

PUBLIC DOMAIN – STAGE 1A SSD 6303 BARANGAROO SOUTH

ENVIRONMENTAL, CONSTRUCTION, AND SITE MANAGEMENT PLAN

APRIL 2014

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Abbreviations

LL: Lend Lease (Millers Point)

LLB: Lend Lease Building

BDA: Barangaroo Delivery Authority

DP&I: NSW Department of Planning & Infrastructure

ECSMP: Environmental, Construction and Site Management Plan

EH&S: Environment, Health and Safety

EIS: Environmental Impact Statement

EMS: Environmental Management System

EPA: NSW Environment Protection Authority

GFA: Gross Floor Area

MSDS: Materials Safety Data Sheet

PM: Project Manager

RAP: Remedial Action Plan

RWP: Remedial Work Plan

SM: Site Manager

SWMS: Safe Work Method Statement

WMP: Waste Management Plan

1 Executive Summary

This Environmental, Construction and Site Management Plan (ECSMP) has been developed by Lend Lease Building for Lend Lease Millers Point (hereafter referred to as Lend Lease) to provide a framework to address environmental issues associated with the Stage 1A Public Domain at Barangaroo South, Millers Point, NSW.

As part of the works associated with this phase of the project, Lend Lease proposes public domain works within the Stage 1A area, above the basement works and in foreshore areas adjacent to Darling Harbour.

As part of the works associated with this phase of the project, Lend Lease is aiming to undertake the following activities within the Barangaroo site:

- Construction of internal roads;
- Paving, trees and lighting;
- Waterfront timber boardwalk;
- Signage and Furniture and Fittings;
- R8 R9 waterfront structures.

The Public Domain SSDA 6303 seeks approval for the all public domain works within 'Stage 1A' of the Barangaroo South Site. These works include typical public domain features such as street paving, a boardwalk, street furniture, lighting and planting.

Additional items such as shade/weather protection structures and water features are also included in the design of the public domain. Various services and infrastructure such as power and water are incorporated into the proposed works where relevant.

Works are proposed to be generally undertaken between the hours of 7.00am and 6.00pm Monday-Friday and between 7.00am and 5.00pm on Saturdays. Occasional night works, and works on Sundays or public holidays, will be required where dictated by authority requirements or for worker or public safety.

The site will be enclosed by fencing. Site vehicle access will be off Hickson Road. Lunch, change and ablution facilities will be provided for the use of all site personnel.

All site personnel, including subcontractors and visitors, will be inducted under Lend Lease's Environment, Health and Safety Management System. Records of all induction, ongoing training and reporting will be maintained.

Tower cranes, which form part of the approved buildings, will be used for materials handling. A materials handling team member will ensure the efficient management of deliveries and removals and hence minimise disruption to traffic around the site.

Site specific environmental management protocols will be established to ensure environmental responsibilities are implemented and documented.

A primary contact(s) to deal with environmental emergencies will be nominated and their 24 hour/day 7 days/week contact details prominently displayed on site.

Management and monitoring of the noise and vibration generated from construction activity will be addressed according to the recommendations of the *Wilkinson Murray, Barangaroo South; Public Domain, Construction Noise and Vibration Assessment.*

Dust suppression, as well as erosion and sediment control measures, will be installed prior to excavation works and service installations, and will be maintained for the duration of construction.

Management of construction generated solid and liquid waste will be addressed in accordance with the Spoil & Waste Management Sub-Plan operating at the site.

An Amended Remedial Action Plan, Barangaroo - ORWS Area, dated 7 July 2011 prepared by AECOM will be implemented for remediation of contaminated soil and groundwater as part of the PA1 Basement works.

Surface and ground water quality, including Harbour water quality, will continue to be monitored with existing monitoring in place as part of PA1 Basement works. In addition, supplementary erosion and sediment controls will be implemented to manage surface runoff during construction.

Vehicular and pedestrian traffic management and controls will be implemented and monitored to minimise disruptions to site activities and surrounding road network. The site haulage route and foreshore Promenade will continue to be managed as reported in PA1 Basement works.

A comprehensive stakeholder action plan will be implemented to maintain a good neighbour policy with surrounding businesses, residents and special interest groups during construction.

2 Project Understanding

2.1 Introduction

This report supports the State Significant Development Application (SSDA) 6303 submitted to the Minister for Planning and Infrastructure pursuant to Part 4 of the Environmental Planning and Assessment Act 1979 (EP&A Act). This report addresses relevant Director-General Requirements for the project. These Director-General Requirements are discussed in the Environmental Impact Statement (EIS) that has been prepared to support the application.

The SSDA seeks approval for public domain works within Stage 1A at Barangaroo South as described in the Project Description section of this report. The scope of work includes:

- Internal road works
- Paving
- Trees
- Lighting
- Signage
- Furniture and fittings

2.2 Background

The 22 hectare Barangaroo site has been divided into three distinct redevelopment areas (from north to south) – the Headland Park, Barangaroo Stage 2 and Barangaroo Stage 1 (herein after known as Barangaroo South). Lend Lease was successfully appointed as the preferred proponent to develop Barangaroo South on 20 December 2009.

The Public Domain SSDA 6303 site area is located within Barangaroo South as shown in Appendix A. The SSDA site extends over land generally known and identified in the approved Concept Plan as Blocks 1, 2, 3, and X and the area of the foreshore between Block X and Darling Harbour.

The following planning approvals are in place for Barangaroo South:

- Concept Plan (MP06_0162 approved 9 February 2007);
- Bulk Excavation & Basement Car Park (MP10_0023 approved 2 November 2010);
- Commercial Building C4 (MP10 0025 approved 3 March 2011);
- Commercial Building C5 (MP10_0227 approved 24 April 2012);
- Commercial Building C3 (MP11 0044 approved 24 April 2012);
- R8 R9 Residential Buildings (MP11_0002 approved 28 June 2013).

2.3 Project Description

The Public Domain SSDA 6303 seeks approval for the all public domain works within 'Stage 1A' of the Barangaroo South Site. These works include typical public domain features such as street paving, street furniture, lighting and planting.

Additional items such as shade/weather protection structures are also included in the design of the public domain. Various services and infrastructure such as power and water are incorporated into the proposed works where relevant.

2.4 ECSMP Context

This ECSMP links the approval process and the Environment Health and Safety (EH&S) management system to be implemented for construction. This ECSMP generally describes environmental management protocols that will be implemented through the EH&S management system. It is a conceptual management tool that assists in informing suitable high standards of environmental protection during construction and will provide guidance for environmental controls to be implemented before and during construction.

It should be noted that a Construction Framework Environment Management Plan (CFEMP), and associated sub-plans, is used to implement the requirements of planning approvals, licences and permits throughout construction. The CFEMP is updated on a regular basis, has been reviewed by the EPA, and approved by the Director General of the Department of Planning & Infrastructure. The CFEMP and associated sub-plans will be updated to include any additional requirements from this planning application.

2.5 Lend Lease Environment Health and Safety Management System

2.5.1 Background information

LLB's construction management will be implemented through the Environment Health and Safety (EH&S) management system. This ECSMP is intended to integrate the requirements of the environmental impacts noted at concept assessment with the operational systems process of the EH&S management system.

The EH&S Management System is based on the ISO14000 model and has been accredited under the NSW Government Environmental Management Systems Guidelines. The management system translates the LLB Environment, Health and Safety Policy into processes so that environmental responsibilities and performance can be monitored, reported and improved. The processes for monitoring procedures to ensure continual improvement in environmental performance are part of the EH&S Management System and are referred to as EH&S throughout this document.

2.5.2 Lend Lease Environment Health & Safety (EH&S) Management System

The LLB EH&S Management System has been developed to focus on the production of a project specific EH&S Plan, which is where the majority of construction activity risks must be identified and managed. Both project environmental and safety issues are planned and managed within the EH&S Plan, prepared specifically for each project based on a template. Mandatory company procedures (i.e. risk assessment, reporting, auditing, and emergency / incident management etc), standard forms and minimum company standards are all included in the template. While there are common management procedures and forms used for environmental and safety assessment, a specific CFEMP and associated environmental management sub-plans are prepared for project specific conditions.

2.5.3 EH&S Standards

Company EH&S Standards and requirements apply to all personnel on the project. Project specific rules are to be developed in accordance with Company EH&S Standards. Project specific requirements will be explained in tender packages and clarified in site inductions.

A visitor's register will be maintained on site at all times with all visitors to sign the register before accessing site with a site inducted person.

2.5.4 Roles and Responsibilities

Project Roles and Responsibilities for EH&S will be detailed in the EH&S Plan.

Key staff and service provider responsibilities for the delivery of the Environment, Health and Safety Policy will be detailed in the EH&S Plan.

More specific Site Management Issues are discussed in **Section 3** and Environmental issues discussed in **Section 4**.

3 Site Management

3.1 Site Establishment

3.1.1 Introduction

The site for the Public Domain works, and a general arrangement site plan, is included in **Appendix A**.

3.1.2 Contact Details

Contact details for the senior site representative will be displayed on site.

3.1.3 Parking

No on-site parking is proposed to be made available for general tradespersons or site personnel.

3.1.4 Security and Hoarding Management

The site will be enclosed by Class A hoardings for the construction phase as follows:

<u>Hickson Road</u>: Class A painted hoarding along the Hickson Road Work zone extending north from the Shelley Street intersection. Vehicle gates will be located up the northern end for access to and from site, typically to coincide with existing crossovers associated with the former Port use. This area will be secured by gateman and stop/go personnel to control pedestrian and vehicle traffic.

<u>Shelley Street</u>: Shelley Street will be protected by a 3m high 'A Class' hoarding until its redevelopment into the Margaret Street extension.

<u>Western Frontage (along the Promenade):</u> Class A hoarding will be erected along the Western Frontage with an agreed allowance for a public thoroughfare through to King Street wharf.

Staging of foreshore works and alignment will be subject to further discussion and agreement with the BDA.

When necessary and in line with the BDA's agreement, the foreshore promenade will be closed to the public in order to facilitate construction activities such as promenade works. A Class A hoarding and appropriate buffer zone will be provided to protect pedestrians from the works.

Northern Frontage: The Northern Frontage will be protected by a Class A hoarding of minimum 2.4m height.

To ensure controlled access is maintained on the project, a security swipe card system will be implemented. All construction workers and visitors will be issued with a swipe card at their induction. This will allow Lend Lease to monitor all onsite personnel at any given time.

3.1.5 Safety Information

All employees on site must first complete the site induction in accordance with the Lend Lease EH&S management system.

In addition, all subcontractors must induct their employees into their specific safe work procedures and submit evidence of appropriate management mechanisms to Lend Lease.

Lend Lease will periodically conduct its own internal safety audits. The audit team will consist of:

- Lend Lease Safety Manager;
- Site EH&S Safety Coordinator; and
- Subcontractor Representative.

An EH&S information board will be erected within the Barangaroo South site, and a copy of the Lend Lease EH&S policy will prominently be displayed on the board.

3.1.6 First Aid Facilities

Lend Lease will ensure First Aid Facilities are provided in accordance with WorkCover requirements. Subcontractors are to provide a First Aiders for their individual company works. A nominated first aider will be on site whenever work is being carried out. This will be either a Lend Lease or Subcontractor representative.

3.1.7 Approved plans to be on-site

In accordance with the conditions of consent, Lend Lease will maintain a copy of the approved and certified plans, specifications and documents incorporating conditions of approval and certification on site at all times.

3.1.8 Dilapidation Survey

A dilapidation survey will be undertaken for adjacent structures, domains and services infrastructure.

3.1.9 Site Notice

In accordance with the conditions of consent, Lend Lease will display, at the boundaries of the site, the project's certifier and the relevant emergency contact name and contact Number.

3.1.10 Neighbours

Lend Lease has developed a Stakeholder Engagement Strategy (Appendix B) as part of ongoing engagement with the local community and key stakeholders. The main objective

of this strategy is to provide a process that engages the community and key stakeholders in the delivery of Barangaroo South. The objectives are to:

- Ensure all stakeholders and affected community members are well informed about the Barangaroo South development and are given an opportunity to provide input into the project;
- Minimise impacts to affected residents and stakeholders; and
- Create opportunities for stakeholders to access transparent information on the project and provide forums for feedback and enquires.

Lend Lease has a commitment to an inclusive and pro-active community and stakeholder engagement process, which will be both responsive (to complaints) and proactive (with provision of information). The engagement will take many forms and will be agreed upon in conjunction with the Barangaroo Delivery Authority to align with their existing communications program.

3.2 Construction Methodology

All works will be carried out to satisfy the Consent Authority's requirements, ensuring safety and continuity of the works. Facilities, hoardings, notices, entrances, etc. have already been established as part of the PA1 works.

Works above the basement slab include:

- Install Public Domain Services Power, drainage and communications.
- Fill to underside of pavement for roadway or pedestrian paving.
- Lay road subgrade, base coarse and asphaltic pavement, stone kerb and concrete gutter.
- Lay subgrade and slab on ground and install stone paving on mortar bed.
- Install trees in tree pits on structural soils.

Works to the west of the basement slab, along the waterfront with Darling Harbour, include:

- Fill waterfront to required level.
- Lay subgrade and slab on ground with exposed aggregate.
- Construct timber boardwalk above the existing caisson wall.
- Install trees in tree pits on structural soils.

4 Environmental Management

4.1 Environmental Management Structure and Responsibility

The relevant ECSMP responsibilities are presented below in **Table 4.1**. Responsibilities will be implemented as part of the Project EH&S Plan.

Individual	Responsibility
All Staff including Sub-Contractors	All staff have a responsibility for their own environmental performance and the impact they have on the environmental performance of the development. In particular, all staff should:
	 Undertake all activities in accordance with the agreed plans of management, procedures and work methods.
	 Ensure that they are aware of the contact person(s) regarding environmental matters.
	 Report any activity that has resulted, or has the potential to result, in an environmental incident.
	 Ensure they attend the environmental training provided.
Lend Lease	Lend Lease has the following responsibilities under the ECSMP:
	 Provide clear guidance under the Lend Lease EH&S Management System so that work undertaken is consistent with legal and contractual requirements.
	 Provide adequate resources to allow effective development, implementation and maintenance of the EH&S Management System.
	 Participate and provide guidance in the regular review of the EH&S Management System and associated documents.
Lend Lease Project Manager	The contractor's project manager will nominate the Environmental Manager. The EM will have responsibility for environmental management in accordance with relevant requirements, including:
	 Prepare documents for the operational deployment of the guidelines of the ECSMP, CFEMP and related documents.
	 Provide environmental advice on matters specified in the conditions of approval, project contracts, licences and permits.
	 Comply with the requirements of the environmental documents.
	 Facilitate induction and training programs for all persons involved in the construction works.
	 Liaise with all relevant government authorities such as the EPA and DP&I.
	 Implement and review compliance with the EHS management system and associated environmental documents.
	In addition, the Lend Lease Project Manager is responsible for:
	 Apprise the Site Foreman of requirements of the EHS management system, and their responsibilities within them.
	 Allocate resources to meet the requirements of the EHS management system.
	 Investigate complaints to determine effective resolution.
	 Nominate appropriate pollution control measures for proposed works.
	 Maintain all necessary monitoring records and reports.
	 Take action in the event of an emergency and allocating the required resources to minimise the environmental impact.
	 Report any activity that has resulted, or has the potential to result, in an environmental incident.

Individual	Responsibility
Site Foreman	The Site Foreman is responsible to the Project Manager and has responsibilities under the EHS management system that include:
	 Management of the works in accordance with the requirements of the environmental management system, work instructions, and associated documents including the implementation of environmental controls.
	 Undertake environmental duties as defined by the Project Manager.
	Identify environmental risks.
	 Attend to spills or environmental incidents that may occur on site.
	 Report activity that has resulted, or has the potential to result, in an environmental incident immediately to the Project Manager.
	 Issue instructions and related information to employees that relate to environmental risks on site.
	 Where necessary, coordinate environmental inspections and maintain environmental records as defined by the EHS management system and work instructions.
Sub-Contract Personnel	All sub-contract personnel must carry out the work in accordance with contract instructions and shall conduct their activities in an environmentally sound manner. All sub-contract personnel will undergo environmental induction before they commence any work on the construction site.

4.2 Reporting

Reporting for environmental issues will generally be undertaken for:

- pre-construction compliance;
- construction monitoring;
- non-compliance;
- corrective action;
- complaint management;
- auditing.

The EH&S Management System will address and provide detail on safeguards outlined in this ECSMP. The EH&S Management System will coordinate and consolidate the appropriate protection and / or mitigation controls and directions before, during and after construction. The following items shall generally be considered as part of the EH&S Management System:

- · community consultation;
- general hazards and risk mitigation;
- noise and vibration management;
- air quality and odour control;
- contaminated soil and water management;
- stormwater and erosion management;
- waste management; and
- · hazardous goods and chemical management.

4.3 Environmental Training

4.3.1 Site Induction Training

Site induction will be undertaken in accordance with the EH&S Management System.

Prior to commencing work on the project, all staff and subcontractors shall receive induction training that shall include the following environmental information as a minimum:

- Overall EH&S Management System structure;
- Developer's and Contractor's Environment Health and Safety Policy;
- Roles and responsibilities and site management contact details;
- Relevant legislation as may be deemed appropriate;
- Key environmental issues and controls (covering environmental issues related to air quality, water quality, erosion and sedimentation, noise, traffic and access as necessary);
- · Hazards, Risks and Emergency Response Plans, and
- Incident Reporting.

Those elements of the EH&S Management System that directly relate to the work to be carried out by the person or persons being inducted, shall be covered as part of the induction.

Records detailing the attendees and content of the induction / training shall be maintained.

4.3.2 Specialist Environmental Training

In addition to the induction program, specialised training shall be provided to personnel, when deemed necessary, to present them with the knowledge, skills and awareness to minimise impact of site activities on the environment.

4.3.3 Training Records

Training Records will be maintained to include information on:

- Who was trained;
- When the training was undertaken;
- Name of trainer;
- General description of training content.

4.4 Emergency Contacts and Response

4.4.1 General

An environmental incident is an unplanned event, such as an oil or chemical spill that occurs on site and could cause significant adverse environmental impacts. The EH&S Management System will nominate specific persons to be the primary contact for environmental emergencies. The nominated persons will be available 24-hours/day, 7-days/week.

4.4.2 Emergency Contacts

Emergency contacts are to be clearly displayed within the Site Office and to be accessible by the project team, e.g. Project Noticeboard. The accident and corresponding contact will be clear and concise as shown below in **Table 4.2**

Table 4.2 – Example Emergency Contacts

Accidents and Emergencies	Contact Telephone Number
Fire Brigade	000
Police	000
Ambulance	000
EPA Pollution Line	131 555
Dangerous Good Licensing Hotline	131 050
Work Cover	(02) 9827-8600

4.4.3 Site Information for Hazardous Materials

Specific guidance for storage and handling of hazardous materials on site will be implemented as part of the Project EH&S Plan. Management of hazardous substances and dangerous goods is discussed in **Section 5.2.7**.

5 Implementation

5.1 Construction Environmental Management

5.1.1 Noise

Management of noise generated by construction of the public domain will be addressed in accordance with the recommendations of the *Barangaroo South; Public Domain, Construction Noise and Vibration Assessment* prepared by Wilkinson Murray. This assessment will be used to manage construction impacts, with reference to those activities that might generate emissions greater than the targets outlined in the assessment.

The processes adopted in the assessment are intended to minimise noise emissions, to meet the objectives of EPA's Interim Construction Noise Guideline, minimising and ameliorating impacts caused by these activities to the extent that it is feasible and reasonable.

A survey of potentially affected sensitive commercial and residential receivers has been conducted and the following locations have been identified:

- King Street Wharf Commercial premises including offices and outdoor restaurants;
- Napoleon Street Commercial premises including Aon Australia and Symantec;
- Hickson Road Residential receivers.

In all commercial premises considered as part of the survey, such as office buildings with closed windows and air conditioning, the predicted worst case noise levels would not exceed the Noise Affected Management Level and therefore do not adversely affect the receivers.

However, in the case of commercial premises with external activities / occupancies having operable windows or external spaces and residential receivers; the predictions indicate, in worst case situations, some of the construction activities may exceed the noise goals.

Exceedences of noise controls would primarily be caused by localised activities such as cutting of pavers. Typical exceedences over the general construction phase of works would primarily be caused by the cumulative effect of general construction activities on site. The assessment notes that the exceedences predicted are relatively small and would occur for only limited periods.

Management Controls and Mitigation Measures

The noise goals for the proposed construction activities are in the assessment. Should noise emission exceed these control limits, the assessment applies a dynamic decision tree management approach to addressing exceedence of noise limitation requirements.

The assessment also provides specific abatement guidance for the cumulative construction noise condition, which is the most likely process to exceed control limits.

Noise will be managed as per the existing Noise & Vibration Management Sub-Plan.

Monitoring

Noise monitoring would be conducted:

- Intermittently, as an ongoing indicator of noise emissions from the site;
- In response to complaints; and
- Where specific monitoring is needed. For example, where noise emission is produced near sensitive structures to confirm safe working distances.

Attended or unattended long term monitoring may be used as appropriate.

5.1.2 Vibration

The scope of work for the construction of the public domain includes works above foundation structures. Activities associated with the excavation of the basement car park have been addressed in previous ECSMPs for Barangaroo South.

Management of vibration associated will be addressed in accordance with the recommendations of the *Barangaroo South; Public Domain, Construction Noise and Vibration Assessment* prepared by Wilkinson Murray. This assessment will be used to manage impacts from all construction activities, with particular reference to those activities that might generate emissions greater than the targets outlined in the NVMP.

The processes adopted in the assessment are intended to minimise vibration emissions, to meet the objectives of the EPA's Assessing Vibration technical guideline. The aim of these processes is to minimise and ameliorate any impacts caused by construction activities to the extent that it is feasible and reasonable.

Management Controls and Mitigation Measures

The vibration goals for the proposed construction activities are the assessment. Predictions made in the assessment indicate that recommended vibration levels will not be exceeded

given the distance separating the construction activities from most sensitive structures or occupancies. The assessment also notes that typical site activities associated with the construction of the buildings will not cause significant vibrations which would affect the amenity or integrity of nearby structures.

Vibration will be managed as per the existing Noise & Vibration Management Sub-Plan.

Monitoring

Vibration monitoring would be conducted:

- Intermittently, as deemed appropriate, to provide an ongoing indication of vibration emissions from the site; and
- In response to complaints.

5.1.3 Air Quality and Odours

Dust and odour from construction is not expected to be significant, as per the Letter of Opinion - Barangaroo South Public Domain - Air Quality from AECOM (January 2014).

Management Controls and Mitigation Measures

The minimisation of air-borne pollution is a key component for environment management of the site. Construction phase air quality impacts shall be minimised or avoided by incorporation of appropriate air quality control measures as directed by the AQIA.

The installation and application of air quality controls during the construction phase will be in accordance with the existing Air & Odour Management Sub-Plan, and specifically the following principles:

- All equipment used and all facilities erected on site are to be designed and operated to control the excessive emission of smoke, dust, fumes and any other air impurity into the atmosphere;
- Spray earthworks, roads and other surfaces as necessary with water to reduce dust generation;
- A water cart will be employed, as required, to dampen work areas and exposed soils to prevent the emission of excessive dust from the site;
- Trucks transporting material from the site shall be covered after loading to prevent windblown dust emissions and spillages;
- All access roads shall be surfaced in appropriately selected materials;
- Subcontractors will maintain all construction equipment to reduce exhaust emissions.

Monitoring

The Site Manager (SM) will visually monitor levels of dust deposition and air quality, the effectiveness of dust emission controls and the construction site and the impacts of any nuisance on adjoining properties.

5.1.4 Stormwater and Erosion

The majority of erosion and sediment controls will be implemented as part of an Erosion and Sediment Control Plan to be prepared prior to construction. Typical erosion and sediment controls proposed for use are shown in Appendix A. These include foreshore impervious barriers and a silt curtain along the existing wharf.

Management Controls and Mitigation Measures

Prior to any detailed earthworks or building works commencing on site, all erosion and sediment control measures will be implemented. These measures shall generally include supplementary erosion and sediment controls implemented as part of Barangaroo South, as deemed necessary:

- Installation of additional sediment fencing;
- Installation of silt arrestors to collect site runoff and retain suspended particles; and
- Placement of sediment controls around and along proposed catch drains.

Stormwater will be managed as per the existing Water and Stormwater Management Sub-Plan. The Sub-Plan also includes monitoring of ambient water quality in Darling Harbour.

5.1.5 Waste Management

Construction of the public domain will result in minimal waste generation. It is estimated that the works will generate around 100m³ of spoil during filling works, and around 50m³ of general construction waste.

The goal for construction waste management is primarily the reduction of waste generated. Waste reduction will occur through materials procurement, handling, storage and use. Waste generated during construction will be reused onsite, or recycled or disposed at a suitably licenced facility.

Waste collection will be appropriately managed through the staged nature of construction and the use of known quantities of materials. The majority of recyclable material that could be recovered during construction is likely to be off cuts and discards of concrete reinforcement (steel), paving off cuts, drainage pipes, cabling, plastics, paint and timber. Waste will be managed as per the existing Spoil & Waste Management Sub-Plan.

No hazardous materials or dangerous goods will be stored on site.

5.1.6 Traffic Management

As part of construction activities, traffic management and controls shall be implemented both within and surrounding the development site.

Refuelling performed on site will be for the excavators and other plant / equipment operating on site.

The following minimum goals have been identified in relation to site and surrounding traffic management:

- Provide a safe environment during construction for those associated with construction activities;
- Provide a safe environment for motorists, cyclists and pedestrians utilising the existing road network; and
- Limit delay times within the surrounding road network.

Traffic management and control measures shall be implemented within the site to clearly identify proposed haul road location(s). The placement of water filled barriers and fencing shall provide a safe environment for construction vehicles and pedestrians. Associated signage will supplement physical structures within the site.

Adequate directional and warning signage shall be installed surrounding the development site to clearly inform motorists, cyclist and pedestrians of the approaching changes within Hickson Road, Sussex Street and Shelley Street. Signage shall also inform delivery drivers of the proposed entry and exit gate locations.

All proposed traffic management and controls shall be documented in the detailed design stage by accredited Roads and Maritime Services (RMS) traffic control designers and where required, the approval obtained by the necessary statutory approval organisations. Road occupancy certificates shall be obtained prior to any works commencing where appropriate.

5.1.7 Management of Existing Services

Existing services within the development area consist of electrical, communications, gas and stormwater drainage conduits. Associated drainage, sewer and communication services shall be diverted from within the construction area with temporary connections made, as required.

5.1.8 Consultation Strategy and Management

A comprehensive action plan to engage with stakeholders in relation to the construction works programme will be developed to establish appropriate processes for engaging stakeholders and managing complaints and enquiries. Management of stakeholders will be undertaken in accordance with the Lend Lease Stakeholder Engagement Statement of Commitment (**Appendix B**) in order to maintain a good neighbour policy with the existing adjoining properties and other local facilities, residents and special interest groups by reducing disturbances and confining any potential loss of amenity.

The potential for negative environmental and amenity impacts during construction, although over a relatively short duration, needs to be managed though environmental monitoring during construction, ongoing community engagement of environmental performance and provision of project information such as operating hours and traffic circulation routes.

Due to the nature of the proposed construction works and the proximity of the site to the local community, appropriate mitigation measures and safeguards are required to avoid the potential for impacts such as:

- Noise and vibration generated during construction activities, which affects adjoining properties;
- Dust generated from construction activity, which affects adjoining properties; and
- Vehicles leaving the construction site depositing dirt/mud on public roads.

Existing properties directly affected by the construction program will be advised of works and provided with contact details, which will be supported by a community relations team that will provide:

- A contacts database for registering, managing and reporting complaints & enquiries;
- A 1300 number for enquiries & complaints;
- A website with a dedicated email address and feedback forms; and
- Specific information in the form of letters, fact sheets and newsletters for the local community.

The intent is for all works to be conducted within approved working hours; however, if works are expected to extend beyond these hours, appropriate stakeholders will be notified prior to these activities.

5.2 Environmental Management Plans

The CFEMP outlines the following sub-plans:

- Air Quality & Odour Management Sub-Plan;
- Noise & Vibration Management Sub-Plan;
- Spoil & Waste Management Sub-Plan;
- Water & Stormwater Management Sub-Plan;
- Acid Sulfate Soil Management Sub-Plan.

6 Auditing, Monitoring and Review

6.1 Environmental Monitoring

Monitoring of environmental activities will be undertaken according to the procedures outlined in the EH&S Management System.

The environmental monitoring protocols will be incorporated into the EH&S Management System for the project.

Monitoring records shall be collated, distributed, and stored as part of the EH&S Management System.

6.2 Environmental Auditing

Auditing will be undertaken to review the effectiveness and implementation of the Lend Lease EH&S Management System at regular intervals.

Audit methodology will be a review of written procedures and implementation activities on site to assess the effectiveness of the management system and control activities.

Audit results will be reviewed and corrective action taken, as necessary. Where corrective action or updates are required, subsequent auditing will be undertaken to confirm the appropriateness of the corrections or updates.

Appendix A: DRAWINGS

BARANGAROO SOUTH

PUBLIC DOMAIN









DRAWING LIST

10025-DA-900 COVER SHEET 10025-DA-910 GENERAL ARRA

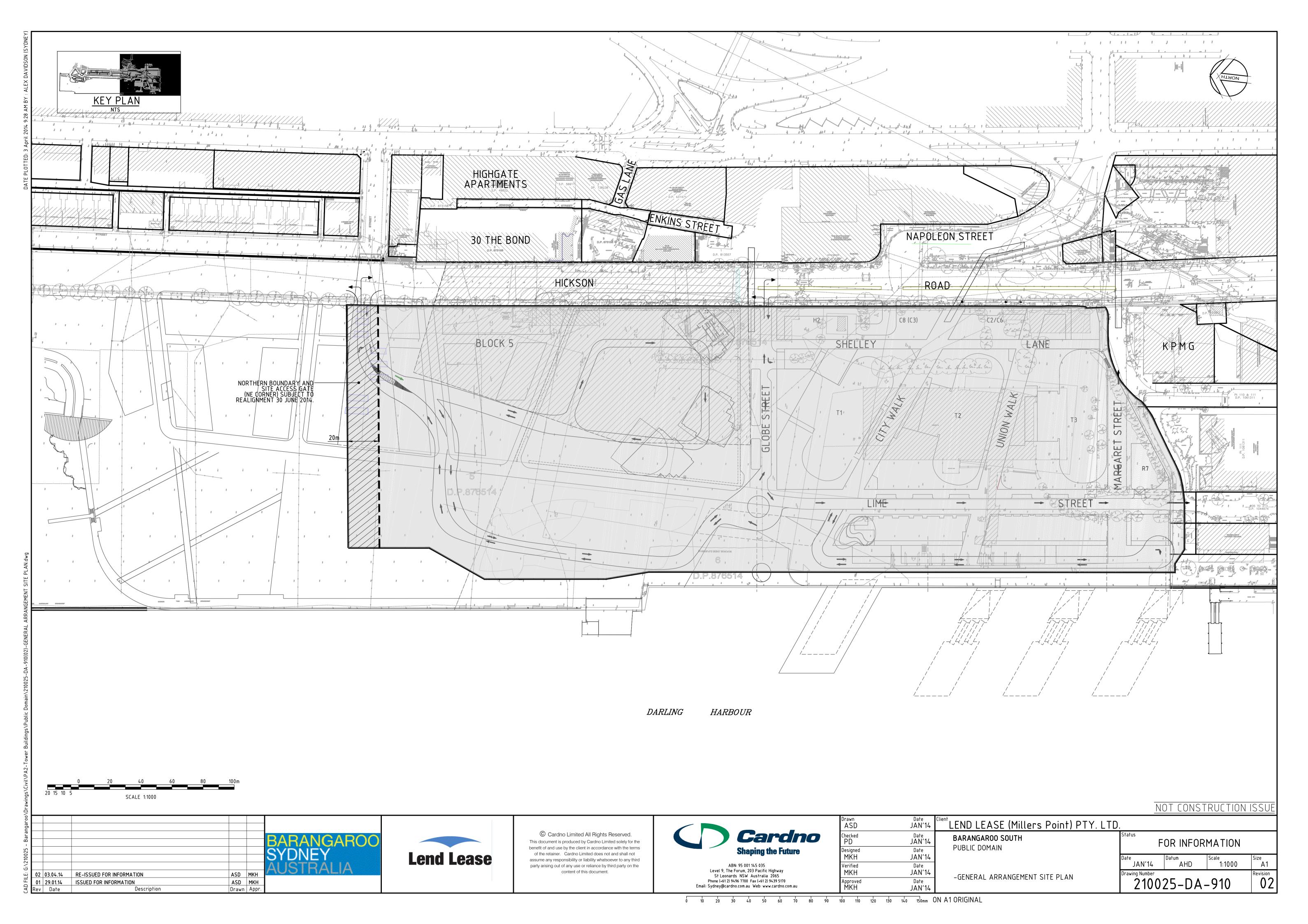
210025-DA-910 GENERAL ARRANGEMENT SITE PLAN
210025-DA-915 DETAIL EXCAVATION, EROSION AND SEDIMENT CONTROL PLAN

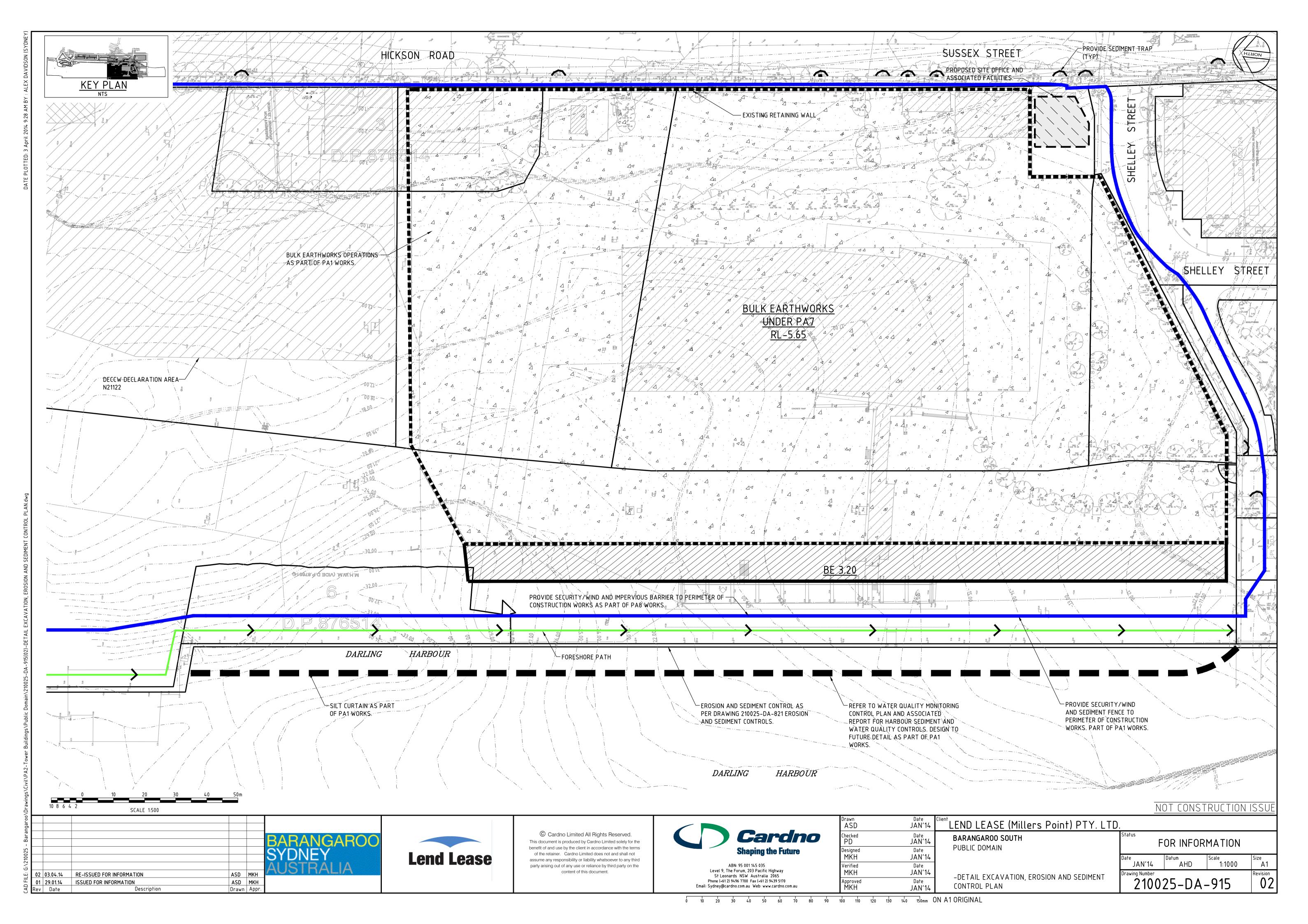
210025-DA-915 DETAIL EXCAVATION, EROSION AND SEDIMENT CONTI 210025-DA-921 EROSION AND SEDIMENT CONTROLS

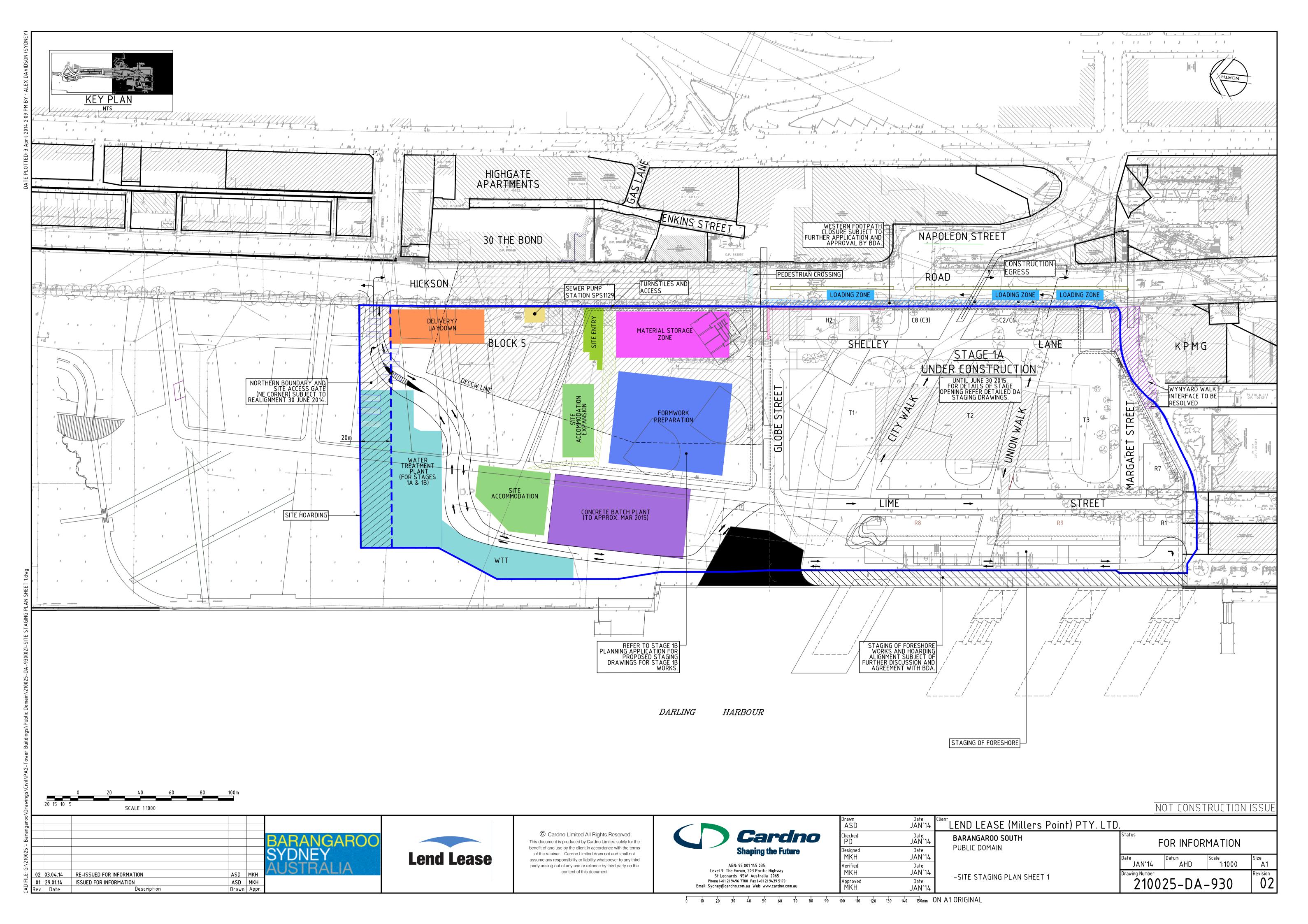
210025-DA-921 ERUSIUN AND SEDIMENT CUNTR 210025-DA-930 SITE STAGING PLAN SHEET 1

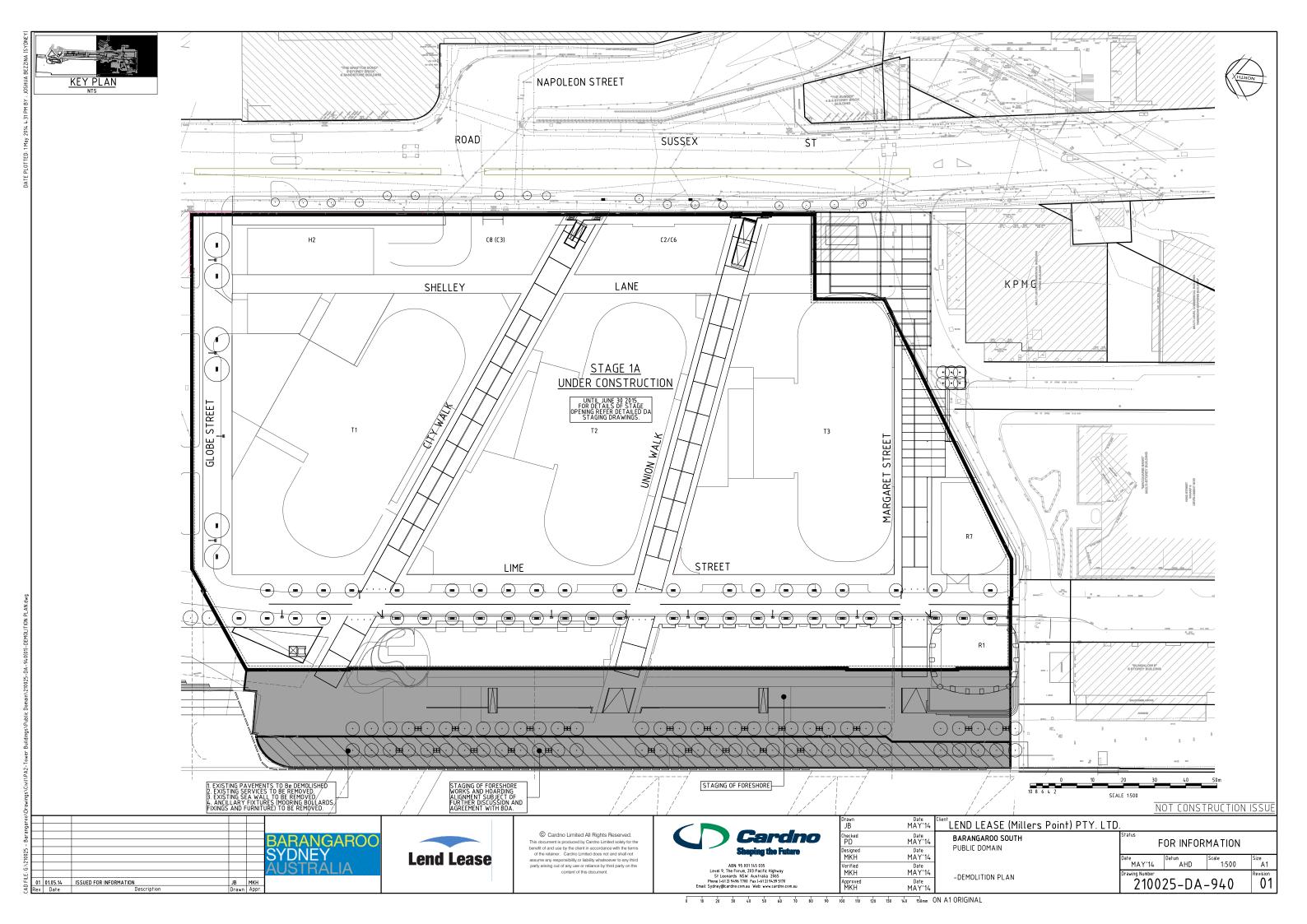
210025-DA-931 SITE STAGING PLAN SHEET 2

LOCALITY PLAN









Appendix B: STAKEHOLDER ENGAGEMENT STRATEGY



STAKEHOLDER ENGAGEMENT - STATEMENT OF COMMITMENT

Lend Lease recognises the importance of positive relationships with our stakeholders and seeks to proactively engage with them in the communities in which we operate.

This statement of commitment covers project level stakeholder engagement, meaning our interactions with individuals and/or groups that have an interest in or are affected by our projects.

Objective

Our objective is to:

• Ensure that our business has a positive impact on communities and other stakeholders

Approach

Our approach is to:

- Be proactive in our engagement in order to understand the needs of our stakeholders and be in a position to respond to these needs and meet them wherever possible
- Provide accurate, up to date and accessible information to our stakeholders as early as possible and at regular intervals throughout the project
- Be open, honest, fair and realistic in all dealings with our stakeholders
- To treat the communities in which we work with respect
- Recognise diversity and seek to inform all stakeholders in the decisions affecting them in a way so
 that they can understand the nature of our operations and ensure that they have an opportunity
 to be engaged

Delivering Stakeholder Engagement

Our commitment is that we will:

- Assess the requirement for a stakeholder Engagement Strategy on all projects
- As required, prepare a Stakeholder Engagement Strategy and Action Plan outlining who our stakeholders are and how we will engage with them on projects
- Strive to add value (where appropriate) to the communities in which we operate by developing initiatives that positively contribute to the community and surrounding environment; in consultation with all relevant stakeholders
- Treat our stakeholders, in particular our neighbours with respect and take reasonable steps to minimise impacts where possible



- Be aware of, and acknowledge, any engagement undertaken prior to our involvement in the project; and work with our client to seek solutions that balance the needs of all stakeholders
- Provide training for all employees involved in stakeholder engagement processes and include relevant information in subcontractor inductions
- Ensure that all public concerns and complaints are documented, acted upon promptly and resolved, where possible, with outcomes communicated back to the relevant affected groups
- Ensure that all subcontractors and consultants are aware of and adhere to our Statement of Commitment

Monitoring and Reviewing

In order to evaluate and review the success of Stakeholder Engagement, each project will have as part of the regular Project Reviews process:

- An assessment of how stakeholders have been engaged in accordance with the project's stakeholder engagement plan and how stakeholder's feedback has been integrated into the project's development
- A review of comments expressed by stakeholders (via customer feedback and complaints process) and how they have been genuinely acted upon/responded to within agreed periods

Key Stakeholders	Relationships/rationale	Aim of Engagement	Strategy	Timeline
Local Residents e.g.: - Kent St. Residents Group - Millers Point Resident Action Group - Walsh Bay Precinct Committee - Pyrmont - Hickson Road - Millers Point Estates Action Board — Housing NSW Local Businesses e.g Hickson Road - Walsh Bay - Kent Street - Kent street Wharf	Neighbours and surrounding community living in local area. Local businesses in surrounding area	 Inform community of proposed design and gain feedback Develop positive relationships Provide regular updates on proposal 	 Participated in large scale Community Forums organised by the Barangaroo Delivery Authority Smaller community forums run by Lend Lease for local and surrounding residents that may have been impacted by or have an interest in the development. Providing updates on proposed plans and progress of planning submissions Provide fact sheets with details of the proposed plans Provide feedback forms to gain feedback and understand the concerns of the community Leverage existing and develop relationships with the local resident and business groups attending existing meetings or forums to provide updates on proposed plans and progress on planning submissions. Provide notifications to local residents and groups when planning submissions are 	 During planning phase Ongoing Project/Precinct stages

			Provision of email address for enquiries Developing a contact management system (incl.) Contacts database for registering, managing and reporting complaints & enquiries Provision of a 1300 number for enquiries and complaints Provision of a Barangaroo South community relations team to manage complaints/enquiries, feedback and engage with the community	
Councils & Chamber of Commerce e.g. - City Of Sydney - Sydney Cove Rotary - Rocks Chamber of Commerce	Local Councils and Chambers of Commerce	Develop positive relationships Provide regular updates on the proposal and the proposed timeline of commencing	 Regular briefing meetings with key representatives Provide presentations to all key staff on proposed development Notification prior to planning submissions taking place 	 During planning phase Ongoing Project/Precinct stages
Agencies/Utilities e.g. - Sydney Ports - Sydney Water - NSW Maritime - Sydney Ferries	Key agencies with an interest in the project	 Ensure agencies are kept updated on the progress of the proposal and pending works Develop positive relationships Promote positive messages about the project 	 Provide updates on key works and upcoming construction activities via: 1-1 meeting where required Website Letters Newsletters Participation in Technical Working Groups 	 During planning phase Ongoing Project/Precinct stages
Government Departments e.g. - Department of Environment, Climate Change and Water (DEEC-W) - Housing NSW - RTA	Government departments with an interest or role in the project	 Provide regular updates on the proposal and the proposed timeline of commencing Joint initiatives and projects 	 Provide updates on proposal and upcoming construction activities that may interface with these agencies Offer regular meetings to ensure agencies are briefed on the project Ensure these stakeholders are kept up to date with status of pending works Advise of potential impacts and mitigation measures being implemented Notification prior to works commencing & links to complaints management system 	 During planning phase Ongoing Project/Precinct stages
Local Educational Institutions e.g. - Fort Street Public School - Observatory Hill Environmental & Education Centre	Local Schools and educational institutions	 Use this landmark project as an educational opportunity Encourage schools and universities to become involved in the project Ensure the positive project 	Provide updates on proposal and upcoming construction activities via: 1-1 meeting where required Website Letters Newsletters Engage with local school to organise opportunities to involve children in activities i.e. photography, art and student	 During planning phase Ongoing Project/Precinct stages

		messages get out to the educational community	based traineeships. Organise site tours to be provided as part of educational development.	
General Public	People commuting/working in the area, pedestrians who use Hickson Road, general road users and cyclists.	 Provision of information & upcoming traffic changes & transport links Minimise disruption and complaints Maintain safety on and around the site Promote positive messages about the project 	Provide up to date information on works, access and transport impacts via: Site signage Factsheets Establish information channels for stakeholders including: 1300 information line Website Email address Community Relations Tea, to manage enquiries and feedback	 During planning phase Ongoing Project/Precinct stages
Local Cultural Groups & Facilities e.g. - Sydney Theatre Company - Australian Theatre for Young People - Bangara Dance Company	Cultural groups & organisations within the local community	 Provision of information on upcoming traffic changes and any modifications to key transport links Develop positive relationships 	 Provide updates on proposal and upcoming construction activities via: 1-1 meeting where required Invitation to Community Forums Letters Factsheets 	 During planning phase Ongoing Project/Precinct stages
Interest & Action Groups e.g. - Barangaroo Community Action Group (BAG) - Friends of Barangaroo - Millers Point Resident Action Group - Kent Street Residents Group	Local interest and action groups with an interest or stake in the project	 Be open and transparent with project information Minimise disruption and complaints by being responsive to concerns 	Provide updates on proposal via: 1-1 meeting or community forum where required Letters Factsheets Address concerns and feedback in a timely and comprehensive manner	 During planning phase Ongoing Project/Precinct stages
Media	Key public opinion influencers regarding this project	 Be open and transparent with project information as appropriate Facilitate a positive working relationship with media 	 Provide updates on proposal and upcoming construction activities Respond to media enquiries where appropriate Ensure project spokesperson is available for comment when required 	 During planning phase Ongoing Project/Precinct stages