



**Frasers Student Accommodation  
BLOCKS 3B, 3C & 10**

**APPENDIX 11 TO HSE PLAN**

**Environmental Management Plan**



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## 1.0 Environmental Management Policy

# Built. ENVIRONMENTAL MANAGEMENT POLICY

### OUR AIM:

Built is committed to establishing and maintaining their and their clients work environments with priority given to minimising adverse environmental effects from our activities and fostering a culture of sustainable environmental management.

The Built environmental strategy is the ongoing development of a system based on AS/NZS ISO14001, legislation and applying the principles of best practice environmental management to our activities. Built is committed to objectives and individual programs by applying proactive approaches to environmental stewardship through:

- Identifying environmental activities, aspects and impacts and applying appropriate environmental actions;
- Minimising the effects of our activities on the environment;
- Preventing pollution;
- Complying with applicable environmental laws and regulations, Codes of Practice and Guidelines leading to the development of appropriate monitoring, measurement and review activities;
- Working cooperatively with our clients and responsible agencies in exercising environmental due diligence at all stages;
- Conducting relevant environmental education and training to improve awareness, knowledge and skills;
- Developing and implementing plans and procedures for the effective operation and management of our processes;
- Meeting Performance Standards and Key Performance Indicators, and taking action to improve performance through regular and formal reviews;
- Communicating with staff, clients and stakeholders on all areas on environmental performance;

Built acknowledges this environmental policy as a commitment that involves cooperation and consultation with all stakeholders to meet the company's business objectives.

Built is committed to continual improvement in environmental management. This includes regular monitoring, assessment and review of all aspects of the system by both internal and external audits.



**Brett Mason**  
Managing Director  
22 February 2010

## 2.0 Environmental Management Plan

The Environmental Management Plan is an attachment to the HSE Plan and describes the environmental strategy, methods, controls and other requirements to effectively manage environmental aspects of the project and should be read in conjunction with the Project HSE Plan.

The Environmental Management Plan shall be reviewed at Project Team Meetings and following any significant environmental incident or significant changes to the project scope or methodology at frequencies not exceeding 12 months.

## 3.0 Purpose of the Environmental Management Plan

The purpose of this Environmental Management Plan is to:

- Identify the environmental issues (aspects and impacts) relevant to the project;
- Establish the environmental and operational controls to reduce any adverse impacts on the environment from the company’s activities, products and services.
- Describe the methods and processes by which the project will maintain compliance with all relevant environmental legislation, any applicable license, approval and permit, regulatory requirements
- Ensure the works are effectively managed so as to eliminate or reduce potential adverse impacts on the environment as a result of construction activities
- Action any outcomes from incidents or accidents, project audits or other identified non-conformances and to continually improve the Environmental Management System.

## 4.0 Environmental Objectives

Built’s environmental objectives for the project are:

Aspect	Objective	Target
Waste	To minimise waste going to landfill	All waste to be accounted for via Dial a Dump
Sediment & Erosion Control	To prevent sediment from entering waterways or stormwater	No uncontrolled run off into drains or waterways
Water quality	To prevent contamination of water ways	No uncontrolled run off into drains or waterways
Noise & vibration	To receive no community complaints regarding noise or vibration	All complaints to actioned. All critical stakeholders to be notified prior to noisy works commencing
Dust	To receive no community complaints regarding dust	All dust complaints to actioned. All critical stakeholders to be notified prior to construction works commencing. Dust suppression to be used during all dusty activities

## 5.0 Project Hours of Operation

### 5.1 Objective

To minimise inconvenience to adjoining residents, businesses and other community members during the construction phase, within the appropriate hours of; **7am - 7pm Monday-Friday, 7am - 5pm Saturday and restricted internal only work between 7pm – 7am Monday-Friday, 5pm – 10:30pm Saturday & 7am – 10:30pm Sunday.**

### 5.2 Restricted Work Hours

Works permitted within restricted hours:

- Internal fitout works within the constructed façade only, such as installation of plasterboard, services installation / commissioning, painting, joinery, laying of floor finishes, installation of furniture, cleaning & the like.
- Internal fitout works to the retail podium in compliance with the 45db(A)  $L_{av\ max}$  to surrounding residential receivers.
- No vehicle movement is permitted on site (with the exception of internally within the building envelope).
- No deliveries to the site, or vehicles movement within or to and from the site;
- No use of cranes;
- No work outside of, and including, the building facade; and
- No floodlighting or additional lighting over and above current lighting levels required for safety and access i.e. no change from current lighting levels.

Site Access during Restricted Hours:

The main site entry points, Gate 1, Gate 2 & Gate 3 on the corner of Kensington and Outram Streets and Gate 4 on Carlton Street will not be used during the extended/restricted construction hours. All pedestrian traffic leaving the site at the end of the working shift will be required to use Gates 5, Gate 6 & Gate 7 on Kensington Street (currently closed to public) and proceed out Gate 8, directly onto Broadway, away from the sensitive residential receivers.

Vehicle access to the site is restricted to the existing approved hours, with no extension sought as part of the modification.

Workers will be required to park off-site during the extended construction hours and enter/exit the site via Kensington Street.

### 5.3 Management Strategy

The normal hours of building activity allowed are detailed in the Local Council Permit.

During the construction period Built will work with the Client and/or their representative to maintain contact with neighbours and others affected to ensure ample notice is given regarding any approved “Out of Hours” work.

(The main impact of “Out of Hours” work is considered to be noise; this is further detailed in Attachment 1 – Environmental Aspects and Impacts Register)

#### **5.4 Action**

- a) Appropriate noise mitigation measures will be implemented and maintained for instances where “Out of Hours” work is approved.
- b) Complaints will be monitored, which arise as a result of “Out of Hours” construction activities.

#### **5.5 Performance Indicators**

- a) Complaints received as a result of “Out of Hours” construction activities from surrounding sensitive receivers.
- b) Minimising Impact to neighbours during the construction phase.

## 6.0 Environmental Rating Tools

### 6.1 NABERS Energy

The Nabers Energy Rating scheme assists office building owners and tenants to reduce energy use, reduce energy costs and reduce greenhouse emissions.

There is no proposed Nabers Energy rating for this project.

### 6.2 Green Star

Green Star rating system is a comprehensive, national, voluntary environmental rating scheme that evaluates the environmental design and achievements of buildings

There is no proposed Green Star rating for this building.

## 7.0 Internal and External Communication

## 8.0 Project Organisational Chart

Refer to Clause 4.2 of the HSE Plan And Appendix 3 of the HSE Plan

## 9.0 Responsibilities & Duties

Refer to Clause 4.0 of the HSE Plan and Appendix 3 of the HSE Plan.

## 10.0 Environmental Risks/Environmental Aspects

Potential environmental obligations and risks associated with the project shall be identified prior to the start of the project by the Project Team in consultation with the Project Manager on the **'Project Environmental Aspects and Impacts Register'** (Refer Attachment 1).

A copy of the **'Environmental Aspects and Impacts Register'** is to be provided to relevant subcontractors prior to their commencement on site and is to be taken into account in the execution of their work.

Significant aspects may impact on the environment positively (e.g. recycling) or negatively (e.g. pollution).

## 11.0 Environmental Impacts and Controls

### 11.1 Project Environmental Management Plans

The **'Project Environmental Aspects and Impacts Register'** describes operational controls used to manage environmental issues across the project.

The Foreman will ensure that environmental controls are inspected on a regular basis, as part of the site inspections described in the HSE Plan or as separate environmental inspections and are in accordance with the requirements outlined in the **'Project Environmental Aspects and Impacts Register.'**

Information on hazardous materials, including each material's potential impact on the environment and measures to be taken in the event of accidental release will managed via the Hazardous Substances Register.

### 11.2 Supplementary Environmental Plans

Supplementary Plans required by the contract or deemed necessary by the Project Manager will be attached to this plan.

Supplementary Plans required by the contract for the project are:

- [Waste Management Plan](#)
- [GML Archaeological Plan](#)
- [Soil and Water Management Plan](#)
- [Noise Management Plan](#)
- [Vibration Management Plan](#)
- [Traffic Management Plan](#)
- [Sustainable Materials Management Plan](#)
- [Community Consultation Plan](#)

Supplementary environmental plans are located on site as Attachments to the Environmental Management Plan

## 12.0 Subcontractors and Suppliers

Subcontractors and suppliers shall meet the environmental management requirements specified in the HSE Plan.

Subcontractors shall be made aware of their responsibilities under the terms of the applicable environmental legislation, by being provided a copy of this Environmental Management Plan and any relevant sub plan and by participating in site induction and subcontractor coordination meetings.

Subcontractors will be requested to submit appropriate environmental control procedures or other information such as ITP's providing details of how they intend to manage environmental aspects and potential impacts of their work.

Where subcontractors do not have such documentation, Built may assist in the development of any necessary documentation, including induction of the subcontractor and those carrying out the work on behalf of the subcontractor into any relevant environmental control procedures.

Subcontractor performance will be monitored during site inspections such as; Consultative Inspection, Supervisor inspection or Task Observation to ensure that contracts are being fulfilled and appropriate environmental management practices are being followed and are in accordance with Built's '**Project Environmental Aspects and Impacts Register**' (Refer Attachment 1).

## 13.0 Legal & Other Requirements

### 13.1 Legislative Compliance

The following legislation and other requirements apply to this project:

The Protection of the Environment Operations Act 1997 (POEO Act) is the main piece of NSW environmental legislation covering water, land, air and noise pollution and waste management for the Frasers project

*Other Requirements:*

- [Building Code of Australia;](#)
- [NSW Government Environment Guidelines;](#)
- [Green Star Rating;](#)
- [Office of Environment and Heritage \(OEH\)](#)

### 13.2 Licenses & Approvals

Where Development Consents, permits or approvals relate specifically to the project, these issues will also be deemed as "significant" and will be included in the **Environmental Aspects and Impacts Register (Attachment 1)**.

## 14.0 Contaminated Site Procedure

Projects undertaken on contaminated sites will undergo a Contaminated Site Assessment (CSA). CSA reports shall be provided as part of planning approvals process of a proposed development.

The CSA and associated approvals shall be reviewed and actioned by The Project Manager.

All relevant CSA reports, documents and relevant approvals will be obtained and reviewed prior to site activities commencing. Operational controls will include any specific procedures described in the report or approvals.

Where required, ITPs and/or other verification documentation shall be developed to address requirements of CSAs and to ensure verification of the works being completed as described.

The Site Manager will also ensure that on site workers are made aware of potential contamination issues associated with the contaminated site development. Advice shall be provided should problems be identified. The Site Manager will maintain spoil disposal records.

## 15.0 Monitoring

The Environmental Management Plan shall be monitored following implementation to ensure that:

- Environmental operational controls are being effectively applied and maintained;
- Project specific environmental monitoring targets specified in the Development Consent or other planning permits for air, water and noise are being met;
- Unpredicted impacts are identified and remedial action is taken; and
- The project objectives listed above are being met.

Responsibilities for monitoring and compliance requirements are detailed in the Project Environmental Plans and the Project HSE Risk Register (Appendix 5).

Monthly reports are provided to the Construction Manager and General Managers for review. The performance of projects against company environmental objectives and targets is reviewed on a quarterly basis.

The Site Manager/Foreman will ensure that environmental controls are inspected on a regular basis, as part of the site inspections described in the HSE Plan or as separate environmental inspections and are in accordance with the requirements outlined in the '**Project Environmental Aspects and Impacts Register.**'

## 16.0 Communication and Consultation

### 16.1 Training

Prior to the commencement of project activities, all site personnel (including sub-contractors) will attend the site induction.

Site Induction shall include an:

- An outline of the key requirements of this EMP
- Responsibilities and accountabilities of all site personnel for prevention of pollution and general management of environmental issues
- Site rules will be included in the induction session.

Built site personnel shall be trained in environmental aspects relevant to their role. Records of training shall be kept to verify competency in the management of environmental aspects of the project.

**16.2 Community Consultation**

The Foreman shall conduct tool box talks for Built employees and require Subcontractors to conduct tool box meetings to address safety & environmental hazards relevant to their work activities.

Where work on site is likely to have an impact on adjoining neighbours, property owners/users the Project Manager will advise them of the nature and scope of works including any potential impacts. Notification shall be either via a letter box drop or special arranged consultation meetings. Where required, community consultation will be outlined further in the Community Consultation Plan.

**16.3 External Stakeholders**

External stakeholders in the project have been listed in the table below:

Agency/Company	Contact	Phone/Fax/Email
Office of Environment and Heritage (OEH)	TBC	131555
City of Sydney Council	TBC	9265 9333

**16.4 Community Complaints**

Community complaint shall be recorded on ‘**HSE-076 Complaint Report Form**’ and recorded on ‘**HSE-077 Complaint Report Register**’ and actioned by the Project Manager. Any complaints received shall be actioned and closed out by the Project Manager or their nominee.

Remedial action must be taken as soon as practical. Any action taken shall be recorded on the form.

**17.0 Emergency Planning & Response**

Refer to the Emergency Plan in the relevant Appendices of the HSE Plan.

**18.0 Incident Investigation & Reporting**

**18.1 Non Conformance**

In the event of breach in the requirements of the EMP, a Non Conformance Report will be completed and issued to the offending party.

Non Conformances will be registered in the Non Conformance Report Register.

A copy of the Non Conformance Notice will be forwarded to the Project Manager and the Subcontractor, who will implement appropriate corrective action.

The Project Manager or Site Manager/Foreman shall ensure that all incidents occurring in or around the site involving company personnel, Subcontractors, visitors or passers-by, are investigated and reported regardless of how minor they appear at the time of the occurrence.

‘**HSE-107 Non-conformance Report**’ shall be completed for each incident that cannot be immediately rectified and has no ongoing environmental impact. More significant environmental incidents shall be subject to detailed investigation using **RapidIncident**

**18.2 Duty to Notify Department of Environment & Conservation of Pollution Incident**

Built shall notify the Office of Environment and Heritage on 131 555 regarding pollution incidents that have occurred in the course of its activities, if the following apply:

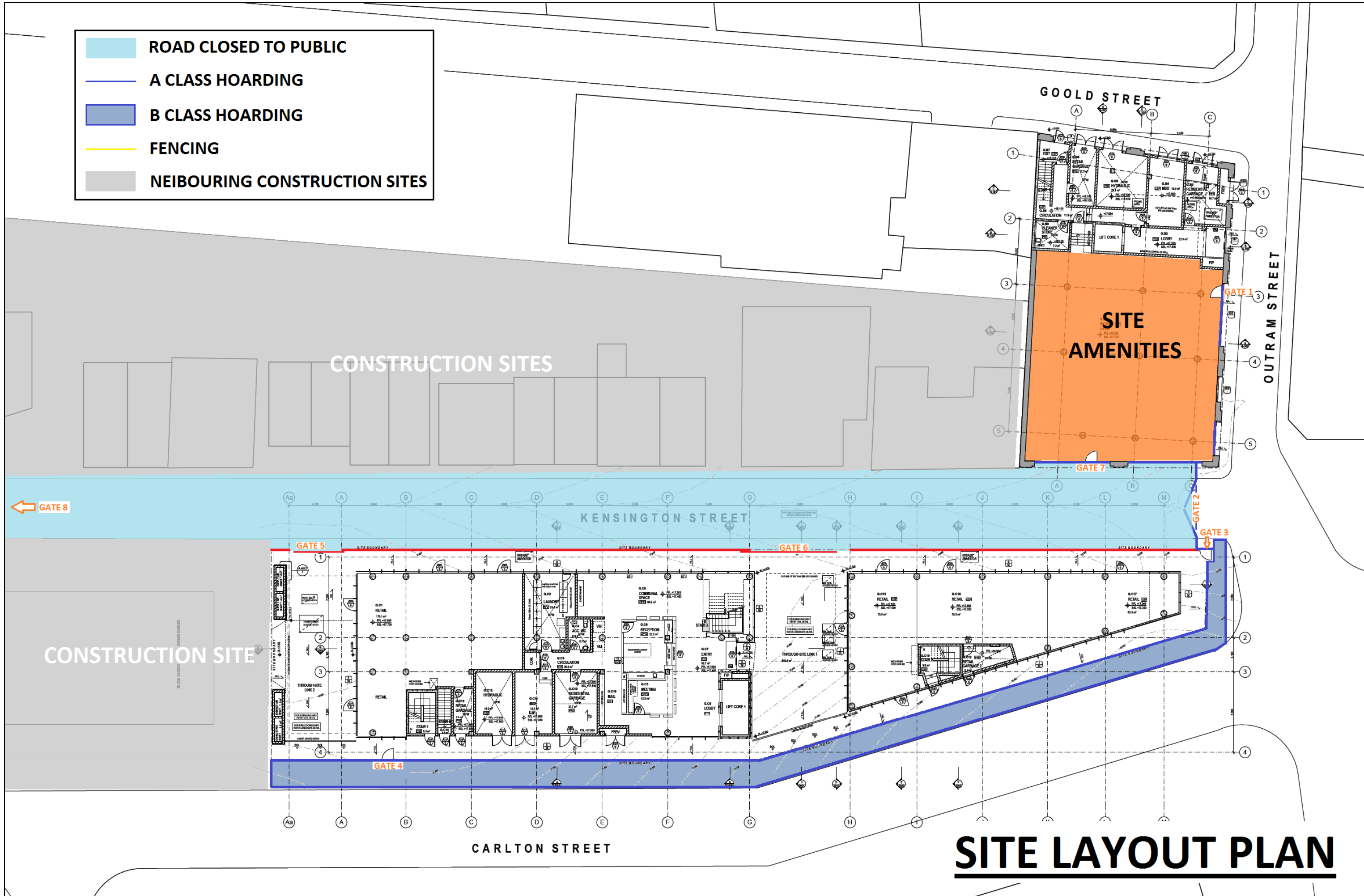
The actual or potential harm to the health or safety of human beings or ecosystems is not trivial,  
The actual or potential loss or property damage (including clean-up costs) associated with a  
pollution incident may exceed \$10,000.

## **19. Audits**

Projects audits shall be scheduled by the Systems Manager and form part of the company's audit schedule. Refer Audit procedure QAP-8.2-001

Audits shall address the requirements of ISO900, ISO14001, AS4801, Built's Management System and the various Management Plans.

**Attachment 1 – Site Layout Plan**



# SITE LAYOUT PLAN

**Attachment 2 – Environmental Aspects and Impacts Register**

Environmental Aspect	Environmental Impact	Risk Rating	Legal Requirements	Environmental Actions, Controls and Criteria	Responsibility
<b>SECTION D: ENVIRONMENTAL ASPECTS</b>					
Dust Generation Particulate Emissions (General)	Air pollution	M	NSW - POEO Act (Sections 124-126)	<ul style="list-style-type: none"> <li>Install shade cloth on perimeter fencing</li> <li>Vehicle corridors will be clearly identified and restricted to control vehicle access onsite.</li> <li>Limit vehicle speed to less than 10kmph</li> <li>water sprays for dusty activities</li> <li>Reduce work activities /stop work during moderate to high wind velocity periods.</li> <li>Maintain equipment. Smokey plant to be stopped until repair works completed.</li> <li>Turn off vehicle engines whilst not in use (no long periods of idling)</li> <li>Regular clean ups of trade waste into bins</li> </ul>	<ul style="list-style-type: none"> <li>Built and Built's Subcontractors</li> </ul>
Dust Generation (Demolition)	Air pollution	L	NSW - POEO Act (Sections 124-126)	<ul style="list-style-type: none"> <li>Breakers and crushing equipment to be fitted with dust filtration equipment or water sprays to control dust emissions.</li> <li>Stockpiles will be kept to a minimum and removed from site as soon as possible</li> </ul>	Built and Built's Subcontractors
Dust Generation (Construction)	Air pollution	M	NSW - POEO Act (Sections 124-126)	<ul style="list-style-type: none"> <li>Minimise areas of site disturbed and stage works where possible.</li> <li>Dust suppression strategies to be used, i.e. water sprays, regular clean up</li> <li>Stockpiled topsoils and rubble will be restricted to 4m high and removed from site as soon as possible</li> <li>Saw dust to be contained to an area and regular clean up s to occur</li> <li>Hoarding to be installed around perimeter to contain dust</li> </ul>	Built and Built's Subcontractors
Emissions to Air	Air pollution	L	NSW - Protection of the Environment Operations Act 1997, s 124-125, s 139	<ul style="list-style-type: none"> <li>Ensure machinery is maintained correctly</li> <li>All plant and equipment to be registered prior to use</li> <li>All visibly smoky plant to be removed or repaired</li> </ul>	Built and Built's Subcontractors
Greenhouse	Resource use Air pollution Global warming	L	AGBR Greenstar	<ul style="list-style-type: none"> <li>Ensure purchased electrical products/whitegoods products comply with specification for CFCS &amp; energy ratings</li> <li>Low solvent paints to be used as a priority</li> <li>Building to conform to AGBR or Green Star performance criteria</li> <li>Deliveries / transport from site effectively planned to limit inefficient transport, assist back loading etc</li> </ul>	Built and Built's Subcontractors
Stormwater (Discharge from sedimentation basins, flooding)	Water contamination	M	NSW - Protection of the Environment Operations Act 1997, s 120, 122; Protection of the Environment Operations (General) Regulation 1998, cl 55; Local Government Act 1993, s 638	<ul style="list-style-type: none"> <li>Water quality to meet ANZECC Water Quality Guidelines.</li> <li>→ <b>PH 6.5- 8.5, Turbidity &lt;50NTU, No visible oil &amp; grease</b></li> <li>Obtain advice for use of flocculants to settle sediment from water.</li> <li>Sedimentation pond to be maintained at low levels to ensure capacity during rainfall event.</li> <li>DO NOT DISCHARGE IF CONTAMINANTS SUSPECTED. Obtain advice.</li> </ul>	Built and Built's Subcontractors
Sewer (Trade waste)	Water pollution	M	NSW - Protection of the Environment Operations (General) Regulation 1998,	<ul style="list-style-type: none"> <li>No paints or other chemical to be poured down drains.</li> <li>If required, obtain trade waste licence for discharge or local council approval</li> </ul>	Built and Built's Subcontractors
Noise	Community complaints	H	NSW - POEO Act (Sections 139, 140)	<ul style="list-style-type: none"> <li>Refer to DA for noise restrictions and working hours.</li> <li>Use hoarding or acoustic mats as required.</li> <li>Situate generators and plant away from sensitive receivers.</li> <li>Turn off machinery. Maintain equipment and stop noisy plant until repaired.</li> <li>No early deliveries.</li> </ul>	Built and Built's Subcontractors
Vibration	Community complaints, Damage to structures	L	NSW - POEO Act (Sections 139, 140)	<ul style="list-style-type: none"> <li>Conduct dilapidation report prior to work starting.</li> <li>Limit the use of vibratory rollers, rock breakers, impact piling etc adjacent to buildings (&gt;7m).</li> </ul>	Built and Built's Subcontractors

Environmental Aspect	Environmental Impact	Risk Rating	Legal Requirements	Environmental Actions, Controls and Criteria	Responsibility
				<ul style="list-style-type: none"> <li>Regenerated noise may also transfer through bedrock and building structures.</li> <li>Obtain advice if required</li> </ul>	
Community	Community Concerns Noise Restricted access	H		<ul style="list-style-type: none"> <li>Provide information to community on programmed works</li> <li>Provide contact name for inquires on site noticeboard and external signage.</li> <li>Advice locals of “noisy” work.</li> <li>If required in noise sensitive areas and/or in response to complaints, engage consultants to undertake monitoring at nominated receivers.</li> <li>Vehicles will not be permitted to queue outside the site or in residential areas unless a defined area is established which does not adversely impact on neighbours.</li> </ul>	Built and Built's Subcontractors
Waste Litter	Landfill Contamination of waterways Soil contamination	M	NSW - POEO Act 1997,	<ul style="list-style-type: none"> <li>Hazardous materials surveys to be completed.</li> <li>Materials to be removed prior to demolition</li> <li>Registers and waste disposal requirements as per WorkCover and DECC/EPA requirements for removal, storage, transport and disposal.</li> <li>General site wastes –use one bin system and sort in contractors yard to produce quantities of material for recycling, reuse, disposal etc.</li> <li>Empty drums are to be taken off-site for disposal.</li> <li>Empty drums shall be crushed prior to recycling/disposal.</li> <li>Do not overfill skip bins. Provide plenty for use. Cover where potential for windblown litter.</li> </ul>	Built and Built's Subcontractors
Landfilling	Landfill Contamination of waterways Soil contamination	L	NSW - POEO Act s 116, 142	<ul style="list-style-type: none"> <li>All waste to managed by Dial A Dump and a monthly report outlining the recyclable percentages to be obtained for record keeping</li> </ul>	Built and Built's Subcontractors
Chemicals	Contamination of waterways Soil contamination Fumes Worker safety	L	NSW - POEO Act s 116, s 142,	<ul style="list-style-type: none"> <li>Chemicals to be <b>stored</b> in bunded areas (impervious + 110% of largest container) away from stormwater drains &amp; pits.</li> <li>Refer Workcover Code of Practice for Storage &amp; Handling of Dangerous Goods, DECC Guidelines for Bunding &amp; Spill Management. Appropriate chemicals storage is in conformance with:                             <ul style="list-style-type: none"> <li>→ AS 1940 The Storage and Handling of Flammable and Combustible Liquids</li> <li>→ Storage and Handling of Dangerous Goods WorkCover Code of Practice 2005– refer p. 86</li> </ul> </li> <li>DEC requirements <a href="http://www.environment.nsw.gov.au/mao/bundingspill.htm">http://www.environment.nsw.gov.au/mao/bundingspill.htm</a></li> <li>Ponded water within <b>bunds</b> will not be discharged to stormwater.</li> <li><b>Fuel and hydraulic leaks</b> to be cleaned up immediately.</li> <li><b>Drilling muds</b> to be contained within bunds and reused.</li> <li><b>Liquid paints</b> NOT to be poured down drains. Spread on waste cardboard or similar and leave to dry. Paint brushes to be rinsed and paint solids allowed to settle. Container of paint solids to be disposed to liquid waste facility.</li> <li>Construct <b>concrete washout</b> pit for washout, away from stormwater drains. Send back to batch plant where possible.</li> <li><b>Concrete cuttings</b> to be contained and wetvac to prevent runoff into stormwater drains.</li> <li>Storage of <b>bulk fuels</b> (&gt;200L) on site is prohibited. All refuelling shall be undertaken by a mobile facility with appropriate spill control and containment control equipment.</li> <li>MSDS's must be provided to the Foreman prior to a chemical being received on site and by subcontractors using chemicals/products.</li> </ul>	Built and Built's Subcontractors
Traffic	Site access restrictions Community safety Pollution	H	Sydney City Council	<ul style="list-style-type: none"> <li>Develop and implement traffic management plans.</li> <li>Signage and notices regarding disruptions.</li> <li>Use crushed concrete, mulches etc along site access roads.</li> <li>Install shakers and wheel wash as required.</li> </ul>	Built and Built's Subcontractors

Environmental Aspect	Environmental Impact	Risk Rating	Legal Requirements	Environmental Actions, Controls and Criteria	Responsibility
				<ul style="list-style-type: none"> <li>Organise regular street sweeping.</li> <li>Haulage routes and rules will be provided to subcontractors prior to commencing on site.</li> <li>All loads of soil, demolition wastes, general wastes etc are to be tarped</li> </ul>	
Hazardous Materials (Asbestos)	Worker health Air contamination Contaminated waterways Soil contamination	L	NSW - POEO Act s 142,	<ul style="list-style-type: none"> <li>Unexpected finds to be managed as per BSMS Asbestos</li> <li>licence is required to remove, repair or disturb friable asbestos</li> </ul>	Built and Built's Subcontractors
Aboriginal heritage	Destruction of heritage items	M	NSW - Heritage Act 1977, s 146, National Parks and Wildlife Act 1974, s 90-91	<ul style="list-style-type: none"> <li>Education and training at site toolbox meetings and induction.</li> <li><b>It is illegal to destroy heritage items.</b></li> <li>Review local or regional environmental plans, or on the State Heritage Register is to be consulted prior to work starting onsite.</li> <li>Obtain excavation permit issued by the Heritage Council of NSW if required.</li> <li>Any heritage relics or sites discovered during construction shall be reported to the NSW Heritage Office.</li> <li>Work in the subject area to cease until specialist advice is obtained.</li> <li>The area will be fenced and signs erected to restrict access.</li> <li>Heritage consultants may be required to provide advice on demolition/construction processes and finishes.</li> </ul> <div data-bbox="1590 961 2332 1713" style="border: 1px solid black; padding: 5px;"> <p><b>Excavation in Areas of Moderate Archaeological Potential (GREEN AREAS)</b></p> <p>The following procedures must be followed when excavating in areas of MODERATE archaeological potential (see Figure 1):</p> <ul style="list-style-type: none"> <li>An archaeologist must be present at ALL times to monitor the removal of hard surfaces (i.e. pavements and slabs).</li> <li>Once hard surfaces have been removed the area will be subject to further archaeological investigation prior to remediation works. This will be conducted by a team of archaeologists under the direction of the GML Archaeology Excavation Director and may involve machine excavation under the direction of an archaeologist.</li> <li>No further excavation and/or remediation work can be undertaken until the archaeological investigation has been completed and the area has been signed off by the GML Archaeology Excavation Director.</li> <li>On completion of the archaeological investigation the GML Archaeology Excavation Director will notify the Site Foreman and the Incoll Project Manager that remediation work may commence. Further archaeological monitoring may be required in specific areas. These areas will be clearly marked on the site remediation plan and provided to the Site Foreman.</li> <li>In the event that historical archaeological remains such as former footings, deposits, artefacts, bottle dumps, wells or cess-pits are discovered during excavation the GML Archaeology Excavation Director and the Incoll Project Manager must be notified immediately. Work in the immediate area must cease until further investigation of the remains has been completed. The GML Archaeology Excavation Director will notify the Site Foreman when remediation / excavation work can re-commence in the affected area.</li> <li>In the event that Aboriginal sites and/or objects are found during excavation, work in the immediate area must cease and the GML Archaeology Excavation Director and the Incoll Project Manager must be notified immediately. Further archaeological investigation and / or notification to the Department of Environment and Climate Change (DECC) may be required before remediation / excavation work can re-commence in the affected area.</li> </ul> </div> <div data-bbox="1590 1730 1991 1923" style="border: 1px solid black; padding: 5px;"> <p><b>CONTACT:</b></p> <p><b>GML Archaeology Excavation Director</b></p> <p>Fiona Leslie                      Godden Mackay Logan Pty Ltd                      78 George Street                      REDFERN NSW 2016                      PH: (02) 9319 4811                      Mob: 0412 468 950</p> </div>	Built and Built's Subcontractors

Environmental Aspect	Environmental Impact	Risk Rating	Legal Requirements	Environmental Actions, Controls and Criteria	Responsibility
European heritage	Destruction of heritage items	M	NSW - Heritage Act 1977	<ul style="list-style-type: none"> <li>• Education and training at site toolbox meetings and induction.</li> <li>• <b>It is illegal to destroy heritage items.</b></li> <li>• Also check the register of the National Estate.</li> <li>• Obtain approval from NPWS (Section 90 consent).</li> <li>• Any evidence of Aboriginal relics discovered during construction shall be reported to the National Parks and Wildlife Service.</li> <li>• Local Land Council representatives may be required to monitor stripping/excavation.</li> <li>• Work in the subject area to cease until specialist advice is obtained.</li> <li>• The area will be fenced and signs erected to restrict access</li> </ul> <div data-bbox="1546 590 2249 1304" style="border: 1px solid black; padding: 5px;"> <p><b>Excavation in Areas of Moderate Archaeological Potential (GREEN AREAS)</b></p> <p>The following procedures must be followed when excavating in areas of MODERATE archaeological potential (see Figure 1):</p> <ul style="list-style-type: none"> <li>• An archaeologist must be present at ALL times to monitor the removal of hard surfaces (i.e. pavements and slabs).</li> <li>• Once hard surfaces have been removed the area will be subject to further archaeological investigation prior to remediation works. This will be conducted by a team of archaeologists under the direction of the GML Archaeology Excavation Director and may involve machine excavation under the direction of an archaeologist.</li> <li>• No further excavation and/or remediation work can be undertaken until the archaeological investigation has been completed and the area has been signed off by the GML Archaeology Excavation Director.</li> <li>• On completion of the archaeological investigation the GML Archaeology Excavation Director will notify the Site Foreman and the Incoll Project Manager that remediation work may commence. Further archaeological monitoring may be required in specific areas. These areas will be clearly marked on the site remediation plan and provided to the Site Foreman.</li> <li>• In the event that historical archaeological remains such as former footings, deposits, artefacts, bottle dumps, wells or cess-pits are discovered during excavation the GML Archaeology Excavation Director and the Incoll Project Manager must be notified immediately. Work in the immediate area must cease until further investigation of the remains has been completed. The GML Archaeology Excavation Director will notify the Site Foreman when remediation / excavation work can re-commence in the affected area.</li> <li>• In the event that Aboriginal sites and/or objects are found during excavation, work in the immediate area must cease and the GML Archaeology Excavation Director and the Incoll Project Manager must be notified immediately. Further archaeological investigation and / or notification to the Department of Environment and Climate Change (DECC) may be required before remediation / excavation work can re-commence in the affected area.</li> </ul> </div> <div data-bbox="1546 1318 1923 1507" style="border: 1px solid black; padding: 5px;"> <p><b>CONTACT:</b></p> <p><b>GML Archaeology Excavation Director</b></p> <p>Fiona Leslie            Godden Mackay Logan Pty Ltd            78 George Street            REDFERN NSW 2016            PH: (02) 9319 4811            Mob: 0412 468 950</p> </div>	Built and Built's Subcontractors
Emergency Preparedness	Worker health Air contamination Contaminated waterways Soil contamination	H		<ul style="list-style-type: none"> <li>• Spill kit onsite.</li> <li>• Refer to the MSDS for advice and procedures.</li> <li>• All spills must be reported to the Site Manager &amp; cleaned up. <b>Complete BUILT Accident /Incident report.</b></li> <li>• Sediment pond pumped out regularly to maintain capacity in case of emergency</li> <li>• Ensure you know where stormwater drains are and have materials to block them in case of a fire`</li> </ul>	Built and Built's Subcontractors
waste storage	Air contamination Contaminated waterways Soil contamination	L	Nil	<ul style="list-style-type: none"> <li>• A dedicated waste storage area is included on the Ground Floor of Block 3b, to service blocks 3B and C, and on the Ground floor of Block 10 to service that building.</li> <li>• The waste room is adequately sized and has storage equipment for separated recycling waste and general waste, making it as convenient to dispose of recycling waste as general waste.</li> </ul>	Built and Built's Subcontractors

Environmental Aspect	Environmental Impact	Risk Rating	Legal Requirements	Environmental Actions, Controls and Criteria	Responsibility
Concrete	Resource use Sustainable incentives	M	Nil	<ul style="list-style-type: none"> <li>Credit not achievable. Substitution of Portland cement by supplementary cementitious materials isn't suitable for construction of post-tensioned slab due to reduced strength rate The amount of Portland cement used is to be reduced by at least 30% by substituting it with supplementary cementitious materials (SCM)</li> </ul>	Built and Built's Subcontractors
Reinforcing Steel	Resource use	M	Nil	<ul style="list-style-type: none"> <li>All reinforcing steel is to exceed 500MPa strength grade</li> <li>Steel production, processing and fabrication facilities shall have valid ISO 14001</li> </ul>	Built and Built's Subcontractors
PVC	Sustainable incentives	M	Nil	<ul style="list-style-type: none"> <li>PVC products are specified to meet the GBCA Best Practice Guidelines for PVC in the Built Environment.</li> <li>At least 90% of the common PVC uses in the project comply with this criteria or use alternative products to PVC</li> </ul>	Built and Built's Subcontractors
Timber	Resource use	M	Nil	<ul style="list-style-type: none"> <li>At least 95% (by cost) of all timber and timber based products are to be sourced from one and/or other of the following: <ul style="list-style-type: none"> <li>Reused timber</li> <li>Post consumer recycled timber</li> <li>Forest Stewardship Council (FSC) certified timber or Australian Forest Certification Scheme (AFCS) certified timber</li> </ul> </li> </ul>	Built and Built's Subcontractors
Dematerialisation	Sustainable incentives	M	Nil	<ul style="list-style-type: none"> <li>At least 90% of the ceilings are exposed structure</li> <li>The studio apartment size is less than 40m<sup>2</sup></li> </ul>	Built and Built's Subcontractors
Flooring	Resource use	M	Nil	<ul style="list-style-type: none"> <li>The flooring used in the project has a reduced environmental impact as determined by the Green Star Flooring Calculator.</li> </ul>	Built and Built's Subcontractors
Internal walls	Sustainable incentives	M	Nil	<ul style="list-style-type: none"> <li>The internal walls used in the project has a reduced environmental impact as determined by the Green Star Internal Walls Calculator.</li> </ul>	Built and Built's Subcontractors

Environmental Aspects and Impacts Risk Assessment Matrix				
Consequence (severity) – is how serious could the environment be harmed		Likelihood – is an estimate of how probable it is for the environmental hazard to occur leading to environmental harm.		
		Very Likely (VL)	Possible (POS)	Very Unlikely (VU)
<b>RISK LEVEL</b>	<b>HIGH SEVERITY (H)</b> <ul style="list-style-type: none"> <li>Irreversible damage to the environment</li> <li>Extensive damage to the environment e.g. large area of contamination (costs exceeding &gt; \$500k)</li> <li>Court proceedings leading to prosecution and significant fine</li> <li>Damage to Built's reputation as a result of widespread adverse publicity</li> </ul>	HIGH	HIGH	MEDIUM
	<b>MEDIUM SEVERITY (M)</b> <ul style="list-style-type: none"> <li>Temporary harm to the environment e.g. small area of contamination but no ongoing long term damage</li> <li>Clean-up costs &lt; \$250k</li> <li>Low level fine</li> <li>No adverse media publicity on a significant level</li> </ul>	HIGH	MEDIUM	LOW
	<b>LOW SEVERITY (L)</b> <ul style="list-style-type: none"> <li>Minor harm to the environment e.g. small scale spill readily mitigated/cleared; Noise complaint from adjoining property</li> </ul>	MEDIUM	LOW	LOW
RISK LEVEL		HIERARCHY OF CONTROL		
		Order of priority in the selection of controls corresponding to level of risk (Acceptable Risk Treatment)		
<b>High Risk</b> - Action must be taken to eliminate the risk to the environment  <b>Medium Risk</b> – if the risk to the environment cannot be eliminated so far as is reasonably practicable or minimised so far as is reasonably practicable by implementing control measures listed as 2nd, 3rd or 4th (in this order of priority)  <b>Low Risk</b> - if the risk to the environment cannot be eliminated so far as is reasonably practicable or minimised so far as is reasonably practicable by implementing control measures listed as 2nd, 3 <sup>rd</sup> , 4 <sup>th</sup> or 5th (in this order of priority) then Administrative controls may be applied		<b>1<sup>st</sup> Elimination</b> - i.e. the permanent removal of the hazard  <b>2<sup>nd</sup> Substitution</b> - substituting (wholly or partly) the hazard giving rise to the risk with something that gives rise to a lesser risk  <b>3<sup>rd</sup> Isolation</b> - isolating the source of the hazard that poses a threat to the environment  <b>4<sup>th</sup> Engineering</b> - controls to reduce the risk to the environment  <b>5<sup>th</sup> Administrative</b> - procedural controls to eliminate or reduce the risk of environmental contamination		