



Preliminary Construction Management Plan

Western Sydney University,
Bankstown City Campus

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Contents

1. INTRODUCTION	3
2. PROJECT DESCRIPTION	4
3. MAIN PROJECT PARTICIPANTS.....	5
4. DEVELOPMENT AND CONSTRUCTION METHODOLOGY.....	5
4.1 Introduction	5
4.2 The Site	6
4.3 Site Establishment	6
4.4 Access – Vehicular	6
4.5 Access – Personal.....	7
4.6 Vertical Lifting – Crane	7
4.7 Materials Handling – Delivery and Disposal	7
4.8 Temporary Service – Accommodation and Amenities	8
4.9 Project Safety Plan.....	8
4.10 Project Program.....	9
4.11 Project Contingency.....	9
4.12 Procurement – Long lead time plant and building elements	10
4.13 Construction Methodology - Site Works	10
4.14 Construction Methodology – Structure.....	10
4.15 Construction Methodology – Building Envelope	11
4.16 Construction Methodology – Services Rough in and Base Building Works.....	11
4.17 Construction Methodology – Fit out and Finishes	11
5. Management Plans.....	12
5.1 Noise, Vibration and Disruption Management.....	12
5.2 Site Safety Management	14
5.3 Construction Waste Management	15
5.4 Environmental Management.....	17
5.5 Traffic Management	18
6. DESIGN PROCEDURE.....	18
6.1 Design Process	18
6.2 Design Control Group (DCG).....	18
6.3 Safety in Design	19
6.4 Design Management Plan.....	19
7. PROJECT MANAGEMENT PLAN.....	22
7.1 Consultation and Communication Strategy.....	22

7.2	Project Management Procedures.....	23
7.3	Construction Phase.....	23
7.4	Programs.....	24
7.5	Stakeholder Communication	24
7.6	Quality Assurance / Quality Control Plan	25
7.7	Completion Plan	25
7.8	Defects Liability Period and Miscellaneous	26
7.9	Project Program – Critical Path	26

1. INTRODUCTION

This document has been prepared to accompany the proposed Western Sydney University Bankstown City Campus project. The objective of this document is to serve as a point of reference for the Project Team in respect to the execution of this Project.

It serves to outline the key issues and address the following aspects of the project:

- Development and Construction Methodology
- Design Procedures
- Project Management Plan
- Project Programme

2. PROJECT DESCRIPTION

Walker Corporation Pty Limited (**Walker**) is the developer for Western Sydney University's (**WSU**) Bankstown City Campus. In anticipation and planning of these works, Walker has developed a Construction Management Plan (**CMP**). The requirement to prepare this CMP is set out in the City of Canterbury Bankstown Council's letter to the NSW Department of Planning & Environment dated 21 February 2019, under the heading Plans & Documentation Requests. The CMP will accompany a State Significant Development Application (**SSDA**) submission for the Project.

The site on which the Project is to be developed is located in the City of Canterbury Bankstown on the southern side of Rickard Road between Jacobs Street and Chapel Road. It includes 74 Rickard Road (being Lot 5 DP 777510) and a portion of 375 Chapel Street (being part Lot 6 DP 777510). In addition, public domain works are proposed to Rickard Road, 70 Rickard Road (being part Lot 7 DP 777510) and access is proposed via 80 Rickard Road (Lot 12 DP566924).

The site is rectangular in shape and has an area of approx. 0.37 hectares, being relatively flat with a fall of approx. 1.0 metre from north-west to south-east. It is subject to stormwater flooding and is categorised as being Medium to High Risk with overland flow paths. The site's immediate surrounds include Paul Keating Park to the south, Bankstown Civic Tower to the east and Bankstown Library and Knowledge Centre to the west.

Existing improvements to be demolished comprise an asphalt paved car park area, with a limited grassed region in the site's western and southern portion, together with a portion of Appian Way. The Project involves the construction of a new high-rise campus that consists of university education facilities, academic and professional staff workspaces, ground floor university uses, retail and industry partner space, as follows:

- Two levels of basement parking;
- Ground floor containing university multi-use tiered space, maker spaces and retail;
- Levels 1-12 containing university learning/teaching spaces, library and literacy centre, student services and hub as well as academic and professional staff workspaces;
- Level 8 containing a conference/meeting/function centre;
- Levels 14-18 for future University/Education space, and;
- 3,000m² of external terrace space (additional to the net lettable area) in the building.

3. MAIN PROJECT PARTICIPANTS

We note the key project participants are as follows:

- City of Canterbury Bankstown Council
- Western Sydney University
- Walker Corporation
- Development Management Team (Walker Corporation)
- Project Management Team (Walker Corporation)
- Project Design and Consultant Team
- Head Contractor; and
- Others as may be required throughout the project.

4. DEVELOPMENT AND CONSTRUCTION METHODOLOGY

4.1 Introduction

The Construction Management Plan has been prepared to accompany the proposed Development Application for the Western Sydney University Bankstown City Campus development. It serves to outline the key construction issues and address the following aspects of the project.

- To ascertain an appropriate construction methodology;
- Outline the consultation and communication process;
- Propose a suitable site setup;
- Establish an indicative programme;
- The site safety management system requirements;
- The waste management objectives; and
- Present a noise mitigation strategy during construction.

4.2 The Site

The site is identified as Western Sydney University Bankstown City Campus (BCC).



4.3 Site Establishment

Site establishment protocols will be established and modified as required as the project evolves. Given the site constraints and parameters, it is envisioned that site establishment plan modifications will be minimal throughout the life of the project.

A-class hoardings will be installed on the western and southern perimeters amount the site. B-Class hoardings will be installed on the northern boundary (along Rickard Road) and the eastern boundary (adjacent Bankstown Library and Knowledge Centre).

Refer **Appendix A** for the illustration of project hoardings proposed.

4.4 Access – Vehicular

Vehicular access to site to enable delivery of large plant, material and equipment will be through the northern boundary of the site, via Rickard Road.

This vehicular access will accommodate large material and plant deliveries including steel, concrete, external elements which require delivery by table top truck, semi-trailer, concrete truck etc. This will also apply to smaller deliveries by utility vehicles. The single-entry point will necessitate close monitoring and coordination of vehicular movements to ensure they do not compromise the sequence of activities on site or encumber access for the adjoining properties and existing pedestrian thoroughfares.

The proposed construction methodology ensures that the basement and tower will be constructed without affecting access through the existing Bankstown Library and Knowledge Centre & Appian Way roads from Rickard Road.

Refer **Appendix B** for the location of the access points and proposed traffic.

4.5 Access – Personal

Personnel access will enter the site off of either a southern site entry or eastern entry through the site hoarding. All Personnel accessing the site will need to be inducted into the site by the Principal Contractor, and sign-in prior to gaining site access.

4.6 Vertical Lifting – Crane

One twenty tonne Favelle Favco M380D diesel tower crane capable, or similar, of a vertical lift of a minimum 80 metres with estimated 10 tonne capacity at 50 metres horizontal distance (the estimated maximum distance to access all points of the tower) will be established as per the attached diagram (**Appendix C**) at commencement of Basement and Tower Construction. It is intended that the crane will be installed post completion of excavation and remain in place throughout the construction phase.

Crane 1 will be located between Grids C & D and 6-7 within the building footprint (at the western void location). This will ensure that there are limited penetrations to be dealt with post completion and optimise the radius of swing, the distance from the Construction Zone and the adjoining properties.

The crane locations, installation and methodology have been investigated with an industry specialist and believe it is the most practical and efficient vertical materials lifting solution for the project.

4.7 Materials Handling – Delivery and Disposal

Unloading of materials off and on site will be undertaken by tower cranes and fork lifts. The movement of large materials will be unloaded by the crane direct to the workface and will be dispatched by crane as necessary.

Refer **Appendix C** for the location of the Deliveries/Staging Zone.

Storage will be established in the basement as space becomes available with movement around the basement to be undertaken by fork lift or pallet jack. Small material loads will be spread between the crane and hoists for movement within the building. Concrete delivery will be undertaken via trucks parked in the Deliveries/Staging Zone and it is proposed that the concrete pump is established on the same location.

4.8 Temporary Service – Accommodation and Amenities

Site sheds and amenities will be established within the site compound and as necessary, additional site office accommodation may be sought in Appian Way initially to supplement the site. Alternatively, site sheds may be located above the B-Class hoardings proposed.

Refer **Appendix A** for the proposed locations of the hoardings and amenities.

Site sheds and amenities will be relocated to the basement levels as access progressively becomes available. The final stage of accommodation will relocate to the retail spaces at the Ground Floor Level, after completion of shopfront glazing installation. This will enable final demobilisation of sheds within basements and enable completion of affected fit out.

4.9 Project Safety Plan

Contractor WHS responsibilities under the Contract and legislation are to be developed following Contractor appointment. Walker will monitor compliance with WHS as defined in the contract and as described.

This plan is to provide specific information regarding the management of project-related works and attempts to ensure that a uniform approach to health and safety is adopted. A copy of the plan shall be readily available and subcontractors and clients associated with the project will be made aware of the location of the plan, and that it is available for inspection.

This plan may be amended where deficiencies are identified or project works change such that the information contained in the plan is no longer accurate or valid. Those amendments will be authorised by the Contractor.

The Contractor Safety Management System is required to be third party certified to AS/NZS 4801:2001 and regularly audited both internally and externally as part of the on-going maintenance of the system.

A Project Safety Management Plan (PSMP) is to be developed to meet contractual and systemic requirements. The PSMP sets out how the Contractor will manage safety on-site.

Generally, the plan embraces:

- The identification of hazards and risks
 - The identification of various controls
 - An assessment of the risk level both before and after controls
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- Emergency Response and Reporting
- Incident Management and Response
- Safe work methods and procedures including applicable Australian Standards
- Safety consultative arrangements including site specific inductions
- Safety in design; and
- Subcontractor management

The PSMP will include a number of sub plans, such as:

- Demolition Work Plan
- Demolition phase TMP
- Project Emergency Response Plan
- Construction phase TMP
- Hazardous Building Material Plan

It is critical that the Contractor adopts a proactive approach to managing safety and drives a positive safety culture throughout the project in conjunction with all project stakeholders. Subcontractors will be required to produce Safe Work Method Statements for Contractor approval prior to commencing works on-site.

Individual employees will have undergone a General Construction Industry Induction as well as their own Company's induction prior to undergoing a thorough site induction and being permitted to commence work on the site.

The site induction will include, but not be limited to addressing site conditions and constraints, the site rules (including traffic management), safety and environmental responsibilities, emergency procedures, existing services, responsibilities and required behaviours. The PSMP will be subject to audit and formal audit reports will be prepared that identify any system deficiencies for action by the project team.

4.10 Project Program

The following table provides an overview of the construction duration for the WSU project.

WSU – Bankstown City Campus	Duration	20 Months
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Note: Programme start and finish dates are subject to authority approvals.

4.11 Project Contingency

The development program incorporates contingency allowance and has been allocated to account for key construction contingency including:

- Inclement weather;
- Builders productivity; and
- General Builders risk.

4.12 Procurement – Long lead time plant and building elements

The building design, enclosures, finishes and services will impose the traditional criticality on the project team to establish the key milestones for delivery of the long lead time items. The key items for consideration include, but are not necessarily limited to, the following:

- Major mechanical plant and equipment including cooling towers, chillers, pumps and reticulation;
- Major electrical equipment including metering, substation, metering and agreement(s) with the Utility Authorities;
- Sustainability related metering and equipment;
- Lifts and equipment;
- Car lift equipment;
- Facade; and
- Specialist finishes for lift lobbies, common areas and retail tenancies.

4.13 Construction Methodology - Site Works

At site establishment, the whole perimeter of the site exposed to the public will be secured by means of a combination of A-Class and B-Class hoardings. Within the site, it is proposed to establish Staging Areas at various locations.

These locations have been selected for vehicular access to the site for large scale movements during demolition of existing buildings that can potentially encroach site and during the excavation and piling stages.

Subject to review by Council, the zones will provide sufficient space for concrete trucks, concrete pump, semi-trailers, etc. Management of vehicular movements at the entrance to the site will require close coordination between Supplier/ Sub Contractor and the Contractor to ensure the zone is effectively utilised.

The Project Hoardings will identify the site and separate it from the public and adjacent properties and be constructed to a minimum 2400mm height including gate(s), stairway access and all painted to Council specifications. Vertical access will be provided for personnel and selected materials by a hoists to facilitate movements between all floors.

4.14 Construction Methodology – Structure

Work will commence at the lowest level in the new basement (B2) and progressively work upwards in a predetermined sequence that seeks to construct the building in a logical manner for reasons of safety, protection of personnel and adjacent properties etc.

Construction of this phase will include the following activities:

- Sub surface perimeter shoring and retention to consolidate the boundary and ensure the integrity of the perimeter enclosure and adjacent property;
- Rough-ins of in-ground services in the basement and areas dedicated to future installation of plant and the utility authorities;
- Construction of the basement floor levels;
- Construction of the new service core and infill structure and elements to the perimeter of the site; and
- Construction of new multi storey levels.

4.15 Construction Methodology – Building Envelope

Access for external finishes work, as well as installation of the facade, will be via trailing decks attached to the perimeter screens. The sequence of this work will be coordinated to maintain the same floor-to-floor cycle as the structure.

Construction will include the following activities:

- Installation of new structural connections to the perimeter of the new floor slabs in the tower to accept points of fixing for new façade; and
- Staged installation of new facades working from the ground up.

4.16 Construction Methodology – Services Rough in and Base Building Works

Services rough-in and wet trades to the base building will commence in the basement level as soon as the floors are sufficiently clear of back propping from the proposed structural works.

Closure of the façade will minimise exposure to inclement weather and allow the dry trades, including major installation of major plant and equipment, to follow the wet trades progressively up the building.

4.17 Construction Methodology – Fit out and Finishes

Fit out of the basement and podium level lobbies, retail base building and amenities, will be scheduled as a priority to commence after substantial completion of the base building works in these areas. This will allow the basement to be used for materials storage during the project, additional site amenities and handover of the retail tenancies for fit out.

The quality and expectations for the installation of fit out to the “front of house” ground floor lobby and public areas necessitate early commencement to ensure installation is executed in accordance with the design. Fit out of the balance of the lobbies and amenities to the balance of the typical floors will be scheduled to follow the dry trades as they are completed.

5. Management Plans

All management plans are site specific action plans, and will be kept on site at all times and be available to all staff.

5.1 Noise, Vibration and Disruption Management

This plan will be developed by the Contractor to address the construction generated noise and vibration that will occur during the project and the measures to mitigate these occurrences.

Noise and vibration generation activities that will occur during construction include the following:

- Use of concrete cutter, circular saws, nail guns;
- Use of excavation equipment, jackhammer, hand tools, welding equipment;
- Crane operations;
- Operation of generators and air compressors;
- Operation of mobile concrete/grout, plant/mixer, concrete pump; and
- Smooth/vibratory drum roller for pavement construction etc.

The following noise mitigation measures will be adopted during site project activities:

- Staging of site works to maximise use of the existing site features/facilities as acoustic barriers where possible;
- Noise and vibration awareness training for all site staff including subcontractors as part of general site induction and tool-box talk activities;
- Strict adherence to approved works times;
- Works will be scheduled, where practical, to avoid simultaneous noisy activities occurring on site;
- Vehicles will not be left turned on or idling at the site for longer than minimum amount of time required to complete the site activities. In addition, machines/equipment used intermittently during construction activities (i.e. cranes, excavators, bobcats, lifting equipment, etc) will be shut down, as practicably achievable, in the period between works activities rather than allowed to idle;
- The duration of noise-intensive works will be minimised through a regular review of the program and construction methodologies during project team meetings;
- Piling/ shoring/ underpinning works will be undertaken using non-percussive methods where achievable given the subsurface conditions.
- Regular and effective plant/equipment maintenance will be completed and documented throughout the project period and documentation will be maintained on site demonstrating completion of maintenance logs and associated checklists in order to ensure all machinery is in good working order and use does not generate excess noise/vibration.

Plant, equipment and vehicles will not be operated in the event that excessive noise is produced at start up as a result of maintenance being required. All plant, machinery and works vehicles will have an efficient muffler design in accordance with the manufacturer's specifications. The mufflers will be well maintained and regularly tested with the results documented in the maintenance logs. Care will be taken by site personnel to ensure materials will not be dropped from a height either onto or from vehicles or from the roof, overhead bridge or other raised location.

Radio/music audible in areas external to the building/vehicles will not be permitted on site. Where monitoring of site conditions and activities indicates the potential or actual occurrence of excessive noise at nearby sensitive receptors, the effectiveness of installation of temporary shielding options, including portable noise walls in the form of timber hoarding, compressed fibre board panels, steel sheeting etc (with no gaps between panels) will be evaluated prior to ongoing noise generation activities.

The quietest suitable plant reasonably available will be selected for each works activity. This will include review of documentation provided by manufacturers, suppliers, hire companies in relation to equipment prior to delivery to site.

Where noise/vibration levels at the sensitive receiver/receptor location exceed the nominated goals, the relevant noise source will be identified and any additional feasible and reasonable measures available will be implemented to either reduce noise emissions or reduce the impact on receptors.

This may include:

- Evaluation of the works activity and subsequent use of alternative methodologies and/or equipment;
- Installation of equipment silencing devices such as shrouding, industrial silences fitted to exhaust systems etc; and,
- Installation of temporary sound barriers/ shielding. This may comprise shielding of plant/equipment in the vicinity of non-mobile equipment where this is the source, or alternatively shielding at the site boundaries where the noise source is mobile (i.e., pavement removal equipment, or the source activity based). The intent of shielding/barrier installation is to block the line of site and so the noise transmission pathway between the receiver and the source. The effectiveness of the attenuation measures will also be dependent upon the ability of the shielding to reduce noise levels. As such, appropriate materials will be installed to achieve suitable noise reduction levels.

A non-conformance resulting from the receipt of a complaint and/or the recording of 2 successive excess noise criteria may result in the following corrective actions being implemented by the project site staff:

- An evaluation of the non-conformance to improve management strategies to prevent recurrence;

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- Address complaint and respond to complainant with proposed mitigation measures;
 - Undertake additional training of the site staff in respect to implementation of mitigation measures for the management of noise and vibration;
 - Notification of relevant government authorities, if required.

5.2 Site Safety Management

This plan will be developed by the Contractor to demonstrate the commitment of the project to Occupational Health & Safety (WHS). The plan is required to identify the scope of work to be undertaken, the hazards associated with the work and the risk assessment processes and risk control measures to be used in the execution of the plan.

The objectives of the Site Safety Plan include the following:

- Maintain lost time injury reporting and review positive performance indicators;
- Report all incidents and near misses and develop corrective action plans;
- Conduct Senior Management and WHS Group reviews;
- Develop required WHS resources;
- Formalise regular senior management reviews of WHS systems and implement relevant improvements;
- Continually develop WHS systems, policies, procedures and WHS Plans to comply with statutory requirements and industry best practice;
- Maintain an Audit Programme to comply with system's requirements;
- Ensure all corrective actions and Non-Conformances are closed out;
- Meet or exceed the requirements of AS 4801 certification and Federal Safety Commission accreditation;
- Adopt a zero tolerance safety philosophy;
- Provide Safety Awareness and other appropriate WHS training;
- Continue to implement ongoing induction procedures on all projects;
- Hold regular Consultative Committee meetings, maintain minutes and record actions;
- Issue Safety Alerts to all staff and other stakeholders according to requirements;
- Conduct weekly toolbox talks on site;
- Maintain a data base of all toolbox talks.

The plan requires that the project ensure that the key responsibilities are addressed by the Contractor to attain the above objectives.

A statement of responsibilities by the Contractor will identify who will be responsible for the following:

- Undertake audits to ensure appropriate implementation of the WHS Plan occurs;
- Coordinate WHS training;
- Establish, implement and maintain procedures for controlling all relevant documents and data required;
- Implement WHS matters in construction design and planning;

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- Make all reasonable endeavours to ensure that the WHS management system is established, implemented and maintained on the project;
 - Monitor and constantly review risk management to the site;
 - Ensure all Work Method Statements have been received on site prior to the commencement of work;
 - Review all Work Method Statements for their accuracy and relevance;
 - Review any safety incidents and where applicable prepare relevant incident reports, notifications and preventative actions;
 - Maintain the management of safety on site, including the set-up of regular site safety inspections by a nominated WHS committee;
 - Administer the issue of Safety Non-Conformance Notices to companies or individuals not adhering to relevant safety standards;
 - Make all reasonable endeavours to ensure safe work procedures and job safety analysis requirements are enforced;
 - Correct improper work practices;
 - Maintain good housekeeping practices;
 - Communicate, negotiate and listen effectively;
 - Review follow-up on non-compliant items from hazard inspections;
 - Monitor safety performance;
 - Review incident reports and investigations.

In addition, the plan will specifically address the following:

- WHS training – identification of WHS training needs of all personnel, induction training, refresher training, attendance of WHS committee personnel at consultation training etc;
- Incident management – identifies who will be available during and outside normal working hours to prevent, prepare for, respond to and recover from illness/ injury and incidents;
- Site safety rules – As a minimum will include induction and safety training, PPE, Site access and security, emergency procedures, illness and injury, protection of personnel and the public, work at elevated areas, safe working, hazardous materials and dangerous goods etc;
- Safe Work Method Statements – All activities assessed as having WHS risks require a SWMS to be prepared and implemented.

5.3 Construction Waste Management

This plan will be developed by the Contractor to address the creation, disposal and minimization of waste created by the construction of the project.

The objectives of the Waste Management Plan include the following:

- Address the waste management requirements for the project;
- Waste minimisation from demolition and construction activities;

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- Increase economic feasibility of the project through effective waste separation, recycling and re-use measures.

Separate waste streams can be contaminated by hazardous materials during the demolition process, which may render them unsuitable for re-use or recycling. If this were to occur it would increase the difficulty in achieving the targets for the project. Care will be taken to ensure that Hazardous material is not mixed with other waste streams.

For all Hazardous wastes, collection from the work area will be performed at least once per day or as the material is identified. Refrigerant gas in air conditioning units at the site can contain R22, an ozone depleting substance. Disposal of air conditioning units will be undertaken by accredited person/s to ensure that embodied ozone gases are not released.

Separated wastes are a more valuable resource. Waste streams will be separated on site where possible to save double handling and time and labour intensive sorting. Hazardous wastes such as lead paint contaminated brick and concrete must be kept separate from uncontaminated recyclables.

The provision of waste skips or bins at the site will be made for Cardboard, timber, metal, soft plastic, polystyrene, insulation, concrete, glass and bricks. Note that recyclables may be combined in a skip bin, however evidence will be provided that the waste contractor will separate these materials off-site. The project is likely to generate significant quantities of all materials stated above.

A waste classification of the soils to be excavated will be provided prior to excavation. The method of soil reuse will depend on the contractor employed for the excavation, and the need for reuse of VENM material will be specified for the excavation contract.

Waste collection during construction is expected to be simpler than during the demolition phase due to the staged nature of construction and the use of known quantities of uncontaminated materials. Major recyclables to be recovered in construction are likely to consist of off cuts, discards and unnecessary volumes of materials such as glass, piping, timber, steel, flooring, tiles and plasterboard. Significant waste is also expected from construction packaging.

The main goal in construction will be to reduce the total volume of waste produced, which will be achieved by effective materials procurement, management and supply. Project managers, engineers, builders and subcontractors will play a key role in achieving on-site waste reduction targets on a day-to-day basis.

The following waste management measures will be undertaken during construction:

- Disposal of waste that cannot be recovered, reused or recycled and requires land filling is to be safely recovered and disposed to licensed landfills;
 - All documentation of materials disposed, landfill receipts, contracts, waste plans, etc. will be retained and maintained to meet the data collection requirements of this
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project. Appropriate storage arrangements to guard against product degradation or damage from weathering or moisture are to be established;

- Prefabricated materials such as frames and trusses are to be purchased where possible;
- Materials are to be delivered by suppliers only when needed. This reduces the opportunity for waste through error or change in estimate, permits on-site measurement rather than from drawings and provides for any modifications that the client may request;
- Packaging is to be minimised for building supply materials;
- Arrangements are to be made with recycling contractors to provide clearly marked bins for material separation. Must ensure that sub-contractors are aware of the placement of the bins and their responsibility to separate materials;
- Litter management will be implemented on site to address air borne litter and litter entering the storm water system.

As well as updating and fulfilling the requirements of the Plan, specific requirements for consideration include:

- If under any circumstances any material becomes contaminated so as to deem it unfit for recycling due to the practice of the contractor, the contractor will be liable for the cost of landfill for this material;
- The contractor must provide notification of any asbestos or hazardous waste that is uncovered during the strip out works. A time frame for the removal of this waste should also be provided;
- Any contractor being used for recycling on this project must provide a facility/service license or similar certification within two weeks of tender and prior to proceeding with any site works;
- Contractors held responsible if known hazardous waste is mixed with recyclables (e.g. lead contaminated concrete disposed with concrete to be recycled);
- The contractor will be liable for any material that is unjustifiably 'dumped' or not dealt with as per the recycling schedule outlined in this report; and
- Any penalties received from recyclers for the contamination of recycling bins or skip will be the responsibility of the contractor. This charge will attract a penalty to be outlined in the contract documents.

5.4 Environmental Management

This plan will be developed by the Contractor to address the environmental issues that will occur during construction and will define the project scope, supporting documents and contacts including Council, Environmental Agency and emergency services.

The objective of the plan is to identify the occurrences of activities that will, and may, occur during construction and the measures to mitigate these occurrences in accordance with the provisions of the Development Consent, Construction Certificate and relevant legislation.

Environmental issues and controls that will occur during construction include the following:

- Noise and dust control (refer previous comments on this item);
- Storm water and sediment control;
- Waste disposal, reduction and recycling (refer previous comment on this item);
- Management of hazardous and dangerous materials;
- Return of excess materials, cleaning of site and paths of delivery and exit;
- Other environmentally related issues; and
- Regular review, audit and reporting.

5.5 Traffic Management

The requirement for any road/footpath closures will be the discussed with Council and relevant authorities and will be the subject of progressive applications throughout the course of the project.

A traffic management plan will be prepared and include the following:

- There will be no on street loading or unloading with all deliveries to be retained within the Construction Zone or site;
- Due to the location of the site, proximity to the public domain and interface with pedestrians, loading and unloading will also be restricted to specific times of day to minimise the potential for congestion;
- Strict monitoring and coordination of all vehicles entering/ exiting the site will be maintained;
- Separation of deliveries between the Construction Zone and other points of site entry;
- Allocation of specific delivery and collection times – after hours deliveries to be utilised;
- Consolidation of deliveries where possible;
- Provision of suitable facilities at the exits to minimise site generated material/ grime on roads and adjacent paths.

6. DESIGN PROCEDURE

6.1 Design Process

Walker will focus on concept refinement during the RFT phase and develop DA documentation with close consultation of Canterbury Bankstown City Council and other Key Stakeholders around the site precinct. Walker will work closely with all stakeholders to develop any “Council Works” design and costs.

6.2 Design Control Group (DCG)

During the day to day progression of the project, decisions will need to be taken within the frame work of the brief that affect the detail of the project. These decisions will be made by the Design Control Group. The DCG will be led by Walker’s Design Manager.

The design team will work with the Project Manager to formulate recommendations for review and approval of the PCG. These decisions will include:

- Review and recommendation of all decisions requested from the End Users
- Approval the monthly cost report
- Approve the Project Manager's monthly status report
- Mock-ups & samples
- Specifications & materials.
- Tender analysis & bid placement recommendations
- Tender short lists Change requests
- Payment certificates

6.3 Safety in Design

The design team acknowledges the requirements of the Occupational Health and Safety Act (2000) and Regulations (2001) relating to safety in design. It is a responsibility of the design team to ensure that risks and hazards associated with the design, construction and maintenance of a structure are identified, and that due consideration is applied to eliminate or minimise any safety concerns.

To facilitate this, Walker will co-ordinate a series of reviews with applicable stakeholders present in order for each party to table risks and suggest mitigation measures.

As identified above, a series of risk workshops are to be held where design risk assessments should be reviewed, and updated on a master risk register to include any hazards along with possible mitigation measures.

This master risk register should identify the hazard that may cause a risk, controls in place to reduce the likelihood of risk and the transfer for risk where appropriate. At various stages of the project, the Risk register is to be revisited to ensure that additional hazards are identified and that proposed mitigation measures are applied and closed out.

The frequency of this review is to be determined in conjunction with the Design Manager. Ongoing consideration to Safety in Design should also be applied during design team meetings as a standard agenda item, and any findings recorded in minutes and subsequently transferred to the master design risk register.

6.4 Design Management Plan

Walker is currently preparing a preliminary design management plan however a detailed Design Management Plan will be developed to provide a framework for all activities associated with the various Design Phases of the projects including, but not limited to the following tasks:

- Consultation process with the Client, User Groups and stakeholders

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- Management of the development approval process, and discharge of conditions
 - Production of documentation – associated with each phase of the project in line with a defined design program
 - Management of the design review and verification processes
 - Consideration of Design Risks and mitigation strategies
 - Consideration of Safety in Design obligations

Successful implementation of this plan relies on clearly articulated responsibilities, defined deliverables and clear communication of expectations to the project team.

In conjunction with Design Manager, Walker will assist to:

- Liaise and assist the Design Team to ensure that all aspects of the project are documented;
- Ensure the scope of the construction work is comprehensively defined and sufficient for construction through design verification and review procedures;
- Provide additional assistance in regards to cost planning, programming and construction feasibility;
Provide consultants with a design program as a guide for targets in documentation production;
- Ensure that any changes required by the Client are reviewed by the Design Team to ensure incorporation is possible, and subsequently reflected in the documentation.
- Ensure ESD benchmarks have been allowed for.

All Consultants must fundamentally deliver design documentation that:

- Reflects the requirements of their consultancy agreement including the scope of services and the Design Brief
- Is safe to implement, and results in a completed facility that is safe to operate, maintain and use
- Complies with all relevant authority and legislative requirements
- Is coordinated with the documentation provided by other consultants
- Achieves pre-described time and cost parameters
- Is technically feasible and buildable
- Coordinate with the requirements of the DA submission and conditions imposed
- To support the production of documentation, all consultants must issue a monthly Design Compliance Certificate as a pre-condition of consultant progress claims.

All consultants are further required to review applicable documentation produced by subcontractors for compliance with the Design Intent as specified within the Design Brief. As maybe nominated in the Development Approval or required by regulations, liaison with the service authorities will also be necessary.

The Design Team is to make themselves familiar with the procedure for change as defined in their consultancy agreements. Walker will articulate the procedure for Consultants to request a change, and establish the procedure for change acceptance by the Client.

It is critical that the procedure for Client acceptance is clearly defined and correctly implemented, to avoid any ambiguity on permissible changes to the design. Design meetings provide opportunity to discuss and agree any potential changes to the design, but documentation must not be changed by the Design Team until written endorsement is provided (either through email, or in minutes of meetings) in accordance with the consultancy agreement. In order to ensure clarity around permissible changes, Walker implements a 'Design Change Request' system.

The Project will utilise Aconex Document Management System (or equivalent) to be nominated for the project. All correspondence and documentation related to the project is to be undertaken through the system, and transmitted in accordance with the document procedures.

All consultants are required to coordinate their scope and produce documentation that is capable of achieving the Project's Greenstar and NABERS ratings.

7. PROJECT MANAGEMENT PLAN

7.1 Consultation and Communication Strategy

To ensure a transparent consultation and liaison process, a Community and Stakeholder Management Strategy will be developed. The Strategy will build on experiences gained and developed on similar large-scale projects and will deliver a proactive communications program for the duration of the project.

The objectives of the consultation will include the following:

- Generate awareness of the project;
- Develop and maintain a working relationship with the key stakeholders;
- Keep the key stakeholders informed of project progress, impacts arising from unforeseen occurrences and actions to mitigate the impact as necessary;
- Mitigate the impact of the construction activities;
- Manage the complaints and concerns of the stakeholders and address in an expeditious manner;

The stakeholder groups will include the following:

- Key stakeholders including Canterbury Bankstown Council.
- Western Sydney University
- Adjoining property owners;
- Statutory and Utility Authorities;
- Prospective Key tenants;
- Pedestrians and users of the public domain and infrastructure;
- Contractor and sub-contractors;
- Other parties including community, environmental, business groups who demonstrate an interest in the project;

Foreseeable issues of concern to stakeholders may include the following:

- Noise and dust;
- Vibration from construction activities;
- Generation of construction traffic including both personnel and vehicle;
- Encroachment into air space over the adjoining properties;
- Restrictions to pedestrian traffic flow etc.

To address the issues that may arise during the development and delivery phases of the project, and in a manner that reflects the criticality of this activity, the Project Team will allocate personnel to act as

Liaison Officers to communicate with the stakeholders on upcoming works or on issues that require clarification or resolution.

The following activities will be undertaken:

- Letters of introduction will be sent to the adjoining property owners early in the development phase of the project and before the commencement of construction, advising of the key details of the project including commencement date, duration, contact details etc;
- Monthly project progress reports will be issued to the representatives of the adjoining property owners identifying upcoming activities;
- Correspondence with stakeholders as necessary to address enquiries. A register of all contact and correspondence with any stakeholders will be established and reviewed monthly at the Project Control meetings;
- Community and tenant meetings to provide a forum in which to discuss concerns and issues in an open manner.

7.2 Project Management Procedures

The design and delivery of the Works will be managed through the implementation of a series of Plans targeted to specific functional areas of the project which includes but is not limited to Design, Quality, Safety, Environment and Site Management. To that end, series of management plans and administrative systems will be further developed as the project evolves.

7.3 Construction Phase

During the Construction phase, a Site Management Plan (SMP) will be developed outlining the way the site will be managed and controlled. The SMP spans the life of the project and is implemented progressively from tender to final completion. Ultimately, the Contractor will take control of this document.

Generally, the SMP incorporates the following key elements:

- Project Team – Roles and responsibilities
- Establishment and Works Sequencing
- Communications
- Administration and Business Procedures
- Industrial Relations Management

Similarly to the PMP, the SMP can contain a number of sub-plans that contain detailed information in relation to a specific topic. These plans can include but are not limited to:

- Security Plan
- Handover and Commissioning Plan
- Defect Management Plan
- Stake Holder / Community Communication Plan
- Decanting Plan

- Training Plan
- Construction Management Plan
- Employment and Training Opportunities for Indigenous Australians
- Local Industry Participation Plan

From Canterbury Bankstown Council's perspective, this plan addresses how work is conducted onsite and specifically focuses on management of site based employees.

7.4 Programs

The Strategic Master Program is an accurate simulation of the project's planned and actual progress. The Master Program (To be finalised by Walker) is essentially a front end planning tool focusing in detail on the design and negotiation implementation, with an identified design and construction duration.

The key attributes of the Master Program are as follows:

- Track Progress against Baseline
- To act as a Co-ordination and Management Tool
- Track Design Release and approval milestones
- To highlight the Critical Path
- To act as a Reporting Tool

It is the Walker Corporation's responsibility to produce and manage the Strategic Master Program by ensuring all the Project team members adhere to its timeline. The Master Program timeline is then used to report to Senior Executives and Core Team Members alike and critical milestones extracted accordingly for to report key deliverables.

7.5 Stakeholder Communication

A Stakeholder / Community Consultation Plan framework will be developed for all activities associated with the various consultation phases of the projects including, but not limited to the following tasks:

- Engagement and consultation stakeholders and neighbours
- Investigating and responding to enquiries and complaints

A sub plan to the Stakeholder / Community Consultation Plan is the Tenant Management Plan. This provides a framework for all activities associated with the proposed future tenant fit out access of a project including, but not limited to the following tasks:

- Site entry requirements
- Site induction requirements
- Other site access and fit out related issues

7.6 Quality Assurance / Quality Control Plan

Walker will develop a Quality Management Framework in conjunction with the project team to demonstrate commitment to the implementation of a comprehensive and effective Quality Management Plan for the design and construction of the projects.

The Project Quality System will embrace all elements of managing the design and construction of the Project. The Project Quality System will assist the project team in assuring the quality of the finished project through:

- Driving a quality culture
- Prescribing systematic best practice management controls
- Ensuring effective planning and verification at all stages of design and construction.

The Project Quality System will be developed in conjunction with the Design and Consultant Team and its application will be continuously assessed and improved through processes of review and audit.

All participants in the project are responsible for implementing the Project Quality System and contributing to its improvement in order to ensure objectives of providing a project which meets agreed requirements in terms of its construction and operational performance.

7.7 Completion Plan

On completion of the works Walker will finalise the contract and associated defects to address the following key deliverables:

- Undertake final defects inspection
- Review and approve handover manuals
- Liaise with WSU for final acceptance and Handover
- Finalise construction contract and claims
- Review commissioning
- Defects liability period
- Occupation certificate
- Practical completion

Prior to practical completion Walker will prepare a contract close-out strategy with the contractor. This strategy will set milestones for the contractor to complete manuals and allow access for inspections.

An Occupation Certificate will be required prior to Practical Completion including lodgement of any outstanding claims and a final invoice.

7.8 Defects Liability Period and Miscellaneous

Detailed plans will be developed for the following key items of works:

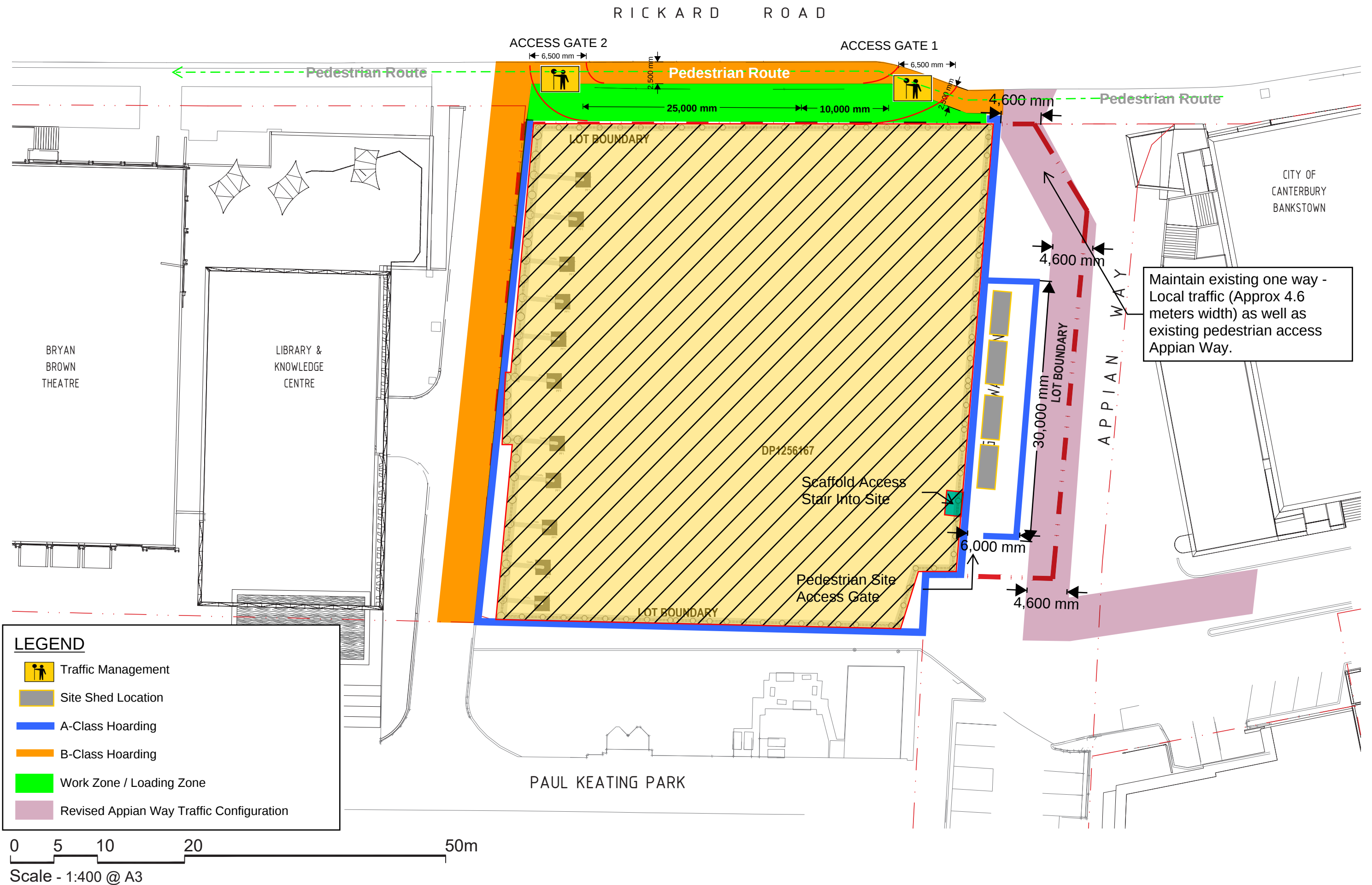
- Defects Liability Period
- Preliminaries
- Proposed Contract and Special Requirements
- Early Access Requirements
- Program requirements documentation

7.9 Project Program – Critical Path

The critical path passes through the following for each project:

- DA preparation, lodgement and approval
- Services Diversions & modifications
- Site establishment
- Demolition and bulk excavation works
- Construction of carpark and podium structure
- Construction of tower structure
- Construction of façade enclosures
- Fit out of tower
- Final defects, testing and commissioning
- Receipt of Certificate of Occupation.

APPENDIX A - Site Establishment Plan

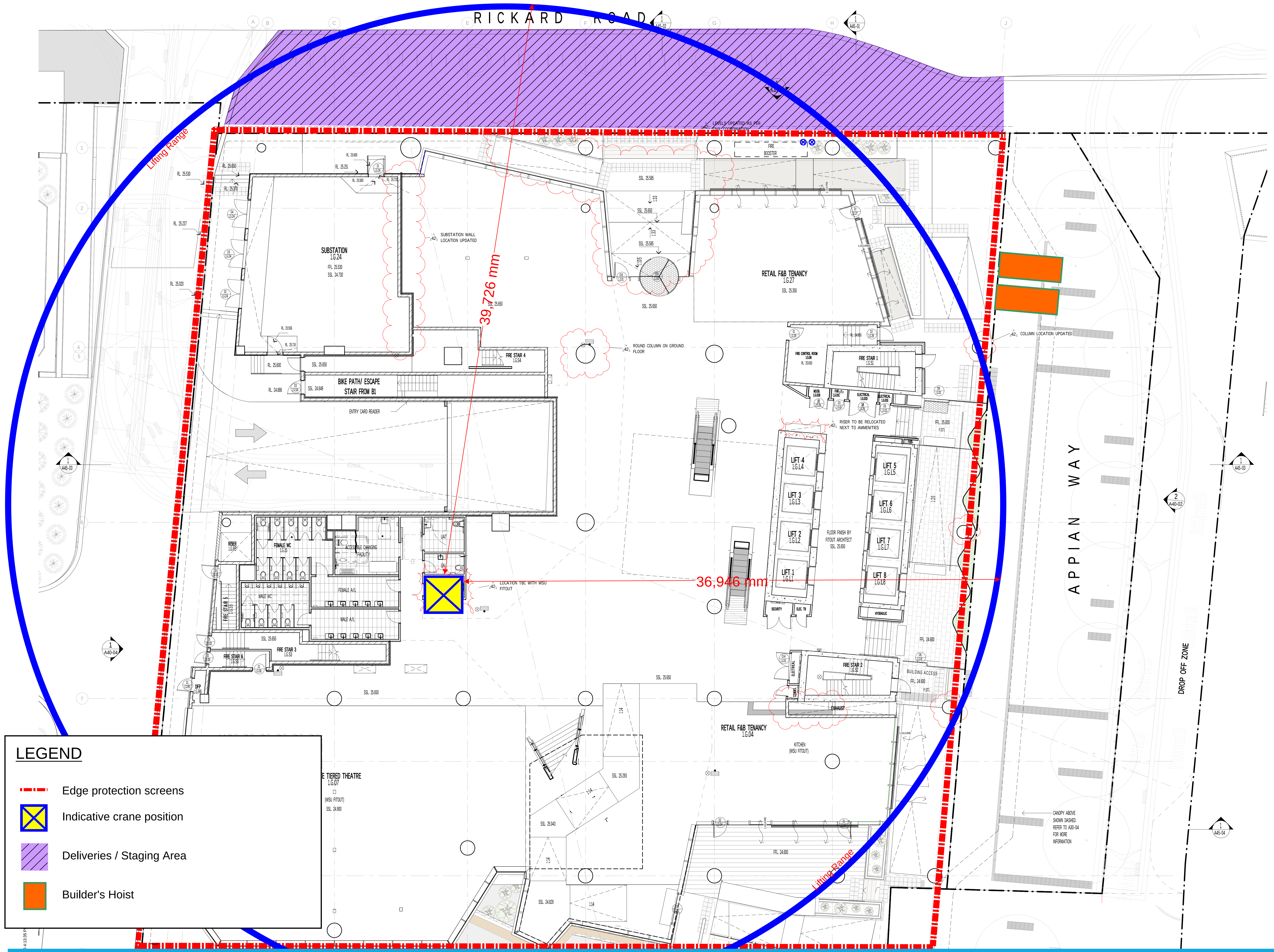


APPENDIX B – Endorsement Traffic Management Strategy

Western Sydney University - Bankstown City Campus Early Works - Traffic Management Strategy



APPENDIX C – Preliminary Crane Erection



ALL DIMENSIONS ARE IN MILLIMETERS. DO NOT SCALE DRAWINGS FOR CRITICAL DIMENSIONS. CHECK DRAWING IS TO SCALE BY MEASURING SCALE BAR ABOVE. VERIFY ALL DIMENSIONS ON SITE BEFORE COMMENCING ANY WORK, SHOP DRAWINGS OR ORDERING MATERIALS.

CLIENT
WESTERN SYDNEY UNIVERSITY

REV.	DETAILS	DATE
29	ISSUED FOR INFORMATION	14.11.2019
30	ISSUED FOR BCA COMPLIANCE REVIEW	02.12.2019
31	ISSUED FOR INFORMATION	16.12.2019
32	ISSUED FOR INFORMATION	24.01.2020
33	ISSUED FOR INFORMATION	14.02.2020
34	ISSUED FOR INFORMATION	27.02.2020
35	ISSUED FOR INFORMATION	12.06.2020
36	ISSUED FOR INFORMATION	22.06.2020
37	COORDINATED WITH HDR ENDORSED CONCEPT PLANS FOR INFORMATION	25.06.2020
38	WSU FITOUT BASE BUILDING COMMENTS INCORPORATED	09.07.2020
39	ISSUED FOR INFORMATION	21.07.2020
40	ISSUED FOR INFORMATION	23.07.2020
41	ISSUED FOR INFORMATION	31.07.2020
42	ISSUED FOR INFORMATION	07.08.2020

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PROJECT
BANKSTOWN CITY CAMPUS DEVELOPMENT
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BANKSTOWN NSW 2200

DRAWING TITLE
GENERAL ARRANGEMENT PLAN - GROUND LEVEL

FOR INFORMATION ONLY
NOT FOR CONSTRUCTION

SCALE
1 : 100 @B1

- LEGEND**
- Edge protection screens
 - Indicative crane position
 - Deliveries / Staging Area
 - Builder's Hoist

WSU BANKSTOWN - Preliminary Crane Study

Date
11 August 2020

Drawing number
Bankstown WSU

