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TRAFFIC MANAGEMENT PLAN

FOR

CONSTRUCTION ACTIVITIES

associated with

THE PROPOSED REDEVELOPMENT
AT
THE NORWEST PRIVATE HOSPITAL

PRELIMINARY PLANNING

Prepared for

Healthscope Ltd

By

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Report Document Control

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Appendix. Traffic management during construction sequencing. Prepared by Taylor Thomson Whitting.

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1 INTRODUCTION

Report title	Traffic Management Plan (TMP) for the construction activities associated with the proposed redevelopment of the Norwest Private Hospital (NPH)
Report purpose	To provide preliminary information about traffic and parking arrangement for the construction period in response to the requirements issued by the NSW Department of Planning & Infrastructure (DPI). To provide framework for Traffic Control Plans (TCPs) for specific works undertaken by contractors.
Report status	This report describes a preliminary TMP. The development proposal is at the Project Application stage and full details regarding the construction process and quantities of materials are not yet known. A more detailed final TMP will be developed after the development approval and appointment of a building contractor.
Client	Healthscope Ltd
Background information used for preparation of the present report	• A Transport and Accessibility Report prepared by TEF Consulting for the proposed redevelopment of Norwest Private Hospital (New Wing) in November 2013 (TEF report "13019 Rep 02 Northern Extension") • Plans of the proposed redevelopment prepared by Health Projects International • Plans of construction sequencing prepared by Taylor Thomson Whitting (civil engineers)
Consultation undertaken	• Johnstaff Projects, • Taylor Thomson Whitting (TTW) Assistance of these organisations is greatly appreciated.

2 PROPOSED WORKS

- Phase 1
  - Early works
    - column strengthening works in the basement car park
- Phase 2
  - Main works
    - construction works for the new wing above the existing ground level car park
  - Refer to **Figure 1** for location of works.
  - Refer to detailed TTW plans included in an **Appendix** to the present report.

Figure 1. Site location.

Quantities of	
• **construction materials**	• unknown at this stage,
• **fittings**	• unknown at this stage,
• **other supplies**	• unknown at this stage,
Types of vehicles	• Small Rigid Vehicles (SRV), • Medium Rigid Vehicles (MRV), • Heavy Rigid Vehicles (HRV), • Articulated Vehicles (AV) as per definitions of AS 2890.2-2002. • at this stage it is not proposed to use B-Doubles (BD) • low-loaders may be used to deliver machinery
Frequency of truck movements	• Cannot be determined at this stage due to unknown material quantities. ◦ Based on the overall size of the development, typical frequencies are expected to be in the order of 10-20 two-way truck movements per day, except a short period of concrete pours when 20-30 trucks per day can be expected.
Duration of construction period	• The current target construction programme specifies two main Phases as follows ◦ Phase 1 – 28 weeks ◦ Phase 2 – 76 weeks • In order to carry out construction activities, the builder will need to utilise various parts of the existing car parking areas. ◦ Refer to detailed TTW plans submitted separately • Each Phase has been broken down into Stages to reduce the impacts on car parking provision. ◦ Refer to **Tables 2.1** and **2.2** ▪ Information about temporary loss of car parking is presented.
Car parking provision and demand	• Investigations into the existing car parking demand at the NPH indicate that at least 250 car parking spaces remain unoccupied even during the peak parking demand. • Information presented in **Tables 2.1** and **2.2** indicates that between 18 and 162 spaces will be unavailable to the staff and visitors at various construction Stages. ◦ The most significant impact will be during Stage 4 of Phase 2 when 114 spaces will be unavailable for 70 weeks ◦ Even then some 136 space will remain vacant and available for staff and visitors should an unusually high parking demand occurs. ◦ The number of construction workers on site is not yet known, however, it is not expected to exceed 50 people even during the most demanding works. ◦ It is evident that 136 remaining spaces will be sufficient to accommodate construction workers as well.

Table 2.1 Staging of Phase 1 (Source: TTW).

Stage	Level	Number of car spaces lost (per level)	Total number of car spaces lost	Expected duration of stage
1	Ground	29	53	5 weeks
	Basement	24		
2	Ground	37	67	5 weeks
	Basement	30		
3	Ground	37	67	5 weeks
	Basement	30		
4	Ground	37	67	5 weeks
	Basement	30		
5	Ground	23	37	2 weeks
	Basement	10		
6	Ground	27	36	2 weeks
	Basement	10		
7	Ground	26	32	2 weeks
	Basement	6		
8	Ground	10	18	2 weeks
	Basement	8		
			TOTAL	**28 weeks**

Table 2.2 Staging of Phase 2 Source: TTW.

Stage	Level	Number of car spaces lost (per level)	Total number of car spaces lost	Expected duration of stage
1	Ground	114	161	2 weeks
	Basement	47		
2	Ground	114	162	2 weeks
	Basement	48		
3	Ground	114	152	2 weeks
	Basement	38		
4	Ground	114	114	70 weeks
	Basement	15*		
			TOTAL	**76 weeks**

3 ROAD NETWORK CONSTRAINTS

Roads unsuitable for construction traffic	Local roads within residential areas shall not be used.
Roads suitable for construction traffic	Main roads provide opportunities for delivery of construction materials and removal of excavated earth / demolition materials. Preferred access routes are shown in **Figure 2**.
B-Double and high vehicle restrictions	• RMS approved roads for B-Doubles near the site are shown in **Figure 2**. • RMS approved roads for high vehicles (4.6 m) are the same as the B-Double routes in **Figure 2**.
Network capacity	• The likely number of construction traffic movements will be low in comparison with the existing traffic volumes and will not have a negative effect on the street network operation.
Safety constraints	• B-doubles and high vehicles shall use only RMS approved routes,
Public transport	• The existing bus stops will not be affected by the construction activities.

Figure 2. Site access routes.

4 RECOMMENDED TRAFFIC MANAGEMENT ARRANGEMENTS

General requirements	• Minimise impact on ◦ existing NPH activities, ◦ operation of loading docks, ◦ pedestrian access, ◦ staff and visitor vehicular access, ◦ residents of the surrounding area ◦ other businesses in the Norwest Business Park (NBP)
Basis for recommendations	• road network and site constraints, • proposed staging of works, • proposed location of works.
Status of recommendations	Preliminary due to incompleteness of detailed information about proposed works. To be reviewed in the course of preparation of specific TCPs.
Existing car parking areas	• On-site parking areas provide substantial spare capacity and will be available for construction staff parking at most times.
Ambulance access	• Relocation of existing services will not be required. Emergency vehicle access from Norbrik Drive shall be maintained.
Pedestrian access points and links	• To be maintained and protected.
Loading docks	• Relocation of existing services will not be required. All access by delivery and service vehicles is to be maintained via the existing service driveway in Norbrik Drive.
Site access for construction vehicles	• Refer to **Figure 2**. • The existing access driveways to the basement and the ground level car parks have sufficient capacity to provide access for construction vehicles whilst maintaining the same for staff and visitors. ◦ It is proposed that one of the two entry ramps to the basement car park be closed during Stages 5 and 6 of Phase 1 and Stage 1 of Phase 2 (a total of 6 weeks). ◦ This is acceptable from a traffic engineering point of view. ▪ Due to most the land around the NPH being vacant, traffic volumes in Norbrik Drive are currently much lower than planned and the likelihood of conflict between general traffic and vehicles queueing to enter the car park is minimal. • Marshalling of vehicles or strict scheduling of arrivals shall be utilised to prevent queueing of construction vehicles for loading/unloading at the site driveways. ◦ It is recommended that the southern section of Norbrik Drive be utilised for this purpose. ◦ Detailed arrangements will form part of the final TMP and TCPs after appointment of the building contractor and finalisation of the Construction Management Plan.

5 GENERAL REQUIREMENTS FOR TCPs

All TCPs shall comply with the provisions of	• Australian Standard 1742.3-2002 Manual of uniform traffic control devices - Traffic control devices for works on roads, • RMS Manual "Traffic control at work sites" (TCWS), • RMS Road Design Guide, • RMS Specification G10 – Control of Traffic, • RMS Road Safety Audit Guide, • RMS Interim Guide to Signs & Markings, • RMS Regulatory Signs Guide, • RMS Road Occupancy Manual, • AUSTROADS Road Safety Audit Guide, • AUSTROADS Guide to Traffic Engineering Practice, Parts 1 to 15, (as required), • Australian Standard AS1742 Manual of uniform traffic control devices, Parts 1, 2 and 4 to 14, (as required), • Australian / New Zealand Standard – AS/NZS3845 Road Safety Barriers Systems.
Qualifications	• All TCPs are to be prepared by qualified persons only, holding an RMS certificate at an appropriate level.
Time periods of construction traffic	• Shall generally be restricted to non-peak periods, reducing the potential for interaction with general traffic and pedestrians.
Provision for existing users	• Ensure that appropriate guidance is provided to staff and visitors of RACF Campus wherever there is a change of their existing access or circulation, • Proposed changes will be identified by advice to the Project Director. On approval, significant changes will be advised to staff. • Ensure that all road users are considered, including construction workers, motorists, cyclists and pedestrians.
Signposting and linemarking	• All signs, devices and linemarking shall be standard to ensure consistency and clarity for road users, • There shall be no conflicting messages between existing and temporary signs.
Parking for construction staff	• Only limited spaces will be located on site. Proposed parking locations on streets, if required, shall be part of the TCPs, determined in consultation with Council.
Information	• Road users and local communities shall be informed in relation to changed traffic conditions.

Policies in addition to traffic management and control	All construction personnel, including contractors, will be made aware of • OH&S Policy, • Environmental Policy, • Quality Policy, • Drug and Alcohol Policy; and • other policies as required by the Project Director. • All construction personnel will be required to comply with the Project Director's site access procedures.
Approvals	• Contractors shall obtain the necessary approvals from Council and RMS for all works within the road reserve and/or any changes to existing infrastructure, installation and/or changes of any regulatory traffic control device.
Public transport	• TCPs shall consider existing public transport routes ◦ to minimise their disruption, ◦ to promote use by construction staff,
Access to properties	• maintain existing property access points, • maintain access to community facilities.
Temporary access points and associated tracks	Shall be • designed in accordance with RMS guidelines, • accommodate the largest vehicles servicing the property, • positioned at a location that has safe intersection sight distance, • constructed of an all weather surface with appropriate drainage; and • provide the minimum inconvenience to the users. Where necessary, entrance gates and boundary fences shall be adjusted to suit the temporary access tracks.
Active work areas	Shall be isolated from hospital and general vehicular and pedestrian traffic by either • provision of sufficient clearance from work areas, or • provision of safety barriers and/or fences, • if provision for queuing on site is not available or sufficient, delivery truck drivers or dispatchers shall notify the site before trucks leave their depot and again on approaching the site to minimise waiting times, • identify queuing locations if not solely on site in consultation with Council.
Traffic control devices	Shall be • installed in accordance with warrants and relevant guidelines, • regularly maintained, • controlled by appropriately trained traffic control staff. Proposed locations of traffic control devices shall be identified by advice to the Project Director.

Unplanned incident management – road network	• inform RMS Traffic Management Centre (TMC), Police and emergency services as required, • if resources are available, provide initial response to unplanned incidents with the aim to make the incident scene safe, and prevent further harm to persons or property, • provide support to emergency services, including traffic control in the vicinity of the incident, • during major incidents, provide a senior construction representative on-site to liaise with the RMS and emergency service agencies; and • reschedule planned works that will interfere with the incident, or create additional delays to those road users already affected by the incident.
Unplanned incident management – on RACF site	Develop an Incident Management Plan which will incorporate standard operating procedures for managing construction site unplanned incidents and emergencies. This Plan may include • roles and responsibilities of Contractor's and RACF staff in the event of incident and emergencies, • emergency response procedures dealing with different category of emergency arising from construction, traffic, environmental incidents, • identification of available response resources, • control, coordination and liaison arrangements with the RMS and emergency services. The Incident Management Plan shall be submitted to the Project Director for approval. All incidents shall be immediately reported to the Project Director and/or the Project Director's nominees.
Inspections	Carry out regular inspections of temporary traffic controls, as per requirements of RMS TCWS and AS 1742.3, including • pre-start and pre-closedown inspections of short-term traffic control, • weekly inspections of long-term traffic control, • night inspections of long-term traffic control.

Audits	Prepare and manage an audit program. The audit scope shall include, but shall not be limited to the following. • all necessary approvals • notifications • compliance with Standards and regulations • minimum disruption for existing users • TCP applicability if conditions changed • road and workplace safety provisions – all travel modes • speed limits • marking and delineation – compliance and condition • pavement condition • traffic control devices – whether in good order and conform with TCP • variable and temporary controls – approvals, application • clearance to excavation and lateral hazard • appropriately certified traffic control staff • record keeping The Audit scope and program shall be submitted to the Project Director for approval.
Service Provider responsibilities	• advise and obtain TCP approvals from Council and/or RMS as required, • implementing TCPs and procedures for the whole construction duration, • communicate TCP information to subcontractors and people working on the site, • ensuring subcontractors' compliance with TCP requirements, • keep TCP records as required by the approving Authority, • incident management, • identify any other road or street work sites which may impact on TCP implementation, • arrange additional site TCP's as necessary. Provide copies of all correspondence relating to TCPs to the Project Director.

Appendix.

Traffic management during construction sequencing.

Prepared by Taylor Thomson Whitting.

EARLY WORKS

Stage	Level	Spaces Lost	Columns Accessable
1	Ground	29	6
	Basement	24	
	Total	53	
2	Ground	37	8
	Basement	30	
	Total	67	
3	Ground	37	8
	Basement	30	
	Total	67	
4	Ground	37	8
	Basement	30	
	Total	67	
5	Ground	23	4
	Basement	12	
	Total	35	
6	Ground	26	2
	Basement	10	
	Total	36	
7	Ground	33	2
	Basement	6	
	Total	39	
8	Ground	16	2
	Basement	8	
	Total	24	
Total Columns:			40

NOTE: THESE NUMBERS ARE PRELIMINARY AND ARE SUBJECT TO CHANGE BASED ON CONTRACTORS INPUT.