



CTPMSP;

**Liverpool Hospital and Academic
Precinct, Construction Traffic
Management Plan**

For ADCO Construction
28 January 2021

**parking;
traffic;
civil design;
wayfinding;
ptc.**

Document Control

Liverpool Hospital and Academic Precinct, Construction Traffic Management Plan, CTPMSP

Issue	Date	Issue Details	Author	Reviewed	For the attention of
1	26/11/20	Draft Issue	JJ	SW	Ellis Lamond
2	01/12/20	Draft Issue (Revision)	JJ	SW	Ellis Lamond
3	08/12/20	Draft Issue (Rev 2)	JJ	DB	Ellis Lamond
4	14/12/20	Final Issue	JJ	SW	Ellis Lamond
5	21/01/21	Final Issue (Rev 2)	JJ	DB	Ellis Lamond
6	28/01/21	Final Issue (Rev 3)	JJ	DB	Ellis Lamond

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1. Introduction

1.1 Project Description

ptc. has been engaged by Adco Construction to prepare a Construction Traffic and Pedestrian Management Sub Plan (CTPMSP) for the construction of a seven storey, 1200 space multi storey car park (MSCP) at Liverpool Hospital.

The report has been prepared to address the following conditions:

Condition B13

The Construction Traffic and Pedestrian Management Sub-Plan (CTPMSP) must be prepared to achieve the objective of ensuring safety and efficiency of the road network and address, but not be limited to, the following:

- (a) Be prepared by a suitably qualified and experienced person(s);*
- (b) Be prepared in consultation with Council and TfNSW;*
- (c) Detail the measures that are to be implemented to ensure road safety and network efficiency during construction in consideration of potential impacts on general traffic, cyclists and pedestrians and bus services; and*
- (d) Detail heavy vehicle routes, access and parking arrangements.*

The report has also received comments from Liverpool City Council and Transport for NSW (TfNSW) (see Attachment 2) . It is noted that all comments associated with traffic have been addressed.

The site is located on Burnside Drive, in the suburb of Liverpool, as shown in Figure 1.

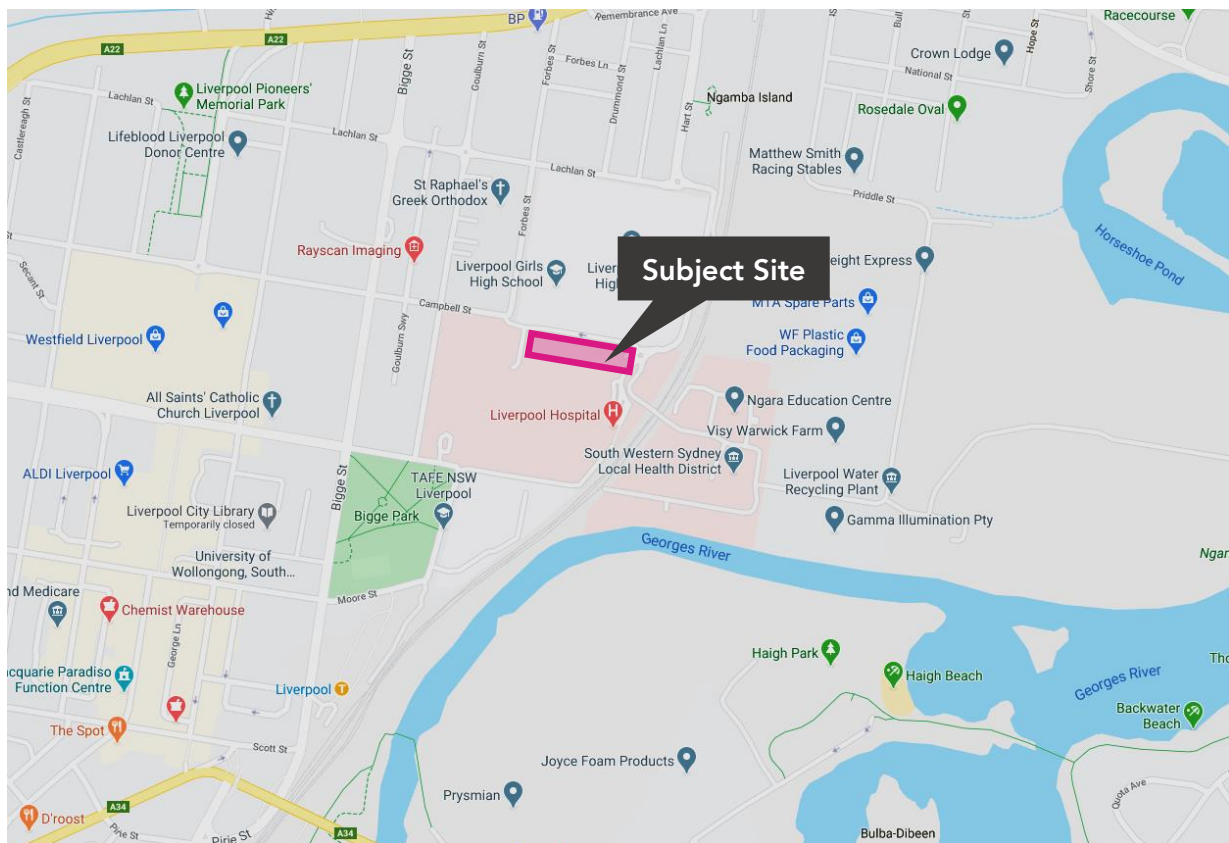


Figure 1 – Site Location

1.2 Purpose of this Report

This CTPMSP addresses the potential construction activity associated with the construction of the development, including:

- Location of any proposed work zones (if required), site boundary, and any site office, crane locations, material and waste storage areas and other components as necessary;
- Haulage routes;
- Construction vehicle access arrangements;
- A heavy vehicle swept path assessment, demonstrating feasibility of any Works Zone or Site Access, in addition to haulage routes if required;
- Proposed construction hours;
- Estimated number of construction vehicle movements;
- Construction Program;
- Any potential impacts to general traffic, cyclists, pedestrians and bus services within the vicinity of the site from construction vehicles during the construction of the proposed works;
- Measures proposed to mitigate any associated general traffic, public transport, pedestrian and cyclist impacts will be clearly identified and included the CTPMSP, and

- Development of a traffic management plan (TMP), outlining the construction access to the development and a description of traffic control measures required.

1.3 Structure of this Report

This report has been prepared to present the traffic and pedestrian management arrangements (including Traffic Control Plans) associated with the const

This report presents the following considerations in relation to the construction traffic management plan of the proposal:

- Section 2: Background;
- Section 3: A description of the road network serving the development site;
- Section 4: Management of construction vehicles and non-site traffic;
- Section 5: Construction Worker Transport Strategy; and
- Section 6: Summary.

2. Background Information

The subject site is located on the west side of Burnside Road, Liverpool, also known as Lot 1, DP827031. The site lies within the grounds of Liverpool Hospital.

It is currently zoned as SP2 (Infrastructure: Health services facility and Educational establishment) land use, in accordance with clause 2.2 of the Liverpool Local Environmental Plan 2008.

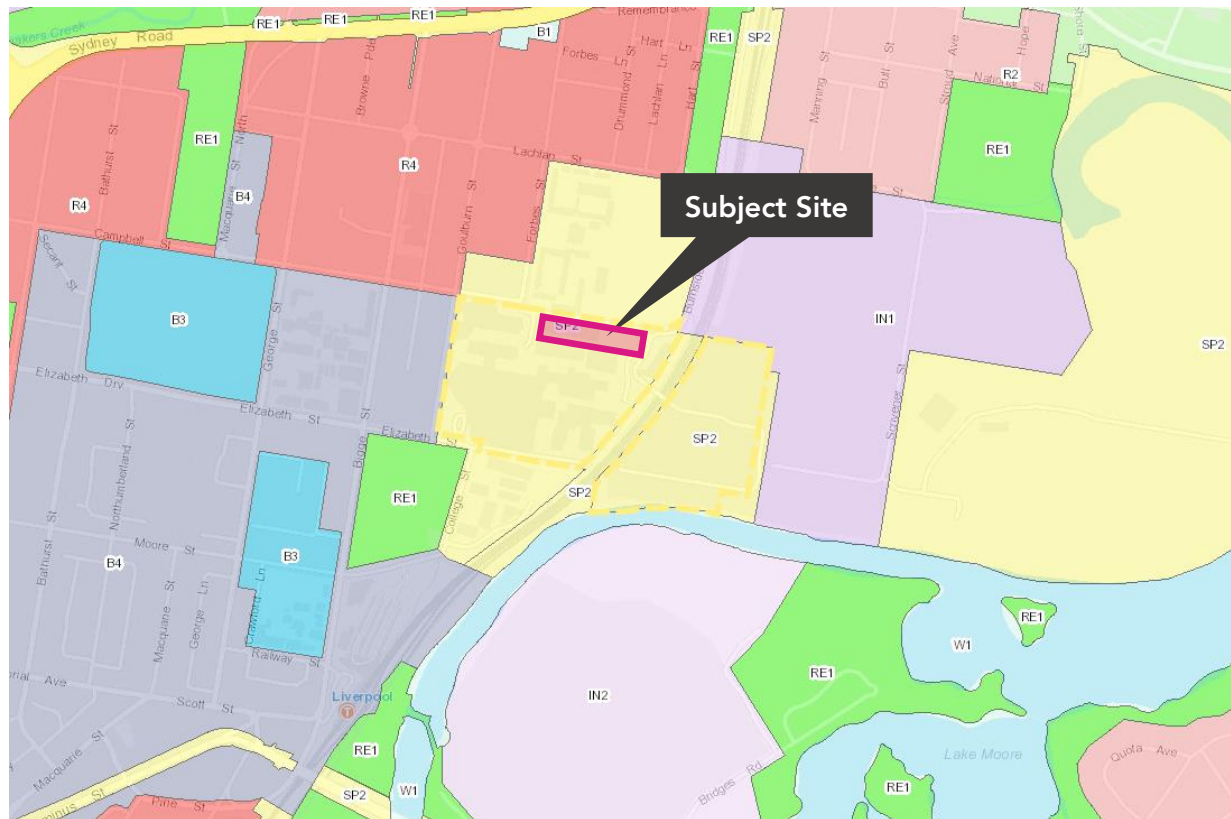


Figure 2 – Surrounding Land Use Map (Source: NSW Planning Portal)

2.1 Development Proposal

The proposed development involves the demolition of an at grade car park and the construction of a seven storey, split level car park, accommodating approximately 1200 spaces.

Access to the car park is via a spiral ramp off Burnside Road, with access and egress to the car park at level 2.

The general floor arrangement and level 2 access is shown in Figure 3.

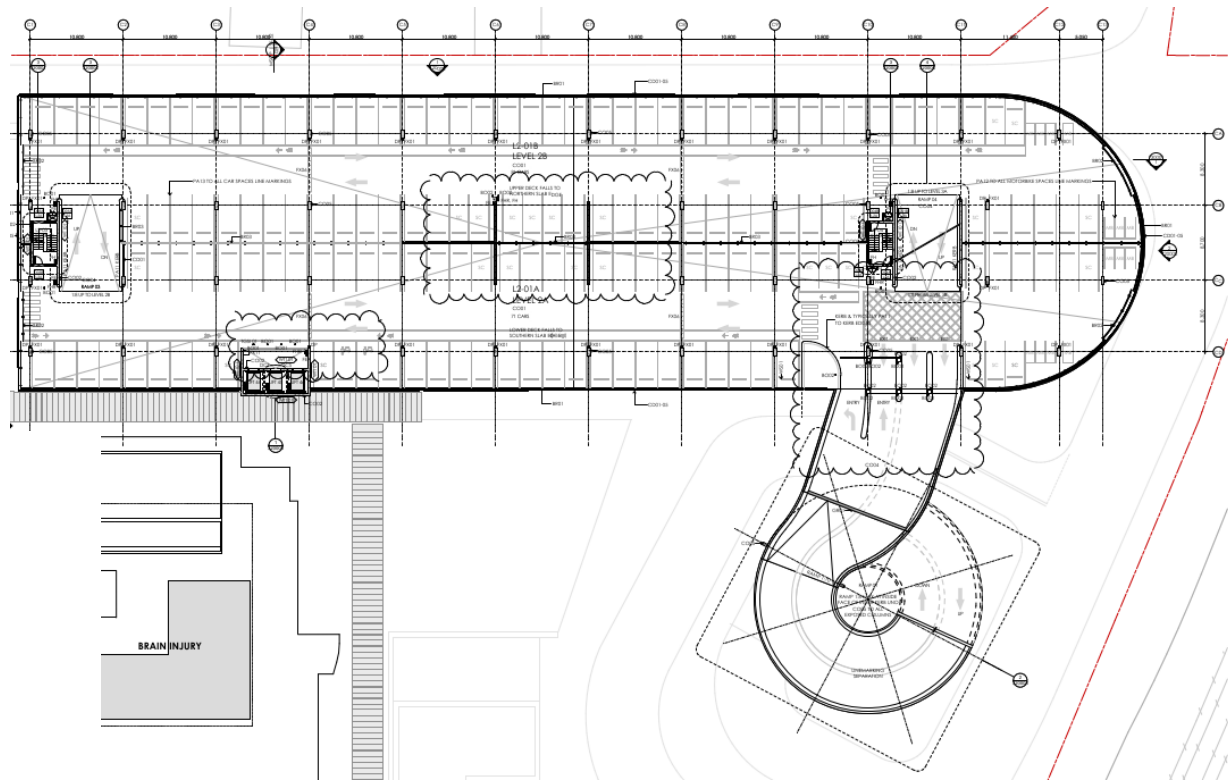


Figure 3 – General Floor Arrangement

3. Existing Conditions

3.1 Road Network

The subject site is located in the suburb of Liverpool, on the west side of Burnside Road.

As shown in Figure 4, the site has good access to the local, regional and state road network, providing access to the local and greater Sydney road network.

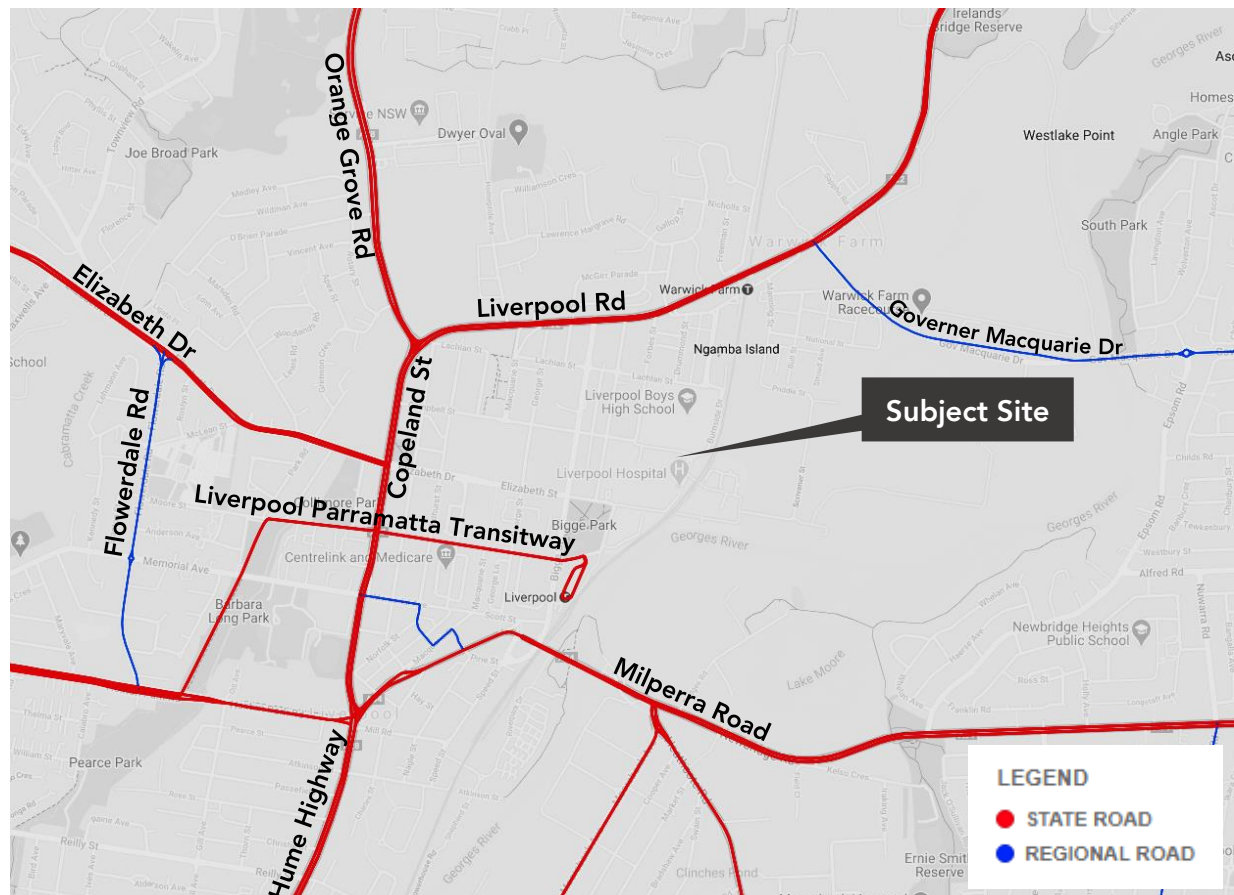


Figure 4 – Road Classification (Source: RMS State and Regional Roads Viewer)

The NSW administrative road hierarchy comprises the following road classifications, which align with the generic road hierarchy as follows:

- State Roads: Freeways and Primary Arterials (RMS Managed);
- Regional Roads: Secondary or sub-arterials (Council Managed, Part funded by the State)
- Local Roads: Collector and local access roads (Council Managed).

Within the vicinity, the road network serving the site includes:

Table 1 – Existing Road Network – Campbell Street

Campbell Street	
Road Classification	Local Road
Alignment	West - East
Number of Lanes	2 lanes in each direction
Carriageway Type	Un-divided
Carriageway Width	13m
Speed Limit	40 km/h
School Zone	Yes
Parking Controls	Restricted parking (2P) on the west bank and unrestricted parking on the east side
Forms Site Frontage	Yes



Figure 5 – Streetview of Campbell Street, Westbound (Source: Google Maps)

Table 2 – Existing Road Network – Forbes Street

Forbes Street	
Road Classification	Local Road
Alignment	North-South
Number of Lanes	2 lanes in each direction
Carriageway Type	Un-divided
Carriageway Width	12m
Speed Limit	40 km/h
School Zone	Yes
Parking Controls	Restricted parking on west and east side
Forms Site Frontage	Yes



Figure 6 – Streetview of Forbes Street, Southbound (Source: Google Maps)

Table 3 – Existing Road Network- Burnside Drive

Burnside Drive	
Road Classification	Local Road
Alignment	North-South
Number of Lanes	1 lanes in each direction
Carriageway Type	Un-divided
Carriageway Width	7m
Speed Limit	40 km/h
School Zone	Yes
Parking Controls	No parking
Forms Site Frontage	No



Figure 7 - Streetview

Table 4 – Existing Road Network – Bigge Street

Bigge Street	
Road Classification	Local Road
Alignment	North - South
Number of Lanes	1 lane in each direction with a parking lane in each direction
Carriageway Type	Undivided
Carriageway Width	12m
Speed Limit	30 km/h
School Zone	Yes
Parking Controls	Restricted (2P) parking on east and unrestricted parking on west side
Forms Site Frontage	No



Figure 8 – Streetview of Bigge Street, Northbound (Source: Google Maps)

3.2 Key Intersections

The key intersections in the vicinity of the development site and their characteristics are listed below:

- Burnside Dr / Hart St / Lachlan St: roundabout, 3-arm intersection;
- Bigge Street / Lachlan Street: roundabout, 4-arm intersection;
- Bigge Street / Hume Hwy: traffic signal controlled, 3-arm intersection;
- Hume Hwy / Mannix Pde / Remembrance Ave: traffic signal controlled, 4-arm intersection;
- Hart St / Remembrance Ave: roundabout, 3-arm intersection.

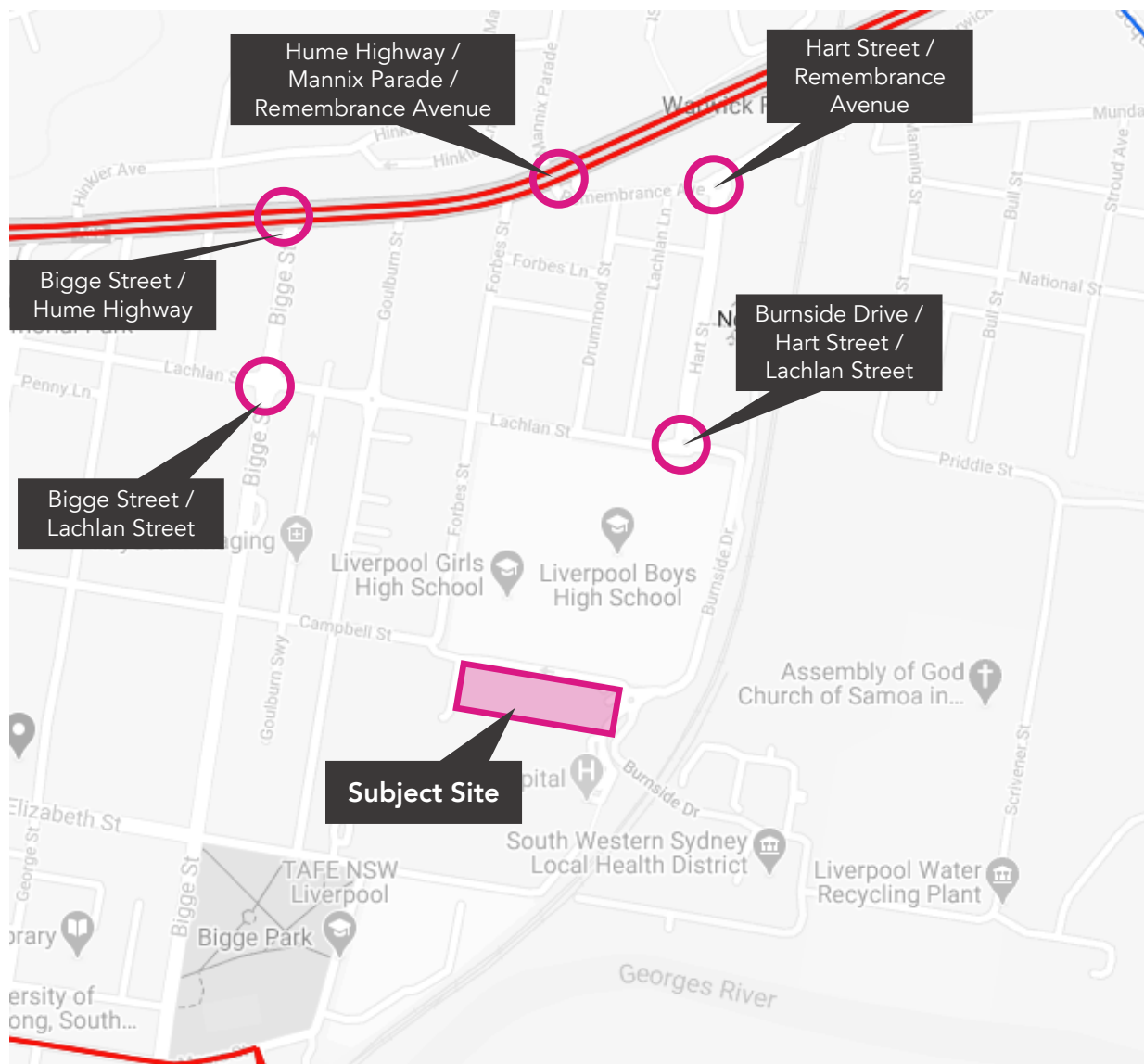


Figure 9 – Key Intersections

3.3 Public Transport

The development site is served by train and bus services. The NSW Planning Guidelines for Walking and Cycling 2004 (the Guide) suggests a distance of 400m as a walkable catchment to access local amenities. The Guide also recommends that an 800m catchment is an acceptable, walkable distance if the development is within an area with public transport links. Furthermore, the document also suggests a distance of 1500m is suitable catchment for cycling for accessibility to public transport facilities and local amenities.

The 400m and 800m catchment areas are shown in Figure 12, together with public transport facilities within the catchment.

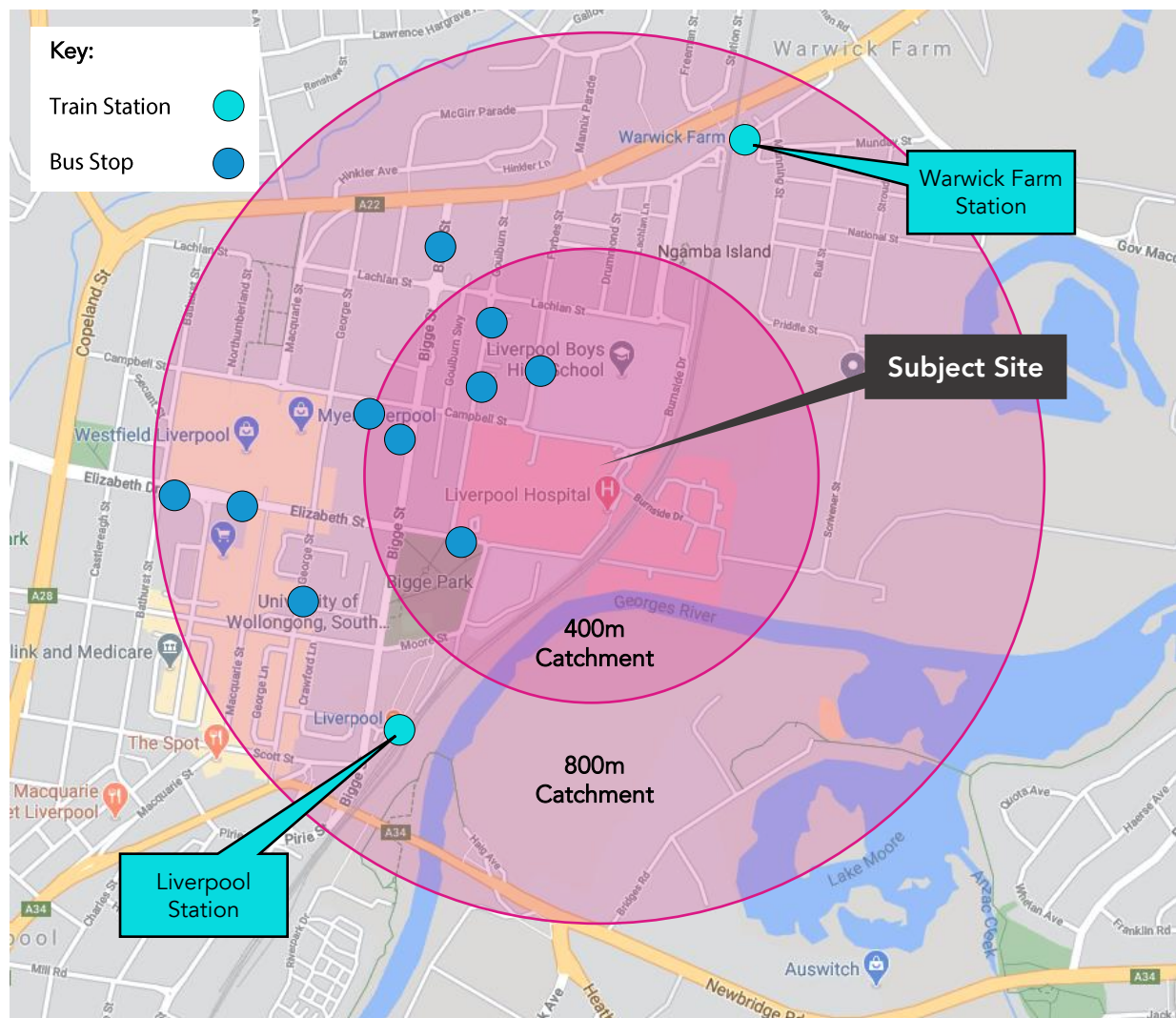


Figure 10 – Walking Catchment Area and Public Transport Facilities

3.3.1 Train Services

The site is located approximately 500m (8 minute) walking distance from Liverpool Station as shown in Figure 10.

Liverpool Station is operated by Sydney Trains and services the following lines:

- T2 Inner West & Leppington Line;
- T3 Bankstown Line; and
- T5 Cumberland Line.

The Sydney Train Network Map is illustrated in Figure 11 (Source: Transport NSW).



Figure 11 – Sydney Train Network Map

3.3.2 Bus Services

As shown in Figure 10, the closest bus stops are located at the corner of Elizabeth and Goulburn Streets.

These stops service the following routes:

Route 801	
Liverpool to Badgerys Creek	To Liverpool: Mon to Fri – 7:15am, 8:45am and 4:32pm
	To Badgerys Creek: Mon to Fri – 3:00pm, 3:55pm and 5:55pm
Route 802	
Liverpool to Parramatta via Green Valley	Mon to Fri - 4:00am to 9:50pm, 30 min intervals, with additional services during peak times
	Sat – 6:00am to 8:20pm, 30 min intervals
	Sun (& public holidays) – 6:50am to 8:20pm, 30 min intervals
Route 804	
Liverpool to Parramatta via Hinchinbrook	Mon to Fri – 4:20am to 11:30pm, 30 min intervals, with additional services during peak times
	Sat – 5:30am to 11:40pm, 30 min intervals
	Sun (& public holidays) – 6:30am to 11:40pm, 30 min intervals
Route 805	
Liverpool to Cabramatta via Bonnyrigg Heights	Mon to Fri – 4:50am to 10:20pm, 30 min intervals
	Sat – 5:50am to 9:30pm, 30 min intervals
	Sun (& public holidays) – 7:30am to 8:30pm, 1 hr intervals
Route 808	
Liverpool to Fairfield via Abbotsbury	Mon to Fri – 4:50am to 9:40pm, 30 min intervals
	Sat – 6:15am to 9:00pm 30 min intervals
	Sun (& public holidays) – 7:50am to 7:50pm, 1hr intervals
Route 819	
Liverpool to Prairiewood (Loop Service)	Mon to Fri – 6:15am to 6:40pm, 30 min intervals
	Sat – 8:40am to 5:00pm, 1 hr intervals
	Sun (& public holidays) – 9:40am to 4:45pm, 1 hr intervals
Route 823	

Liverpool to Warwick Farm (Loop Service)	Mon to Fri – 6:10am to 6:26pm, 30 min intervals
	Sat – 8:14am to 5:30pm, 1 hr intervals
	Sun (& public holidays) – 9:10am to 4:30pm, 1 hr intervals

Route 853

Liverpool to Carnes Hill via Hoxton Park Rd	Mon to Fri – 5:20am to 10:06pm, 1 hr intervals, with additional services during peak times
	Sat – 6:20am to 10:00pm, 1 hr intervals
	Sun (& public holidays) – 8:20am to 10:00pm, 1 hr intervals

Route 855

Liverpool to Rutleigh Park via Austral & Leppington Station	Mon to Fri – 8:30am to 7:50pm, 2 hr intervals, with additional services during peak times
	Sat – 8:15am to 6:15pm, 3 hr intervals
	Sun (& public holidays) – 11:00am to 6:00pm, 3 hr intervals

Route 856

Liverpool to Bringelly	Mon to Fri – 10:00am to 7:15pm, 3 hr intervals
	Sat – 7:20am to 5:20pm, 3 hr intervals
	Sun (& public holidays) – 7:40am to 5:00pm, 3 hr intervals

Route 857

Liverpool to Narellan	Mon to Fri – 6:20am to 8:40pm, 1 hr intervals, with additional services during peak times
	Sat – 9:15am to 8:15pm, 3 hr intervals
	Sun – 9:10am to 3:10pm, 3 hr intervals

There are also other numerous bus services to/from site within reasonable walking distance which services an additional approximately 16 different bus routes operated by various bus operators as presented in Figure 12.

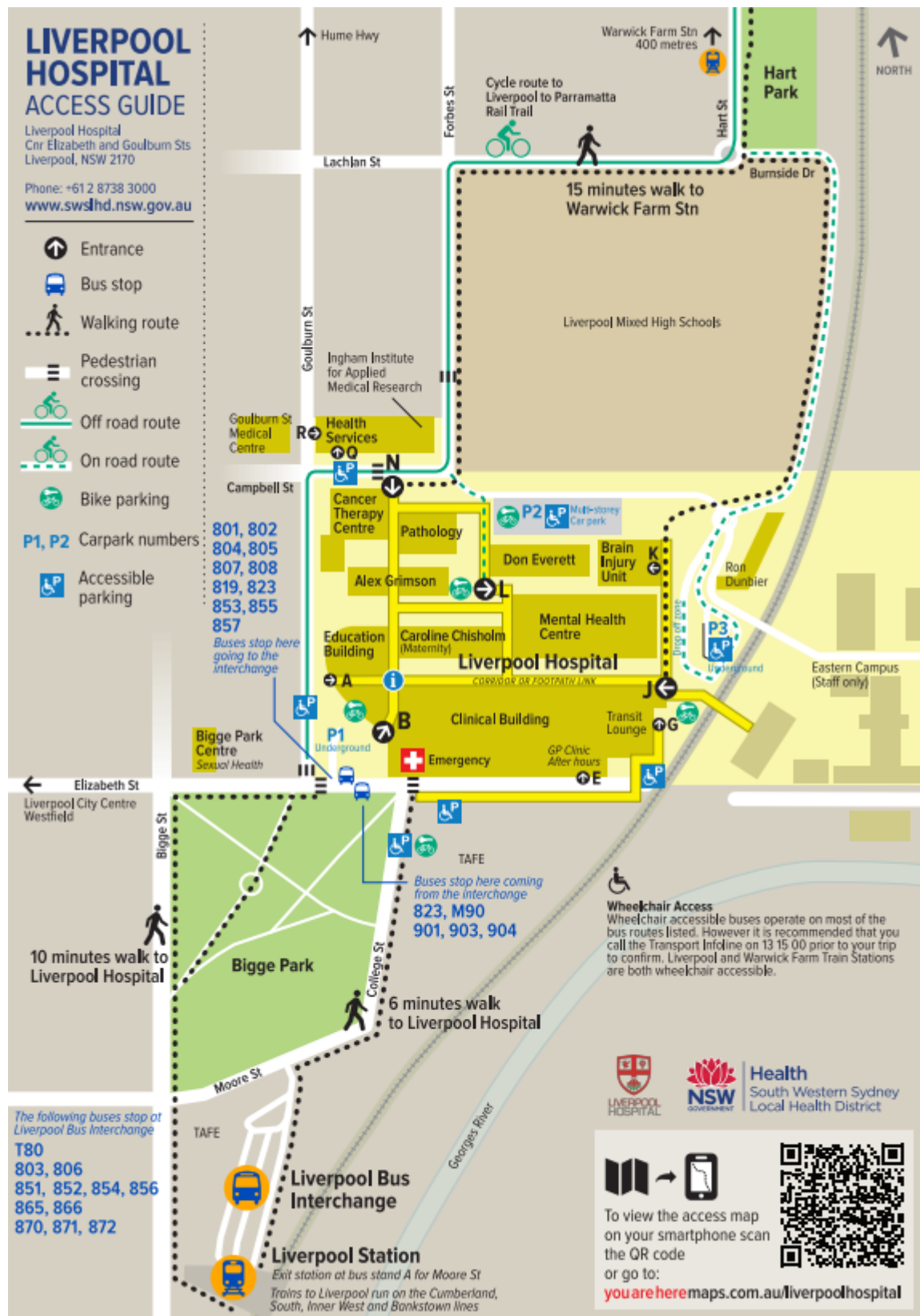


Figure 12 – Liverpool Hospital Access Guide

3.3.3 Summary

In light of the frequent train (or replacement bus services) and bus services which serve the locality, as well as the close proximity to Liverpool Station and nearby bus stops, the subject site is considered to be ideally located in terms of access to the public transport network. These plans review existing bike paths and amenities whilst proposing additional cycle facilities to improve

3.4.2 Pedestrian Infrastructure

Pedestrians can access the site from Elizabeth St, Goulburn St and Campbell St, where all roads have footpaths connections to and from key areas within Liverpool Hospital (car parks and the medical building precinct).

Figure 14 shows an overview of the existing pedestrian infrastructure in the vicinity of the site.

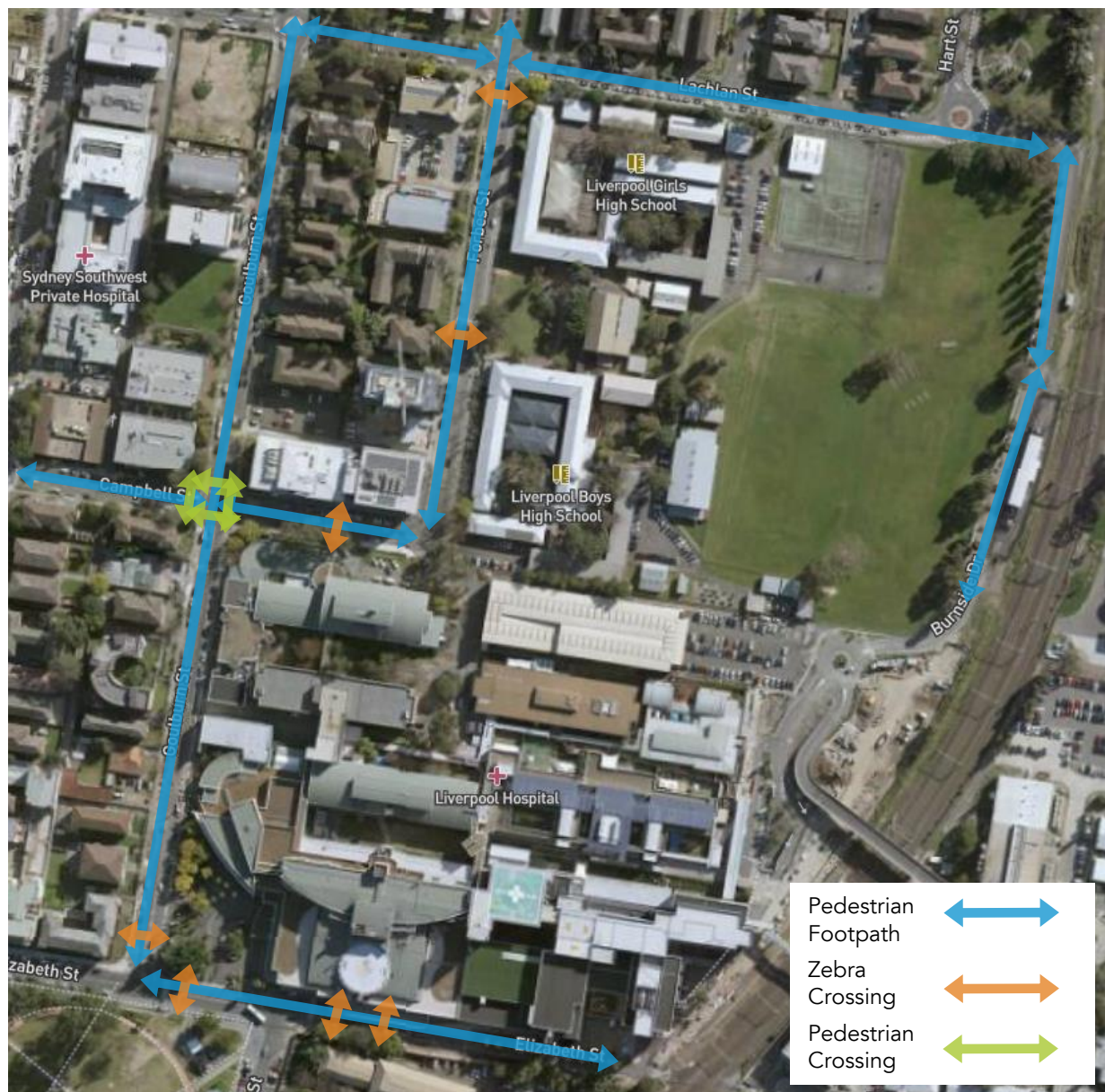


Figure 14 – Pedestrian Infrastructure

4. Construction Traffic Management Plan

This CTPMSP has been prepared in accordance with Review of Environmental Factors (REF) Condition no. 13, with reference number REF-05/2020.

4.1 Objective

The traffic management plan associated with the construction activity of the project aims to ensure the safety of all workers and road users within the vicinity of the construction site, with the following primary objectives:

- To minimise the impact of the construction vehicle traffic on the overall operation of the road network;
- To ensure continuous, safe, and efficient movement of traffic (pedestrian and vehicular) for both the general public and construction workers;
- Installation of appropriate advance warning signs to inform users of the changed traffic conditions;
- To provide a description of the construction vehicles and the volume of these construction vehicles accessing the construction site; and
- To provide information regarding the changed access arrangements and a description of the proposed external routes for construction vehicles accessing and exiting the site.

4.2 Construction Activities & Program

4.2.1 General Construction Activity

- There are 3 entry points identified, each corresponding to each of the areas, to service the site throughout the project duration.
- All loading and unloading of materials will be contained wholly within the site and no Work Zones are proposed.
- The largest vehicle to access the site will be a typical 19-metre Articulated Vehicle (AV) as per AS2890.2.
- Construction Hours
 - Monday to Friday 7:00am to 6:00pm
 - Saturday 8:00am to 1:00pm
 - Sunday & Public Holidays No Works
- The construction will be undertaken in three different stages. The duration for each stage has been summarised in Table 5.

Table 5 - Works Staging

Stage	Works	Duration
1	Demolition	2 weeks
2	Excavation	4 weeks
3	Construction	52 weeks

4.3 General Requirements

In accordance with Transport for New South Wales (TfNSW, formerly RMS) requirements, all vehicles transporting loose materials will have the entire load covered and/or secured to prevent any items, excess dust or dirt particles depositing onto the roadway during travel to and from the site. All subcontractors shall undergo induction by the lead contractor to ensure all procedures are met for all construction vehicles entering and exiting the construction site. The lead contractors will monitor the roads leading to and from the site and undertake all necessary steps to rectify any road deposits caused by construction activity.

Vehicles operating to, from and within the site shall do so in a manner, which does not create unreasonable or unnecessary noise or vibration. No tracked vehicles are required nor permitted on any paved roads. Public roads and access points will not be obstructed by any materials, vehicles, refuse skips or the like, under any circumstances.

4.4 Construction Site Arrangement & Access

4.4.1 Site Arrangement

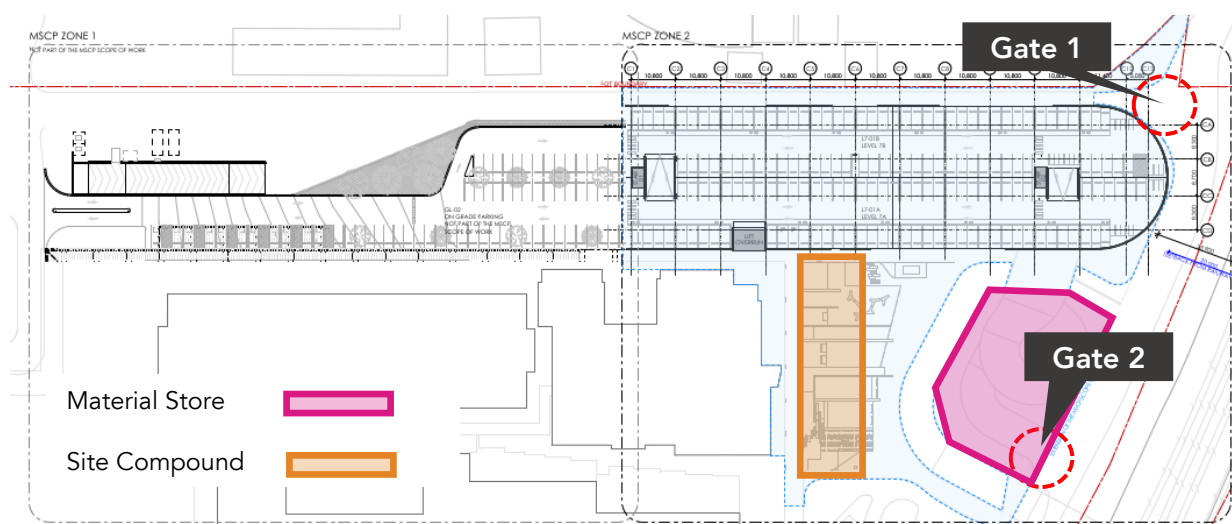


Figure 15 - Site Arrangement and Access Plan

The site is divided into three (3) areas as illustrated in Figure 15. The proposed vehicular access arrangement varies for each site area.

4.4.2 Site Access

There are 2 access points corresponding with the 3 areas as illustrated in Figure 15.

The construction vehicles accessing the car park area will enter via Gate 1 and exit via Gate 1. The largest vehicle to utilise Gate 1 is anticipated to be an AV. The swept path assessment indicates that the vehicle is able to manoeuvre within the provided area to enter and exit in a forward motion.

The construction vehicles accessing the material storage area will enter and exit via Gate 2. The largest anticipated vehicle to access this area is a MRV. The vehicle will enter in a forward motion, manoeuvre within the site and exit in a forward motion. A swept path assessment has been undertaken which indicates that the vehicle is able to manoeuvre within the provided area to enter and exit in a forward motion.

4.5 Construction Traffic

4.5.1 Construction Vehicle Types

The construction development will involve the use of a range of construction vehicles including Medium Rigid Vehicles (MRV) and Articulated Vehicles (AV). The largest anticipated vehicle will be an AV with an overall length of 19 metres which is restricted to the access discussed in Section 4.4.2. The largest anticipated vehicle to access the material storage and site compound area will be a typical MRV with an overall length of 8.8 metres.

Swept path assessments have been undertaken to assess the accessibility of construction vehicles to the site and the ability for the site to provide access for construction vehicles to address Condition B22. The assessments are included in this report as Attachment 1.

Should there be any oversized vehicles required to travel to the construction site, a separate submission shall be submitted to the Liverpool City Council prior to any permitted oversized vehicle activity.

4.5.2 Construction Vehicle Routes

This section has been prepared to address the following conditions:

Condition B28

Prior to the commencement of construction, compliance with the following requirements must be submitted to the Certifier:

- (a) All vehicles must enter and leave the site in a forward direction;*
- (b) A minimum of 1,248 on-site parking spaces for use during operation of the development and designed in accordance with the latest versions of AS 2890.1 and AS 2890.6;*
- (c) The swept path of the longest construction vehicle entering and exiting the site in association with the new work, as well as manoeuvrability through the site, must be in accordance with the latest version of AS 2890.2; and*
- (d) The safety of vehicles and pedestrians accessing adjoining properties, where shared vehicle and pedestrian access occurs, is to be addressed.*

The proposed construction vehicle routes have regard for the surrounding local road network within the vicinity of the construction site.

No queuing or marshalling of trucks is permitted on any public road. The construction vehicle access routes into the site are as discussed and illustrated in Figure 16.

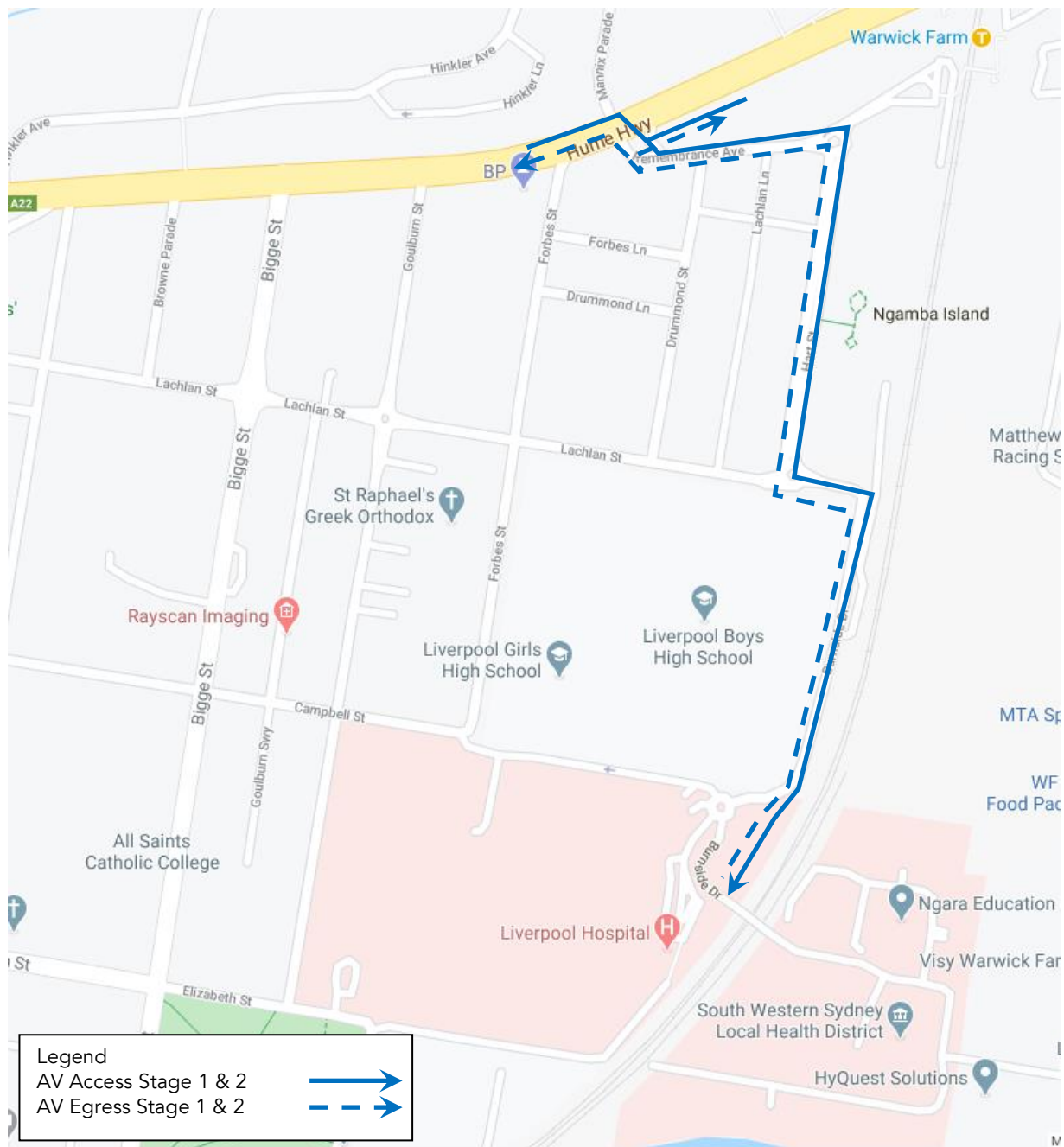


Figure 16 - Construction Vehicle Approach & Egress Routes

It is noted that the 19-metre AV ingress and egress route as shown in Figure 16 shall not be used between 7am and 9am due to the hospital shift change over.

The overall swept path analysis illustrating the construction vehicle routes is included in this report as Attachment 1.

As shown in the swept path analysis and as required by Condition B28;

- (a) all vehicles entering and exiting the public road network, do so in a forward direction.
- (b) upon completion of the development, the site will provide, a minimum of 1,248 on-site parking spaces for use during operation of the development and will be designed in accordance with the latest versions of AS 2890.1 and AS 2890.6;
- (c) During construction, the swept path of the longest construction vehicle (19m Articulated Vehicle) entering and exiting and manoeuvring through the site, meets the requirements of AS2890.2;
- (d) Traffic control measures (outlined in Section 4.8) have been provided in accordance TfNSW Traffic Control at Work Sites and access to all adjoining properties is to be maintained at all times.

4.5.3 Traffic Generation

The anticipated truck movements / deliveries are ranged from 20 to 30 (maximum) vehicle movements per day, inclusive for all 3 areas. Based on a typical 8-hour construction shift, the anticipated truck deliveries are approximately 4 construction vehicles per hour, all with varying sizes.

It is noted that the proposed heavy vehicle route travels within the school zone for Liverpool Boys and Girls High Schools. Therefore, no construction vehicle movements are to occur during the school drop-off and pick up times on school days being 8:00am to 9:30am and 2:30pm to 4:00pm.

This section has been prepared to address the following condition:

Condition B21

Prior to the commencement of construction, the Applicant must provide sufficient parking facilities on-site for heavy vehicles, except where separate works zone have been approved, to ensure that construction traffic associated with the development does not utilise public and residential streets or public parking facilities.

The swept path assessment indicates that the car park area which is accessible via Gate 1 has the capacity to accommodate up to five (5) AVs. The material storage area accessible via Gate 2 can accommodate up to 4 MRVs.

Therefore, the anticipated truck delivery of four (4) construction vehicles per hour can be accommodated in both areas with no construction traffic utilising the public and residential streets in accordance with Condition B21.

4.6 Work Zone / Road Occupancies

There are no work zones proposed within the public road for this construction development.

4.7 Stakeholders

Stakeholders shall be identified and informed of the proposed works upon commencement of construction activities. Stakeholders identified as listed as the following:

- Liverpool City Council; and
- Transport for New South Wales (TfNSW).
- Local residents and employees.

4.8 Traffic Control Measures

The Traffic Control Plan (TCP) outlines the proposed traffic management to inform road users of the changed traffic conditions in the vicinity of the works site.

The TCPs have been set out in accordance with the RMS Traffic Control at Works Site.

Final Traffic Control Plans will be prepared by the traffic management contractor prior to commencement to works on site.

Gate controllers will be provided to manage the access and egress from Gates 1 to 2.

It is noted that all traffic controllers engaged are required to be accredited by TfNSW, and to act in accordance with TfNSW and conditions stipulated by the Liverpool City Council.

4.9 Work Site Security

The works site shall be fully bounded with barriers to restrict unauthorised pedestrian access. When not in use, the site shall be appropriately secured outside of work hours.

4.10 Emergency Vehicle Access

The proposed works are not anticipated to involve the closure of any local roads. Any emergency vehicles requiring to access the project site will be provided unobstructed access.

4.11 Occupational Health & Safety

Any workers required to undertake works or traffic control within the public domain shall be suitably trained and will be covered by adequate and appropriate insurances. All traffic control personnel will be required to hold RMS accreditation in accordance with Section 8 of Traffic Control at Worksites.

4.12 Contact Details for On-Site Enquiries & Site Access

Stefan Chalouhi

Project Engineer

M: 0449 250 050

5. Construction Worker Transportation Strategy

This section has been prepared to address the following condition:

Condition B22

Prior to the commencement of construction, the Applicant must submit a Construction Worker Transportation Strategy to the satisfaction of the Certifier. The Strategy must detail the provision of sufficient parking facilities or other travel arrangements for construction workers in order to minimise demand for parking in nearby public and residential streets or public parking facilities. A copy of the strategy must be submitted to the Planning Secretary for information.

5.1 Staff Induction

All staff and subcontractors are required to undergo a site-specific induction which outlines the construction procedures and management framework specific to the project. The induction will include a description of the available transport options and the policy towards site access, parking at the car parking facility provided for the construction workers and the storage of tools at the site to reduce the need to bring vehicles to site.

5.2 Active and Public Transport

The active and public transport options available for the construction staff over the project duration is described in Section 3.3 and Section 3.4.

5.3 Staff Parking

A car parking facility will be provided which will be dedicated to the multi-storey car park construction workers. The location of the car parking facility and pedestrian access to the site is shown in Figure 17.

It is noted that, due to the limited parking available, all construction workers are encouraged to carpool (wherever practical) or to travel to the construction site via public transport. Personnel will be informed of the large availability of bus services readily available, connecting neighbouring suburbs to the site vicinity.

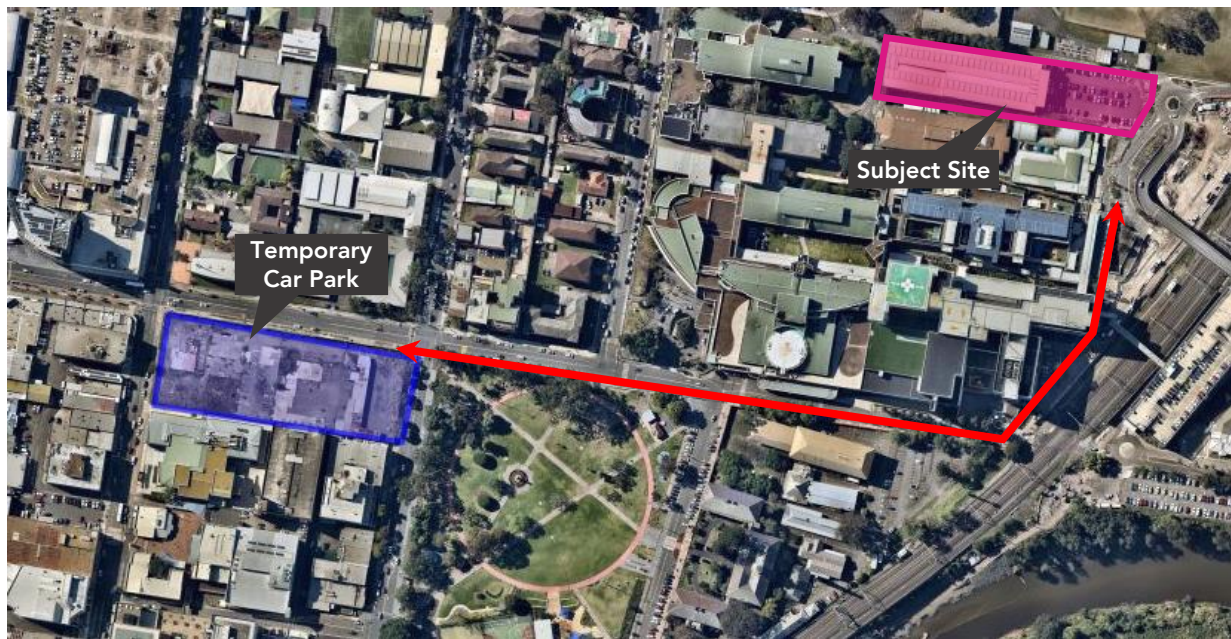


Figure 17 - Temporary Car Park Location

6. Summary

This CTPMSP has been prepared for the construction activity associated with the multi-storey car park at Liverpool Hospital, in Liverpool, NSW. This report outlines the construction traffic process associated with the construction works, as well as the construction traffic management measures to improve and regulate the safety of pedestrians, cyclists, motorists, and workers in the site vicinity.

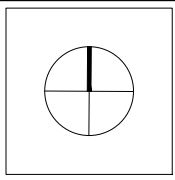
It is envisaged that this document will be continually reviewed and amended if required, in the event of changes to design, the surrounding road network, or additional requirements of Liverpool City Council, TfNSW, or any other authority.

Attachment 1 Construction Vehicle Routes Swept Path Analysis



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rev	date	comment / description	drawn	reviewed
7	21/01/21	CTMP	JJ	DB
6	08/12/20	CTMP	JJ	DB
5	01/12/20	CTMP	JJ	SW
4	26/11/20	Update CTMP	JJ	SW
3	16/05/20	Update CTMP	SW	SW
2	11/05/20	For Review	SW	SW
1		Not Used		

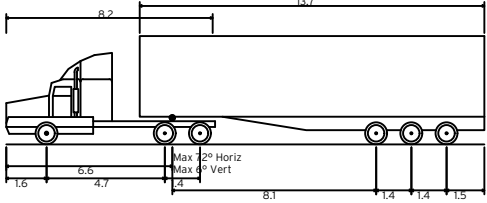


project
Liverpool Health & Academic Precinct
Multi Storey Car Park

drawing title
Traffic Management Plan
Overall Plan

client	ADCO Construction
drawing #	ptc-000
project #	2833
scale	1 : 3000

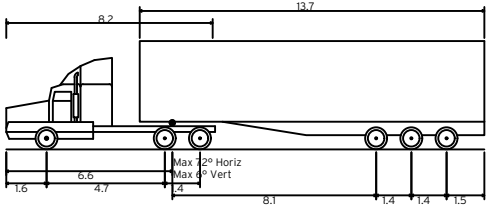
rev 7



AV - Articulated Vehicle
Overall Length 19.000m
Overall Width 2.500m
Overall Body Height 4.301m
Min Body Ground Clearance 0.418m
Track Width 2.500m
Lock-to-lock time 6.00s
Curb to Curb Turning Radius 12.500m

SITE NOTES:
S1. Maintain pedestrian access along formed pathway around the site.
S2. Work site to be fenced to prevent unauthorised access.

GENERAL NOTES:
G1. All signed to be clearly visible throughout the works and monitored. Signs can be mounted if required on posts to be visible above parked cars. Signs to be coordinated on site to ensure they are clearly visible.
G2. All signs to be size A.
G3. All signs to be visible when workers are in the area and covered when workers are not present.
G4. Signs to be in accordance with RMS Traffic Control at Worksites (TCAWS) Manual and AS1742.3 Traffic Control for Works on roads.
G5. RMS/Council approvals to be obtained prior to implementation.
G6. This TCP is based on TCAWS Manual and is to be set up by qualified traffic controllers (Yellow card). Any alterations on site to this TCP is to be documented and rerecorded by qualified personnel with a Red/Orange card.



AV - Articulated Vehicle	
Overall Length	19.000m
Overall Width	2.500m
Overall Body Height	4.301m
Min Body Ground Clearance	0.418m
Track Width	2.500m
Lock-to-lock time	6.00s
Curb to Curb Turning Radius	12.500m

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	6	08/12/20	CTMP	JJ	DB						project #
	5	01/12/20	CTMP	JJ	SW						2833
	4	26/11/20	Update CTMP	JJ	SW				scale	rev 7	
	3	16/05/20	Update CTMP	SW	SW						
	2	07/05/20	For Review	SW	SW						
	1	06/05/20	For Review	SW	SW						



commentsA3

AV - Articulated Vehicle	
Overall Length	19.000m
Overall Width	2.500m
Overall Body Height	4.301m
Min Body Ground Clearance	0.418m
Track Width	2.500m
Lock-to-lock time	6.00s
Curb to Curb Turning Radius	12.500m

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7	21/01/21	CTMP	JJ	DB
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5	01/12/20	CTMP	JJ	SW
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2	07/05/20	For Review	SW	SW
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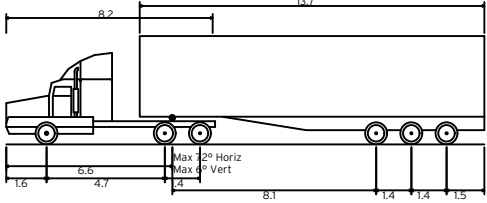
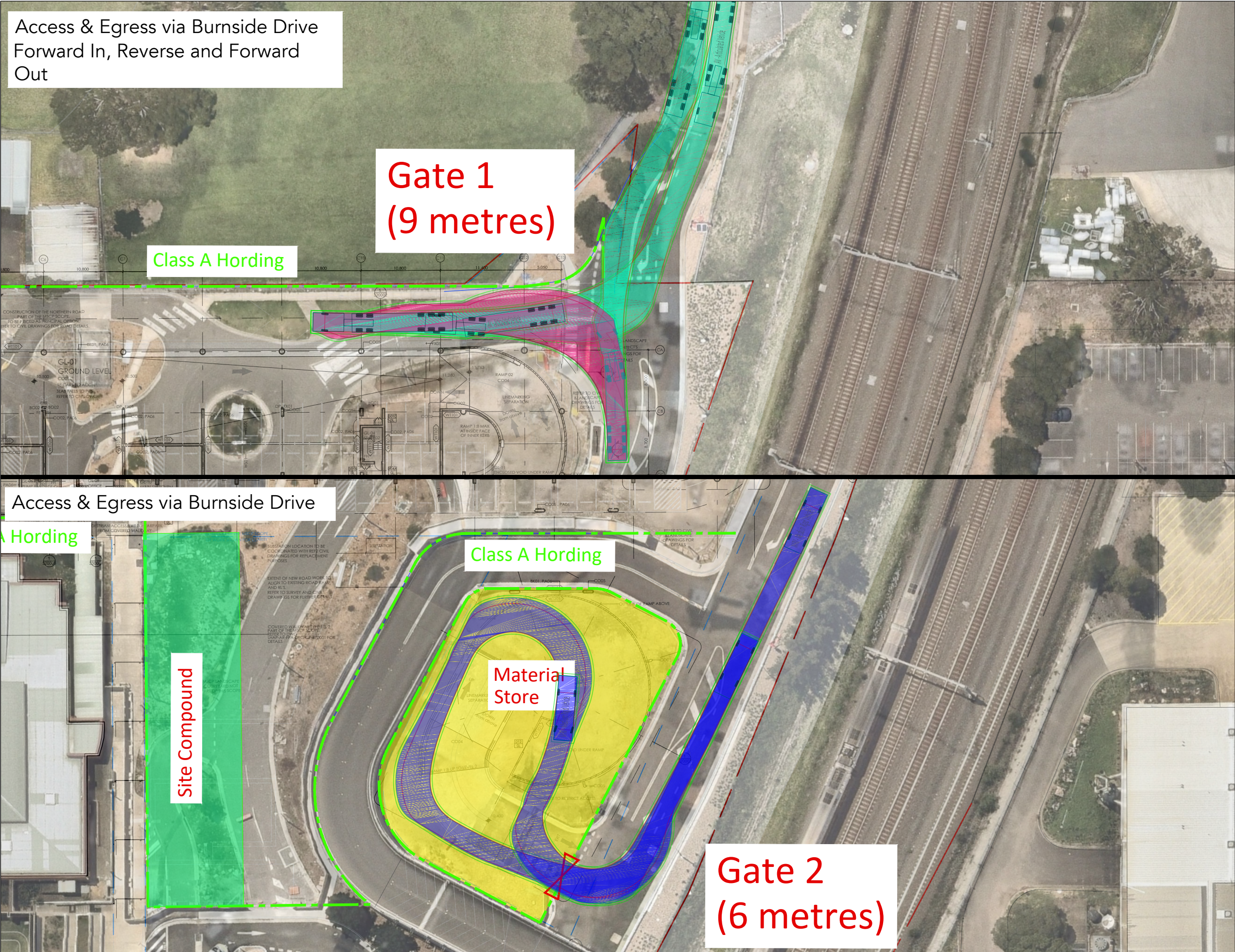
project

Liverpool Health & Academic Precinct
Multi Storey Car Park

drawing title

Traffic Management Plan

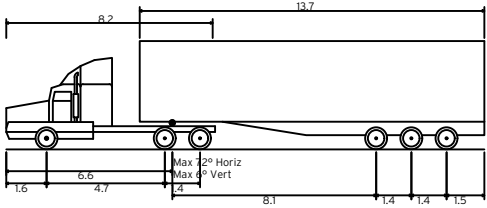
client	ADCO Construction	
drawing #	ptc-003	rev 7
project #	2833	
scale	1 : 1000	



AV - Articulated Vehicle
Overall Length 19.000m
Overall Width 2.500m
Overall Body Height 4.301m
Min Body Ground Clearance 0.418m
Track Width 2.500m
Lock-to-lock time 6.00s
Curb to Curb Turning Radius 12.500m

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Overall Length	19.000m
Overall Width	2.500m
Overall Body Height	4.301m
Min Body Ground Clearance	0.418m
Track Width	2.500m
Lock-to-lock time	6.00s
Curb to Curb Turning Radius	12.500m

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rev	date	comment / description	drawn	reviewed
7	21/01/21	CTMP	JJ	DB
6	08/12/20	CTMP	JJ	DB
5	01/12/20	CTMP	JJ	SW
4	26/11/20	Update CTMP	JJ	SW
3	16/05/20	Update CTMP	SW	SW
2	07/05/20	For Review	SW	SW
1	06/05/20	For Review	SW	SW

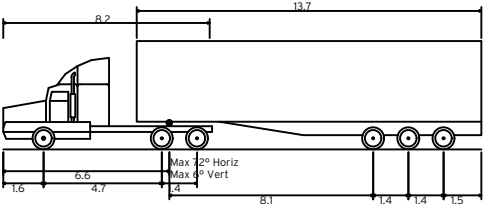
project

Liverpool Health & Academic Precinct
Multi Storey Car Park

drawing title

Construction Traffic Management Plan
Egress Route
19m Articulated Vehicle (AV)

client	ADCO Construction	
drawing #	ptc-005	rev 7
project #	2833	
scale	1 : 500	



AV - Articulated Vehicle
Overall Length 19.000m
Overall Width 2.500m
Overall Body Height 4.301m
Min Body Ground Clearance 0.418m
Track Width 2.500m
Lock-to-lock time 6.00s
Curb to Curb Turning Radius 12.500m

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5	01/12/20	CTMP	JJ	SW
4	26/11/20	Update CTMP	JJ	SW
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2	07/05/20	For Review	SW	SW
1	06/05/20	For Review	SW	SW

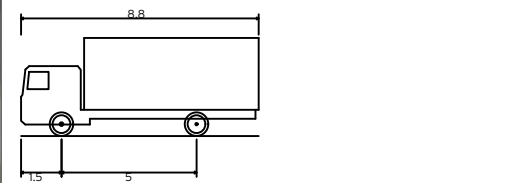


project
Liverpool Health & Academic Precinct
Multi Storey Car Park

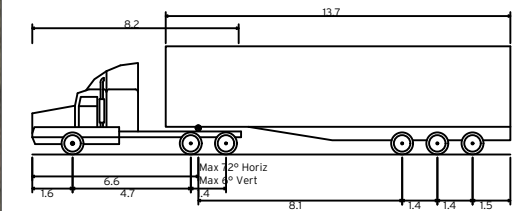
drawing title
Construction Traffic Management Plan
Egress Route
19m Articulated Vehicle (AV)

client	ADCO Construction
drawing #	ptc-006
project #	2833
scale	1 : 500

rev 7



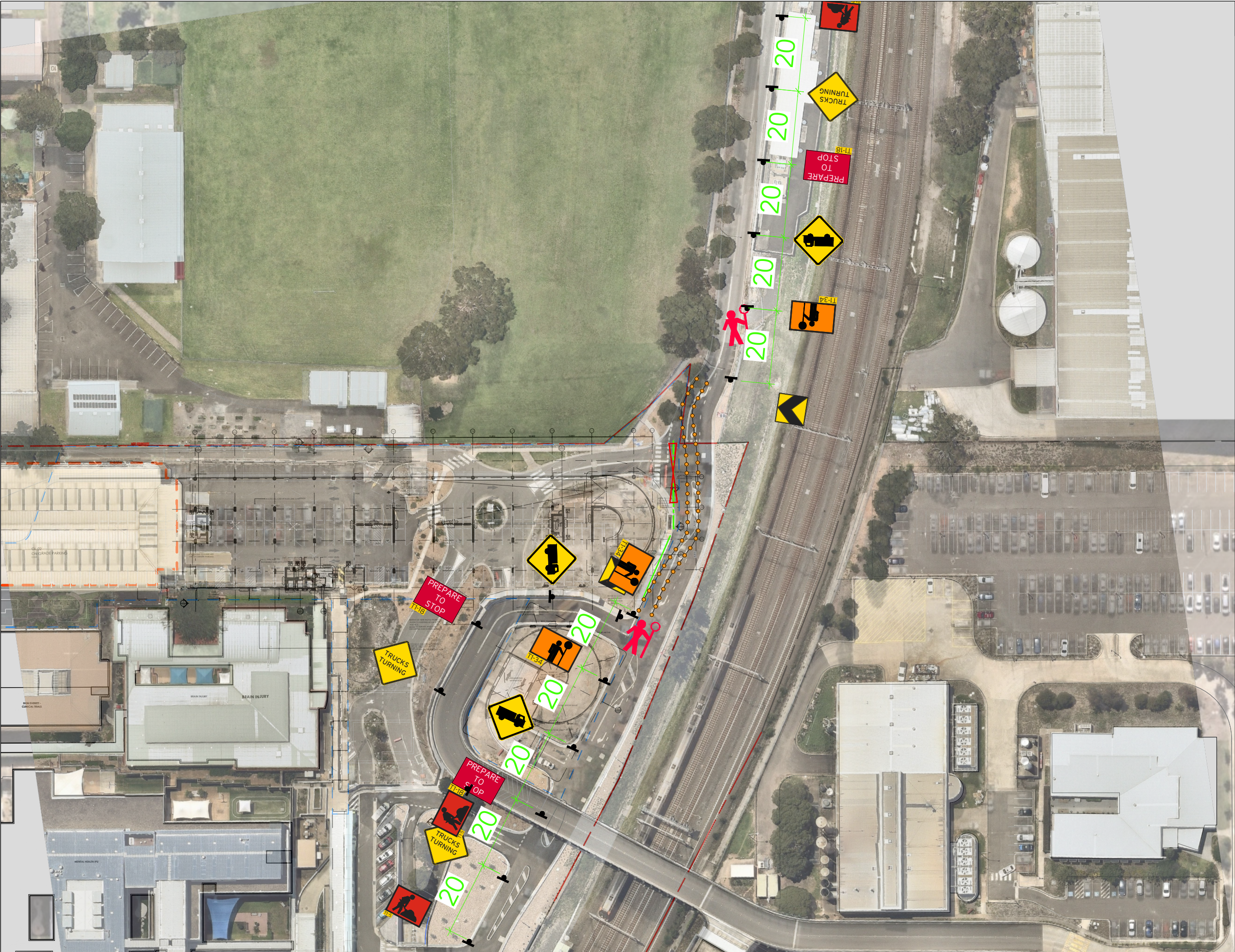
MRV - Medium Rigid Vehicle
Overall Length 8.800m
Overall Width 2.500m
Overall Body Height 3.633m
Min Body Ground Clearance 0.428m
Track Width 2.500m
Lock-to-lock time 4.00s
Curb to Curb Turning Radius 10.000m



AV - Articulated Vehicle
Overall Length 19.000m
Overall Width 2.500m
Overall Body Height 4.301m
Min Body Ground Clearance 0.418m
Track Width 2.500m
Lock-to-lock time 6.00s
Curb to Curb Turning Radius 12.500m

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comments

A3

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rev	date	comment / description	drawn	reviewed
7	21/01/21	CTMP	JJ	DB
6	08/12/20	CTMP	JJ	DB
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3	16/05/20	Update CTMP	SW	SW
2	07/05/20	For Review	SW	SW
1	06/05/20	For Review	SW	SW

project

Liverpool Health & Academic Precinct
Multi Storey Car Park

drawing title

Construction Traffic Management Plan
Traffic Control Plan
Southern Side

client

ADCO Construction

drawing #

ptc-008

project #

2833

scale

1 : 500

rev

7



comments

A3

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	7	21/01/21	CTMP	JJ	DB					
	6	08/12/20	CTMP	JJ	DB					
	5	01/12/20	CTMP	JJ	SW					
	4	26/11/20	Update CTMP	JJ	SW					
	3	16/05/20	Update CTMP	SW	SW					
	2	07/05/20	For Review	SW	SW		Liverpool Health & Academic Precinct Multi Storey Car Park	Construction Traffic Management Plan Traffic Control Plan Bridge Overpass	drawing #	ptc-008
	1	06/05/20	For Review	SW	SW					
									project #	2833
									scale	1 : 500
rev 7										

Attachment 2 Council & TfNSW Comments

Stefan Chalouhi
ADCO Constructions
Level 2, 7-9 West Street
NORTH SYDNEY, NSW 2060

Email: stefanc@adcoconstruct.com.au

Dear Stefan

Re: Construction Traffic Management Plan for proposed development of 1200 space carpark at Liverpool Hospital and Academic Precinct, Liverpool

I refer to the submitted Construction Traffic Management Plan (CTMP) for the approved development of 1200 space carpark at Liverpool Hospital and Academic Precinct, Liverpool.

Council notes that the plan has been submitted to comply with Conditions B13 and B22 of the Development Consent SSD10388 for the above-mentioned development.

Council has reviewed the CTMP and the following comments are to be incorporated to finalise the plan. The updated plan is to be implemented during construction.

- Heavy vehicles access route for deliveries should be via Remembrance Avenue, Hart Street and Burnside Drive is to be used at all times. The proposed access using Bigge Street is not supported.
- Heavy vehicles not to use Forbes Street access at all times without prior consent from Council.
- Approval from National Heavy Vehicle Regulator (NHVR) would be required for vehicles prohibited on the public roads without consent.
- Traffic impact, if any, on access from Burnside Drive, Warwick Farm, through railway live overpass should be included in the CTMP.
- Driver Code of Conduct should include:
 - I. Enter and leave the site in forward direction.
 - II. Promote road safety and obey all NSW Road Rules
 - III. Drivers randomly be tested of alcohol and drugs.
- The working hours should be restricted to the approved times, in accordance with the development consent. If required, contact Council's Traffic and Transport Section for approval of alternative working hours within public road reserves.

- A separate Works Zone application along with Works Zone signposting plan is to be submitted to Council for approval. Approved Works Zone should only be used to park work vehicles. Note: Works Zone approval may take up to six weeks.
- Road occupancy approval is required for road occupancies including placing construction plants such as concrete pumps, mobile crane etc. within the public road reserve.
- Work specific traffic control plans are to be submitted with each road occupancy application. Application forms for road occupancy and road opening permits as well as works zone are available on Council website.
- Road opening approval is also required for works within the public road reserve including connections to existing services.
- Parking for all construction workers should be accommodated within the development site. Alternatively, a map indicating locations of existing public parking spaces for construction workers are to be included in the CTMP.
- Work vehicles parked on streets closer to the work site, should be in accordance with the signposted parking restrictions and NSW Road Rules.
- A notice with contact phone number and email details for community to make contacts regarding work activities are to be installed at the site.
- Obtain approval Council prior to removing any trees from the construction site, if any.
- Plant three trees to every removed tree from the site, please discuss with Council for planting replacement trees.
- The proposed footpath at the front of development site should be constructed in accordance with the consent condition but should be less than 1.5m and must be Disability Discrimination Act (DDA) compliant.

The updated CTMP will comply with the consent conditions B13 and B22.

Should you require further clarification, please contact Council's Traffic Engineer, Mr Mahavir Arya on 8711 7592, or via email on aryam@liverpool.nsw.gov.au.

Yours sincerely



Charles Wiafe
Service Manager Traffic and Transport

Jae Jeon

From: Stefan Chalouhi <stefanc@adcoconstruct.com.au>
Sent: Friday, 22 January 2021 12:09 PM
To: Jae Jeon
Subject: FW: LHAP MSCP - SSD10388 - Condition B13 - Construction Traffic and Pedestrian Management Plan

Stefan Chalouhi
Project Engineer

ADCO Constructions
Level 2, 7-9 West Street, North Sydney NSW 2060
T 02 8437 5000 **M** 0449 250 050
W www.adcoconstruct.com.au



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From: Bikram Singh <bikram.singh2@transport.nsw.gov.au>
Sent: Monday, 18 January 2021 2:21 PM
To: Stefan Chalouhi <stefanc@adcoconstruct.com.au>
Subject: RE: LHAP MSCP - SSD10388 - Condition B13 - Construction Traffic and Pedestrian Management Plan

Hi Stefan,

The normal procedure with CTMP / CTPMP is that the applicant would send them through to the local Council (Liverpool City Council), and then the Council would forward the document onto Transport for review. This is to ensure Transport and Council can send through their respective comments in a single email which ensures greater efficiency as the applicant can address all the concerns in one round of updates.

With respect to the above, I just wanted to make sure if this CTPMP has been sent through to Liverpool Council for their comments?

Please see Transport comments below;

- 1) As the proposed truck route travels within the school zones for Liverpool Boys and Girls High Schools, it should be advised that no construction vehicle movements are to occur during school drop-off (8.00am to 9.30am) and pick up (2.30pm to 4.00pm) times on school days as the proposed truck routes contain a school zone. This change in timings would need to be shown within the CTMP and would respectively change the number of trucks per hour accessing the site, which would also need to be updated.
- 2) What is the duration of each respective phase within the project (demolition, excavation and construction)?
- 3) The provided turn paths showcase that 19m vehicles will utilise the intersection of Hume Highway and Remembrance Avenue, where the AV trucks will be turning right into Remembrance Avenue via the Hume Highway (eastbound towards the site). After further investigation, it is noted that the phasing at the intersection of Hume Highway / Remembrance Avenue operates as a diamond overlap where two respective opposing right turns are

allowed to filter through oncoming traffic, simultaneously (during phase A). This can be problematic due to limited intersection space as an AV turning right (EB) can potentially collide with a service vehicle (WB) conducting its own right turn. An updated turnpath is required which shows a 19m AV turning right heading eastbound whilst a design vehicle (8.8m MRV) is turning right heading westbound, simultaneously.

Kind Regards,

Bikram Singh
A/Network & Safety Officer
North West Precinct
Greater Sydney
Transport for NSW

T 02 8849 2311 | M (WFH) 0433 632 525
Level 5, 27 Argyle Street, Parramatta, NSW 2150

From: Stefan Chalouhi [<mailto:stefanc@adcoconstruct.com.au>]
Sent: Friday, 15 January 2021 8:28 AM
To: Bikram Singh <bikram.singh2@transport.nsw.gov.au>
Subject: RE: LHAP MSCP - SSD10388 - Condition B13 - Construction Traffic and Pedestrian Management Plan

Hi Bikram,

Thank you for your confirmation.

Is there any chance we could have your response back by Monday?

Reason being is that this is a condition currently delaying CC.

Regards,

Stefan Chalouhi
Project Engineer

ADCO Constructions

Level 2, 7-9 West Street, North Sydney NSW 2060

T 02 8437 5000 M 0449 250 050

W https://clicktime.symantec.com/a/1/UhRNQRzZ8h5cU6ykrCRW3d2_LdcYxbQ5CQacxvptWh8=?d=IjgB9zxTmkSHKVFliAng4BnzPLn5jYVs6ikUN-U1vmC0P3lavcGP_iDKtnHIG22qieoKgrx4y6pVzY_VUTdbKZe738O9SK_CvRNvkukwZcRL7hR-c5jkiQqpUZZ2DKfwiNHenZwSYIRayXn6ZtGCD1ldLE0ZunJEbeVa6oyXzVdAB9sMmnybZjAEaV8BDiQhXxSi2m6GeipetO1pjD-Xpi1NtgQV5tlH1eZ2Mo1DJh1mZIJjKIGZHa5VtPmh85Ev1flAXkfilyTuOqaP8zfrX-rDUscYPIVvUpKYM2Rc-6es2v01_st-imx7FU7vqzuQdKsKfHrsDpg1o2r2NuMDZJKhFBKUwayCvXkl5-uJEe-TcB1B38nmQngMWEQ7bTHUsOvRdDytDjX6O1p4s_7w9HzvkJjW8zcmY37Eop7GNPBL5SV87oTqGl6pLsMk24I6_oEmMAm4eLdXBn-7Qx3SNMQvmMEG8ZIVos6cA1gp2IFjPq3AL8-tvIKexKfQpw-pa_mKDY3hcfbv5jWxEOCHlhiHPgFJLFzeRUOGWj_hYmF4xBlwTGj7DS2&u=www.adcoconstruct.com.au



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From: Bikram Singh <bikram.singh2@transport.nsw.gov.au>
Sent: Thursday, 14 January 2021 1:56 PM
To: Stefan Chalouhi <stefanc@adcoconstruct.com.au>
Subject: RE: LHAP MSCP - SSD10388 - Condition B13 - Construction Traffic and Pedestrian Management Plan