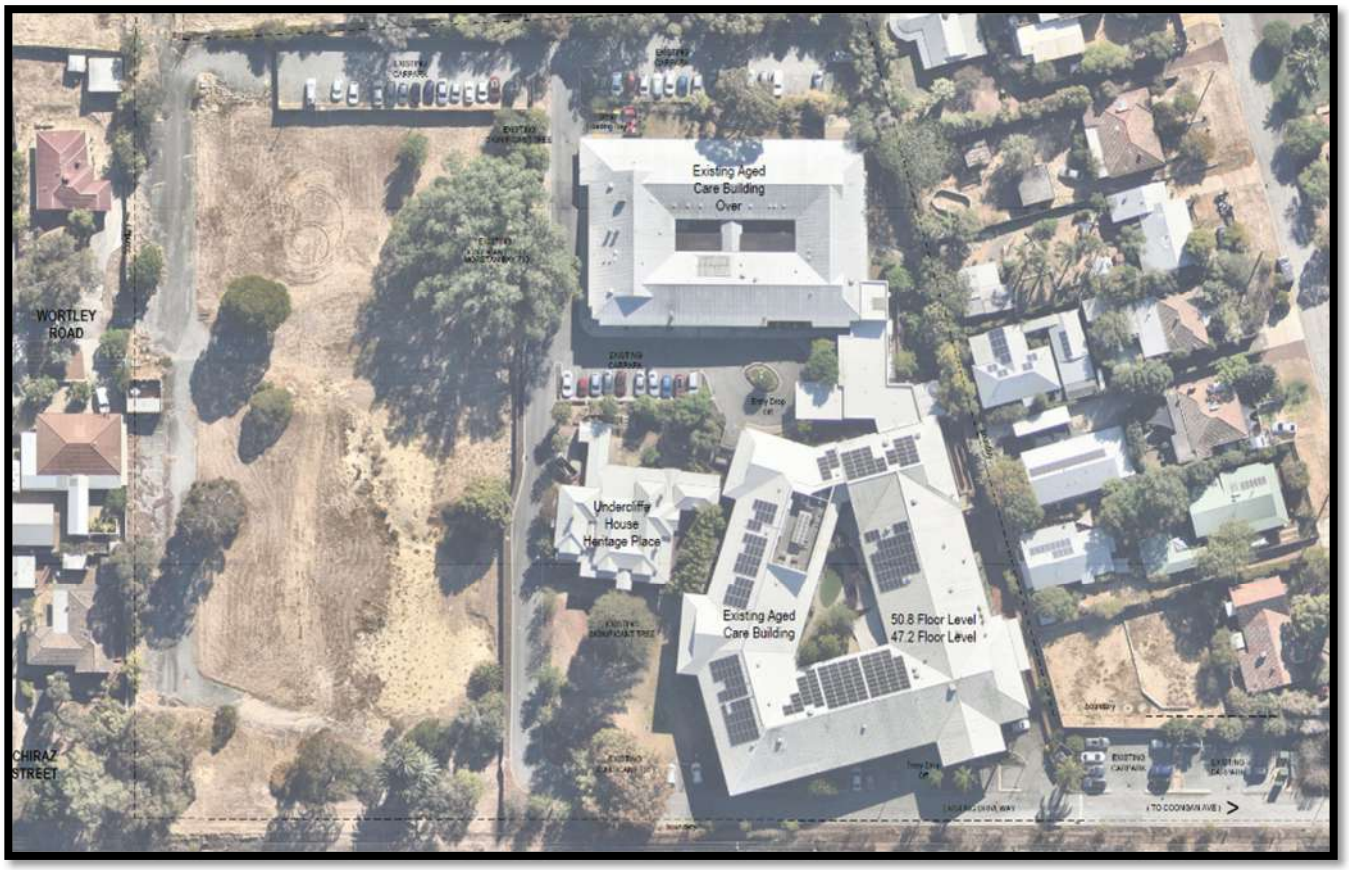
The Site is located south of the Great Eastern Highway (GEH) and west of a row of residential dwellings accessed of Coongan Avenue. Existing site access is via a driveway at 22 Coongan Avenue. Entry to Coongan avenue is from Scott Street and Great Eastern Highway to the north.

Figure 2.2 - Location of the Development Site,

Source: Apple Maps 2025 (Annotated)

The Site is surrounded to the north, east and west with single detached residential dwellings and undeveloped land to the south (see Section 2.3). The undeveloped land to the south marks the borderline with the City of Swan.

Figure 2.3 – Roads Network in the Vicinity of the Existing Site



Source: LW Architects 2025

2.2 Shire of Mundaring Local Planning Scheme No 4

The Shire of Mundaring Local Planning Scheme No. 4 (LPS4) amended 9/9/2023, divides the district into zones to identify areas for particular land uses. The area depicted in Figure 2.4 includes the location of the Site, which has been zoned as Special Use.

Figure 2.4 – Mundaring Local Planning Scheme No.4 (Map 5 Excerpt, updated 10/12/2020)

In Schedule 4 of LPS4, the Site location allows the following special uses, subject to the discretion of the Shire of Mundaring:

- aged persons' village
- aged or dependent persons' dwellings
- nursing home
- uses incidental to the above

An "aged persons' village" is defined as five or more aged or dependent persons' dwellings and may include buildings and parts of buildings used for communal facilities, food preparation, dining, recreation, laundry, or medical care. An "aged or dependent persons' dwelling" is defined as a dwelling, either in isolation or in a group, designed for the accommodation of aged persons or dependent persons, as defined in the Residential Design Codes, and used for the accommodation of one or more aged persons or dependent persons or the surviving spouse of such a person. Both of these uses relate to dwellings of 80 m^2 or more rather than single room bedrooms in a communal aged care facility.

A "nursing home" is defined as a premises in which persons who do not require constant medical attention are received as patients and lodged for the purposes of medical supervision and nursing care.

The proposed aged care extension most closely aligns with the LPS4 definition of a nursing home with its focus on beds rather than self-contained dwellings.

2.3 Other Nearby Developments

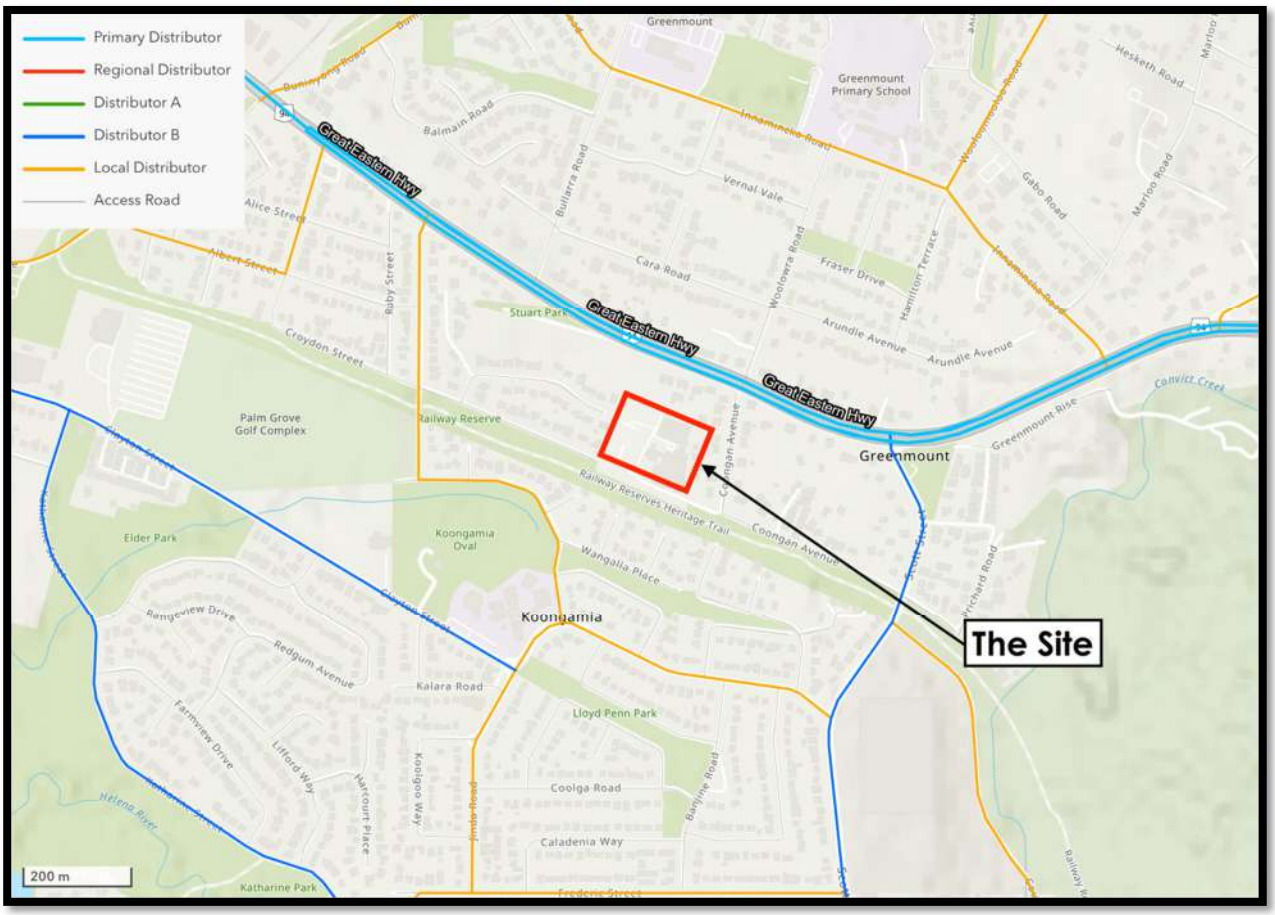
The Shire of Mundaring has confirmed that there are no new major developments currently proposed that are within close proximity to the Site that are likely to impact the findings of this traffic impact assessment.

3 Existing Road Network Characteristics

3.1 Existing Road Network

Figure 3.1 illustrates the road classification in the vicinity of the Site as specified by the Main Roads WA Metropolitan Functional Road Hierarchy (MFRH).

Figure 3.1 - Connectivity within the broader road network



Source: Main Roads WA (annotated)

The Great Eastern Highway is the main traffic-carrying route through the area and is designated a Primary Distributor in the MFHR. The roads within the immediate proximity to the Site are Coongan Avenue (designated as an Access Road) and Scott Street (designated a Distributor B).

Table 3.1 summarises the characteristics of the road network in the vicinity of the Site.

Table 3.1 - Road Network Characteristics

Road Name	Road Hierarchy			Road Network			
	Road Hierarchy	Jurisdiction	Capacity (2-way vph)[1]	No. of Lanes	No. of Footpaths	Carriageway type	Posted Speed (km/h)
Coongan Avenue	Access Road	Local Government	300	2	0	2-Lane Undivided	50
Scott Street	Distributor B	Local Government	1,200	2	1	2-Lane Marked	60
Great Eastern Highway	Primary Distributor	Local Government	3,600	4	2	4-Lane Divided	70
Coulston Road	Local Distributor	Local Government	1,200	2	0	2-Lane Marked	50
Stuart Street	Local Distributor	Local Government	1,200	2	0	2-Lane Undivided	50
Wangalla Road	Local Distributor	Local Government	1,200	2	0	2-Lane Marked	50
Jinda Road	Local Distributor	Local Government	1,200	2	0	2-Lane Marked	50

3.2 Existing Traffic Volumes (Cars)

Traffic volumes on roads in the vicinity of the Site as reported in the Main Roads' TrafficMap are given in Table 3.2. Observations indicate that traffic volumes are below the environmental traffic capacities for these roads.

Table 3.2: Existing Traffic Volume (Great Eastern Highway/Scott Street Intersection, 6/9/2023)

Road	Road classification	24 hr Total	Morning Peak Volume (7:45-8:45)	Evening Peak Volume (15:45-16:45)
Great Eastern Highway (West of Scott Street)	Primary Distributor	33,560	2,693	2,971
Great Eastern Highway (East of Scott Street)	Primary Distributor	32,535	2,574	2,863
Scott Street	Distributor B	7,443	729	636

The percentage of heavy vehicles travelling along the Great Eastern Highway ranges between 7% to 9%, and is 3% along Scott Street as shown in Appendix F.

Current traffic movements to the Site are listed in Table 3.3. The peak visitation time is on weekdays at 2 pm, which is outside the peak operating times of the adjacent road network.

[1] Based on Austroads Guide to Traffic Management Part 3 and the MFRH. For District Distributors it assumes 900 vehicles per hour per lane for a 2-lane carriageway with interrupted flow or where adjacent to a parking lane, and 600 vehicles per lane on a 2-lane carriageway with occasional parked vehicles. For a Local Distributor it assumes 6,000 vehicles per day two-way, and for a residential local Access Road it assumes 3,000 vehicles per day two-way with the peak hour being one tenth of the daily traffic volume.

Table 3.3: Existing Site Two-Way Traffic Movements

Road	Daily Average (Mon-Sun)	Weekly Average
Resident Visitors	27	187
Staff (Morning Shift)[2]	27	186
Staff (Afternoon Shift)	16	109
Staff (Evening Shift)	5	32
Staff (Other)	6	40
Staff Movement Totals	**54**	**367**
TOTAL DAILY MOVEMENTS	**81**	**554**

3.3 Existing Traffic Volumes (Trucks and Vans)

The existing site is serviced by trucks and vans as follows:

- Articulated trucks (19 m long) – average 4.5 visits per week
- Large rigid trucks (12 m long) - average 10.25 visits per week
- Medium rigid trucks (8.8 m long) - average 2 visits per week
- Small rigid trucks / vans (up to 6.4 m long) - average 26 visits per week

The new extension is proposed to be serviced using the same volumes of service vehicles as per the existing situation. This can continue to be achieved as the facilities for all residential beds will remain common.

3.4 Existing Access Arrangements

The Site currently has a driveway off Coongan Avenue, providing direct access to the Development via a porte-cochere (at the low care ward), a drop-off loop (between the low care and high care wards) and three at-grade parking lots.

3.5 Existing Parking Arrangements

The existing parking arrangements for the Site comprise the following:

- A 16-bay parking lot close to the Coongan Ave entrance (see Figure 6.1),
- 1 ACROD bay and 5 perpendicular bays in front of the low care ward near the porte-cochere,
- 3 perpendicular bays south of the Heritage Undercliffe House,
- 11 bays adjacent the drop-off loop (including a delivery bay), and
- A 39-bay parking lot, bin area and waste collection bay adjacent the administration building.

The resulting total bays include 74 visitor car bays, 1 ACROD bay and 2 service bays.

[2] Each two-way traffic movement equates to two one-way staff movements

4 The Proposed Development

4.1 Proposed Land Uses

The proposed development consists of the following:

1. A residential aged care extension located on the vacant plot to the west of the existing residential aged care building. The proposed extension shall have 48 one-bedroom one-bathroom assisted living residential beds with attached under croft kitchen, laundry, carpark and associated common assisted living service facilities.
2. A new entry/reception and drop-off area, integrating the heritage house for administrative use and linking the existing residential aged care building to the extension.
3. A total of 50 new car parking bays, including 4 new accessible parking bays, plus a loading bay. A total of 45 of these bays will be constructed in an undercroft area under the new building extension.
4. Removal of some existing at-grade parking areas. Retention of 22 existing car parking bays. The resulting total new parking on the Site is proposed to be 72 car bays.
5. Removal/demolition of an existing 39 bed aged care building (already completed).
6. Modifications to the existing driveway network:
    - The proposed entry/reception drop-off area cuts through the north-south section of the existing driveway. A new drop-off loop will be installed to the south of the proposed reception area.
    - Adjacent the new reception area drop-off loop, perpendicular car parking bays will be installed. The existing significant trees in this area will be preserved.
    - The existing car parking bays located adjacent to the existing drop-off loop near Heritage Undercliffe House (and the nearby delivery bay) will be removed to accommodate the new development.

The ground floor plan for the proposed development of the Site is shown in Figure 4.1. The lower ground floor plan is provided in Appendix B.

4.2 Proposed Operation of the Assisted Living Residential Accommodation

The Regis residential aged care facility in Greenmount is proposed to provide a 127-bedroom accommodation facility post development. That includes both the existing and newly extended residential buildings. It should be noted that the people living on-site will be residents with assisted living needs. This Site is not intended to be a medical or clinical facility. If the residents need medical care they will be taken to a doctor or a hospital.

4.3 Proposed Staging Context

The development of the Site is planned to occur in five discrete stages as shown on Figures D1 to D5 in Appendix D.

These five stages can be broadly categorised as follows:

- Stage 1: Development work commences. Staff, visitor and builder access and parking to be provided via Coongan Avenue. Traffic access to be prevented from both Chiraz Street and Wortley Road as per the current situation. During this stage, which is likely to be about 6 months in duration, there will be no additional traffic impacts on Chiraz Street and Wortley Road.

- Stage 2: Demolition of 'Central Road' will occur. A temporary connection to Wortley Road will be created for staff access to parking at the rear of the Site and for builder/logistics access. Some staff and builder access will occur from Coongan Avenue. Visitor access and parking will be provided from Coongan Avenue. No direct access will be provided from Chiraz Street. The length of this stage will depend on builder activities but is likely to be less than 12 months in duration.
- Stage 3: Undercroft car park will be completed allowing the relocation of all staff access via Coongan Avenue. Access for builder and logistics vehicles to temporarily occur via Wortley Road. All visitor access and parking will continue to occur via Coongan Avenue. There will be no direct access to the Site from Chiraz Street.
- Stage 4: Demolition of the existing residential facility on the rear of the Site. Demolition and logistics access will temporarily be provided via Wortley Road. All staff and visitor access and parking will occur via Coongan Avenue. Direct access from Chiraz Street will continue to be prevented. This stage is likely to be quite short, i.e. 1 month.
- Stage 5: This is the post development stage after construction and demolition works are complete. Wortley Road will be physically blocked after demolition works are finalised. Access to the rear of the Site will then be completely restricted. Chiraz Street will remain closed to the Site.

Chiraz Street will not be used for direct Site access at any stage of the proposed development. The following screenshot shows Chiraz Street in its current blocked state.

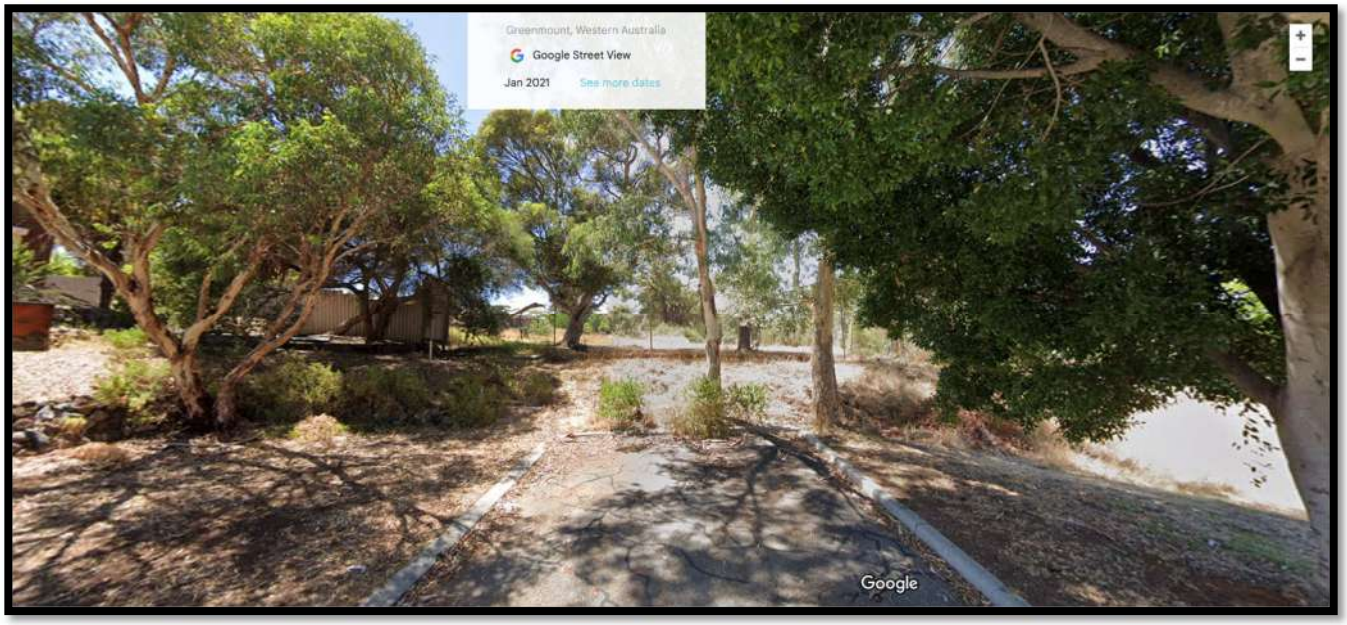


Figure 4-1: Chiraz Street Road Closure

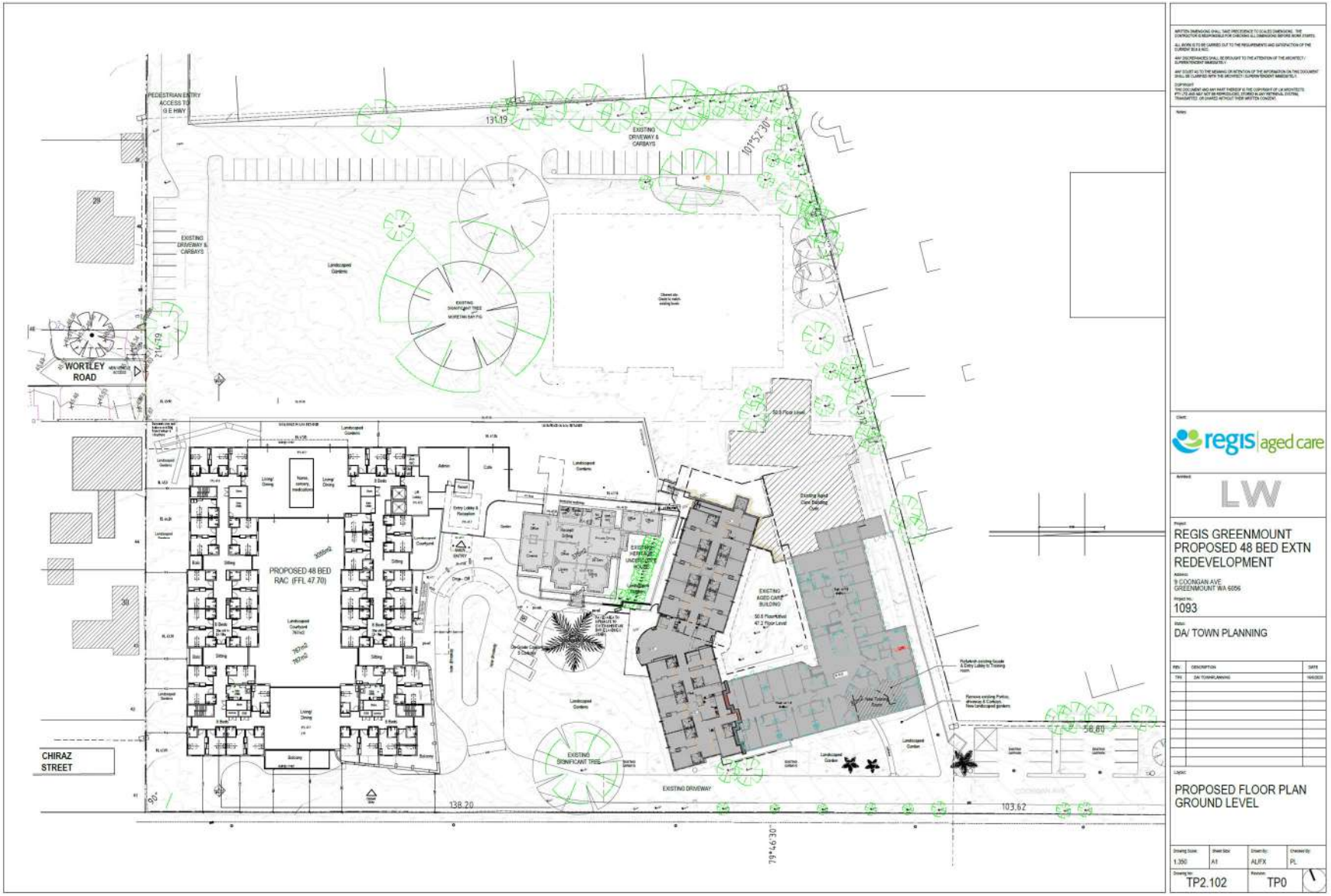
Wortley Road (and the western end of Chiraz Street) will only be used temporarily during Stages 2 to 4 of construction and will not be used after demolition of the existing building on the rear of the Site is completed. A fence will be installed at the interface of Wortley Road and the Site after Stage 4 is completed.

The primary point of access to the Site post development (Stage 5) including all parking areas is proposed to be via Coongan Avenue, which is consistent with the current traffic situation.

The proposed staging plan allows for the undercroft car park to be used pre-practical completion of the new building thereby facilitating earlier access for staff and visitors using the existing traffic arrangements via Coongan Avenue.

Any future development of the rear of the Site is proposed to be subject to future planning processes outside the scope of this TIS. Nonetheless, it is recommended that due regard be given to the findings of this TIS, and the future traffic use of Chiraz Street and Wortley Road at that time, to ensure there is no undue amenity impacts caused by any future development on those local access roads.

Figure 4.2 – Proposed Site Layout



Source: LW Architects

5 Assessment of Traffic Generation and Impacts

5.1 Forecast Traffic Generation for the Development

It is noted that the peak hours for the Site and the surrounding road network are not coincident. The morning and afternoon peak hours for traffic on the surrounding road network is from 7:45 am to 8:45 am in the AM peak and 15:45 pm to 16:45 pm in the PM peak. Regis staff (shift workers) start and finish outside those peak hours, which reduces their impact.

Based on published traffic generation rates from the Institute of Transportation Engineers (ITE) (Trip Generation Manual 11th Edition 2021), the traffic generation from the Site was estimated. For this purpose, the ITE rates given in Table 5.1 were used. The trip generation results are shown in Table 5.2.

While the proposed new extension includes 48 beds, the existing traffic volumes quoted in this report include trip generation from the existing 39-bed facility on the rear of the Site. Consequently, the traffic generation associated with 9 additional beds is what adds to the existing traffic volumes to determine resulting traffic impacts. This approach accurately evaluates the incremental impact of the additional traffic introduced by the new development.

Table 5.1 - Trip Generation Rates for Peaks on the Adjacent Road Network

Land Use	Source	AM Peak hour	IN	OUT	PM Peak hour	IN	OUT
Assisted Living: 254	ITE 11th	0.18 trips per bed	60%	40%	0.24 trips per bed	39%	61%

Table 5.2 – Trip Generation for Peak Hours on the Adjacent Road Network

Land Use	Yield	AM Peak trips[3]	IN	OUT	PM Peak trips	IN	OUT
Assisted Living Accommodation (existing demolished)	39 beds	-7	-4	-3	-9	-4	-5
Assisted Living Accommodation (new extension)	48 beds	9	5	4	11	5	6
Assisted Living Accommodation (difference)	9 beds	2	1	1	2	1	1

Based on the ITE trip generation rates, it is forecast that assisted living residential accommodation on the Site will generate as much as 0.18 and 0.24 two-way trips per bed in the AM and PM peak hours of the surrounding road network, respectively. For an extra 9 residential beds, this amounts to a maximum of 2 two-way trips in the AM and PM peak hours of the surrounding road network (see Table 5.1). Even if the traffic generation from all 48 beds in the new extension were factored into the analysis, it would only add approximately 10 vehicles per hour to the existing situation. The impact from such a small increase in traffic volume is not likely to be very noticeable and is considered immaterial to the effective operation of the road network.

[3] Refers to the AM peak hour of the adjacent road network occurring between 7 am and 9 am on a weekday. The same situation applies for the PM peak hour, i.e., one hour between 4 pm to 6 pm.

5.2 Traffic Distribution

A distribution of generated traffic consistent with the operation of the existing site was adopted. When applied to the local road network in the vicinity of the Site, the post development distribution has translated to 100% of vehicles entering and exiting via Coongan Avenue to and from Great Eastern Highway.

5.3 Forecast Traffic Impact on Surrounding Streets

The total trips generated from the proposals has been estimated at less than 10 vehicles in both the AM and PM peak hours of the adjacent road network. This amount is considered to be a relatively low impact noting the operation and capacity of existing surrounding streets and intersections.

Based on the traffic forecasts it can be concluded that:

- While the main impact of the Site will be on Coongan Avenue and Scott Street, it is not likely to have a material impact[4], and they will continue to operate well within their practical environmental traffic capacities.
- The increase in traffic on Great Eastern Highway is forecast to be negligible and not likely to have any material impact[4].
- There will be minimal impact on the operation of the Scott Street and Great Eastern Highway and Coongan Avenue and Scott Street intersections.
- Due to the relatively low number of vehicles entering and exiting the Site, the likelihood of vehicles queuing at the entrance and thus impacting traffic on Coongan Avenue and connecting streets is considered negligible.

5.4 Forecast Traffic During Construction Stage

During the construction and demolition stages of the development it is proposed that some staff and construction traffic will temporarily access the Site via a short-term connection from the rear of the Site to Wortley Road.

Based on the traffic generation exercise (refer Section 5.1) the total traffic generated by the existing assisted living residential accommodation has been estimated at a maximum of 9 two-way vehicles movements (4 in and 5 out) during the peak hour for the Site. This excludes construction related traffic. As a conservative estimate, if two-thirds of this Site generated traffic were to utilise Wortley Road during Stages 2-4 (and one third via Coongan Ave) it would only represent an increase of 6 two-way vehicle movements per hour on Wortley Road and the western end of Chiraz Street.

An estimate of construction (builder and logistics) traffic has been estimated based on the scale of the development and experience with other similar construction sites in Perth. The estimate allows for typical time-based fluctuations of traffic movements throughout the day with the majority of construction traffic occurring outside the peak hours of the adjacent road network. The construction traffic generation is forecast to be between 10 and 12 two-way vehicle movements per hour in the peak hour for the adjacent road network. This traffic is forecast to temporarily use Wortley Road (and the western end of Chiraz Street) to differing degrees during Stages 2 to 4 of the construction staging program described in Section 4.3.

[4] The WAPC Transport Impact Assessment Guidelines indicate that an increase in traffic of less than 10% of capacity would not normally be likely to have a material impact on any section or road.

Collectively, the staff and construction traffic forecast to temporarily use Wortley Road and the western end of Chiraz Street during Stages 2 to 4 is estimated to be a maximum of 18 two-way vehicle movements per hour. This amount of traffic is considered negligible in the context of existing traffic levels in the area and noting that the environmental traffic capacity of Wortley Road and Chiraz Street is in the order of 3,000 vpd (300 vph based on the peak hour being 10% of the daily volume). It is noted that an increase of 18 two-way vehicle movements represents less than 10% of the 3,000 vpd environmental traffic capacity of a local access road as defined by the MFHR. This small increase can be considered immaterial in the context of the 10% threshold specified by the WAPC[4].

6 Proposed Parking Arrangements

6.1 Assessment of Development Generated Parking Demand

It is forecast that there will be a reasonable demand for parking that will need to be satisfied on the Site.

The peak hour for the Site for parking is forecast to be around 2 pm in the early afternoon based on staff shift turnover requirements, site visitations schedules, and the movement of residents. Staff changeover times have taken as follows:

- Morning shift – begins at 6 am
- Afternoon shift – begins at 2 pm
- Evening shift – begins at 10 pm

Based on the proximity of public transport and other transport infrastructure nearby, it is forecast that some portion of the assisted living residents and associated staff will use other modes of transport to access the Site, i.e. not via a single occupancy private car, and therefore will not require parking on the Site.

Table 6.1 presents the forecast parking demand by time period in a tabular format. This demand has been estimated based on a first principles methodology using actual statistics for the existing Site. It also allows for a 50% shift changeover overlap from the two shifts.

Table 6.1: Forecast parking demand by time period

Time[5]	5.30 am	6.00 am	6.30 am	1.30 pm	2.00 pm	2.30 pm	9.30 pm	10.00 pm	10.30 pm
Support Staff	5	30	27	27	35	16	16	19	5
Admin / Management staff	-	-	2	4	4	4	-	-	-
Residents	19	19	19	15	15	15	19	19	19
Visitors / Ambulance / Maintenance Vehicles / Other	3	3	3	15	12	10	1	1	1
Totals	27	52	51	61	66	45	36	39	25

The peak parking demand taking all the above into consideration has been estimated at 66 parking bays allowing for the busiest period of the day for staff (admin, support, etc.) residents, and visitors (including maintenance staff).

[5] Assumes higher parking demand will occur at staff changeover times at 5.30-6 am, 1.30-2 pm and 9.30-10 pm. Admin staff start at 8.30 am and finish between 4-5 pm. It is assumed that approximately 75-80% of admin and management staff will be car drivers during the day (7 am to 5 pm). It is assumed that 100% of care staff will be car drivers. It is forecast that care staff will undertake two traffic movements per shift. It is estimated that 15% of residents will park a car. Estimates are based on data taken from Regis Greenmount and other similar sites.

6.2 Assessment of Parking Provision Requirements

A total of 127 assisted living residential bedrooms and associated common service areas are proposed for the Site. This includes 79 existing beds and 48 new beds.

For a nursing home, Schedule 4 of LPS No. 4 defines a requirement of 1 car parking bay per 4 beds plus 1 space per employee or staff member on premises at any one time. This parking provision rate is considered reasonable noting the type of aged care facility proposed by Regis at Greenmount, the forecast level of car ownership and use, and the proximity of nearby high frequency public transport services and pedestrian infrastructure.

The maximum staff forecast to be on the Site at any one time is 39. This allows 4 site leadership team and regional support staff to be on Site at the same time as the busiest shift changeover period, i.e. at 2 pm when the morning shift changes over with the evening shift.

Based on these estimates, it is calculated that 32 car parking bays are required for residents and 39 car parking bays for staff. In total, this adds to Shire of Mundaring requirement to provide 71-car parking bays on the Site.

Based on first principles, it has been established (refer to Section 6.1) that there will be a demand for parking of up to 66-car parking bays in the peak hour of the Site. This parking demand covers the total requirements for staff, visitors and residents at the busiest period of the day. This peak demand estimate is slightly lower than the 71-car parking bay provision rate requirement to satisfy the planning requirements of the Shire of Mundaring.

6.3 Assessment of Proposed Parking Supply

It is proposed that a total of 72 off-street car parking bays be provided on the Site. This includes 4 accessible/ACROD bays for people with disabilities and a set down area near the main entry for parking of emergency vehicles/ambulances and mini-vans to transport wheelchair-bound residents to external venues.

This amount of parking supply exceeds the parking demand of 66 bays forecast during the peak period for the Site (see Section 6.1). The parking supply also satisfies the parking provision requirements of 71 bays (see Section 6.2) specified by the Shire of Mundaring.

The types of vehicles frequenting the Site post development will be mostly small to midsize cars driven by staff, visitors, and residents. On a less frequent basis, the Site will be visited by contractors and gardeners maintaining the site in utility vehicles. The proposed off-street parking areas have been designed to accommodate these sizes of vehicles.

It is our expert opinion that the size of the proposed car parking facility is well justified and will adequately meet the peak parking demand of residents, visitors, and staff. It will be the right size to satisfy the demand during the day while not encouraging more traffic than necessary into the adjacent area.

6.4 Assessment of Parking Needs During Construction Staging

Section 4.3 and Appendix D provide details on the proposed car parking arrangements during the different stages of construction.

The existing parking is proposed to be retained on the rear of the Site for use by staff and construction workers during Stages 1 to 3 of the development staging plan when the undercroft car park is scheduled to be completed. It will then be opened and made available for use by staff and visitors.

The existing 16 parking bays on the front of the Site located adjacent to the Coongan Avenue access leg are also proposed to be retained (see Figure 6.1) and made available

for visitor use during construction staging. Another 6 existing car parking bays in two separate at-grade locations will also be retained for ongoing use.

On this basis, the development will remain compliant with the stipulated Shire of Mundaring parking provision requirements (71 car parking bays) throughout the full period of construction.

Figure 6-1: Car parking near Coongan Ave entry

7 Assessment of Vehicular Access and Manoeuvrability

7.1 Access to the Site Post Development (Stage 5)

Regis Greenmount will be accessible via a 6 m wide crossover on Coongan Avenue, which is not a through-road connection to any major road and only carries local traffic.

The driveway is proposed to be extended to the west with localised widening to accommodate the largest service vehicle forecast to visit the Site.

Images of the street frontages and junctions in the vicinity of the Site are provided in Appendix C.

7.2 Vehicle Manoeuvring throughout the Site Post Development (Stage 5)

Vehicle manoeuvres within the Site were checked to ensure adequate manoeuvring space and clearances to fixed objects. In all cases, 300 mm clearance has been provided where parking spaces are adjacent to a wall or fence and other restrictions that prevent door openings as per the requirements of Australian Standard AS/NZS 2890.1.

Maxi-taxis, small mini-buses/vans, and patient transport will pick up and deliver residents and visitors in the area outside the main entry on the loop service road. Ambulances will make use of the main entry loop or the loading dock area in the undercroft parking area, which is of sufficient size to accommodate ambulances manoeuvring as shown on the swept path diagrams contained in Appendix E.

The undercroft car park is able to accommodate the safe manoeuvring in all directions of a small 6.4 m long truck, a large van, and an ambulance. For details on manoeuvring by larger vehicles refer to Sections 7.3 and 7.4.

7.3 Loading and Unloading Manoeuvres Post Development (Stage 5)

As defined in Section 3.3, a variety of sizes of different service vehicles are forecast to frequent the site. The largest of these will be a 19.0 m semi-trailer but the majority of service vehicles will be smaller.

A loading bay has been included in the design at the rear of the undercroft parking area. A total height clearance of 3.8 m has been provided between the driveway and the loading bay. The basis of the design is that trucks safely enter from Coongan Avenue in forward gear, drive past the undercroft parking entrance into the service road stub, reverse back into the loading bay, and then exit the Site to Coongan Avenue once again in forward gear.

Safe access for 19.0 m articulated vehicles and 12.0 m heavy rigid vehicles doing this manoeuvre was checked with the Autoturn vehicle path simulation software and it was found to comply with the requirements of Australian Standard AS/NZS 2890.1. The swept path drawings given in Appendix E illustrate these swept path vehicle manoeuvres. This includes a semi-trailer manoeuvring while retaining a minimum 300 mm clearance between any fixed objects like kerbs and walls.

The 3.8 m height clearance provided in the undercroft area allows for the requirements of most large trucks and vans, e.g. Pantech trucks, and large passenger vehicles with roof cargo attachments. In the rare cases where trucks more than 3.8 m in height enter the Site, allowance has been made for them to park in the service road stub west of the undercroft parking entrance and to be unloaded/loaded with pallet stackers/transporters. The design allows this to be done effectively without impacting on the operation of the entrance to the undercroft parking area.

7.4 Commercial Waste Vehicle Access Post Development (Stage 5)

Commercial waste trucks will service the Site by entering from the south via the Coongan Road driveway and departing the Site in forward gear.

Allowance has been made for the largest size of commercial waste vehicle expected to service the Site. This is equivalent to a 12.0 m heavy rigid truck.

It is intended that commercial waste trucks shall collect waste from the development outside of peak hours and outside of major shift changes at the development in order to minimise interference with entering and exiting traffic.

Waste vehicle access during off-peak hours will significantly reduce the chances of any significant impact on:

- the operation of the driveway and the movement of vehicles entering and exiting the Site,
- the movement of traffic within the Site on circulating roads, and
- access to enter and exit visitor car parking bays.

7.5 Access During Construction and Demolition (Stages 1 to 4)

The proposed staging plan for access during construction is given in Section 4.3 and is illustrated in the figures contained in Appendix D.

Chiraz Street will continue to remain physically closed at the interface to the Site during construction.

Wortley Road will be connected to the rear of the Site temporarily to provide alternate facility access during a constrained window of construction activity (Stages 2 to 4). Once construction and demolition activities are finalised the temporary connection to Wortley Road is proposed to be permanently closed again. Access to the development for all traffic movements will then revert to Coongan Avenue as in the existing situation.

8 Public Transport Access

The Site is located within 100 m of two bus stops on the Great Eastern Highway, served by the Transperth bus routes No. 320 and 321 in both directions. The stops comprise 14543 travelling eastward, and 14603 travelling westward. Both bus routes connect the Site to Midland Train Station (5 km west of the Site) and services in both directions run between 6 am and 6 pm. See Figure 8.1 for the locations of the bus stops.

Figure 8.1 - Walking route from Stop 26566 (South) to the Site

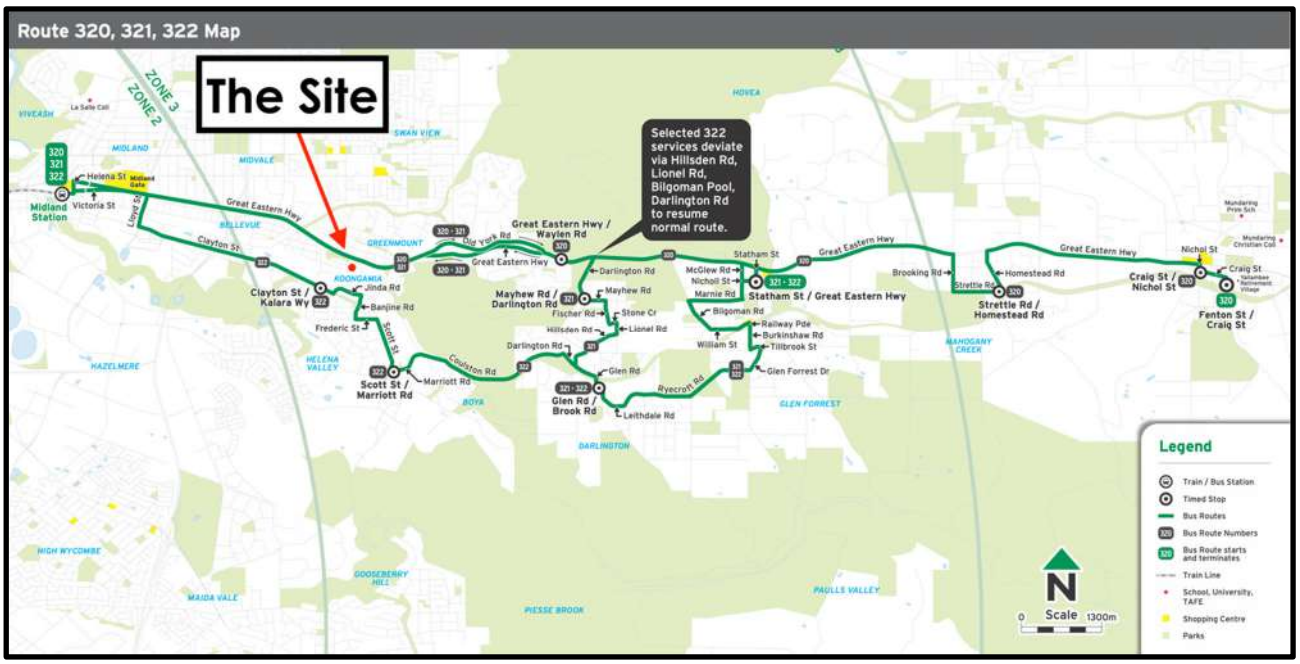
Source: Google Maps 2025

Walking distances of up to 400 m for bus stops and 800 m for train stations are considered the limit of what people will generally accept. As Midland Station is currently the nearest train station, it is necessary for public transport users from Perth City to catch the 320 or 321 bus routes to the Site. This makes the placement of the eastbound and westbound stops along the Great Eastern Highway near the Site ideally located.

As the services are restricted to daytime hours and do not run 24/7, the option to commute using public transport may be limited to shift workers arriving and departing during typical office hours. Outside of the stated public transport operating hours, workers will have no choice but to drive to the Site.

Carers are likely to be concerned with walking the streets after hours when it is dark to get to public transport, especially in Winter. Consequently, public transport in this scenario is unlikely to be a very attractive mode of transport for most people accessing the Site. Instead, secure off-street parking will be required to accommodate most staff and visitors. The map for route 558 has been provided in Figure 8.2 for greater context.

Figure 8.2 - Public Transport Connectivity



Source: Transperth 2025 (modified for presentation)

9 Pedestrian and Cycling Facilities

The Site has limited access to high quality pedestrian and cycling connections. The only paths near the Site useable by commuting pedestrians and cyclists are those on Great Eastern Highway. None of the local access roads surrounding the Site offer sealed footpaths or designated cycle lanes.

The main pedestrian movements that will occur in the vicinity of the Site are expected to be to and from the bus stops on Great Eastern Highway via the development's proposed cut-through to the north of the Site.

An extract of the Department of Transport's Long-Term Cycle Network (Perth and Peel) has been provided in Figure 9.1. The nearest cycle path is a secondary route using a cut-through from Arundle Avenue to Great Eastern Highway and continuing southward along Scott Street. The Railway Reserves Heritage Trail, an offroad bike trail, runs across the south border of the Site.

Figure 9.1: Long-Term Cycle Network for Perth

Source: DoT via ArcGIS, 2025

10 Road Safety Assessment

10.1 Crash Assessment

A search of the Main Roads WA Reporting Centre for traffic crash data was undertaken for reported crashes between the 1st of January 2019 and the 31st of December 2023 for the following sections:

- Stuart Street; from Great Eastern Highway to Wangalla Boulevard,
- Scott Street; from Great Eastern Highway to Coulston Road,
- The Great Eastern Highway; from Norman Street to Scott Street, and
- No crashes occurred on the following:
  - Coongan Avenue,
  - Chiraz Street, and
  - Wortley Road.

The analysis results are given in Tables 10.1 to 10.3.

Table 10.1 – Stuart St, from GEH to Wangalla Blvd

Type of Crash (RUM Code)	Fatal	Hospital	Medical	Major Property Damage	Minor Property Damage	Total Crashes
Rear End	-	-	-	1	-	**1**
Right Angle	-	-	-	1	-	**1**
Right Turn Thru	1	-	-	-	-	**1**
Sideswipe	-	-	-	1	-	**1**
Total	**1**	**0**	**0**	**3**	**0**	**4**

Table 10.2 – Scott St, from GEH to Coulston Rd

Type of Crash (RUM Code)	Fatal	Hospital	Medical	Major Property Damage	Minor Property Damage	Total Crashes
Rear End	-	-	1	17	6	**24**
Right Angle	-	1	1	9	1	**12**
Right Turn Thru	-	2	-	5	1	**8**
Not Specified	-	-	-	1	-	**1**
Total	**0**	**3**	**2**	**32**	**8**	**45**

Within the given data interval, both streets have recorded only one midblock incident; a rear-end collision on Stuart Street that resulted in significant property damage. All other incidents are concentrated near the intersections with the Great Eastern Highway.

Table 10.3 – GEH, from Stuart St to Scott St

Type of Crash (RUM Code)	Fatal	Hospital	Medical	Major Property Damage	Minor Property Damage	Total Crashes
Rear End	-	-	4	27	9	**40**
Right Angle	-	1	2	11	-	**14**
Right Turn Thru	1	1	1	5	1	**9**
Hit Pedestrian	-	1	-	-	-	**1**
Sideswipe	-	-	1	1	3	**5**
Not Specified	-	-	-	1	-	**1**
Total	**1**	**3**	**8**	**45**	**13**	**70**

On Great Eastern Highway, 19 crashes (27%) occurred midblock, including 1 that resulted in hospitalisation and 3 requiring medical treatment. The remaining 51 crashes (73%), which included 1 fatality, 2 hospitalisations, and 5 medical treatments, took place near street intersections, specifically at Stuart Street, Bullaburra Road, and Scott Street.

While crashes have been recorded on the Great Eastern Highway near the nearest turn-off streets to the Site, the crash data does not indicate any significant road safety concerns or major crash risks on the streets adjacent to or leading into the Site.

10.2 Assessment of Sight Distances

The visibility/sight line from the driveway locations was reviewed and it is deemed to meet the requirements of the Australian Standards in terms of required sight distances.

11 Summary

Level5Design has prepared a Transport Impact Statement for the proposed residential extension to the Regis Aged Care development in Greenmount. The Transport Impact Statement has been prepared in accordance with *Guidelines for Development: Volume 4 – Individual Developments*, DPLH/WAPC.

As part of this review, a traffic generation exercise was conducted to qualify and quantify the impact of the Site on the surrounding road network post development. The results indicate that the traffic impacts will be relatively low (approx. 2 vehicle trips in the peak hour) and are unlikely to significantly impact the operation of surrounding road network.

A review of the traffic impacts during the different stages of construction staging was also undertaken. In particular, the traffic impact on Wortley Road and the western end of Chiraz Street was assessed during Stages 2 to 4 when Wortley Road is proposed to be temporarily connected to the rear of the Site to provide alternate access for some staff and construction traffic. It was estimated that the traffic on Wortley Road and the western end of Chiraz Street would increase by up to 18 additional two-way vehicle movements in the peak hour of the adjacent road network. This increase on Wortley Road and the western end of Chiraz Street represents less than 10% of their environmental traffic capacity. This small increase is considered negligible, and consistent with WAPC Guidelines, would not be expected to have a material impact on any section of these local access roads. Hence, the traffic generated by the development was assessed as being able to be adequately accommodated.

An analysis of the parking requirements confirmed that the development proposal will provide adequate parking capacity to satisfy the demands of residents, staff, and visitors for all parts of the day while not encouraging more traffic than necessary into the surrounding area. The use of other transport modes like public transport, cycling and walking is encouraged where it is safe and effective to use them.

The access and manoeuvring of service vehicles was checked and found to comply with the requirements of the Australian Standards. Service vehicles can safely access and manoeuvre through the Site to the loading area.

Finally, a road safety assessment was undertaken that indicates that the proposals are safe and appropriate. The analysis also confirmed compliance with all relevant design standards.

In summary, this Transport Impact Statement has not identified any traffic or parking-related issues that would prevent the proposed development from being approved in its current form.

APPENDIX A: Transport Impact Statement Checklist

Item	Reference
Proposed development	
proposed land uses	Section 4
existing land uses	Section 2
context with surrounds	Section 2
Vehicular access and parking	
access arrangements	Section 3
public, private, disabled parking set down / pick up	Section 6
Service vehicles (non-residential)	
access arrangements	Section 7
on/off-site loading facilities	Section 7
Service vehicles (residential)	
rubbish collection and emergency vehicle access	Section 7
Hours of operation (non-residential only)	Section 3
Traffic volumes	
daily or peak traffic volumes	Sections 3 and 5
type of vehicles (e.g. cars, trucks)	Sections 3 and 5
Traffic management on frontage streets	Sections 5 and 7
Public transport access	
nearest bus/train routes	Section 8
nearest bus stops/train stations	Section 8
pedestrian/cycle links to bus stops/train stations	Sections 8 and 9
Pedestrian access/facilities	
existing pedestrian facilities within the development (if any)	Section 9
proposed pedestrian facilities within development	Section 9
existing pedestrian facilities on surrounding roads	Section 9
Cycle access/facilities	
existing cycle facilities within the development (if any)	Section 9
proposed cycle facilities within development	Section 9
existing cycle facilities on surrounding roads	Section 9
proposals to improve cycle access	Section 9
Site specific issues	
Safety issues	Section 10
identify issues	Section 10
remedial measures	Section 11

APPENDIX B: Plans for the Proposed Development

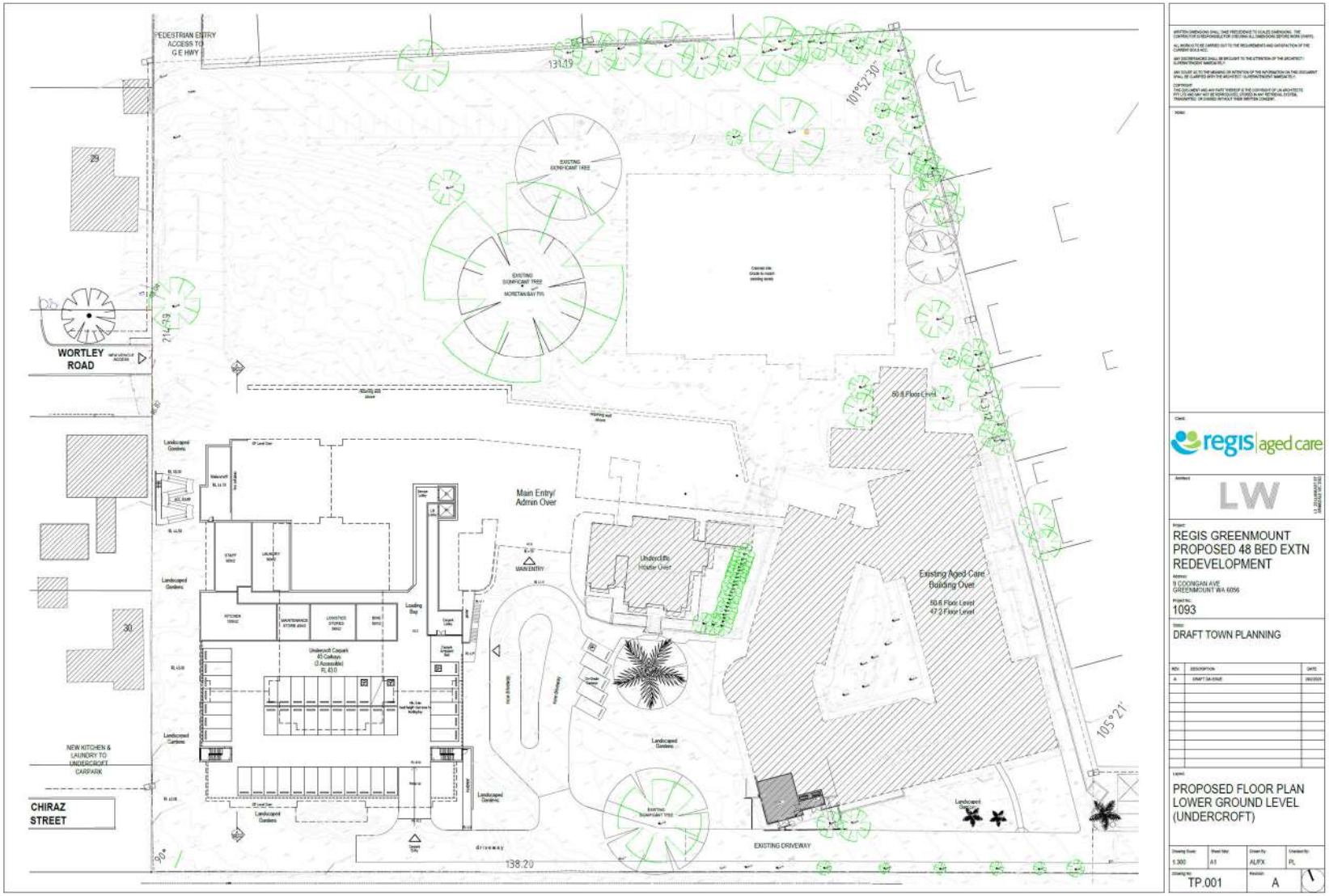


Figure B1 – Lower Ground Level Floor Plan (Source: LW Architects)

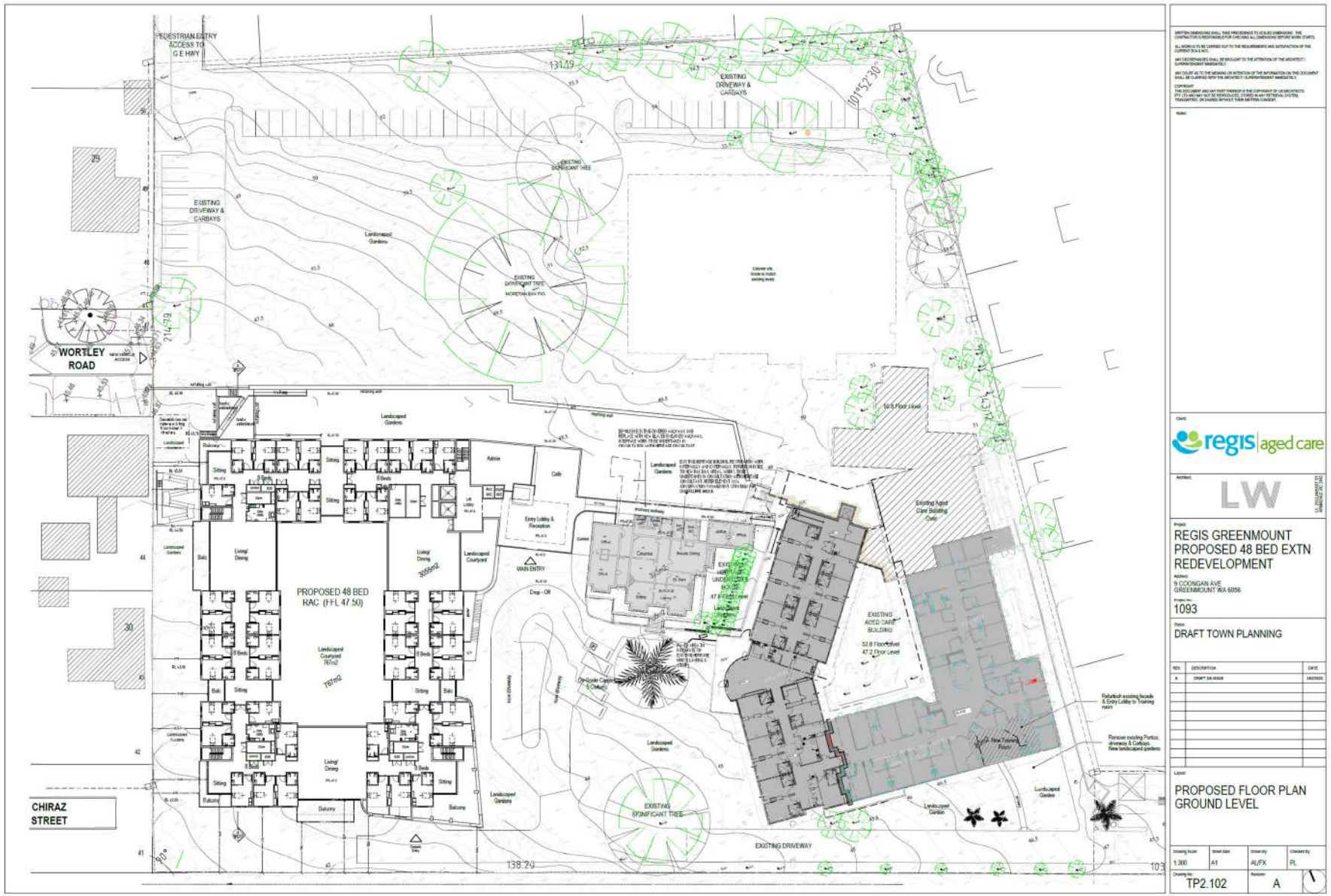


Figure B2 – Ground Level Floor Plan (Source: LW Architects)

Appendix C: Images of the Site

Figure C1: Entry to Regis Greenmount via Coongan Avenue (looking Southeast)

Figure C2: Entry to Regis Greenmount via Coongan Avenue (looking Northwest)

Figure C3: Western end of Regis Greenmount at the end of Coongan Avenue (looking South)

Figure C4: Regis Greenmount at the end of Coongan Avenue near Chiraz Street (looking Northwest)

APPENDIX D: Proposed Staging Plans

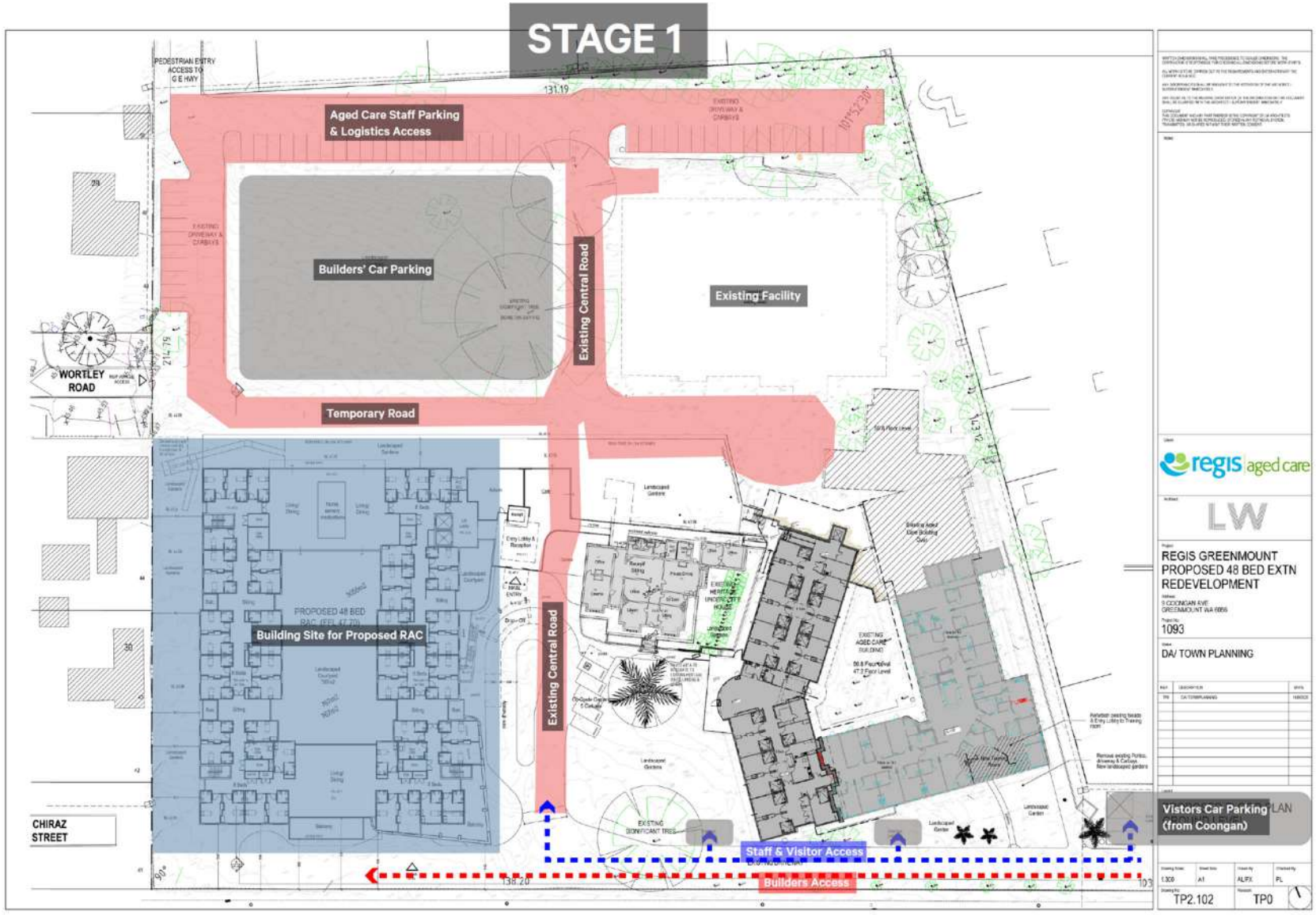


Figure D1: Proposed Stage 1 Access Arrangements

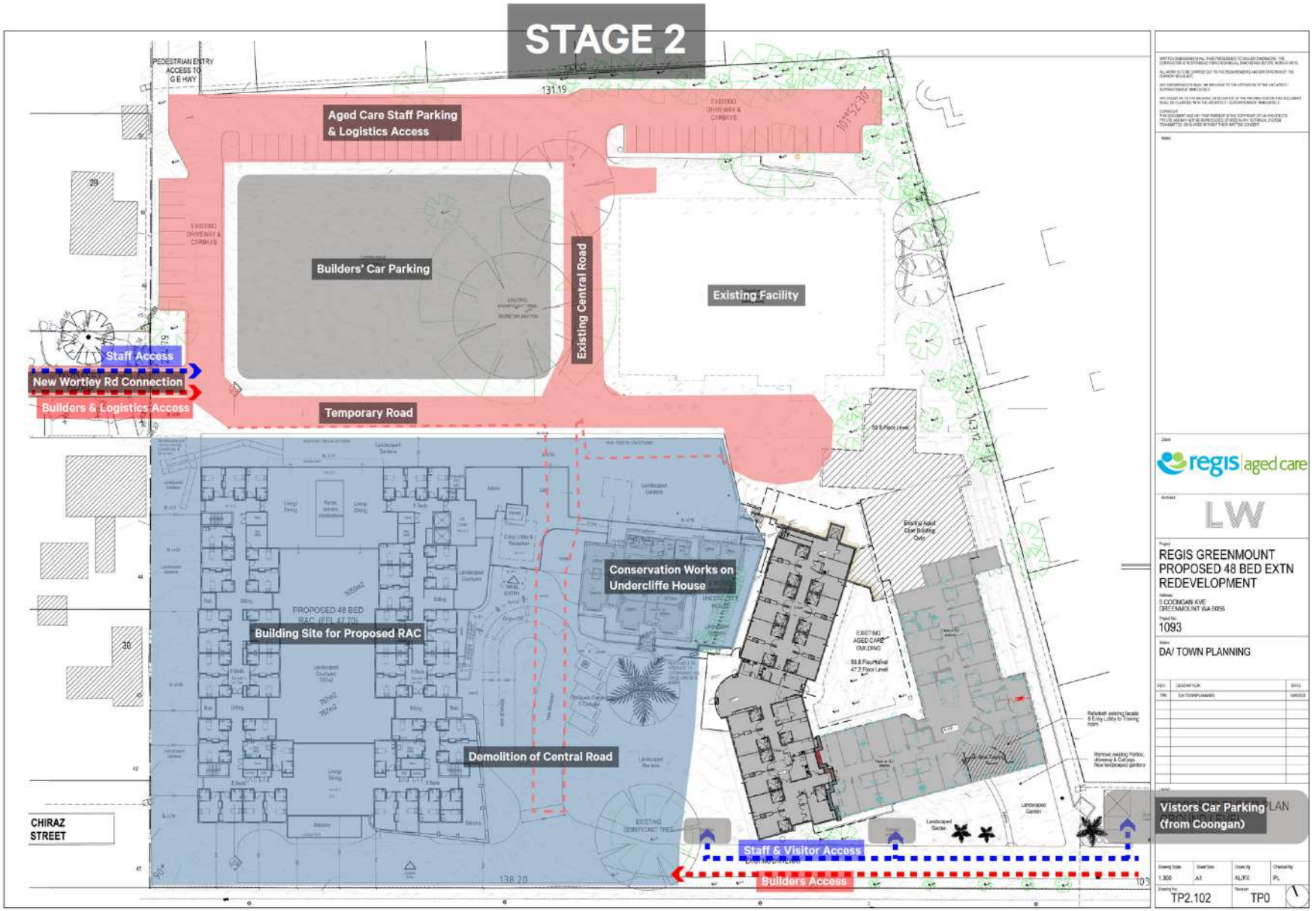


Figure D2: Proposed Stage 2 Access Arrangements

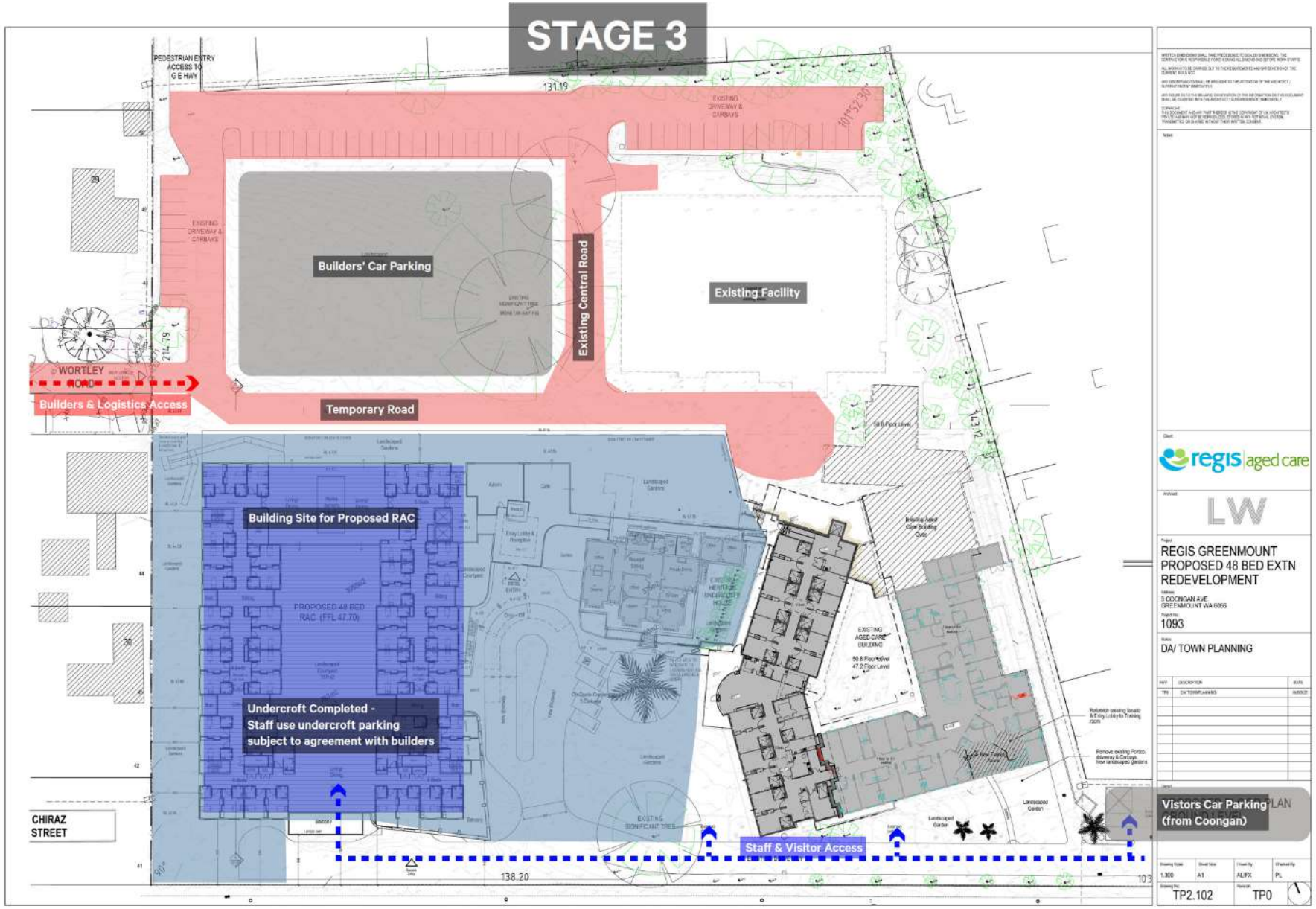


Figure D3: Proposed Stage 3 Access Arrangements

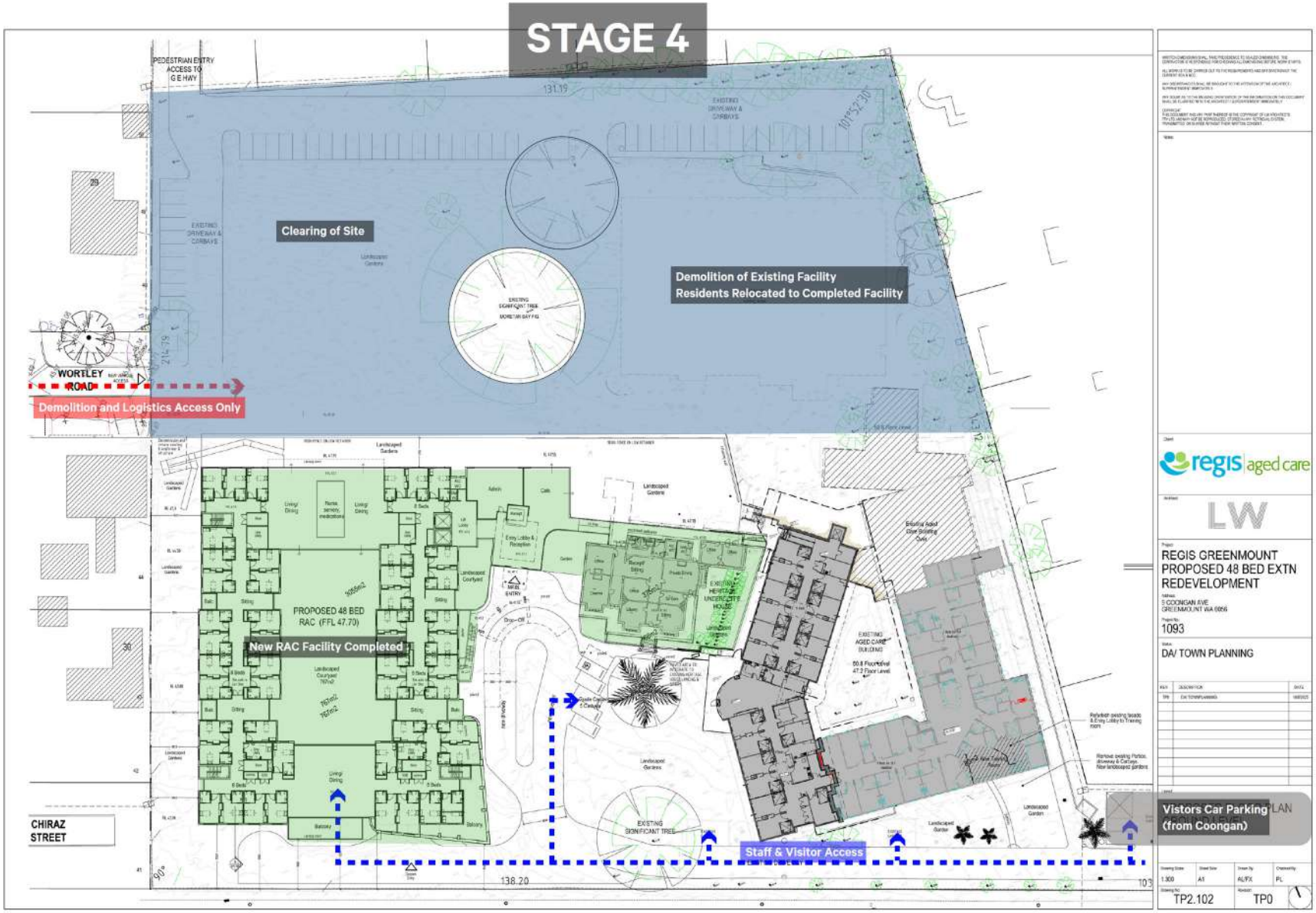


Figure D4: Proposed Stage 4 Access Arrangements

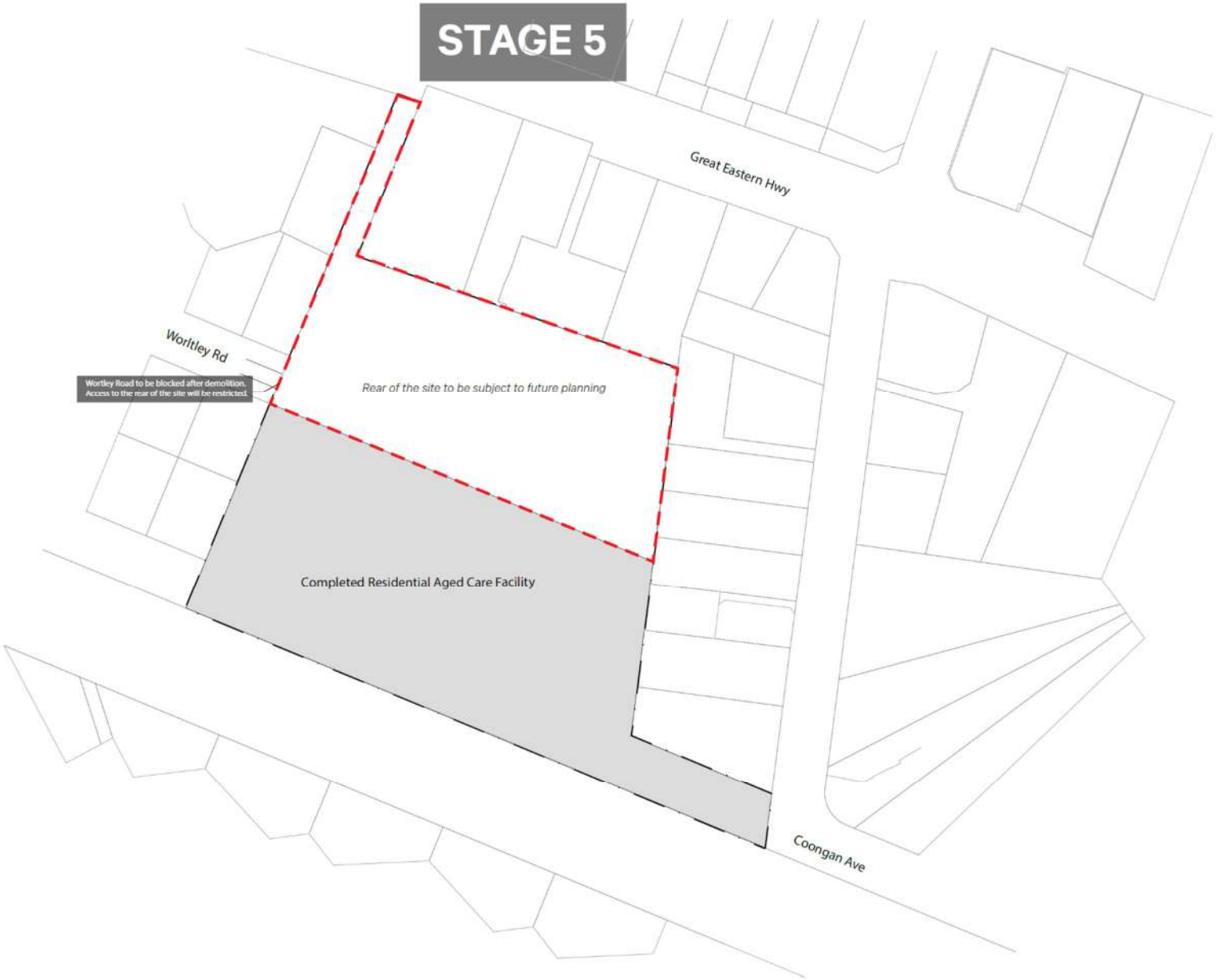
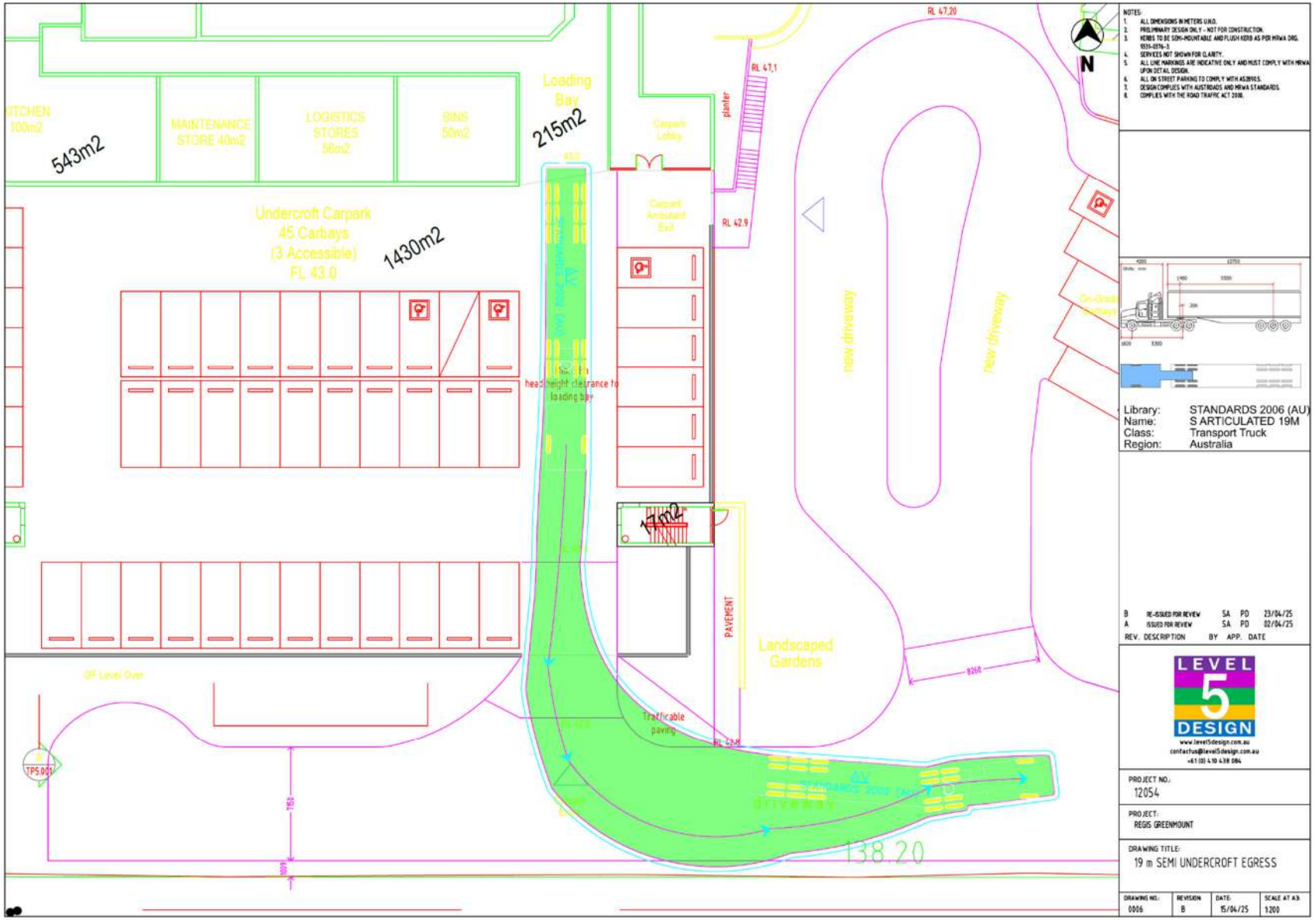


Figure D5: Proposed Stage 5 Access Arrangements

APPENDIX E: Swept Path Diagrams

Figure E1 - Swept Path – 12.0 m Heavy Rigid Vehicle (HRV)

Figure E2 - Swept Path – 19.0 m Articulated Vehicle (AV) Ingress



E3 - Swept Path – 19.0 m Articulated Vehicle (AV) Egress

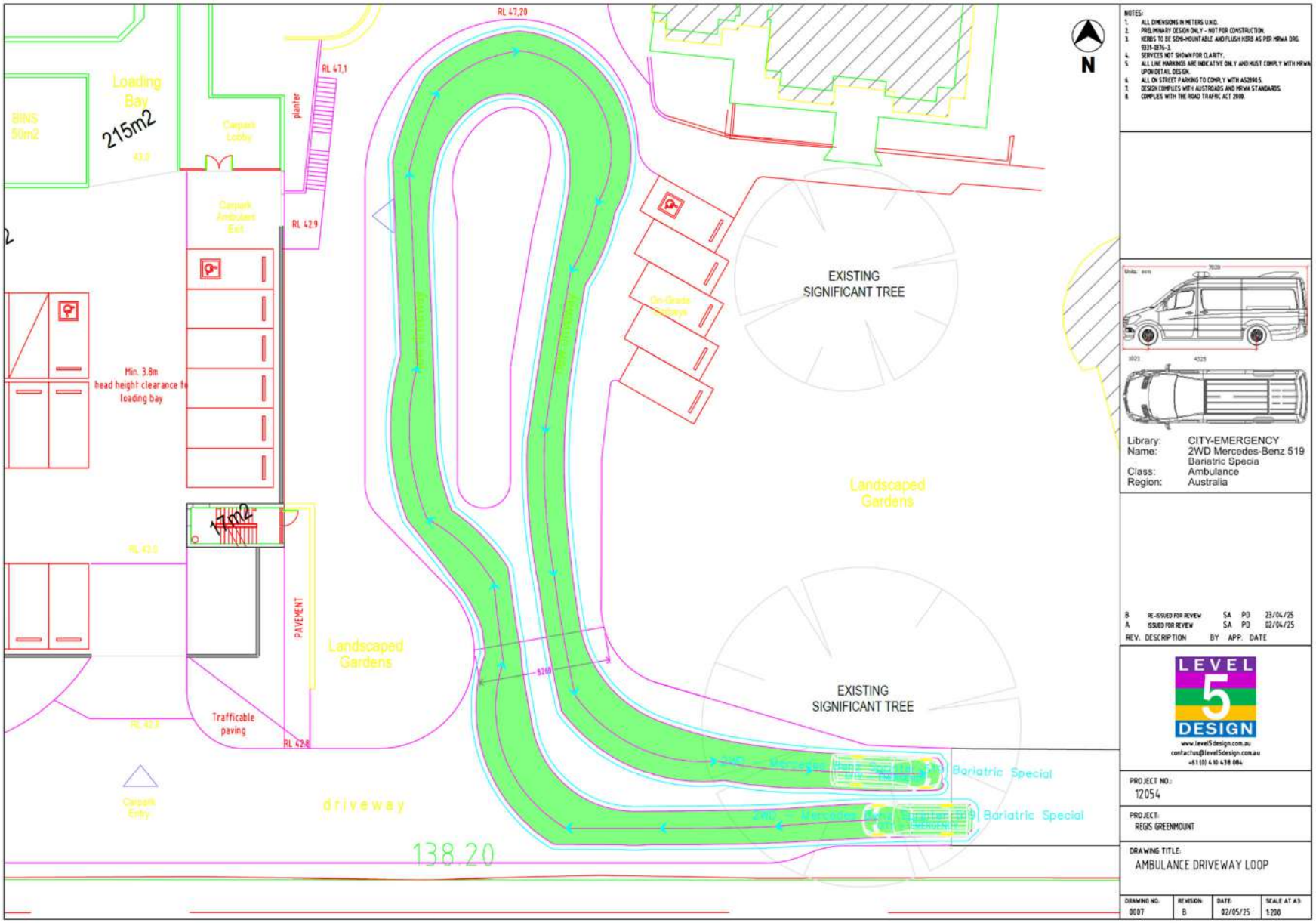


Figure E4 - Swept Path – Ambulance on Entry Loop Road

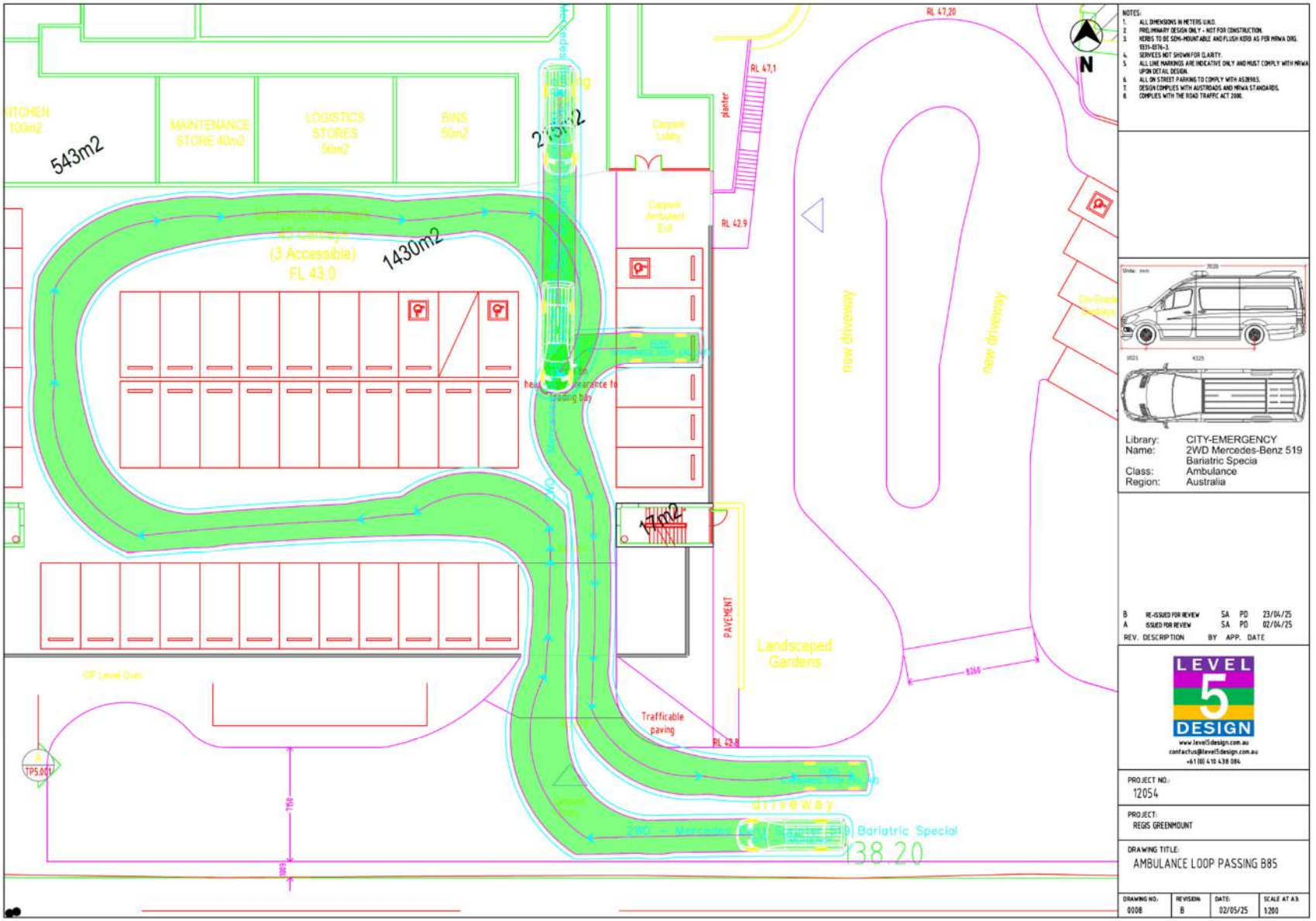


Figure E5 - Swept Path – Ambulance and B85 Car in Undercroft Parking Area

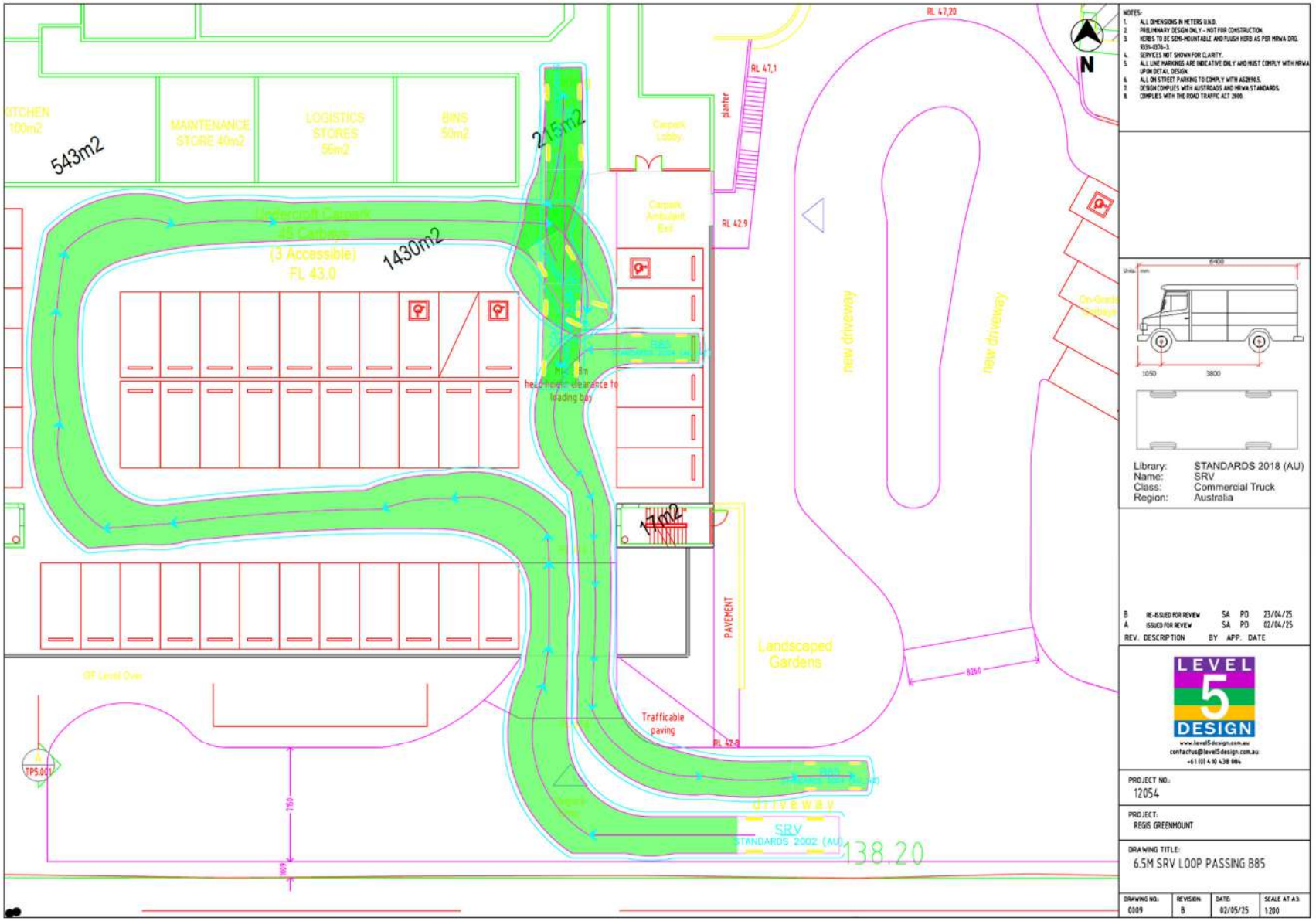
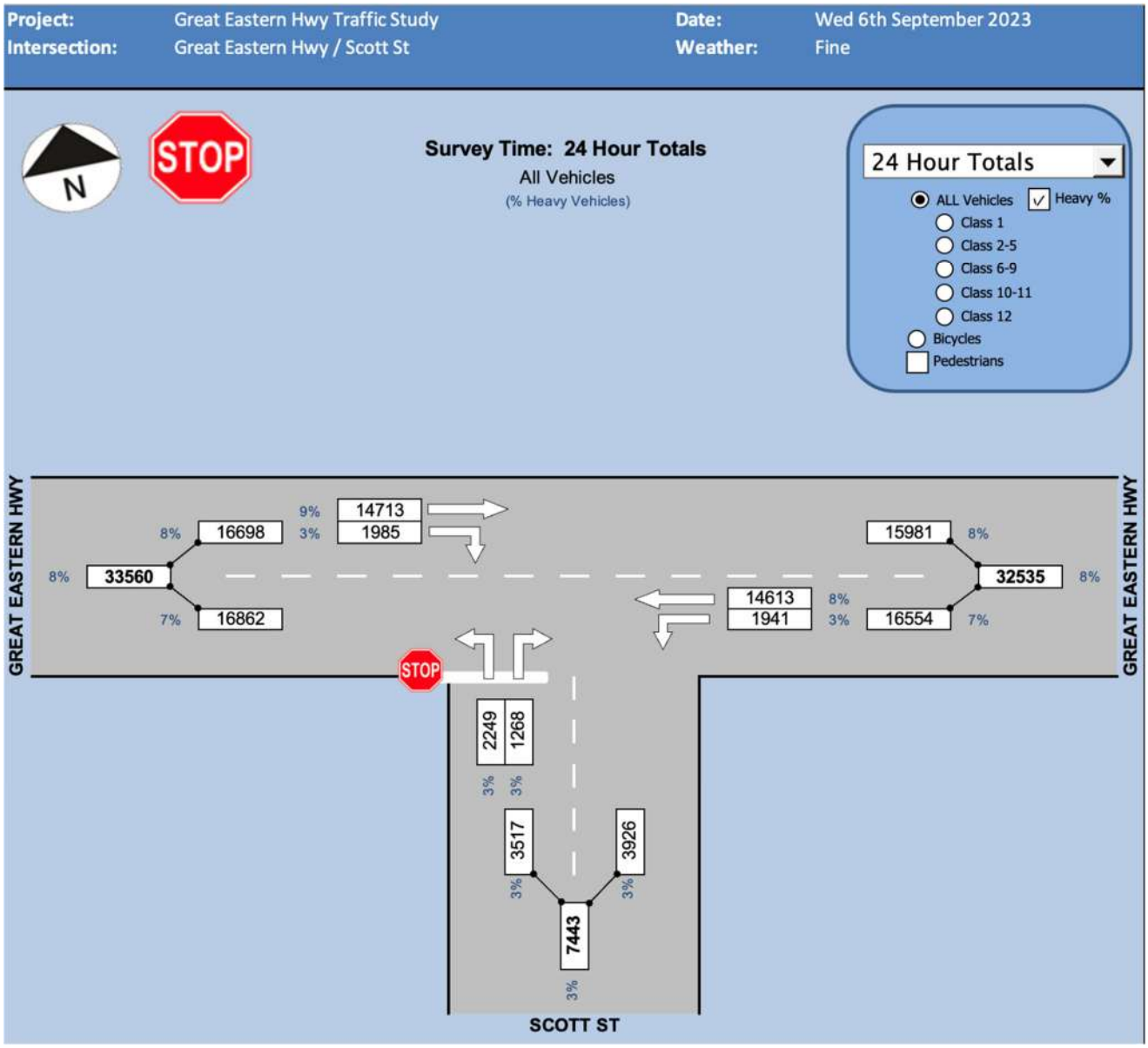


Figure E6 - Swept Path – Small 6.4m SRV Truck and B85 Car in Undercroft Parking Area

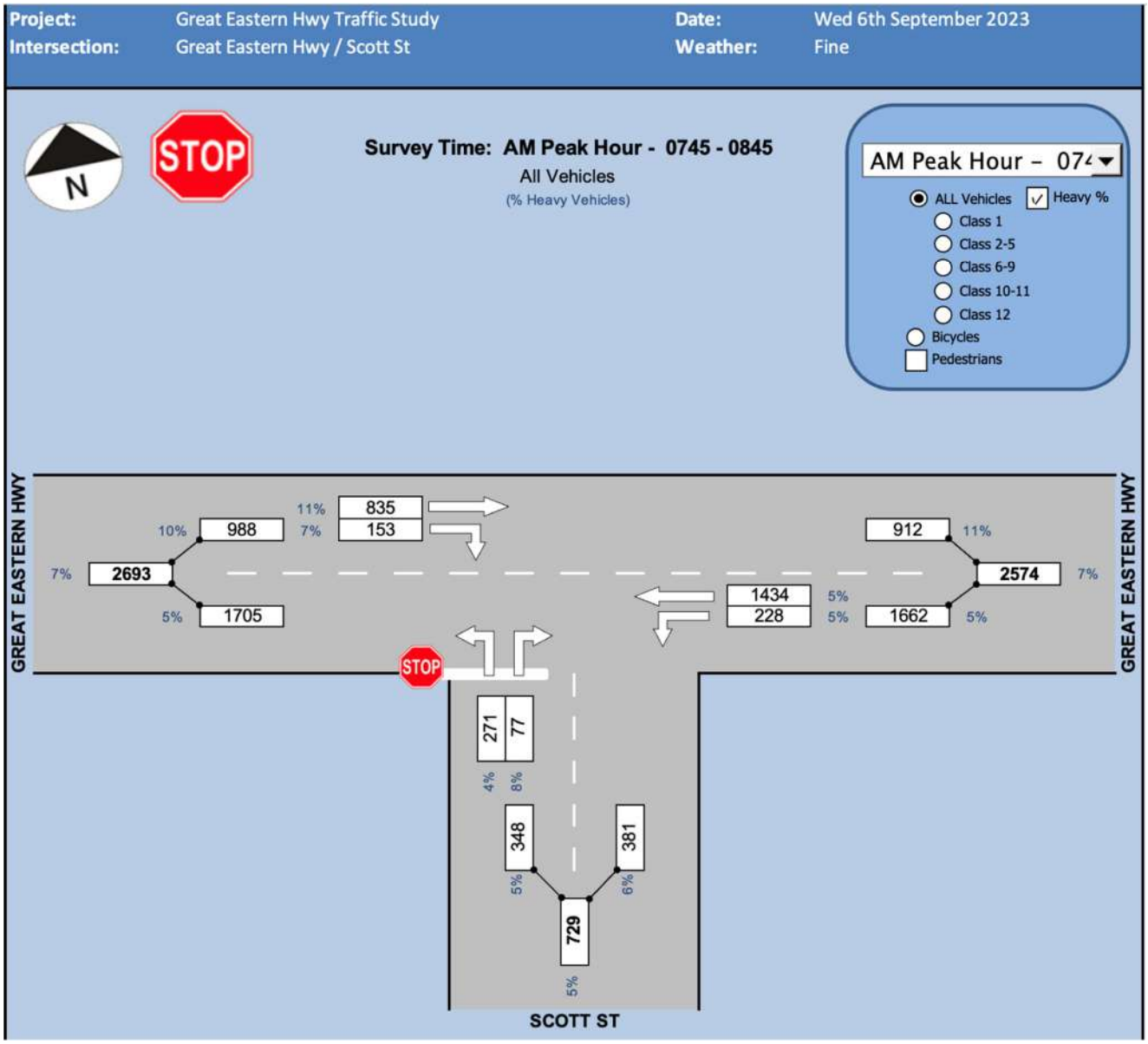
Appendix F: Great Eastern Highway/Scott Street Traffic Volumes (6/9/23)

Figure F1 – 24 Hour Totals



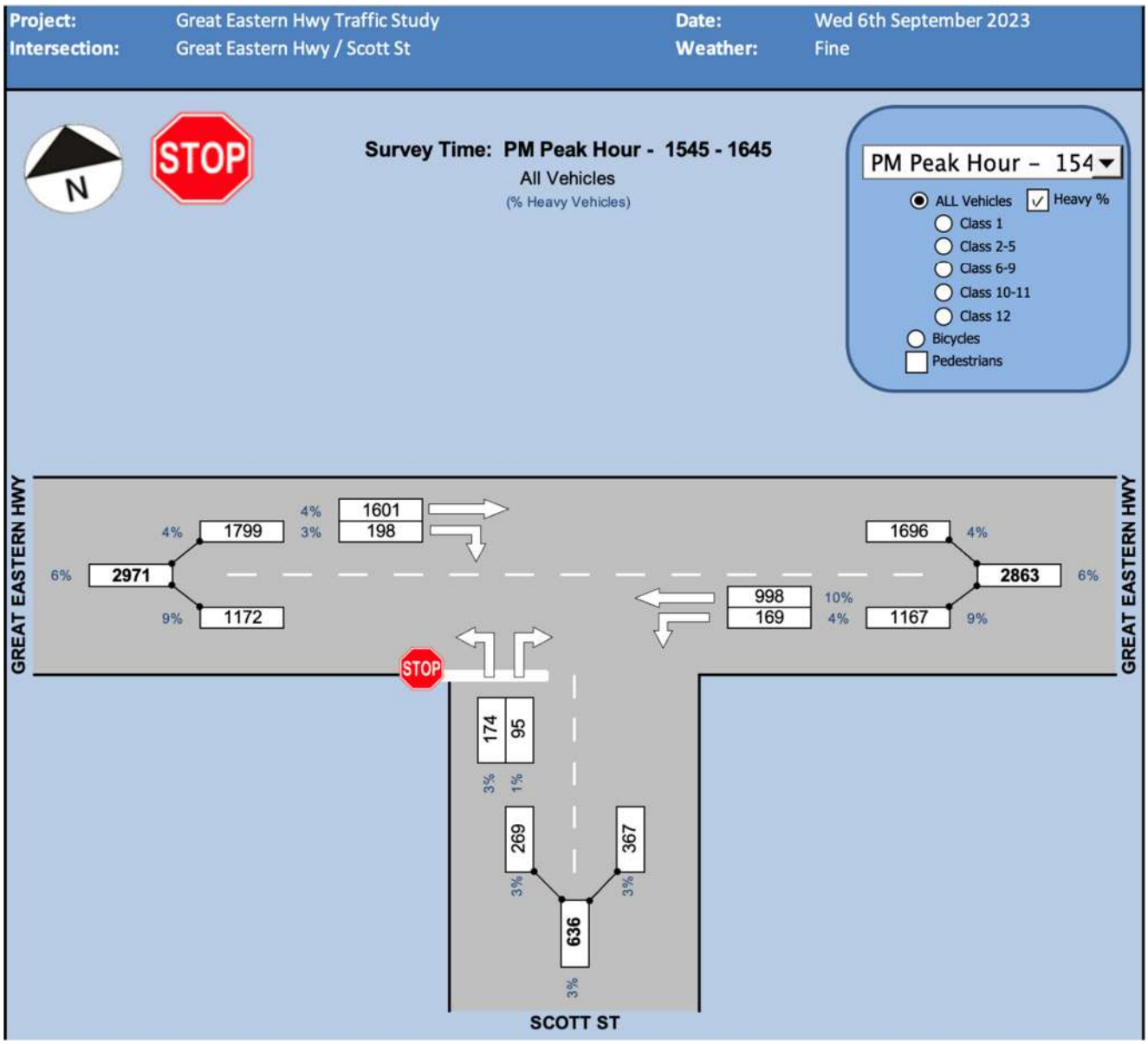
Source: MRWA 2025

Figure F2 – AM Peak Hour Totals



Source: MRWA 2025

Figure F3 – AM Peak Hour Totals



Source: MRWA 2025

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