



NSW Department of
Commerce

Royal North Shore Hospital Demolition of Building 13 (Old Maternity Building)

Methodology Statement

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1 Scope of Proposed Works

The scope of the proposed works is the full demolition of Building 13, including near-surface footings and slabs. Once the demolition is completed, the disturbed areas will be graded and covered with turf.

2 Final Physical Character and External Appearance

Once the demolition is completed, the only above ground features that will be visible are:

- A 2100 mm high chain wire fence around the site. This fence will have lockable gates to allow maintenance staff into the area for grass cutting, etc.
- The construction/repair of existing concrete dish drain along the western side of the covered walkway to collect surface stormwater runoff.
- External street lighting to maintain adequate illumination for night-time users of the surrounding areas. The contract allows for three pole-mounted lights to be installed.

3 Construction Issues

The Construction contract was awarded to Cardinal Project Services on the 14/2/06. A start-Up Meeting was also held on the Hospital Grounds on the 20/2/06.

Cardinal Projects Services have since submitted their Project Manual (No. CPS 601) containing:

- Emergency Procedures
- Safety Management Plan
- Environmental and Site Management Plan
- Program
- Work Method Statement
- Dilapidation Report
- Licences and Insurances

A copy of the contractor's Project Manual has been provided to RNSH for review.

3.1 Demolition Program

The contract period is 14 calendar weeks. Contractor has submitted a program which has four (4) phases that would be to some extent carried out concurrently. However, the general sequence of work is as follows:

Phase	Period
Access and awnings	1 week
Demolition of single storey part of building (not including section nearest to the MRI Building)	3.5 weeks
Demolition of 3 storey building including basement areas	8 weeks
Demolition of single storey part of building and basement nearest to the MRI Building	4 weeks

Further details of the demolition program are in the contractor's project manual. The progress on site will be monitored by Commerce.

3.2 Removal of Hazardous Substances

From preliminary investigations it has been determined that Building 13 contains a number of hazardous substances such as asbestos, lead paint, PCB's, and banks of old batteries containing lead acid and nickel cadmium.

These hazardous substances will be removed first by Cardinal Project Services. The site will be inspected by a specialist consultant and certified as free of hazardous materials prior to any demolition work commencing.

Air monitoring stations will be set up on the perimeter of the contract area to monitor air quality during the removal of hazardous substances.

3.3 Security

During the whole of the contract period, the site will be completely enclosed with Temporary Fencing and Scaffolding as required by relevant Codes of Practice and Workcover regulations to secure the site against unauthorised access.

Cardinal will provide appropriate signage around the perimeter of the site warning of the dangers that may be present and to deter unauthorised access. Also, temporary lighting will be installed to provide illumination of the work area during night-time periods when the site is most likely to be unattended.

3.4 Traffic management

The Pedestrian & Traffic Management Plan submitted by Cardinal Project Services details the measures proposed to control zones of conflict between construction traffic and public vehicular and pedestrian traffic.

The Plan and traffic routes are shown in Cardinal's manual. The main features of the plan are:

- Access to the site will only be from the Pacific Highway via Reserve Road.
- Where possible truck movements will occur outside of peak traffic flow periods.
- Inconvenience to Reserve Road users will be minimised through best construction and traffic management practices and include persons to hold traffic control ("lolly-pop) signs to control traffic movements when trucks are approaching and leaving the site.
- Traffic during construction will be managed in accordance with the requirements of Australian Standard 1742.3 - 1996 *Manual of Uniform Traffic Control Devices Part 3: Traffic Control Devices for Works on Roads*.

Again, this will be monitored for compliance and implement any further improvements as required.

3.5 Excavation and earthworks on the site

All excavations and trenches created during the demolition process will be backfilled as soon as possible. If they are to be left for any period of time, the contractor will provide appropriate fencing or cover them with metal plates.

3.6 Transport of materials on and offsite

Under their OH&S Management obligations, Cardinal Project Services have developed Safe Work Method Statements (SWMS) detailing how they intend to manage materials handling on the site and load this material for removal off the site.

These SWMS have been examined by Commerce to ensure that they adequately cover the safe movement of materials and adequate procedures are put in place to minimise risk to workers, passers-by, general public and adjoining structures.

Commerce will monitor the demolition works to ensure compliance with the agreed procedures and any further improvements that may be required.

3.7 Waste disposal

Cardinal Project Services will comply with the NSW Government's *Waste Recycling and Processing Corporation Act 2001* and the *Waste Avoidance and Resource Recovery Act 2001*.

Any wastes generated by the demolition work will be disposed of in accordance with all relevant statutory requirements. All waste disposal records will be kept as required by law. Compliance with all of these requirements will be monitored by Commerce.

The Contractor will be required to complete WRAPP and Waste Disposal Report bi-monthly and return to Commerce at site meetings. Commerce will check that waste is being disposed of appropriately. Commerce will keep copies of these reports on file and provide the Client with the summary WRAPP report to ensure that the client can comply with the NSW Government WRAPP reporting requirements.

3.8 Construction compound (including storage of chemicals and hazardous materials, onsite amenities, storage of plant and equipment)

Cardinal's Manual shows the location of the temporary site fencing and arrangement of the contractor's compound. In general the site compound is as close as possible to the external walls of the building.

The contractor proposes to use a part of the existing building as a "site office" in the initial phase of the project. As demolition progresses, portable site sheds will be brought on site and placed within the compound.

All materials will be handled inside the compound. All rubbish skips and stockpiles of demolition material will be contained within their compound fence.

4 Hours of Work

Working hours will be:

- Construction hours will be limited to between 7 am to 5 pm Monday to Friday.
- Works on Saturdays will require approvals.
- Work will not be permitted on Sundays and public holidays.

In essence, the works will be carried out during normal working hours. Under the terms of the General Conditions of Contract used by Commerce, the Contractor must observe *Statutory Requirements* which regulate working days and hours of work.

5 Construction Environmental Management Safeguards

The manual submitted by Cardinal Project Services addresses the State Government's policy to improve the performance of the NSW construction industry, preparation of an environmental management plan (EMP) is mandatory for all projects undertaken by or on behalf of government agencies or where funding is being provided by the government.

5.1 Construction Areas

The Contractor's plans demonstrate that:

- A temporary guard fence will be installed around the site area to form a secure compound as shown in the location plan with controlled vehicle and workforce access points.
- The area within the compound is to be maintained in a clean and tidy state at all times.
- No plant and equipment storage areas or areas for storage of petroleum, distillate and other chemicals will be permitted outside the contractors compound.

5.2 Plant and Equipment

- Construction equipment will be maintained to meet DEC (ex EPA) air and noise requirements.
- All internal combustion engines will be maintained and in proper working order to ensure air and noise emissions were minimised.
- No blasting will be permitted during construction.
- No vehicle maintenance will be permitted outside the work area except in emergencies.
- Mufflers will be fitted to all construction plant and equipment to meet DEC (ex EPA) air and noise requirements.
- All plant/equipment will be inspected daily to avoid leakage of fuel, oil or hydraulic fluid to the worksite. Machinery found to be leaking will be repaired or replaced.
- All machinery will be secured against vandalism outside working hours.

5.3 Waste Management and Contamination

- Waste management practices for the proposal will follow the resource management hierarchy principles embodied in the *Waste Avoidance and Resource Recovery Act 2001*.
- Where possible any non-contaminated excavated material will be incorporated in the earthworks for the proposal.
- Excess concrete will be transported off-site for recycling.
- No burning or burying of wastes will be permitted on site.
- All non-recyclable waste will be disposed of at legally operating waste disposal sites.

- Cleaning out of batched concrete mixing plant will not be permitted within the construction area.
- No contaminated material will be used in any earthworks.
- If any contaminated material were encountered during excavation then safe work method statements and appropriate practices will be implemented.
- Any contaminated material will be classified first and then disposed of in accordance with EPA requirements at an EPA licensed waste facility.
- The workforce will use temporary 'portaloo' toilet facilities on site.

5.4 Erosion and Sediment Control

Cardinal Project Services have submitted their site specific "Site Environmental Management Plan" for the control of temporary erosion, sedimentation and drainage controls.

This plan has been reviewed and is considered adequate. These controls will be monitored during demolition of the building and improvements implemented if required.

- Erosion and sedimentation controls will be implemented as shown in the three plans attached
- Soil and Water Management Plans for the demolition, construction and on-going phases of the project.
- Regular monitoring and maintenance of the sedimentation controls will be implemented to ensure they perform in a fully functioning condition at all times.
- Any material stockpiles will be located within the temporary guard fence and be protected from possible erosion.
- Exposed earthworks areas will be stabilised as quickly as possible.
- Mud deposited on the road network due to truck movements to and from the site will be either prevented or cleaned immediately.

5.5 Vibration

It is recognised that the demolition site is well within the Royal North Shore Hospital Campus. Adjacent buildings are used for medical services that have equipment that is very sensitive to vibration. The Contractor is aware of this and has made allowances by adopting the following practices:

- Early warning to occupants in adjoining buildings
- Scheduling the works in areas adjacent to buildings containing sensitive equipment to be carried out when the equipment is not being used.
- Using high pressure hydraulic systems to split concrete structures instead of pneumatic hammers,
- Avoiding dropping demolition materials where possible

5.6 Noise

Adjacent buildings are used for medical services and accommodation for nursing staff. The movement of vehicles on and around the site and the activities required for demolition of a large building will generate some unavoidable noise which could be considered as a nuisance to people in adjoining buildings.

The contractor has detailed in his plans the measures that will be taken to minimise the impact of this nuisance noise. In general these will include:

- The contractor will use the best available techniques not entailing excessive cost to meet DEC (ex EPA) construction noise requirements as far as practicable.
- Construction noise will be attenuated with the use of screening, acoustic enclosures, engine silencing and substitution by alternative processes to reduce noise emission levels from typical construction equipment.
- Plant and equipment will be properly maintained.
- Equipment will be checked and calibrated to the appropriate design requirements and to ensure that maximum sound power levels will not be exceeded.
- Where possible, plant will be strategically positioned on site to reduce the emission of noise to the surrounding neighbourhood and to site personnel.
- Any unnecessary noise will be avoided when carrying out manual operations and when operating plant.
- Any equipment not in use for extended periods during construction work will be switched off.
- Good relations with people living and working in the vicinity of the construction site will be established at the beginning of the project and be maintained throughout the project. Any complaints will be registered, and then addressed seriously and expeditiously.

5.7 Air Quality

Prior to the commencement of asbestos removal air-monitoring stations will be established around the perimeter of the site compound.

- Best management practices will be implemented for minimising off-site dust impacts from the project.
- Loose materials transported in trucks travelling on public roads will be covered.
- Tailgates of all vehicles transporting materials on public roads will be securely fixed.
- Construction work will be regularly monitored and hand held water sprays will be used to suppress dust as required.

6 Site clean up and Landscaping

The site will be receiving minimal landscaping at the completion of the demolition. The ground surface will be graded to provide adequate cross fall for surface drainage. The surface treatment will be turfing with a grass species (probably “Buffalo” grass) to match the existing grass on surrounding lawn areas.

A chain wire fence with gates where appropriate will be erected around the site to prevent unauthorised car parking on the grassed areas.

7 Community Consultation

- Procedures for monitoring complaints and taking appropriate actions will be implemented.
- A complaints register will be maintained.
- A sign will be erected with the contractor’s name and telephone number for enquiries.

8 Conclusion

The proposed Project Manual “Number CPS 601” submitted by Cardinal Project Services for the demolition of Building 13 (Old Maternity Building) in the Royal North Shore Hospital Campus is considered adequate and will always be monitored by Commerce in consultation with the RNSH staff for any further improvements.

Attachments

- A Start-Up Meeting Minutes
- B Project Manual Number CPS 601 submitted by Cardinal Holdings.