



22<sup>nd</sup> January 2020

The Planning Secretary  
Department of Planning, Industry & Environment  
320 Pitt Street  
Sydney, NSW 2000

Attention: Megan Fu  
Project: Nihon University Newcastle Campus - SSD 9787  
Re: Conditions of Consent C07

Dear Megan,

Reference is made to SSD 9787 Conditions of Consent C07 in relation to the Environmental Management Plan Requirements for the development.

Please find attached a copy of the Environmental Management Plan prepared by the contractor Built Pty Limited. The document addresses the environmental management of the development during the construction processes. A copy of the plan has been forwarded to the Certifier.

Should you require further clarification on document please feel free to contact either Katherine Daunt or Edward Clode at dwp Australia Pty.

Yours sincerely,

Edward Clode  
Design Director  
Registered Architect – NSW ARBN 4100  
Email: [edward.c@dwp.com](mailto:edward.c@dwp.com)  
File: 17-0347\_A-d01-20\_let  
Encl.: Built HSE Plan - Appendix 11 Environmental Plan - Rev 1



## **APPENDIX 11 TO HSE PLAN**

### **Environmental Management Plan**

**Nihon University Newcastle Campus**

## TABLE CONTENTS

<b>1 ENVIRONMENTAL MANAGEMENT POLICY .....</b>	<b>3</b>
<b>2 ENVIRONMENTAL SUSTAINABILITY POLICY.....</b>	<b>4</b>
<b>3 ENVIRONMENTAL MANAGEMENT PLAN .....</b>	<b>5</b>
<b>4 PURPOSE OF THE ENVIRONMENTAL MANAGEMENT PLAN.....</b>	<b>5</b>
<b>5 ENVIRONMENTAL OBJECTIVES.....</b>	<b>5</b>
<b>6 ENVIRONMENTAL RATING TOOLS.....</b>	<b>6</b>
6.1 NABERS ENERGY .....	6
6.2 GREEN STAR .....	6
<b>7 INTERNAL AND EXTERNAL COMMUNICATION .....</b>	<b>6</b>
<b>8 PROJECT ORGANISATIONAL CHART.....</b>	<b>7</b>
<b>9 RESPONSIBILITIES &amp; DUTIES.....</b>	<b>7</b>
<b>10 ENVIRONMENTAL RISKS/ENVIRONMENTAL ASPECTS.....</b>	<b>7</b>
<b>11 ENVIRONMENTAL IMPACTS AND CONTROLS.....</b>	<b>8</b>
11.1 PROJECT ENVIRONMENTAL MANAGEMENT PLANS .....	8
11.2 SUPPLEMENTARY ENVIRONMENTAL PLANS .....	8
<b>12 SUBCONTRACTORS AND SUPPLIERS .....</b>	<b>8</b>
<b>13 LEGAL &amp; OTHER REQUIREMENTS.....</b>	<b>9</b>
13.1 LEGISLATIVE COMPLIANCE .....	9
13.2 LICENSES & APPROVALS.....	9
<b>14 CONTAMINATED SITE PROCEDURE .....</b>	<b>9</b>
<b>15 MONITORING .....</b>	<b>10</b>
<b>16 COMMUNICATION AND CONSULTATION .....</b>	<b>10</b>
16.1 TRAINING .....	10
16.2 COMMUNITY CONSULTATION .....	11
16.3 EXTERNAL STAKEHOLDERS.....	11
16.4 COMMUNITY COMPLAINTS .....	11
<b>17 EMERGENCY PLANNING &amp; RESPONSE.....</b>	<b>11</b>
<b>18 INCIDENT INVESTIGATION &amp; REPORTING .....</b>	<b>11</b>
18.1 ENVIRONMENTAL INCIDENTS .....	11
18.2 DUTY TO NOTIFY DEPARTMENT OF ENVIRONMENTAL INCIDENT .....	12
<b>19 AUDITS.....</b>	<b>13</b>
<b>ATTACHMENT 1 – ENVIRONMENTAL ASPECTS AND IMPACTS REGISTER.....</b>	<b>15</b>
<b>ATTACHMENT 2 – ENVIRONMENTAL LEGAL REGISTER.....</b>	<b>21</b>
<b>APPENDIX A – GREEN STAR PATHWAY .....</b>	<b>25</b>
<b>APPENDIX B – CEMP.....</b>	<b>26</b>

# 1 Environmental Management Policy

## **Built.** *Environmental Management Policy*

### **Our Aim**

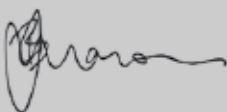
Built is committed to establishing and maintaining ours and our clients work environments with priority given to minimising adverse environmental effects from our activities and fostering a culture of sustainable environmental management.

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  
1 July 2018

## 2 Environmental Sustainability Policy

# Built. *Environmental Sustainability Policy*

### Our Aim

Built is committed to environmentally sustainable work practices and aspires to be recognised as a leading environmentally responsible contractor across all business operations Australia-wide.

Consistent with our Environmental Management Policy, we will seek to continually improve on environmental outcomes within the built environment through the adoption of best practice environmental sustainability principles, including:

- Eliminating, or where this is not possible, minimising waste from our activities and recovering resources for reuse or recycling
- Minimising our consumption and use of water and natural resources
- Reduce our carbon emissions to as low as is possible, through the efficient use of electricity and fossil fuels
- Protecting land quality and biodiversity from negative impacts associated with our operations
- Working cooperatively with our clients to achieve their objectives for environmental sustainability
- Raise the level of awareness of our staff, employees and contractors through the provision of training, instruction and information on the requirements for and importance of the sustainable use of natural resources and energy efficiency
- Work cooperatively in a consultative manner with our clients, responsible agencies and other stakeholders in exercising environmental due diligence across all areas of our business operations, including openly communicating, listening and responding to concerns of those potentially affected by our project operations
- Promoting the benefits of sustainable building design through the participation in and delivery of Green Star, NABERS rated projects and other world leading sustainability rating tools



Brett Mason  
Managing Director  
1 July 2018

### 3 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.

### 4 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.

### 5 Environmental Objectives

Built's environmental objectives for the project are:

Aspect	Objective	Target	Measurement Tool
<b>Corporate Objectives and Targets</b>			
Waste	To minimise waste going to landfill	90% landfill diversion	Audits, compliance reporting
Sediment & Erosion Control	To prevent sediment from entering waterways or stormwater	Zero incidents	Audits, monitoring, implementation and review of control plans
Water quality	To prevent contamination of water ways	Zero incidents of water way pollution	Audits, monitoring, implementation and review of control plans
Noise & vibration	To proactively address community complaints regarding noise or vibration	Respond to any community concerns within 48 hours	Audits, monitoring, implementation and review of methodology and control plans
Dust	To proactively address community complaints regarding dust	Respond to any community concerns immediately	Audits, monitoring, regular reviews of

			methodology and control plans
<b>Project Objectives and Targets</b>			
Heritage	To maintain all heritage items and minimise disturbance during construction	Zero damage to heritage items	Audits, monitoring, revision of management plans in response to NCRs
Legal requirements	Construction of the project in accordance with environmental approvals	Full compliance with statutory approvals	Audits, monitoring, compliance construction reporting
Community Consultation	Engage and consult effectively with the community	Regular communication with community through notices and updates. Record and respond to complaints within one working day and/or as reasonably practical	Review complaints register, construction compliance reports

## 6 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 a proposed Green Star rating for this building (The Green Star rating is 4) and the Green Star Pathway will be issued to all subcontractors and suppliers to inform them of the requirements. Regular and quality assurance inspections and audits will be completed by Built to ensure compliance with the Green Star Pathway (Attached in Appendix A)

## 7 Internal and External Communication

### Monthly PCG (Project Control Group) – External

Environmental management issues and sustainability progress will be updated within the Monthly PCG report as necessary.

### Monthly PMR (Project Management Report) - Internal

Environmental management issues and sustainability progress will be updated within the Monthly PMR as necessary.

### Rapid Incident

All environmental incidents are to be reported through Rapid Incident Reporting. Significant incidents shall be investigated, and a report distributed to senior management and other parties, as required.

### **HSE-029 – Toolbox Meeting and Consultation Record**

A prompt is provided within the Toolbox talk form to enable any environmental issues arising on site, or other information relevant to the workforce, to be discussed.

### **Subcontractor Meeting**

A prompt is provided within the Subcontractor Meeting Agenda to enable any environmental issues arising on site, or other information relevant to the subcontractors, to be discussed.

### **Community Liaison – External**

Built has an established Community Liaison Plan which outlines the methods of communication with residents and businesses surrounding the site. Built has established the [nihon@built.com.au](mailto:nihon@built.com.au) email address as the primary contact method and is monitored daily by the Project Manager / Community Liaison Officer.

All complaints and queries will be actioned immediately and responded to within one working day.

Other forms of communication include letterbox drops, face to face, and phone calls as required throughout the project.

## **8 Project Organisational Chart**

Refer to clause 4.2 of the HSE Plan and Appendix 3 of the HSE Plan

## **9 Responsibilities & Duties**

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

## **10 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.

Risks levels (i.e. Consequence and Likelihood) in relation to environmental Aspects and Impacts rated as ‘High’ or ‘Medium’ are considered ‘Significant’ as they have the potential to adversely impact on the environment, result in additional costs to and potential fines to Built or damage the company’s reputation. Where an environmental aspect results in a positive impact on the environment (e.g. waste elimination or waste re-use) these are considered to also be significant.



## 11 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 be 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](#)
- [Noise & Vibration Management Plan](#)
- [Traffic & Pedestrian Management Plan](#)

Supplementary environmental plans are included in the annexures to this plan.

## 12 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 Legal & Other Requirements

### 13.1 Legislative Compliance

#### *Environmental*

Environmental legislation applicable to the project is listed in the '**Environmental Legal Register**' (Refer Attachment 2).

#### *Other Requirements:*

- SSD-9787 Development Approval
- Australian Building Greenhouse Rating;
- NSW Government Environment Guidelines;
- Green Star Rating;
- National Construction Code & Building Code of Australia 2019
- Contaminated Land Management Act 1997
- Coal Mine Subsidence Compensation Act 2017
- Conveyancing Act 1919
- Environmental Planning & Assessment Act 1979
- Environmental Planning & Assessment Regulation 2000
- Heritage Act 1977
- Hunter Water Act 1991
- Newcastle Development Control Plan 2012
- Newcastle Local Environmental Plan 2012
- NSW Health Code of Practice for the Control of Legionnaires' Disease
- Protection of the Environment Operations Act 1997
- Protection of the Environment Operations Regulation 2014
- Protection of the Environment Operations (Waste) Regulation 2014
- Public Health Act 2010
- Public Health Regulation 2012
- Roads Act 1993 (Section 138)
- State Environmental Planning Policy (SEPP) 55
- Work Health and Safety Act 2011
- Work Health & Safety Regulation 2017
- Australian Standards, Guidelines & Handbooks
- International Standards, Guidelines & Handbooks

### 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 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 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 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 verifying 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 / Community Liaison Officer will advise them of the nature and scope of works including any potential impacts. Notification shall be either via email ([nihon@built.com.au](mailto:nihon@built.com.au)), letter box drops or special arranged consultation meetings. Where required, community consultation will be outlined further in the Community Liaison Plan.

## 16.3 External Stakeholders

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

Agency/Company	Contact	Phone/Fax/Email
NSW Department of Planning	Planning Secretary	compliance@planning.nsw.gov.au
Department of Environment & Conservation	NSW Office of Environment and Heritage (OEH) and National Parks and Wildlife Service (NPWS)	(02) 9995 5000 131 555 info@environment.nsw.gov.au
Local Council	City of Newcastle	02 4974 2000 mail@ncc.nsw.gov.au
Department of Land and Conservation	Department of Natural Resources	1300 361 967 info@environment.nsw.gov.au
Department of Agriculture, Forestry and Fisheries	Department of Agriculture, Forestry and Fisheries Hotline	1800 900 090

## 16.4 Community Complaints

Community complaints shall be recorded in Rapid Incident Reporting and actioned by the Project Manager as soon as practical and a formal response within one working day. Any action taken shall be recorded on the form.

All notifications and complaints will be recorded in the community consultation register maintained onsite.

Built has established a community liaison email address for notifications and complaints – [nihon@built.com.au](mailto:nihon@built.com.au)

## 17 Emergency Planning & Response

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

## 18 Incident Investigation & Reporting

### 18.1 Environmental Incidents

Refer to clause 13.0 HSE Incident Reporting of the HSE Plan. All incidents are to be recorded in Rapid Incident Reporting.

## 18.2 Duty to Notify Department of Environmental Incident

Built shall notify the (DECCW Pollution Line: 131 555) regarding pollution incidents that have occurred in the course of its activities, if the following apply:

### Incident Notification, Reporting and Response

A26. The Planning Secretary must be notified in writing to **compliance@planning.nsw.gov.au** immediately after the Applicant becomes aware of an incident. The notification must identify the development (including the development application number and the name of the development if it has one) and set out the location and nature of the incident.

A27. Subsequent notification must be given, and reports submitted in accordance with the requirements set out in Appendix 2 of the SSD Conditions.

### Non-Compliance Notification

A28. The Planning Secretary must be notified in writing to **compliance@planning.nsw.gov.au** within seven days after the Applicant becomes aware of any non-compliance. The Certifier must also notify the Planning Secretary in writing to **compliance@planning.nsw.gov.au** within seven days after they identify any non-compliance.

A29. The notification must identify the development and the application number for it, set out the condition of consent that the development is non-compliant with, the way in which it does not comply and the reasons for the non-compliance (if known) and what actions have been, or will be, undertaken to address the non-compliance.

A30. A non-compliance which has been notified as an incident does not need to also be notified as a non-compliance.

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 Regional HSE Manager and form part of the company's audit schedule. Refer to clause 36.0 Audits of the HSE Plan. Audits shall address the requirements of ISO9001, ISO14001, AS4801, Built's Management System and the various Management Plans.

Independent Environmental Audits by GHD will be conducted in accordance with the following SSD requirements:

D29. Proposed independent auditors must be agreed to in writing by the Planning Secretary prior to the preparation of an Independent Audit Program or commencement of an Independent Audit.

D30. Prior to the commencement of construction, an Independent Audit Program prepared in accordance with the Independent Audit Post Approval Requirements (Department 2018) must be submitted to the Planning Secretary and the Certifier.

D31. Table 1 of the Independent Audit Post Approval Requirements (Department 2018) is amended so that the frequency of audits required in the construction phase is:

- (a) an initial construction Independent Audit must be undertaken within eight weeks of the notified commencement date of construction;
- (b) a subsequent Independent Audit of construction must be undertaken no later than six months from the date of the initial construction Independent Audit; and

In all other respects Table 1 remains the same. The Planning Secretary may require the initial and subsequent Independent Audits to be undertaken at different times to those specified above, upon giving at least 4 weeks' notice to the applicant of the date upon which the audit must be commenced.

D32. Independent Audits of the development must be submitted to the Planning Secretary and must be carried out in accordance with:

- (a) the Independent Audit Program submitted to the Planning Secretary and the Certifier under condition D30 of this consent; and
- (b) the requirements for an Independent Audit Methodology and Independent Audit Report in the Independent Audit Post Approval Requirements (Department 2018).

D33. In accordance with the specific requirements in the Independent Audit Post Approval Requirements (Department 2018), the Applicant must:

- (a) review and respond to each Independent Audit Report prepared under condition D30 of this consent;
- (b) submit the response to the Planning Secretary and the Certifier; and
- (c) make each Independent Audit Report and response to it publicly available 60 days after submission to the Planning Secretary and notify the Planning Secretary and the Certifier

in writing at least seven days before this is done.

D34. Notwithstanding the requirements of the Independent Audit Post Approval Requirements (Department 2018), the Planning Secretary may approve a request for ongoing annual operational audits to be ceased, where it has been demonstrated to the Planning Secretary's satisfaction that an audit has demonstrated operational compliance.

## **Attachment 1 – Environmental Aspects and Impacts Register**



Environmental Aspect	Environmental Impact	Risk Rating (Risks ranked as 'High' or 'Med' are deemed significant)	Legal Requirements	Environmental Actions, Controls and Criteria	Responsibility
<b>SECTION D: ENVIRONMENTAL ASPECTS</b>					
Dust Generation Particulate Emissions (General)	Air pollution	Low	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 onsite to 5km/hr</li> <li>Reduce work activities / stop work during moderate to high wind velocity periods.</li> <li>Turn off vehicle engines whilst not in use (no long periods of idling)</li> </ul>	<ul style="list-style-type: none"> <li>Built</li> <li>PCBU</li> </ul>
Dust Generation (Demolition)	Air pollution	Medium	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>Construction vehicle loads to be watered and covered</li> <li>Stockpiles to be watered and covered as required</li> </ul>	<ul style="list-style-type: none"> <li>PCBU</li> </ul>
Dust Generation (Construction)	Air pollution	Low	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, soil binders, hydro mulching, controlled speed onsite, roadbase + shaker grids.</li> <li>On site drilling or coring operations will be undertaken by equipment fitted with air filtration equipment.</li> <li>Construction vehicle loads to be watered and covered</li> <li>Stockpiles to be watered and covered as required</li> </ul>	<ul style="list-style-type: none"> <li>Built</li> <li>PCBU</li> </ul>
Odour	Air pollution Odour	Low	NSW - Protection of the Environment Operations Act 1997, s 129; Common law of nuisance; Local Government Act 1993, s125	<ul style="list-style-type: none"> <li>If odorous materials uncovered, re-cover immediately and notify Built.</li> <li>Seek advice from consultant regarding soil /materials management.</li> </ul>	<ul style="list-style-type: none"> <li>Built</li> <li>PCBU</li> </ul>
Emissions to Air	Air pollution	Low	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> </ul>	<ul style="list-style-type: none"> <li>PCBU</li> </ul>
Greenhouse	Resource use Air pollution Global warming Light pollution	Low	Green Star	<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 Green Star performance criteria</li> <li>Deliveries / transport from site effectively planned to limit inefficient transport, assist back loading, minimise road traffic noise etc</li> <li>Workers encouraged to carpool where possible or catch public transport</li> <li><b>External lighting to be in compliance with AS 4282-2019 to control of the obtrusive effects of outdoor lighting</b></li> </ul>	<ul style="list-style-type: none"> <li>Built</li> <li>PCBU</li> </ul>
Stormwater (Discharge from sedimentation basins, flooding)	Water contamination	Medium	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  ANZECC Water Quality Guidelines  NSW Department of Housing's Managing Urban Stormwater (2004)  ANZECC Water Quality Guidelines	<ul style="list-style-type: none"> <li>All drains within the construction site or outside the site which are likely to be affected, are to have environmental controls such as bunding, geofab over drains etc and inspected as part of the weekly site inspections</li> <li>Implementation of Built Erosion &amp; Sediment Control Plan &amp; regular monitoring of measures</li> </ul>	<ul style="list-style-type: none"> <li>Built</li> <li>PCBU</li> </ul>
Sewer (Trade waste)	Water pollution	Low	NSW - Protection of the Environment Operations (General) Regulation 1998, cl 55; Sydney Water Act 1994, s 49; Hunter Water Act 1991, s 31; Local Government Act 1993, s 68 (cl 4 of Part C of the Table)], Consent to Discharge Industrial Trade Wastewater, Special Conditions Schedule 6 paragraphs 1-2	<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>	<ul style="list-style-type: none"> <li>Built</li> <li>PCBU</li> </ul>

Environmental Aspect	Environmental Impact	Risk Rating (Risks ranked as 'High' or 'Med' are deemed significant)	Legal Requirements	Environmental Actions, Controls and Criteria	Responsibility
Land (Acid sulphate soils, contaminated soils, imported fill)	Contaminated waterways Soil contamination	Low	NSW - Contaminated Land Management Act 1997, s 60; Contaminated Land Management Regulation 1998, cl 3  Acid Sulphate Soils Management Advisory Committee	<ul style="list-style-type: none"> <li>Potential for <b>acid sulphate soils</b> will be assessed based on the site's proximity to low-lying coastal areas eg. Coastal plains, wetlands and mangroves where the surface elevation is less than five metres above mean sea level.</li> <li>Stop work if unexpected potentially <b>contaminated soils</b> are encountered.</li> <li>Obtain waste classification from consultant in accordance with DECC guidelines Environmental Guidelines: Assessment, Classification &amp; Management of Liquid &amp; Non-Liquid Wastes (June 2004) <a href="http://www.environment.nsw.gov.au/waste/envguidlms/index.htm">www.environment.nsw.gov.au/waste/envguidlms/index.htm</a>.</li> <li>Where required a Remediation Action Plan will be developed and implemented.</li> <li>Sign off by Site Auditor may be required to validate clean up.</li> <li>Any groundwater or ponded rainwater will be tested and classified by consultants prior to disposal.</li> <li>Check Geotech requirements. Ensure soil classification suitable for land use i.e. Schools, residential, commercial etc.</li> </ul>	<ul style="list-style-type: none"> <li>Built</li> </ul>
Land	Contaminated waterways Soil contamination	Medium	NSW - Contaminated Land Management Act 1997, s 60, Contaminated Land Management Regulation 1998, cl 3, Protection of the Environment Operations Act 1997, s 142A-E  ANZECC Publication: Organochlorin Pesticides Waste Management Plan (1999)	<ul style="list-style-type: none"> <li>If odorous soils (rotten egg gas) or grey/yellowed mottled soils encountered, stop work.</li> <li>If suspected, consultant to prepare Acid Sulphate Soil Management Plan (ASSMP).</li> <li>Excavation and neutralisation to be supervised by consultants as per ASSMP.</li> </ul>	<ul style="list-style-type: none"> <li>Built</li> <li>PCBU</li> </ul>
Resources – water, materials, energy	Resource use Landfill Air pollution	Low	NSW - POEO Act	<ul style="list-style-type: none"> <li>For design and construct jobs, refer to the design specification for ESD requirements and product choices.</li> <li>Buy local wherever possible to reduce impacts of transport on environment.</li> <li>Implementation of Built Erosion &amp; Sediment Control Plan &amp; regular monitoring of measures</li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>
Noise	Community complaints	High	NSW - POEO Act (Sections 139, 140)  Interim Construction Noise Guideline 2009	<ul style="list-style-type: none"> <li>Strict adherence to noise and working hour restrictions. Refer to SSD Consent Conditions.</li> <li>Use hoarding an/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 or construction vehicles idling before or after approved construction hours.</li> <li>Conduct noise monitoring during demolition works.</li> </ul>	<ul style="list-style-type: none"> <li>Built</li> <li>PCBU</li> </ul>
Vibration	Community complaints, Damage structures to	Medium	NSW - POEO Act (Sections 139, 140)  Environmental Noise Management Assessing Vibration: a technical guideline 2009	<ul style="list-style-type: none"> <li>Strict adherence to vibration and working hour restrictions. Refer to SSD Consent Conditions.</li> <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> <li>Regenerated noise may also transfer through bedrock and building structures.</li> <li>Obtain advice if required</li> <li>Conduct vibration monitoring during demolition works</li> </ul>	<ul style="list-style-type: none"> <li>Built</li> <li>PCBU</li> </ul>
Community	Community Concerns Noise Restricted access	High	SSD Conditions of Consent	<ul style="list-style-type: none"> <li>Provide information (e.g. Signage, letterbox drops) to community on programmed works</li> <li>Provide contact name for inquiries.</li> <li>Advise locals of “noisy” and/or disruptive work through Built Community Liaison Plan.</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>	<ul style="list-style-type: none"> <li>Built</li> </ul>
Flora	Destruction of flora Erosion	Low	NSW - State Environmental Planning Policy No 14 - Coastal Wetlands, s 7(1, 5), 7A; Native Vegetation Act 2003, s 12; Forestry Act 1916,	<ul style="list-style-type: none"> <li>Review planning documentation to determine the presence of any protected, threatened or significant flora. Obtain approvals as required.</li> <li>Trees to be protected and retained as required by SSD &amp; City of Newcastle Requirements.</li> </ul>	<ul style="list-style-type: none"> <li>Built</li> </ul>

Environmental Aspect	Environmental Impact	Risk Rating (Risks ranked as 'High' or 'Med' are deemed significant)	Legal Requirements	Environmental Actions, Controls and Criteria	Responsibility
			s27(1); National Parks and Wildlife Act 1974, s 117(1), 118(1)]		
Waste Litter	Landfill Contamination of waterways Soil contamination	Low	NSW - POEO Act 1997, s 116, s 142, s 143, 144-146NSW - Waste Avoidance and Resource Recovery Act 2001, NSW Crown Lands Act 1989, s 155, Management of Waters and Waterside Lands Regulations - N.S.W., cl 13, POEO (Waste) Regulation 2005, cl 49, 12, 16, 17, 23	<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 NSW WHS Regulator 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>Do not overfill skip bins. Provide plenty for use. Cover where potential for windblown litter.</li> </ul>	<ul style="list-style-type: none"> <li>Built</li> <li>PCBU</li> </ul>
Chemicals	Contamination of waterways Soil contamination Fumes Worker safety	Low	NSW - POEO Act s 116, s 142, NSW -Work Health and Safety Regulation 2011	<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 NSW OHS Regulator 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 State/Territory WHS/OHS Regulator 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> will be off site.</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>SDS's must be provided to the Foreman prior to a chemical being received on site and by subcontractors using chemicals/products.</li> </ul>	<ul style="list-style-type: none"> <li>Built</li> <li>PCBU</li> </ul>
Traffic	Site access restrictions Community safety Pollution	Low	Local Government Requirements	<ul style="list-style-type: none"> <li>Develop and implement traffic management plans. Submit to local council as required.</li> <li>Signage and notices regarding disruptions.</li> <li>Install shakers and wheel wash as required.</li> <li>Organise regular street sweeping as required.</li> <li>All loads of soil, demolition wastes, general wastes etc are to be tarped</li> </ul>	<ul style="list-style-type: none"> <li>Built</li> <li>PCBU</li> </ul>
Hazardous Materials (Lead paint)	Air contamination Contaminated waterways Soil contamination	Low	NSW - POEO Act s 142	<ul style="list-style-type: none"> <li>If disturbing or removing dust or paint that could contain lead, wear a respirator or dust mask and protective clothing.</li> <li>Seal the rooms with plastic.</li> <li>Do not use open-flame torches on lead paint as they create lead fumes. If you must use a heat gun, use it on the lower setting to keep the paint temperature below 370 degrees C.</li> <li>Avoid using dry-sanding techniques: keep the surface wet to minimise dust.</li> <li>Don't sweep or use a domestic vacuum cleaner to clean up; lead dust will pass right through it. Use a high-efficiency particulate air (HEPA) vacuum cleaner. These can be hired.</li> <li>When finished, wipe all surfaces with a damp cloth and high-phosphate detergent.</li> <li>Wash face and hands before eating, drinking or smoking.</li> <li>Refer to <b>Lead Safe: A Renovator's Guide to the Dangers of Lead</b> and the Australian Standard AS4361.2 Guide to Lead Paint Management: Part 2 Residential and Commercial Buildings 1998</li> </ul>	<ul style="list-style-type: none"> <li>PCBU</li> </ul>
Hazardous Materials (Asbestos)	Worker health Air contamination	High	NSW - POEO Act s 142, NSW POEO (Waste) Regulation 2005, cl 42	<ul style="list-style-type: none"> <li>A licence subcontractor must be used to demolish, remove, repair or disturb asbestos.</li> <li>A NSW WHS Regulator asbestos licence is required to remove 10 square metres or more of bonded asbestos</li> <li>A NSW WHS Regulator licence is required to remove, repair or disturb friable asbestos</li> </ul>	<ul style="list-style-type: none"> <li>Built</li> <li>PCBU</li> </ul>

Environmental Aspect	Environmental Impact	Risk Rating (Risks ranked as 'High' or 'Med' are deemed significant)	Legal Requirements	Environmental Actions, Controls and Criteria	Responsibility
	Contaminated waterways Soil contamination		Asbestos materials regulations, standards, codes and guidelines	<ul style="list-style-type: none"> <li>Final inspection survey to be conducted by qualified Hygienist &amp; Clearance Certificates issued prior to construction works commencing.</li> </ul>	
Aboriginal heritage Uncovered artefacts	Damage or destruction of heritage items	Low	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>Any evidence of Aboriginal relics discovered during construction shall be reported to the National Parks and Wildlife Service.</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>	<ul style="list-style-type: none"> <li>Built</li> <li>PCBU</li> </ul>
European heritage (Court House items) Uncovered artefacts	Damage or destruction of heritage items	High	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>Check of the register of the National Estate.</li> <li>Obtain approval from NPWS (Section 90 consent).</li> <li>Local Land Council representatives and other Consultants may be required to monitor stripping/excavation works.</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>	<ul style="list-style-type: none"> <li>Built</li> <li>PCBU</li> </ul>
Emergency Preparedness	Worker health Air contamination Contaminated waterways Soil contamination	Low	<a href="#">Environmental Protection Act 1994</a> <a href="#">Environmental Protection Regulation 2008</a> Work Health and Safety Act 2011 Work Health and Safety Regulations 2011	<ul style="list-style-type: none"> <li>Spill kit onsite.</li> <li>Refer to the SDS for advice and procedures.</li> <li>All spills must be reported to the Site Manager &amp; cleaned up. <b>Complete BUILT Accident /Incident report &amp; follow SSD Incident Notification, Reporting, and Response Procedure</b></li> <li>Implementation of Built Erosion &amp; Sediment Control Plan &amp; regular monitoring of measures</li> </ul>	<ul style="list-style-type: none"> <li>Built</li> <li>PCBU</li> </ul>

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>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>	RISK LEVEL	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>1<sup>st</sup> Elimination</b> - i.e. the permanent removal of the hazard		
<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 2 <sup>nd</sup> , 3 <sup>rd</sup> or 4 <sup>th</sup> (in this order of priority)		<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>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 2 <sup>nd</sup> , 3 <sup>rd</sup> , 4 <sup>th</sup> or 5 <sup>th</sup> (in this order of priority) then Administrative controls may be applied		<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		

Risks levels (i.e Consequence and Likelihood) in relation to environmental Aspects and Impacts rated as ‘High’ or ‘Medium’ are considered ‘Significant’ as they have the potential to adversely impact on the environment, result in additional costs to and potential fines or damage the company’s reputation. Where an environmental aspect results in a positive impact on the environment (e.g. waste elimination or waste re-use) these are considered to also be significant.

## Attachment 2 – Environmental Legal Register



## ENVIRONMENTAL LEGAL REGISTER

Revision Date: 12 Dec 2019

## **1.0 NSW (NEW SOUTH WALES) - ENVIRONMENTAL LEGAL REGISTER**

### **Major Environmental and Planning legislation/**

- Environmental Planning and Assessment Act 1979
- Environmental Planning and Assessment Regulation 2000
- Protection of the Environment Operations Act 1997
- Protection of the Environment Operations Regulation 2014
- Protection of the Environment Operations (Clean Air) Regulation 2010
- Protection of the Environment Operations (General) Regulation 2009
- Protection of the Environment Operations (Noise Control) Regulation 2017
- Protection of the Environment Operations (Underground Petroleum Storage Systems) Regulation 2019
- Protection of the Environment Operations (Waste) Regulation 2014

### **Laws relating to water, oceans, rivers and waterways/**

- Marine Pollution Act 2012
- Marine Pollution Regulation 2006

### **Laws relating to parks, vegetation and land use/**

- Contaminated Land Management Act 1997 No. 140 (NSW)
- Soil Conservation Act 1938

### **Laws relating to heritage/**

- Heritage Act 1977
- Heritage Regulation 2012
- Environmental Protection and Biodiversity Conservation Act 1999
- National Parks & Wildlife Act 1974
- New South Wales Heritage Register and Inventory 1999
- Newcastle LEP 2012
- Newcastle DCP 2012

### **Laws relating to the atmosphere and clean air/**

- Ozone Protection Act 1989
- Protection of the Environment Operations Act 1997
- Protection of the Environment Operations (Clean Air) Regulation 2010



**Laws relating to dangerous goods etc/**

- Environmentally Hazardous Chemicals Act 1985
- Environmentally Hazardous Chemicals Regulation 2017

## **APPENDIX A – Green Star Pathway**

# Green Star - Design & As Built Scorecard v 1.2

## 4 Star Pathway

Date:	Thursday, 16 January 2020
Targeted Rating:	4 Star - Best Practice

Points Available	4 Star Pathway
97	48.0

CATEGORY / CREDIT	AIM OF THE CREDIT / SELECTION	CODE	CREDIT CRITERIA	Available	4 Star
Management					
Green Star Accredited Professional	To recognise the appointment and active involvement of a Green Star Accredited Professional in order to ensure that the rating tool is applied effectively and as intended	1.0	Accredited Professional	1	1
Commissioning and Tuning	To encourage and recognise commissioning, handover and tuning initiatives that ensure all building services operate to their full potential.	2.0	Environmental Performance Targets	-	Complies
		2.1	Services and Maintainability Review	1	1
		2.2	Building Commissioning	1	0
		2.3	Building Systems Tuning	1	0
		2.4	Independent Commissioning Agent	1	0
Adaptation and Resilience	To encourage and recognise projects that are resilient to the impacts of a changing climate and natural disasters.	3.1	Implementation of a Climate Adaptation Plan	2	0
Building Information	To recognise the development and provision of building information that facilitates understanding of a building's systems, operation and maintenance requirements, and environmental targets to enable optimised performance.	4.1	Building Information	1	1
Commitment to Performance	To recognise practices that encourage building owners, building occupants and facilities	5.1	Environmental Building Performance	1	0
		5.2	End of Life Waste Performance	1	0
Metering and Monitoring	To recognise the implementation of effective energy and water metering and monitoring	6.0	Metering	-	No
		6.1	Monitoring Systems	1	0
		7.0	Environmental Management Plan	-	Complies
Responsible Construction Practices	To reward projects that use best practice formal environmental management procedures during construction.	7.1	Formalised Environmental Management System	1	1
		7.2	High Quality Staff Support	1	1
		8A	Prescriptive Pathway - Facilities	1	1
Operational Waste	Prescriptive pathway				
Indoor Environment Quality					
Indoor Air Quality	To recognise projects that provide high air quality to occupants.	9.1	Ventilation System Attributes	1	0
		9.2	Provision of Outdoor Air	2	0
		9.3	Exhaust or Elimination of Pollutants	1	1
Acoustic Comfort	To reward projects that provide appropriate and comfortable acoustic conditions for occupants.	10.1	Internal Noise Levels	1	0
		10.2	Reverberation	1	0
		10.3	Acoustic Separation	1	0
Lighting Comfort	To encourage and recognise well-lit spaces that provide a high degree of comfort to users.	11.0	Minimum Lighting Comfort	-	complies
		11.1	General Illuminance and Glare Reduction	1	1
		11.2	Surface Illuminance	1	0
		11.3	Localised Lighting Control	1	1
Visual Comfort	To recognise the delivery of well-lit spaces that provide high levels of visual comfort to building occupants.	12.0	Glare Reduction	-	complies
		12.1	Daylight	2	0
		12.2	Views	1	1
Indoor Pollutants	To recognise projects that safeguard occupant health through the reduction in internal air	13.1	Paints, Adhesives, Sealants and Carpets	1	1
		13.2	Engineered Wood Products	1	1
Thermal Comfort	To encourage and recognise projects that achieve high levels of thermal comfort.	14.1	Thermal Comfort	1	0
		14.2	Advanced Thermal Comfort	1	0
Energy					
Greenhouse Gas Emissions	Modelled Performance Pathway	15E.0	Conditional Requirement: Reference Building Pathway	-	complies
		15E.1	Comparison to a Reference Building Pathway	20	3
Peak Electricity Demand Reduction	Performance Pathway	16B	Performance Pathway - Reference Building	2	1
Transport					
Sustainable Transport	Performance Pathway	17B	Prescriptive Pathway - Facilities	7	7
Water					
Potable Water	Performance Pathway	18B	Potable Water - Prescriptive Pathway	12	8
Materials					
Life Cycle Impacts	Performance Pathway - Life Cycle Assessment	19A	Life Cycle Assessment	7	2
	OR Prescriptive Pathway - Life Cycle Impact	19B	Life Cycle Impacts		
Responsible Building Materials	To reward projects that include materials that are responsibly sourced or have a sustainable supply chain.	20.1	Structural and Reinforcing Steel	1	1
		20.2	Timber Products	1	0
		20.3	Permanent Formwork, Pipes, Flooring, Blinds and Cables	1	1
Sustainable Products	To encourage sustainability and transparency in product specification.	21.1	Product Transparency and Sustainability	3	2
Construction and Demolition Waste	Percentage Benchmark	22B	Percentage Benchmark	1	1
Land Use & Ecology					
Ecological Value	To reward projects that improve the ecological value of their site.	23.0	Endangered, Threatened or Vulnerable Species	-	complies
		23.1	Ecological Value	3	0

# Green Star - Design & As Built Scorecard v 1.2

## 4 Star Pathway

Date:	Thursday, 16 January 2020
Targeted Rating:	4 Star - Best Practice

Points Available	4 Star Pathway
97	48.0

CATEGORY / CREDIT	AIM OF THE CREDIT / SELECTION	CODE	CREDIT CRITERIA	Available	4 Star
Sustainable Sites	To reward projects that choose to develop sites that have limited ecological value, re-use previously developed land and remediate	24.0	Conditional Requirement	-	Complies
		24.1	Reuse of Land	1	1
		24.2	Contamination and Hazardous Materials	1	1
Heat Island Effect	To encourage and recognise projects that reduce the contribution of the project site to the heat island effect.	25.0	Heat Island Effect Reduction	1	0
<b>Emissions</b>					
Stormwater	To reward projects that minimise peak stormwater flows and reduce pollutants entering public sewer	26.1	Reduced Peak Discharge	1	1
		26.2	Reduced Pollution Targets	1	1
Light Pollution	To reward projects that minimise light pollution.	27.0	Light Pollution to Neighbouring Bodies	-	Complies
		B	Light Pollution to Night Sky	1	1
Microbial Control	To recognise projects that implement systems to minimise the impacts associated with harmful microbes in building systems	28.0	Legionella Impacts from Cooling Systems	1	1
Refrigerant Impacts	To encourage operational practices that minimise the environmental impacts of refrigeration equipment.	29.0	Refrigerants Impacts	1	0
<b>Innovation</b>					
Financial Transparency (D)		Innovation	Providing anonymous design and construction cost data to the GBCA confidentially.	1	1
Soft Landings		Innovation	Implementation of handover processes that helps facilitate optimisation of building performance.	1	0
Ultra low VOC paints		Innovation	>50% paints by cost are ultra low VOC (<5g/L)	1	0
Stormwater Pollution Targets (C)		Innovation	Exceeding the Stormwater targets	2	1
Marketing Excellence		Innovation	Using Green Star as a marketing tool based on research	1	0
Occupant Engagement		Innovation	Undertaking occupant surveys before and after to understand how occupants experience the building and inform the design and operation.	1	0
Beauty		Innovation	Requires narrative to be put together by Architect	1	1
Reconciliation Action Plan		Innovation	To encourage organisations to take formalised steps to provide opportunities for Aboriginal and Torres Strait Islander peoples.	1	1
Green Cleaning		Innovation	To encourage green cleaning services that prevent the use of contaminants that impact on indoor environment quality, occupant health and the natural environment. - from Performance tool.	1	TBC
<b>Total</b>				<b>10</b>	<b>4</b>

TOTALS	AVAILABLE	4 Star
CORE POINTS	97	44
CATEGORY PERCENTAGE SCORE		45.4
INNOVATION POINTS	10	4.0
TOTAL SCORE TARGETED		48.0