CONSTRUCTION TRAFFIC MANAGEMENT PLAN

Construction of a Hospital Redevelopment at 369-381 President Avenue in Kirrawee

Prepared for: Imagescape Design Studios

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1. INTRODUCTION

ML Traffic Engineers was commissioned by Imagescape Design Studios for the preparation of a construction traffic management plan for the demolition, evacuation and construction of a Hospital Redevelopment at 369-381 President Avenue in Kirrawee. The site has frontage to President Avenue and Hotham Road.

A four level basement car parking area will be constructed on the existing surface car park on the corner of President Avenue with Hotham Road. The driveway to the basement located on Hotham Road. There is a smaller surface car at the northern end of Hotham Road and adjacent to the porte cochere.

The existing buildings will be demolished.

There will three construction driveways:

- One at the basement entrance and exit
- The entry of the porte cochere (entrance only)
- The combined entrance/exit of the porte cochere

Implementation and approval of the Construction Traffic Management Plan requires approval from Council.

The following activities will be undertaken in the public areas:

- Construction driveway on Hotham Road as stated above
- A work zone on Hotham Road adjacent to the porte cochere exit for the general construction stage
- Demolition and excavation, and the construction of the basement car park will not need a work zone since the trucks will be able to enter and leave in a forward manner

The works zone will be 30 metres in length to accommodate an articulated truck. Truck swept paths have been undertaken and is discussed in the report.

Demolition trucks will enter the site via the existing southern driveway on Hotham Road. The area where the existing car park and administration will be used by demolition trucks. Figure 1 shows the demolition parking area. As each building or part of the hospital is demolished, there will greater manoeuvrability for the demolition trucks.

Once the existing above ground level buildings are demolished, excavation for the four basement level will occur. The area to the north of the basement (more than half of the hospital site) will be used by excavation trucks. The existing driveway on the northern end

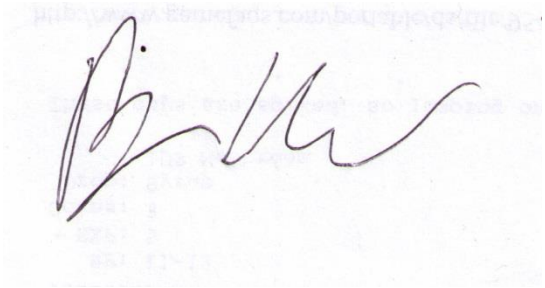
of Hotham Road will be used. There will excavation work for the buildings as well but will be for footings and foundation and will be relatively minor when compared to the four basement level

The construction can be broken into three parts: basement car park construction, construction of the east and west buildings. The basement scar park will be constructed first since both wings of the hospital are above the basement. The construction of the basement parking will not need a work zone. Trucks will be able to enter and leave the site in a forward manner to the area north of the basement parking

The construction site is located near the St Catherine Laboure Catholic School. There will be no truck movements travelling through the school zone when it is operating.

The following traffic control plans have been prepared:

- Pedestrian management plan to ensure that pedestrians are aware of the construction driveway
- Traffic controllers will assist the truck movements to and from the construction works zone as required



Benny Chen
Principal
(NER)

Figure 1: Truck area for demolition

Figure 2: Truck area for Excavation

2. PARKING IMPACT OF WORKS

The works zone on Hotham Road on the property frontage will reduce the available parking supply by five car spaces respectively.

The loss of the above car space will have a minimal impact since there are vacant car spaces nearby in the residential area on the respective streets. The nearby residents have street frontage on their property should they wish to park on street for themselves and their visitors.

All car parking offsite by the construction workers will be in legal parking areas and not on the verges or footpaths.

Where possible, construction workers will park within the on-site basement or at the surface level car park area car park.

3. TRAFFIC IMPACT OF WORKS

As discussed previously, traffic controllers will guide truck movements to and from the works zone on Hotham Road.

Traffic controllers will temporarily stop Hotham Road traffic travelling north bound.

The interruption of north bound traffic on President Avenue through the implementation of a Traffic Control Plan for up to 90 seconds will disrupt three cars on average outside of the commuter peak hours (when the existing hospital traffic is removed) . This disruption, although significant to the drivers involved, is acceptable given the need for construction activity within a construction works zone and is relatively modest with minimal impacts on the nearby road network.

Pedestrian management will be provided at the construction driveways.

The impact on local traffic of construction traffic on the adjacent roads (such as Chelmsford Parade, and Bidurgal Avenue) will be kept to a minimum. The following will be implemented to achieve this:

- The construction trucks travelling to the site will be using major roads that permit trucks and through traffic such as Princes Highway, Old Princes Highway and President Avenue
- One of the requirements for a traffic controller is to stop traffic when there is a gap in the traffic stream to minimise traffic impacts. Hence the implementation of the traffic control plan will be aimed at minimising traffic disruption

- The timing of the truck arrivals and departures will largely be outside of the commuter peak periods
- During the demolition stage, all trucks will enter the construction site and not occupy the nearby roads with a traffic control plan
- If some of the trucks are not be able to enter or leave the site in a forward manner, then these trucks will use the works zone
- Warning signs will be placed warning pedestrians to walk across the construction driveway with care
- During periods of high traffic volume (such as demolition, excavation and concrete pours etc), pedestrians will be guided walking across the construction site entrance and exit by traffic controllers.
- Truck movements will only occur during permitted construction periods on a weekday only
- The cars of the construction workers will park either on site or on the public parking areas away from the site. Where possible, some will use public transport to travel to and from the site and takes into accounts that the Gymea Train and Bus interchange is a ten-minute walk away
- Vehicle access to neighbouring properties will be retained.

The entire frontage of the property will be fenced off with temporary fencing for security and safety in accordance with WorkSafe requirements.

All statutory safety and warning signs to be erected and maintained at all times.

No machinery or material will be stored on the footpath or verges or on public areas.

Pedestrians will be advised to watch their step and on days of truck movements across the construction site driveway.

The loading/unloading of materials will either occur on site or in the works zone with a traffic control plan.

4. SITE CONDITIONS

The site is provided with adequate controls to ensure the safety and security of the construction site and to constrain environmental impacts. The following presents details of the safety, security and environmental controls provided on site.

Fencing

- A 1.8 metre fencing surrounds the site to prevent unauthorized personnel from accessing the site from entering the site. It provides a single entry point for authorised personal. Fencing also provides security and safety to the site and ensures that potential safety hazards are constrained to the site area.

Erosion and Sediment Control Fence

- An erosion and sediment control fence surrounds the site to prevent or minimise erosion while constraining loose soil to the site. The control fences will also aid in minimalizing the environmental impact on the surrounding flora and fauna.

Wooden Mats

- Wooden mats are placed at the site entrance as additional support for heavy vehicles. The mats serve to spread out the weight of the heavy vehicles whilst also aiding in stability on loose unstable ground conditions.

Cattle Grid

- A cattle grid is placed within the site boundary at the site entrance to shake loose dirt and large materials such as, pebbles and rocks, off a vehicle as it drives over the cattle grid. Vehicles exiting the site are simultaneously washed off to capture air born soil particles discharged from the vehicle as a result of driving over the cattle grid.

Silt Arrestors

- Silt arrestors are placed along the gutter adjacent to the site entrance. These catch loose silts and dirt washed of the cattle grid and out of the site entrance.

Bins

- Bins are located adjacent to the site office which allows for easy access by the vehicles on site.
- The bins are used to centralise and contain site waste material such as pallet wrap and broken/damaged materials to reduce site hazards

Emergency Evacuation point

- The emergency evacuation point is located at the front of the site office.

Site Office

- The site office is located adjacent to the entrance and next to the bins. The location allows for convenient access and view of the construction site. First aid is located in the site office. The site office allows for visitors to engage in a site induction before having to travel to far through the site.

Noise

For noise management and control on the construction site, strict work time and periods are to be followed. By following noise management time frames, the impact on the neighbours and surrounding will be reduced. It is recommended to avoid the use of heavy machinery, large delivery vehicles and loud oscillating/ impacting tools like jack hammers in the initial and end of these periods of times where possible to further reduce the impact.

Construction activity will only occur during nominated hours.

A predicted noise level assessment should be undertaken and weighed against surrounding sites and potential sensitive land uses to assess if a Construction Noise Management plan will be required for the site.

This is done by gathering all the noise impacts associated to the site and comparing it to the acceptable levels for the area. Some points to consider are as such:

- Height of noise
- Type of noise (eg. Airborne / vibration etc)
- All noises associated to the construction during all phases
- Existing noises in the area
- Examining proximity to sensitive areas
- Assessing for particularly offensive noises such as “beepers” and jackhammering
- Etc.

Local neighbours and those most affected should be notified early on in the process of the

construction times and expected times of high noise levels. Complaints to the site regarding noise levels and other noise related issues should be compiled and analysed regularly with attempts to rectify issues made.

5. TRUCK AND CAR MOVEMENTS

The details and frequency of the truck movements and the corresponding Traffic Control Plan are as follows in the following Table1 and the appropriate traffic control plan in use and the frequency.

Phase	Duration	Workers Onsite	Largest Vehicle	Loading / Unloading Location	Truck Movements	TCPs Used & Frequency
Demolition	12 weeks	10	15m articulated truck	Onsite	6 / day	TCP 1: Pedestrian Management on Hotham Road (all day)
Excavation	12 weeks	10	19m articulated truck (truck and dog)	Onsite	6 / day	TCP 1: Pedestrian Management on Hotham Road (all day)
Construction	52 weeks	50	12.5 metre long rigid truck	Hotham Road zone	4 / day	TCP 1: Pedestrian Management on Hotham Road (all day) TCP 2: Hotham Road Works Zone Management (four times a day)

Table 1: Summary of Truck Usage by Construction Phase and Traffic Control Plan Used

The number of truck movements on a daily basis is relatively low over a working day.

The inbound truck routes are as follows to the Hotham Road construction driveway:

North

- Truck drivers coming from the North will travel on Princes Highway, President Avenue, and Hotham Road

South

- Drivers from the South will travel on Princes Highway, President Avenue, and Hotham Road

East

- Drivers from the East will travel on President Avenue and Hotham Road

West

- Truck drivers coming from the West will travel on Bangor Bypass, Linden Street, The Grande Parade, Old Princes Highway, Princes Highway, President Avenue, and Hotham Road

The outbound movement is to travel on Hotham Road and turn right into President Avenue.

6. TRUCK SWEPT PATHS

Truck paths have been undertaken demolition and excavation for the truck areas as presented in Figure 1 and Figure 2 respectively to show that forward entry and exit is obtained.

The trucks are “truck and dog” for the excavation and a 15 metre long articulated truck.

The truck swept paths are presented in Appendix B.

7. PARKING AND QUEUING AREAS

All trucks will be queued within the site or at the works zone. To minimise queuing on President Avenue, and the nearby roads, a schedule of construction vehicle deliveries will

be prepared by the main contractor. This will minimise queuing into and out of the site and to ensure that once the construction vehicles arrive, the traffic controllers will be ready to manage the construction vehicles and the through traffic on President Avenue.

The expected frequency of construction vehicles are presented in Table 1. Most arrivals are pre-planned to within a time frame of 20 minutes.

Trucks are not to park in nearby streets while waiting to travel to the construction site.

8. TRAFFIC MANAGEMENT PLAN CHECKLIST

This section responds to the checklist in the document titled "Procedures for Use In the Preparation of a Traffic Management Plan (TMP)" prepared by the NSW RTA (now RMS) with the document dated 2001. The checklist is in Section C of the document.

	Traffic Management Plan Issues	Response
A	Description or detailed plan of proposed measures	Yes - see report
B	Identification and assessment of impacts of proposed measures	Yes -see report
C	Measures to ameliorate the impact of re-assigned traffic	Yes- alternative vehicle routes are available. See report
D	Assessment of public transport services affected	No - public transport not affected
E	Details of provisions made for emergency vehicles, heavy vehicles, cyclists and pedestrians	No change. Emergency vehicles and trucks have alternative access
F	Assessment of effect on existing and future developments with transport implications in the vicinity of the proposed measures	Construction works are short term
G	Assessment of effect on traffic movements in adjoining areas	No. The impacts are local
H	Public Consultation Process	Notices will be delivered by a letter drop

Table 2: Traffic Management Checklist

9. TRAFFIC CONTROL PLANS

This section discusses the preparation of traffic control plan managing both pedestrians and trucks entering and leaving the construction site and the occupancy of the kerbside lane.

The preparation of the Traffic Control Plans have been in accordance with Australian Standards AS1742.3 and the RTA Traffic Control at Work Sites (now the RMS).

Benny Chen is licensed and registered by the NSW Roads and Maritime Services to design and inspect traffic control plans (Certificate No. 2893016010).

Table 1 presents the use of Traffic Control Plans according to each construction phase and the expected frequency of use per day.

The Traffic Control Plan is presented in a clear manner to allow for the plan to be implemented by the works supervisor. The placement of the signs is from a key identifier. The works supervisor will need to be RMS accredited. The Traffic Control Plans are presented in Appendix A.

Where there are two controllers require, radios will be used to communicate the implementation of the traffic control plan between controllers.

All barriers used in traffic control will need to be compliant with Australian Standards.

APPENDIX A – TRAFFIC CONTROL PLANS

APPENDIX B – TRUCK SWEPT PATHS