

UNSW Wallace Wurth Redevelopment Construction Impacts

1. Site Establishment

The following outlines the mitigation strategies to minimise construction impacts of the Wallace Wurth Redevelopment to surrounding neighbouring buildings including residential housing and bus stops along High and Botany Street.

- A) **Noise Control** – Where possible an electric tower crane will be selected over a diesel crane to reduce daily noise emissions. Noise monitoring equipment to monitor noise at the critical site boundaries will also be installed to establish background noise readings and monitor impacts to surrounding areas.
- B) **Dust Control** – Control of dust particularly during excavation will be controlled by the use of water mist spraying onto the affected area.
- C) **Site Security** – The site will be enclosed with 2.4m high A Class hoardings surrounding site accommodation facilities on the south of Botany Street, with a B Class hoarding securing the High and Botany Street frontages.

The proposed B Class hoarding would also provide overhead protection to the footpath & the bus stop. Site access gates would be manned at all times to prevent unauthorised access. An internal hoarding would also be provided around the base of the Tower crane to prevent unauthorised access to the towers and footpath drop down barriers would be used to stop pedestrian movement whilst vehicles entered or exited the site.

These barriers were successfully used on the C25 Lowy Cancer Research Centre Project for the High Street bus stop. Swipe card access to site would also be utilised to prevent unauthorised access.

- D) **Construction Vehicles** – Construction vehicles will access the site via dedicated driveways along Botany Street. It is proposed that two driveways will be required to provide access to the north and south extensions along Botany Street. Driveways will be manned at all times to ensure pedestrian safety and minimal disruptions to traffic along Botany Street.

2. Environmental Controls

A full range of environmental controls will be implemented to manage the impact of the site on the surrounding environment as follows:

- E) **Tree Protection Zone** – Where required a tree protection zone will be established along the High Street and Botany Street frontage and incorporated within the site fencing, but fenced off as a tree protection zone for the duration of the construction.

- F) **Dewatering/Controlled Discharges**- All site water during construction will be contained on site and only released when suspended solids are less than the Sydney Water guidelines in order to avoid pollutants entering the surrounding stormwater drainage system. On the C25 Project, the water was treated to such quality that it could be released back into the campus bore water system for recycling. The same strategy is proposed on the Wallace Wurth project where possible.
- G) **Sediment Control** – sediment control devices will be installed to all inlets etc surrounding the site to prevent sediment discharge into the stormwater system. For these to be effective regular maintenance of these devices will be undertaken.

3. Site Setup (Refer – Overall Site setup Plan)

- A) **Site Accommodation** – It is proposed that the temporary worker accommodation be located on the grass area adjacent to the Biological Sciences building and along the Botany Street B class hoarding closest to this area. This accommodation would be double stacked to fit the required space on the available area. A covered walkway is proposed to provide dry access to the site from the accommodation area. This walkway would assist to minimise delays during inclement weather once the building is watertight.
- B) **Site Access** –All deliveries via semi trailer vehicles would be unloaded directly from the construction zone with the tower crane. Construction access during civil works will be via the northern and southern driveways created along Botany Street.
- C) **Materials Handling** –A materials handling zone to the South of site near Gate 10 is proposed. This area is ideal as it serves directly into the building's new goods lift and construction alimak.
- D) **Construction Equipment** – There are two possible locations for the tower crane being in the north and south section of the atrium and will be finalised during detailed construction planning to maximise adequate reach to each extreme corner of the building near High Street. The crane being inside of the footprint of the building will mean that the Sydney Water easement along the eastern side of the building is kept clear of all construction equipment.

Installation of some building elements on the south eastern section of the building will be via a 450 tonne mobile crane (where the tower crane is unable to reach) and located along Botany Street. This work would be undertaken over several weekends.

A construction hoist will also be located internal to the building in the south atrium. This location also has direct access to the southern driveway for vehicular access. The hoist is proposed to extend down to the lower ground level.

4. Construction Methodology

- A) **Hazardous Materials Management** – As the demolition and services diversion work is scheduled prior to excavation of site. The Hazardous Materials Survey Report identifies samples of asbestos in the existing M- Wing. There is no asbestos identified within the excavation zone, however should any be identified during the course of the excavation, the material will be tested and removed by licensed contractors.
- B) **Demolition** – Licensed contractors would be utilised working under approved demolition plans.
- C) **Earthworks** – Following site establishment, the perimeter secant & contiguous piles would be installed from the existing ground level, followed by the construction of the capping beam. Following this installation, the excavation would be benched down to the temporary anchor level for installation. Once the temporary anchors had been installed, the excavation would be benched down to a final bulk level to enable the footing piles, detailed excavation & in-ground services to commence.
- D) **Concrete Structure** – Following completion of the in-ground works, the concrete structure will commence with the slab on-ground, via a series of pours, followed by the suspended floors. The suspended floors will be constructed in a 1 pour sequence with the southern structure being accelerated due to minimal ground works. Perimeter screens will be used along the north, eastern and southern elevation of the structure for edge protection.
- E) **Services Rough In & Fitout** – Following the stripping of the formwork to each floor, services rough in will commence in the lower ground level and cycle up the building. The internal fitout will follow the services rough-in cycle, however full height walls will be constructed in conjunction with the high level services to ensure acoustic and fire rating sealing of wall penetrations can be constructed correctly.
- F) **Atrium Construction** – An internal scaffold within both the north and south voids will rise with the structure to provide edge protection, but will remain in place for the installation of atrium balustrades & provide a working deck above for work on the glazed roof.
- G) **Relocation and Decanting** – Movement of occupants within the building is a critical component of the construction process and will be managed at an early stage to ensure a smooth transition from existing areas to new building extensions.
- H) **Completion** – In order to achieve a defect free completion of the building, it is proposed to involve key UNSW stakeholders and undertake periodic site inspections from commencement of construction through to completion to enable them to raise issues & any concerns they may have with the installation. This also ensures that at completion all parties are fully familiar with the building prior to taking possession & responsibility for the building.

5. Management of Key Risks to Campus Services

- A) **Communication with current campus partners** - In order to keep all affected campus stakeholders abreast of construction activities that may affect their operations weekly. It is proposed that "Client Impact Liaison" meetings be held where the stakeholders can raise any concerns and upcoming activities for discussion on possible disruptions. These meetings will be planned 1-2 month schedule ahead of any works being done so disruptions can be identified and strategies put in place to minimise impact on the incumbent stakeholders.
- B) **Communication with adjacent neighbours** –A stakeholder liaison officer will be required as part of the site team that would field concerns from neighbours and provide an appropriate resolution. A formal complaints register will also be maintained, where complaints are logged and close out of the issues tracked. Information leaflets would also be distributed to surrounding neighbours to inform them of any upcoming activities that may cause them any inconvenience, ie erection of a tower crane etc. These leaflets would be distributed well in advance of the actual event to provide maximum notice.
- C) **Interruptions to services** – All services connections to existing campus services would be planned such that the cut over period was conducted out of hours, so that no disruption to campus services occurred.