

PRELIMINARY

Preliminary Construction Management Plan Inner Sydney High School

NSW Department of Education

Revision B
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**ROOT
PARTNERSHIPS**

Advisory+
Project Management

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1 Construction Management Plan Overview

In developing the Preliminary Construction Management Plan for the inner Sydney high school project Root Partnerships confirms its commitment to ensuring a safe work site for its employees, students, contractors, suppliers, subcontractors and also Prince Alfred Park users, NSW Department of Education (DoE) staff, visitors, pedestrians and the travelling public.

This Plan also allows for reasonable disruption (e.g. noise, vibration and dust) for the respective contractors as agreed during the construction of the works. The Preliminary Construction Management Plan references information in the 'Acoustic Assessment of Operation and Construction Noise and Vibration' prepared by Acoustic Studio for this project to inform in the detailed planning and implementation of the works.

A preliminary construction traffic management plan is currently being prepared and information provided in the Positive Traffic Pty Ltd and the Thompson Stanbury Associates traffic assessment reports is being utilised along with tree protection advice from The ENTS Tree consultancy. The two Traffic Assessment reports and Arborist report are referenced in this Preliminary Construction Management Plan and the preliminary Site Establishment Plan is attached in Appendix 3.

Construction waste management is a key element of environmental sustainable design (ESD) in this project. The Preliminary Construction Management Plan seeks to integrate the EDS incentives with the management of construction waste and references specific construction waste management objectives in the EIS Waste Management Plan prepared by ARUP with the Environmental Sustainable Design (ESD) initiatives identified by Northrop Consulting Engineers.

1.1 Relevant Documents;

Technical reports and documents supporting the Environmental Impact Statement (EIS) that are specifically relevant to this Plan in addition to the Architects Design Statement and drawings are:

- Positive Traffic Pty Ltd - Traffic Assessment Report
- Thompson Stanbury Associates - Preliminary Traffic Assessment Report
- The ENTS Tree Consultancy - Arboricultural Impact Assessment
- Acoustic Studio Pty Ltd - Acoustic Assessment of Operation and Construction Noise and Vibration
- GreenCap NAA - Hazardous Materials Risk Assessment
- ARUP Pty Ltd - Waste Management Plan
- Northrop Consulting Engineers - Ecologically Sustainability Design (ESD) report

Construction information in these technical reports relating to Traffic, Existing Trees, Noise, Vibration, Hazardous Materials, Waste and ESD must be considered by the Contractor in the preparation of the final Preliminary Construction Management Plan.

This preliminary Construction Management Plan

This Plan ensures that the Works contractors have:

- Sufficient control devices (e.g. security gates and site access procedures) are utilised to warn and guide NSW Education staff, students, visitors, and the general public safely, around the park or through the site while restricting unauthorised access to construction areas or any unsafe areas
- Adequate warning/notification is provided of changes in conditions and of personnel and/or plant engaged in work associated with the work site or adjacent public areas e.g. Prince Alfred Park and public road areas
- Signs and devices will be erected and displayed prior to work commencing at a work site

The contractors will:

- regularly checked for effectiveness and maintained in a satisfactory condition,
- removed from the work site and Park or covered when not in use.

This Plan shall be revised to take into account altered or unexpected site conditions. In such instances, an addendum to the Plan will be issued to all copy holders to reflect such changes.

2 Revision List

Draft/tender issues of this document shall be identified as revision 1, 2, 3 etc. Upon initial issue (generally Contract Award) this shall be changed to a sequential number commencing at revision A.

All copies shall be distributed in accordance with an agreed distribution list. On receipt of a revision, the copyholder shall incorporate the revised pages into their copy of the document.

The document shall be subject to reissue after a practical number of changes have been made.

3 References

3.1 Legislation

- Work Health and Safety NSW
- NSW Environmental Protection Agency

3.2 Other Documents

- Root Partnerships Project Management Plan
- Construction Contractor Project Management Plan
- City of Sydney Regulation <http://www.cityofsydney.nsw.gov.au/development/public-domain-works> and <http://www.cityofsydney.nsw.gov.au/development/building-and-construction-approvals/temporary-structures/hoardings-and-scaffolding>

Root Partnership's Project Management System

Root Partnership's Project Management Plan is contained in volumes of standard procedures and related forms and appendices.

Access to these procedures is done electronically via 'Synergy' on the Root Partnership's network, or hard copies may be printed where this access is not available.

4 Description of the Works

4.1 Introduction

DoE are preparing a State Significant Development Application (SSD 7610) for the development of a new 'inner Sydney high school' located at the corner of Cleveland and Chalmers Streets, Surry Hills (the 'site'), identified as 244 Cleveland Street, Surry Hills.

The new inner Sydney high school is proposed to accommodate up to 1200 students to take enrolment pressure off surrounding high schools exceeding student capacity, and accommodate future population growth within City of Sydney Local Government Area (LGA). The high school will contain high quality learning, collaborative learning spaces and associated facilities.

Specifically, this proposal seeks development consent for the following works at the site:

- Internal reconfiguration and refurbishment of the existing heritage listed buildings on the site to create:
 - Collaborative learning hubs with a combination of enclosed and open spaces
 - Amenities and support areas
 - Workplaces and lounge spaces for teachers and administrative staff
- Construction of a 13 storey plus roof level and basement (approximately 56.5m from park level), multi-purpose school building, containing:
 - Collaborative learning hubs with a combination of enclosed and open spaces
 - Library
 - Staff workplaces
 - Student canteen
 - Indoor gymnasium and other indoor recreation and performance spaces
 - Ancillary outdoor learning and recreational areas
- Associated site landscaping and public domain improvements
- Augmentation and construction of ancillary infrastructure and utilities as required

4.2 Background

The population of Sydney is forecast to grow by over one million people in the next 10 years and a significant number will reside in or close to the Sydney CBD in new residential developments in areas such as Green Square, Central to Eveleigh precinct, Barangaroo, Central Square, the Bays Precinct and Ultimo. This growth in inner Sydney suburbs is occurring rapidly, putting significant pressure on public infrastructure, including transport, health services and education.

DoE has a legislative responsibility to provide teaching spaces to meet demand in all areas across NSW. A new inner Sydney high school is to be built on Cleveland Street, Surry Hills to meet this demand. Cleveland Street Intensive English High School (CSIEHS) currently occupies the site. A new facility is being constructed for CSIEHS on a site already owned by DoE at Alexandria.

The Cleveland Street site will be redeveloped to create a new future focused high-rise school with a mix of new and refurbished buildings. The heritage of the site is a major consideration for the design of the new campus. A design excellence competition has been completed with the winning architects, Francis-Jones Morehen Thorp (FJMT) continuing to progress the design for the school. The new inner Sydney high school is expected to open in 2020.

The new inner Sydney high school will offer:

- Facilities that are readily accessible and flexible to meet the demands of an evolving curriculum in line with future-focused learning principles.
- Flexible and well connected teaching and learning spaces that enable a variety of teaching and learning practices.
- Spaces that are engaging and supportive for students and teachers.
- Technology-rich settings with an emphasis on mobility and flexibility.

- A healthy and environmentally sustainable environment.
- Innovative, connected outdoor spaces that enable play and collaborative learning.
- Connected open space, creating a welcoming and accessible school with indoor and outdoor teaching and learning opportunities.

No buildings of heritage significance are proposed to be demolished as part of the redevelopment.

The new teaching spaces will incorporate principles of energy efficiency and ecologically sustainable development (ESD). This includes:

- Passive design principles
- Thermal performance and comfort.
- Natural lighting.
- Water recycling management.

Works are as illustrated in detail in the Architectural Design Statement as prepared by FJMT.

Construction works are programmed to commence in late 2017 and completion is expected in early 2020.

5 General Management

Root Partnerships will coordinate with all other project managers, contractors and consultants working on project, as well as with designated staff from DoE Education and Facility Management.

Planning and implementation of the works on site, including access to, from and around the site, Root Partnerships shall consult and coordinate with the Contractors and all relevant stakeholders, authorities and agencies including:

- City of Sydney Council
- NSW Planning and Environment
- NSW Education Facility Management
- NSW Education staff
- NSW Education Security
- NSW Fire Brigade
- NSW Police
- Environmental Protection Agency (EPA)
- SACL

Root Partnerships will ensure suitable and safe access is maintained at all times in Prince Alfred Park around the site for the Community, NSW Education staff, students, and visitors by the contractor, including but not limited to the preparation of, and consultation regarding, the maintenance of an Access Plan which, shall incorporate:

- temporary signage around the site
- temporary pedestrian crossings, particularly where the works mean that pedestrians should not be moving immediately adjacent the site, even for particular events / episodes
- temporary paths and ramps
- hoardings and protective screens and covers
- temporary lighting

In accordance with the City of Sydney regulation; <http://www.cityofsydney.nsw.gov.au/development/building-and-construction-approvals/temporary-structures/hoardings-and-scaffolding> and the Prince Alfred Park plan of management: <http://www.cityofsydney.nsw.gov.au/explore/facilities/parks/plans-of-management>

5.1 Site Establishment

Before construction of the inner Sydney high school the contractor will carry out a thorough dilapidation report on the site and adjoining properties. The site will be fenced and appropriate hoardings installed to site boundaries and sediment control measures installed. Exclusion zones around the trees that identified to remain will be fenced in accordance with an experienced Arborists advice. Temporary builder's supply's for power, water, sewage and communications will be made. Truck access in and out of the site will be made safe with the use of full time traffic controllers and wheel washing and dust mitigation measures will be in place. After excavation, a mobile crane be used on site for the foundation works and to erect a tower crane. The tower crane will comply with the protected air-space regulations for Sydney Airport. A temporary construction zone is proposed on Chalmers Street during non-peak traffic period and further discussion is required with Sydney Buses and the CBD Coordination Office to progress. See the preliminary Site Establishment Plan is attached in Appendix 3.

5.2 Hours of Work

Hours of work permissible during the course of the project as set down in the development consent.

- Monday to Friday 7.30am to 5.30pm,
- Saturday 7.30am to 3.30pm.

The above working works are preliminary and subject to the working hours granted under the development approval process.

No works to be undertaken on Sundays and Public Holidays unless otherwise approved by Root Partnerships and DoE and approval authority.

Out of standard hours work will be considered for special applications only when it becomes necessary. Relevant authority approvals will be obtained by the contractors prior to any work being performed outside the approved development consent working hours.

5.3 Construction Works

All works shall be carried out in normal hours with the exception of the following restricted work hours / times where an agreement has been reached between contractor, DoE, Root Partnerships and the approval authority for the works to be undertaken:

- Delivery and removal of plant to and from site where noise from the operation is managed to not cause disturbance to neighbouring properties,
- Delivery of material to site where noise from the operation is managed to not cause disturbance to neighbouring properties (Pumping of concrete to be within normal hours only).
- Works within the Cleveland Street and Chalmers Streets which need to be carried out at night due to traffic conditions.

Deliveries of material to site will be minimized during the morning and afternoon peak traffic hours and all material movements shall be carried out in accordance with contractor's material handling procedures and Construction Traffic Management Plan (TMP). Traffic Controllers will be in place to safely manage vehicle access to and from site. Refer to Appendix 1 for the Preliminary Site Establishment Plan.

NSW Education staff will not be able to access the construction works unless prior arrangements have been made with Root Partnerships and the contractor. DoE staff nor other non-site team personal (Consultants, Service Providers etc.) wishing to visit the site need arrange the access in advance with Root Partnerships. DoE staff member must be accompanied by a representative of Root Partnerships or the contractor while on site.

It is also recommended that those wishing to gain access to the construction site on a regular basis during the course of the project, undertake the Building Industry Induction Course and obtain a white card.

5.4 Access for Emergency Vehicles and Personnel

Construction works will not effect to access for emergency vehicles and personnel during the course of the project, however in the event of a particular construction activity the works do effect the access path:

- Root Partnerships and the contractor shall ensure suitable access is maintained by the contractors at all times for emergency vehicles and the general public on and off the site.
- All construction traffic to and from the Site (A preliminary draft Site Establishment Plan in Appendices 3 provides an outline of the strategy currently being developed.

5.5 Access for construction personnel

Access by the contractors, subcontractor, and workers to the project will be via the Contractor's site compound located on the western boundary. The contractor will need to consult with the RMS and the CBD coordination office for construction vehicle deliveries and waste removal access and coordinate to avoid morning and afternoon peak traffic periods. Traffic Controllers will be in place to safely manage vehicle access to and from site. The contractor will seek approval and the relevant permits for access to the park at any time. All construction personnel will be advised of the requirements of access as part of the site Inductions prior to commencing work on site.

General circulation from the contractor's site establishment area and the site will be in accordance with the site establishment plan.

5.6 Access for NSW Education and Visitors

At commencement of construction all Education operations will have ceased and been relocated off site. DoE, staff and students do not need to access the site once construction begins however should DoE staff need to access the site arrangements will be made to suit the constructions staging. The final access arrangement will be agreed with the contractor prior to the commencement of works.

The Contractor will be responsible for the implementation and management of access plans required for the various stages of the project. All plans will need to be approved by Root Partnerships and DoE prior to the implementation.

Refer to the Contractor's Site Management Plan for details of pedestrian circulation pathways. Root Partnerships shall ensure suitable and safe access is maintained at all times around the site for DoE staff, student, visitors and general public. The contractor will consult with Root Partnerships and DoE and develop access plans that will be incorporated within the Contractor's Site Management Plan.

The plans will include:

- Temporary Signage around the site
- Temporary pedestrian crossings
- Temporary paths and ramps
- Hoardings and site fencing

5.7 No Smoking Policy

DoE promotes a smoke free school site and the Contractors shall ensure there is no smoking on site, no smoking within the building under construction and no smoking within the site accommodation including site offices and subcontractor's sheds including trade Contractor's facilities.

5.8 Adjoining Property

The contractors shall undertake a dilapidation inspection and prepare reports on adjoining properties, including roads and surrounding landscaping. A copy of the report is to be issued to Root Partnerships and DoE.

The contractor shall inform all construction personnel that the adjoining spaces to the redevelopment will remain operational during the course of the project, and that all construction personnel must behave in an acceptable manner that does not disrupt the daily operations of the Park and its users.

5.9 Noise, Vibration and Dust

The Acoustic Report 'Acoustic Assessment of Operation and Construction Noise and Vibration' prepared by Acoustic Studio identifies the general work practices to be implemented by the contractor to minimize noise at the source and the control of the transmission path between the construction site and the receiver. The Acoustic report details how noise and vibration sources will be identified and managed on this project.

Dust control during construction will be carried out in accordance with the contractors approved construction environmental management plan. Measure will include limiting the volume of material stockpiles on site. Shade cloth screens, solid hoardings and damping down of loose material in dry windy conditions.

To limit the impact of noise and vibration from construction activities the all noisy works will be carried out during the standard construction hours.

Standard construction hours

The following timing guidelines for construction activities will be adhered to:

- Monday to Friday 7.30am to 5:30pm,
- Saturday 7:30am to 3:30pm.

The above working works are preliminary and are in accordance with the City of Sydney guidelines <http://www.cityofsydney.nsw.gov.au/business/regulations/health-and-safety/construction-site-noise> and subject to the working hours granted under the development approval process.

Working outside these hours will only be considered by the Contractor where:

- it is an emergency,
- a situation that would create hazardous conditions,
- plant breakdowns have delayed an activity that cannot be stopped,
- the extended working hours will not impact on NSW Education’s operations.

The Contractor will ensure that the Root Partnership’s representative and the relevant government authority are notified of this work with the details and the reasons for performing outside the designated hours. No work will proceed outside of hours without the prior approval of the relevant approval authority e.g. City of Sydney (CoS), Roads & Maritime Service (RMS) and the CBD Coordination Office as applicable.

Criteria

Management of work activities will be undertaken to achieve the recommendations set out in the Construction Noise advise which forms part of the EIS documentation provided in the Acoustic report by Acoustic Studio. The works are to achieve the following criteria:

Parameter	Measurement	Criteria/KPI
Construction noise	Monday to Friday 7.30am to 5:30pm, Saturday 7:30am to 3:30pm. Boundary with nearest Users	No breaches
Complaints	Surrounding community and the City of Sydney and EPA	No public complaints of noise.

Noise and Vibration Levels

Noise

The Contractor is to identify indicative sound power levels for specific items of plant and equipment used, to estimate noise impacts in accordance with the relevant guidelines.

Vibration

Given the location of the site, some exceedance of daytime vibration limits may be expected in terms of either the potential for building damage or in terms of exceedance of human comfort levels, and operational limits of DoE equipment from any construction activities.

Procedure for Mitigation of Impacts

Control Measures	Responsibility	Timing/Frequency
General and Construction Hours		
Implement this Noise and Vibration Control Plan	Contractor	Throughout works
Ensure that construction work is restricted to the stated normal working hours unless otherwise approved: Work outside these hours will only be considered by the Root Partnerships where: It is an emergency; A situation that would create hazardous conditions; Plant breakdowns have delayed an activity that cannot be stopped (e.g. concrete pour); The extended working hours will not impact on surrounding Users/buildings	Contractor	Daily
Ensure the relevant government authority approval is obtained for any work occurring outside normal working hours	Contractor	Prior to works outside normal working hours
Train site personnel in noise and vibration impacts and management, including techniques to minimise noise and vibration emissions to residences.	Contractor	Prior to on-site construction commencing
Noise		
Inform surrounding Users/Buildings of intended scope of works regarding noise.	Contractor	Prior to on-site construction commencing
Where practical, construct earth mounds or screening in sensitive locations, to act as acoustical barriers and to minimize noise emissions.	Contractor	Prior to on-site construction commencing

Select and use the quietest available plant and equipment. Minimise the use of 2 stroke engines.	Contractor	Prior to on-site construction commencing
Monitor individual vehicles, plant and equipment for noise generation.	Contractor	when first brought onto site & every 3 months throughout the project
Regularly maintain vehicles, plant and equipment and fit engine exhaust systems with properly maintained noise suppression devices such as mufflers, silencers and enclosures in accordance with manufacturer's recommendations.	Contractor	Prior to on-site construction commencing and ongoing
As far as practicable, locate compounds, parking areas and activities located in positions away from noise sensitive locations	Contractor	At all times
Minimize noise-intensive activities as far as possible.	Contractor	At all times
Where possible, face engines of large plant and equipment away from Users/Buildings.	Contractor	At all times
Notify client and other relevant authorities and surrounding Users/Buildings prior to predicted noisy or vibration-intensive activities	Contractor	Prior to noisy activities commencing
Notify client, the relevant government authority and adjacent Users/Buildings of any works undertaken outside normal working hours, which could result in noise impacts.	Contractor	Prior to works outside normal working hours
Record and action all noise complaints.	Contractor	When required
Monitor general noise levels during working hours.	Contractor	Throughout construction period
Compare noise levels to the KPI's. If greater than KPI's or background, raise a Non-conformance report and implement further noise control strategies.	Contractor	Throughout construction period
Vibration		
Evaluate likely vibration impacts on nearby structures, sewer mains, and pipelines and develop mitigation measures as appropriate with Root Partnerships and NSW Education.	Contractor	Prior to on-site construction commencing
A dilapidation Survey shall be undertaken prior to commencing demolition / construction works	Contractor	Prior to on-site construction commencing
Implement a weekly / daily communication process with stakeholders to inform of construction activities particularly excavation in rock that may cause vibration issue with the adjacent building. Works to stop immediately if vibration from construction works interfere with the normal operation of NSW Education equipment	Contractor	Prior to commencing any construction activities that may cause vibration issues with NSW Education equipment.
Monitoring		
The Contractor shall monitor noise and vibration objectively of plant and sensitive receptors. The results of these tests shall be recorded on a regular basis.	Contractor	Regularly
Physical monitoring (using Sound Level Meters or vibration meters) shall be performed in accordance with the relevant Australian Standards or other prescribed standards. Short term attended noise and vibration monitoring shall be performed at locations nominated at the commencement of works.	Contractor	When required
Recording		
Observations shall be noted in weekly Site Inspection Report	Contractor	Weekly

General

Contractors will ensure that any dust caused by the works is reduced to a minimum. Areas worked in by Contractors will be adequately screened to prevent dust spreading to neighbouring buildings via the installation of pre-filters.

The Contractors shall notify Root Partnerships and DoE in advance of work which may require additional dust protection.

Jack hammers and other noisy equipment including hand-held tools used in the performance of the work will be fitted with effective silencers of a type recommended by the manufacturers.

Compressor sets and motors used in the performance of the work will be fitted with effective acoustic canopies and special engine exhaust silencers of a type recommended by the compressor manufacturer. Where possible the Contractor is to under all noisy works between standard work hours identified in the Section 5.1.

Portable radios, iPods, CD players will not be permitted on site. Contractors use of mobile phones and 2 way Radios will be monitored and managed by Root Partnerships to eliminate disturbance from excessive noise etc. to neighbouring properties, pedestrians and park users.

The contractors shall ensure that all structural borne noise will be kept at a minimum to avoid disruption for the users and occupiers of the adjacent areas for periods outside the agreed noisy works periods. The contractors will use “best practice” methods of work to obviate any generated noise.

5.10 Site Security

The contractors will secure the boundaries of the site for the duration of works. The external area will be fenced off using temporary fence panels 1.8m to 2.4m in height. Shade cloth will be placed on the fencing to help minimise dust and present a clean and well managed site.

Appropriate signage will be displayed at all access points to the site warning staff, visitors and the general public that an area which is fenced and/or hoarded off is a construction site.

All access points allowing entry to the construction site will be locked at all times with the exception of the main entry gate to the site which will be manned and remain open during normal working hours. The contractors will issue a key to Root Partnerships to allow access to the construction site in an emergency situation for emergency services teams only.

Emergency Site Access procedure will be implemented and will be issued to DoE’s security for use after normal hours. Where Root Partnerships or DoE have allowed access for emergency services teams to the construction site for an emergency situation, Notification to the contractor must be made immediately, and thereafter in writing of the date and time they have entered the site and an explanation of the emergency situation must be provided.

5.11 Stakeholder Communication

The Contractor will contribute to the monthly project updates posted on project webpage by DoE. The contractor and project manager will outline all site activities and works planned for the month ahead which may have an impact to the local community (including pedestrians, park users and commuters).

A weblink to the monthly updates will be distributed to the local community by emailed and by letter box drop as required.

Regular stakeholder communication meetings will be established so as to keep key stakeholders informed on key milestones and any changes to access for pedestrians, park users and commuters.

Communication Meetings:

- Construction Liaison Committee (Monthly when required)
- Site Meetings (Weekly)

Contact List:

Project site team contact list to be provided by the Contractor prior to commencement of the works.

5.12 Site Signage

Park User, Pedestrian and Visitor directional signage:

A proposal covering the extent, design to be developed by the contractors in accordance with the contractor's management plans and systems and submitted to Root Partnerships for approval.

5.13 Parking

Parking for all construction personnel on the site is not provided. The contractor shall ensure that all persons inducted on the project are advised of this 'No Parking' policy. It is envisaged that most site workers will commute to and from the site on public transport. Parking for contractor's trade vehicles will be in accordance with local parking bylaws and controls set out by the authorities, this includes the current Plan of Management for Prince Alfred Park which prohibits unauthorised vehicles from entering the park at any time.

Refer to Positive Traffic Pty Ltd and the Thompson Stanbury Associates traffic assessment reports for further details.

5.14 Rubbish Removal

The contractors shall remove from site rubbish resulting from the works. Rubbish shall be handled in a manner so as to confine the material completely and to minimise dust emissions and disposed of in accordance with Contractor's Environmental Plan. Refer to Section 8. The Preliminary Site Establishment Plan in Appendix 1 provides an outline of the strategy currently being developed.

5.15 Deliveries

Deliveries to the site will be minimized during the morning and afternoon peak traffic periods and in accordance with the work hours as approved by the development consent approvals. Traffic Controllers will be in place to safely manage vehicle access to and from site.

Refer to the Positive Traffic Pty Ltd and the Thompson Stanbury Associates traffic assessment reports for further details. A preliminary draft Site Establishment Plan in Appendices 3 provides an outline of the strategy currently being developed.

6 Daily Tasks

6.1 Prior to Work Commencing

The Contractor's Supervisor will carry out the following operations to ensure acceptable safety at all times, before work starts:

1. Obtain all necessary construction traffic permits (RMS and CoS) including any required Park access approvals
2. Letter box drop to local community advising of the commencement of works and programme of activities
3. Complete dilapidation survey and report for the site and adjoining properties.
4. Daily prestart toolbox talks with Subcontractor
5. Inspect all signs and devices, note any signs out of place or damaged overnight and rectify as soon as possible
6. Inspect all emergency and pedestrian egress paths and ensure that they are clear of construction plant and materials
7. Make the programmed adjustments to the site management provisions for the day
8. Check for safety and effectiveness of site management provisions by an inspection around the job
9. Maintain, regularly clean and repair OR replace signs and devices as necessary

6.2 During Hours of Work

The Contractor's Supervisor will:

1. Carryout approved induction of site personnel and workers with specific instructions on the protection of people and property
2. Arrange work to minimise nuisance to Park users and pedestrians and ensure their safety
3. Attend to problems as they occur
4. Where there are hazards to the public or DoE, the contractors staff will ensure these are attended to immediately and take photographic record of any potential hazards
5. Reposition barriers and signs as necessary
6. Co-ordinate maintenance of access paths, footpaths with other job operations
7. Promptly notify Root Partnerships of any Accidents involving loss of time or injury

7 Record Keeping

7.1 Site Quality Assurance and Daily Records

Contractor's representative will keep adequate records of daily activities and any significant departures or additions in the Project Diary. An Inspection and Test Plan (ITP) shall be completed ensuring compliance with the management plans.

7.2 Incident / Accident Management and Reporting

Incident Management

The objective of the incident plan is to minimise such disruptions and provide a clear and simple guideline for disruptive events. Contractor's Incident Management Plans are to be implemented on the project upon award of the Contractor.

Accident Management

The Contractors shall promptly notify Root Partnerships and DoE of the occurrence and furnish a written report of the following incidents and accidents:

- Accident involving death or personal injury
- Accident involving lost time
- Incidents with accident potential such as equipment failure, slides, cave ins, and the like

In the case of accidents either witnessed or reported, involving DoE staff, student, public or from which legal proceedings might arise:

- Record the actual type, size and location of signs and devices in use at the time of the accident
- Notify NSW Education management as soon as possible
- Take photographs of the arrangement for subsequent reporting

A file shall be kept including any relevant information on traffic arrangements used and completed.

8 Waste Management Construction Phase

Specific construction waste management objectives are addressed in the EIS Waste Management Plan by ARUP and the Environmental Sustainable Design (ESD) report by Northrop Consulting Engineers. The existing buildings may contain some hazardous materials. A report on hazardous materials by GreenCap NAA is included in the EIS documents and provided a risk assessment for the site.

The contractors will ensure DoE facilities are NOT used for the disposal of rubbish from site. The contractors will engage a waste removal specialist to manage and recycle all waste that leaves the project. To encourage recycling, bins will be located close to areas of work and in a position where access for removal by trucks is possible.

The project objectives include:

- Retain and refurbish all historic buildings on the site (Buildings 1,2 and 3) thereby minimising waste and refurbishing the buildings and benefit from these existing building in the foreseeable future.
- Reinforce waste minimisation with the Contractor based on the hierarchy of avoidance/reduce, re-use, recycle, treat and dispose to endeavour to re-use and/or recycle to reduce/avoid waste disposal to landfill.
- minimize construction waste by early planning and establishment of “Waste minimisation Culture” by all participants in the Design, Construction and End User process.
- Waste minimisation is a key element in life cycle analysis, material selection and specification.

General construction works will generate quantities of materials such as concrete and other masonry products, timber, steel and plastic mainly associated with packaging. Wastes will be segregated and recycled as per the Contractor’s and DoE’s waste minimisation strategy.

8.1 Construction Waste Management Guidelines

Materials on Site		
Type of Materials	Reuse and recycling	
	On Site	Offsite
Concrete Slabs, paving and Brickwork	External face brickwork to be salvaged and used to repair damaged brickwork. Surplus brickwork to be packed for storage by the Contractor	Concrete and Internal Brickwork to be demolished by specialist demolition contractor and removed from site for recycling as seconds or crushed for road base or fill
Formwork	Minimise wastage through reuse of formwork on succeeding floors or use permanent formwork system	Timber formwork to be removed on completion and stored at the Contractor’s for re use on other projects.
Concrete blocks		To be demolished by specialist demolition contractor and removed from site for recycling as seconds or crushed for road base or fill
Plasterboard		Off cuts returned to manufacturer for recycling
Timber	Minimal use of timber in the building other than for joinery fabricated off site	
Metal/Steel	Metal panel system is fabricated off site.	Sold as scrap

General Waste other than construction		
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The Operational Controls implemented to achieve this include:

8.2 Operational Controls		Method of Recording
General	Identify any hazardous and toxic materials (e.g. asbestos) and comply with WorkCover requirements. Develop project Waste Management Plan Try not to over-order on materials (initial waste avoidance). Communicate housekeeping & litter reduction rules with subcontractors during contract letting and site inductions.	Hazardous substance survey Hazardous Materials Management Plan Waste Records Inductions
Implement the waste hierarchy – avoid, reuse, recycle and lastly disposal to landfill.		

Operational Controls	Method of Recording
<p style="text-align: center;">AVOID</p> <hr/> <p style="text-align: center;">RE-USE</p> <hr/> <p style="text-align: center;">RECYCLE</p> <hr/> <p style="text-align: center;">RECOVER</p> <hr/> <p style="text-align: center;">DISPOSAL</p>	
<p>Demolition Plan</p>	<ul style="list-style-type: none"> • Demolition disposal for concrete, bricks, plasterboard, timber, tiles, PVC, metal, paper & cardboard, glass, appliance, carpet, vegetation, soil – to Recycled Facility by specialist demolition contractor. • Asbestos ACM to be removed by a licenced contractor (up to 30 June 2007 >200m², 1 July 2007 > 50m³, from 1 Jan 2008 > 10m² of bonded asbestos) & managed in accordance with WHS Act & Regulation 2012 and DECCW requirements. • Lead paints & dusts will be removed using we sanding and vacuum techniques (cleaners which comply with AS/NZS 3544 Industrial vacuum cleaners for particulates hazardous to health). Waste will be contained within sealed plastic bags for disposal. Clean up with a wet mop. Waste material to be disposed in accordance state legislation.
<p>Consider recycling reprocessing</p>	<p>Where practicable:</p> <ul style="list-style-type: none"> • Timber for reuse or mulching • Aluminium wall frames – reprocess • Plasterboard – recycled or use as soil improvers • Steel – reprocess • Toughened Glass – reprocess • Carpet & underlay – reprocess & mulch mats
<p>Product Stewardship</p>	<ul style="list-style-type: none"> • Investigate returning waste to the supplier? (e.g. plasterboard, packaging)

Operational Controls		Method of Recording
		<input type="checkbox"/> Supply agreements
Putrescibles Waste	<ul style="list-style-type: none"> Putrescible waste is to be contained in bins and collected by licenced contractor for disposal. 	<input type="checkbox"/> Invoices
Contaminated Soils	<ul style="list-style-type: none"> Contaminated soils will be excavated and classified in accordance with DECCW guidelines “Environmental Guidelines: Assessment, Classification & Management of Liquid & Non-Liquid Wastes” – http://www.environment.nsw.gov.au/resources/clm/waste_guide.pdf 	<input type="checkbox"/> RAP Reports <input type="checkbox"/> Test Reports <input type="checkbox"/> Waste Records <input type="checkbox"/> Disposal Dockets
Virgin Excavated Natural Materials (VEMN)	<ul style="list-style-type: none"> VEMN excavated from site with suitable compaction qualities will be beneficially re-used on other construction sites whenever possible. Disposal to landfill will be the last option. No fill is expected, however if required no fill will be received on site that does not comply with DECCW guidelines i.e. Contamination limits appropriate to the development. 	<input type="checkbox"/> Test Reports <input type="checkbox"/> Waste Records <input type="checkbox"/> Disposal Dockets
Acid Sulphate Soils (ASS)	<ul style="list-style-type: none"> ASS not expected on the project If suspected, consultant to prepare Acid Sulphate Soil Management Plan (ASS MP). Excavation and neutralisation to be supervised by consultants as per ASS MP. 	<input type="checkbox"/> ASS MP <input type="checkbox"/> Supervision
Monitoring	<ul style="list-style-type: none"> Bin(s) with heavy lids shall be provided for putrescibles waste Daily inspections shall be carried out to ensure the worksite is litter free. 	<input type="checkbox"/> Env. Inspection Checklist
Reporting	<ul style="list-style-type: none"> Waste reports/management plans indicate estimated waste min (%) of accumulated totals for the project. 	<input type="checkbox"/> Monthly Reports
Non-Compliance	<ul style="list-style-type: none"> Generation of water pollution and/or air pollution from onsite waste storage Inappropriate/illegal off-site disposal of waste materials Asbestos & CCA treated timber contamination 	<input type="checkbox"/> Env. Inspection Checklist <input type="checkbox"/> Incident Report, NCRS

Operational Controls		Method of Recording
	of recoverable waste stream thereby requiring landfill disposal.	
Emergency Response	<ul style="list-style-type: none"> No specific requirements associated with waste management Scenarios such as spill, fires, explosions covered by the project emergency response plans. 	<input type="checkbox"/> Incident Report

8.3 Estimated Waste Quantities

Estimated waste quantities examples:

Block of Flats (per 1000 m2)			
Waste Type	Conversion Factor	Demolition (t)	Construction (t)
Excavated Material	1.8 t/m3	na	na
Concrete (incl. Blocks)	2.4 t/m3	813	813
Bricks	1.0 t/m3	655	655
Timber Gyprock	Timber 0.5 t/m3 ³ Gyprock: 0.75 t/m3	22	22
Steel	2 -4 t/m3	9	9
Roof Tiles	0.75 t/m3	33	33
Other – vegetation, cardboard, plastic	0.05 t/m3	26	26

Factory (per 1000 m2)			
Waste Type	Conversion (t to m3)	Demolition (t)	Construction (t)
Excavated Material	1.8 t/m3	na	na
Concrete	2.4 t/m3	448	0.25
Bricks	1.0 t/m3	205	2.10
Timber Gyprock	Timber 0.5 t/m3 ³ Gyprock: 0.75 t/m3	4	1.65
Steel	2 -4 t/m3	23	0.45
Roof Tiles	0.75 t/m3	na	4.80
Other	0.05 t/m3	?	0.60

Office Block (per 1000 m2)			
Waste Type	Conversion (t to m3)	Demolition (t)	Construction (t)
Excavated Material	1.8 t/m3	7,410	5.10
Concrete	2.4 t/m3	1,485	18.80
Bricks	1.0 t/m3	124	8.50
Timber Gyprock	Timber 0.5 t/m3 ³ Gyprock: 0.75 t/m3	29	8.60

8.4 Reporting

A nominated member of the project team will be responsible for collecting monthly waste reports and issuing them to the Project Manager.

These reports will measure the weight of waste generated of material by classification, total weight of waste, percentage by weight recycled and percentage by weight to landfill and will be reported to DoE.

8.5 Estimated quantities

The Contractor will estimate the volume and weight of the core waste streams that will be removed from the project. Project waste to be removed will be assessed for the Reuse and recycling content and the Disposal to landfill.

Type of Waste	Demolition	Construction	Disposal
Excavated Material			Contractor yet to be determined. Excavated Material to be removed from site by the Earthworks Contractor. Material to be recycled as select fill on other building or civil projects in the area.
Concrete			Contractor yet to be determined. Demolished concrete to be removed by a Specialist Demolition Contractor. Concrete to be taken from site to the Contractor's depot for recycling into road base.
Brickwork			Contractor yet to be determined. External face brickwork to be salvaged for reuse on the building. Internal brickwork to be removed by a Specialist Demolition Contractor. Bricks to be taken from site to the Contractor's depot for recycling.
Windows / Glass			Contractor yet to be determined. Removed by Specialist Demolition Contractor. Material to be taken to the Contractor's depot for sorting and recycling.
Floor Finishes			Contractor yet to be determined. Removed by Specialist Demolition Contractor for recycling. Vinyl flooring containing asbestos to be removed by a licenced asbestos removal contractor & managed in accordance with WHS Act & Regulation 2012 and DECCW requirements.
General Construction			Contractor yet to be determined. Removed by a licenced Waste Management Contractor using skip bins. Materials to be taken to the Contractor depot for sorting and recycling. Approximately m3 per month to be identified at Tender.

8.6 Waste Management Initiatives

Demolition and construction work are to take place with consideration of the project's Green Star initiatives, particularly in regard to use of recycled building materials and recycling of construction waste streams. Target rate for construction and demolition waste diversion from landfill will be determined once the Green Star initiatives for the project have been finalised.

An overview of major waste streams resulting from demolition and construction is provided in the Section 4 of the Waste Management Plan by AURP Pty Ltd

9 Emergency Procedure

In the event of any emergency situation arising during the course of the contract, including:

- Emergency evacuation
- Fire
- Flooding and water damage
- Gas leak
- Mains power failure
- Explosion
- Bomb threat
- Chemical Spill
- Construction accident
- Medical Emergency
- Theft of Collection items
- Criminal or accidental damage

The Contractor responsible for the construction / worksite will be responsible to ensure that all construction personnel associated with the works are evacuated from the work site in accordance with the Contractor's procedures. On evacuation of the work site the Contractor's representative will notify DoE and Root Partnerships and advise the status of the site, and await any further instructions.

The Contractors should ensure that Evacuation Plans are displayed within the worksite and the Contractor's site establishment to assist construction personnel evacuating in the event of an emergency.

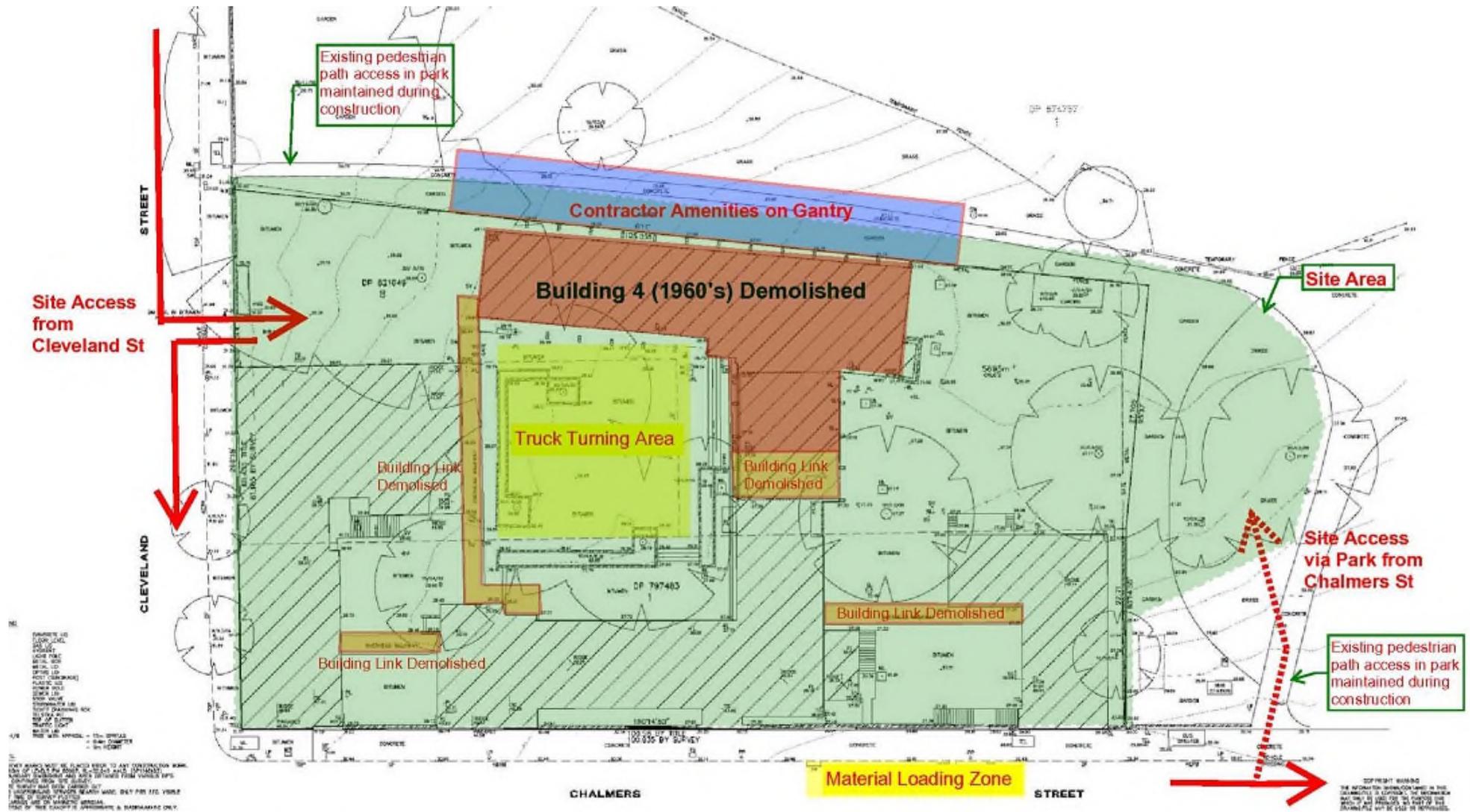
The Contractors shall ensure that the emergency procedures are incorporated into the Contractor's plans.

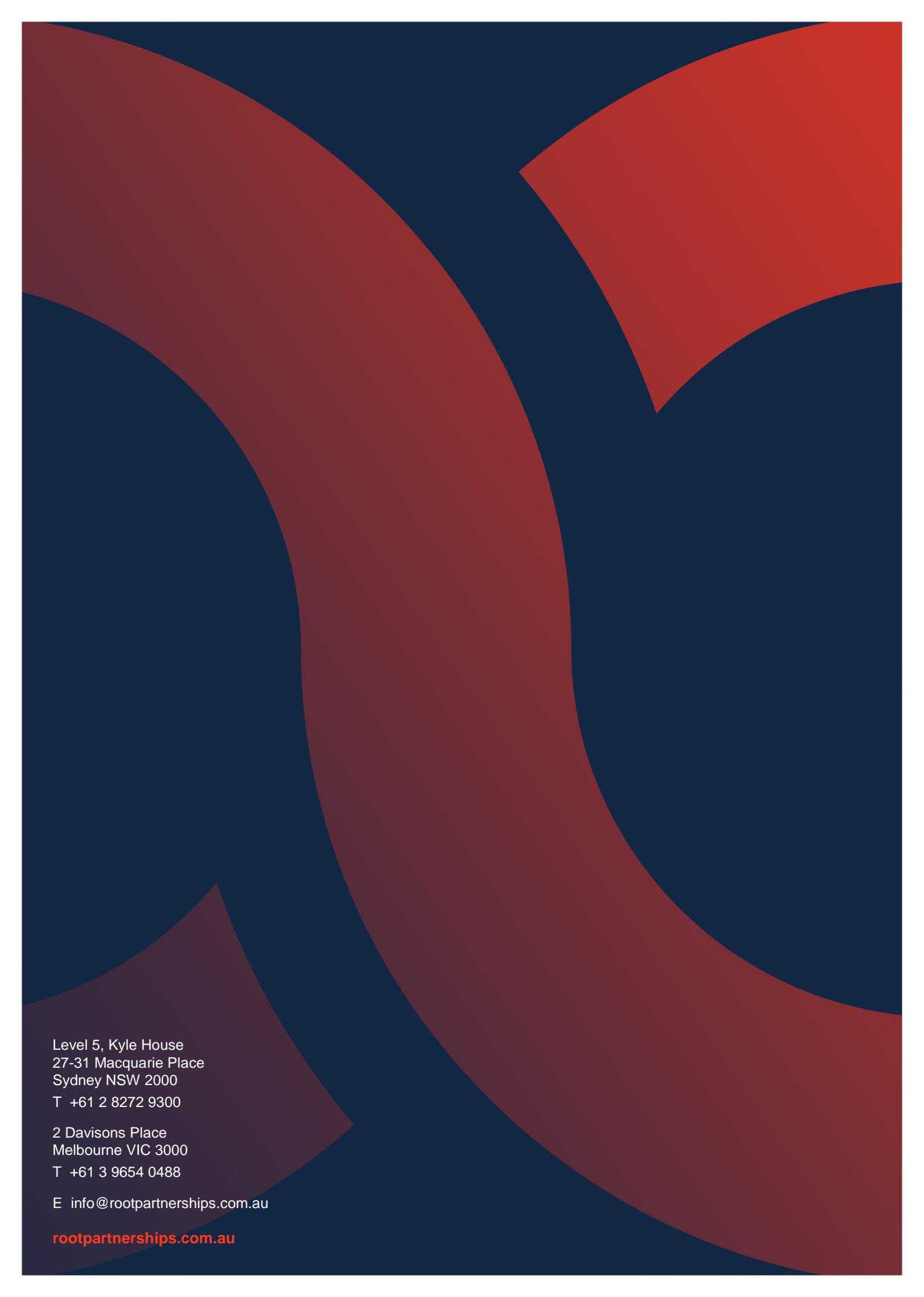
In the event of any emergency the following project team personnel will be contactable during all hours of the day:

No.	Position	Name	Telephone Numbers
1	Project Manager	Fiona Larkin	
2	<i>To be completed on award of Contractor</i>		
3			
4			

The number designates the order of precedence, which may depend on availability at a particular time of day or period of construction.

Appendix 1 - Preliminary Site Establishment Plan





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