



22nd 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 C12

Dear Megan,

Reference is made to SSD 9787 Conditions of Consent C12 in relation to the Construction Waste Management Sub-Plan [CWMSP] requirements for the development.

Please find attached a copy of the Construction Waste Management Sub-Plan prepared by the contractor Built Pty Limited. The document addresses the construction waste 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
File: 17-0347_A-d01-20_let
Encl.: Built Nihon University Construction Waste Management Plan Rev a

Built.



Construction Waste Management Plan Nihon University Newcastle Campus

Rev Date	REVISION	Description	Prepared By
16/01/2020	Revision 01	Submission to NSW Dept. Planning	Ben Moss - BUILT

Contents

Introduction	4
General	4
Existing Site	4
Project Description	4
Scope	5
Objectives	5
Legal and Other Requirements	7
Roles & Responsibilities	8
Contact Details	9
Waste Strategies and Procedures	10
Waste management principles	10
Demolition Waste Plan	11
Waste Minimisation	12
Waste Management Hierarchy	12
Awareness and Training	13
Reporting and Conformances	14
Waste Reporting	14
APPENDIX A ENVIRONMENTAL ASPECTS AND IMPACTS REGISTER	15
APPENDIX B BUILT & CENTRAL WASTE STATION WASTE PLAN	22
APPENDIX C WASTE GENERATION ESTIMATION	23
APPENDIX D DEMOLITION PLANS	24

General

Existing Site

Figure 1: Site Location - 9 Church St, Newcastle, NSW 2300 (SIX Maps)

This Project is Nihon University and consists of the complete demolition of 2 x existing 3 storey buildings, site remediation (including the management of any resultant contamination, mine workings or archaeological findings, the restoration and refurbishment of the retained and state heritage listed Newcastle Courthouse building and the construction of 2 x 4 storey buildings comprising student accommodation in the eastern building and teaching space\carpark in the western building.

This Waste Management Plan (WMP) has been compiled in accordance with the Built's Health, Safety and Environmental Management plan and the ESD targets for the project.

For the purposes of this plan, waste includes:

- Hazardous materials identified in Napier & Blakeley's Asbestos Materials Report 2008 & ADE Consulting Group's Asbestos Materials Pre-Demolition Survey Report 2019.
- Construction, building and demolition waste, such as bricks, concrete, plasterboard, timber and metal, etc.
- Domestic (Office and general) waste generated by site construction personnel during site works.

Scope

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

The project incorporates a number of sustainable design initiatives that cover the following areas:

1. Construction and operational management
2. Energy efficiency
3. Water efficiency
4. Improved indoor environment
5. Reduced environmental impact through the selection of responsibly sourced and sustainable materials

Demolition and Waste Contractors have been appointed for the project to track the wastes produced. The full details of the waste management procedure for the project are described herein.

Objectives

The objectives of this Waste Management Plan are to:

- Encourage minimisation of waste generated by the project and maximisation of resource recovery through targeting over 90% waste diversion from landfill;
- Encourage improved environmental outcome through waste management;
- Establish waste management strategies for the construction stages from demolition, building construction through to commissioning;
- To identify procedures for waste management for all project stages from demolition, building construction through to commissioning. This encompasses on-site management, offsite disposal, and the tracking information and documentation required.
- Identify all potential wastes likely to be generated on site, how these are to be sorted, collected, reused, recycled and/or disposed of.

- Define the appropriate waste disposal measures to be undertaken for materials that pose an environmental or health risk.
- Ensure that waste is delivered to lawful locations upon removal from site

Legal and Other Requirements

The following, though not limited to, legal requirements and best practice guidelines apply to this project:

- Waste Avoidance and Resource Recovery Act 2001.
- Planet Ark recycling Near You - <http://www.planetark.com.au/index.cfm>.
- ANZECC Publication: Organochlorin Pesticides Waste Management Plan (1999)
- NSW - Protection of the Environment Operations Act 1997 & Amendment Act 2006 (POEO Act), s 116, s 142, s 143, 144-146
- Protection of the Environment Operations Regulation 2014
- Protection of the Environment Operations (Waste) Regulation 2014
- NSW - 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, PEO (Waste) Regulation 2005, cl 49
- Newcastle Development Control Plan 2012
- Newcastle Local Environmental Plan 2012
- Environmental Planning & Assessment Act 1979
- Environmental Planning & Assessment Regulation 2000
- Contaminated Land Management Act 1997
- SafeWork NSW Code of Practice: Demolition Work (2019)
- AS2601:2001 – The Demolition of Structures
- SafeWork NSW Code of Practice: How to Manage and Control Asbestos in the Workplace (2019)
- SafeWork NSW Code of Practice: How to Safely Remove Asbestos (2019)
- NSW SafeWork information guide on the safe management of synthetic mineral fibres (SMF) glass wool and rockwool
- EPA Waste Classification Guidelines Part 1: Classifying Waste 2014

Roles & Responsibilities

The following roles and responsibilities have been set for all Contractors to follow and ensure the waste recycling targets can be met.

Table 1: Waste management roles and responsibilities for Charlestown Square North Piazza

Project Task	Responsibility
Site Operation	
Site Manager – Leif Aleksic	<ul style="list-style-type: none"> Ensuring that waste is progressively recycled at the nominated C&D waste recycling target in accordance with this Plan (90%) Ensuring that Duty of Care documentation is obtained and maintained in the site file (e.g. copy of waste transporters licence, waste collection receipts, waste transport certificates) Undertaking site walks to monitor implementation of the WMP and take feedback from contractors on what is and isn't working. Engagement and education of all personnel on WMP at induction. Updates to the Plan and Building Management approvals Maintaining site records of waste types and approximate quantities collected from site Carrying out a daily inspection to ensure the worksite is left in a rubbish free state
Waste Reduction (on site)	
All Contractors & Built Site Management	<ul style="list-style-type: none"> Minimise the generation of waste through accurate procurement of materials and ongoing management of materials. Minimise waste through appropriate behaviour on site to store and use materials thoughtfully and reuse materials where appropriate. Provide Feedback on what is/isn't working Contractors are to use the designated bins on site and not dispose of any materials expect within designated bins on site
Waste Sorting (off-site)	
Demolition Contractor - Drumderg Services Pty Ltd Waste Contractor – Central Waste Station & All Contractors	<ul style="list-style-type: none"> The demolition contractor shall be responsible for collecting demolition waste, both separated on site and in comingled bins and delivering to C&D waste recyclers for off-site sorting and recycling The waste contractor shall be responsible for collecting C&D waste in comingled bins and separating wastes into recyclable streams at end collection point
Waste Collection & Management	
Waste Contractor – Central Waste Station	<ul style="list-style-type: none"> Supply of bins, according to agreed approach & ongoing site requirements Collection & disposal of waste, as agreed & according to ongoing site requirements Weighing and sorting of all wastes generated on site for disposal off site Ensuring that the waste collected is managed in accordance with the relevant legislation and the identified wastes are re-used, recycled or recovered
Reporting	

Built Project Manager – Benjamin Moss	<ul style="list-style-type: none"> Tracking of wastes generated Monthly Project Control Group waste reporting to the Client. End of project waste data report to confirm total percentage recycled / reused and sent to landfill for Green Star As-Built submission. Preparation of final waste report for the site
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Contact Details

Client Contact Details

Name	Jun Yokobori
Company Name	Azusa Sekkei
Company Business Address	No 2 Bldg3F 1-7-1 Haneda Kukp, Ota-Ku TOKYO 144-0041 JAPAN
Company Contact Number	-

Superintendent Details

Name	Ed Clode
Company Name	Dwp Newcastle
Company Business Address	16 Telford St, Newcastle East, NSW 2300
Company Contact Number	0408 689 868

Onsite contact person responsible for compliance with this Waste Management Plan

Name	Benjamin Moss
Title	Project Manager
Company Name	Built Pty Ltd
Contact Number	0401 088 850

Contact person in control of the project

Name	Rob McLaughlin
Title	Construction Manager
Company Name	Built Pty Ltd
Contact Number	0478 597 116

Contact person in control of the site

Name	Leif Aleksic
Title	Site Manager
Company Name	Built Pty Ltd
Contact Number	0439 913 387

- **Demolition Contractor**

Name	Steven Fam
Title	Project Manager
Company Name	Drumderg Services Pty Ltd
Contact Number	0499 223 202

- **Waste Contractor**

Name	Samm Laughton
Title	Customer Service Administrator
Company Name	Central Waste Station
Contact Number	1800 180 180

Waste Strategies and Procedures

Waste management principles

- Waste management training shall form part of the site induction program, ensuring contractors and site visitors are aware of the materials on site (any hazardous wastes), waste disposal requirements and on-site waste facilities.
- Adherence to Built's Environmental Management Systems and Waste Management Plan requirements stipulated in contracts with sub-contractors.
- All waste materials shall be collected and segregated prior to placement in waste bins located onsite.
- During demolition waste will be roughly separated on site into concrete, bricks, metals and other in order to achieve maximum recycling percentage.
- All waste shall be collected by an accredited waste removal contractor, Central Waste Station who shall transport the waste to their off-site sorting facilities at 8 Styles St, Kurri Kurri NSW 2327 where thorough separation of waste will occur.
- All loads of rubbish removed shall be securely covered to ensure no spillage, dust and/or air pollution.
- Should contaminated material be identified, workers are instructed to stop work immediately and seek advice from the Site Manager on how to proceed. Actions are to be in accordance with the Built's Environmental Management Plan.
- At the sorting facilities, waste material shall be segregated for recycling or re-use.

Demolition Waste Plan

Drumderg Services Pty Ltd have supplied BUILT with a Demolition Methodology Plan, Environmental Management Plan, and Asbestos Materials Pre-Demolition Report including the following information on the containment and removal of hazardous materials from site.

Prior to any structure disruptive works, all hazardous materials, including asbestos, lead paints, etc., as per the Napier & Blakeley's Asbestos Materials Report, are to be removed and disposed of in accordance with local regulations, the NSW Work Health & Safety Act 2011, and SafeWork NSW. Removal works will only start on approval of the asbestos removal notification by SafeWork (approximately 7 days from notification), and once council and neighbouring properties have been notified of the works 5 working days prior.

1. Management controls will be set in place during the asbestos removal works as well as throughout the project in the case of newly identified hazardous materials.
2. Once the surrounding areas have been entirely cleared, all hazardous material removal work areas will be delineated, barricaded and signed.
3. Air monitoring will be set up by the hygienist within the surrounding work areas for both asbestos and lead.
4. Once air monitoring is setup and both the supervisor and hygienist have cleared the commencement of removal, the hazardous materials will be removed in such way that the entirety of the item is kept as unbothered as possible.
5. The remediation crew will load out all asbestos material into double plastic lined (200 µm thick minimum) Hook Lift roll-on bins. a. Bins to be placed as close as site access allows to the asbestos removal work area.
6. The ACM will be transported to the designated waste facility. a. All hazardous material transportation and disposal is tracked as per EPA requirements. Consignments and disposal dockets will be kept for Drumderg's and Built's records.
7. At the completion of the hazardous waste removal, Drumderg will approach an independent Licenced Asbestos Assessor to inspect the site and issues a clearance report per building, ensuring the site has been completely cleared of such materials.
 - Asbestos & SMF is to be removed by a licensed contractor (**Drumderg Services Pty Ltd**) & managed in accordance with the WHS Act 2017 & Regulation 2017 and all relevant legislation, codes, standards and guidelines.
 - The below quantity of Asbestos & SMF material has been extracted from the Asbestos Materials Pre-Demolition Report commissioned by Drumderg Services and prepared by ADE Consulting Group.

Material Removed	Quantity	Proposed Timeframe
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Asbestos & SMF	150m ² estimated	7 Days
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- Lead paints & dusts will be removed using wet sanding and vacuum techniques (cleaners which comply with AS/NZS 3544 Industrial vacuum cleaners for particulates hazardous to health).
- Waste will be contained within sealed appropriately rated plastic bags for disposal. All dust and/or residue cleaned up with a wet mop.
- Bricks, pavement and concrete to be placed into single bin to be sent off-site for crushing and recycling.
- Gyprock materials to be recycled off-site.
- Steel & timber to be sorted and recycled off-site or re-used where able.
- Glass to be recycled off-site.
- General waste to be sorted and recycled off-site where able, remainder to go to landfill.

Waste Minimisation

Waste Management Hierarchy

Waste management for the project is to be prioritised by adopting a waste management hierarchy (noting existence and requirement for separation of hazardous material on the job) consisting of:

Avoidance	Waste avoidance through prevention or reduction of waste generation. Waste avoidance is best achieved through better design and purchasing choices.
Reuse	Waste reuse, without substantially changing the form of waste
Recycle	Waste recycling through the treatment of waste that is no longer usable in its current form to produce new products.
Energy recovery	Energy recovery through thermal treatment of residual waste materials and from green waste processing.
Disposal	Waste disposal, in a manner that causes the least harm to the natural environment

Minimising waste involves identifying demolition and construction wastes streams to be generated and then working with sub-contractors and suppliers to minimise these streams.

- **Design:** To minimise waste generation on site the project team has designed elements of the building that reduce the likelihood of waste generation during construction. All steelwork and façade systems have been designed to be prefabricated systems so that there are no wastes generated on site from the installation. Concrete pours have been calculated in revit to avoid half loads being required.
- **Suppliers & Packaging:** Negotiation with suppliers to reduce the extent of packaging of materials and furniture items and a take back policy for relevant packaging so that it can be reused within their services. This includes cardboard, bubble wrap and other plastics that are used to protect materials in storage and transportation.

- **Storage:** appropriate storage and management of materials on site to minimise damage from weather eliminating need to protect replacement materials and waste generation.

Table 1 presents the expected waste types that will be generated during the project and describes how each will be managed on-site, collected and the waste management outcome ranked from the most to least preferred.

Table 1: Site Waste Management Strategy

Waste Type	On-site Management	Collection Method	Waste Management Outcome				
			Most Preferred				Least Preferred
			Avoid / Reduce	Re-use	Recycle	Recover (energy from waste)	Treat &/or Dispose
Plasterboard	Commingled for separation and recycling off-site	General waste vehicle					
Cardboard	Commingled for separation and recycling off-site	General waste vehicle					
Metals	Commingled for separation and recycling off-site	General waste vehicle					
Timber	Commingled for separation and recycling off-site	General waste vehicle					
Plastic / Foam	Commingled for separation and recycling off-site	General waste vehicle					
Paper	Segregate on-site and bundled	Dedicated cardboard/paper collection vehicle					
Concrete	Commingled for separation and recycling off-site	General waste vehicle					
Residual	Commingled for separation and recycling off-site	General waste vehicle					
Hazardous paint or Solvents	Segregated on-site using 10L drums (paints)	Dedicated hazardous waste vehicle					
Existing Materials	Commingled for separation and recycling off-site	General waste vehicle					

Notes

1. Waste collected in "general waste" bins is sorted at a resource recovery facility using mechanical and manual sorting techniques that remove wastes such as plasterboard, timber, metal, cardboard and plastic for recycling.

2. Residual waste refers to waste types other than plasterboard, timber, metal, pallets, plastic, cardboard, paper and hazardous waste.

3. Waste Management Definitions:

Re-use means the activity of using waste materials in their current form (ie. not altering their chemical or physical state)

Recycling, means the activity of processing waste materials to form new products

Recovery means the activity of processing waste materials for the purpose of recovering energy (eg. incineration)

Disposal, means the activity of depositing waste materials in landfill

Awareness and Training

Prior to commencing work on site, project personnel (including subcontractors) are to be informed through the site induction process of the presence of potentially hazardous materials onsite and unidentified finds procedure, the importance of appropriate waste management, recycling, spills or incident impacts on the site and adjacent areas and the requirement to keep food scraps contained.

Site supervisors are to discuss waste management issues and alerts at toolbox and other meetings.

Reporting and Conformances

Refer to clause 13.0 HSE Incident Reporting of the HSE Plan. All incidents are to be recorded in Rapid Incident Reporting and any environmental incidents reported to the Superintendent and NSW Dept. Planning as per Incident Reporting Procedures outlined in the SSD Conditions of Consent.

Waste Reporting

All waste materials that are exported offsite will be tracked through the following methods:

1. Records of total volumes and mass of waste sent offsite including truck weighing bridge receipts.
2. Random visual truck inspections prior to leaving site.
3. Random offsite quality assurance inspections of waste facilities by Built management.
4. The waste removal contractor shall provide monthly reports providing a breakup of waste recycled and waste going to landfill.
5. Monthly waste reports are to be inputted into Monthly Project Control Group reports and kept onsite.
6. Quarterly waste reports will be issued to the Client

APPENDIX A - 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
SECTION D: ENVIRONMENTAL ASPECTS					
Dust Generation Particulate Emissions (General)	Air pollution	Low	NSW - POEO Act (Sections 124-126)	<ul style="list-style-type: none"> Install shade cloth on perimeter fencing Vehicle corridors will be clearly identified and restricted to control vehicle access onsite. Limit vehicle speed onsite to 5km/hr Reduce work activities / stop work during moderate to high wind velocity periods. Turn off vehicle engines whilst not in use (no long periods of idling) 	<ul style="list-style-type: none"> Built PCBU
Dust Generation (Demolition)	Air pollution	Medium	NSW - POEO Act (Sections 124-126)	<ul style="list-style-type: none"> Breakers and crushing equipment to be fitted with dust filtration equipment or water sprays to control dust emissions. Construction vehicle loads to be watered and covered Stockpiles to be watered and covered as required 	<ul style="list-style-type: none"> PCBU
Dust Generation (Construction)	Air pollution	Low	NSW - POEO Act (Sections 124-126)	<ul style="list-style-type: none"> Minimise areas of site disturbed, and stage works where possible. Dust suppression strategies to be used, i.e. water sprays, soil binders, hydro mulching, controlled speed onsite, roadbase + shaker grids. On site drilling or coring operations will be undertaken by equipment fitted with air filtration equipment. Construction vehicle loads to be watered and covered Stockpiles to be watered and covered as required 	<ul style="list-style-type: none"> Built PCBU
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"> If odorous materials uncovered, re-cover immediately and notify Built. Seek advice from consultant regarding soil /materials management. 	<ul style="list-style-type: none"> Built PCBU
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"> Ensure machinery is maintained correctly 	<ul style="list-style-type: none"> PCBU
Greenhouse	Resource use Air pollution Global warming Light pollution	Low	Green Star	<ul style="list-style-type: none"> Ensure purchased electrical products/whitegoods products comply with specification for CFCS & energy ratings Low solvent paints to be used as a priority Building to conform to Green Star performance criteria Deliveries / transport from site effectively planned to limit inefficient transport, assist back loading, minimise road traffic noise etc Workers encouraged to carpool where possible or catch public transport External lighting to be in compliance with AS 4282-2019 to control of the obtrusive effects of outdoor lighting 	<ul style="list-style-type: none"> Built PCBU
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"> 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 Implementation of Built Erosion & Sediment Control Plan & regular monitoring of measures 	<ul style="list-style-type: none"> Built PCBU

Environmental Aspect	Environmental Impact	Risk Rating <small>(Risks ranked as 'High' or 'Med' are deemed significant)</small>	Legal Requirements	Environmental Actions, Controls and Criteria	Responsibility
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"> No paints or other chemical to be poured down drains. If required, obtain trade waste licence for discharge or local council approval 	<ul style="list-style-type: none"> Built PCBU
Land (Acid sulphate soils, contaminated soils, imported fill)	Contaminated waterways Soil contamination	Medium	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"> Potential for acid sulphate soils 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. Stop work if unexpected potentially contaminated soils are encountered. Obtain waste classification from consultant in accordance with DECC guidelines Environmental Guidelines: Assessment, Classification & Management of Liquid & Non-Liquid Wastes (June 2004) www.environment.nsw.gov.au/waste/envguidlms/index.htm. Where required a Remediation Action Plan will be developed and implemented. Sign off by Site Auditor may be required to validate clean up. Any groundwater or ponded rainwater will be tested and classified by consultants prior to disposal. Check Geotech requirements. Ensure soil classification suitable for land use i.e. Schools, residential, commercial etc. 	<ul style="list-style-type: none"> Built
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"> If odorous soils (rotten egg gas) or grey/yellowed mottled soils encountered, stop work. If suspected, consultant to prepare Acid Sulphate Soil Management Plan (ASSMP). Excavation and neutralisation to be supervised by consultants as per ASSMP. 	<ul style="list-style-type: none"> Built PCBU
Resources – water, materials, energy	Resource use Landfill Air pollution	Low	NSW - POEO Act	<ul style="list-style-type: none"> For design and construct jobs, refer to the design specification for ESD requirements and product choices. Buy local wherever possible to reduce impacts of transport on environment. Implementation of Built Erosion & Sediment Control Plan & regular monitoring of measures 	<ul style="list-style-type: none">
Noise	Community complaints	High	NSW - POEO Act (Sections 139, 140) Interim Construction Noise Guideline 2009	<ul style="list-style-type: none"> Strict adherence to noise and working hour restrictions. Refer to SSD Consent Conditions. Use hoarding an/or acoustic mats as required. Situate generators and plant away from sensitive receivers. Turn off machinery. Maintain equipment and stop noisy plant until repaired. No early deliveries or construction vehicles idling before or after approved construction hours. Conduct noise monitoring during demolition works. Compliance with CNVMP 	<ul style="list-style-type: none"> Built PCBU

Environmental Aspect	Environmental Impact	Risk Rating <small>(Risks ranked as 'High' or 'Med' are deemed significant)</small>	Legal Requirements	Environmental Actions, Controls and Criteria	Responsibility
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"> • Strict adherence to vibration and working hour restrictions. Refer to SSD Consent Conditions. • Conduct dilapidation report prior to work starting. • Limit the use of vibratory rollers, rock breakers, impact piling etc adjacent to buildings (>7m). • Regenerated noise may also transfer through bedrock and building structures. • Obtain advice if required • Conduct vibration monitoring during demolition works • Compliance with CNVMP 	<ul style="list-style-type: none"> • Built • PCBU
Community	Community Concerns Noise Restricted access	High	SSD Conditions of Consent	<ul style="list-style-type: none"> • Provide information (e.g. Signage, letterbox drops) to community on programmed works • Provide contact name for inquires. • Advise locals of “noisy” and/or disruptive work through Built Community Liaison Plan. • If required in noise sensitive areas and/or in response to complaints, engage consultants to undertake monitoring at nominated receivers. • 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. 	<ul style="list-style-type: none"> • Built
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, s27(1); National Parks and Wildlife Act 1974, s 117(1), 118(1)]	<ul style="list-style-type: none"> • Review planning documentation to determine the presence of any protected, threatened or significant flora. Obtain approvals as required. • Trees to be protected and retained as required by SSD & City of Newcastle Requirements. 	<ul style="list-style-type: none"> • Built
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"> • Hazardous materials surveys to be completed. • Materials to be removed prior to demolition • Registers and waste disposal requirements as per NSW WHS Regulator and DECC/EPA requirements for removal, storage, transport and disposal. • General site wastes –use one bin system and sort in contractors’ yard to produce quantities of material for recycling, reuse, disposal etc. • Do not overfill skip bins. Provide plenty for use. Cover where potential for windblown litter. 	<ul style="list-style-type: none"> • Built • PCBU
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"> • Chemicals to be stored in bunded areas (impervious + 110% of largest container) away from stormwater drains & pits. • Refer NSW OHS Regulator Code of Practice for Storage & Handling of Dangerous Goods, DECC Guidelines for Bunding & Spill Management. Appropriate chemicals storage is in conformance with: → AS 1940 The Storage and Handling of Flammable and Combustible Liquids → Storage and Handling of Dangerous Goods State/Territory WHS/OHS Regulator Code of Practice 2005– refer p. 86 • DEC requirements http://www.environment.nsw.gov.au/mao/bundingspill.htm • Poned water within bunds will not be discharged to stormwater. • Fuel and hydraulic leaks to be cleaned up immediately. • Drilling muds to be contained within bunds and reused. • Liquid paints 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. • Construct concrete washout will be off site. • Concrete cuttings to be contained and wetvac to prevent runoff into stormwater drains. • Storage of bulk fuels (>200L) on site is prohibited. All refuelling shall be undertaken by a mobile facility with appropriate spill control and containment control equipment. 	<ul style="list-style-type: none"> • Built • PCBU

Environmental Aspect	Environmental Impact	Risk Rating <small>(Risks ranked as 'High' or 'Med' are deemed significant)</small>	Legal Requirements	Environmental Actions, Controls and Criteria	Responsibility
				<ul style="list-style-type: none"> SDS's must be provided to the Foreman prior to a chemical being received on site and by subcontractors using chemicals/products. 	
Traffic	Site access restrictions Community safety Pollution	Low	Local Government Requirements	<ul style="list-style-type: none"> Develop and implement traffic management plans. Submit to local council as required. Signage and notices regarding disruptions. Install shakers and wheel wash as required. Organise regular street sweeping as required. All loads of soil, demolition wastes, general wastes etc are to be tarped 	<ul style="list-style-type: none"> Built PCBU
Hazardous Materials (Lead paint)	Air contamination Contaminated waterways Soil contamination	Low	NSW - POEO Act s 142	<ul style="list-style-type: none"> If disturbing or removing dust or paint that could contain lead, wear a respirator or dust mask and protective clothing. Seal the rooms with plastic. 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. Avoid using dry-sanding techniques: keep the surface wet to minimise dust. 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. When finished, wipe all surfaces with a damp cloth and high-phosphate detergent. Wash face and hands before eating, drinking or smoking. Refer to Lead Safe: A Renovator's Guide to the Dangers of Lead and the Australian Standard AS4361.2 Guide to Lead Paint Management: Part 2 Residential and Commercial Buildings 1998 	<ul style="list-style-type: none"> PCBU
Hazardous Materials (Asbestos)	Worker health Air contamination Contaminated waterways Soil contamination	High	NSW - POEO Act s 142, NSW POEO (Waste) Regulation 2005, cl 42 Asbestos materials regulations, standards, codes and guidelines	<ul style="list-style-type: none"> A licence subcontractor must be used to demolish, remove, repair or disturb asbestos. A NSW WHS Regulator asbestos licence is required to remove 10 square metres or more of bonded asbestos A NSW WHS Regulator licence is required to remove, repair or disturb friable asbestos If required, monitoring measures implemented throughout the removal process. Final inspection survey to be conducted by qualified Hygienist & Clearance Certificates issued prior to construction works commencing. 	<ul style="list-style-type: none"> Built PCBU
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"> Education and training at site toolbox meetings and induction. It is illegal to destroy heritage items. Review local or regional environmental plans, or on the State Heritage Register is to be consulted prior to work starting onsite. Obtain excavation permit issued by the Heritage Council of NSW if required. Any heritage relics or sites discovered during construction shall be reported to the NSW Heritage Office. Work in the subject area to cease until specialist advice is obtained. Any evidence of Aboriginal relics discovered during construction shall be reported to the National Parks and Wildlife Service. The area will be fenced, and signs erected to restrict access. Heritage consultants may be required to provide advice on demolition/construction processes and finishes. 	<ul style="list-style-type: none"> Built PCBU
European heritage (Court House items) Uncovered artefacts	Damage or destruction of heritage items	High	NSW - Heritage Act 1977	<ul style="list-style-type: none"> Education and training at site toolbox meetings and induction. It is illegal to destroy heritage items. Check of the register of the National Estate. Obtain approval from NPWS (Section 90 consent). Local Land Council representatives and other Consultants may be required to monitor stripping/excavation works. Work in the subject area to cease until specialist advice is obtained. The area will be fenced, and signs erected to restrict access 	<ul style="list-style-type: none"> Built PCBU
Emergency Preparedness	Worker health Air contamination	Low	Environmental Protection Act 1994 Environmental Protection Regulation 2008 Work Health and Safety Act 2011	<ul style="list-style-type: none"> Spill kit onsite. Refer to the SDS for advice and procedures. All spills must be reported to the Site Manager & cleaned up. Complete BUILT Accident /Incident report & follow SSD Incident Notification, Reporting, and Response Procedure 	<ul style="list-style-type: none"> Built PCBU

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		Work Health and Safety Regulations 2011	<ul style="list-style-type: none">• Implementation of Built Erosion & Sediment Control Plan & regular monitoring of measures• Hazardous material methodology & controls to be strictly implemented and monitored throughout removal process	

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.

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)
HIGH SEVERITY (H) <ul style="list-style-type: none">Irreversible damage to the environmentExtensive damage to the environment e.g. large area of contamination (costs exceeding > \$500kCourt proceedings leading to prosecution and significant fineDamage to Built's reputation as a result of widespread adverse publicity	RISK LEVEL	HIGH	HIGH	MEDIUM
MEDIUM SEVERITY (M) <ul style="list-style-type: none">Temporary harm to the environment e.g. small area of contamination but no ongoing long-term damageClean-up costs < \$250kLow level fineNo adverse media publicity on a significant level		HIGH	MEDIUM	LOW
LOW SEVERITY (L) <ul style="list-style-type: none">Minor harm to the environment e.g. small-scale spill readily mitigated/cleared; Noise complaint from adjoining property		MEDIUM	LOW	LOW
RISK LEVEL	HIERARCHY OF CONTROL			
	Order of priority in the selection of controls corresponding to level of risk (Acceptable Risk Treatment)			
High Risk - Action must be taken to eliminate the risk to the environment	1 st Elimination - i.e. the permanent removal of the hazard			
Medium Risk – 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)	2 nd Substitution - substituting (wholly or partly) the hazard giving rise to the risk with something that gives rise to a lesser rise			
Low Risk - 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, 4th or 5th (in this order of priority) then Administrative controls may be applied	3 rd Isolation - isolating the source of the hazard that poses a threat to the environment			
	4 th Engineering - controls to reduce the risk to the environment			
	5 th Administrative - procedural controls to eliminate or reduce the risk of environmental contamination			

APPENDIX B - BUILT & CENTRAL WASTE STATION WASTE PLAN

NIHON UNIVERSITY NEWCASTLE CAMPUS

DETAILS: CENTRAL WASTE STATION

Business & Contact Name:

- Central Waste Station Pty Ltd – Samm Laughton
- Drumderg Services Pty Ltd – Steven Fam

ABN: 44 604 989 433

Address: 8 Styles Street, Kurri Kurri NSW 2327

Telephone:

- Central Waste Station - 1800 180 180
- Steven Fam – 0499 223 202

Email:

- Central Waste Station - samm@centralwaste.com.au
- Drumderg Services Pty Ltd - steven@drumderg.com.au

1) Transportation of waste – Vehicle to collect waste skip and transport to waste management & processing facility ensuring that skip bin or truck load is filled, covered and secured correctly in accordance with EPA and RMS requirements.

2) Location of Waste Management Centre –

- Central Waste Station Recycling Facility – 8 Styles Street, Kurri Kurri NSW 2327

3) Expected frequency of skip collection –

- Demolition Stage - Approximate frequency is 5 off 30m³ skip bins per week dependent on material segregation onsite and truck/trailer usage as additional waste transport offsite.
- Construction Stage – Approximate frequency is 6 off 15m³ skips per week dependent on material segregation onsite and factors such as re-use.

Note that skip bins will be assessed daily, and when nearing safe fill limits, will be scheduled for collection to ensure waste is efficiently transported from site. This will prevent build up of construction waste, WHS, and environmental issues arising.

4) Size of skips to be used – Skip sizes will range between 2m³ to 30m³ dependent on the stage of the project and site constraints during construction.

APPENDIX C - WASTE GENERATION ESTIMATION

The following table represents the designated destinations for the wastes that are expected to be generated on site and the destinations of the waste streams.

Table 2: Estimation of Waste Types Quantities and Final Destination

Expected Waste Types	Estimated Tonnes Generated (kg)	How reused / recycled		Final Destination
		On-site	Off-site	
Plasterboard	17,000kg	No	Yes	Recycled into new plasterboard and agricultural products
Cardboard/Paper	150kg	Yes	Yes	Re-used onsite for wrapping or office use Recycled in the manufacture of cardboard /paper products
Metal	10,000kg	No	Yes	Recycled in the manufacture of metal products or reused onsite where possible
Timber	8,000kg	Yes	Yes	Re-used onsite if suitable Recycled as a compost feedstock or reused onsite where possible
Plastic / PVC	2,000kg	No	Yes	Recycling for wrapping/ packaging Disposal
Comingled	3,000kg	No	Yes	Disposal or recycling for wrapping/ packaging
Concrete	50,000kg	No	Yes	Recycled in the manufacture of fill materials and aggregate
Blocks/Bricks	20,000kg	No	Yes	Reused or recycled in the manufacture of fill materials and aggregate
Soils/fines	1,200,000kg	Yes	Yes	Reused or recycled in the manufacture of recycled soil
Residual	1,000kg	No	No	Disposal to landfill
Hazardous	1,100kg	No	No	Disposed according to law, specialist advice and EMP.

Note: The final destination of recyclable materials can vary according to supply and demand and materials prices. Variations between disposal recycling centres may also dictate final destinations of these products.

APPENDIX D - DEMOLITION PLANS