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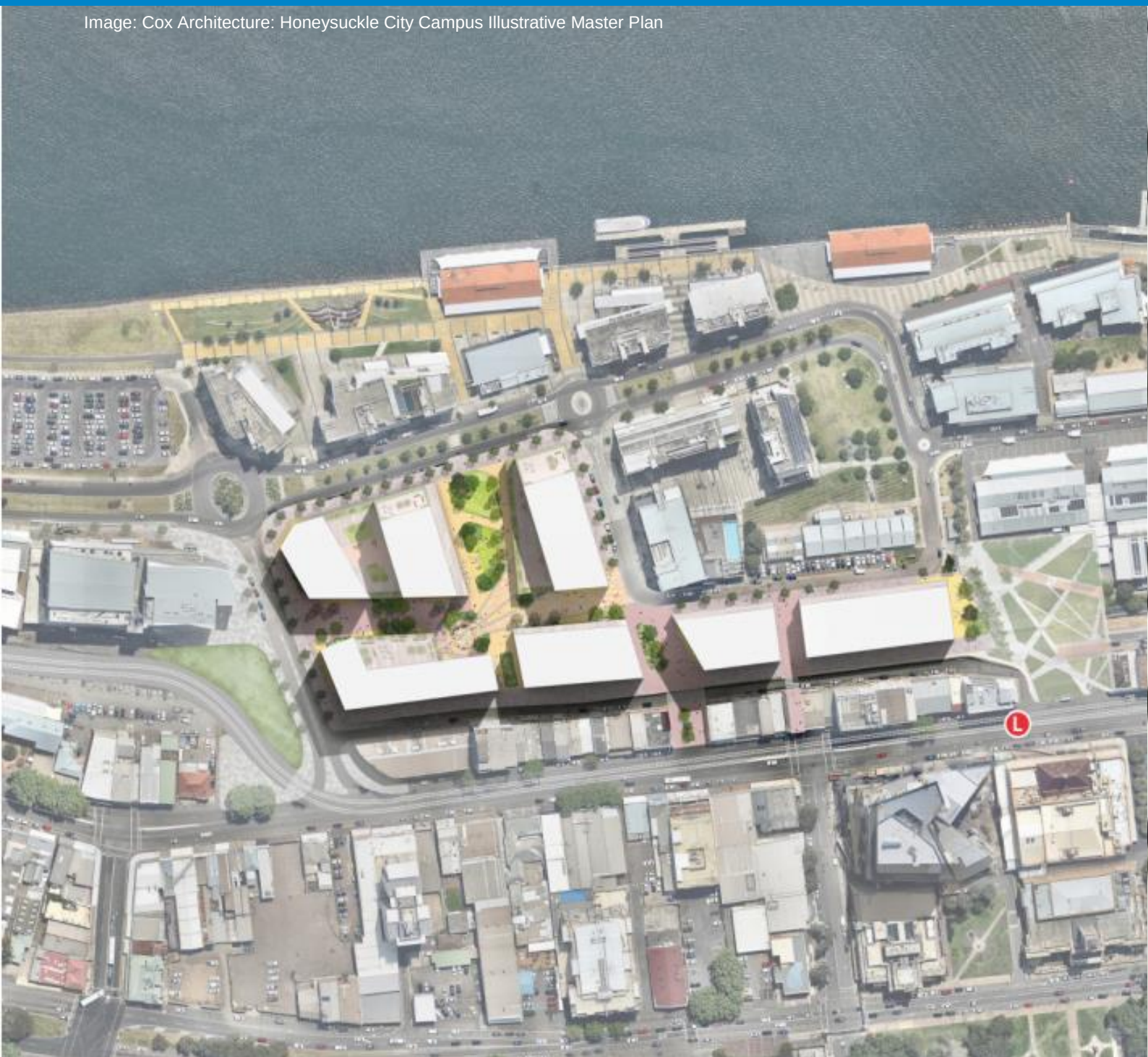
STRICTLY CONFIDENTIAL

University of Newcastle
Honeysuckle City Campus Development – Enabling Works
Preliminary Construction Management Plan

JOHNSTAFF

Image: Cox Architecture: Honeysuckle City Campus Illustrative Master Plan



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Contents

1. Introduction

1.1. Purpose of this Plan

The purpose of this preliminary Construction Management Plan (CMP) is to demonstrate that the proposed works can be executed in accordance with legislated safety and environmental requirements with minimal inconvenience to the surrounding land users, neighbours and the general public. It is to be used in the submission of a Development Application for the Honeysuckle City Campus Development - Enabling Works Stage 1A

Council Pre-DA Minutes Requirements:
The following matters are considered to warrant further detail, consideration or amendment prior to the submission of a Development Application:

- Waste management of soil during and after works (disposal of excess fill)
- Dewatering (handling of contaminated or sediment laden water), approvals required for these works,
- Acid sulfate soils
- Noise (construction on site and on roads including dewatering pumps, hours of operation, etc)
- Dust from site and soil stockpiles and from grouting processes
- Tracking of material onto roads during site works
- Construction environmental management in general to address these range of issues.

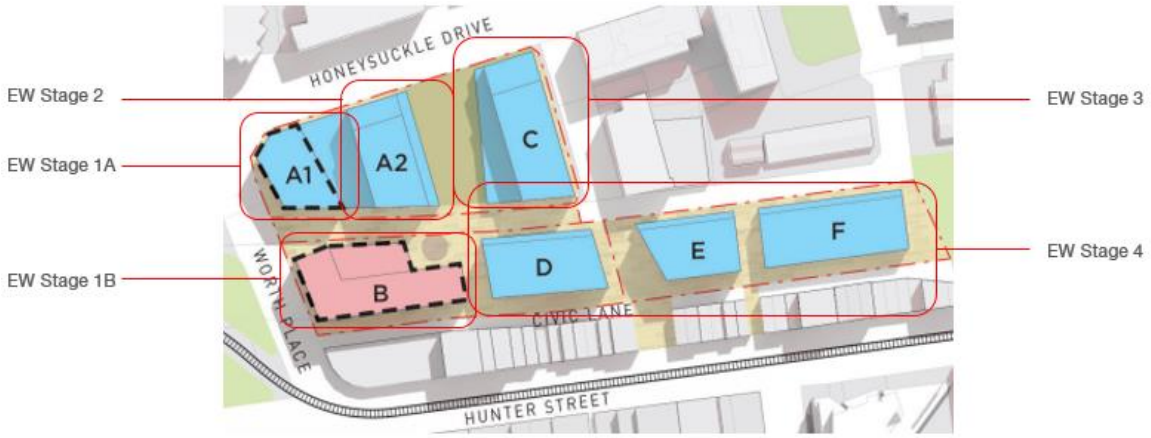

Figure 1: Enabling Works Stages

1.2. Proposed Site Works

The Enabling Works project is part of Stage 0 of the HCCD project. It involves the provision of infrastructure and civil works to support future building development that is intended to occur in stages. Key elements of the Enabling Works scope include:

- Bulk Earthworks
- Extension of Stormwater Drainage lines
- Extension and expansion of Water infrastructure
- Extension of Waste Water (Sewer)
- Extension of electrical High Voltage (HV) cables into a new Kiosk Substation and Low Voltage (LV) reticulation
- Extension of Communications network to and around the site

The Enabling Works infrastructure will provide future connection points to allow subsequent joining of specific infrastructure required for individual building stages.

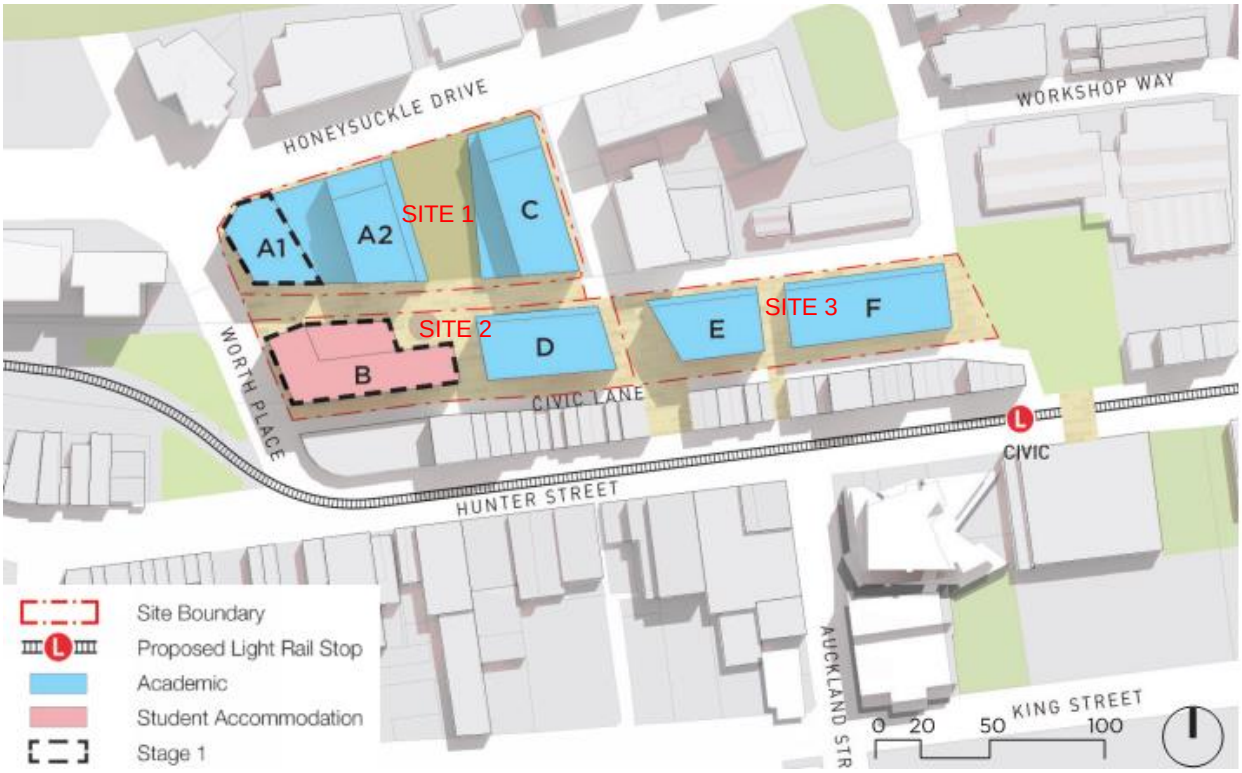

Figure 2: Concept Master Plan

1.3. Site Description

The Honeysuckle City Campus Development (HCCD) project aims to increase the University's presence within the Newcastle CBD through a large scale staged development that will help transform the city centre, enhance the University's reputation, and support future University growth. The University of Newcastle (UON) has committed to the strategic acquisition of land on the Honeysuckle site in Newcastle's CBD. This area comprises three sites:

- Site 1 (8,546sqm), has been secured through deposit with final purchase subject to the terms of the agreement being met; and
- Site 2 (5,880sqm) and Site 3 (6,478sqm) remain as options for the University to purchase subject to rezoning.
- It is understood that the Wright Lane site (between Sites 1 and 2) does not form part of the UON acquisition.

The HCCD Enabling Works project was initiated to support the Honeysuckle City Campus Development by providing critical site infrastructure and site preparation to support future development stages.

The Concept Master Plan is illustrated under Figure and includes indicative development yields, outlined in Table 1 which have been used to undertake a demand analysis.

Table 1: Indicative Development Yield and Stages

Building	GFA	Site	Stage	Use
Building A1	4,608m²	Site 1	1	Academic
Building A2	10,299m²	Site 1	2	Academic
Building B	11,828m² 394 beds	Site 2	1	Student Accommodation
Building C	12,217m²	Site 2	3	Academic
Building D	9,415m²	Site 2	4	Academic
Building E	7,158m²	Site 3	4	Academic
Building F	7,049m²	Site 3	4	Academic
Total GFA	**62,573m²**			
Total Target/ Permissible*	62,659m²			

1.4. Prior to the Commencement of the Works

Prior to the commencement of Works on site, the following procedures will be undertaken:

- Notify Newcastle City Council and neighbouring properties of intention to commence works.
- Ascertain all relevant project information, applicable standards, statutory requirements and conditions, including authorities having jurisdiction over the Works.
- Obtain all relevant insurances, permits and approvals and pay all associated fees and deposits.
- Undertake a dilapidation report that provides a photographic record of the site and surrounding areas and properties as well as a record of existing noise and dust levels for use as a base for ongoing monitoring.

2. Site Operations

Following appointment, the Head Contractor will be obliged to develop and provide a detailed Construction Management Plan that will incorporate WHS, Environmental and Quality management. This plan will be developed specifically for the subject site a nd contract works. The plans will take into consideration the live city working environment as well as any other site-specific risks that have been identified and document the implementation of control measures to effectively mitigate those risks.

2.1. Legislative Requirements

The Works will be undertaken in accordance with, but not limited to, the following legislative requirements:

- Protection of the Environment Operations Act and Regulations;
- Approved Methods for the Modelling and Assessment of Air Pollutants in NSW (EPA)
- Environmentally Hazardous Chemicals Act 1985;
- Protection of the Environment Administration Act and Regulations;
- Work Health & Safety Act 2012 and relevant codes of practice and Standards
- WHS Regulation 2012 and relevant codes of practice and Standards;

- Australian Standard AS 2601-2001: Demolition of Structures;
- Australian Standard AS 4970-2009: Protection of Tress on Development Sites;
- Australian Standard AS 4373-2007: Pruning of Amenity Trees;
- Code of Practice for the Safe Removal of Asbestos (NOHSC:2002 (1998));
- Guide to the Control of Asbestos Hazards in Buildings and Structures (NOHSC:3002 (1988));
- Resource and Recovery Act 2001;
- Environmental Planning and Assessment Act 1979, including clause 109R for the compliance of the
- current Building Code of Australia;
- Heritage Act 1997;
- Local Government Act 1993; Disability Discrimination Act 1992 (DDA);
- Disability (Access to Premises – Buildings) Standards 2010 (Premises Standard);
- Applicable aviation standards e.g. CASA requirements; and
- Soil Conservation Act 1938.

2.2. Hours of Operation

The hours of demolition or construction including delivery of materials to and from the site shall be restricted to between, as follows or as per Newcastle City Council requirements:

- Monday to Friday inclusive 7.00am to 6.00pm.
- Saturday 8am – 1pm
- No work on Sundays and Public Holidays

2.3. Public Safety, Amenity and Site Security

Appropriate hoarding/fencing (as specified in Australian Standards and WorkCover requirements) will be installed to prevent public access and to maintain security for the various areas of the works. The works will be planned so that access to the public car park areas will be maintained to the maximum capacity, as much as is feasible during the works. Vehicular access/egress gates will be erected internally as required. These gates will be manned by qualified traffic supervisors at the times of vehicular access and egress to the Site.

The attached Preliminary Site Management Plan depicts how the development site will be contained, serviced and accessed, including designated parking for construction staff. The site plan will be further developed in consideration of the main contractors methodologies prior to commencement on site.

These measures may be staged during the works. At various times, different portions of the site may be fenced. These public and property protection measures will be reviewed at the time of contract award for the Works to ensure alignment with proposed preferred methodologies and sequencing developments and to ensure that the safety of the general public is maintained at all times during the Works. The Head Contractor will need to comply with their duty under WHS management in accordance with the legislative requirements listed in Section 2.1 of this document.

2.4. Disruption Notices and Neighbour Management

Disruption Notices
Disruptions to local services will be managed through the process of Disruption Notices (DNs). For such stoppages, the DN will describe the applicable works, timetable, issues and contingency plans. DNs are submitted by the Head Contractor to the Project Manager who will co-ordinate with and obtain written approval from the project stakeholders. Depending on the Works, these may be required between 48 hours and 3 weeks prior to commencing works dependent upon the nature of the works.

Complaints Mechanism and Neighbour Management

From the commencement of construction until completion, the Head Contractor will be required to maintain a community liaison officer on the project. This officer will be contactable by both a mobile phone and email and the contact details will be clearly advertised on site hoardings, community updates and the like. The Head Contractor will be required to maintain a register of complaints and to report to the Project Manager the status of complaints on a monthly basis. Complaints that cannot be addressed by the Head Contractor will be presented to the appointed representative from the University for resolution of the issues and for decisions to be made.

3. Environment and Amenity

The Head Contractor undertaking the Works will be required to submit for review a comprehensive Environmental Management Plan (EMP) to ensure that all elements of the plan meet all statutory requirements. The environmental performance of the Head Contractor will be monitored throughout the Works. The following specific environmental management principles will be implemented on site.

3.1. Noise and Vibration

All practicable measures will be taken to reduce the noise arising from the Works. Noise from the Site shall not exceed the limits set out in the Interim Construction Noise Guidelines (ICNG) and Environmental Protection Authority (EPA). No machine work will occur outside approved working hours unless approval has been given by the consent authority through the DN process. The following measures are proposed with reference to the ICNG:

- Use Noise Management Levels (NML's) to identify demolition, excavation and construction noise sources or scenarios that require engineering controls or administrative management;
- Promote clear understanding of ways to identify and minimize noise from construction works;
- Focus on applying all feasible and reasonable work practices to minimize construction noise impacts;
- Provide flexibility in the selection of site-specific and reasonable work practices to minimize noise impacts;
- Encourage construction/ demolition work to be undertaken within approved standard hours where reasonably practicable with noise that is audible to other premises. Approval is required for works undertaken outside standard hours; and
- The use of noise reduction techniques including, but not limited to, barriers, enclosures and silencers shall be employed to ensure compliance with construction and demolition noise criteria.

As part of the noise mitigation treatment for the project, the Head Contractor will be responsible for the checking of compliant maintenance regimes and statutory supervision of all equipment, such as making sure all trucks and machinery involved in the Works are checked for defective exhaust systems and general servicing.

Benchmarks will be used to assess vibration impacts due to the construction works. The noise mitigation treatment proposed by the Head Contractor will be included in the detailed Construction Management Plan.

3.2. Dust

Management of dust prevention strategy is to be developed by the Head Contractor, detailed in the Construction Management Plan and agreed by the project stakeholders. Examples of precautions that will be implemented during the Works include water spraying, the covering of all haulage trucks with tarpaulins, monitoring of weather conditions (including wind) and helicopter down draft. Management and contingency plans will be developed to prevent any foreseeable impacts from dust.

3.3. Odour Control

Odour problems will be minimal for demolition activity on site. All plant and machinery involved in the Works will be regularly serviced and checked for exhaust emissions and catalytic converters.

3.4. Vegetation Protection

The Head Contractor upon appointment will be required to prepare a detailed site-specific Construction Management Plan. This Plan will need to demonstrate the measures that will protect trees and vegetation being retained under the development works. Vegetation protection should be in accordance with Australian Standard 4970-2009, Protection of

Trees on Development Sites. Where branch pruning works are required, works should be carried out in accordance with Australia Standard AS 4373-2007 Pruning of Amenity Trees and the works are to be undertaken by an experienced and qualified arborist.

3.5. Stormwater, Erosion and Sediment Control

As a minimum, the erosion and sediment controls for the Works shall be designed, installed and maintained in accordance with the requirements of Managing Urban Stormwater: Soils and Construction “The Blue Book” 2004 (4th edition) and/or details provided by project engineering consultants. Reference should be made to Sediment and Erosion Control Plan.

Appropriate elements of the drainage system on the Site will be cleaned out to remove sediments, prior to commencing the Works on site. Drainage of surface run-off will be allowed to flow along existing contours (down slope) with the existing drainage system on-site of kerbs, gutters, gully pits, pipes and stormwater runoff passing through installed filtration systems prior to being discharged off-site. The site will be continually cleaned of rubble to minimise possible sediment flow during rainfall periods. Stormwater kerbs and drainage lines will have sediment controls in the form sedimentation socks.

Stormwater grate inlets surrounding works areas will be covered with geotextile fabric to allow water to enter into drains whilst retaining sediments. Should external surface run-off flow into works areas, it may need to be diverted to reduce sediment transportation. All drainage control devices will be regularly checked particularly during heavy rainfall periods. The Head Contractor will be required to prepare a detailed Stormwater Management Plan which will cover all aspects of stormwater and sediment management and control during construction.

4. Traffic Management

As part of its Construction Management Plan (CMP), the Head Contractor is required to submit a Construction Traffic Management Plan for approval prior to commencement of the works. The CMP will detail site access, pedestrian protection measures and all associated vehicle movements which will be restricted to the permitted working hours of the site. During construction, the following equipment may be used:

- Bulldozers, backhoes and excavators;
- Articulated and fixed trucks;
- Mobile cranes;
- Concrete delivery trucks;
- Concrete pumps;
- Man and material hoists;
- Scissor and boom lifts, and
- Fork trucks

4.1. General Requirements

All vehicles transporting loose materials will be required to have the entire load covered and/ or secured to prevent any large items, excess dust or debris being deposited onto the roadway during travel to and from the site. All subcontractors and suppliers must be inducted by the Head Contractor to ensure that the procedures are met for all vehicles entering and exiting the construction sites. The Head Contractor will monitor the roads leading to and from the site and take all necessary steps to clean any debris deposited by construction vehicles.

Vehicles operating to, from and within the site shall do so in a manner which does not create unreasonable or unnecessary noise or vibration. Public roads and access points will not be obstructed by any materials, vehicles, refuse skips or the like, under any circumstances.

4.2. Construction Worker Parking

It is proposed that Head Contractor car-parking will be designated in the south east area of Lots 2 and 3. A direct construction worker pedestrian link will be provided to link the worker parking area with the construction compounds. Further detail relating to site access can be noted in the preliminary site access plan.

4.3. Construction Entry and Exit

It is proposed that early works construction traffic will enter and exit the site from Wright Lane via Honeysuckle Drive in the northeast, to mitigate impact on public traffic along Hunter Street. Vehicles will park on Lots 1, 2 or 3. Details of service vehicle movements including likely arrival and departures will be assessed in a Construction Traffic Management Plan provided by the Head Contractor.

4.4. Construction Traffic Impacts

A construction traffic management plan will be prepared by the Head Contractor prior to Works commencing on site. This overview of construction traffic impacts associated with construction activity aims to ensure the safety of all workers and road users in the vicinity of the construction sites. The key principles are outlined below:

- To identify the need for adequate and compliant traffic management requirements along the surrounding road network
- To ensure continuous, safe and efficient movement of traffic for general public and construction workers
- To restrict construction vehicle movements to designated routes to/ from the site and to prioritise these as required
- To establish a safe pedestrian environment at all times
- To maintain current levels of parking amenity within the precinct
- To inform the Head Contractor and set the ground rules for managing construction traffic.

4.5. Construction Traffic Volumes

Traffic generated by the construction works will include construction worker light vehicles, as well as heavy vehicles for periodic delivery and removal of materials, including plant and equipment. Vehicle types and sizes would vary depending on the required use, but include medium and large rigid vehicles and articulated vehicles for import of bulk materials or minor spoil removal, as well as concrete trucks.

Formal prior approval will be required from the relevant authorities for deliveries, with the timing of truck arrivals to ensure minimal disruption to general traffic along the route. The defined approach and departure routes will also need to be approved and observed.

Overall the construction works is not envisaged to significantly impact intersection operation external to the site. Any Works on weekends would not present significant traffic related impacts, with no known specific restrictions limiting access and/ or the work hours as specified. All Works within the site and associated vehicle movements will be restricted to the permitted working hours of the site. Detailed site access will be set out in detailed construction traffic management plan.

4.6. Pedestrian Protection

Pedestrian and vehicular passage to and around the site will be maintained, or alternate routes determined where necessary, and be defined by clear signage. Temporary hoarding appropriate to the interaction between pedestrians and construction works (as per WorkCover requirements and Australian Standards) will be constructed to prevent unauthorised access to the Site. These hoardings and fences will be staged to allow access to in-use areas during the Works.

5. Waste and Materials Reuse Management

5.1. Storage of Dangerous Goods

Dangerous goods (such as petrol, diesel, oxy-acetylene, oils, glues etc) will be stored in a lockable compound with sufficient ventilation in accordance with relevant codes of practice and standards. Material safety data sheets on all of these flammable and potentially harmful liquids will be provided by the Head Contractor undertaking the Works. As a result of the proposed Works, there will be no change in the type or quantities of dangerous goods on site, therefore all current practices for the management of dangerous goods will apply at the completion of the Works.

5.2. Waste Management/Recycling Principles

Demolition and removal of in-ground services will be required around the site. The Head Contractor will be required to achieve compliance with the EPA guidelines. Following removal of all hazardous materials such as asbestos, lead-based paints, phenols and polychlorinated biphenyls (PCB), where possible, any waste material generated from the Works will be recycled apart from selected soft demolition materials. The following measures are adopted to encourage the management and reduction of waste to minimize the loss of natural resources and landfill space:

- Emphasise the importance of recycling and waste reduction;
- Encourage the use of recycled materials where it is reasonably practical;
- Minimise the use of packaging materials and recycle packaging materials where possible;
- Waste concrete to be sent to a concrete recycling plant where possible;
- Separate removed native vegetation from general construction waste, mulched and stockpiled for re-use; and
- Non-recyclable general waste will be disposed at an approved waste disposal facility.

5.3. Hazardous Materials Management

Hazardous Materials Audit
A licensed demolition contractor and/ or Head Contractor are to inspect the site to determine the presence of any hazardous materials in accordance with the requirements of AS2601.

Hazardous Materials Management Plan

- A Hazardous Materials Management Plan will be prepared in accordance with the requirements of AS2601 prior to the commencement of any demolition works;
- The removal, handling and disposal of asbestos materials are to be undertaken only by an appropriately licensed contractor and in accordance with the requirements of the NSW WorkCover Authority and the NSW Office of Environment and Heritage (NSW OEH);
- All asbestos and other hazardous materials are to be appropriately contained and disposed of at a facility holding the appropriate licence issued by the NSW OEH; and
- A sign displaying the words ‘DANGER ASBESTOS REMOVAL IN PROGRESS’ is to be displayed on sites where buildings to be demolished contain asbestos materials.

5.4. Contamination Contingency Strategy

A Phase 1 contamination report, the Contaminated Land Management Plan and Unexpected Finds Protocol, has been produced for the authority approval submission. The report indicates minimal evidence of contamination on the site. A Phase 2 contamination report will be carried out prior to any works occurring on site.

These reports will be used as the basis for identifying and managing the removal of any contaminated materials identified during the Works. ‘Unexpected finds’ protocols will be implemented to manage any materials identified during the Works.

6. Services Disconnection

In general terms the following principles will be adopted when disconnecting services:

- Services impacts will be done with full coordination, development and input with the client and its relevant stakeholders and will only proceed with approval via a Disruption Notice process;
- If the Head Contractor proposes to carry out ‘out of hours’ work, the Head Contractor must provide details of the time and frequency of such work. It is anticipated that such work will be kept to a minimum;
- All Service authorities will be consulted prior to the Works commencing to ascertain lead times and correct termination locations;
- All termination works will be undertaken in accordance with design engineers’ specifications and instructions;
- All termination works will be undertaken by suitably licensed contractors;
- Any termination works that impact on adjoining owners will be notified and will be undertaken out of hours to minimise impact