Stadium Australia
Construction Management Plan

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1. Background

1.1. Introduction

This report supports a State Significant Development (SSD) Development Application (DA) for the refurbishment of Stadium Australia, which is submitted to the Minister for Planning pursuant to Part 4 of the Environmental Planning and Assessment Act 1979 (EP&A Act). Infrastructure NSW is the proponent of the SSD DA.

1.2. The Project

Stadium Australia opened in 1999 for the 2000 Sydney Olympic and Paralympic Games and, at the time, was the largest Olympic Stadium ever built and the second largest stadium in Australia. In March 2018, the NSW Premier announced plans to refurbish Stadium Australia to address deficiencies with the existing infrastructure and ensure that the stadium retains its status as a premier venue within a network of stadia and events infrastructure in NSW.

The NSW Stadia Strategy 2012 provides a vision for the future of stadia within NSW, prioritising investment to achieve the optimal mix of venues to meet community needs and to ensure a vibrant sports and event environment in NSW. A key action of the strategy includes developing Tier 1 stadia and their precincts covering transport, integrated ticketing, spectator experience, facilities for players, media, corporate and restaurant and entertainment provision. Stadium Australis is one of three Tier 1 stadia within NSW, the others being Sydney Football Stadium and the Sydney Cricket Ground.

In order to qualify for Tier 1 status, a stadium is required to include:

- seating capacity greater than 40,000;
- regularly host international sporting events;
- offer extensive corporate facilities, including suites, open-air corporate boxes and other function/dining facilities; and
- be the home ground for sporting teams playing in national competitions.

The refurbishment of Stadium Australia will address deficiencies in the existing infrastructure and improve facilities to be in line with contemporary Australian venue standards. The works ensure the stadium remains a modern, globally competitive venue that achieves the requirements for a Tier 1 stadium. The refurbishment of Stadium Australia addresses the following project objectives:

- transform the stadium into a ‘fan favourite’ destination for experiencing and enjoying sports and entertainment events;
- maximise the direct and indirect economic, social and cultural benefits to NSW from the project, including securing major, economically beneficial events within NSW to ensure the economic sustainability of the stadium into the future;
- deliver a multi-use contemporary rectangular venue that meets the needs of patrons, hirers and other users for rugby, football, concerts and other new forms of entertainment, and reaffirms the status of the stadium as Australia’s largest purpose-built rectangular venue in Australia;
- improve the facility’s sensitivity to the environmental conditions of the site by providing a roof which provides cover to 100% of seats (to the drip line);

- provide new and refurbished corporate areas, members areas and general admission areas to enhance the patron experience;
- promote universal accessibility, safety and security such that the stadium is welcoming, inclusive and safe for all stadium users, including persons requiring universal access;
- promote environmental sustainability and embrace a whole of life approach to operations and maintenance; and
- achieve a high standard of design and reinforce the Stadium's status and identity within the NSW stadia network, and more broadly, nationally and internationally.

1.3. Site Description

The site is located at 15 Edwin Flack Avenue within the Sydney Olympic Park. It is bound by Edwin Flack Avenue to the west, Dawn Fraser Avenue to the south, Olympic Boulevard to the east and Qudos Bank Arena to the north. The site is located within the City of Parramatta Local Government Area.

The site is legally described as Lot 4000 in DP 1004512 and part of Lot 4001 in DP 1004512. In 2017, the Minister for Sport assigned Venues NSW as the trustee of Stadium Australia under the *Sporting Venues Authorities Act 2008*.

In a broader context, the site forms part of Sydney Olympic Park which is a sporting and economic centre in metropolitan Sydney that covers 680 hectares. Sydney Olympic Park comprises a range of sports and entertainment venues, parklands, and commercial, retail and residential developments. It benefits from convenient access to Homebush Bay Drive, Parramatta Road and the M4 Western Motorway, as well as Olympic Park railway station. The Parramatta Light Rail Stage 2 and Sydney Metro West will also significantly increase accessibility.

The locational context of the Site is shown in Figure 1, whilst the site boundaries and existing site features are shown in Figure 2.

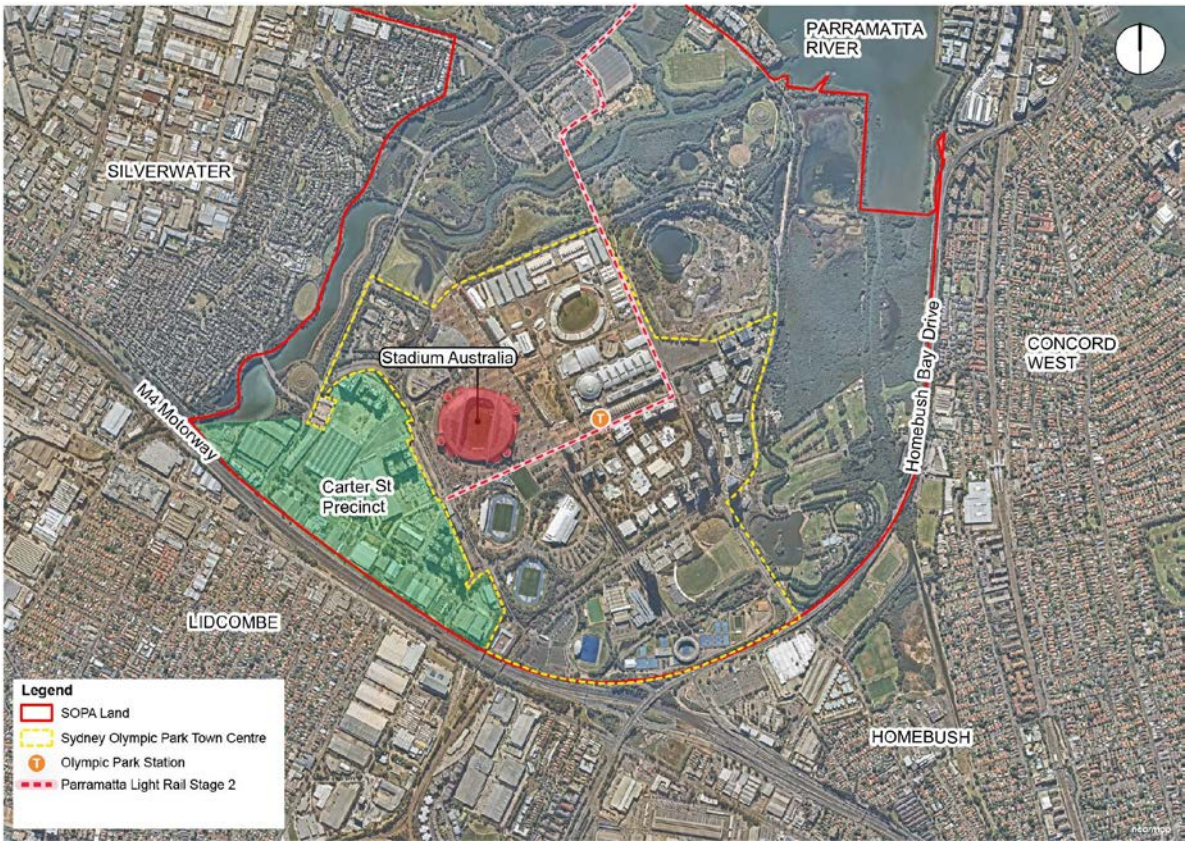


Figure 1 - Regional site context

Figure 2 - Site area and local context

1.4. Overview of Proposed Development

In March 2018 the NSW Government announced its commitment to refurbish the existing Stadium Australia and retain its status as a premier venue within a network of stadia and events infrastructure in NSW. This comprises the following:

- Reconfiguring the field of play to a permanent rectangular configuration.
- Redeveloping the lower and middle seating bowl to locate seating closer to the field and increase the pitch (steepness) of the seating bowl, which has the effect of reducing the capacity to approximately 70,000 seats (plus up to 20,000 persons on the field during concerts).
- Providing 100% drip-line roof coverage to all permanent seats by replacing the northern and southern sections of the roof and extending the existing eastern and western sections of the roof.
- Providing a new northern and southern public stadium entrance, including a new stadium facade and double-height concourse
- Renewing the food and beverage concessions, bathrooms, team facilities including new gender neutral changerooms, members and corporate facilities, press and broadcast facilities, and back of house areas.

- Providing new signage, high-definition video replay screens, LED lighting, and other functional improvements.
- Enhancing the public domain within the site boundary, including hard and soft landscaping, to deliver a range of publicly accessible, event and operational areas.

Part of the existing stadium forecourt will be used as a construction compound during the construction phase and reinstated following the completion of works and prior to commencement of stadium operations.

Figure 3 - Indicative photomontage of proposed stadium

Source: Cox Architecture

1.5. SEARs

The Department of Planning, Industry and Environment (DPIE) has issued Secretary's Environmental Assessment Requirements (SEARs) to the applicant for the preparation of an Environmental Impact Statement for the proposed development. This report has been prepared having regard to the relevant SEARs as follows:

Transport, Traffic, Parking & Access	**Comments/Reference**
The EIS must include a Transport and Traffic Impact Assessment that provides, but is not limited to, the following: Construction ▪ Preparation of a draft Construction Pedestrian and Traffic Management Plan (CPTMP) which shall address, but not limited to the following: ▪ a construction program detailing the anticipated construction duration and highlighting significant milestone, stages and events during the construction process	Section 9 and also refer to draft Construction Pedestrian and Traffic Management Plan within the Transport Impact Assessment prepared by JMT.
Air Quality, odour and waste	
▪ The EIS shall identify potential air quality, odour and waste impacts during the construction of the development and include any appropriate mitigation measures.	Section 8 and also refer to Air Quality Impact Report prepared by Wilkinson Murray.
Sediment, Erosion and Dust Controls	
▪ The EIS shall identify measures and procedures to minimise and manage the generation and off-site transmission of sediment, dust and particles.	Section 8.9 and Appendix 1.
Servicing and waste	
▪ The EIS shall identify, quantify and classify the likely waste streams to be generated during construction and operation of the development and describe the measures to be implemented to manage, reuse, recycle and safely dispose of this waste.	Section 13. Operational Waste addressed in separate Operational Waste Management Plan prepared by Aurecon.

1.6. Construction Management Plan

This Construction Management Plan (CMP) has been developed to guide activities during the refurbishment of the existing Stadium Australia. The CMP will be updated by the Contractor engaged for the refurbishment prior to works commencing.

All tasks undertaken in relation to the project whether they be physical construction activities, office duties or procedural tasks are to be undertaken in accordance with the following:

1. Suppliers and contractors shall provide assurance of the quality of all goods, materials and services to be provided; and
2. All materials and works are to be undertaken to the manufacturer's specification or industry standards.

The Client has engaged various consultants to assist in the investigation planning and Development Application process. Those relevant to the CMP include:

- Transport Impact Assessment, JMT
- Stormwater Management Plan, Aurecon
- Noise and Vibration Impact Assessment, Arup
- Infrastructure Services Report, Aurecon
- Heritage Impact Statement, Curio Projects
- Waste Management Strategy, Aurecon
- Arboricultural Assessment, Tree iQ
- Air Quality Impact Assessment, Wilkinson Murray

The *Contractor* will adhere to the *Protection of the Environment Operations Act 1997* (POEO Act). The principles that underpin the POEO Act are:

- To protect, restore and enhance the quality of the environment in New South Wales, having regard for the need to maintain ecologically sustainable development;
- To provide increased opportunities for public involvement and participation in environment protection;
- To ensure that the community has access to relevant and meaningful information about pollution;
- Pollution prevention and cleaner production;
- Reduction to harmless levels of the discharge of substances likely to cause harm to the environment;
- Reduction in the use of materials and the re-use or recycling of materials;
- Making progressive improvements including the reduction of pollution;
- To rationalise, simplify and strengthen the regulatory framework for environment protection;
- To improve the efficiency of administration of the environment protection legislation; and

  To assist in the achievement of the objectives of the Waste Minimisation and Management Act 1995.

1.7. Refurbishment Works

The Refurbishment Works (Works) for the project include site preparation and establishment, services relocations or terminations, as well as the demolition and rebuild of the Northern and Southern stands, and refurbishment of the lower Eastern and Western bowl.

2. Legislative Requirements

The Works will be undertaken in accordance with the following legislative requirements:

- Protection of the Environment Operations Act 1997 and Regulations
- Environmentally Hazardous Chemicals Act 1985
- Protection of the Environment Administration Act and Regulations
- Occupational Health and Safety Act 2000 and relevant codes of practice and Standards
- Occupational Health and Safety Regulation 2001 and relevant codes of practice and Standards
- Australian Standard 2601-2001: Demolition of Structures
- 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 1998)
- Resource and Recovery Act 2001
- Environmental Planning and Assessment Act 1979 and Regulations
- Heritage Act 1997
- Local Government Act 1993
- State Environmental Planning Policy (Infrastructure) 2007
- State Environmental Planning Policy (State and Regional Development) 2011
- State Environmental Planning Policy No. 55 – Remediation of Land
- Draft State Environmental Planning Policy No. 55 – Remediation of Land
- Draft State Environmental Planning Policy (Environment) 2017
- State Environmental Planning Policy No. 64 – Advertising and Signage

The Works are also required to be consistent with the following legislation where relevant:

- Sporting Venues Authorities Act 2008
- Work Health and Safety Act 2011
- Roads Act 1993
- National Parks and Wildlife Act 1974
- Gaming and Liquor Administration Act 2007
- Liquor Act 2007
- Sydney Olympic Park Authority Act, 2001

3. Hours of Operation – General

All work on site will only occur between

- 7am and 6pm Monday to Friday and
- 8am and 1pm Saturday
- unless otherwise approved in writing by Consent Authority due to extenuating circumstances.

No work will be undertaken on Sundays or public holidays.

No work will occur outside of the hours nominated unless approval has been given by the consent authority. An application may be lodged to extend these hours, however for the purposes of this Plan current approved working hours are as per the above.

When an event is programmed within proximity to the site (e.g. Easter Show) close consultation will be undertaken with SOPA.

4. Hours of Operation – Event Mode

Event Mode to be enacted at the times nominated by SOPA. This mode will provide the following:

- The Contractor will work with SOPA to maintain access to Qudos Bank Arena, Easter Show facilities and ensure that all event ingress and egress provisions (including emergency and evacuation plans) are maintained.
- The Contractor is to ensure that no disruptive work occur during an event.
- Sufficient time should be allowed by the Contractor to ensure all access and egress corridors are made safe and handed over to SOPA prior the bump-in period for an event.
- Please refer to Section 9.4 Construction Traffic – Event Mode of this document for further information on Event Mode traffic and vehicle movements.

5. Site Establishment

Prior to commencement of Works on site, the site will be formally established. This includes addressing the following areas:

- Temporary site fencing to secure areas.
- On-site storage, compounds, site office etc. (generally located in existing stadium basement).
- Connection to temporary services.
- Site amenities (generally located in existing stadium basement).
- Sediment & erosion control measures.
- Identification and marking of trees to be retained and/or removed.
- Protection of trees that are to be retained.
- Statutory and contact signage.

Site establishment will take approximately 3-4 weeks and be maintained for the duration of the Works.

6. Public & Property Protection

The site is adjacent to Qudos Bank Arena to the north, and the nearest residences are located within the Carter Street Precinct to the west of Edwin Flack Avenue. The Novotel Hotel is located south of the Stadium on Dawn Fraser Avenue.

Adequate protective perimeter signage will be installed. This signage will be required to identify construction works in progress and ensure no unauthorised entry to site.

Vehicular access/egress gates are proposed through new access points off Edwin Flack Avenue and Dawn Fraser Avenue. These gates will be manned by qualified traffic supervisors at the times of major vehicular access and egress to the Site.

These public and property protection measures will be reviewed at the time of commencing 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.

Refer to the Transport Impact Assessment (JMT) which includes the access points and heavy vehicle routes nominated for the Refurbishment Works.

7. Archaeological

7.1. Heritage

The existing stadium is not heritage listed, nor are any individually listed heritage items or heritage conservation areas (HCAs) located within the Stadium Australia redevelopment study area.

7.2. Historical Archaeology

The subject site is considered to have no potential for historical archaeological resources to be present within the footprint of the stadium itself, and low to no potential in the surrounding public domain/concourse areas.

7.3. Aboriginal Archaeology

The subject site is assessed to have no potential for Aboriginal archaeological deposits to be present.

8. Environmental

The following specific environmental management principles will be implemented on site with environmental performance to be monitored throughout the Works.

8.1. Noise and Vibration

Acoustic issues relating to the Works are as follows:

- Noise intrusion from vehicle movements
- Excavators
- Boom and other access equipment
- Concrete pumps and vibrators

- Crawler and mobile cranes

Noise from the Site shall be in accordance with the requirements of the Noise and Vibration Impact Assessment (Arup). All work on site would occur during the construction Works hours of 7am to 6pm Monday to Friday and 8am to 1pm Saturdays. No construction work will occur outside the normal working hours set unless approval has been given by the consent authority.

All construction Works would be carried out in accordance with the following legislative requirements:

- Clause 102 of State Environmental Planning Policy (Infrastructure) 2007
- Australian Standard 2436-1981 "Guide to Noise Control on Construction, Maintenance and Demolition Sites".
- Interim Construction Noise Guideline (DECCW, 2009)

The noise and vibration from the use of any plant equipment and/or building services associated with the premises shall not give rise to an offensive noise as defined under the provisions of the Protection of the Environment Act 1997.

Monitoring to ensure environmental management/compliance shall be undertaken by the Contractor. Where and if required, specialist consultants will be engaged to help establish monitoring systems.

In addition to formal environmental monitoring the Contractor will ensure that regular environmental inspections are undertaken of all work activities being carried out at the project. Inspections will be carried out in conjunction with personnel responsible for a particular work area

8.2. Noise and vibration measures

The following noise and vibration mitigation measures would apply to the Works:

- The Contractor will prepare and implement a final Construction Noise and Vibration Management Plan in accordance with the requirements at Section 3 of the Noise and Vibration Impact Assessment (Arup)
- A Contractor staff member will be appointed as the Responsible Person with respect to noise and vibration.
- Regular training will be conducted with workers and contractors (such as at toolbox talks) in the use of equipment in ways to minimise noise.
- The Contractor will ensure good work practices are adopted to avoid issues such as noise from dropped items and noise from communication radios is kept as low as is practicable.
- The Contractor will avoid the use of radios or stereos outdoors.
- The Contractor will avoid shouting, and minimise talking loudly and slamming vehicle doors.
- The Contractor will check and rectify any defective exhaust systems in trucks and machinery used on site.
- Intrusive stationary equipment, such as the mulcher and concrete crusher, should be located to the south of the site as far from receivers as possible. Where possible stationary equipment should be located behind structures such as demountable buildings or stockpiles to maximise shielding to receivers.
- Turn off all vehicles, plant and equipment when not in use.
- The Contractor will ensure that the Responsible Person checks the conditions of the powered equipment used on site daily to ensure plant is properly maintained and that noise is kept as low as practicable.

- The Contractor will ensure that the Responsible Person controls the working hours on site to ensure that work is only done during the acceptable periods (7am to 6pm on weekdays and 8am to 1pm on Saturdays. No work on Sundays or public holidays).
- The Contractor will ensure that the Responsible Person keeps the local community advised on expected activities and coordinates scheduling and locations of noisy works around any critical user events where practicable. This shall include face to face meetings with nearby receivers if requested and a letter box drop, and shall include close liaison with neighbours during construction, including Qudos Stadium and P1 carpark operators.
- The Contractor will maintain appropriate records of complaints to include timing, reported issues, actions taken and measures to be included for on-going works. The complaints log will need to be filed with the Responsible Person.
- The Contractor will be responsible for adhering to the vibration mitigation measures outlined in the Noise and Vibration Impact Assessment.

8.3. Monitoring of noise and vibration

Vibration monitoring will be carried out at the nearest sensitive receiver on commencement of significant construction activities. Hand-held noise monitors may be utilised to gauge point source readings frequently by site staff whilst observing works.

Attended noise monitoring will be carried out to verify demolition noise levels and determine effectiveness of noise mitigation strategies.

Noise and vibration monitoring will be considered prior to the commencement of works and include:

- Proximity of the receiver to a worksite
- Sensitivity of the receiver to noise and vibration
- Background noise levels
- Expected duration of the impacts

8.4. Dust

Dust emissions may occur through the Works. As per Wilkinson Murray's recommendations, effective management will be put in place to mitigate dust emissions in order to maintain acceptable levels where relevant. These measures may include:

- Implementation of water sprays to suppress dust emissions

8.5. Dust control measures

Dust control measures for site preparation which will remain in place for the duration of the Works will include:

- Erection of site fencing to provide appropriate barriers at the site boundary
- Erection of effective screens and barriers around dusty activities. Cleaning of the screens and barriers should be completed as necessary.
- Communication with neighbouring properties prior to undertaking works in proximity to their premises.
- Establishment of a complaints management system to record details of any reason for air quality-based complaints.
- Avoidance of dry sweeping in large areas

Dust control measures for Refurbishment Works will include:

- Sheet and screen buildings with suitable material and where possible strip out internals before demolition begins.
- Use of effective water suppression where necessary
- Limit demolition activities that will create dust during times of adverse wind
- Dusty materials should be removed from site as soon as practicable
- Covering of any stockpiles
- Trucks to have payload covered
- Wheel washing system for trucks if necessary

Should these measures be undertaken it is expected that dust impacts can be kept at acceptable levels throughout the Works.

8.6. Monitoring of air quality

Monitoring of air quality can include daily and weekly visual surveillance of dust emissions, dust controls, plant emissions.

Weather and physical parameters such as wind speed, rain, temperature and humidity will be utilized to assist in programming works (impact of rain and wind conditions on site) and recorded or works will not be conducted during periods of rainfall where there is the potential to generate runoff, or where heavy rain is forecast.

Weather data (such as wind direction) will also be used where complaints are received in relation to dust or noise.

8.7. Odour Control

The site has not been identified as contaminated; and therefore, no odour sources associated with the construction of the development have been identified.

8.8. Storage of Dangerous Goods

The Works may involve the use of flammable fuels such as petrol, diesel, Oxy-acetylene, oils, etc.

If required, such items will be stored in a lockable compound, within an appropriately bunded area, and with sufficient ventilation in accordance with relevant codes of practice and Standards.

Material safety data sheets (MSDS) on all flammable and potentially harmful liquids will be provided to the Contractor undertaking the Works. Copies of MSDS will be kept in the site office and easily accessible to all construction personnel.

8.9. Erosion and Sediment Control

During construction, there is minimal risk of on-site activities resulting in bare soil and existing fill materials exposed to the elements. In this rare scenario rainfall, and particularly heavy rainfall could scour this material dislodging and transporting fill downstream.

To mitigate the risk of scouring and associated deposition and sedimentation of downstream areas and/or in-ground drainage systems, consideration of sediment and erosion control measures is required. Best practice principles and site management techniques are described in Landcom's Managing Urban Stormwater series, commonly referred to as the Blue Book.

Appendix 1 – Erosion and Sediment Control Details contains Aurecon's preliminary sediment and erosion control plan for the Stadium Australia project site and the surrounding areas. It is noted this is at a preliminary stage and will need to be developed by the contractor prior to the commencement of works so as to be coordinated with the sequencing of works.

8.10. Flora and Fauna Management

The proposed redevelopment works will require the establishment of construction access at three (3 points around the site perimeter. Construction access off from Dawn Frazer Avenue and through the existing basement entry will not require the removal of any trees. The access from Edwin Flack Avenue will require the removal of Trees 199-201 and Tree 203.

All other trees on site are proposed for retention. Protection measures are outlined as follows;

- Where possible, hoardings/site fencing should be placed as to exclude as many trees as possible from within the site compound area as those trees outside of the fenced area will not require any specific protection measures,
- Trees which cannot be excluded from the fenced site compound should have trunk protection installed.

Refer to the Arborist Report prepared by Tree iQ regarding trees to be retained and protected during works.

8.11. Flood Mitigation

Flood damage and potential environment risks caused by flooding shall be minimised by:

- providing controlled access points across the site;
- provide water extraction methods (i.e. pumps) during heavy rains
- Maintenance of all erosion control measures during the Works.

8.12. Water Quality Management

Control and monitoring measure are to include but not be limited to:

- All run-on surface water will be diverted from site where possible and run-off from the worksite captured for treatment or disposal.
- Before pumping any water out an Approval to Discharge or Reuse Water will be obtained
- Quantities of sealants, solvents, oil, and fuels will be stored correctly and bunded.
- All demolition and construction zones/roads will be maintained and cleaned to prevent spoil entering into the stormwater drains/system.
- Temporary bund products such as Plant Nappies or similar product will be used to manage potential spills/leaks.
- Surface water generated in the sawing of concrete is to be vacuumed up and disposed of appropriately.
- Temporary check-dams or bunds around stormwater drainage paths near concrete sawing work areas as a secondary measure for capturing polluted water.
- A street sweeper will be in operation to manage sediment tracking onto road surfaces throughout demolition and construction works.
- Maintenance and checking of controls, check machinery daily for any oil or fuel leaks.

- Any water from rainfall onto the work site/s will have to be managed appropriately prior to discharge.
- Located stockpiles of materials away from areas where it could potentially move to waterways or stormwater drains, otherwise surround stockpiles with sediment controls.
- All loads to be covered during demolition removal process to prevent spillage of material and dust being swept into the air.
- All vehicles not to track debris onto public roadways.
- Install sediment controls on stormwater inlets such as sediment traps and barriers where required by the shifting location and the nature of the works.

The quality of surface water discharges from site will be monitored visually during and after rainfall events by the Site and/or Environmental Manager and if required Environmental Consultant to establish if further controls are necessary.

The monitoring frequency shall be determined on a case by case basis by the Environmental Consultant.

9. Traffic Management

A Construction Pedestrian and Traffic Management Plan (CPTMP) (Section 6 of the Transport Impact Assessment Report prepared by JMT) has been prepared for the Works as required and covers site establishment and demolition Works. The CPTMP has been prepared based on the following principals which are described in more detail within the CPTMP.

- overall principles of construction traffic management
- staging schedule
- hours of operation
- construction traffic volumes
- truck routes
- pedestrian and cycle management
- traffic and parking effects
- event traffic and pedestrian management

The cumulative impacts associated with other construction activities in vicinity of the site are also discussed. Preliminary consideration has been afforded to other Construction Traffic Management Plans for development occurring in the Cater Street Precinct, however, the appointed contractor will be required to engage in ongoing consultation with key agencies including City of Parramatta Council, Transport for NSW and SOPA during the construction period to ensure any cumulative impacts with other projects (particularly the Carter Street precinct development) are managed appropriately.

9.1. Construction Vehicle Access / Egress Management

As detailed in the CPTMP and Figure 4 and 5 below, construction vehicles (both light and heavy) will be travelling to, from, and within the existing stadium boundary via Edwin Flack Avenue and Dawn Fraser Avenue. The existing basement access adjacent to P1 will be used for the entirety of the works.

9.2. Construction Vehicle Transport Routes

As detailed in the CPTMP, construction vehicles are anticipated to utilise three vehicular site access points. Traffic controllers will be present at the vehicle crossover points to manage interactions with pedestrians. The three vehicular site access points proposed are as follows;f

Frontage Road	Location	Vehicle Turning Movements
Dawn Fraser Avenue	East of Edwin Flack Avenue	All turning movements permitted
Edwin Flack Avenue	North of Dawn Fraser Avenue	Left in / left out only
Edwin Flack Avenue	At existing basement car park / loading dock entry point	Left in / left out only

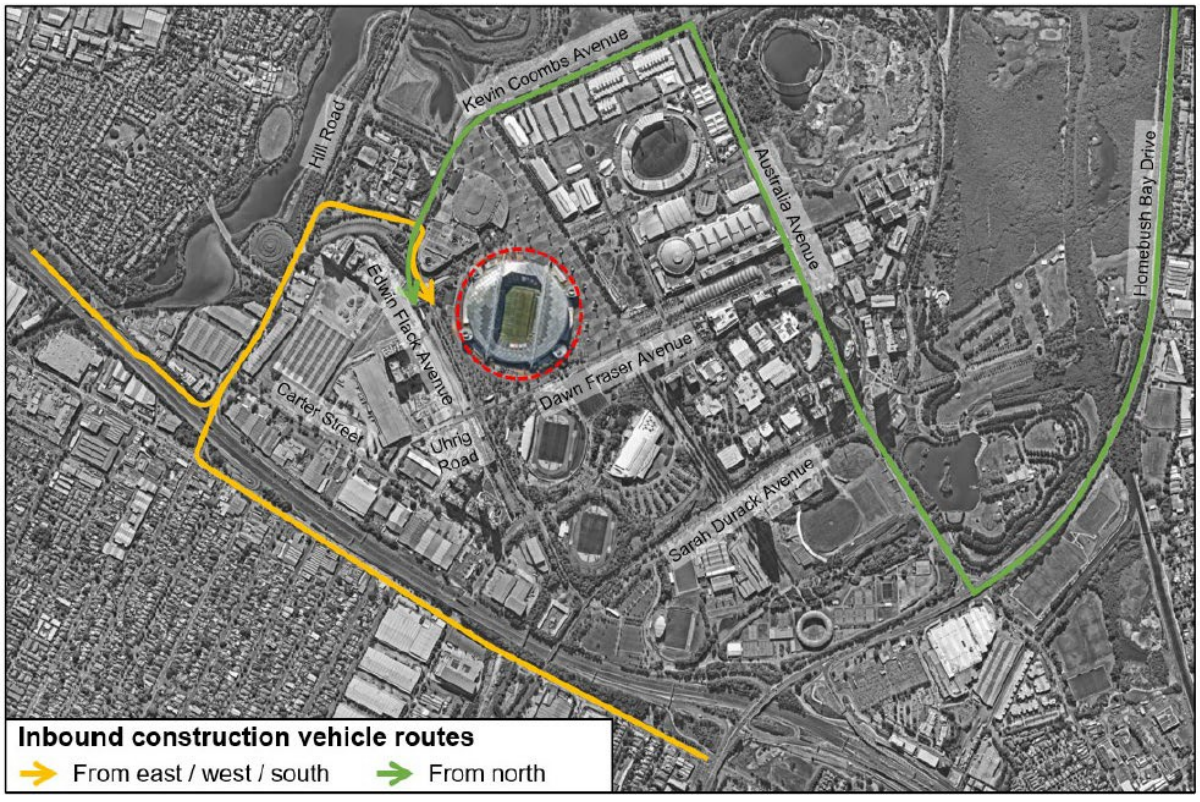


Figure 4: Inbound construction vehicle routes

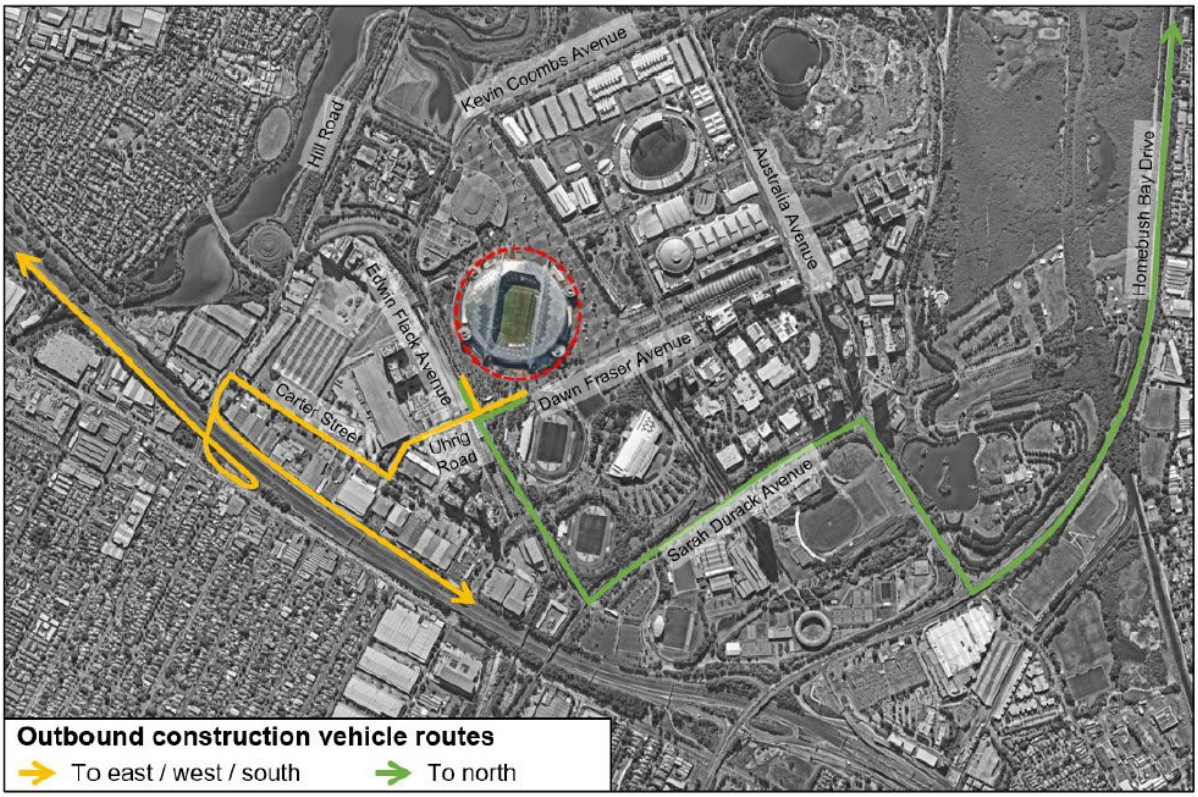


Figure 5: Outbound construction vehicle routes

9.3. Construction Traffic Generation

The following table provides a summary of the likely construction heavy vehicle traffic generation of the proposed Works during these stages. Refer to the CTMP for further details.

Stage	Duration	Average weekday traffic generation	Maximum hourly traffic generation
Procurement and Establishment	30 days	15 vehicles	3 vehicles
Demolition	240 days	40-50 vehicles	6-7 vehicles
Refurbishment	720 days	40-60 vehicles	6-7 Vehicles

Table 1 - Construction Vehicle Movement by Stage

The number of daily construction heavy vehicles accessing the site is forecast to vary from between 5 and 60 daily vehicles. The overall number of vehicle movements generated from construction is indicated in Table 1. As the project is in its preliminary stages, the following forecasts are approximate and may vary once a Contractor is appointed.

The expected number of vehicles generated by the construction Works (less than 10 per hour) is considered minimal in the context of the existing road network. Further, the volume of traffic in and out of the stadium precinct would essentially be less than existing levels.

The following measures would also be adopted for the Works:

- All trucks will be loaded to their prescribed weight limits, within the site boundary and be covered with a tarp (rubbish loads only) prior to exiting the Site;
- All trucks are to be held within the construction site for the demolition works, with no queueing on public roads to occur;
- Construction workers / tradespersons will be encouraged to utilise public transport and/or car pool with other construction workers;
- All demolition vehicles are to be contained wholly within the site and vehicles must enter the site before stopping. A construction zone will not be permitted on surrounding public roads;
- Hours of operation are Mondays to Friday 7:00am to 6:00pm and 8:00am to 1:00pm Saturday. No Works on Sundays and Public Holidays and materials would be delivered, and spoil removed during standard construction hours;
- Establishment and enforcement of appropriate on-site vehicle speed limits (20km/h), which would be reviewed depending on weather conditions or safety requirements;
- Neighbouring properties would be notified of construction Works and timing;
- No vehicles will queue on public roadways;
- Deliveries would be planned to ensure a consistent and minimal number of trucks arriving at site at any one time;
- Vehicles would arrive to the site in a staged manner that will prevent the need forqueuing outside the site.

9.4. Light vehicles

Workers will generate some additional traffic to the site. Typically, the demolition phase will have a workforce of 50 people, with up to 300 people on site during the construction phase. Typically, construction workers have a high vehicle occupancy of between 2-3 people per vehicle, however a conservative vehicle occupancy of 1.5 people / car has been assumed for this project. This would generate 33 vehicles during the demolition phase and 200 vehicles during the construction phase. This level of activity is commensurate with that currently generated by non-event day staff associated with Stadium Australia. Further, construction workers generally start earlier and finish earlier than the commuter peak periods, and would likely not coincide with the peak periods of the adjacent road network.

10. Demolition & Construction Management

10.1. Scope of Works

The site currently contains an existing stadium, Demolition will include the dismantling of the stadium North and South roofs and seating bowls and East and West lower seating bowls. The methodology for the dismantling of the roof and seating structures should be developed with a thorough understanding of the structural load paths and function.

The North, South, East and West superstructure is primarily a reinforced concrete frame, with upper tiers constructed of precast concrete seating plats on steel rakers. A number of columns and struts to the rear of the upper tier and roof are concrete encased steel.

Demolition staging as follows:

- Fully secure the site to allow for demolition of the North and South Stands
- Mobile Cranes to be located at northern and southern extents of the circulation areas.
- Optionally install additional tower crane/s or crawler depending on demolition and following construction sequence and if intention is to carryout demolition of areas in parallel
- Sequentially move around the stadium demolishing each quadrant of the stadium.
- Install temporary ties where required to maintain stability of the remainder of the partially demolished roof during the staged demolition.
- For the bowl demolition could start at the north and south stands depending on staging and operations plan. Working inside and out removing lower bowl whilst piling is being carried out in other areas

All demolition and construction access and waste removal are proposed to be via Edwin Flack Avenue, Dawn Fraser Avenue and the existing basement entry to the site. All demolition and construction vehicles will be contained wholly within the site.

Demolition of North and South structures is scheduled to take approximately 5-6 months.

The East and West lower bowl internal demolition work will take approximately 4-6 months with the overall refurbishment taking 24 months.

The demolition of structures on the site is to be carried out in accordance with the Work Health and Safety Act 2011. All vehicles transporting demolition materials from the site are to have covered loads and are not to track any soil or waste materials on the road.

10.2. Investigation

An investigation of the structures to be demolished and surrounding environment will be undertaken in accordance with the Australian Standards for Demolition of Structures, AS2601 – 2001. The observations from the investigation will be broken up into 3 sections and record:

1. Investigation of Site
2. Investigation of Structures and
3. Investigation of Services

Where practical, services relocations and disconnections will be carried out prior to commencing clearing works. The appropriate authorities will be consulted prior to the Works. In general terms the following principles will be adopted when disconnecting services:

- 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.
- There will be a number of services (certain sewer and electrical connections) which will need to be maintained until new services are online, whereupon they can be disconnected and removed.
- Refer to the Infrastructure Management Plan prepared by Aurecon regarding services diversions and temporary servicing required during the Works.

10.3. Restricted Areas (exclusion zones)

- Outside of working hours (or when the site is otherwise unoccupied), B Class Hoarding or other measures are to be erected/ installed to restrict public access to the site and building Works, materials and equipment.
- Signs to be erected in identifiable positions stating that unauthorised entry to the site is not permitted. The signs are to include an after-hours contact name and telephone number.
- All exclusion zones, as nominated by the Contractor will be properly demarcated throughout the Works.
- No unauthorised persons shall be permitted into the demolition and work area.
- All personnel and visitors will follow the Site Personnel and Visitor Registration Procedure.

10.4. Hazardous/Contaminated Materials

As the building was constructed in 1999 the use of asbestos was prohibited in the construction of new buildings. Hazardous material will be limited to Synthetic Mineral Fibres (SMF) and some other minor chemicals and liquids In the event that hazardous/contaminated materials are present, removal will be undertaken by an appropriately qualified contractor in all areas of site prior to demolition and excavation in those particular areas and in accordance with The Code of Practice for the Safe Removal of Asbestos and OHS Regs-2001.

The contractor is to prepare reports validating the appropriate removal, remediation and disposal of any identified hazardous materials. On completion of all 'Hazardous Materials Removal' Works, a clearance certificate is to be provided.

The following controls and safeguards are to be implemented for the Works:

- All demolition Works involving the removal and disposal of asbestos (of an area more than 10sqm) must only be undertaken by a licenced asbestos removalist who is licenced to carry out the work.
- Transporters of asbestos waste (of any load over 100kg of asbestos waste or 10 square metres or more of asbestos sheeting) must provide information to the NSW EPA regarding the movement of waste using their Waste Locate online reporting tool www.wastelocate.epa.nsw.gov.au.

- Asbestos removal must be carried out in accordance with the WorkSafe, Environment Protection Authority and Office of Environment and Heritage requirements.
- Asbestos to be disposed of must only be transported to waste facilities licenced to accept asbestos.
- No asbestos products are to be reused on the site.
- If unidentified asbestos is encountered during the Works, work will stop in that area immediately and the applicant must immediately notify the certifying authority and Council. A suitably qualified Contractor will seal the area and make safe as appropriate.
- If required, the necessary sampling and identification of the suspect material will take place and the appropriate method of removal implemented.

10.5. Dumps of Noxious, Toxic or Hazardous Substances

No major dumps of noxious, toxic or hazardous substances have been identified.

10.6. Method of Demolition

10.6.1. Demarcation of Site and Definition of Exclusion Zones

A temporary hoarding, fence or awning must be erected between the work site and adjoining public lands before starting work and must be kept in place until completion of the Works if there is a risk that the Works:

- Could cause danger, obstruction or inconvenience to pedestrian or vehicular traffic
- Could cause damage to adjoining lands.
- Involve the enclosure of a public place or part of a public place.

SOPA will be notified in writing prior to the erection of any structure or other obstruction on public land. Other areas of the site may be demarcated as hazard removal areas only if ACM is identified with the following:

1. Unauthorised Entry Prohibited.
2. Warning Demolition.
3. Warning Asbestos Removal (if required).
4. Contractors Details including Contacts.

10.6.2. Install Environmental Controls

All drains will be covered in a geotech material, with geotech lined hay bales placed up stream of the flow to these drains as required.

10.6.3. Soft Strip Structures

- The structures will be stripped-out by hand with appropriate hand-tools where required, prior to mechanical stripping.
- Windows and frames, external linings, roof tiles and timber frames will be removed by hand with hand tools and fall arrest equipment (if required).
- Bounded material such as non-load bearing walls, partitions, and doors that may not be removed by machines will be removed by a combination of hand, picks, crow bars, and other associated tools.

10.6.4. Mechanical Demolition

- Mechanical Demolition will then take place by cranes at the northern and southern extents with the option of additional tower cranes or crawler depending on demolition sequence.
- Installation of temporary ties where required to maintain stability of the remainder of the partially demolished roof during staged demolition.
- The bowl demolition could start at the East and West stands depending on staging and operations plan. Working inside and out removing larger bowl whilst piling is being carried out in other areas.
- An excavator will stockpile the steel and concreate elements for removal and recycling
- A watcher will work with plant and equipment operators at all times.
- Water will be maintained at the face of demolition for dust suppression where required.

10.6.5. Removal of Demolished Materials

- Demolished material will be source separated and stockpiled ready for removal and recycling
- A combination of machinery, will load out any demolition material into bins, semi-trailers, tippers and trucks for transport to an EPA approved tipping or recycling facility.
- Water will be maintained on stockpiles as required for dust suppression.
- Care shall be taken to watch for pedestrians when entering and leaving site.
- The approved CPTMP will be adhered to at all times. All trucks will follow the truck route and guidelines on entering and exiting site.

The final demolition method to be confirmed by the Contractor within an updated Construction Management Plan prior to Works commencing.

10.7. Permits

All relevant permits will be sought and displayed on-site at all times. These permits include but are not limited to:

- WorkCover permit for demolition; and
- WorkCover permit for asbestos removal (if required).

11. Emergency and Crisis Management

The Emergency & Crisis Management section provides a framework for the appropriate risk management of serious incidents and issues that may disrupt the operations of the Contractor.

Environmental incidents on the project shall be communicated to the appropriate internal personnel, formally recorded, and where appropriate, reported to regulatory authorities. Where incidents require investigation, any lessons learned for future prevention will be made available and distributed.

11.1. Roles and Responsibilities

The Director/s, are responsible for the establishment, operation and monitoring of the Contractor's Crisis and Emergency Management Plan.

11.2. Processes and Documentation

A critical incident may be defined as any event which causes disruption to an organization, creates significant danger or risk and which creates a situation where staff may feel unsafe, vulnerable and under stress.

The Contractor should use a systematic approach to the management of incidents or issues that seriously affect or may affect the organisation's people, operations or reputation, public and private property and the environment.

The approach should look to bring together, as a minimum, the following four key elements:

1. Emergency response
2. Emergency Management
3. Crisis Management
4. Recovery

11.3. Recognising a major emergency

A major emergency is any event continuity issue that significantly threatens the commercial position or operability of the Contractor. Major emergencies will involve all or a substantial part of the Contractor organisation and have major actual or long-term consequences.

Major emergencies require a coordinated operational response that deals with the control of the emergency situation and the restoration of normal business operations.

A major emergency can be triggered by a physical event such as a bushfire, chemical spill, gas leak, major fire or explosion, even fatality or serious injury, although it is possible that it may develop over time from smaller and possibly unconnected events.

An event of this kind may involve some media interest and may be driven by perceptions rather than facts.

11.4. Recognising a crisis

A crisis may be triggered by a physical emergency such as polluted water leaving the site or a fatality however, most crises evolve gradually from less dramatic events. The crisis may be triggered by internal or external issues such as safety, health, mismanagement or controversial work practices.

Routine or seemingly harmless activities may develop into a crisis after attracting the attention of government, regulators, interest groups, the public or the media. In addition, a simple emergency or minor issue can be turned into a crisis by being insensitively or poorly managed.

11.5. The notification process

The effective management of incidents and issues requires their prompt communication to the appropriate level of management.

Where an immediate emergency response is required to an incident, MD's Occupational Health & Safety Plan prescribes the notification arrangements. All incidents requiring an immediate emergency response are reported directly to the Director.

Where an immediate response is not required, incidents and issues will be brought to the attention of the Project Manager through the normal management structure.

All major/critical issues or incidents must be advised to the relevant member of Senior Management.

11.6. Crisis / Emergency Management Team

Where an immediate emergency response to a health and safety risk is required, the arrangements in MD's Occupational Health & Safety Plan will apply.

Where no immediate response is required, or where an emergency has ongoing effects, activation of MD's Crisis and Emergency Management Plan is at the discretion of the Director/s.

The Crisis/Emergency Management Team may direct the establishment of operational teams to provide support or handle aspects of the emergency or crisis.

11.7. Recovery

Recovery management is most effective when there is recognition of the complex, dynamic and sometimes protracted nature of recovery processes and the changing needs of affected individuals, groups within the community, work environments, legislation and stakeholder expectations.

The monitoring of recovery processes facilitates the return to routine. Recovery will include reviewing the contractor's policies and processes.

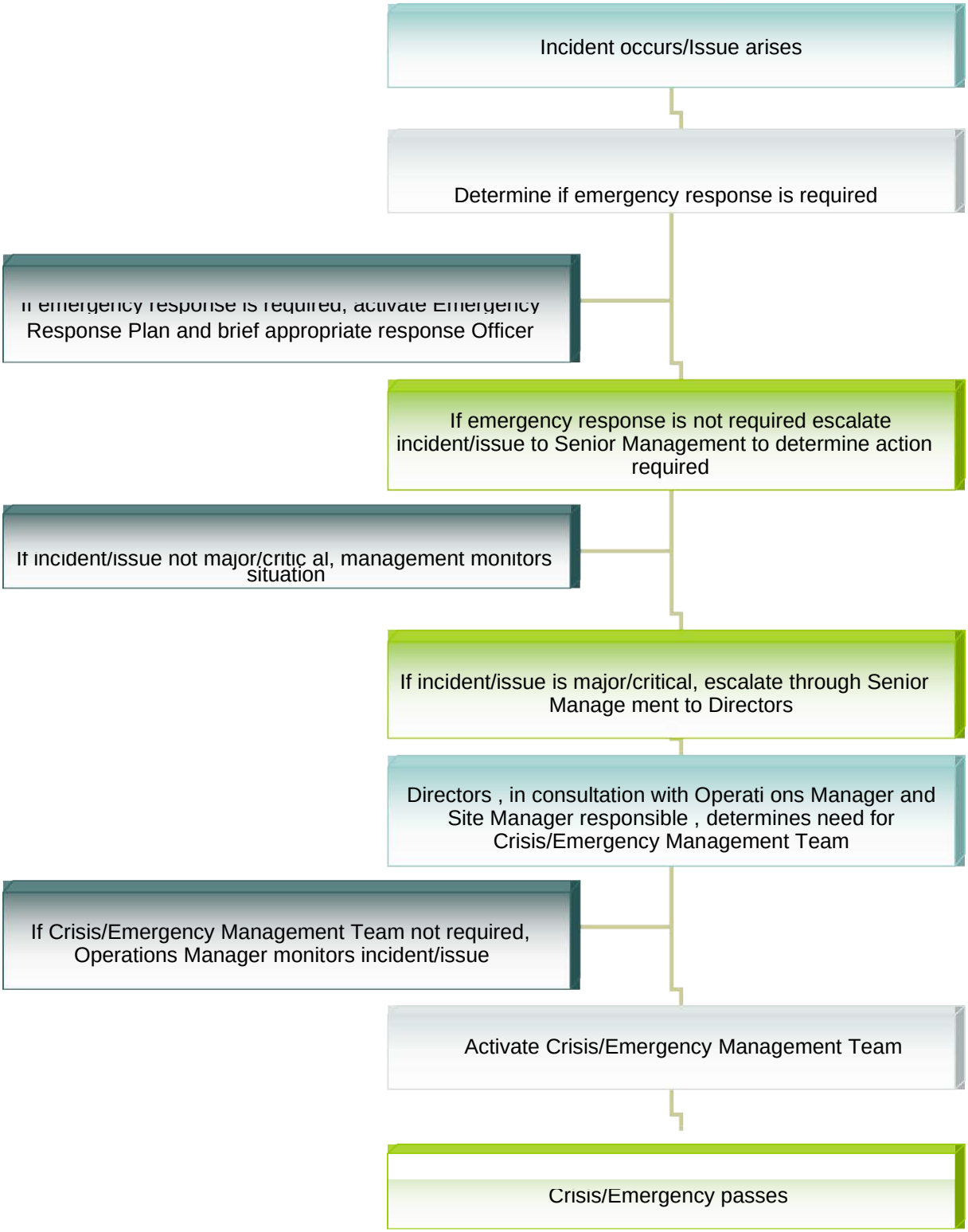
11.8. Activation & Notification Matrix

		Alert Crisis Management Team	**Activate Crisis Management Team**
	Alert Emergency Management Team	**Activate Emergency Management Team**	**(Emergency Management Team)**
	Emergency Response Team / Operational Management		
Normal Business Operations	**Alert Incident/Issue**	**Major Incident/Issue**	**Critical Incident/Issue**
1. Controlled situation on a work site 2. Report to external agencies possible 3. Contained operational effects 4. Harm to third parties unlikely 5. No reputation risk	1. Emergency response may be required 2. Emergency Services possibly involved 3. Contained operational effects 4. Harm to third parties possible 5. Limited	1. Emergency controllable by local Emergency Response Team 2. External agencies involved or likely to be so 3. Significant operational effects 4. Major threat or injury to people 5. Reputation risk apparent	1. Strategic management required 2. Major external agency involvement 3. Significant threat or injury to people 5. Critical operations severely disrupted 6. Reputation damage potentially significant

Environment			
• Single event that causes transient harm to flora/fauna/soil/ water	• Easily controlled incident, but could lead to public harm/damage • Repeated incidents that are likely to cause local harm	• Easily controlled incident with public harm/damage • On site event with long term but recoverable environmental harm	• Significant off-site environmental effects • Significant physical/social impact • Actual or probable long-term off-site harm
Community			
• Privately voiced complaints that require resolution • Community complaint resolved normally	• Vocal or repeated community complaints that require resolution	• Significant community criticism of MD operations or activities • Loss of credibility with clients/community/partners • Disputes unresolved for over 3 months • MD action interferes with normal activities of community	• Legislative violations • Criminal or potentially criminal action affecting the community • Government intervention • Local community actions or protests endangering University staff or students
Reputation			
• Well known issue but no media exposure	• Adverse local media exposure • Speculation about an official enquiry into the Organisation or its operations • Controversy within the Organisation	• Adverse state-wide media coverage • Public statement required by the Organisation • Official enquiry threatened or underway	• Adverse national/ international media coverage • Major adverse political impact or (threatened) suspension or loss of Client support • Client or ot her public enquiry critical of the Organisation
Health & Safety			

• Lost time injury (hospitalization) or near miss • Health impact among several people • Unauthorised access to facilities/ information	• Ongoing long-term injury • Likelihood of long term health effects on staff, students or the community • Third parties hospitalised by Site activities • Harassment and intimidation of staff • Pandemic or major health threat • External threats	• Single accidental fatality or permanent disability to staff or the community • Threat of criminal/ terrorist/ other violent action against staff or the community • Violent or potentially violent protest action on site • Pandemic or major health issue affects the University	• Multiple fatalities or disabilities to staff or the community • Negligent action by Organisational staff leads to a fatality or serious injury • Criminal, terrorist or other violent action against staff or the community

11.9. Notification and activation process



12. Other Specific Management Plan Principles

12.1. Work Occupational Health & Safety Management Principles

A site-specific Plan will be developed and will be tailored to meet the project requirements.

The Plan will look to cover induction and training, safe work method statements (SWMS), risk management, injury management, incident management, training, inspections, audits and performance reporting.

The OHS management system shall, as a minimum, demonstrate compliance with all duties of an employer specified in the *Occupational Health and Safety Act 2000*.

The site-specific Safety Management Plan shall consider and respond to the specific WHS hazards and issues relevant to the Works and shall document the systems and methods to be implemented for the term of the Contract.

12.2. Environmental Management Principles

The Plan will be developed and used to identify Environmental Aspects, Impacts and to control Environmental Risk and document the processes to manage those risks during the demolition and construction of the Project.

The general outcomes for the project are:

- That the construction work complies with all relevant legislation;
- That the Works be undertaken such that all environmental and construction objectives are achieved; and
- Compliance with the criteria and safeguards as specified in the various planning and approval documents; and
- The environmental parameters set in the Developments Conditions of Approval and regulatory agencies requirements are adhered to.

12.3. Quality Management Principles

The plan will be developed to focus not only on product/service quality, but also the means to which it is achieved.

Planning for quality management can reduce the risk of project failure attributable to inadequate project management processes that result in outputs failing to meet defined and agreed standards.

13. Waste

13.1. Waste Storage and Handling

The Works are expected to take 24-30 months (including site establishment). The project will include a target of 90% of demolished materials by weight to be either recycled or reused on site. The key activities within the demolition period of Works are expected to generate waste including:

- Establishment of temporary facilities for demolition Works staff
- Demolition of existing stadium and associated infrastructure

Conservative estimates of the quantity and destination of major waste streams are detailed in Table 2 - Estimated Waste Generation and Destination Table 2 below.

MATERIALS ON-SITE		DESTINATION		
		Re-Use and Recycling		Disposal
Type of Materials	Estimated Approximate Quantity	ON-SITE Specify proposed Re-Use or On-Site Recycling	OFF-SITE Specify Contractor and Recycling Outlet	Specify Contractor and Landfill Site
Structural & Reinforcement Steel	5,000 tonnes (t)		Transported off site for recycling by licenced contractor.	Unlikely to be any Steel materials not recycled
Concrete	3,000 t	To be collected on site in internal tip trucks. Concrete to be crushed on site and re-used where possible.	Un-used concrete to be transported off site for sale/recycling by licenced contractor.	Minimal unrecyclable material to be sold/disposed of by licenced waste contractor.
Asphalt	20 t		Transported off site for recycling by licenced contractor.	Minimal unrecyclable material to be disposed of by licenced waste contractor.
Glass	50 t		Transported off site for recycling by licenced contractor.	Unrecyclable material to be disposed of by licenced waste contractor.
Plastics (including stadium seats[1])	60 t		Transported off site for recycling by licenced contractor.	Unrecyclable material to be disposed of by licenced waste contractor.
Cabling	30 t		Transported off site for recycling by licenced contractor.	Unrecyclable material to be disposed of by licenced waste contractor.

[1] *The stadium seating is made of polypropylene material and recycling companies will provide collection services for this material. Recycling is generally used for the building industry. The seats may be unlikely to be reused as seats by other stadiums or councils due to the longevity and quality standards required for reuse.*

Fluorescent Light Tubes	1 t		Transported off site for recycling by licenced contractor.	Unrecyclable material to be disposed of by licenced waste contractor.
General Municipal Waste – Food waste/residual	4 t		Transported off site for recycling by licenced contractor.	Unrecyclable material to be disposed of by licenced waste contractor.
Sewerage effluent	TBC	To be connected to existing sewerage infrastructure.		
Asbestos	0	No re-use to occur on site		Disposal to occur by licenced waste contractor.
Fitout Strip Out (including plasterboard, ceilings, services and joinery)	150 t		Transported off site for recycling by licenced contractor.	Unrecyclable material to be disposed of by licenced waste contractor.
Green Waste	1 t		Transported off site for recycling by licenced contractor.	

Table 2 - Estimated Waste Generation and Destination

The figures in the table above are estimates and are used as a guide for designing the waste management systems on site.

13.2. Waste Re-use

The appointed demolition contractor will identify waste re-use for demolition items. In order to allow maximum re-use waste shall be segregated into individual stockpiles where space is available as determined by the contractor.

Throughout the demolition phase re-use opportunities will be investigated as the first option.

13.3. Waste Recycling

Where practical waste would be collected on site and segregated into separate recyclable and non-recyclable stockpiles before being transferred to the appropriate locations as determined in Table 2 above.

The demolition and construction contractor will be encouraged to re-use and recycle demolition materials. All dockets for removal of materials will be retained for confirmation of waste recycling.

13.4. Waste Disposal

The disposal of waste will be considered only after re-use and recycling are found to be unsuitable. When waste materials are being disposed, all items are to be handled in a manner than causes the least amount of harm to the environment.

General waste produced on site shall be handled as per council requirements. It is recommended that existing local waste management facilities are utilised.

The removal, transportation and disposal of all materials will be undertaken in accordance with the requirements of the relevant authorities. The contractor will supply transportation dockets, disposal

points and other relevant documentation which verifies the type, quantity and disposal location of all materials removed from Site.

13.5. Waste Monitoring and Reporting

The contractor is to develop on site waste recording for all waste streams and volumes arising throughout the demolition phase. This information will be used to show the type, volume and rate of waste being generated, re-used and recycled.

14. Appendix 1 - Preliminary Erosion and Sediment Control Plan