

# Construction Management Plan (CMP)

Kambala

794 -796 New South Head Road, Rose Bay

Revision	Date	Section	Revision Details
1	27 July 2020	All	For SSDA
2	21 October 2020	All	Response to DPIE comments
3	25 January 2021	4.15 4.1.19 4.1.20 4.1.21	Site work hours and vehicle movement restrictions Student amenity and safety School operations during each construction phase Student and staff parking
4	15 April 2021	4.1.5	vehicle movement restrictions

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## 1.0 INTRODUCTION

This CMP supports a State Significant Development Application (SSDA) submitted to the Department of Planning, Infrastructure and Environment (DPIE) pursuant to Part 4 of the Environmental Planning and Assessment Act 1979 (EP&A Act), for the proposed redevelopment of the sports precinct of Kambala School at 794 -796 New South Head Road, Rose Bay.

This application is SSD by way of clause 8 and schedule 1 under *State Environmental Planning Policy (State and Regional Development) 2011* on the basis that the development is for the purpose of an existing school and has a Capital Investment Value of more than \$20 million.

This report has been prepared having regard to the Secretary's Environmental Assessment Requirements issued for the project by DPIE, ref no SSD-10385 issued on 24 November 2019.

The table below considers the relevant items raised in the SEARs during the preparation of this Construction Management Plan (CMP)

SEAR's KEY ISSUE	CMP REFERENCE
7. Transport and Accessibility - details of on-site car parking and access arrangements of construction vehicles, construction workers to and from the site, emergency vehicles and service vehicle;	Refer to Appendix A – Site Establishment, Access, Material Handling Plan & Section 4.1.7 Contractor Parking Section 6.6 Emergency Access
7. Transport and Accessibility - details of any crane locations and road closures	Refer to Appendix A – Site Establishment, Access, Material Handling Plan
19. Sediment, Erosion and Dust Controls	Refer to Appendix B – Sediment Control Plan
20. Waste	Refer to Appendix E – Waste Management Plan
21. Construction Hours	Refer to Section 4.1.5 Site working hours

### 1.1 Background

#### Need for a Campus Masterplan

Kambala is an independent day and boarding school for girls up to 18 years. Kambala also has an early learning centre catering for approximately 70 girls and boys aged between 6 months and 5 years. The school was established in the late 1800s and moved to the current campus in 1913. The campus has evolved in an organic and ad-hoc manner over the last 100 years as the school and its demands have grown.

A new campus-wide planning approach offers the opportunity to strategically plan for the future in a sustainable and effective manner and to preserve the unique aesthetic and heritage qualities of the campus. The preparation of a campus-wide planning approach is also consistent with the School's 2019 - 2023 Strategic Plan which identified the need for a broader strategic plan to coordinate renewal and development in a feasible and staged manner.



## 1.2 The Site

Kambala is located at 794 -796 New South Head Road, Rose Bay and is within the Woollahra Council local government area (LGA). Situated in the eastern suburbs of Sydney, the School is approximately 8km east of the Sydney CBD. The School is located on New South Head Road which is a classified road connecting the City with the eastern beaches. The School is surrounded by predominantly residential uses.

The campus is bound by New South Head (to the east), Bayview Hill Road (to the north) and Tivoli Avenue (to the west). Fernbank Boarding House is located at 1A -3 Bayview Hill Road opposite the Kambala School grounds. No works are proposed to this part of the campus in this DA. The locational context of the School is illustrated at **Figure 1**. **Figure 2** provides an aerial map of the School and its immediate surrounds.

The School campus slopes down from New South Head Road in the east to the west and comprises a series of existing buildings in the western part of the campus that range in height and age. The south western and north western part of the campus accommodates much of the school's existing built form, while the eastern part has the school's sporting fields and courts.

The Kambala School building known as Tivoli House is in the heart of the campus. The house, its interiors, gateposts, gates and flanking walls with railing facing Tivoli Avenue, as well as 2 Norfolk Island Pines are listed as a heritage item in Woollahra Local Environmental Plan 2014 (WLEP 2014).

Within the School campus, the site of this SSDA is illustrated in **Figure 3**. The site proposed for new buildings is on top of the existing sports field and music building, as shown in green. The site proposed for demolition works and associated façade redevelopment and landscaping works is shown in red and is limited to a portion of the existing Hawthorne Building and the Arts building. The site of new landscape works is shown in yellow and includes all external spaces connecting these works. It is anticipated that the construction works will be staged, so the construction site for any given stage will be smaller than the overall scope identified in **Figure 3**. The four key main buildings proposed are identified in **Figure 4**.

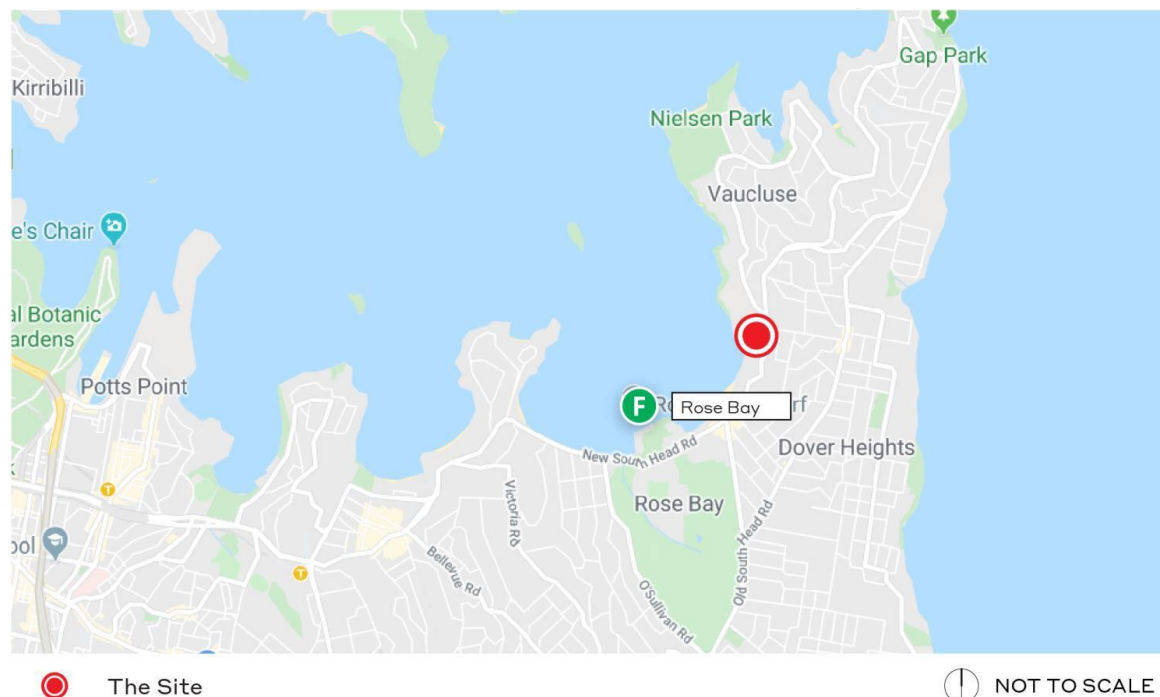
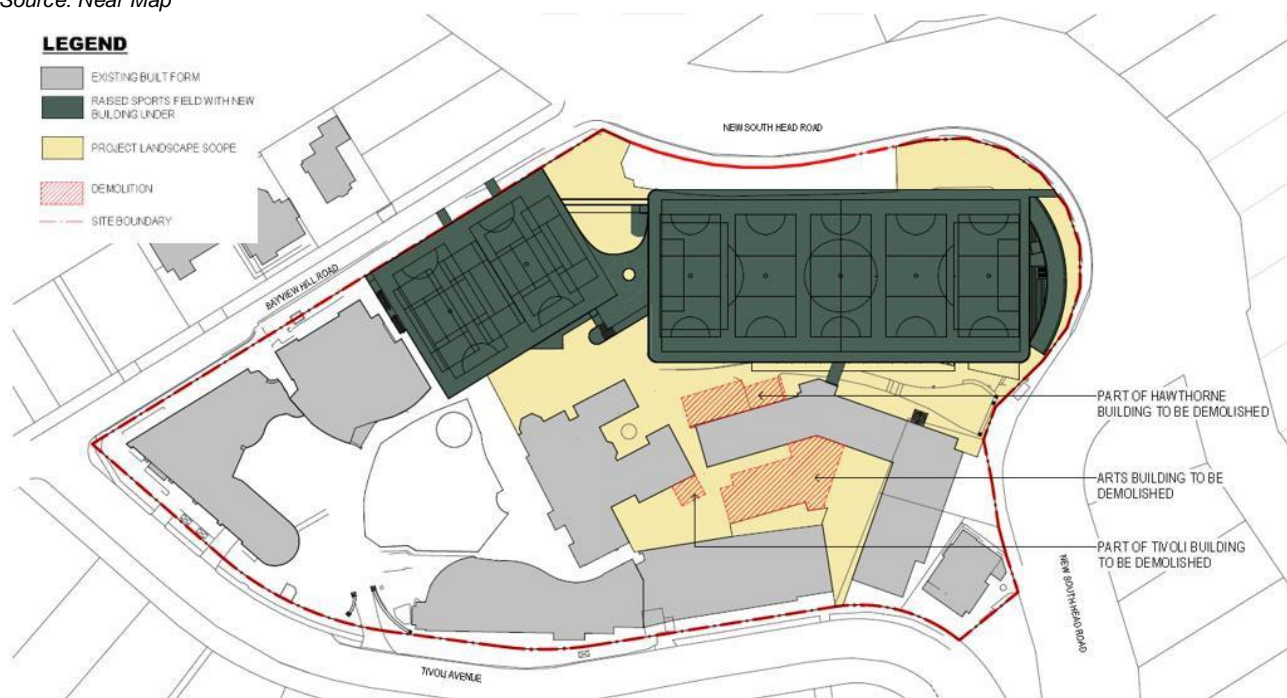


Figure 1 – Kambala School Location Context Plan



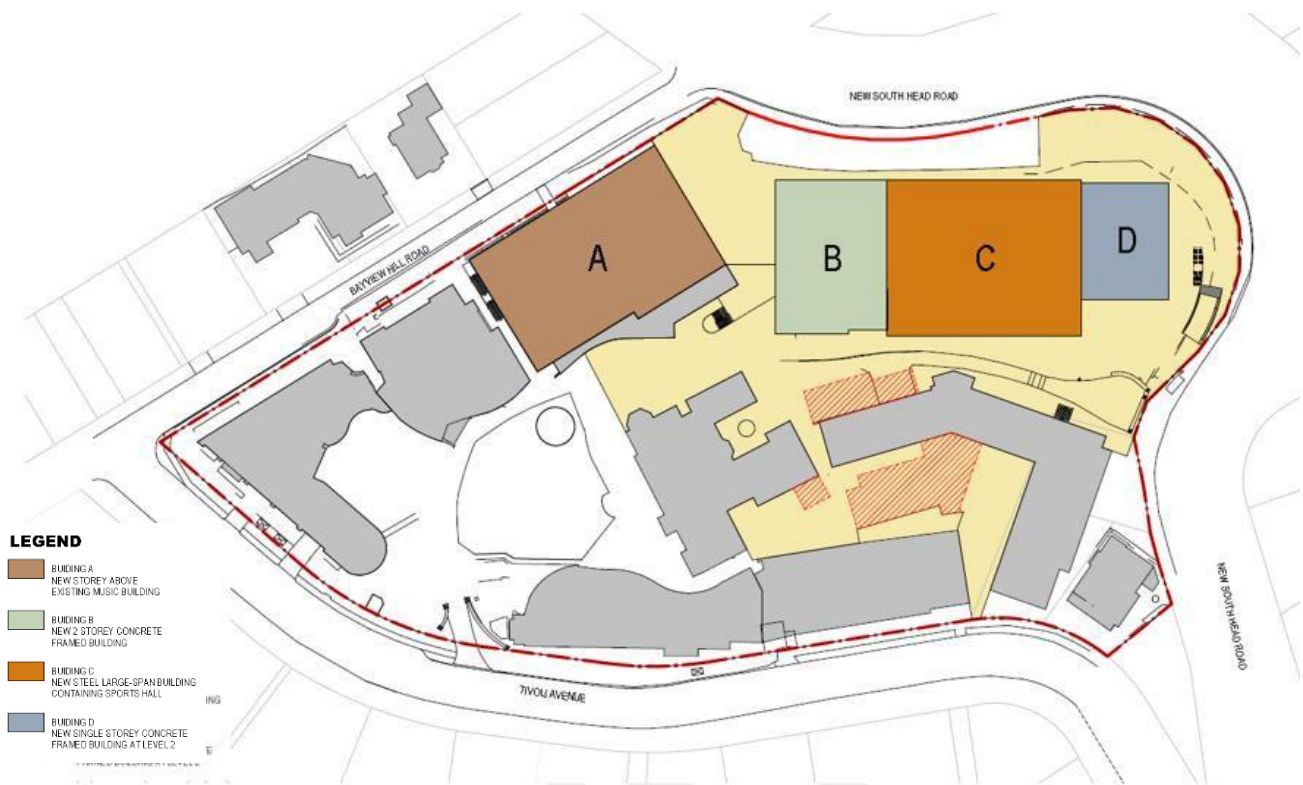
**Figure 2 – Aerial Map of the Kambala Campus**

Source: Near Map



**Figure 3 – Project Scope**

Source: AJC



**Figure 4 – Key Plan**

Source: AJC

### 1.2.1 Legal Description and Ownership

The campus comprises several allotments, the legal descriptions of which are provided in **Table 1** below. The existing campus has a site area of approximately 22511m<sup>2</sup>.

**Table 1 Legal Description**

Address	Lot	Plan
794-796 New South Head Road	Lot 67	DP 2538
	Lot C	DP 210074
	Lot 1	DP 1089403
3 Tivoli Avenue	Null	SP 64653
3 Bayview Hill Road	Lot 1	DP 175832
1A Bayview Hill Road	Lot 45	DP 2538
1 Bayview Hill Road	Lot 46	DP 2538



### 1.3 Overview of Proposed Development

This SSDA includes detailed plans for a new sport, wellbeing and senior learning precinct. Accordingly, consent is sought for the following:

- The excavation of part of the existing sports field to facilitate the construction of the following:
  - sports facilities including weights room and dance rooms;
  - indoor multipurpose sports courts for use by up to 1500 people;
  - innovative and flexible teaching and learning spaces;
  - amenities, storerooms, plant, circulation and ancillary spaces
  - reinstatement of the sports field surface on the roof (sports field and perimeter fencing)
  - spectator seating / bleachers;
- The removal of the tennis courts (currently on the roof of the music building), and the construction of the following:
  - a wellbeing centre, called the SHINE centre, to accommodate the Kambala SHINE program
  - a new staff centre, called the KITE centre, to accommodate staff workstations, meeting areas, staff development workshop rooms and amenities
  - reinstatement of the tennis courts, lighting and perimeter fencing on the new roof
- a new eastern forecourt for the school, new external landscaped areas and new courtyards;
- minor works to the existing music building to facilitate a new connection to the new courtyard;
- the partial demolition of the Hawthorne building and the construction of a new façade, roof and landscaping; and
- the demolition of the Arts building and the construction of new facades to adjacent affected buildings, and new landscaping to the footprint of the demolished building

### 1.4 Project Staging

#### Stage 1

- Demolition of existing metal shed and other minor elements
- Stormwater pipe & easement realignment
- New Sports Hall and Covered Outdoor Learning Areas (COLA's)
- New Multi-Sports Field and perimeter fencing above Sports Hall
- New stairs and lifts
- New PV array on existing roof of Alexander Building

#### Stage 2A

- Demolition of temporary hoardings and the south-east corner of existing Music Building
- New lift within Sports Hall
- New glass façade & fit out of GLA's and Lite SHINE Centre
- New Level 2 slab above GLA's and Lite SHINE Centre
- Fit out of Senior Learning Precinct on Level 2

#### Stage 2B

- Demolition of temporary hoardings
- New glass façade & fit out of east end PDHPE within COLA

#### Stage 2C

- Partial demolition of Hawthorne Building
- New façade to Hawthorne Building
- Original pitch and extent of Hawthorne Building roof to be reinstated

- Landscaping to forecourt, main spine and within Hawthorne Building footprint

#### **Stage 2D**

- Landscaping between Music and Tivoli buildings

#### **Stage 3**

- Partial demolition of Arts and Tivoli buildings
- New façade works to Arts and Tivoli buildings (make-good)
- Landscaping around Tivoli and Hawthorne Buildings

#### **Stage 4**

- Demolition of existing tennis courts and minor elements
- Structural strengthening works to Music Building
- Construction of new Level 3 slab over Music Building
- Fit out of SHINE and KITE centre on Level 2
- New Multi-Sports Courts, perimeter fencing and lighting
- New paths to Bayview Hill Road
- New bridge between Sports Hall and Minter Building
- New stormwater retention tank between Music and Tivoli buildings

Staging details are included with **Appendix F**

### **1.5 Ongoing School Operations**

School operations will be ongoing throughout the entire construction program. Revised pedestrian access notwithstanding, there will be minimal impact to normal school operations from the works.

Departments will be decanted as required from the areas being demolished and/or relocated into the new facilities upon completion. Activities at the areas undergoing demolition will be moved to other venues as required.

Fencing and barricades will be provided to segregate the construction works from live school areas, and signage will be provided to clearly identify any changes to pedestrian access during each stage of works. Appropriate security measures will be provided to deter and prevent access to the construction areas.

Acoustic and vibration minimisation strategies will be implemented to minimise the impacts on the staff and students at Kambala during construction.

## 2.0 PROJECT PROGRAM & MILESTONES

Construction works for the redevelopment of the sports precinct are anticipated to commence in 2021 and with project completion forecast in 2023.

Target milestone dates are listed below:

Project Milestones	Planned Completion Dates
Assumed SSDA Approval	End of 2020
Site Establishment	2021
Operational Milestone	2023

## 3.0 COMMUNICATION & CONSULTATION

Kambala School will establish an appropriate communication plan which ensures all neighbours and relevant parties remain informed about the development.

Part of this plan provisions for a construction team member to be included in the liaison team with the Kambala school building and property committee, surrounding community, and relevant authorities.

The consultation process makes provision for community complaints about construction activities to be submitted, tracked and responded to via a register which forms part of the Project Control Group's reporting structure.

Project updates will be issued on a regular basis to proactively inform the local community.

## 4.0 SITE ESTABLISHMENT, CONTROL & PROJECT STAGING

### 4.1 Site Establishment

For details, refer to **Appendix A - Site Establishment Plans**.

#### 4.1.1 Dilapidation Reporting

Prior to site establishment and construction commencement, Independent dilapidation reports of the surrounding structures, infrastructure and roads will be completed and issued to all relevant parties.

The report will include photographs and plans with location reference for ease of use. This report will form the basis for comparison with a dilapidation report that will be prepared after all construction works are completed.

#### 4.1.2 Site Fencing, Hoardings & Security

The site will be appropriately secured by solid fences (wire mesh or similar), hoardings and gates during the entire duration of the construction work. Gates will be installed to control access to the site.

Hoardings, gates and fences will be suitably lined to limit public viewing and ensure safe pedestrian flow. Attention will be paid to ensure service vehicles and pedestrian travel paths are not obstructed at any time.

Locations of fencing, hoardings and security will be adjusted as required to address each project stage. Refer to **Appendix A** for details.

#### **4.1.3 Signage**

Signage specifying all safety, security measures and key contact details shall be erected on the perimeter of the construction site (i.e. attached to the building, fence or hoarding).

A 24-hour contact name and phone number shall be provided.

Delivery signage will be posted at the site entrances to ensure deliveries are coordinated and entering the correct locations.

Locations of signage will be adjusted as required to address each project stage.

#### **4.1.4 Site Amenities**

Site amenities and facilities will be provided for work personnel including offices, toilets, lunchrooms, first aid rooms and change rooms. The attached Site Establishment Plans in **Appendix A** note these proposed positions.

#### **4.1.5 Site working hours**

To mitigate impacts on the surrounding school and neighbours the proposed work hours provide the greatest opportunity for the most efficient construction program as well as mitigating traffic impacts. Further consultation with the key stakeholders of CTPG will occur prior to project commencement to ensure minimal or nil impact is made to the schools operating hours to allow the appropriate project planning and programming if required.

The preferred working hours of the site are:

- 7.00am to 6.00pm Monday to Friday, (TBC in approval conditions).
- 8.00am to 1.00pm Saturday (TBC in approval conditions).
- No work on Sundays and Public Holidays. (TBC in approval conditions)

With restricted vehicle movements during peak school traffic (school drop offs and pick up) when demolition, excavation and constructions works are to be undertaken on school days. All vehicular movements associated with this work shall only be undertaken between the hours of:

- 7am and 8am (TBC in approval conditions)
- 9:00am and 2:30pm (TBC in approval conditions)
- 4:00pm and 5:00pm (TBC in approval conditions)



We would ensure all deliveries and vehicular site access to comply with the above hours to reduce the impact on the operations of the school and to limit the impact on local traffic. This information would be included within our site-specific induction.

Outside these hours, works, such as special delivery of materials / machinery / specific site works may be required to be undertaken outside the approved hours of operation for the site. This would be in line with the type of work, authority's requirements, or for safety reasons. For example, wide delivery loads that are required to meet RMS restrictions on public roads may need to be delivered outside the approved site hours, or large concrete pours that require time to pour and cure the concrete before it can be finished may extend beyond the approved hours on limited occasions.

Communication with CTPG, relevant authorities and neighbours will be issued prior to these events occurring to all impacted stakeholders.

#### **4.1.6 Stakeholder Management**

CTPG will issue regular communication updates regarding the Project to relevant stakeholders, including local neighbours & relevant authorities. Stakeholders will have an open line of communication to the school project team in order to address any issues and concerns if they arise.

#### **4.1.7 Contractor Parking**

The site is served by public transport with Bus stops on New South Head Rd approximately 40m from the site entry. Contractors will be encouraged to use public transport where possible. All site personnel when inducted to the project will be informed of this requirement, including details of available services.

#### **4.1.8 Site Inductions**

All site personnel will be site inducted prior to commencing work on site. The site inductions will be specific to the Kambala School site and Buildcorp safety protocols including site specific requirements including:

- ▼ Site Safety
- ▼ Site Access, Site Amenities & Site Emergency Procedures
- ▼ Travel, Deliveries & Parking
- ▼ Client & Neighbour Requirements including; personnel behaviour; dust, vibration & noise controls.
- ▼ Head Contractor Policies & Procedures.
- ▼ Environmental considerations and rules.
- ▼ Other Specific School requirements including school drop off times.

The head contractor and all sub-contractors must induct their employees into their safe work procedures. Induction register & copies of site SWMS will be available on site when required.

#### **4.1.9 Hazardous Materials**

For works that require hazardous and/or flammable products, secure and appropriate storage shall be provided on site. The storage area shall be appropriately located away from emergency exits, amenities, neighbouring properties & stormwater pits.

Storage and handling of materials shall be in accordance with each of the products manufactures recommendations and Material Safety Data Sheet, the Occupational Health & Safety Act 2011 and the Occupational Health and Safety Regulations 2011.

Procedures will be implemented to control chemical storage and clean up and any spills if they were to occur.

#### **4.1.10 Safety Inspections**

OH&S meetings will be held on a regular basis on site. These meeting will be conducted as per head contractor's OHS procedures.

An OH&S information board will be erected, and a copy of the OH&S policy will be prominently displayed on the board. Safety inspection audit results will also be displayed.

Sub-contractors will be required to submit their OH&S Plan / SWMS to the Contractor for review prior to commencement as per Buildcorp's policy & procedures. The sub-contractor is to incorporate any feedback from the Contractor and Superintendent into the OH&S Plan.

#### **4.1.11 First Aid Facilities**

First aid facilities will be provided and maintained as per OH&S legislative requirements. There will always be at least one qualified first aider on site whenever any works are taking place.

#### **4.1.12 Approved Plans to be on Site**

A copy of the approved consent plans, specifications and documents incorporating conditions of approval and certification shall always be kept on site.

#### **4.1.13 Public Domain**

All footpaths and bicycle paths surrounding the site will be kept unobstructed and free of tripping hazards from hoarding, fences or construction related items.

Any works required within the public domain shall be undertaken in accordance with relevant authority approvals as required.

Where any construction related materials temporarily extend over footpaths, they will be covered and fitted with a ramp to facilitate safe pedestrian access including access for persons with disabilities.

The public shall be protected from all construction activities including vehicle loading and off-loading within the public domain with the implementation of a Construction Traffic Management Plan and qualified traffic control personnel.

#### **4.1.14 Site Appearance**

No materials shall be stored within the Public Domain areas surrounding the site.

Materials stored on site shall be adequately secured, organised and stacked to prevent unnecessary and unsightly views from surrounding public areas.

All construction generated rubbish and waste shall be sorted and placed into skip bins located within the site which will be removed on a regular basis.

Trucks leaving the site shall be cleaned to ensure soil, mud and other site debris is prevented from spilling onto adjoining roads and footpaths.

All loads shall be covered to prevent the accidental spilling of materials on roadways.

#### **4.1.15 Site Personnel Behaviour**

The head contractor will ensure that all site personnel conduct themselves appropriately and consciously of the neighbouring environment. During the site induction personnel will be inducted to these protocols. The requirements will include use of acceptable language, appropriate clothing, reporting of any incidents and compliance with required consent conditions.

#### **4.1.16 Environmental Controls – sediment controls, tree protection & dust control**

Sediment and Erosional Controls: Refer to **Appendix B** for the sediment control plans applicable to each project stage. All sediment controls will be installed prior to works commencing. Auditing / inspection and maintenance of these controls will occur regularly throughout the project duration.

These controls include the installation of silt control fabric at the low points of the site, at stormwater pit lids.

Tree protection: Refer to **Appendix C** for the Arborist report. The report details trees of heritage significance and requiring protection for the duration of the works. The nominated trees will be protected as per the requirements of the report.

Dust Control: Adequate dust control measures will be put in place throughout the project to control wind driven dust. Control measures shall include the covering of stockpiled soil materials, implementation of dust suppression measures such as watering the site, and the covering loads when they leave / arrive on site.

#### **4.1.17 Site Access**

Construction access will vary during the construction cycle. Details of construction access points is detailed in the Construction Traffic Management Plan in **Appendix D**.

All project stages are expected to utilise the main entrance from New South Head Road for construction vehicle access, therefore it has been anticipated that this gate will be closed to all school staff, students and visitors for the duration of the construction works.

A key consideration is that the Eastbound bus stop on New South Head road outside the school entry gate will be temporarily restricted from use by the students. Instead the students will utilise the East bound bus stop on New South Head Rd opposite the Towns Rd intersection. This will provide a clear separation between the construction vehicles using the New South Head Rd construction entry gate and the students accessing the school.

All site access points shall be controlled for security and safety purposes.

Environmental controls as stipulated in the Construction Environmental Management Plan will be established and maintained throughout the project lifespan as identified in **Appendix B**.

#### **4.1.18 Existing services infrastructure**

Prior to commencement of works, a survey and scan of the site will ensure that all existing services on site are located and documented. This survey in conjunction with any as built information provided by the Kambala School will be used by our site team and services manager to ensure all services are terminated and / or diverted in order to ensure services to adjoining buildings are maintained whilst undertaking the works.

Accurate documentation and as built surveying information allows us to confirm their location and mitigate the risk of exposure to live services and or interruptions to these services that would affect others.

#### **4.1.19 Student amenity and safety during construction staging**

**Separation of construction works** - Live construction and demolition areas will be fenced at all times to prevent the unauthorised access of students and the public. Refer to Appendix A which details the site security fence to be installed for each stage of the construction works.

**Student access to the school** – Students will access the school from Tivoli Avenue throughout the majority of the works. Refer to Appendix A which identifies the student access points.

**Separation of construction workers** – The construction team will have their own dedicated access to the works area ensuring there is no interaction with the operational school. Where access is required to the live school environment i.e. to isolate services or during the installation and removal of boundary fencing. These works will be completed out of school hours where possible.

**Pedestrian and Traffic Management** – Where works are to be conducted from an approved work zone authorised traffic and pedestrian controllers will be engaged to manage the works.

**Dust** – Tools that create excessive dust will be restricted to those that have dust extraction devices connected where such tools are available. The dry cutting of masonry will not be permitted on site. Wetting techniques will be adopted to suppress dust for tools and equipment that will not allow dust extraction devices to be fitted.

**Noise** – Noise will be controlled by the appropriate tool selection for each task, noise monitoring, hoardings and acoustic baffles / screens to be installed to areas of sensitivity.

**Vibration** – A vibration management plan will be implemented for each stage of the construction and demolition. The vibration management plan will seek to protect the existing buildings from vibration damage. Vibration controls will also be employed to prevent the disruption caused by nuisance vibration to the ongoing operations of the school.

**Protection from falling objects** – Construction and demolition works will be screened via a combination of either scaffold, hoardings or fencing that will prevent debris from falling into the live



school environment. During demolition works where student access will come in close proximity to the works, solid overhead mechanical protection will be provided to dedicated student and teacher access paths.

#### 4.1.20 School operations during each construction phase

Construction Phase	Tivoli Building	Hawthorne Building	Minter Building	Anne & John Lewis wing	Massie Building	Early Learning Centre	Alexander	New sports field & hall
During Stage 1 Building Operational	Yes	Yes	Yes	Yes with Restricted rooftop courts use	Yes	Intermittent disruption	Yes	No
During Stage 2A Building Operational	Yes	Yes	Yes	Yes with Restricted rooftop courts use	Yes	Yes	Yes	Restricted areas
During Stage 2B Building Operational	Yes	Yes	Yes	Yes with Restricted rooftop courts use	Yes	Yes	Yes	Restricted areas
During Stage 2C Building Operational	Yes	No	Yes	Yes with Restricted rooftop courts use	Yes	Yes	Yes	Yes
During Stage 2D Building Operational	Yes	Yes	Yes	Yes with Restricted rooftop courts use	Yes	Yes	Yes	Yes
During Stage 3 Building Operational	Intermittent disruption	Intermittent disruption	Intermittent disruption	Yes with Restricted rooftop courts use	Yes	Yes	Intermittent disruption	Yes
During Stage 4 Building Operational	Yes	Yes	Intermittent disruption	No	Yes	Yes	Yes	Yes with Restricted rooftop courts use

#### 4.1.21 Student and staff parking

The access to the student and staff parking is off Tivoli Avenue. The access for the construction works is off New South Head road. The student and staff parking will remain uninterrupted throughout the construction works.

### 4.2 Construction Sequencing Project Stage 1

#### 4.2.1 Demolition

To commence construction of the new sports precinct, the extent of demolition is minimal. The sheds currently onsite in the location of the new sports precinct will be demolished to allow the works to commence. We expect the demolition of these to take approximately 1 week.

#### 4.2.2 Excavation

All excavation work will take place using large excavation plant and equipment with excess spoil transported off site.

Access for earthworks will be in accordance with the Site Establishment Plans and Construction Traffic Management Plan attached at **Appendix A** and **Appendix D**.

The duration to undertake these works will be approximately 20 weeks.

Access around the site is well serviced to allow the use of 'truck and trailers'. This will assist in reducing the number of truck movements for the earthworks phase by half.

At the time of writing this report it is envisaged that the spoil being removed off site would generally be transported to the outer regions of Sydney.

#### **4.2.3 Foundation / Sub-Structure Phase**

Piles and structural footings will be engineered and constructed in such a way as to mitigate the risk of noise and vibration wherever possible. The works will be occurring concurrently with the detailed excavation phase noted above, and thus within the same duration of approximately 8 weeks.

#### **4.2.4 Structure Phase**

With completion of the Foundations, the structure phase will commence.

This phase will consist of traditional concrete column and suspended concrete slab construction. Each level will take approximately 8 weeks to form, reinforce and pour and also allow for in slab services provisions.

Atop the building structure, the new sports fields will be installed.

The duration to undertake these works will be approximately 52 weeks.

Construction of the structure shall be via the use of the sites tower crane.

Traffic movements for this phase of work are identified in **Appendix D**

#### **4.2.5 Façade and Building Envelope Phase**

Following completion of the structure works, external facade and the building envelope works will commence.

The façade will consist of generally lightweight construction materials and components will be prefabricated where possible to limit the works on site.

The duration to undertake these works will be approximately 32 weeks.

Construction of the façade and envelope shall be via the use of the sites tower crane.

Traffic movements for this phase of work are identified in **Appendix D**

#### **4.2.6 Internal Fitout & Finishes Phase**

Following installation of the building facades and envelope elements, the internal fitout and finishes will commence.

Typically starting with the installation of required building services, followed by internal walls, ceilings, joinery and then finishes to walls, floors etc.

Construction of the internal fitout & finishes shall be via the use of the sites tower crane accompanied by an all-terrain fork.

The duration to undertake these works will be approximately 32 weeks.

Traffic movements for this phase of work are identified in **Appendix D**

#### **4.2.7 Connection of Services**

Occurring in parallel with construction activities within the building, wherever possible connection of the developments services to the infrastructure surrounding the site will take place.

Critically these connections must be in place upon completion of the building works to allow all systems to be tested and commissioned ensuring they work as designed.

Specific locations for supply connections (water, recycled water, gas, electricity, communications, sewer, etc.) have yet to be resolved and agreed with the respective infrastructure authorities. Upon receipt of the development consent these applications will be submitted and locations agreed.

Importantly it should be noted that all connections to the supply infrastructure will be done with little disruption to the public domain and service supply to surrounding residents.

Connections shall be undertaken via the use of small scale and specific excavation equipment where necessary.

Traffic movements for this phase of work are identified in **Appendix D**

#### **4.2.8 Landscaping & External Works Phase**

The landscaping and external works is expected to commence following completion of the façade/building envelope, removal of the perimeter scaffolding and completion of in-ground services works.

The landscape and external works surrounding the built form completes its integration with the property boundary line and streetscape.

Works shall be undertaken via the use of small-scale plant and construction equipment for material handling purposes now that the main site cranes etc have been removed.

Traffic movements for this phase of work are identified in **Appendix D**.

### **4.3 Construction Sequencing Project Stage 2**

#### **4.3.1 Demolition**

Patrial demolition of Music & Hawthorne buildings will be completed during Stage 2 using specialist equipment which is suitable for structural demolition within a live environment.

Music Building will be partially demolished as part of the initial sequence in Stage 2A. We expect demolition to take approximately 2 weeks.

Hawthorn Building will be partially demolished following completion of the PDHPE fit out in Stage 2C. We expect demolition to take approximately 2 weeks.

#### **4.3.2 Structure Phase**

In parallel with partial demolition of Music Building, the structure phase for Stage 2 will commence.

Construction of a new Level 2 slab below the Multi-Sports Field for Lite SHINE and GLA's will consist of traditional concrete construction and is expected to take approximately 3 weeks to form, reinforce and pour and allow for in slab services provisions.

Construction of new structure shall be via the use of small mobile materials handling equipment and mobile cranes where necessary.

Traffic movements for this phase of work are identified in **Appendix D**

#### **4.3.3 Façade and Building Envelope Phase**

Following completion of the Stage 2A structure works, external facades and the building envelope works for Stage 2A and Stage 2B will commence. The duration to undertake these works will be approximately 6 weeks.

The façade will consist of generally lightweight construction materials and components will be prefabricated where possible to limit the works on site.

Construction of the façade and envelope shall be via the use of small mobile cranes.

Traffic movements for this phase of work are identified in **Appendix D**

#### **4.3.4 Internal Fitout & Finishes Phase**

Following installation of the building facades and envelope elements, the internal fitout and finishes for Stage 2A and Stage 2B will commence.

Typically starting with the installation of required building services, followed by internal walls, ceilings, joinery and then finishes to walls, floors etc.

Construction of the internal fitout & finishes shall be via small mobile materials handling equipment and mobile cranes where necessary.

The duration to undertake these works will be approximately 10 weeks.

Traffic movements for this phase of work are identified in **Appendix D**

#### **4.3.5 Landscaping & External Works Phase**

The landscaping and external works will be completed as Stage 2C and 2D.



Upon completion of all internal works and removal of the site material handling equipment, the landscape and external works surrounding the built form commences to integrate the works with the existing school campus.

These works will vary in design from footpaths and paved areas through to garden beds and grass areas.

Works shall be undertaken via the use of small-scale plant and construction equipment for material handling purposes.

Traffic movements for this phase of work are identified in **Appendix D**.

#### **4.4 Construction Sequencing Project Stage 3**

##### **4.4.1 Demolition**

Partial demolition of Tivoli & Hawthorne buildings will be completed during Stage 3 using specialist equipment which is suitable for structural demolition within a live environment.

We expect demolition to take approximately 4 weeks.

##### **4.4.2 Façade and Building Envelope Phase**

Following completion of demolition works, external facades and the building envelope make good works will commence. The duration to undertake these works will be approximately 4 weeks.

The façades will consist of generally lightweight construction materials and components will be prefabricated where possible to limit the works on site.

Construction of the façade and envelope shall be via the use of small mobile cranes.

Traffic movements for this phase of work are identified in **Appendix D**

##### **4.4.3 Landscaping & External Works Phase**

The landscaping and external works between Tivoli, Hawthorne, Minter and Alexander building will be completed following completion of façade make good works.

The landscape and external works replaces the demolished structures and integrates the works with the existing school campus.

These works will vary in design from footpaths and paved areas through to garden beds and grass areas.

Works shall be undertaken via the use of small-scale plant and construction equipment for material handling purposes.

Traffic movements for this phase of work are identified in **Appendix D**.

## 4.5 Construction Sequencing Project Stage 4

### 4.5.1 Demolition

Existing sports courts will be demolished to allow the structural works to commence. We expect the demolition of these to take approximately 1 week.

### 4.5.2 Structure Phase

With completion of demolition, the structural strengthening works and new concrete structure will commence.

This phase will consist of traditional concrete columns and suspended concrete slab construction for the new SHINE and KITE centre. It is anticipated that the structural works will take approximately 6 weeks to form, reinforce and pour and also allow for in slab services provisions.

Atop the building structure, the new sports fields will be installed.

Construction of the structure shall be via the use of the sites tower crane.

Traffic movements for this phase of work are identified in **Appendix D**

### 4.5.3 Façade and Building Envelope Phase

Following completion of the structure works, external facades and the building envelope works will commence.

The façade will consist of generally lightweight construction materials and components will be prefabricated where possible to limit the works on site.

The duration to undertake these works will be approximately 8 weeks.

Construction of the façade and envelope shall be via the use of the sites tower crane.

Traffic movements for this phase of work are identified in **Appendix D**

### 4.5.4 Internal Fitout & Finishes Phase

Following installation of the building facades and envelope elements, the internal fitout and finishes will commence.

Typically starting with the installation of required building services, followed by internal walls, ceilings, joinery and then finishes to walls, floors etc.

Construction of the internal fitout & finishes shall be via the use of the sites tower crane.

The duration to undertake these works will be approximately 10 weeks.

Traffic movements for this phase of work are identified in **Appendix D**

## 5.0 CONSTRUCTION MATERIAL LOGISTICS

Note – refer to **Appendix A** Site Establishment Plans

Materials handling involves the movement of material around the site to construct the building. The planning of this work upfront will allow the efficient construction of the building including safety, minimise double handling of materials and accelerate construction.

It is anticipated the main materials handling equipment will include:

- ▼ Forklifts to unload and relocate materials within the site compound.
- ▼ Cranes, both mobile cranes and tower cranes, to lift materials to relevant floor areas and install structure elements such as structural steel, formwork, reinforcement, precast concrete and façade panels.
- ▼ Concrete pumps for pouring concrete

**Appendix A** shows the planned locations of the above equipment applicable to each construction stage

Off-site prefabrication methods will be utilised to minimise the amount of work conducted on site. This also minimises the logistical requirements of coordinating all components of an element as separate deliveries, into a single delivery for complete elements.

Where possible, as the floors are constructed, they will be preloaded with bulk fitout materials such as gyprock sheets, wall framework, services componentry, joinery and the like. This will reduce smaller deliveries later in the project.

Concrete pumping will take place from both the work zone and from within the site to ensure minimum disruption.

## 6.0 CONSTRUCTION TRAFFIC MANAGEMENT

**NOTE: A detailed construction traffic management plan is included in Appendix D.**

### 6.1 Estimate of construction vehicles

Details of the estimated number of construction vehicles for each stage of the works are outlined with the **Appendix D** report.

To minimise impact on local traffic routes the following will be encouraged with incoming and outgoing deliveries:

- ▼ Prefabrication of elements and components where possible (will reduce the number of workers on site & number of deliveries (e.g. Structural Steel, Precast Concrete, Prefabricated Curtain Wall Facades, etc).
- ▼ Sub-contractors to log in deliveries with the project team to ensure that there is no back log of deliveries arriving at a similar time.
- ▼ Incorporate lay/waiting areas within the site for trucks to stand whilst waiting to be unloaded.
- ▼ Traffic control measures to be placed at entry points to control traffic.
- ▼ Sequences to the construction works so that trade activates that rely on several deliveries to do their work do not happen on the same day. For example, a large concrete pour and removal of spoil from site will not be programmed for the same day.
- ▼ Refer to attached TCMP - public transport & site personnel parking.

### 6.2 Construction vehicles site access

Due to the topography, number of buildings, design and concurrently occurring works to surrounding main roads and infrastructure during the construction cycle, construction vehicle access points will change to suit. This is further detailed under the Traffic Management section of this report.

**New South Head Road Access:** Predominantly the site access will be off New South Head Road. This access provides a gate for incoming and outgoing traffic.

### 6.3 Standing of Vehicles on Council Land.

The site establishment plan has been developed to ensure that generally standing of vehicles on public property not is required. All works, and vehicles will be contained within the site fencing line / boundary line wherever possible. Should standing of vehicles be required on council land, appropriate approvals will be sought.

### 6.4 Standing of Equipment on Council Land.

It is anticipated that there will be no need to stand construction plant or equipment on Council Property for most of the project duration. However, as the project develops, and available space is reduced there may be a need to stand some plant within Council land. If this is the case the then the necessary approvals to do so will be procured from the local Council. Such examples include:

- ▼ Dismantling of Materials Hoisting Equipment
- ▼ Dismantling of Tower Cranes
- ▼ Removal of Site Hoardings



## 6.5 Proposed road closures, temporary traffic routes and loss of pedestrian paths.

As noted above, the site establishment plan has been developed to ensure that generally standing of vehicles on public property not is required. All works, and vehicles will be contained within the site fencing line / boundary line. Given this no semi-permanent closure of roads, traffic routes or pedestrian paths is required for the primary development.

The following work activities may result in a short-term road closure or footpath closure. These will need to be confirmed as the design is finalised and await authority advice and advice from the relevant trade contractors:

- ▼ Construction of temporary and permanent laybacks and footpaths.
- ▼ Infrastructure services connections to the site. e.g. incoming high voltage power, sewer, telephone lines etc

Should any closures be required relevant authority paperwork will be submitted, including traffic control plans. From this any required conditions will then be put in place.

## 6.6 Emergency Access

Access to the construction area by emergency vehicles will always be available via the construction gates whilst the site is operational.

## 7.0 CONSTRUCTION WASTE MANAGEMENT

Refer to **Appendix E** for the detailed Waste Management Plan (WMP).

Additional information for the handling of waste is also contained in the Demolition & Construction Waste Management Plan prepared by Waste Audit.

For Excavation Waste, excavated materials shall be reused on the site wherever possible. Any surplus materials needing to be exported from the site will be sorted into separate soil classifications and managed according to EPA requirements. Any hazardous materials identified will be disposed of in accordance with statutory and EPA requirements.

For Primary Building Elements, they will be prefabricated offsite wherever reasonably practicable in order to reduce waste and increase construction efficiency.

For Site Generated Waste, it shall be sorted into relevant bins located within the site prior to being collected by a licensed waste removal company/contractor.

## 8.0 CONSTRUCTION NOISE MANAGEMENT

A Noise and Vibration Management Plan will be prepared by the CTPG acoustic consultant and head contractor once the project's design has been sufficiently detailed.

This summary assessment has been carried-out based on assumptions i.e. the types of equipment which would typically be used on similar projects. These typical sources of noise may be effectively controlled via:

- ▼ Appropriate hoardings around the site and strategically locating noisy items of plant away from sensitive receivers
- ▼ Selection of quieter construction methods wherever possible and appropriate, particularly for piling works
- ▼ Selection of low vibration construction work methods wherever possible and appropriate
- ▼ Vibration monitoring and management controls for heritage structures
- ▼ Coordination with the School and their relevant stakeholders / neighbours to minimise disruption wherever possible.
- ▼ Noise monitoring as required.

## 9.0 CONSTRUCTION NUISANCE MITIGATION MEASURES

The development site currently has neighbouring properties and as such mitigation measures will be adopted.

Adequate measures as nominated below are commonly implemented for sound Health and Safety reasons as well as nuisance prevention, thus in summary mitigation measures are as noted below.

Implementation of these measures shall be the responsibility of the Main Contractor.

Concerns	Mitigation Measure
1. Noise works e.g. rock hammering	<ul style="list-style-type: none"><li>▼ Construction equipment may be fitted with noise mitigation equipment where possible and reasonable.</li><li>▼ Noisy work will be identified and communicated to relevant stakeholders and neighbours, giving them sufficient notice.</li><li>▼ Noisy equipment to be located further away from the direction of closest residential neighbours wherever possible.</li></ul>
2. Dust	<ul style="list-style-type: none"><li>▼ Appropriate site fencing and hoardings will be provided around the site.</li><li>▼ Ensure construction vehicles have been appropriately cleaned before exiting the site.</li><li>▼ Ensure sufficient wetting-down is completed during excavation activities.</li><li>▼ Ensure stockpiles are sufficiently protected and covered.</li></ul>
3. Hazardous materials being encountered	<ul style="list-style-type: none"><li>▼ Hazardous materials survey conducted prior to works commencing on site.</li><li>▼ Appropriately licenced contractors engaged to remove any hazardous materials found.</li></ul>

	<ul style="list-style-type: none"> <li>Appropriate signage and exclusion zones maintained during applicable works if encountered.</li> </ul>
4. Sediment run-off entering the storm water system or surrounding streets	<ul style="list-style-type: none"> <li>Follow prescribed sedimentation and erosion control measures as provided by the Civil Engineer.</li> <li>Conduct regular visual inspections of silt socks and all other sedimentation controls to ensure integrity of the systems are always maintained.</li> <li>Provide dedicated wash-out facilities for use by relevant Subcontractors.</li> </ul>
5. Unauthorised entry to Site	<ul style="list-style-type: none"> <li>Appropriate site fencing and hoardings will be provided which separate all construction activities from the public.</li> <li>Signage appropriately placed to warn of hazards.</li> </ul>
6. Vibration during excavation, piling and structural works	<ul style="list-style-type: none"> <li>Maximise use of bored piles rather than driven piles.</li> <li>Saw cut rock where feasible to minimise rock breaking equipment.</li> <li>Applicable works will be identified and communicated to relevant stakeholders and neighbours giving them sufficient notice.</li> </ul>
7. Construction vehicles, plant and equipment on public roads (arriving / leaving the site)	<ul style="list-style-type: none"> <li>Traffic controllers to manage construction vehicle movements to/from the site as required.</li> <li>Safe public access routes to be pre-agreed and maintained.</li> <li>Site plan and access diagrams provided to delivery drivers before reaching site, to minimise the time spent on public roadways surrounding the site.</li> </ul>
8. Site personnel behaviour both inside and external of the site (e.g. language, rubbish left on streets, interaction with neighbours)	<ul style="list-style-type: none"> <li>Site inductions will include site requirements. These will include no inappropriate language, no throwing rubbish on streets, parking of vehicles legally and the requirement to wear appropriate clothing at all times etc.</li> <li>Weekly toolbox talks will reinforce requirements.</li> <li>Daily check of surrounding streets.</li> </ul>

## Appendix A – Site Establishment Plans

### Site Compound Establishment

The project will have a project office, meeting rooms, site amenities & storage facilities located on the existing sports courts for Project Stages 1, 2 & 3 and will be relocated onto the new Multi-Sports Field for Project Stage 4. All major site functions will be controlled from within this space, including all required site inductions that also are to be conducted within the site compound.

As the contractors will need to go through the standard security checks prior to coming on site, the team will conduct all inductions & checks of SWMS prior to any contractor commencing on site in accordance with the Buildcorp Contracting New South Wales (BCNSW) Safety system.

### Site Access

Site access is via multiple secure gates. Pedestrians from Bayview Hill Road for Project Stages 1, 2 & 3 and will be relocated to New South Head Road for Project Stage 4.

Vehicles will enter and exit using the main gate on New South Head Road.

Gates and access points may vary as the different construction stages are completed.

Heavy vehicle traffic is expected through the structure and façade enclosure construction sequences

### Material Storage

The way that materials come to site will also play a part in the speed of constructing the project. All materials must come to site in a packaged type of way - for example, bulk materials i.e. bricks will need to be in pallets wrapped in safety plastic to allow the quick loading & unloading.

The site will have dedicated lifting zones for materials going directly into the buildings. It will also have dedicated storage zones for materials being delivered prior to lifting into the building.

### Materials Handling

#### **Cranes;**

The predominant material handling and vertical lifting for Project Stages 1 and 4 shall be via Tower Crane and mobile cranes located around the site will be used as the primary material handling method for Stages 2 & 3 and may be used to supplement the tower crane in Stages 1 & 2 (refer attached plans). Cranes will vary in size and boom length as required to perform their ultimate lifting capacity functions, however coordination of the cranes shall occur via computer software-controlled systems to ensure at no time are there risks of striking each other.

#### **All Wheel Drive Forklifts;**

Where materials are requiring unloading and loading onto trucks, as well as moving horizontally across the site, these functions shall predominantly occur with the use of all terrain forklifts.

Forklifts are anticipated for all Project Stages.

**Material Hoists;**

Various materials also shall be moved to the required levels of the building via the use of material hoists. Typically, these materials are not suited to lifting via the sites tower cranes.

Hoists are expected to be required for Project Stages 1 and 4.

**See Attached Plans Identifying Site Amenities, Access and Material Handling Strategy**



## Appendix B – Sediment Control Plans

### Introduction

#### Purpose

This Stormwater and Sediment Control Plans describe how Buildcorp proposes to manage stormwater, prevent erosion, control sediment and prevent pollution.

#### Scope

This plan describes the stormwater and sediment control aspects of the project, which will need to be managed to achieve the desired outcomes, within the constraints imposed by legislative, regulatory and contractual requirements, so that the desired outcomes are achieved.

#### Objectives

To prevent contamination of, or damage to, stormwater drains and waterways and ensure sediment from the building site is retained on-site during construction work.

#### Project Site

The project site is identified in the forward section of this report.

#### Project Description

The project proposes the redevelopment of the Sports precinct over various stages as detailed in the forward sections of this report.

#### Site Specific Details

The construction site is located within 794 – 796 New South Head Road, Rose Bay, NSW as detailed in the forward sections of this report.

### Operational Controls

- ▼ Stormwater shall be prevented from entering adjoining properties or into the sewerage system.
- ▼ Stormwater shall be captured and filtered in sediment control points before entering the legal point of discharge from the site.
- ▼ Rumble grids shall be cleaned daily with consideration given to water saving measures including recycling. Water run-off from cleaning the grid must be filtered prior to entering the legal point of discharge from the site.
- ▼ Stockpiles shall be located away from drainage lines and street drains and gutters. Where possible, stockpiles shall be located on the highest part of the site clear of main activity areas.
- ▼ Designated truck/vehicle/ equipment wash down areas shall be located near the site entrance and be designed to capture and treat water prior to discharge into the stormwater system. A water recycling system shall be installed if wash down areas exceed 3,000 litres per day.
- ▼ Wherever possible, natural vegetation shall be retained to absorb water flows and to minimise dust. Revegetation shall occur as soon as possible after the completion of works
- ▼ Natural rainwater run-off shall be controlled to prevent sediment draining into the stormwater system. Upslope water shall be diverted to prevent it from travelling through the site. Downpipes

shall be connected as soon as a roof is installed on the site. Natural falls of the site shall be identified and sediment filters such as straw bales filters, gravel surface barriers, sandbags, pit baskets or geo-textile mesh screens shall be installed at runoff points.

- ▼ Sediment shall be trapped and controlled prior to leaving the site boundary.
- ▼ Straw bales/geo-textile mesh screens shall be inspected and replaced on a regular basis, so they remain effective.
- ▼ Sediment traps or filters shall be placed around any drain affected by construction works to prevent sediment entering the stormwater system. Sediment controls shall be checked regularly to ensure they are in place and operating properly. Additional inspections shall be undertaken immediately following or during heavy rain (10mm or more rainfall event) to confirm the operational adequacy of the facilities.
- ▼ Water shall not be discharged to the stormwater system if oil is visible on the surface, or if there is reason to suspect that the pit is contaminated with fuel, sewage or other contaminants. In this case the water shall be taken away to an oil separation facility (such as Lidcombe Liquid Waste Facility);
- ▼ Waste material, including liquid wastes such as paint, concrete slurries and chemicals, will not be discharged into a stormwater drain. Facilities shall be provided to enable paint brushes, rollers and spray equipment to be cleaned without any discharge of by-product into the stormwater system. Where possible, a depression or earth dam below brick, concrete or tile cutting shall be constructed. If this is not possible, site water shall be passed through a filtered pit.
- ▼ Buildcorp will monitor discharge from the sediment trap during design rain events (up to 5year ARI) to ensure only visibly clean water is discharged from site. Additional measures such as the addition of flocculants to the sediment trap may be employed if necessary.
- ▼ Wastewaters which are still “dirty” or contaminated will not be discharged to stormwater systems, but instead collected and properly disposed.

### Water Saving Measures

Permanent water saving measures shall be used on site. These include:

- ▼ All hoses must be in good condition and fitted with a trigger nozzle.
- ▼ A high-pressure water cleaning unit is to be used for all washdown activities.
- ▼ Where infrastructure is available the use of recycled water for washdown activities is to be used.

**See attached Site Plans Identifying Control Measures**

## **Appendix C – Tree Protection Plan**

See attached arborist report detailing tree protection measures

## Appendix D – Construction Traffic Management Plan

During the construction of the proposed Project, Buildcorp shall engage the services of specialist Traffic Control Operators to ensure traffic and pedestrian flow is managed to the highest standards and with the utmost focus on safety. Buildcorp will allocate traffic controllers where required to direct all construction deliveries and to communicate changes to traffic conditions to the users of the precinct. All traffic control personnel will be certified as required.

Care will be taken to minimise any damage to the surrounding roads as a result of construction activity.

### Public Safety and Security

Safety of the public is the highest priority. In order to reduce the safety risks to public, all potential risks need to be identified and eliminated or controlled. In summary, practices that will be initiated for this project to assist with public safety will include:

- ▼ Hoardings/fencing to the perimeter of the site to be used to eliminate the chance of public gaining access and to reduce the visual impact of the construction zone by utilizing shade cloth on perimeter fencing.
- ▼ Gates to the sites will always be monitored by appropriate staff.
- ▼ Each entry point will be carefully signposted and monitored to reduce accidental public access. Refer to attached site establishment plan.
- ▼ Daily monitoring of all public access ways and repair if required as a result of construction activities will be conducted.
- ▼ Surrounding access paths will be cleaned daily in order to reduce the occurrence of slip risk.
- ▼ A clearly defined traffic management plan will be implemented to ensure all motor vehicle movements to and from the site as a result of construction activities, do not impede on the operations of the parking of the general public.
- ▼ With the public's safety as our primary concern we will ensure licensed traffic controllers and the traffic management plan is approved by Buildcorp Contracting NSW management and is implemented.

### Traffic Control Personnel

- ▼ Traffic control personnel and equipment will be established as required for the safe and effective control of traffic and pedestrians at all Gates leading into and from the site that interface with public space.
- ▼ Traffic control personnel will set-up roadside signage and equipment at the various locations specified and in accordance with guidelines stipulated by MUTCD.

### Statement of Quality Assurance Compliance

#### Traffic Management:

- ▼ Will be conducted in a professional manner to minimise delays to reduce inconvenience to the public by authorised traffic controllers.
- ▼ Will maintain the traffic control equipment as required for the safe and effective control of traffic for the duration of the roadwork.

## References

- ▼ Australian Standard AS 1742.3 - 1996
- ▼ MUTCD – Manual of Uniform Traffic Control Devices – Part 3
- ▼ Traffic Management Plan

## Ingress and Egress of Vehicles to the Site

Vehicles will approach the site from the South West along New South Head Road. The Gate provided will ensure all vehicles can always fully enter the site and not remain standing on public land. Area will be provided inside the site for vehicles requiring assistance unloading via any of the site material handling equipment. The vehicles will enter turning left into the site and leave turning left out of the site.

For further information, please refer to the Site Establishment Plans in **Annexure A**.

## Management of Loading and Unloading of Materials

Loading and unloading of materials shall occur in nominated “Delivery and Set- Down Zones”

Where any activities are anticipated to affect normal vehicular and/or pedestrian movement, appropriate traffic management shall be provided. Appropriate notification shall be provided for any large or significant deliveries which may result in disruptions.

## Numbers, Timing and Frequency of Vehicles Accessing the Site

The number of vehicles entering the site is to be restricted to deliveries wherever possible; no subcontractor parking will be permitted on site.

The anticipated number of vehicular access into the site is detailed in the enclosed report.

## Management Responsibility for Traffic Control

It is the responsibility of the senior traffic controller or nominated person on site to ensure that all traffic control equipment and its allocation is in accordance with the contract specifications and guidelines.

If required, Traffic delays will be kept to an “absolute maximum” of fifteen (15) minutes (as per MUTCD guidelines) for any single vehicle. Routine work delays to traffic flow shall be targeted to no more than sixty (60) seconds.

Any traffic delays shall be monitored on a regular daily basis and reported to the Site Supervisor. Areas of work under traffic control shall be programmed to achieve these times and other safety requirements. Any specified lengths of work under traffic shall be nominal distances only.

Queue congestion at closures will be monitored to ensure that any intersection and/or roundabout are not blocked at any time during the program unless unavoidable. Traffic Controllers and signage will direct traffic through the closure to ensure this is enforced and maintained.



## Responsibility and Authority

Appropriately qualified personnel will undertake direct traffic control. The minimum qualification shall be a current Traffic Controllers' ticket and General Safety (Blue Card) Induction Card. Traffic Controller's will be responsible for ensuring traffic is not unduly delayed and that safety of the general public and workers on site is maintained.

Each traffic controller is required to take corrective action and notify the Site Supervisor if a problem occurs. The relevant parties will communicate via two-way radio, mobile telephone or direct oral communication.

The Traffic Controller's on site, in consultation with Buildcorp Contracting NSW representative, will be responsible for the control of traffic.

The Traffic Management Plan is to be signed off by the representative prior to commencement of the project.

Personnel on-site will rectify any Non-Conformances immediately and the Operations Manager will respond to all necessary reports.

## Selection of Site Traffic Control Modes.

The following factors have been considered in selecting the appropriate site control modes:

- ▼ Minimising hazard risk to the public and workers on site:
- ▼ Minimising interaction between public traffic and work-site pedestrian / construction vehicles.
- ▼ Minimising traffic delays as specified in the Traffic Control at Worksites - 1998.
- ▼ Minimising the occurrence of any traffic stoppages.

## Specific Traffic Control Modes.

At the location/s outlined in the job specification, the traffic will be controlled by: -

- ▼ Traffic Controllers will maintain road/lane closures on the sections that are indicated as per Traffic Control Plan and/or contract details.
- ▼ A Buildcorp representative prior to the commencement of any road/lane closures will complete any applicable application for Road Occupancy/Closure [if applicable] and all other relevant permits for closures.
- ▼ Buildcorp – Traffic Control Plans / Traffic Management Plan.

## Public Notification

Notification will be by way of signage approved and installed by Buildcorp. Where appropriate written communication with surrounding residents may be utilised to notify of any major planned changes to traffic.

## Time Restrictions

Shall be implemented as per Development Consent conditions.

## Equipment List

Traffic Controller control personnel as required

All signage and equipment as required and as specified in the detailed Traffic Control Plans developed and approved for various scenarios.

## Pedestrians flow

- ▼ Main pedestrian access shall be segregated from the vehicle entry points to the site.
- ▼ Pedestrians will be required to follow the same directions/detour as vehicles.
- ▼ No unauthorised personnel shall be allowed within the construction zone.
- ▼ All personnel (including authorised visitors) on site shall be required to wear as a minimum safety boots, hard hats and high visibility safety vests.

## **Appendix E – Waste Management Plan**



Level 4, 10 Mallett Street  
Camperdown NSW 2150  
Phone: 02 9565 0000

## Waste Management Plan

### ***Kambala School***

794 – 796 New South Head Road,  
Rose Bay

Approved by:

Manager	Date
Mike Currie	14 February 2020

### Record of revisions of HSE Waste Management Plan

Edition Revision	Date	Page	By	Revision Details
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## Introduction

This Waste Management Plan outlines Buildcorp's strategy to minimise the generation of waste, maximise reuse and recycling and ensure waste is disposed of at a licensed EPA waste disposal facility.

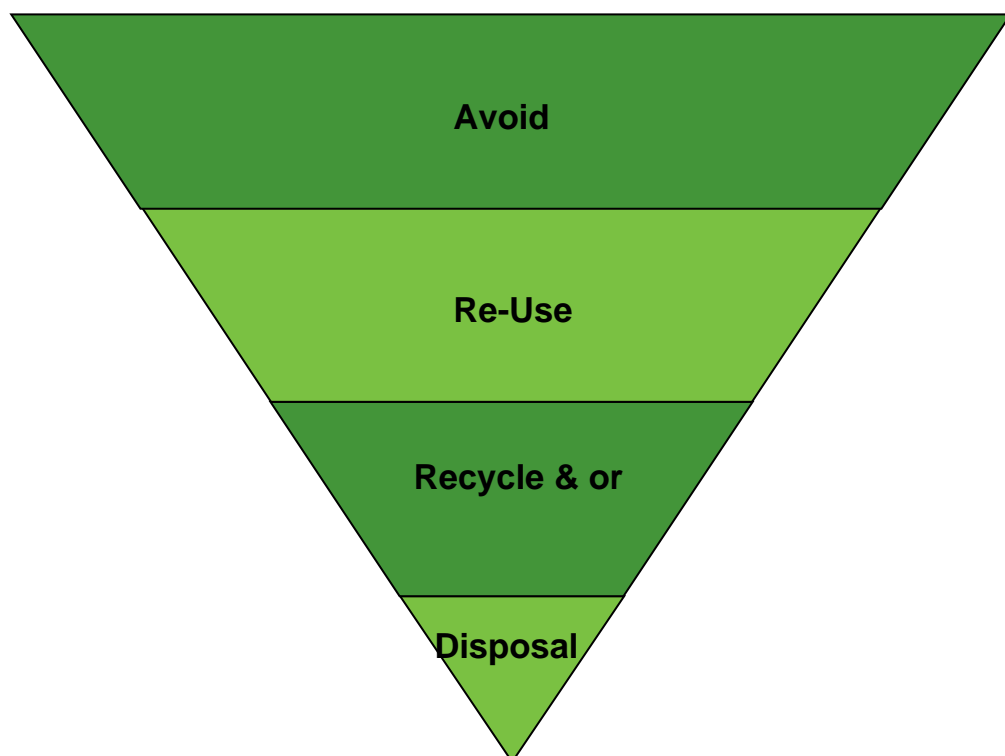
The purpose of this plan is to:

- Establish the specific procedures to ensure waste generated by project activities are minimised and waste is appropriately recycled.
- Provide a consistent and uniform approach that assures the required standards relating to waste are attained and maintained for the project works to achieve minimum recycling / reuse target of 80% of waste by weight minimising the amount of waste going to landfill.
- Establish waste management strategies for the construction stages from demolition, building construction through to commissioning.
- Establish provision for on-site monitoring of wastes generated with details of each material, disposal destinations (tracking) and receipts.
- Define the appropriate waste disposal measures to be undertaken for materials that pose an environmental risk such as soils, concrete, contaminated water, paints etc

## Waste Management Hierarchy

Buildcorp have prioritised waste management by adopting a waste management hierarchy as follows:

1. **Avoiding Waste** (identify demolition and construction waste to minimise packaging and over ordering of materials)
2. **Re-Use Materials** (pallets and storage containers)
3. **Recycle and Reprocess Materials**
4. **Disposal of Waste**





## Waste Minimisation Controls

The following controls will be implemented on site to ensure waste is minimised on the project:

- Main subcontractors are asked to submit waste minimisation details in their SWMS including the following:
  - i. Avoiding over-ordering materials
  - ii. Minimising the use of un-recyclable packaging materials
  - iii. Reviewing with suppliers, the potential for reusable packaging, such as cloth bags, blankets, pallets or containers for materials and equipment
  - iv. Buying environmentally-approved and recycled-content products where possible
- Waste management training is provided as part of Site Induction, ensuring that subcontractors and site visitors are aware of the materials on-site (in particular any hazardous wastes) and waste disposal requirements.
- Buildcorp will utilise the services of a Waste Sub-Contractor whose facilities and waste procedures have been audited by our sustainability management team for stringency and accuracy. They should need also meet the following requirements:
  - i. Be appropriately licensed under the POEO Act (1997) and associated regulations to transport, store, recycle, reprocess and/or dispose of wastes removed from the site;
  - ii. Provide waste containers and transport vehicles suitable for storage and carriage of waste types to be generated at the site;
  - iii. Can provide EPA licenses of the appropriate landfills that are licensed to accept the waste which is generated on site
  - iv. Provide accurate written documentation including tracking documentation and disposal receipts to Buildcorp in a prompt manner following the disposal of waste from the site to comply with regulatory and Buildcorp contract requirements;
  - v. Remove and transport all waste for disposal to a facility lawfully able to accept the waste;
  - vi. Securely load and cover all vehicles/bins and containing waste prior to exit from the site to minimise the risk of waste spillage, dust generation etc during transport.
  - vii. Facilitate recycling of appropriate materials.
- Prior to commencing work on site project personnel (including subcontractors) are to be informed through the site induction process of the importance of waste, recycling, spills or incident impacts on the site and adjacent areas. Site supervisors are to discuss waste management issues at toolbox and other meetings as required.
- All work areas are to be maintained in a clean and tidy manner. A weekly (or more frequent if required) sweep of the entire site will be completed by the contractor to remove loose waste and/or litter present within the site to appropriate waste/recycling storage facilities in the loading dock.
- Daily inspections are to be conducted to ensure that the worksite is left in a rubbish-free state and that no rubbish has been “trapped” against site fencing
- Regular management audits are to be carried out to ensure that the Waste Management Plan is being adhered to

## Waste Management

The table below represents the expected waste types that will be generated during the works and describes how each will be managed on-site, collected and the waste management outcome ranked from the most to least preferred.

Waste Type	Waste Management Outcome				
	Most Preferred		Least Preferred		
	Avoid/Reduce	Reuse	Recycle	Recover	Treat &/or Dispose
Plasterboard					
Paper & Cardboard					
Steel, Scrap Metal etc...					
Timber					
Plastics and Foam					
Insulation Material					
Excavated Fill					
Glass					
Concrete and Bed Mix					
Residual					
Hazardous					
Food and General Waste					

### Notes;

1. Waste is collected in "general construction waste" bins and is sorted at a resource recovery facility using mechanical and manual sorting techniques that remove wastes such as plasterboard, timber, metal, cardboard and plastic for recycling.
2. Residual waste refers to construction waste other than those listed as a waste type.
3. Waste Management Definitions:
  - *Re-use*, means the activity of using waste materials in their current form (i.e. not altering their chemical or physical state)
  - *Recycling*, means the activity of processing waste materials to form new products
  - *Recovery*, means the activity of processing waste materials for the purpose of recovering energy (e.g. incineration)
  - *Disposal*, means the activity of depositing waste materials in landfill

## Demolition

Parts of the Hawthorne, Alexander and Tivoli Buildings will be demolished. Given the age of these buildings the materials that can be recycled will be and the remaining items will be disposed of.

## Excavation Fill Material

Any fill materials identified requiring excavation within the site footprint should be reused, where suitable, on the site as part of the site engineering or landscaping work. Excess or contaminated excavation fill is to be removed off site and classified in accordance with relevant guidelines. To ensure the fill is being taken to the correct landfill the subcontractor transporting the waste should provide details of the landfill site, the EPA licence details and confirmation that landfill is authorised to receive that waste. Trucking docket records are to be kept on site to check that fill is going to the nominated landfills.

## Construction Waste

The construction waste generated on site is to be placed as follows;

- in mixed waste skip bins, meaning that all waste is deposited in the one skip bin and segregation into the appropriate waste streams occurs offsite.
- Where site room allows and subject to waste type quantity sorted into the appropriate waste bins and will be removed and where applicable recycled off site by the waste generating contractor.

## Food and general waste

Food scrap/ general waste bins are provided in the vicinity of site offices and amenities. It is sorted into general waste, cans/bottles and paper/cardboard. Buildcorp site sheds have paper bins and printer cartridge bins (for staff to return to head office for recycling).

## Hazardous Materials

Contaminated waste will be disposed of to an EPA licensed facility which is able to take the waste. Contaminated waste will be stored within designated storage areas on site. Records of disposal of the waste should be maintained with site records.

## Hazardous Substances

Any subcontractors handling, using or disposing of harmful or toxic chemicals or substances are to ensure they follow appropriate manufacture requirements and legislation requirements in disposal. No chemicals or substances are to be disposed of down any drains, sewer etc on- site.

If a spillage of a hazardous substance occurs staff are appropriately trained in spill kit procedures to clean up spills immediately. Spill kits are located adjacent to the areas where hazardous substances are stored on site. Once the substance has been cleaned up it will then be disposed of to the appropriate EPA licensed facility. Records of disposal and the clean up methods of the spill are to be maintained with site records.

## Waste Water/Wash Out Areas

Wash out facilities for finishing trades including concrete and paint waste are to be minimised and water recycling for these activities are encouraged. If a wash out facility is utilised it will not be plumbed to any building services or drain to stormwater.

The wash out area will have sediment controls and should be clearly signposted. The location of the wash down area is shown on the sites layout plan and everyone is made aware of this location during the site induction. Refer to the Sediment control section.

The wash out area and sediment controls should be emptied of all solid residues regularly in order for it to catch waste water. Solids which are caught by this process should be disposed of in a bin going to a licensed waste facility.

### Anticipated Waste Quantities

Anticipated waste quantities associated with the demolition of existing site structures, and construction of the proposed new development are outlined below;

	Demolition	Construction
Type of Material	Estimated Waste Volume (m <sup>3</sup> ) or Area (m <sup>2</sup> )	Estimated Waste Volume (m <sup>3</sup> ) or Area (m <sup>2</sup> )
Excavation Material	33,400 m <sup>3</sup>	100m <sup>3</sup>
Misc. General Waste	100 m <sup>3</sup>	10 m <sup>3</sup>
Bitumen	60 m <sup>3</sup>	N/A
Metal Roofing, Walls	60 m <sup>3</sup>	5 m <sup>3</sup>
Paving	50 m <sup>3</sup>	N/A
Vegetation	40 m <sup>3</sup>	N/A
Bricks	40 m <sup>3</sup>	N/A
Carpet	20 m <sup>3</sup>	N/A
Ceiling Tiles	20 m <sup>3</sup>	N/A
Cardboard Packaging (from deliveries)	20 m <sup>3</sup>	20 m <sup>3</sup>
Concrete	20 m <sup>3</sup>	5 m <sup>3</sup> (excess)
Electrical Wiring, fixtures	12 m <sup>3</sup>	N/A
Window Glass	12 m <sup>3</sup>	5 m <sup>3</sup> (excess)
Metal Fixtures, Fencing (from tennis courts)	10 m <sup>3</sup>	N/A
Mixed Recyclables	N/A	15 m <sup>3</sup>
Timber Offcuts	N/A	5 m <sup>3</sup>
Plasterboard Offcuts	N/A	5 m <sup>3</sup>
Floor Coverings	N/A	5 m <sup>3</sup>

## Site Management Roles and Responsibilities

To manage waste generation on site the following roles and responsibilities have been set for all contractors to follow and ensure the waste recycling targets can be met. The table below represents a summary of the waste management roles and responsibilities for the works on the Kambala sports precinct redevelopment.

Responsibility	Project Task
<b>Site Operation</b>	
Base building management	<ul style="list-style-type: none"> <li>Ensuring that waste is segregated and collected in accordance with this Plan</li> <li>Ensuring that Duty of Care documentation is obtained and maintained in the site file (e.g. copy of waste transporters licence, waste collection receipts, waste transport certificates)</li> <li>Updates to the Plan and Building Management approvals</li> <li>Supervising the collection of waste by the waste contractor (where practical)</li> <li>Maintaining site records of waste types and approximate quantities collected from site</li> </ul>
<b>Waste Sorting</b>	
All Contractors	<ul style="list-style-type: none"> <li>It is the responsibility of all contractors to be inducted into this plan and put waste into the correct bins on site for appropriate disposal off site</li> <li>Contractors are to use the designated bins on site and not dispose of any materials expect within designated bins on site</li> <li>Minimise the generation of wastes through appropriate behaviour on site through site measurement and ongoing management of works</li> </ul>
<b>Waste Collection &amp; Management</b>	
Waste Contractor & Buildcorp Project Manager	<ul style="list-style-type: none"> <li>Supply of bins, according to agreed approach &amp; ongoing site requirements</li> <li>Collection &amp; disposal of waste, as agreed &amp; according to ongoing site requirements</li> <li>Weighing and sorting of all wastes generated on site for disposal off site</li> <li>Ensuring that the waste collected is managed in accordance with the relevant legislation and the identified wastes are re-used, recycled or recovered</li> </ul>
<b>Reporting</b>	
Buildcorp Project Administrator	<ul style="list-style-type: none"> <li>Tracking of wastes generated</li> <li>Reporting of all waste data</li> <li>End of Project reporting of waste data to confirm % recycled / reused and wastes to landfill</li> <li>Preparation of final waste report for the site</li> </ul>

## Monitoring, Conformance and Reporting

The Buildcorp (BC) approved Waste Contractor will provide monthly recycling and waste minimisation reports. These reports are audited to ensure that we are reaching our set targets. Records of the total waste generation and disposal to landfill or recycling are retained on site by Buildcorp contractor site staff.

Any subcontractor found to be inappropriately acting will be issued with a non-conformance and rectification notice immediately by BC. The procedure for environmental non-conformances is as follows:

- i. Site issue is identified
- ii. BC investigates and issues a response to all subcontractors
- iii. BC issues non-conformance/rectification notice to party responsible
- iv. Subcontractor to clean up immediately to relevant legislative requirements
- v. BC notifies external parties as required and final notice to subcontractor

Audits are to be conducted on waste generated to ensure it is being disposed of as per the procedures set out in this Waste Management Plan.

## **Appendix F – Project Staging Details**

See attached architectural sketches detailing the project staging