Inspiring Innovation in Parking and Transport

MSWA Montario Quarter, Shenton Park

Transport Impact Statement

Project number 11046

May 2022

LEVEL 5 DESIGN

Contents

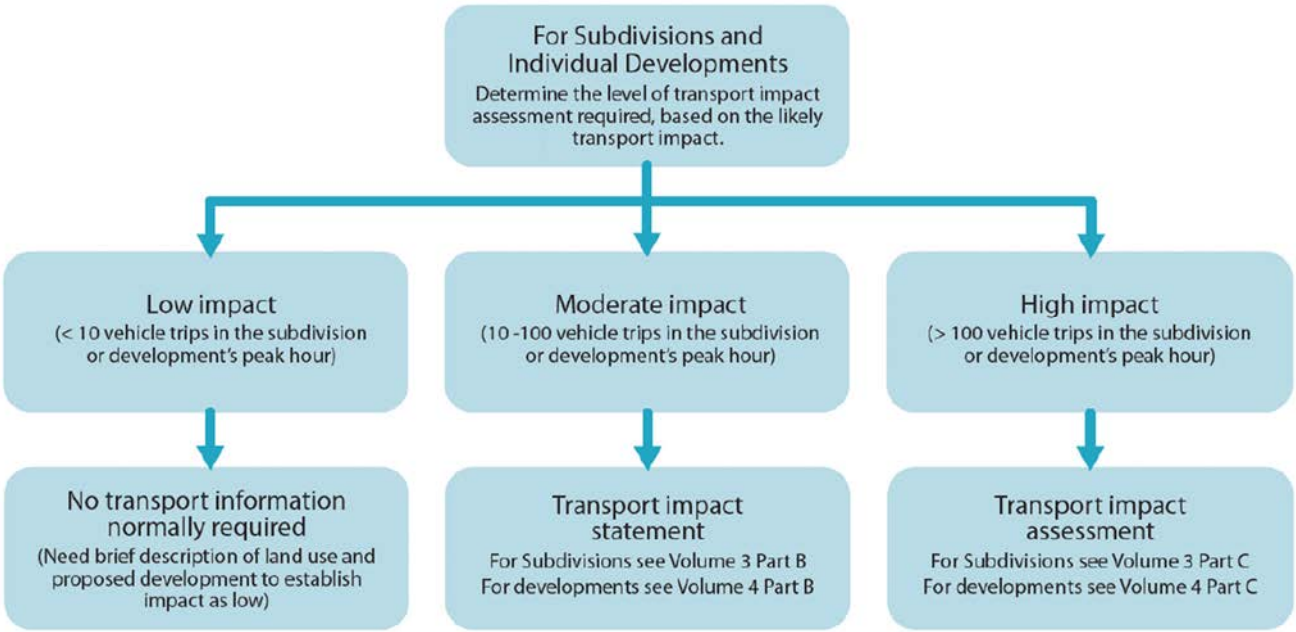
1 Introduction

Level5Design has been engaged by MSWA to prepare a Transport impact Statement (TIS) of the proposed supported residential accommodation facility in the Montario Quarter in Shenton Park (the 'Site') in support of a Development Application.

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 between 10 and 100 vehicle trips in the peak hour, which equates to a moderate impact, and therefore the required level of assessment is a 'Transport Impact Statement'.

As part of the investigations, a site visit was carried out on 2 February 2022 to observe the site conditions and to identify any traffic and parking issues that may be associated with this proposal.

2 Background

2.1 The Site Context

The subject site (the 'Site') is located approximately 6 km west of Perth CBD in the suburb of Shenton Park within the City of Nedlands (Figure 2.1).

Figure 2.1: Site location within a regional context

The Site is located south of Orton Road and west of Guttman Approach as shown in Figure 1.2. The Site is currently vacant. Access onto the Site is proposed from Guttman App diagonally opposite Muecke Way in accordance with the Estate Design Guidelines.

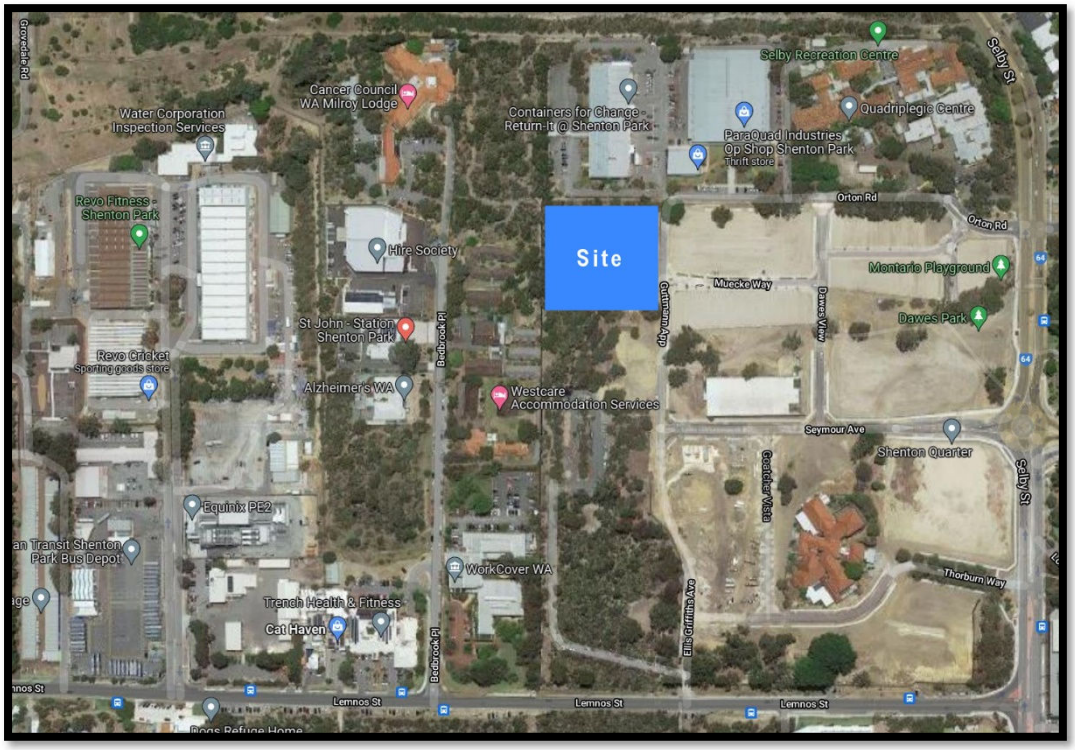


Figure 1.2: Location of the Development Site

The Site is located within the Shenton Park Hospital Redevelopment Improvement Scheme area, otherwise known as Montario Quarter, which is denoted in Figure 2.3 by the yellow rectangle. This area has been gazetted for redevelopment with enforcement and implementation of the Scheme to be undertaken in a coordinated manner under the responsible authority of the WAPC. A copy the Shenton Park Hospital Redevelopment Improvement Scheme Map is shown in Figure 2.4.

Figure 2.2: Montario Quarter location within a regional context

The Site is located on the western side of the Fremantle Train Line and is approximately 950 metres by foot away from Shenton Park Train Station – the shortest walking path being Seymour Avenue and Selby Street.

Other nearby attractors are shown in Figure 2.3 and include Shenton College, QEII Medical Centre and the Claremont Quarter.

The Site will be well-integrated into its immediate surroundings and will be consistent with the character of the area.

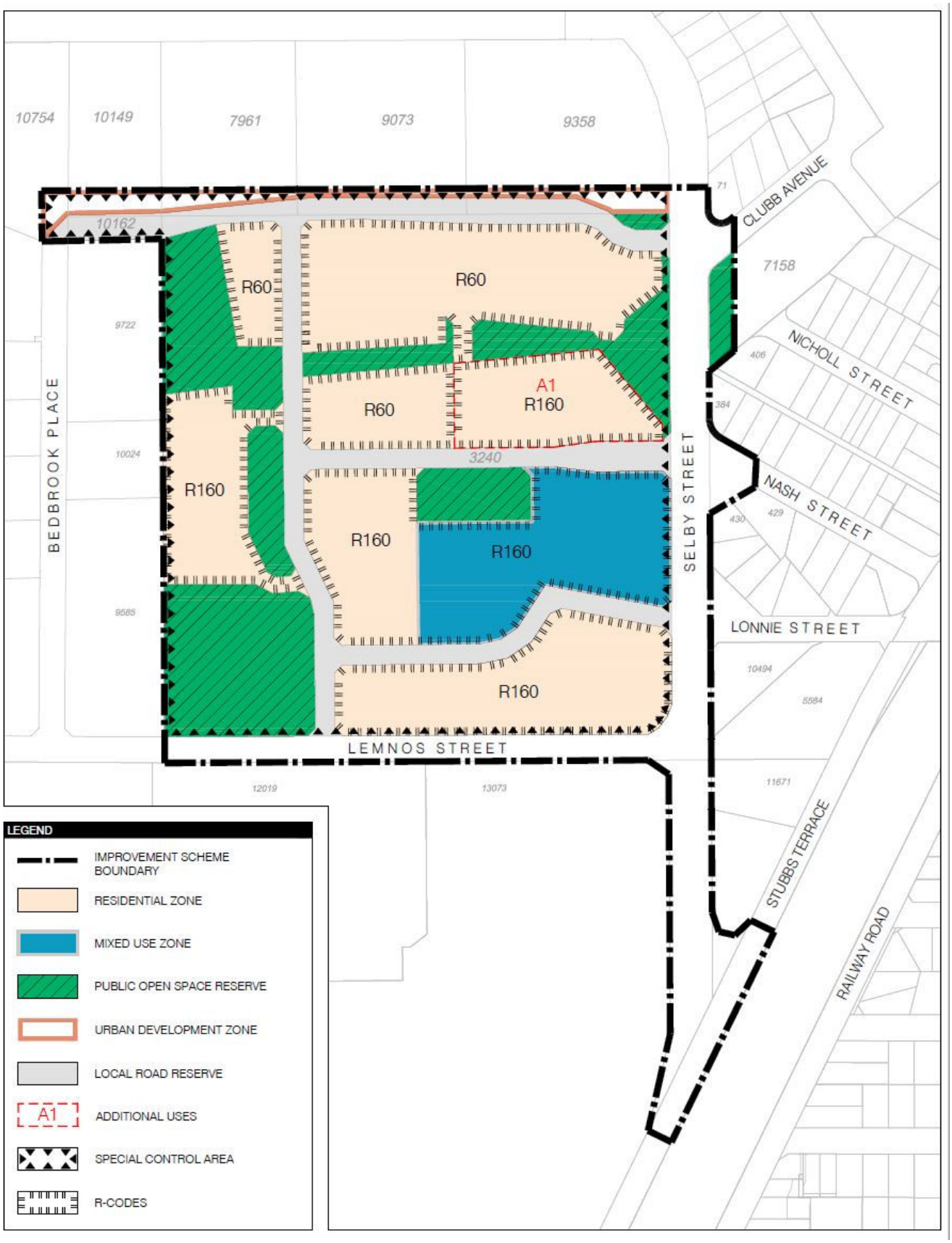


Figure 2.4: Montario Quarter location within a regional context

2.2 Montario Quarter Structure Plan

A Structure Plan for Montario Quarter was published in January 2017. It describes the vision for an 'urban village within a landscape setting.' It highlights the intent to maximise the use of public transport, cycling and walking. Nonetheless, it also acknowledges the importance of a legible and well-connected street network for vehicular traffic and the adequate provision of car parking. The Structure Plan Traffic Assessment recommended application of parking rates generally in line with State Planning Policy 4.2 Appendix 3.

A total of 1,100 to 1,600 dwellings and 12,500 m^2 of non-residential gross floor area (GFA) are built into the Structure Plan forecasts generating between 722 and 999 one-way vehicle trips in the AM and PM peak hours. The forecast net change in peak hour traffic in the Structure Plan area was therefore estimated to be between 474 and 718 trips. This included 6,000 m^2 of health facility/clinics on the MSWA site, which has now been replaced with 20 supported accommodation units.

The traffic generation of the 20 supported accommodation units will be significantly less than the 72 and 74 vehicle trips forecast in the AM and PM peak hours respectively by the previous planned health facility use. Consequently the traffic impact is likely to be significantly lower than that indicated in the Structure Plan Traffic Assessment.

The worst case traffic scenario documented in the Structure Plan Traffic Assessment under the full Montario Quarter redevelopment indicated 85 two-way on Guttman App in the AM Peak (north of Lemnos Street) and 35 two-way vehicles on Orton Road west of Selby Street. While no traffic forecast was given for Guttman App south of Orton Road, it can be extrapolated from the other information in the report that it would be significantly lower than that reported for Guttman App north of Lemnos Street.

While the Structure Plan acknowledges generally excellent access to the Shenton Park Train Station for most parts of Montario Quarter, the MSWA Site is at the furthest extremity of the area away from the station. The shortest walking distance is approximately 950 metres, which is not generally considered a convenient distance for most people. The Department of Transport suggests people will generally accept walking distances to train stations of up to 800 metres under normal circumstances.

2.3 Montario Quarter Public Realm Design Guidelines

The Montario Quarter Public Realm Design Guidelines published in September 2017 identify the planned pedestrian, bicycle and vehicle circulation throughout the Montario Quarter precinct. It acknowledges that walking has been prioritised and consequently lower vehicle speeds have been encouraged through the use of a clear road hierarchy, street treatments and delineation. More information on the pedestrian and bicycle plans for the area is given in Section 8.

The street typologies are typically pedestrian focussed with narrow 3.2 to 6.0 metres carriageways incorporating driveway links, extensive street plantings providing good vertical friction and shade, and clearly designated paths. This is illustrated in Figure 2.5.

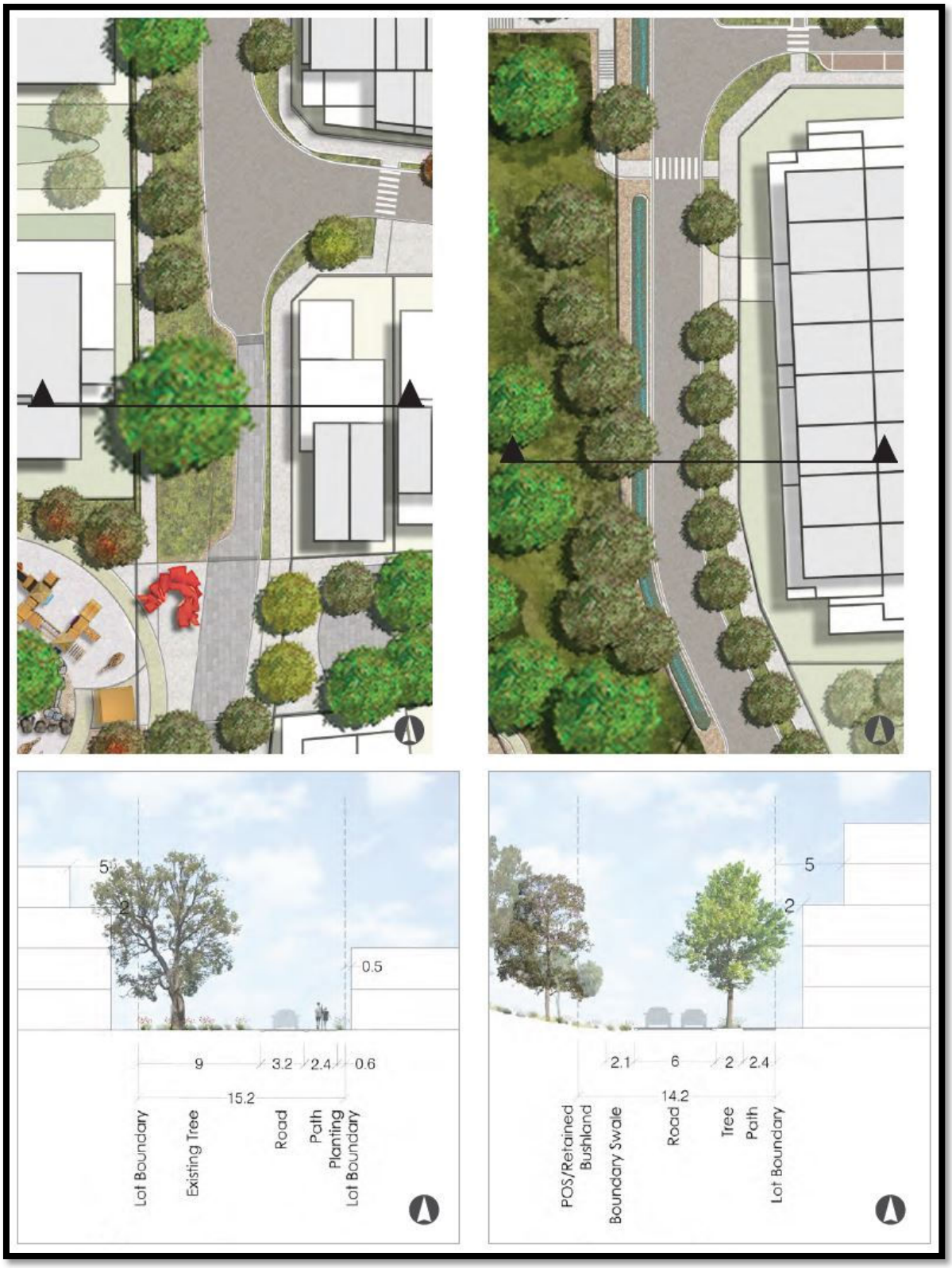


Figure 2.5: Montario Quarter street typologies (Source: Public Realm Guidelines, 2017)

3 The Development Proposal

The Development involves the construction of 20 new supported accommodation units serving 20 residents with multiple sclerosis, spinal cord injuries and other neurological conditions. The residents will be in wheelchairs and will require a high level of support.

The supported accommodation cannot be considered the same as traditional residential single dwellings as none of the residents are expected to own and drive their own vehicles. However, there will be a large number of carers and support staff that will need to drive to and from the Site each day. Consequently, the development proposal includes an adjacent parking facility with capacity for 17 vehicles including 2 fully accessible/ACROD bays. This parking is intended to cater for the reasonable needs of carers/staff, visitors to the residents, specialist consultants and others.

The facilities will be serviced 24/7 by up to 16 carers and staff at any one time, who will predominantly be women who are unlikely to feel safe walking the long distances to the Site from public transport, particularly outside of normal working hours.

The Site will also service visitors of the residents, health professionals and maintenance contractors.

It should be noted that the people living on site are residents and not patients. This Site is not intended to be a medical facility. If the residents need medical care they will be taken to a doctor or hospital. Two minivans will be stored on Site providing a means of transport for the residents to go to hairdressers, doctors, and dentist appointments.

An undercover pick up and drop off (PUDO) area is proposed to the north of the main entry road to move residents in and out of the supported accommodation using transport such as Maxi Taxis, patient transport, small buses, and private vehicles.

The Development site plans assessed in this report are presented in Appendix B. Images of the street frontages and junctions in the vicinity of the Site are provided in Appendix C.

4 Assessment of Vehicular Access and Manoeuvrability

4.1 Access to the Site

Montario Quarter can be accessed either via the Orton Road turnoff on Selby Street or via the Seymour Avenue (western) leg of the Nash/Selby Street roundabout. Access to the MSWA Site will be provided via a 6 m wide crossover on Guttmann Approach located diagonally opposite Muecke Way, approximately 100 m south of Orton Road and 300 m north of Seymour Avenue. Guttman Approach is not a through road connection to any major road and only carries local traffic.

The width of the crossover is consistent with the City of Nedlands Crossover Specifications. Appendix D shows the swept path of a standard City of Nedlands waste truck. The 6 m width of the crossover is of sufficient width to accommodate the entry and exit manoeuvres of these service vehicles. Any narrowing of the crossover would not be advised as it would potentially create a safety hazard.

4.2 Manoeuvring throughout the Site

Vehicle manoeuvres within the Site were checked to ensure adequate manoeuvring space and clearances to fixed objects.

Maxi-taxis, small mini-buses/vans, patient transport and ambulances will pick up and deliver residents in covered area outside the main entry. The swept paths of an 8 seater passenger van is given in Appendix D. This drawing illustrates that these types of vehicles can do a full turnaround in forward gear in the manoeuvring area provided outside the main entry.

Safe access for standard sized vehicles using the parking area has also been checked and found to comply with Australian Standard AS2890.1. The swept path drawings given in Appendix D illustrates these vehicle parking manoeuvres.

4.3 Waste Vehicle Access

The Site will be open 24/7 and monitored by the carers of the residents. The Site will be operational for general servicing between the hours of 7am to 4pm allowing waste trucks to service the Site. City of Nedlands waste trucks will service the Site by entering from the north via the Guttman Approach crossover, travelling forward towards the car park, and doing a short reversing manoeuvre within the Site immediately prior to backing up to the bin enclosure. They will exit the Site completely in forward gear.

Site access for rear loading waste vehicles was checked and found to comply with the City of Nedlands Local Planning Policy for Waste Management including the standard truck dimensions given in Clause 22.2. The swept paths drawings for an 8.5 m long by 3.0 m wide waste truck with 300 mm clearance each side is given in Appendix D.

4.4 Traffic Management on Frontage Streets

The Site has frontage to Guttman Approach, which is a Local Access Road connecting between Seymour Ave and Orton Road. It is speed zoned at 40km/h, is configured with one lane in either direction, and is surrounded by pedestrian infrastructure. The cross section of Guttman Avenue narrows to a driveway link immediately south of the Site. This has the tendency to restrict movement to local traffic and reduce speeds to 30 km/hr or less.

The visibility/sight line from the proposed crossover location has been checked and is deemed to meet the requirements of the Australian Standards in terms of available sight distances.

5 Assessment of Traffic Impact

5.1 Road Hierarchy

All of the roads within the Montario Quarter precinct are designated as Local Access roads with environmental traffic capacities of 3,000 vpd. This includes Guttman Approach, Seymour Avenue and Orton Road.

Selby Street and Nash Street are the main traffic carrying routes through the area and are designated as District Distributors in the Main Roads Road Hierarchy.

Figure 5.1 illustrates the road hierarchy diagrammatically.

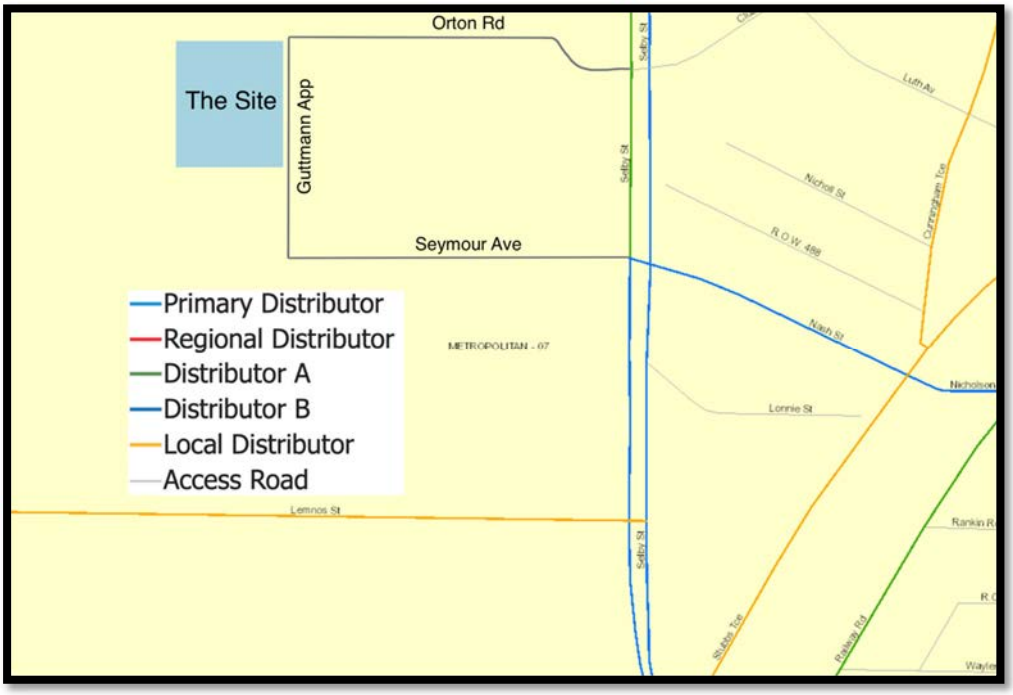


Figure 5.1: Connectivity within the broader road network (Source: Main Roads WA, annotated)

5.2 Existing Traffic Volumes

There are no existing traffic volumes available from the City of Nedlands or Main Roads on the local access roads within Montario Quarter including Guttmann Approach, Orton Road and Seymour Avenue. However, observations indicate that traffic volumes are well below the environmental traffic capacities for these roads.

The traffic volumes on Selby Street as reported by Main Roads are given in Table 5.1. This data is relevant to a location immediately north of the Nash Street roundabout.

Table 5.1: Existing traffic volume

Road	Road classification	Date of survey	Weekday Average Traffic	Morning peak (8-9 am) volume		Evening peak (4-5 pm) volume	
Selby Street	District Distributor B	2019/20	12,791	1,391		1,222	
				northbound	southbound	northbound	southbound
				686	705	792	430

The traffic volume on Selby Street has remained relatively consistent through the years with a 12,669 vehicle weekday average recorded in 2018/19 followed by 12,791 in 2019/20. The measured 85th percentile speed of traffic on Selby Street (i.e. the speed at, or below, which 85% of vehicles travel) is 57.4 km/h.

5.3 Traffic Impact Assessment of Structure Plan Area

As reported in Section 2.2, the Montario Quarter was originally planned for a more intensive land use on the Site. The traffic generation of the proposed 20 supported accommodation units will be significantly less than allowed for with the previous planned health facility use. Consequently the traffic impact is likely to be significantly lower than that indicated in the Structure Plan Traffic Assessment, and fully able to be accommodated by the road network.

5.4 Forecast Traffic Generation and Impact

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 8-9am in the AM peak and 4-5pm in the PM peak. MSWA caring 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) for assisted living residential accommodation (Trip Generation Manual 11th Edition 2021), and
- the Roads and Traffic Authority of NSW (Guide to Traffic Generating Developments 2002) relating to housing for aged and disabled people,

it Is predicted that the traffic impact of the supported living residential accommodation on the Site will be 0.18 and 0.24 two-way trips per bed in the AM and PM peak hours of the surrounding road network, respectively. For a total of 20 beds, this amounts to a maximum of 5 two-way trips in the AM and PM peak hours of the surrounding road network. The traffic generated in the peak hour for the Site (day shift change-over time) will be higher and has been forecast as 22 two-way trips (14 inbound and 8 outbound) based on the turnover of staff and two visitors both arriving and departing. Finally, the daily two way trips are estimated at 64. This can be characterised as a 'low' traffic impact.

This level of traffic is lower than what was forecast and built into the Structure Plan for Montario Quarter. Consequently, the road network has been planned to accommodate it.

The above forecast of peak traffic generation assumes that 25% of carers/staff will arrive at the Site using public transport, cycling, scootering, ridesharing, walking or other modes not involving driving to and parking at work.

Based on the traffic forecasts it can be concluded that:

- while the main impact of the Site will be on Guttmann Approach, it will continue to operate well within its practical environmental traffic capacity,
- the increase in traffic on neighbouring roads including Orton Road and Seymour Ave from the development represents a small proportion of total traffic,
- there will be minimal impact on the operation of the Selby Street and Orton Road intersection,
- 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 Guttman Approach and the connecting streets is considered negligible.

6 Parking Assessment

6.1 On-Street Parking in the Surrounds

There is no on-street parking currently provided or planned in Guttman Approach adjacent to the Site. Likewise there is no on-street parking provided on Muecke Way near the Site.

There is a small amount (approx. 4-5 bays) of on-street embayed parking on the west side of Dawes View (see Figure 6.1), and some on Orton Road. This on-street parking is a reasonable walking distance from the entrance to the Site and is fully utilised by others as the demand for parking in the area far exceeds the available supply. Hence this small number of highly utilised parking bays do not satisfy the requirements for workers and visitors travelling to the MSWA Site in any significant way.

Figure 6.1: Embayed parking on-street in Dawes View

6.2 Assessment of Parking Demand

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

- 24/7 requirements of carers/staff, specialist consultants and visitors
- Lack of on-street parking options
- Inconvenient access to public transport (950 m walk to the train station)
- Need for secure and safe travel options for staff outside normal working hours.

The traffic generated in the peak hour for the Site (day shift change-over time) has been forecast as 22 two-way trips (14 inbound and 8 outbound) based on staff shift turnover requirements and several visitors arriving and departing in the peak hour. This number assumes that 25% of carers/staff will not drive to and park at the MSWA Site but rather will use other modes of transport.

Shift changeovers will overlap and consequently there will be a need for parking supply for more than required by a single shift. In addition, parking will be required for some visitors plus there will be a need for one parking bay for the passenger transport for residents. Without

this passenger transport the lives of the residents will be diminished. The peak hour parking demand taking all of the above into consideration is estimated at 21 bays.

6.3 Assessment of Parking Provision Requirements

The Shenton Park Hospital Redevelopment Improvement Scheme (gazetted January 2017) specifies car parking provision standards for Montario Quarter in Table 3 of that document. It indicates that for single (or grouped) residential dwellings there is a requirement to provide between one and two car parking bays per dwelling.

As a total of 20 individual residential dwellings are proposed for the Site - this equates to a parking provision requirement of between 20 and 40 car parking bays consistent with the demand forecast in Section 6.2.

However, while the best characterisation of the land use proposed for the Site is a 'residential building,' supported residential accommodation does not function as would a typical single, multiple or group residential dwelling. This is because none of the residents are expected to own and drive their own vehicles.

For those land uses that are not specifically listed in Table 3, it is up to the Commission to determine the appropriate parking provision rate.

The City of Nedlands Town Planning Scheme 3 and associated Parking Policy refer to State Planning Policy 7.3 (SPP 7.3) for residential land uses. The R-Codes Volume 2 (SPP 7.3) specify a requirement for one car parking bay per dwelling/apartment where outside the walkable catchment for public transport, which would apply in this case. However, the parking requirements for apartments do not correspond well to those of supported accommodation.

The only other relevant land use that the City of Nedlands specify is a parking provision rate for 'residential aged care facility,' which has a requirement for 12 car parking bays or 1 bay per 4 beds (whichever is the greater). Using that approach would result in a requirement to provide a minimum of 12 car parking bays off-street on the Site.

None of the above methods provide a very good fit to the requirements for the MSWA Site.

It has been established (refer Section 6.2) that there will be a demand for parking of up to 21 bays in the peak hour of the Site. Best practice in parking provision for urban developments (like Montario Quarter) is to provide for the 75th to 85th percentile demand for parking rather than the highest demand so as to encourage more sustainable and economical outcomes consistent with the intent of an 'urban village'. While 15-25% of the generated demand is not totally satisfied, people do adjust their travel patterns to compensate or find alternative places to park. Using this approach the provision of off-street parking can be set lower than the induced demand – in this case between 16 and 18 off-street car parking bays.

6.4 Assessment of Parking Supply

It is proposed that a total of 17 off-street car parking bays be provided on the MSWA Site. This includes 2 accessible/ACROD bays for people with disabilities. It also includes one parking bay for storing mini-vans to transport wheelchair bound residents to external venues.

This amount of parking supply represents 80% of the peak hour parking demand, which in turn represents 75% of all multi-modal trips forecast to occur in that same hour.

None of the residents are expected to own and drive their own vehicles. The parking bays have been designed to cater to onsite carers, visitors of the residents, health professionals and maintenance contractors. Staff will be present on the Site 24/7 and traffic will be consistently spread out through the day with 12 to 16 staff present in the morning, 6 to 8 in

the afternoon and 2 to 4 in the evening and overnight shifts. There will be some overlap at shift changeover times.

MSWA will discourage visitors and consultants from visiting residents at staff change over times as that is the peak demand time for parking bays - this mechanism works well on other Sites to spread the parking demand.

The types of vehicles frequenting the Site will be mostly small to midsize cars driven by carers, visitors and medical professionals. On a less frequent basis, the Site will be visited by contractors and gardeners maintaining the site in utility vehicles. The proposed parking facility has been designed to accommodate these size of vehicles.

The parking facility has been designed in such a way as to properly screen it from the street to ensure it does not interfere with the streetscape and the urban design of the public realm.

The proposed 17 bays will be exclusive to staff, visitors and maintenance contractors of the supported residential accommodation.

It is our expert opinion that the provision of a 17 bay car parking facility is justified and will adequately meet the parking demand of visitors and workers of the Site. It will be the right size to satisfy the demand at most times of the day while not encouraging more traffic than necessary into Montario Quarter.

If a parking facility like the one proposed is not provided then it is likely to cause problems throughout Montario Quarter in terms of overspill parking, verge parking, security issues, etc that in turn could compromise road safety and interfere with pedestrian and cyclist access.

7 Public Transport Access

The Shenton Park Train Station is located approximately 950 metres from the Site (see Figure 7.1).

There are also bus routes that operate along Selby Street and Lemnos Street. The 998 and 999 routes pass the Shenton Park Train Station on Selby Street. Route 27 also passes stops on Selby Street, Lemnos Street and Nash Street. All bus stops are a 700 m walk or more from the Site (see Figure 7.2).

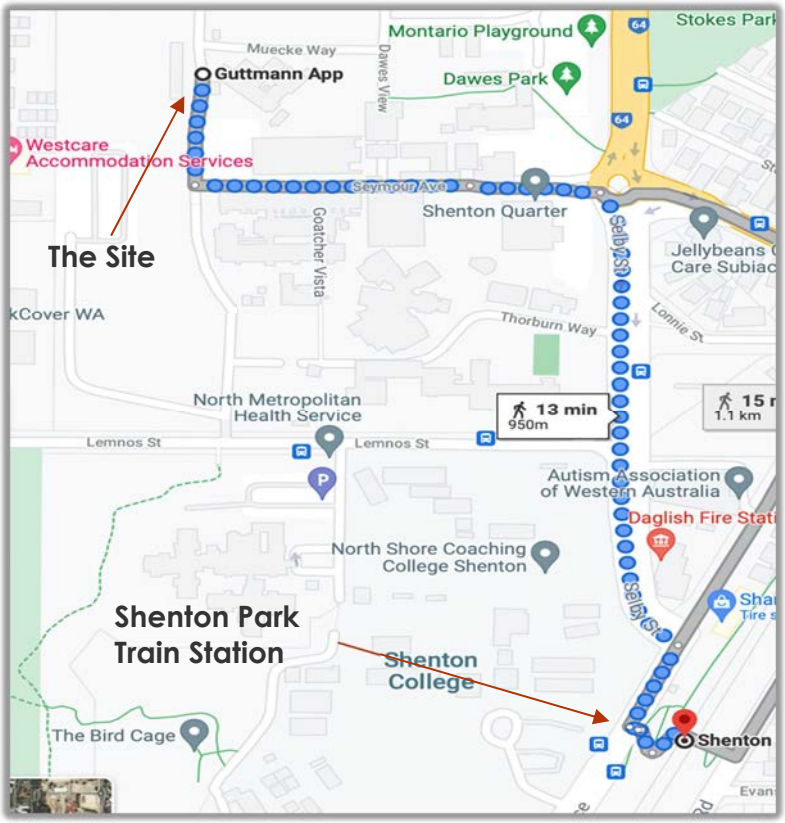


Figure 7.1: Walking route from Shenton Park Train Station to the Site

The walking distance to the nearest train station and bus stops is considered too distant to be attractive to staff and visitors of the Site. Walking distances of up to 400 m for buses and 800 m for trains is considered the limit of what people will generally accept.

Many of the staff working on the Site will be shift workers arriving and departing outside the peak periods for public transport. They are likely to be predominantly female carers that live in areas far from the Site without good access to convenient public transport. The carers will be required to work various shifts around the clock which will involve commuting during both late and early hours of the day. Outside of public transport operating hours they will have no choice but to drive to the Site.

These carers are likely to be concerned with walking the streets after hours when it is dark to get to public transport, especially in Winter. The level of risk that the carers would be expected to take in these circumstances is considered unreasonable. Ridesharing and taxis is also unlikely to be a cost effective option for most. Consequently, public transport is not considered to be the most appropriate mode of transport for most people accessing the Site. Instead secure off-street parking will be required to accommodate staff and visitors.

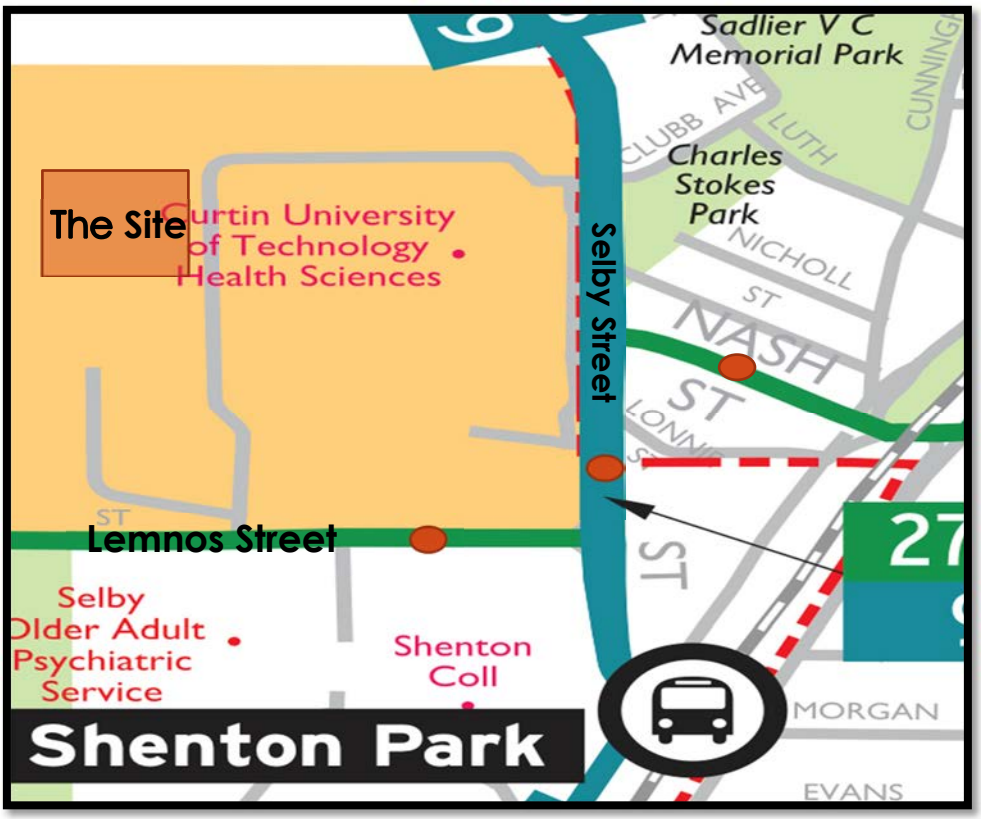


Figure 7.2: Public Transport Connectivity (Source: Transperth.wa.gov.au, annotated)

8 Pedestrian and Cycling Facilities

The pedestrian and cycling circulation networks proposed for Montario Quarter as defined in the Montario Quarter Structure Plan are given in Figures 8.1. This network provides good pedestrian and cycling access in all desire lines from the Site.

As the residents of the supported accommodation will be wheelchair users, any pathway levels that meet with a variation in height will be accommodated with ramps.

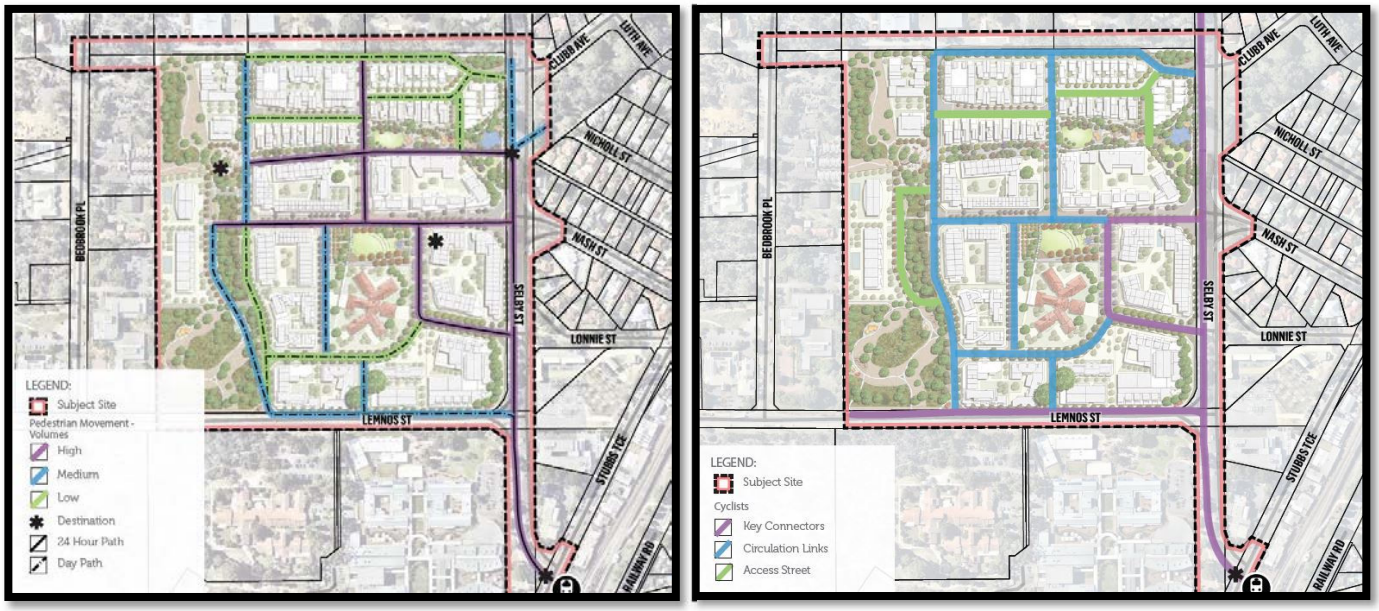


Figure 8.1: Proposed Pedestrian and Cycling Circulation Networks (Source: Public Realm Guidelines, 2017)

The area surrounding the Site has a speed limit of 40km/h. It also has infrastructure friendly to pedestrians and cyclists, including footpaths and traffic calming treatments. As a result, it is expected that the prevailing speeds on Guttman Approach will be generally lower than the permitted speeds thus reducing the road safety risk for pedestrians and cyclists.

9 Road Safety Assessment

9.1 Crash Assessment

A review of the latest crash statistics available in the Main Roads WA CARS database indicates that during the latest five-year period on record (2017-21) there has been no crashes on any of the roads adjacent to the Site including Guttman Approach, Orton Road and Muecke Way. This is illustrated in Figure 9.1.

The crash data points to no intrinsic road safety issues or crash risks on the streets abutting and leading to the Site.

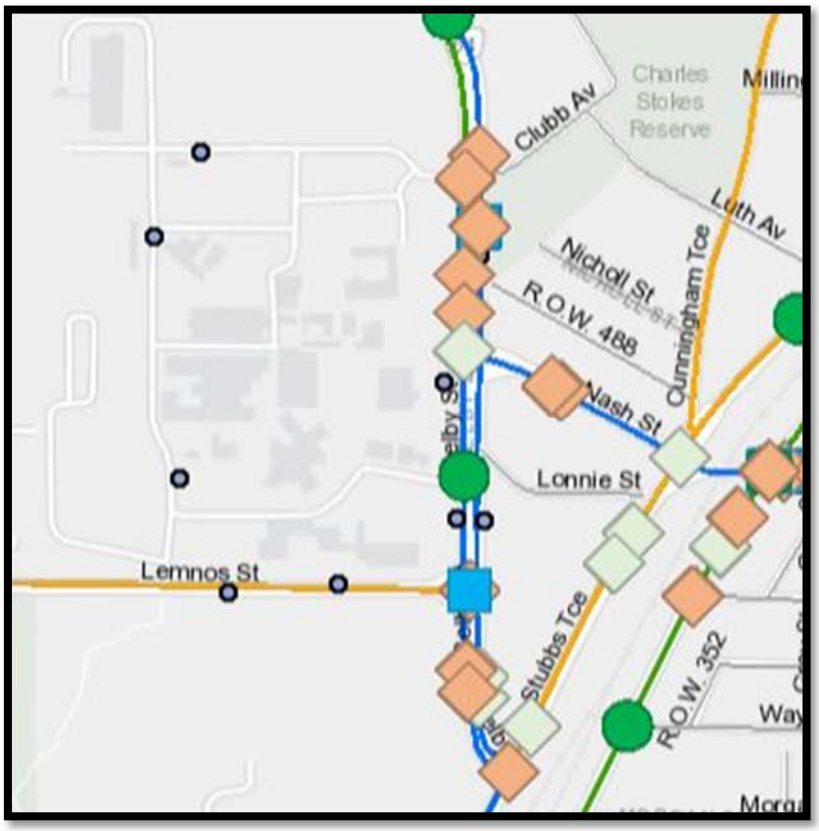


Figure 9.1: Crashes in the area over past 5 years (Source: Main Roads CARS Database)

9.2 Risk Assessment

A formal risk assessment was undertaken for the Site with particular consideration being given to:

- Waste truck access including reversing manoeuvres within the Site
- Access over the crossover to the Site from Guttman Approach
- Vehicle interactions at the minor offset junction of Guttman Approach and Muecke Way
- The provision of an off-street parking facility (versus no off-street parking)

A copy of the independent risk assessment is given in Appendix F.

10 Summary

Level5Design has prepared a Transport Impact Statement for the proposed MSWA development at Guttmann Approach in Shenton Park. 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 carried out to qualify and quantify the impact of the Site on the surrounding road network. The suitability of the proposed crossover on Guttmann Approach and the internal circulation arrangements were assessed and found to be appropriate for the expected level of traffic activity in the area. The traffic generated by the development will be adequately accommodated on the surrounding road network.

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

The proposed development is located at a significant walking distance from any bus or train station in the area, and there is a lack of on-street kerbside parking in the vicinity of the development. If a parking facility like the one proposed is not provided then it is likely to cause significant problems throughout Montario Quarter in terms of overspill parking, verge parking, security issues, etc that in turn could compromise road safety and interfere with pedestrian and cyclist access. Therefore the provision of an off-street parking facility along the lines proposed is essential for both workers and visitors.

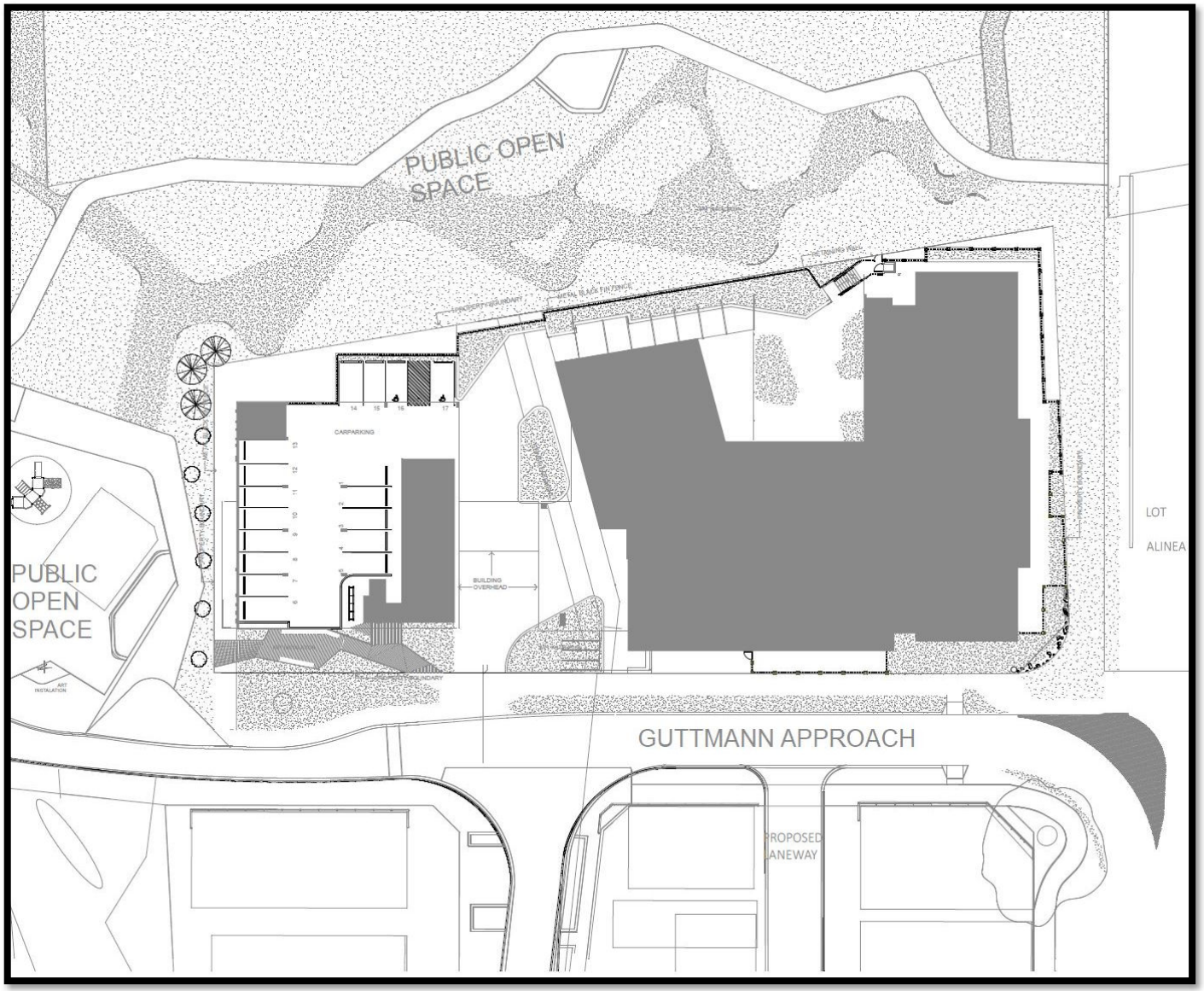
Finally, a crash assessment and independent risk assessment were undertaken that indicate that the proposals are safe and appropriate. The analysis also confirmed compliance with all relevant design standards.

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 3
existing land uses	Section 2.1
context with surrounds	Section 2.1
Vehicular access and parking	
access arrangements	Section 4
public, private, disabled parking set down / pick up	Section 6.2 and 6
Service vehicles (non-residential)	
access arrangements	N/A
on/off-site loading facilities	N/A
Service vehicles (residential)	
rubbish collection and emergency vehicle access	Section 4.3
Hours of operation (non-residential only)	N/A
Traffic volumes	
daily or peak traffic volumes	Section 5
type of vehicles (e.g. cars, trucks)	Section 5
Traffic management on frontage streets	Section 4.4
Public transport access	
nearest bus/train routes	Section 7
nearest bus stops/train stations	Section 7
pedestrian/cycle links to bus stops/train stations	Section 7
Pedestrian access/facilities	
existing pedestrian facilities within the development (if any)	N/A
proposed pedestrian facilities within development	Section 8
existing pedestrian facilities on surrounding roads	Section 8
Cycle access/facilities	
existing cycle facilities within the development (if any)	Section 8
proposed cycle facilities within development	Section 8
existing cycle facilities on surrounding roads	Section 8
proposals to improve cycle access	Section 8
Site specific issues	
Safety issues	Section 9
identify issues	Section 9
remedial measures	Section 9

APPENDIX B: Plans for Ground Floor of the Development



APPENDIX C: Images of the Site

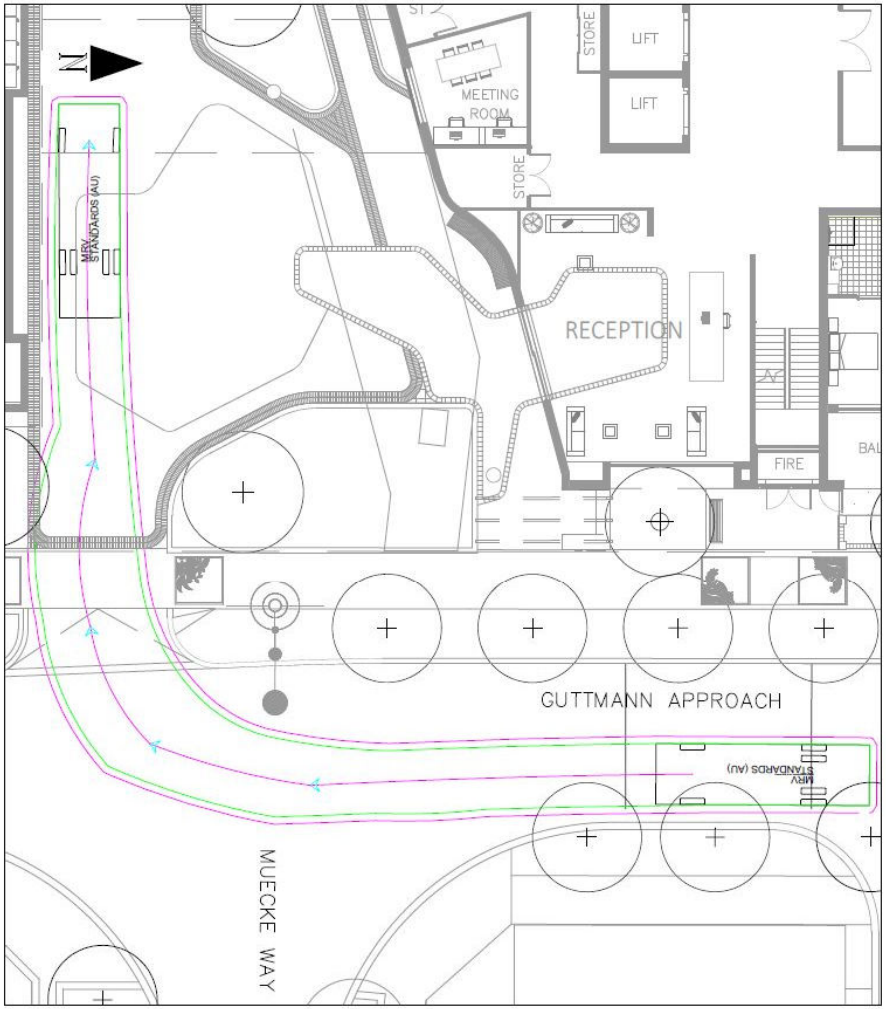
Figure C1: The Site on left, facing north along Guttmann App (at intersection of Muecke Way)

Figure C2: Facing south along Guttmann App (bottom of Site on the right of the page)

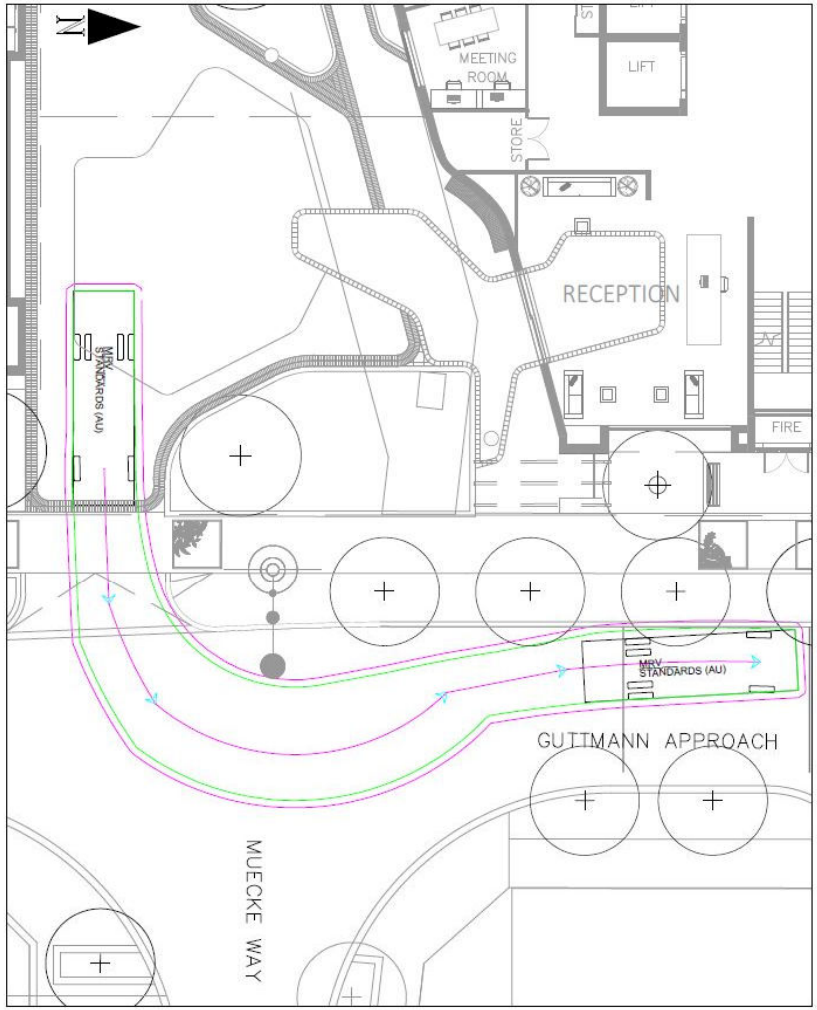
Figure C3: The Site, facing northwest from Muecke Way (at intersection of Guttman App)

Figure C4: The Site (straight ahead) facing west from Muecke Way (at intersection of Guttman App)

APPENDIX D: Swept Path Diagrams



GUTTMANN APPROACH
RIGHT TURN IN



GUTTMANN APPROACH
LEFT TURNOUT

REV.	DESCRIPTION	APP.	DATE
B	REVISED SKIDS ON SATISFACTORY DESIGNS		27/04/22
A	ISSUED FOR REVIEW		28/01/22

STATUS:

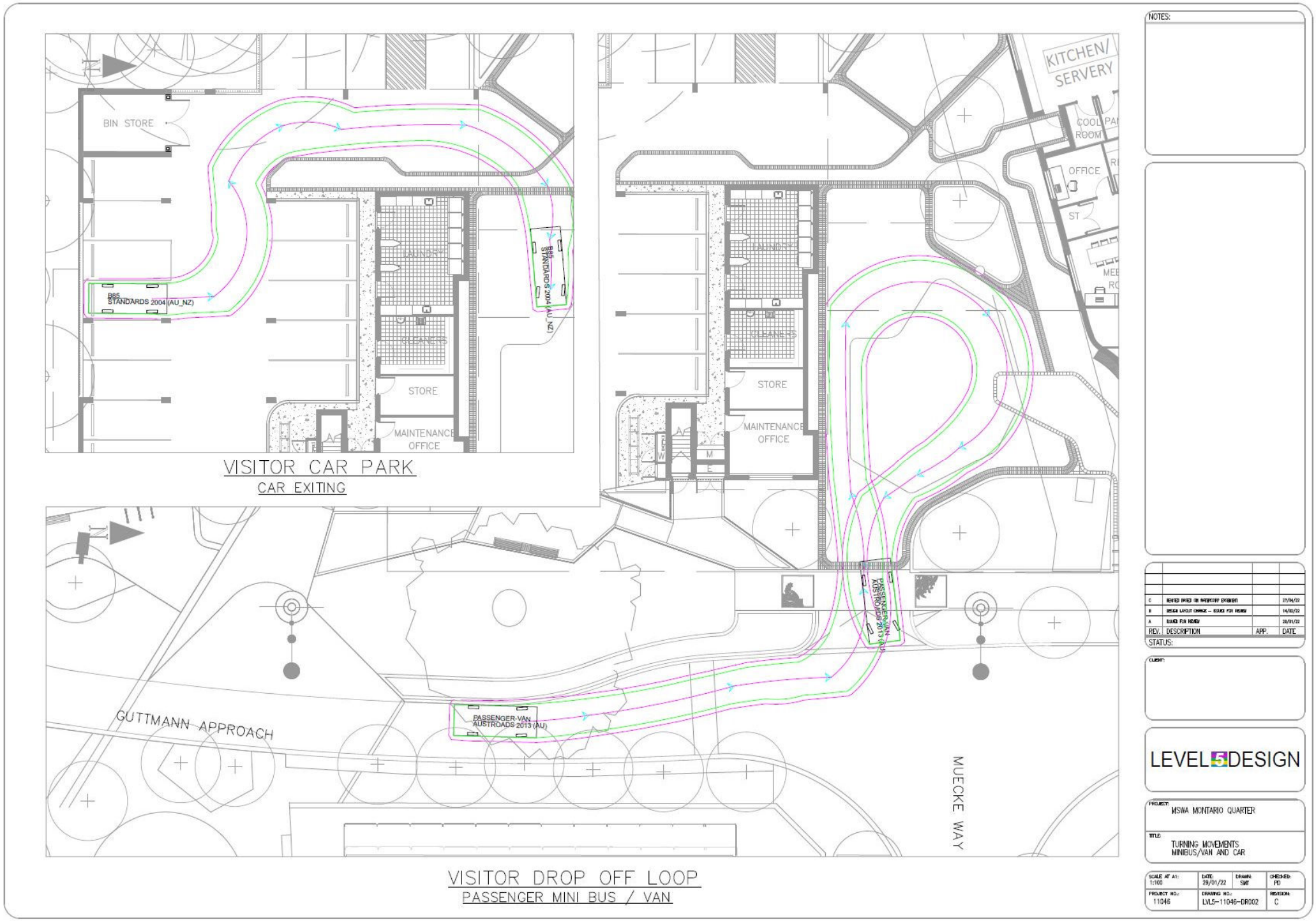
CLIENT:

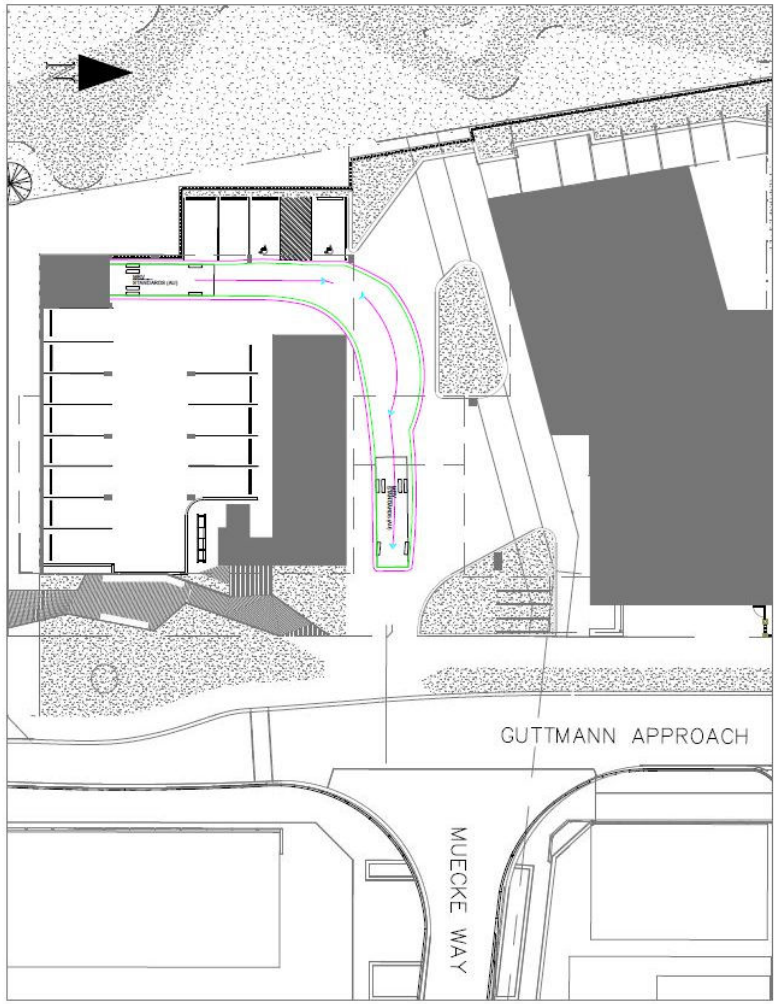
LEVEL 5 DESIGN

PROJECT: MSWA MONTARIO QUARTER

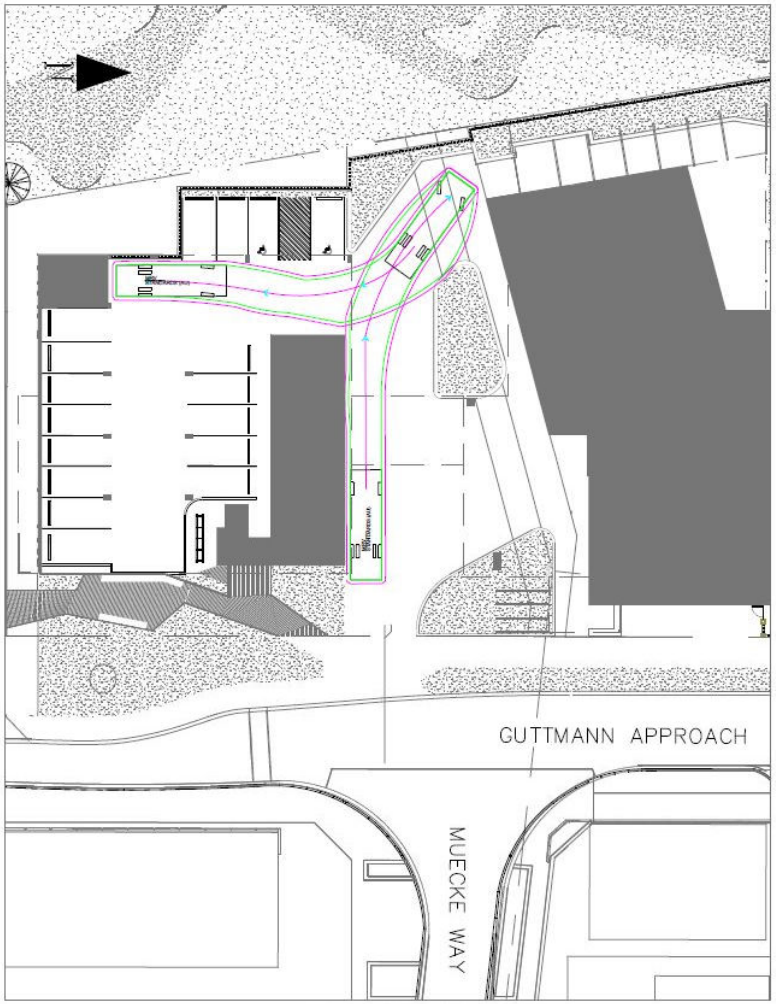
TITLE: SERVICE VEHICLE TURNING MOVEMENTS

SCALE AT A1: 1:100	DATE: 28/01/22	DRAWN: SMT	CHECKED: PD
PROJECT NO.: 11046	DRAWING NO.: LVL5-11046-DR0001		REVISION: B


BIN STORE
B85 STANDARDS 2004 (AU_NZ)
B85 STANDARDS 2004 (AU_NZ)
STORE
MAINTENANCE OFFICE
VISITOR CAR PARK
CAR EXITING
KITCHEN/ SERVERY
COOL PAN ROOM
OFFICE
ST
STORE
MAINTENANCE OFFICE
PASSENGER-VAN AUSTROADS 2013 (AU)
PASSENGER-VAN AUSTROADS 2013 (AU)
GUTTMANN APPROACH
MUECKE WAY
VISITOR DROP OFF LOOP
PASSENGER MINI BUS / VAN
NOTES:
REV. DESCRIPTION APP. DATE
STATUS:
CLIENT:
LEVEL 5 DESIGN
PROJECT: MSWA MONTARIO QUARTER
TITLE: TURNING MOVEMENTS MINIBUS/VAN AND CAR
SCALE AT A1: 1:100
DATE: 29/01/22
DRAWN: SMT
CHECKED: PD
PROJECT NO.: 11046
DRAWING NO.: LVL5-11046-DR002
REVISION: C



WASTE TRUCK
ACCESS TO BIN AREA – OUT



WASTE TRUCK
ACCESS TO BIN AREA – IN

NOTES:

REV.	DESCRIPTION	APP.	DATE
C	UPDATED DESIGN – ISSUED FOR REVIEW		14/02/22
B	ISSUED FOR REVIEW – MOVEMENT CHANGED		28/01/22
A	ISSUED FOR REVIEW		28/01/22

STATUS:

CLIENT:

LEVEL 5 DESIGN

PROJECT: MSWA MONTARIO QUARTER

TITLE: TURNING MOVEMENTS WASTE TRUCK

SCALE AT A1: 1:200	DATE: 28/01/22	DRAWN: SMT	CHECKED: PD
PROJECT NO.: 11046	DRAWING NO.: LVL5–11046–DRG003		REVISION: C

APPENDIX E: MSWA MONTARIO QTR – Parking Management Plan

1. Background

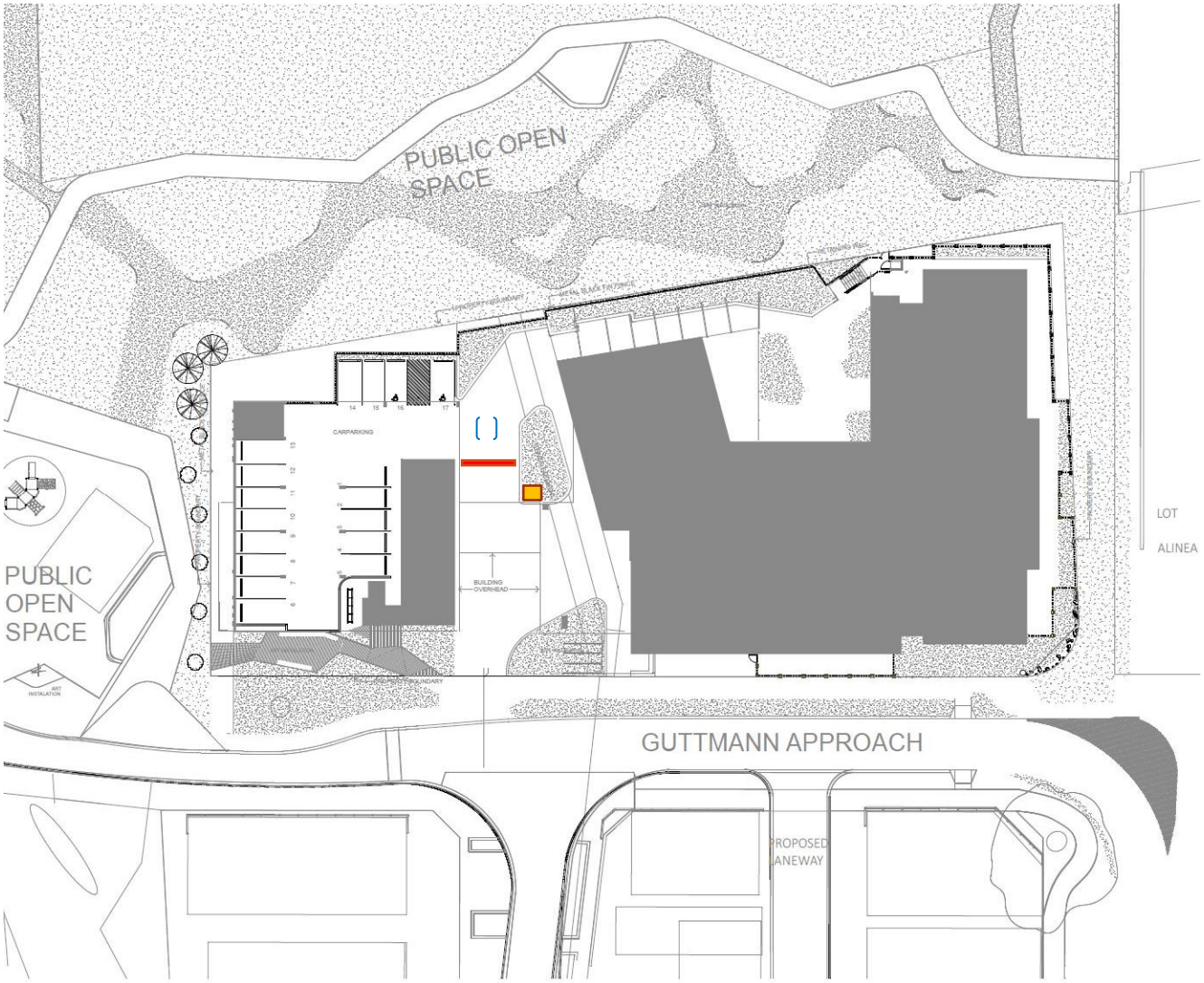
The MSWA Montario Quarter (MQ) provides high support accommodation for up to 20 live-in patients. Car parking will be generated by staff, visiting consultants and health specialists, visitors to patients, delivery vehicles and contractors.

2. Responsible Person

The car park will be managed in-house by the on-site MQ Manager.

3. Car Park

As shown below, the ground level undercroft car park provides 15 ANZ/AS compliant parking bays and two Accessible permit bays.



4. Vehicle access

Authorised vehicle entry to the car park will be controlled by a single boom gate (shown in red above) operated on entry by a proximity card reader (shown in orange) on the traffic island. Authorised parkers will be issued proximity cards by MSWA. To exit the car park, a surface loop (shown in blue) will open the boom gate.

The proximity card reader will incorporate an intercom linked to MQ reception, or default to the on-site MQ Manager's mobile phone.

5. Operating hours

The car park will allow 24/7 access to staff and authorised visitors.

The boom gate will operate Monday to Friday from (to be determined) 7am to 6pm. Outside of these hours the gate will be in the 'up' position and staff and visitors may park in the car park subject to bay availability and their vehicles must be removed by 7am on the next working day.

6. Signage

A sign at the entry to MQ will state 'AUTHORISED PARKING ONLY. No public parking.'

Authorised parkers include access card holders and visitors to patients.

The following signage will be installed within the car park:

- Height restriction barrier at 2400 mm located at the car park entrance
- Compliant Accessible parking signs.
- Conditions of Entry and Limitation of Liability (as detailed below).

CONDITIONS OF ENTRY AND LIMITATION OF LIABILITY
THIS IS NOT A PUBLIC CAR PARK
ATTENTION all persons entering this Car Park.

The following conditions apply when you enter, leave or use this Car Park. If you do not accept these conditions, immediately leave the Car Park.

You enter and use this Car Park at your own risk. We may refuse entry by any vehicle or person.

1 *We are not liable to you or any person with you for:*

   (a) injury to you or to anybody else;

   (b) damage to, destruction of, theft of or unauthorised delivery of your vehicle or any other vehicle whether authorised or not; or

   (c) damage to, destruction of, theft of or delivery of any property (including anything in or on your vehicle or any other vehicle) however caused, and you release and indemnify us from any claim which you might otherwise have against us.

2 *You agree to indemnify us in respect of any claim made against us and any expenses incurred by us as a consequence of, in relation to, or in any way arising out of your use of this Car Park.*

3 *We will not be liable to you for delivery of your vehicle to any person who did not have authority to take your vehicle.*

4 *You agree:*

a) not to cause any obstruction;

b) not to park anywhere that we designate as a no parking or reserved area; and

c) not to use this Car Park other than in accordance with instructions we may give.

5 *While in the car park, you must comply with all signs and reasonable directions made by us.*

6 *We have the right, at our discretion, to move your vehicle (including moving it to any location outside this Car Park), even if your vehicle is locked. If we move your vehicle, these conditions continue to apply. We are not liable for any damage caused to your vehicle when we move it.*

7 *These conditions may only be altered by a written agreement between us and you.*

8 *If any of these conditions are illegal or unenforceable, the offending part is to be disregarded and does not affect the remaining part.*

9 *Each exclusion of our liability in these conditions is subject to any law which restricts or forbids that exclusion of liability including the Trade Practices Act and similar State legislation.*

10 *In these conditions references to:*

(a) 'we', 'us' and 'our' mean MSWA, its employees, agents and independent contractors; and

(b) 'your vehicle' includes a vehicle driven, or intended to be driven, by you into this Car Park.

APPENDIX F: Independent Risk Assessment

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ABN: 98 930 463 163

TECHNICAL NOTE

From:	Damir Vagaja, Principal Consultant, RTSM Consulting		
To:	Peter Damen, Level 5 Design		
CC:			
Date:	17 February 2022		
RTSM Reference	*2133N1F*	Client Reference	*11046*
Re:	MSWA Montario Quarter, Shenton Park, Risk Assessment		

RTSM Consulting (RTSM) has been engaged by Level 5 Design (L5D) to undertake a road safety risk assessment for the proposed supported residential accommodation development on Guttman Approach in Shenton Park, in respect to the following specific requirements:

1. Waste truck access including reversing manoeuvres within the Site
2. Access over the crossover to the Site from Guttman Approach
3. Vehicle interactions at the minor offset junction of Guttman Approach and Muecke Way
4. The provision of an off-street parking facility (versus no off-street parking).

This Technical Note reports the results of a qualitative risk assessment of the issues listed above. RTSM has not assessed or commented on any other aspects of the subject development application.

RTSM has based its assessment on the information provided in the *MSWA Montario Quarter, Shenton Park, Transport Impact Statement*, L5D, February 2022.

The risk assessment has been based on the Safe System assessment framework principles[1] where traffic risk is expressed as a combination of the three major components:

Exposure: number and duration of road users exposed to potential crashes (AADT, number of pedestrians crossing or walking along the road, length of the road, etc.)

Likelihood: elements which affect opportunity for crashes (e.g. number of conflict points, offset to roadside hazards, separation between opposing traffic, intersection control, speed, sight distance, geometric alignment, driver guidance and warning, etc.).

Severity: injury outcome of crashes (impact speed, impact angles, severity of roadside hazards, etc.).

[1] Safe System Assessment Framework, Research Report AP-R509-16, Austroads, 2016

RISK ASSESSMENT

Waste truck access including reversing manoeuvres within the Site

The diagrams in the TIS report show the City of Nedlands waste trucks entering and exiting the site in forward gear. This accords with proper site access planning requirements.

There are no major singular attractors for pedestrian traffic in the immediate area (e.g. schools, shops, religious facilities, etc.) that can generate high concentrated volumes of pedestrian traffic in short time periods. Instead, it is expected that the pedestrian traffic will be dispersed throughout the day with no critical periods where the risk of potential interaction with the service vehicles would be elevated.

Based on the traffic generation analysis presented in the TIS report (and RTSM concurs with this analysis), the expected volume of vehicles using Guttman Approach will be relatively low. The road only provides access to developments within the precinct and is not likely to attract through traffic. Furthermore, the various developments within the precinct will be serviced by several roadways which will assist with the distribution of internal traffic volumes.

The roads within the precinct have been designed to promote and enforce low traffic speeds. A driveway link (i.e. a single-lane, 3.2m wide, road narrowing) is located immediately to the south of the proposed crossover. Consequently, it is expected that the prevailing traffic speeds on Guttman Approach will be low, possibly 40 km/h or less.

The development's crossover is located on a straight section of road with uninterrupted visibility along Guttman Approach and Muecke Way.

Based on these factors, the risk of collision between service trucks and pedestrians or other traffic is low.

Once within the site, the trucks will turn and reverse towards the bin enclosure to empty the bin(s).

Due to the relatively small size of the car park, short reversing distance and the visibility within the car park, the risk of collision with pedestrians or vehicles is relatively minor and the arrangements are similar to those in place at many other developments of this nature.

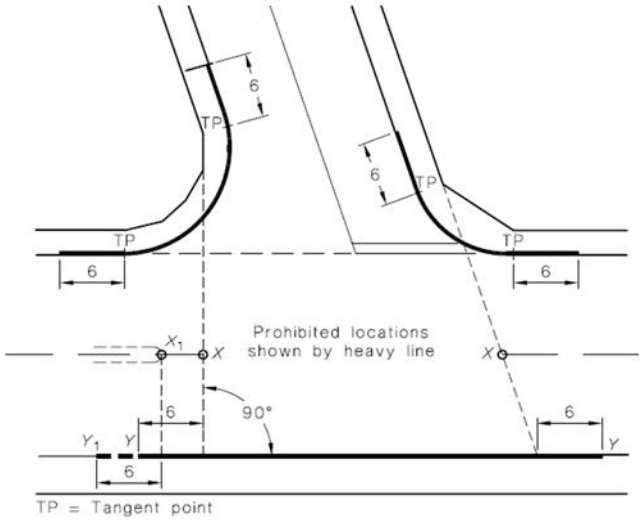
Overall, the risk posed by the waste truck access into and within the site is considered to be acceptable.

Access over the crossover to the Site from Guttman Approach

This risk exposure is covered in the previous item.

Vehicle interactions at the minor offset junction of Guttman Approach and Muecke Way

The development's crossover is proposed on Guttman Approach, opposite Muecke Way. As such, the crossover is located in a "prohibited location" defined in *Figure 3.1 Prohibited Locations of Access Driveways* in the Australian Standard AS2890.1 *Parking facilities, Part 1: Off-street car parking.*



NOTES:

1 Accesses to domestic driveways are excluded from the prohibition in respect of the kerb section marked *Y-Y* (see Clause 3.2.3(a)).

2 The points marked X_1 and X are respectively at the median end on a divided road and at the intersection of the main road centre-line and the extensions of the side road property lines shown as dotted lines, on an undivided road. On a divided road, dimension *Y-Y* extends to Point Y_1.

Figure 3: Prohibited locations of access driveways (Figure 3.1) from AS 2890.1

The purpose of the above restriction is to reduce the risks associated with possible interactions between vehicles turning at an intersection and vehicles entering or exiting an adjacent crossover.

The TIS advises that the development is likely to generate 64 daily trips with 22 trips expected in the AM peak. Whilst it is difficult to predict the traffic distribution on such a micro-analysis scale, given the internal road layout and the connection with the broader road network, it can be assumed that the development-generated traffic will be equally spread on Guttman Approach heading north and heading south. It is not envisaged that any vehicles would use Muecke Way.

Similarly, vehicles travelling to and from future developments on Muecke Way are likely to use Dawes View for their travel to and from Selby Street and are unlikely to use the intersection at Guttman Approach in large numbers.

Consequently, the exposure to possible interactions, as well as the expected speeds at which these interactions would take place, can be considered to be relatively minor and at a level where they should not be considered as a reasonable argument against the proposed location of the crossover.

The provision of an off-street parking facility (versus no off-street parking)

It is understood that the proposed development has previously been reviewed by the State Design Review Panel. The Panel has advised the applicant that, from a design perspective, it may not be considered appropriate for this development to provide any on-site parking.

Generally speaking, parking provision can have a strong influence on traffic generation of a development. Unwarranted parking provision can result in excessive traffic generation and insufficient parking provision can have a significant impact on traffic safety.

The TIS report provides a strong justification for the proposed provision of 17 parking bays. This provision, along with the implementation of the proposed Parking Management Plan, is not likely to result in excessive traffic generation. The overall traffic volumes on Guttman Approach and other roads within the structure plan area is expected to be well within the practical and amenity limits.

On the other hand, considering the type of the development (i.e. the socio-demographic profile of the support people that will service the residents) as well as the location of the development in relation to the public transport services, it would be unreasonable to expect that a zero parking provision would be appropriate.

Lack of appropriate parking provision can result in risks resulting from drivers parking illegally or driving around the area looking for a parking spot.

The proposed parking provision appears to present a balanced approach and is supported from a risk management perspective.

CONCLUSION

Having reviewed all relevant information about the proposed supported residential accommodation development on Guttman Approach in Shenton Park, RTSM Consulting concludes that the overall risk level for all road users posed by the proposed development will be low, and certainly within acceptable parameters.

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