ABN 93 118 380 484

CEMP

CONTRACTOR'S ENVIRONMENTAL MANAGEMENT PLAN

SWMP

SOIL AND WATER MANAGEMENT PLAN

ESCP

EROSION AND SEDIMENT CONTROL PLAN

Demolition Environmental Civil Contractors Pty Limited t/as

DEMOLITION • ENVIRONMENTAL • CIVIL • CONTRACTORS

www.decc.com.au

Contact Details:
Tel: (02) 9594 0653
Fax: (02) 9594 0653
frank@decc.com.au

Postal Address:
PO Box 217
South Hurstville NSW 2221

Head Office Address:
6 Young Street
Annerley QLD 4103

Demolition License:
QLD Certificate No 1995089
NSW Certificate No 205523DE1

UNIVERSITY OF SYDNEY: CENTRE FOR OBESITY, DIABETES AND CARDIOVASCULAR DISEASE (CODCD) – ENABLING WORKS

Document Number: **DECC-003 CONTRACTOR'S ENVIRONMENTAL MANGEMENT PLAN**

APPROVAL AND ISSUE STATUS

We hereby certify that this document has been reviewed and amended as necessary to reflect Demolition Environmental Civil Contractors Pty Ltd. (DECC) current quality system.

Address: PO Box 217
South Hurstville NSW 2221

Phone: 02 9594 0653

Authorised for Issue by: ***Mr. Frank Lombardi***
Project Manager

Signed for Issue: ……..…

Date: ……

DOCUMENT CONTROL

DECC is responsible for:

1. Providing a copy of the CEMP, SWMP & ESCP to the Principal before work commences on site;
2. Maintaining an updated version of the CEMP, SWMP & ESCP using a record of revision;
3. Providing an updated copy of the CEMP, SWMP & ESCP to the Principal;
4. Maintaining a register of people to whom the CEMP, SWMP & ESCP are issued using the Distribution List;
5. Issuing a complete copy to all those registered;
6. Ensuring revisions of the CEMP, SWMP & ESCP are distributed to all registered people;
7. Reviewing the CEMP, SWMP & ESCP regularly to ensure it is up to date;
8. Ensuring the document control process details how changes to the environmental management documentation and data are identified – Record of revision;
9. Issuing and recording the communication of the Environmental Management documentation an subsequent changes/revisions - Distribution list

Record of Revision

Version No	*Date Revised*	*Details of Revisions*		
		Section	*Page*	*Details*
02	*23 February 2011*			

Distribution List

Controlled versions of the CEMP have been issued to the persons listed below.

No.	*User*	*Position*	*Version No*
01	*Andrew Durbridge*	*Uni of Sydney - Project Manager*	*1*
02	*Brenton Watson*	*Project Engineer*	*1*
03	*Frank Lombardi*	*Project Manager*	*1*
04	*George Petropoulos*	*Site Supervisor*	*1*
05	*Ryan Kinney*	*Site Foreman*	*1*

TABLE OF CONTENTS

PART 1 – CONTRACTOR'S ENVIRONMENTAL MANAGEMENT PLAN (CEMP)

1.0 Introduction

This Construction Environmental Management Plan (CEMP) for the "**University of Sydney COCDC Project – Enabling Works"** (the Project), provides a system and procedures to ensure that DECC establishes and maintains best practice controls to manage potential environmental impacts during the construction of the Project.

DECC is committed to providing the services it offers in a manner that conforms to the contractual requirements and to all relevant regulatory and legislative requirements. To achieve this DECC will plan, implement and control an integrated management system that facilitates the management of the environmental aspects of the Project.

DECC will ensure that controls are properly implemented and regularly monitored and audited to assess their effectiveness. Changes to the controls will be instigated if they are not achieving their objectives.

This CEMP is consistent with:

- AS/ISO 14001:2004;
- RTA Contract Specifications (including Contract No. USYDCON2010/117 RFT/2010/008) ;

1.1 Purpose of the CEMP

The primary purpose of the CEMP is to provide an easily interpreted reference document that ensures that the project environmental commitments, safeguards and mitigation measures from the:

- environmental planning documents;
- approvals; and
- Contract Specifications

are being implemented, monitored, audited and improved.

The purpose is also to document the hazard and risk identification and management process for the construction techniques to be adopted by DECC, and to document the systematic process of implementing controls to minimise the impacts of DECC demolition/construction methods on the environment.

DECC warrants that this plan is fit for its intended purpose.

This CEMP forms part of the Project Management Plan, an integrated quality, safety and environmental management system, managed by the Project Manager.

1.2 Objectives of the CEMP

The key performance objective set by DECC is to ensure compliance with all Environmental Law, including minimising pollution, noise and vibration, waste generation and environmental impacts.

The CEMP will clearly define all environmental obligations contained in the Contract documentation, and other legal and regulatory controls relevant to the Project.

DECC will adopt the following key performance targets:

- No breach of environmental legislative or regulatory requirements
- Value of penalties incurred = $0
- An environmental Incident Rate = 0
- To maximise project efforts to recycle materials
- To employ strategies to minimise pollution / waste generation

DECC will also adopt the following objectives and targets:

No	Objective	Target
1	To employ Best Environmental Management Practices to minimise noise impacts	Maintain noise levels within project goals where practicable.
2	To minimise the impacts of Noise and vibration from construction activities on local residential receivers.	Maintain construction demolition activities within the allowed working hours and required guidelines contained within the Acoustic Studios noise and vibration report and those of the University of Sydney stakeholders such as Centenary Institute
3	To apply soil erosion and sediment control principles to minimise water pollution.	Maintain effective soil erosion and sediment controls throughout the project.
4	To minimise air pollution from construction and associated activities	Conduct works in a manner to prevent air pollution, within required guidelines.
5	To protect all heritage items that will be impacted by the Project	All identified or found heritage items will either be appropriately fenced, protected, salvaged, signposted or (if permitted) destroyed according to its significance status. Identify and protect heritage sites in consultation with relevant indigenous groups or Heritage Office as required.
7	To minimise impacts to the environment caused by the management of contaminated soil and groundwater (including PASS).	Manage contaminated soil and groundwater in accordance with environmental law and DECC NSW guidelines.
8	To protect vegetation and fauna within the construction zone	Limit damage to all native vegetation to the construction zone where practicable. Fauna rescue during clearing as necessary.
9	To avoid pollution of the environment caused by fuels, oils or chemicals stored or used on the Project	No significant spills of fuel, oil or chemicals.

1.3 Location of Project

The Project site area is located at the University of Sydney Campus. Refer to Figure 1 below for details of the project location – **University of Sydney, Psychiatric Missenden Building (Building 92);**

The works in this contract consist of the demolition of ***Building 92 and associated civil and service diversion works as part of the CODCD Enabling Works.***

Building 92:

Building 92 *is a four storey brick and concrete building constructed at various stages. The façade is constructed from brick having timber framed windows and a flat metal sheet roof. The internal walls are typically of a solid brick construction with internal finishes either carpet or vinyl with gyprock ceilings.*

1.4 Description of Project

Company Name	*Demolition Environmental Civil Contractors (DECC)*		
Address	*6 Young Street, Annerly QLD 4103*		
Principal	*Vince Di Falco*		
Phone	*07 5504 5988*	*Fax*	*07 5504 5452*
Site Supervisor	*George Petropoulos*	*Contact Number*	*0406 428 832*
Contract Job Number	*Contract No. USYDCON2010/112*		
Project Name/Address	*Centre for Obesity, Diabetes and Cardiovascular Disease (CODCD) – Enabling Works*		
Scheduled Start Date	*Refer program*	*Due to be Completed*	*Refer program*
Peak number of employees on the site at any one time will be	*15*		
Project Name and Scope of Works	1. *Site set-up and establishment;* 2. *Mechanical, Electrical and communications Service disconnections and diversions (enabling works);* 3. *Temporary road construction (Parramatta road to Building 92);* 4. *Stormwater diversion (enabling works scope);* 5. *Temporary Carpark construction;* 6. *John Hopkins Drive Road re-allignment;* *Demolition of Building 92;*		

1.5 Management Plans

The scope of this Construction Environmental Management Plan is as follows:

The CEMP consists of this main EMP Framework document plus a series of Management Plans. The EMP Framework contains the overarching ISO 14001 system elements. The Management Plans document the aspects, impacts, safeguards and monitoring requirements for each key environmental element, and also nominate who is responsible for implementing those controls and the frequency/timing of implementation. The Management Plans also include checklists of obligations and safeguards in relation to each element.

Management Plans prepared as part of the CEMP follow the prescriptive content requirements of the RTA Specification G35 and the REF decision report (where applicable) for each site of works. Where the Principal is not the RTA the management plans will also include the relevant requirements under the Contract.

The environmental elements they address are detailed in the table below. The origin of the requirement is shown below.

Table: Management Plan Requirements – Origins

Management Plan	RTA Specification (N/A)	Other specification
Erosion and Sediment Control Plan (ESCP)		
Noise Management Plan		Acoustic Solution Report
Vibration management Plan		Acoustic Solution report
Acid Sulphate Soils Management Plan		
Air Quality/Dust Management Plan		
Waste management Plan		
Traffic Management Plan		

1.6 Environmental Policy

Demolition Environmental Civil Contractors Pty Limited
Environmental Policy

Policy Goals: For Demolition Environmental Civil Contractors Pty Limited to be aware of the need and be able to implement measures to control the impact of it's activities, products and services on the environment.

It is the company policy that each of the company's workers and subcontractors are committed to all facets of environmental preservation to ensure that all environmental habits are maintained and preserved throughout the life cycle of the project.

It is everyone's job to protect the environment, by;

Meeting the objective of committing to support the Principles of Ecologically Sustainable Development as detailed in the Protection of the Environment Administration Act 1991 (NSW).

Adopting appropriate Risk Management processes and procedures, based on ISO 14001;

Complying with the Principal's site safety requirements / directions;

Purchasing and using products that have a recycled content;

Actively participating in environmental management systems, meetings and open discussion;

Be aware of and discharge Demolition Environmental Civil Contractors statutory obligations under the;

1. New South Wales Environment Administration Act 1991

Actively consulting with and encouraging the co-operation of all workers and identified stakeholders to ensure Environmental Management;

Communicating the Environmental Policy and its application to all personnel and subcontractors working on the project;

Regularly monitor and review the effectiveness of controls measures;

To work as an active partner with the Principal to ensure Environmental Management compliance within our scope of works; and,

To clearly communicate methods to discharge their Environmental management obligations to all workers

Signed: _____ January 2011

Vince Di Falco (Director)

2.0 Planning - Approvals and Legal Obligations

Approval for the works under the Project has been obtained by University of Sydney

The following is an index identifying where the environmental protection requirements have been captured within the CEMP document:

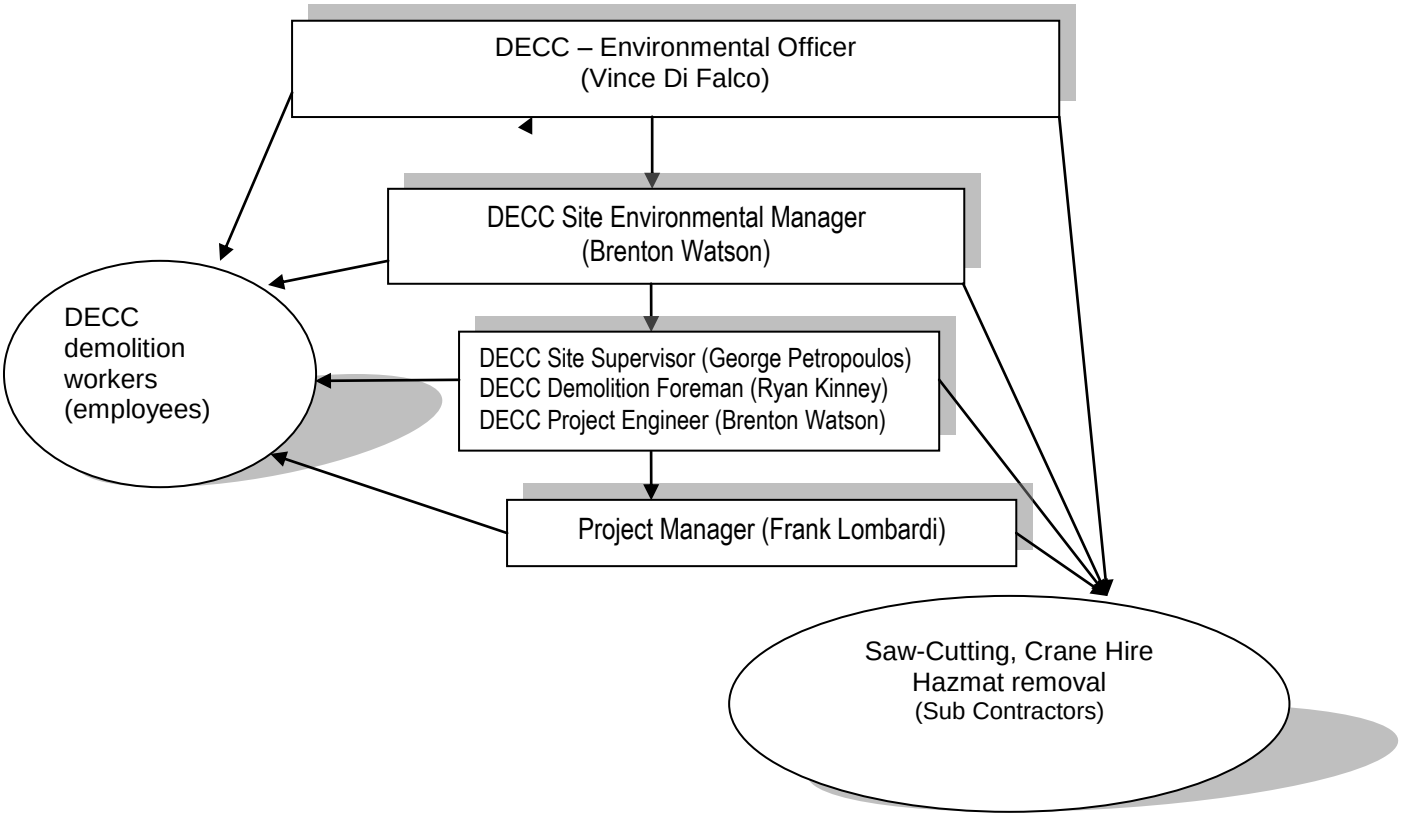
***PART 2** – Acid Sulphate Management Plan (NOT USED);*
***PART 3** – Waste Management Plan;*
***PART 4** – Soil and Water Management Plan;*
***PART 5** – Erosion and Sediment Control Plan;*
***PART 6** – Air Quality Management Plan;*
***PART 7** – Noise and Vibration Management Plan;*
***PART 8** – Vegetation Management Plan;*
***PART 9** – Traffic Management Plan; and*
PART 3A Instrument of Approval conditions applicable to DECC as the Enabling Works Contractor.

When implemented and managed this CEMP will greatly assist the Project Team to complete the scope under the Project with the least possible impact to the Environment.

3.0 Implementation and Operation

3.1 Site Structure

DECC's organisational structure including site personnel is shown below:



3.2 Environmental Management Team

The responsibility and authority pertaining to environmental performance of key DECC personnel, environmental specialists and sub-contractors is described below.

Project Manager

DECC's Project Manager is responsible for planning the works, preparing the CEMP, and delivery of the Project to ensure that impacts are minimised and obligations are met.

An Environmental Manager reporting directly to the DECC Project Manager is responsible to ensure that DECC delivers the prescribed environmental outcomes.

Site Environmental Manager

The Environmental Manager reports directly to the Project Manager. The Environmental Manager has primary responsibility and powers to ensure the environmental success in the delivery of the Project. The key responsibilities of the Environmental Manager are to:

- implement the project environmental management system;

- maintain, assess and monitor the CEMP;
- complete environmental checklists;
- respond to environmental incidents and complaints;
- maintain environmental documents;
- monitor environmental controls; and
- monitor subcontractor environmental performance.

Environmental Officer

The Environmental Officer (Off-site) assists the Site Environmental Manager. The key responsibilities of the Environmental Officer are to:

- ensure that all project environmental obligations are met and prepare reports on compliance;
- obtain relevant licenses, permits and approvals;
- provide input and advice to engineers on work method statements;
- identify and prepare environmental induction and training materials;
- manage the environment team and environmental budget;
- liaise with government agencies and relevant stakeholders;
- manage environmental sub-consultants;
- conduct system environmental audits;
- prepare reports on compliance; and

Foremen and Site Supervisor

The site foreman reports directly to the site supervisor, who inturn reports to the Project Manager. Both the foremen and site supervisor will have a direct role in the compliance with identified environmental procedures and controls. They will also be responsible for checking the site on a regular basis and ensuring that regular maintenance is undertaken to minimise environmental impacts and that personnel are provided with appropriate environmental “toolbox” training.

Sub-contractors

As a minimum, sub-contractors and their employees will be required to comply in full with the requirements of the CEMP as it applies to site environmental management and control. Sub-contractors’ personnel are considered equivalent to DECC’s Project personnel in all aspects of environmental management and control and their responsibilities in this respect mirrors those of DECC’s personnel.

DECC will monitor the progress of subcontractors depending on their scope of works, duration of works and their potential impact on the environment. Depending on their risk profile DECC may carry out audits on the environmental management of individual subcontractors. With respect to monitoring, DECC will monitor the overall site environmental controls daily. This includes the monitoring of subcontractors on a daily basis. The completion of checklists, may however, be completed on a weekly, monthly or on a frequency that is dependent on wet weather.

Where a non-compliance is noted either during a routine weekly check or during daily monitoring a NON-Conformance will be issued to the party responsible for the NON-Conformance. The NON-Conformance will outline the Corrective action required and the date the Corrective Action must be carried out.

Appropriate references to environmental management and control reflecting DECC and RTA requirements will be included in the on-site induction process.

Schedule of Service Providers

DESIGN	
Architectural	*N/A*
Engineering	*0425254898 – Jim Grasso - Grasso Consulting Engineers*
Drafting	*0425254898 – Jim Grasso - Grasso Consulting Engineers*
Mechanical	*N/A*
Hydraulic	*N/A*
Fire	*N/A*
Electrical	*N/A*
Hygienist	*Phil Clifton and Associates*
SUB CONTRACTORS	
Plumbing	*BDL Plumbing – Dave Lang 0418 672 045*
Hoarding	*Coates Hire 131552*
Electrical	*Forbes Electrical - Darren Forbes 0417 029 273*
Hazmat Removal	*Australasian Technical Services P/L - Ken Smith 0412 569 271*
Services Searching	*Dial Before You Dig, RTA Property Searches*
Crane	*Melrose Cranes*
Saw-cutting	*Cutaway Concrete – Steve Beerens 0400 929 963*
Access Gear	*Coates Hire 131552*
Plant Hire	*Brisbane Diggers - Vince DiFalco 0418 818 649*
Traffic Control	*Direct Traffic Solutions - Adam Spilsted*

Resources

The resources required to implement the control measures and obligations identified in the environmental documents will be managed through the on-site resource pool (labour, plant and materials). Resources will include:

1. general labour to install and maintain controls during construction activities and following storm/wet weather events;
2. heavy plant and equipment such as excavators;
3. hand tools;
4. fencing and flagging tape to secure protected areas;
5. erosion and sediment equipment including sand bags and sediment fence; and
6. emergency response equipment including booms and absorbent materials.

The Project Manager, Site Supervisor and Environmental Manager will be responsible for ensuring sufficient resources are allocated to install, inspect, maintain and remove environmental controls throughout the construction period.

AUTHORITIES	
Environmental Officer	*TBA*
DECC-NSW Pollution Hotline	*131 555*
Council	*City of Sydney*
EPA	*02 9995 5000 or www.epa.nsw.gov.au*

3.3 Environmental Control Measures and Procedures

General Approach

A range of environmental obligations and control measures have been identified in the **PART 3A approval** document:

ENVIRONMENTAL PLANNING AND ASSESSMENT ACT 1979

DETERMINATION OF THE CENTRE FOR OBESITY, DIABETES AND CARDIOVASCULAR DISEASE PROJECT THE UNIVERSITY OF SYDNEY, CAMPERDOWN

Major Project No. 09_0051

Specific measures and procedures have been identified to address each of the obligations. Actions and procedures are detailed in individual Management Plans. This process of matching actions with obligations and assigning responsibility for each action will ensure that each project obligation is being implemented.

The timing of installation of control measures will be critical to ensuring that environmental obligations are met within the required timeframe and that controls are effective in achieving their purpose.

A program of routine maintenance will be conducted on environmental controls. Daily inspections of work areas by Site Foreman and weekly (minimum) inspections by the Environmental Manager/Site Supervisor will provide a means for identifying maintenance requirements before they reach a critical stage.

Stage EMPs are not being created for the delivery of this project and so cumulative impacts won't need to be separately identified.

Actions and procedures are detailed in Individual Management Plans.

Work Method Statements

The Enabling Works for the CODCD site has a general Safe Work Method Statement (SWMS) including environmental considerations. It was developed under the OHS Plan (Refer SWMS 02). Further work activities may require the development of activity specific WMS, or even area specific WMS, these are referred to as Sub-WMS's.

A copy of the sites general WMS is attached in Appendix E, (refer **"SWMS University of Sydney – CODCD Enabling Works")**

The aim of the general site Safe Work Method Statements is to provide site engineers with a framework for planning, coordinating and undertaking project works in a consistent safe and environmentally responsible manner, and to that end produce a quality product. The Work Method Statements will incorporate actions to ensure that environmental commitments made by DECC to external stakeholders within their commissioned Environmental Planning Documents are incorporated, (including requirements, Licenses/Permits, Conditions of Approval).

Sub-Contractor Management

Project specific environmental management requirements will be included in the selection and management of sub-contractors working on site.

Where the Contract specified RTA Prequalification for a subcontractor and the Prequalification level nominated includes environmental management requirements, the subcontractor shall apply its RTA accredited EMS for its construction activities.

The Environmental Manager will develop a standard monitoring form that will be used to assess:

1. the sub-contractors general work practices;
2. the effectiveness of the sub-contractor's environmental protection measures;
3. compliance with the requirements of the CEMP; and
4. the maintenance of environmental measures.

Construction Hours

All construction activities (at the ***University of Sydney CODCD Enabling Works Project***) including the entry and departure of heavy vehicles are restricted to the hours of:

- ✓ **7:30 am to 5:30 pm (Monday to Friday);**
- ✓ **7:30 am to 3:30 pm (Saturday) and;**
- ✓ **at no time on Sundays and public holidays**

Work outside these hours that may be permitted include:

1. any works which do not cause noise emissions to be audible at any nearby residential property;
2. the delivery of materials which is required outside these hours as requested by police or other authorities for safety reasons;
3. emergency work to avoid the loss of lives, property and/or to prevent environmental harm; and
4. any other work as approved by the DECC-NSW (EPA).

3.4 Training, Awareness and Competence

The three main forms of training will be provided on site:

1. ***site induction***;
2. ***environmental awareness training***; and
3. ***"toolbox" training.***

Records of induction and training will be kept on a database including the topic of the training carried out, dates, names and trainer details.

Induction

Prior to working on site all personnel and sub-contractors will undertake an environmental induction. The induction will address a range of issues including, but not limited to:

1. the CEMP (purpose, objectives and key issues);
2. legal requirements including due diligence and duty of care;
3. environmental responsibilities;
4. conditions of licenses, permits and approvals; and
5. DECC environmental policy;
6. significant environmental issues and areas of the site including identification of boundaries for vegetation clearing, location of refuse bins, washing, refueling and maintenance of vehicles, plant and equipment;
7. environmental management techniques for key environmental elements (soil and water, waste and recycling, flora and fauna, heritage etc);
8. incident management and emergency plans;
9. reporting process for environmental harm/incidents;
10. protection and maintenance of environmental controls;
11. finding heritage items on site;
12. mitigating dust during construction works; and
13. environmental control installation must be before construction works begin.

There will be 2 levels of induction.

1. *Level 1 induction* will be for visitors, irregular delivery drivers and others who will remain in the company of a fully inducted DECC employee.

2. *Level 2 induction* will be required for all permanent employees and subcontractors working on the site.

Environmental Awareness Training

Staff and sub-contractors working on site will be provided with environmental training to achieve a level of awareness and competence appropriate to their assigned activities.

Targeted environmental awareness training will be provided to individuals or groups of workers with a specific authority or responsibility for environmental management or those undertaking an activity with a high risk of environmental impact.

This training will generally be prepared and delivered by the Site Environmental Manager. The target groups and suggested topics for this training are shown below.

Training Topics to be Provided to Personnel during Early Stages of the Project.

Target Group	Topic
Site Supervisor	content and requirements of the CEMP and Sub-Plans and requirements for temporary waterway crossings.
The Erosion and Sediment Control Team	selection, installation and maintenance of erosion and sediment controls; monitoring of water quality; and incident response.
Site Foremen and Work Crew	management and maintenance incident response.
Bridge Demolition Crew	the construction of crossings and bridges; and significance of waterways.
Work Crew Subcontractor	working near sensitive receivers or waterways; working near areas of protected vegetation; basic weed identification; and incident response.
Emergency response crew	the location of emergency response equipment; the use of such equipment; safety issues; internal notification procedures; and disposal of clean up materials.
Haulage and Earthworks Subcontractors	dust control; and traffic control.
Earthworks Subcontractors	dust control noise and vibration control sediment control

"Toolbox" Training

"Toolbox" training will help to ensure that relevant information is communicated to the workforce and that feedback can be provided on issues of interest or concern. "Toolbox" training will generally be prepared and delivered by the Site Supervisor or Site Foremen. "Toolbox" training topics will include:

1. Erosion and Sediment Control;
2. Traffic Management;
3. Noise and Vibration Management;
4. Compliance with Heritage Impact Statement;
5. Retention of trees and Compliance with Arborist Report;
6. Working hours;
7. waste management, minimisation and recycling;
8. flora and fauna protection;
9. Air Quality/dust control;
10. work methods;
11. wastewater control, de-watering and spill response.

3.5 Communication and Consultation

Community Consultation

At least 5 days prior to the commencement of works, DECC will advise the University tenants within 200 meters of the proposed works by letterbox drop or via an approved alternate method. The following information will be contained in the letter:

1) anticipated duration of works;
2) scheduled timing of demolition activities, particularly noisy periods;
3) DECC Site Environmental Managers contact details.

Complaints Management

A complaints register will be established and maintained by the DECC Site Environmental Manager who will receive, log, track and respond to complaints within specified timeframes. The following details will be recorded in the register:

- Date and time;
- type of communication (telephone, letter, meeting etc);
- name, address, contact number of complainant;
- nature of complaint;
- action taken in response including who the complaint was referred to (if not resolved immediately); and
- details of any monitoring undertaken to confirm that the complaint has been satisfactorily resolved.

A written report will be provided to the University of Sydney's Authorised delegate (Project Manager) within one working day of receiving a complaint about any environmental issue, including pollution, arising from the works. The Report will provide details of the complaint and the action taken to alleviate the problem. A final report with proposed measures to prevent the occurrence of a similar incident will be submitted to the University of Sydney's Authorised delegate within 5 working days.

External Stakeholders

Consultation with a range of non-community, external stakeholders will be required throughout the project. A list of relevant contact names, telephone numbers and fax numbers for project stakeholders will be maintained by the DECC Site Environmental Manager. The below table provides examples of typical consultation with external parties.

Table of External Stakeholder Consultation

Stakeholder	Consultation Requirements (where applicable)
Government Agencies including: DECC (EPA) DWE, Department of Water and Energy (previously DIPNR) DPI (Fisheries)	 CEMP and Sub-Plans Contaminated soil management (if found) Permit/Licences and approvals Soil and water management

Workcover (NSW)	Water crossings and bridge demolition Notification for dredging and reclamation Notification of demolition and asbestos removal
Utility providers	Relocation of services
University of Sydney stakeholders St Johns College, RPA; Sydney Uni sports union	Demolition, civil and stormwater works

The name and contact numbers for 2 DECC personnel who are available to DECC (EPA) on a 24 hour basis and who have authority to take immediate action to shut down any activity or to effect any pollution control measure as directed by an authorised officer of DECC (EPA) are:

- ✓ **George Petropoulos: 0406 428 832**
- ✓ **Frank Lombardi: 0449 250 907**

These contact details is to be provided to the DECC (EPA) Regional Manager by the RTA.

3.6 Incident and Emergency Planning, Preparedness and Response

Emergency Planning

Activities that are associated with potential or major environmental incidents are identified in the respective Management Plans.

In undertaking planning for emergencies, learning from past incidents, and applying risk assessments and training will also be included.

Preparedness

The key to effective prevention of incidents is monitoring and surveillance. During construction activities, inspections and preventative action to be performed by DECC will include:

- daily inspections of active work sites;
- completion of routine environmental checklists;
- issue and quick close-out of non-compliance notices;
- maintenance of constant supervision on site;
- on-going environmental training; and
- environmental audits of work sites, sub-contractors and compliance issues.

Environmental and safety information on hazardous substances (e.g. MSDS) will be available at the main site office and where such substances may be stored.

Testing of environmental response procedures may be conducted in areas where a pollution risk is present, such as in workshops. Personnel involved in emergency response activities will be provided with specific training.

An up-to-date list of emergency response personnel and organisations will be maintained at the main office and compounds. Refer also SSMP.

The following specific measures will also be implemented to minimise the risk of an incident occurring due to spillage, storage of hazardous materials or fire.

Spills and Leaks (chemicals, fuel, hazardous liquids)

- works involving the use of chemicals, dangerous good or other potential contaminant, will be planned and implemented to minimise the possibility of pollution;
- the use and storage of chemicals and dangerous goods will be strictly in accordance with relevant legislation, manufacturer instructions and the MSDS;
- transport, handling, storage and application methods will be established (with the relevant method statement) to prevent chemical, fuel and lubricant spillage on or around the site;
- adequate quantities of emergency response materials such as oil spill kits, absorbent materials, sand bags, flocculating agents and pH buffer solutions will be readily available and kept in designated compounds. Oil spill kits will also be kept in appropriate vehicles;
- temporary bunding will be provided for refuelling or maintenance of plant and equipment, mixing of cutting oil with bitumen or any other activity that could result in spillage of a chemical, fuel or lubricant (where the activity is undertaken in a location with direct drainage to a waterway or environmentally sensitive area);
- where chemical drums are removed from bunded areas, they will not be left unattended. Where this is not practical, the unbunded and unattended drums will be managed to minimise the risk of spillage and must only be for use on that day. A procedure will be implemented for both safe overnight storage and removal to bunded areas when conditions change creating a risk to the environment;
- drums used as markers must not contain chemicals or fuels;
- for spills and leaks the major response will involve containment and cleanup after containment of the offending material; and
- where safe to do so, containment measures such as sandbags, booms, earth bunds or cut drains will be installed to capture and retain spilled material and prevent it from leaving site, entering any watercourse or impacting on vegetation stands.

Storage of Liquids (chemicals, fuel, hazardous materials)

- all liquid storage areas will be bunded in a manner that meets the requirements of the DEC;
- chemical, fuel and lubricant storage areas will be suitably located and bunded to minimise the impact of any spillage or contaminated on or around the site;
- storage areas will not be located within 20m of a natural or built drainage line, flood prone areas or on slopes steeper than 1:10 or near vegetated areas;
- water captured in a bunded storage area will be monitored and drained after each rain event to ensure bund capacity is maintained at all times;
- before discharging water from bunded areas, a verification procedure will be implemented to ensure the water complies with water quality criteria nominated by the DECC;
- appropriate treatment or removal will be arranged if the water is not suitable for discharge; and
- records of water quality checks, discharges and any remedial actions taken will be recorded.

Fire

- fire-fighting equipment will be available on site to facilitate an immediate response to a fire incident and help ensure the safety of public and property;
- spark arrestors will be fitted to plant that could discharge sparks, which are being used during proclaimed high fire danger periods;
- cutting, welding, grinding and other activities with the potential to generate fire will not be undertaken in the open on total fire ban days;
- personnel involved in work where there is a risk of fire being caused by hot work (e.g. welding or in burning-off operations) will be provided with adequate training in regard to fire prevention, safety and basic fire fighting skills; and
- personnel and vehicles involved in such activities will be equipped with fire fighting and safety gear
- Access to existing fire services around the site will not be obstructed at any time;

Notification

The Site Environmental Manager will notify the DECC-NSW (EPA) Regional Manager (or if incident occurs outside normal business hours then DECC-NSW Pollution Line Ph: 131 555), of pollution incidents on or around the site which have occurred in the course of activities in the following circumstances:

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

The University of Sydney's Project Manager will also be contacted.

An emergency contact list is attached. Refer to Appendix C for contact numbers for DECC and University of Sydney personnel including emergency contacts for fire, police and ambulance. The Emergency contact list must be displayed in the site office and sheds.

In the event of an emergency, the Site Foreman is to contact 000 and seek immediate emergency. Once the relevant emergency service is contacted, the Site Foreman is to contact George Petropoulos and Frank Lombardi who will inform the University of Sydney's John Sung. Where the incident is NOT an emergency the Site Foreman is to contact George Petropoulos who will contact the Authorised Environmental Delegate.

DECC Site Foreman will carry out the Environmental Spill Incident management procedure in accordance with Appendix D1.

DECC will adopt the RTA Environmental Incident Reporting procedure. Appendix D5 contains the following extracts from the RTA Environmental Incident Reporting Procedure:

1. Incident levels;
2. Incident Reporting;
3. Appendix 3 of the Environmental Incident Reporting Procedure (Incident Reporting Form)

Incident Investigation

All **incidents** will be documented, investigations conducted and action plans established in order that the event does not occur again. Incidents involves actual or potential harm to the health or safety of human beings or to ecosystems that is not trivial.

Where lessons are learnt from the investigation or current procedures are identified as being ineffective, the CEMP will be revised by the DECC Environmental Officer in consultation with the Site Environmental Manager to include the improved procedures or requirement.

An environmental investigation includes the following basic elements:

- identifying the cause, extent and responsibility of the incident;
- identifying and implementing the necessary corrective action;
- identifying the personnel responsible for carrying out the corrective action;
- implementing or modifying controls necessary to avoid a repeat occurrence of the incident;
- recording any changes in written procedures required; and
- advising the environmental authority if any substantial pollution has occurred.

All personnel are required to report all incidents, as it is regarded as a valuable method of addressing shortcomings in procedures, training or equipment, and is an opportunity for improvement. It is an offence not to report to the EPA environmental incidents that may exceed $10,000 in harm, in accordance with part 5.7 of the POEO Act, 1997.

Records of Environmental Activities

The Site Environmental Manager, with assistance from the DECC Environmental Officer, will maintain the following records as part of the project records:

- details of qualifications for individuals responsible for environmental monitoring;
- the CEMP (all versions), with attached regulatory licences and permits;
- regulatory authority inspection reports;
- correspondence with regulatory authorities;
- monitoring results;
- employee induction and training records;
- waste quantity reports;
- environmental accidents/incidents/emergency reports; complaint reports;
- non-conformance reports;
- audit reports (internal and external); and
- management review minutes and action taken.

Records will be held for at least 5 years after the date of Final Completion and be accessible to the University of Sydney's Authorised Delegate and to authorised DECC-NSW (EPA) Officers.

Document and Data Control

The Site Environmental Manager will coordinate the preparation, review and distribution, as appropriate, of the environmental documents listed above.

During construction, environmental documents will be stored at the main site office and can be accessed on request to the Site Environmental Manager.

A document and data control procedure will be implemented to control the flow of documents and data within DECC and between DECC and the University of Sydney, stakeholders and sub-contractors.

Documents and data that are to be issued and liable to change will be controlled to ensure that they are approved before issue and that the current issue or revision is known and available to those requiring them.

A register and distribution list will identify the current revision of particular documents or data.

After a number of changes have been made to a document it may be withdrawn and reissued as a new revision. Data will be issued on a revision basis only.

4.0 Compliance

An environmental compliance table will be prepared and included in this CEMP, and will form the basis of a Compliance Tracking tool for the project.

Permit and License conditions will be added to this compliance table when these have been received.

The compliance table will be updated at least every six months for the duration of the construction project, and will provide source material for audits and reports.

4.1 Checklists

The effectiveness of environmental protection measures will be assessed at least once per month and before predicted severe weather warnings and after rain in consultation with http://www.bom.gov.au/weather/nsw. To achieve this, checklists will be prepared for each Management Plan incorporating the best management practices and safeguards identified in the Management Plan as well as any specific approval requirements. The purpose of the checklists is to:

- provide a surveillance tool to ensure that safeguards are being implemented;
- identify where problems might be occurring;
- identify where sound environmental practices are not being implemented;
- facilitate the identification and early resolution of problems;
- rectify deficiencies identified after inspections within reasonable time frames according to risk profile and prior to forecasted wet weather.

The checklists will be completed in accordance with the below Table: **Checklist Frequency**

Management Plan	Checklist Completed By	Frequency
Flora and Fauna	Environmental Manager	Prior to clearing During clearing (weekly)

Soil and Water	Site Supervisor/ Environmental Manager	Weekly
Acid Sulphate Soils	Site Supervisor	Weekly during works impacting on known ASS (i.e. Bulk Earth Works)
Noise/Vibration	Site Supervisor / Environmental Manager	Weekly
Air Quality/Dust	Site Supervisor / Environmental Manager	Weekly
Waste, Resource Use and Recycling	Environmental Manager	Monthly
Hazards and Risks	Environmental Manager	Monthly
Spoil, Material Stockpiling and Disposal	Site Supervisor	Monthly

DECC are committed to rectify deficiencies;

1. Immediately – Where there is a current risk to the environment;
2. Within 24 hours – Where the risk to the environment is HIGH;
3. Within 3 days – Where the risk to the environment is MEDIUM;
4. Within 5 days – Where the risk to the environment is LOW;
5. Prior to wet weather should rain be forecasted.

Any non-conformances identified through the checklist process will be highlighted and an environmental inspection report (minor issues) or an environmental improvement notice/environmental incident report completed. The checklist will remain “open” until:

- the issue has been resolved;
- a new or revised procedure has been established and implemented; or
- training has been provided to relevant personnel/sub-contractors.

4.2 Inspection and surveillance

Inspections and surveillance of work activities and sub-contractors will be undertaken on a day-to-day basis by:

- Site Supervisors;
- Site Foreman;
- Site Environmental Manager; or
- University of Sydney Authorised Delegate

The activities of sub-contractors will be monitored. The Environmental Manager will develop a standard monitoring form that will be used to assess:

- communication;
- compliance with contractual requirements,

- knowledge of and compliance with the CEMP and work procedures and environmental controls used on site;
- general work practices;
- the effectiveness of environmental protection measures; and
- the maintenance of environmental measures.

In addition to the above, the following inspections may take place:

- the University of Sydney Authorised Delegate will be involved in regular surveillance inspections with DECC personnel to assess compliance, review the effectiveness of the CEMP and identify issues and/or improvements;
- inspections may be conducted by external organisations such as DECC, DWE (previously DIPNR), and DPI(Fisheries) to assess specific sites or work activities e.g. culvert and crossing installation;
- inspections will be undertaken as part of internal and external audits;
- the University of Sydney Authorised Delegate and/or Environmental Manager will undertake inspections to confirm that environmental controls are being implemented and to identify any current or upcoming issues; and

Where inspections are undertaken by a third party and/or the the University of Sydney's Authorised Delegate, a report will be sought by the Environment Manager. Details of the inspection will be provided to relevant site personnel or discussed in site meetings with a request to take action within 7 days.

A brief report will be prepared notifying the University of Sydney's Authorised Delegate of the purpose and outcome of the visit including details of the response proposed to any issues raised. The report will be submitted to the University of Sydney within 5 working days of the site visit.

Completed inspection reports will be collated and filed by the Environmental Manager.

4.3 Audits

Internal

The Environmental Manager, Group Environmental Manager and/or Systems Manager will conduct internal audits in accordance with G35 S4.14 – internal audits required within the 1st three months of start up and then every six months thereafter.

Areas of the Project that may be audited include:

- compliance with Contract;
- compliance with the Conditions of Approval (CoA);
- compliance with the CEMP;
- compliance with approval, permit and licence obligations;
- compliance with method statements;
- complaint response;
- sub-contractor activities;
- training records;
- non-conformances;
- monitoring results;

- system documentation such as checklist completion;
- suitability of, and modifications to, work method statements, particularly corrective actions; and
- Internal audits will be undertaken on a three monthly basis initially, then six monthly.

A standard environmental audit schedule will be prepared prior to commencement of construction. The Environmental Manager will ensure that any action resulting from the audit will be completed.

Internal Management Review

An internal management review will be undertaken on an annual basis. The review will take account of environmental audit outcomes, monitoring records, performance in achieving environmental targets and compliance limits, complaints, non-conformance, corrective and preventative actions and any changes to stat requirements.

The results of the review will be brought to the attention of people responsible for the area reviewed.

External

External audits may be conducted by the University of Sydney and/or Environmental Agencies. Audits may address:

- compliance with regulatory requirements;
- assessment of performance against EIS predictions;
- compliance with the CEMP; and
- documentation and record keeping.

The outcomes of any audit will be documented. Corrective action requests (CAR) and observations of concern (OOC) will be addressed immediately following the closing meeting using draft audit findings and resolved within 2 weeks of receiving the final audit report.

Resolution of CARs and OOCs will be documented and filed with the Audit Report.

The first audit will be scheduled within the first three months from the commencement of work and then at least every 6 months. A complete audit schedule will be developed in consultation with the University of Sydney

Concluding Audit

Within 28 days after the Date of Construction Completion, an environmental compliance audit, including site inspection and full review of environmental records will be carried out. The purpose of the audit is to:

- identify any environmental protection measures which have not been finalised;
- record the condition of existing environmental protection controls; and
- itemise environmental protection controls which need ongoing management.

An audit report will be submitted to University of Sydney's Authorised Delegate together with a written response on how all actions and issues raised in the audit will be addressed.

4.4 Non-conformance, Preventative and Corrective Action Systems

Non-conformances will be resolved according to the DECC internal quality management system procedures. The Environmental Manager may issue an Environmental Inspection Report (EIR) or an Environmental Improvement Notice (EIN) in response to poor or inappropriate work methods, equipment selection, maintenance of controls, or other identified concern. An EIR will be issued for deficiencies that are minor in nature but require rectification, whilst an EIN will be issued for more serious issues that present an immediate need for action, or for repeat non-conformances where a warning is required to be issued for poor performance.

The following reporting hierarchy describes the level of intervention:

ROUTINE LEVEL

a) Checklists

These are internal documents as the primary documentation to ensure that environmental safeguards are being implemented on an on-going basis.

b) Environmental Inspection Report (EIR)

These are used to report internally rectification of and inattention, or careless work that could result in environmental harm of low to moderate consequences.

c) Environmental Improvement Notice (EIN)

This is for a near miss. Immediate intervention is required because if unchecked it could result in environmental harm or community complaint of moderate to severe consequences.

If there is a potential breach of the environmental commitments, then DECC will notify the University of Sydney within 2 hours and in writing within 24 hours.

SIGNIFICANT LEVEL

d) Environmental Incident Report & Investigation (EIRI)

This is for an actual breach of environmental commitments with physical evidence of minor environmental harm. Action will be taken immediately to isolate the area and minimise the environmental damage and organise repair work to be undertaken promptly.

This would equate to a reportable incident (POEO) and the DECC-NSW (EPA) would be notified.

Reporting will be to the following: the Project Manager, DECC Head Office, the University of Sydney, and DECC-NSW (EPA).

The University of Sydney will be notified within 2 hours and in writing within 24 hours.

MAJOR LEVEL

e) Environmental Incident Report & Investigation (EIRI)

This is for a breach of environmental commitments with physical evidence of serious or major environmental harm plus there is also the potential for impact off the site (eg. Downstream or closure of a main road).

Third parties would be involved (Emergency services, Police or others) and they must be contacted immediately.

Reporting will be to the following: the Project Manager, DECC Head Office, the University of Sydney, the relevant state agencies, DECC-NSW (EPA).

In all cases, in the event of a non-conformance:

- the nature of the event will be investigated and monitoring may be undertaken;
- advice may be sought from a specialist;
- the effectiveness or need for new/additional controls will be reviewed;
- an appropriate preventative and corrective action will be implemented;
- checks will be made that the preventative and corrective action has been effective;
- strategies will be identified to prevent reoccurrence; and
- environmental documentation will be reviewed and revised.

5.0 Reporting

The Environmental Manager will prepare a summary report on environmental matters on a monthly basis in concurrence with the completion of the compliance monitoring checklist.

The report will be used to facilitate the preparation of the monthly report provided to the RTA.

5.1 Reporting to the University of Sydney (where applicable)

Monthly environmental reports will be prepared for the University of Sydney and tabled for discussion at site meetings. The Report will include details on:

- all cases of non-compliance with environmental obligations and the CEMP;
- actions resulting from environmental inspections and audits by University of Sydney or regulatory agencies;
- any failure to address low/high monitoring levels;
- actioning and reporting of all incidents;
- frequency of environmental checklists and actioning of concerns;
- any University of Sydney issues not addressed after two months;
- Complaints, incidents, and any other issues.

Reports addressing the above and other environmental issues will be prepared for the University of Sydney as requested and where applicable.

6.0 Heritage.

6.1 Indigenous Heritage

Should any relic, artifact or material (including skeletal remains) be encountered which is suspected of being of Aboriginal origin, cease all demolition works that may affect the relic, artifact or material and protect the relic, artifact or material from damage or disturbance.

DECC will notify the University of Sydney immediately.

DECC will ensure that all personnel working on Site have received training regarding their responsibilities under the National Parks and Wildlife Act and are made aware of any relevant sites/areas identified in the EIS/REF (if applicable) that must be avoided.

6.2 Non-Indigenous Heritage

Should any item be encountered which is suspected of being a relic of heritage value DECC will cease all demolition work that might affect the item and protect the item from damage or disturbance.

DECC will notify the University of Sydney immediately. The University of Sydney will arrange for an Officer from the NSW Heritage Council and to be consulted. Under the Heritage Act, 1977, relic means any deposit, object or material evidence:

- Which relates to the settlement of the area that comprises NSW, not being Aboriginal settlement;
- Which is 50 years or more old;

DECC will ensure that all personnel working on Site have received training regarding their responsibilities under the Heritage Act and are made aware of any relevant sites/areas identified in the EIS/REF (if applicable) that must be avoided.

6.3 Compliance with Heritage Impact Statement

A heritage photographer will be engaged to take photos of the building (Building 92) for archival records prior to demolition. The photos will be submitted to the University of Sydney by DECC.

7.0 Contaminated Land

DECC to prepare a Contaminated Land Management Plan as part of the CEMP for any areas of the Site identified as contaminated. The University of Sydney have not confirmed the presence of land contamination within the tender documentation.

Should contamination be identified of a non Acid Sulphate Soil (ASS) nature, DECC will immediately notify the University of Sydney of any suspicion. DECC will arrange for the material to be tested (in-situ) using a qualified geotech/enviro-scientist in accordance with NATA requirements.

A Contamination Land management Plan will be developed outlining the treatment of the contaminated soil. This may include the following:

- Land-farming;
- Land-filling;
- Treating on site.

Environmental controls isolating the contaminated material will be installed. The method of treatment/disposal will be confirmed by the University of Sydney upon receipt of NATA test results and confirmation of contaminated material volume. DECC's approach is to avoid any disturbance to identified contaminated land where possible.

PART 2: ACID SULPHATE SOILS MANAGEMENT PLAN

1.0 Purpose of Management Plan

- Identify possible areas of concern and sources of Acid Sulphate Soils (ASS) affected by construction.
- Evaluate potential environmental impacts associated with disturbance of any ASS due to construction.
- Plan for and provide preventative and control measures during and after construction.
- Provide on site personnel with sufficient guidance on what to look for in acid sulphate soils.
- Provide on site personnel with sufficient guidance when acid sulphate soils are encountered.
- Provide on site personnel with work instructions for excavation & management of acid sulphate soils.
- Address Occupational Health & Safety of workers.

2.0 What is Acid Sulphate Soil?

Acid sulphate soil (ASS) are a mix of low-lying coastal clays and sands that contain sulfur bearing compounds at concentrations above 0.05% in clays and 0.01% in sands. The soils are formed by the action of anaerobic bacteria on organic matter in the presence of seawater. Acid sulphate soils are stable in unoxidized state—but become a concern if exposed to air, resulting in the production of sulfuric acid by oxidation.

Acid sulphate soils fall into two main categories:

1. Potential acid sulphate soils (PASS)
2. Actual acid sulphate soils (AASS)

Note: There is no potential for Acid Sulphate Soil on this Project.

7.0 Emergency and Incident Response

Response to emergency situations will be undertaken in accordance with the Project Emergency Response and Incident Management Plan – Refer to the OHS Plan. The mustering points are identified in the photo below.

Mustering Point No. 1 – DECC site office

PART 3: WASTE MANAGEMENT PLAN (WMP)

1.0 Principles

This WMP follows the Waste Planning guide for development Application published by the Inner Sydney Waste Board (1998) prepared on behalf of Regional waste Boards and will adhere to the following:

1. *City of Sydney Councils Policy for Waste Minimization in New Developments 2005;*
2. *The Waste Minimization and Management Act 1995"*

The demolition will utilise the following waste management principles:

- Avoid the use of excess materials and production of waste;
- Reuse waste materials (such as off-cuts) on site where possible;
- Recycle waste;
- Dispose of waste correctly

When deciding how to minimise waste management impacts, consider the following:

- Will construction/demolition generate surplus material that can be recycled?
- Will construction/demolition generate waste material that can be disposed of on site?
- Will construction/demolition generate waste that will have to be disposed off-site?
- Will site personnel generate litter or rubbish?

2.0 Waste Management Plan

The waste management plan involves four major steps:

1. Estimating the type and quantity of waste generated on site;
2. Identifying who is responsible for recycling or disposal

- DECC is responsible for on-site processing of concrete and steel;
- Local Concrete recycler is responsible for off –site crushing and re-use of concrete;
- Local Scrap and Recycling yard is responsible for off-site recycling of steel.

3. Specifying whether the waste is:

- Re-used on site;
- Re-used or recycled of-site;
- Disposed off-site (landfill)

4. Recording the type and quantity of waste recycled.

- Concrete tipping dockets to be received from Concrete reycler;
- Steel tipping dockets to be received from Steel Recycler.

The material from Building 92 demolition site will be recycled on-site by crushing. Refer to Table 1 for quantities of recycled material)

Effluent from the amenities for which DECC is responsible for, will be discharged into the local sewerage system, where available. Otherwise septic tanks and portable self-contained toilets will be used.

Littering or dumping of unwanted waste or disposal of surplus waste on any land on or around the site is illegal unless specifically permitted in accordance with the Contract.

Set up skip bins or other appropriate receptables to contain waste materials, litter and spoil. Provide separate bins for recyclable material and non-recyclable material ensuring recycling potential is optimised with efficient material sorting, processing and stockpiling.

All Green waste is to be mulched on site and re-used (if possible) with the exception of noxious weeds.

All construction amenities and putrescible waste will remain within the DECC site compound facility.

Waste Streams

The demolition of **Building 92** will produce the following waste streams having the following waste classification:

- Concrete – General solid waste (non-putrescible);
- Masonry (Brick) – General solid waste (non-petrescible);
- Steel reinforcement – General solid waste (non-putrescible);
- Rubbish – General solid waste;
- Timber – General solid waste;
- Hazardous materials (asbestos).

Re-use of waste

Concrete – Large tracked excavators fitted with hydraulic hammers and/or pulverisers will process the concrete. The concrete will be fragmented into sections less than 600 mm to allow further processing off-site at a recycling facility.

The concrete will be used as a “raw feed” for the production of recycled concrete. The recycling potential of the concrete is 100%.

Concrete will be crushed on site by a mobile crusher. The recycled concrete will be used as select material (subgrade) for the construction of the temporary road;

Brick – Large tracked excavators fitted with hydraulic hammers and/or pulverisers will process the brick. The brick will be fragmented into sections less than 600 mm to allow further processing off-site at a recycling facility.

The brick will be used as a “raw feed” for the production of recycled brick. The recycling potential of the brick is 100%.

Brick will be crushed on site by a mobile crusher. The recycled concrete will be used as select material (subgrade) for the construction of the temporary road

Steel – During the processing of the concrete steel reinforcement is detached from the concrete. The reinforcement is gas-axed (oxy-cut) into manageable sections/lengths for loading onto a truck for removal off site. The steel is delivered to a steel merchant for further processing. The recycling potential of the steel is 100%.

The steel will be transported to a nominated recycling/scrap yard. Here the steel will be further processed into manageable lengths for transportation to a smelter.

Rubbish and Green waste – During the demolition, plant and machinery will need access the work area. Vegetation cleared as a result will be stockpiled on site for chipping (if feasible). The green waste is returned to the environment as mulch to assist with the revegetation of the site post demolition works. With the exception of noxious weeds the recycling potential of the green waste is 100%.

Rubbish on the other hand is landfilled. There is NO recycling of rubbish material.

Stockpile management

The demolition of the buildings will require the management of the following stockpiles.

1. Concrete;
2. Brick;
3. Steel;
4. Rubbish and Green waste

The **recycled material** is generated by the demolition of **Building 92**

The stockpiling of material throughout the recycling process is required to ensure efficiency during processing on site, loading out from site and processing at the recycling facility. Proper stockpiling and separation optimises the recycling potential and quality of the recycled product.

From an environmental perspective stockpiling material into separate and individual concrete, brick, steel and rubbish/green waste stockpiles is to maximise the recycling potential of the demolition process and minimise material landfilled.

Sediment fencing will be placed downstream of the stockpiles. In the event of wet weather, water runoff from the stockpiles will be filtered by the silt fencing – Refer to the approved ESCP for **CODCD Enabling Works Project** on location of environmental controls.

Water will be sprayed over the concrete and brick stockpile prior to and during (if required) the loading out process to mitigate dust. During the concrete processing stage where concrete is either hammered or pulverised to extract the steel reinforcement from the concrete water will be sprayed over the processing area and stockpiles.

Material stockpiles will be kept to a manageable volume with progressive loading out. Water for will be sourced from both sites adjacent to the location of the site compounds. In the event that water is unable to be sourced water carts or portable tanks containing water will be used.

Table 1 – Recycling rate.

DECC estimate that 90% of the material by weight will be recycled. DECC to keep records of all tipping receipts to confirm and track recycling achieved against initial estimates. Table 1 is to be updated to include real quantities on an ongoing basis throughout the demolition project.

Concrete and steel “won” from the demolition of the bridges to be transported to a licensed recycling facility. All material that is land-filled to be transported to a licensed EPA approved landfill. DECC to confirm recycling facility and landfill are capable of accepting proposed material.

Note: The Actual Quantity is based on tipping receipts.

Waste Management Statistics – Building 92 demolition

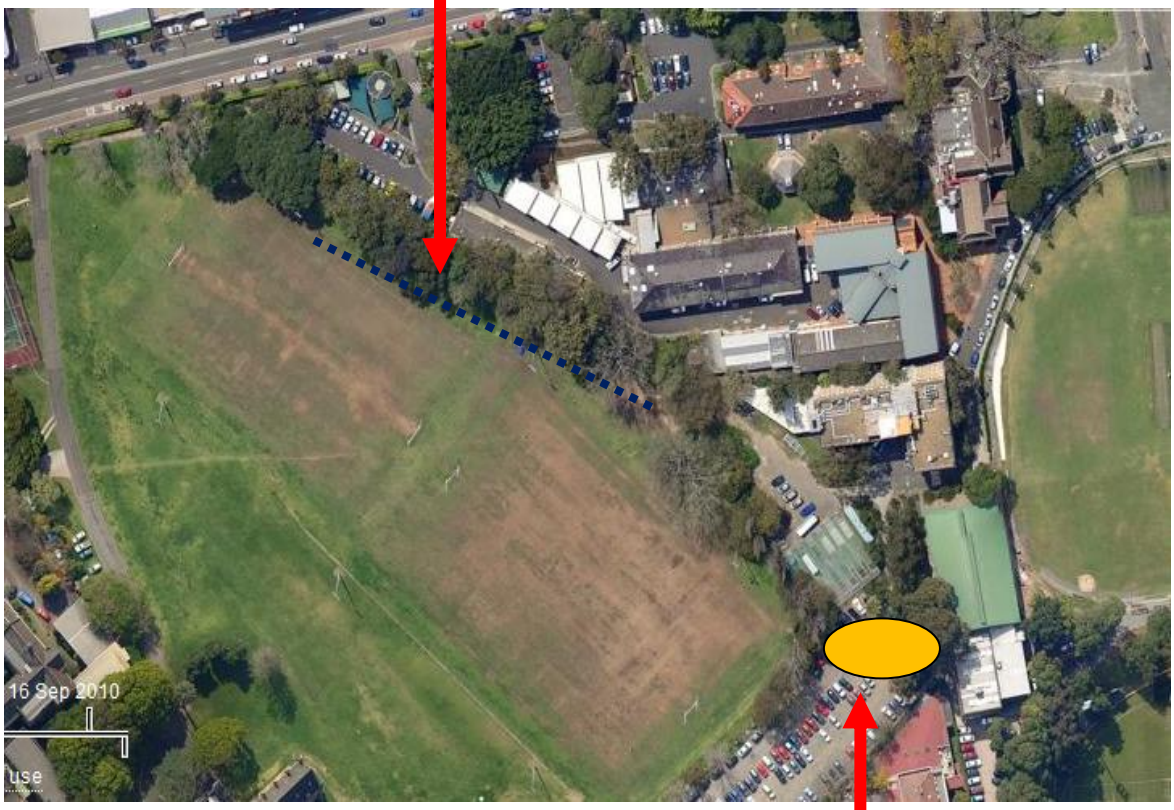
Statistics Updated by: …….

Position: ……..

Date of Update: ……

Waste Materials	**Estimated Quantity (Tonnage)**	**Actual Quantity – to date (Tonnage)**	**ON SITE Specify re-use or recycling methods**	**OFF SITE Specify re-use or recycling methods**	**DISPOSAL Specify re-use or recycling methods**
Excavated material					
Green waste					
Concrete					
Bricks					
Steel					
Timber					
Plaster					
Metals (Non-Ferrous)					
Asbestos					
Other					

Reuse of brick and concrete crushed from Building 92



Stockpile location for the demolition of Building A03

Steel, brick and concrete stockpile locations

Note: Separate stockpiles for concrete, brick and steel each with appropriate sediment fencing

PART 4: SOIL AND WATER MANAGEMENT PLAN (Not Used)

PART 5: EROSION AND SEDIMENTATION CONTROL PLAN – (ESCP)

1.0 Planning

When deciding how to minimise potential for erosion and sedimentation, consider the following:

1. Will banks of waterways be disturbed and susceptible to erosion?
2. Will ground surface be disturbed and be susceptible to erosion in storms, surface run-off or flooding?
3. Are trenches or filling being constructed with exposure to batters for potential erosion?
4. Does sediment have to be trapped before run-off enters waterways?
5. Can surface run-off flowing through construction site become unclean before entering waterway or stormwater drainage system?
6. Will unclean water need to be released from detention areas into waterway or stormwater drainage system?
7. Could mud or litter be deposited from construction vehicles onto trafficked roadway?

Erosion and sediment control is a two-stage process. Firstly, erosion control measures need to be established within the site to minimise erosion.

Secondly, acknowledge that some erosion is going to occur and steps must be taken to intercept and retain mobile sediment within the work site.

An **erosion sediment control plan (ESCP) for the CODCD Enabling Works Project** must be prepared before commencing work. It will need to show how various soil conservation measures will be carried out on site, including:

1. Timing of works;
2. Locations of land where protective ground cover will, as far as practicable, be maintained;
3. Access protection measures;
4. Nature and extent of earthworks, including the amount of any cut and fill;
5. Where applicable, the diversion of run-off from upslope lands around the disturbed areas;
6. Location of all soil and other material stockpiles;
7. Location and type of proposed erosion and sediment control measures;
8. Site rehabilitation proposals including schedules;
9. Frequency and nature of any maintenance program;
10. Other site specific soil or water conservation structures;

Note: Further guidelines on the preparation of ESCP's are provided in the NSW Housing Department Publication "Managing Urban Stormwater".

To minimise erosion/sedimentation problems"

1. Minimise the length and steepness of the slopes;
2. Limit the time during which unprotected graded areas are exposed to wind and rain;
3. Intercept, divert and safely dispose of clean run-off flowing on all disturbed or critical areas. Including soil stockpiles;
4. Erect sediment fences down slope of disturbed ground and site stockpiles to prevent sediment running into the surface water drainage system or waterway.
5. Insert straw bales around gully pits to catch sediment before and site works commence;
6. Install permanent stormwater drainage works as the first stage of construction;

7. Reduce run-off velocities by minimising the length of the flow path constructing channels with gentle gradients and by providing rough linings to the steeper channels;
8. Control waste water discharge from any dewatering, washing out of concrete trucks/mixers, washing vehicles or plant through the use of pump trays, temporary lined sedimentation basins of filtration tanks/systems.

2.0 Program

Clearing is started by removing what is required for the drainage system (catch drains, cross drainage, culverts and sediment control structures).

General clearing and topsoil stripping operations should not be commenced until the major earthworks operations are ready to begin.

During the earthworks operations, take care to dispose of run-off from the construction site without causing silt and sediment to enter natural watercourses. The permanent drainage systems should be constructed at the earliest opportunity. Additional temporary drainage measures may be required during the construction to control the run-off from exposed slopes. These short-term erosion controls are progressively implemented and will require frequent alteration.

All earthworks activities should be co-ordinated and completed in stages to avoid leaving large areas exposed for long periods.

Re-vegetation should be carried out progressively as the earthworks operations proceed.

3.0 Drainage Structures and Erosion Protection

3.1 Catch Drains

To control erosion, catch drains are located at the top of proposed cuttings where the natural run-off drains toward the cutting. They are used to divert water to diversion drains or to the inlets of cross-drainage culverts to avoid mixing run-off from outside the construction area with any sediment-laden water.

Drains are stabilised with vegetation, stone pitching or concrete lining. Stabilisation with vegetation is preferred wherever practicable. Synthetic woven fabric or jute mesh will provide temporary protection until vegetation establishes. In steep terrain or highly erodible soil, stone pitching or concrete lining may be required.

3.2 Diversion drains

Diversion drains take the form of a channel, constructed along a slope, with a minor ridge on its lower side. They are used to protect slopes by intercepting surface water and diverting it to a stable outlet at a non-erosive velocity.

When used for erosion control, diversion drains intercept water from catch drains and intercept water from outside the construction area flowing towards the toes of embankments.

3.3 Through Drainage Culverts

Through drainage culverts are required where the route of the road intercepts creeks, depressions and natural drainage channels.

At culverts, water should generally enter and discharge at the natural surface, since changes in level may cause erosion. Outlets should be suitably protected to prevent scour by using rip-rap, gravel baffles etc.

3.4 Energy Dissipators

Energy dissipators are used to reduce flow energy, and therefore erosion potential, by interrupting the flow of surface water in a channel.

When required, details of energy dissipators will be shown on the road plan or ESCP.

4.0 Drainage Structures for Sediment Control

4.1 Sediment Traps

These are used to filter run-off from small areas of the site. They are designed to collect sediment before it enters culverts, channels or natural watercourses. Typical sediment traps include silt fences, hay bales, drop inlet structures, gabions and sandbags filled with gravel or stone.

4.2 Sedimentation basins

These are dam type structures, designed to still run off from the construction site and allow sediment to settle before the run-off enters the natural watercourse. It is preferable that basins be located away from the natural watercourses so that they receive run-off only from the area disturbed by construction. Where a culvert is to be constructed in a natural watercourse, sedimentation basins are best sited adjacent to the culvert inlet and outlet clear of the watercourse. Access should be provided for maintenance purposes.

4.3 Diversion drains

Diversion drains take the form of a channel, constructed across a slope, with a minor ridge formed on the lower side. They are used to protect slopes by intercepting surface water diverting it to a stable outlet at a non-erosive velocity.

As sediment control measures, these drains are used where practicable to collect run-off from exposed areas. By providing diversion drains at regular intervals along the toe line of the batter. The sediment-laden run-off may be dispersed through sediment traps into stable land areas.

4.4 Batter toe drains

Batter toe drains are required where it is not possible to divert run-off from batter slopes to stable locations. These drains are located at the toes of fill batters and are designed to collect run-off from batter slopes and direct it through sediment traps to drainage culverts or natural watercourses. Drains should be suitably lined to prevent scour.

5.0 Temporary Erosion and sedimentation Control

5.1 General

Temporary drains and temporary sediment traps used during construction should be provided by construction personnel as and when required. This will allow sediment-laden run-off top be disposed

of without causing serious damage until the permanent drainage system has been fully installed and is functioning properly.

5.2 Temporary Drains

Run-off from areas exposed during the works can be controlled by temporary contour and diversion drains. These drains generally take the form of a channel constructed across a slope, with a ridge on its lower side.

a. Contour drains

Contour drains are drains which follow points of the land of approximately the same elevation. They should be provided immediately after a construction site is cleared to intercept and divert run-off from the site to nearby stable areas at non-erosive velocities. The drain should be formed with gentle grade and spaced at intervals between 20m and 50m depending on the erodibility of the exposed soil.

b. Diversion drains

Diversion drains should be provided across haul roads and access tracks when these are identified as potential erosion hazards due to either, their steepness, soil erodibility or potential for concentrating run-off flow. The drains intercept and divert run-off from the road or track to stable outlets. Close spacing of these drains is generally required to maintain run-off at non-erosive velocities.

b. Silt traps and Fencing

Silt fencing should be installed down slope of the stockpiles and embankment batters prior to re-vegetation. Straw bale check dams should be placed along the drainage lines to intercept dirty water and trap sediment. Silt fencing and ay bales need to be embedded into the ground to be fully effective.

6.0 Construction Methods

The following techniques will assist in minimising scour of new-formed fill batters by diverting run-off from the formation away from the batter until vegetation has established;

- Shaping the fill with an artificial super-elevation during earthworks so that the run-off is directed towards the upstream edge of the formation. The formation should also be “hogged” above the line of any cross-drainage culverts so that run-off can be directed to sedimentation basins or traps located at both sides of the culvert inlet;
- At the completion of the earthworks, construction of relatively impervious sub-base and base layers, construction of berms at the edge of the fill to contain run-off inside the construction area. Run-off can be drained to the toes of batters by flexible plastic chutes spaced at suitable intervals. These measures can be removed once vegetation has been established on the batter.

6.1 Outlet Protection

At drainage outlets, it may be necessary to make temporary protection measures, such as crushed stone, to diffuse concentrated flows and prevent scouring.

7.0 Inspection and Maintenance

7.1 Sediment Basins

Sediment Basins should be cleaned out the accumulated sediment has reduced the capacity of the basin by about 60% or if the sediment has built up to within 300 mm below the spillway crest.

Accumulated sediment must be removed from permanent sedimentation control structures in such a manner as not to damage the structures.

7.2 Inspections

All temporary erosion and sedimentation control works shall be inspected weekly or within 24 hours after each rainfall event in excess of 10mm in 24 hours and during periods of prolonged rainfall using the attached Inspection Report.

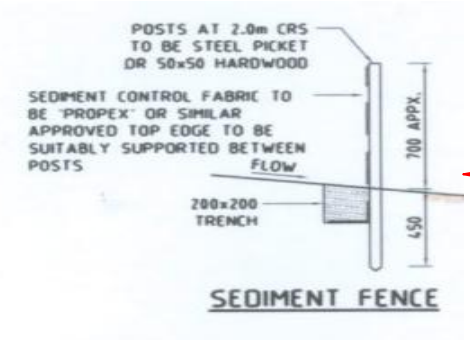
8.0 Implementation

1. Erosion and sediment control devices shall be implemented on site prior to commencement of works and shall be inspected at a minimum of weekly intervals and within 24 hours of all rainfall events;
2. Regular routine maintenance shall be undertaken to replace damaged sediment control structures, hydrocarbon booms and silt curtains as well as maintain and improve other temporary measures as required;
3. DECC to consult with NSW Department of Primary Industries (DPI) Fisheries and the RTA for the temporary or permanent obstruction of fish passage across any waterway;
4. Geo-fabric silt fences and/or barriers shall be provided at the base of all exposed earth work areas at the completion of each work day to prevent sediment laden runoff from leaving the demolition area and entering the river;
5. Temporary drains shall be used to catch sediment and outflow or spills from the demolition area with drainage into a siltation trap to avoid any direct discharge into the river;
6. Regular monitoring and maintenance of the sediment controls shall be implemented to ensure they perform in a fully functioning condition at all times;

DECC propose to manage the environment by undertaking the following as part of the ESCP for the demolition and civil works for the **CODCD Enabling Works Project**:

Installation of sediment fencing along the demolition perimeter fencing;

1. Providing water spray over the stockpile locations;
2. All stormwater inlets to be wrapped with geotextile fabric;
3. Installation of a cattle grid and vehicle cleansing facility;
4. Recycling all brick and concrete and steel won from the demolition of the buildings;
5. Hydrocarbon spill kits to be located on site (two locations).



Sediment fence detail

Erosion and Sediment Control Plan

The Erosion Control Plan is detailed on the Civil drawings – Refer to Appendix A1

DECC
ABN 93 118 380 484

Inspection Report for Temporary Erosion/Sediment Controls

Week Commencing: …….

1. Are temporary drains effective in diverting all runoff from exposed areas to silt traps or other sediment control devices before leaving the site? Yes/No

M	T	W	Th	F	S	Su

If YES, state location and action needed.

……
……
……
……
……
……
……
……

2. Have new areas been disturbed which need temporary drains? Yes/No

M	T	W	Th	F	S	Su

If YES, state location and action needed.

……
……
……
……
……
……
……
……

3. Are there any disturbed areas where work is sufficiently advanced for revegetation to be undertaken? Yes/No

M	T	W	Th	F	S	Su

If YES, state location and action needed.

……
……
……
……
……
……

……
……
……
……

4. Is any dirty run-off water by-passing or overflowing existing silt traps/sediment control structures? Yes/No

M	T	W	Th	F	S	Su

If YES, state location and action needed.

……
……
……
……
……
……

5. Do any silt traps/sediment control structures need maintenance or repair to operate effectively? Yes/No

M	T	W	Th	F	S	Su

If YES, state location and action needed.

……
……
……
……
……
……

6. Are any silt traps/sediment control structures more than 60% full or otherwise in need of cleaning out? Yes/No

M	T	W	Th	F	S	Su

If YES, state location and action needed.

……
……
……
……
……
……
……
……

7. Is the silt curtain working effectively in the river flow? Yes/No

M	T	W	Th	F	S	Su

If NO, state location and action needed.

……
……
……
……
……
……
……
……

8. Is the boom working effectively in the river flow? Yes/No

M	T	W	Th	F	S	Su

If NO, state location and action needed.

……
……
……
……
……
……

Inspected By:…… Signed…….

Date of Inspection: ……..

PART 6: AIR QUALITY MANAGEMENT PLAN

1.0 Principles

DECC will plan and carry out the whole of the work under the Contract to minimise the emission of smoke, dust, cement dust, pesticides and other substances into the atmosphere.

DECC will comply with the requirements of the POEO Act and any conditions of licenses or approvals in relation to maximum air pollutant levels.

2.0 Air Quality Management

Best management practices shall be implemented for minimising off-site dust impacts from the project. Steps include the following:

1. Tailgates of all vehicles transporting materials on public roads shall be securely fixed, sealed and loads covered during transportation;
2. Exhaust systems of construction plant, vehicles and machinery shall bee maintained in accordance with manufacturers specifications and the exhaust emissions shall comply with the requirements of relevant legislation;
3. Odour suppression includes: ceasing works in high wind activity; having a dedicated covered storage/stockpile area and removal of contaminants/chemicals within storage jars/containers prior to demolition works;
4. Temporary screens shall be used to ensure the containment of airborne material and as a safety feature for workers at height;
5. Demolition work shall be regularly monitored and a dedicated water cart and/or water sprays shall suppress dust as required;
6. Removal of mud spilt by demolition equipment on to public roads and or other sealed pavements;
7. Develop demolition methodologies that reduce the generation of dust ie sawcut and crane the bridge into large sections – minimise hammering;
8. Process concrete sections craned and sawcut in the “process area”;
9. The process area is to have localised water sprays;

Other steps that may be introduced at the discretion of DECC include:

1. Removal of mud from wheels and bodies of haulage equipment before it enters public roads;
2. Construction of cattle grids and/or truck wash downs and wheel wash facilities;
3. Erection of dust screens around and/or spraying of stockpiles with suitable stabilising agents other than water;
4. Stopping dust generating activities which cannot be adequately controlled by water;
5. Maintaining dust control equipment so that this equipment is available when required, including periods of dust generating activities or high wind speed;
6. Maintaining exhaust systems of demolition plant, vehicles and machinery in accordance with manufacturer’s specifications and undertaking periodic visual checks of exhaust systems emissions;
7. If dust levels are high, dust monitoring may be undertaken to confirm levels are within permissible levels

Note: During hazardous materials removal (asbestos) an air monitoring program and strategy will be implemented. Details of the Asbestos air monitoring will be outlined in the **Project Management Plan.**

PART 7: NOISE, VIBRATION AND AIR BLAST MANAGEMENT PLAN

1.0 Principles

DECC will plan and carry out the whole of the work under the Contract to minimise the effect of noise and vibration during the project. DECC will comply with the requirements of the POEO Act and any conditions of licenses or approvals in relation to maximum noise and vibration levels including the Noise and Vibration report prepared by Acoustic Solutions.

2.0 Noise, Vibration& Air Blast Management

The following measures will be considered to minimise the impact of noise as a result of the demolition works:

1. Undertake ambient noise and vibration monitoring – Acoustic Solutions;
2. Undertake noise and vibration monitoring during the demolition works at locations agreed with Uni of Sydney as outlined in the Acoustic Solutions report – Acoustic Solutions;
3. Substitution by an alternative process;
4. Restricting times when noisy work is carried out;
5. Placement of work compounds, parking areas, equipment and material stockpile sites away from noise sensitive locations;
6. Where noise barriers/walls are to be constructed, programming this as early as possible to reduce noise impacts from other construction work on neighbouring residents;
7. Screening or enclosures;
8. Consultation with effected residents and/or building tenants;
9. Establish a register on receipt and course of action taken on all complaints received;

The demolition plant used on Site will be:

1. Fitted with noise suppression devices;
2. Maintained in an efficient condition;
3. Operated in a proper and efficient manner; and
4. Limited to: 1 x bobcat; 1 x 5T excavator; 1 x 30T excavator.

The following demolition methodology will be used to minimise noise generated on site:

1. Where possible hammering works required to process the concrete and steel reinforcement to be confined to after 9am (if possible);
2. Erect scaffold to Building 92 (if required) – Scaffold to be fitted with chain and shade (dust control) and carpet will line the scaffold as a noise attenuation measure;
3. Position stockpiles for processing below the level of adjoining properties;
4. The concrete processing will be carried out by “munchers” should noise by hammering exceed acceptable limits upon receipt of complaints from neighbours (affected properties).

Due to the nature of demolition and the immediate surrounds the effect of vibration is minimal. However, the following noise and vibration monitors will be established**:**

1. **Centenary Building (1 off noise and 1 off vibration monitor);**
2. **RPA Hospital (1 off noise);**
3. **RMC Gunn Building (1 off noise).**

A Dilapidation Report will be carried out by DECC prior to the commencement of works. The dilapidation report will include the immediate surrounds, roadways and any properties within 50 metres of the works.

PART 8: VEGETATION, FAUNA and TREE MANAGEMENT PLAN

1.0 Principles

DECC will plan and carry out the whole of the work under the Contract to minimise the effect of demolition activity on the existing vegetation and Fauna.

DECC will comply with the requirements of applicable legislation and any conditions of licenses or approvals in relation to the requirement to maintain the integrity of the existing vegetation. Clearing, lopping or trimming of vegetation must not occur without the required approvals under the National Parks and Wildlife Act 1974 (NSW), Native Vegetation Conservation Act 1979 (NSW), Threatened Species Conservation Act 1995 (NSW) and Environmental Planning and Biodiversity Act 1999 (Cth).

The trees that are to be removed and those that are to remain are detailed on the Architectural drawings that form **Appendix A2**.

2.0 Vegetation and Fauna Management

1. Clearing shall be kept to an absolute minimum. Trees and vegetation to be retained near the works shall be protected where necessary;
2. Stockpiles and other activities shall not occur within close proximity of trees to be retained (ie within the drip line of the tree canopy);
3. Where trees are close or within the demolition area, tree enclosures will be constructed;
4. All exposed earthworks including the creek banks and former highway approaches shall be stabilised as quickly as possible and revegetated with local indigenous species at completion of demolition;
5. Environmental resources shall be maximised by retention of existing vegetation including riparian vegetation and resources where possible;
6. Native vegetation removed as a result of demolition works shall be chipped on-site and reused as mulch in revegetation works;
7. Any suitable vegetation shall be reused as mulch as a first priority, provided to community groups as firewood and/or disposed of at a legally operating recycling facility;
8. Parking of vehicles or storage of materials is not be permitted beneath the canopy of trees;
9. Any exotic vegetation, noxious weeds, associated leaf litter and sool cleared for the demolition works shall NOT be used in the revegetation of the disturbed areas;
10. Propagules of all noxious weeds shall be removed from the demolition area for disposal at a legally operating disposal site;

The following steps will be adopted for the protection of fauna, trees and vegetation:

1. The site will be delineated with “no go areas” to minimise the possibility of disturbance;
2. Areas disturbed will be kept at a minimum with an emphasis on placing equipment, shedding and vehicles on existing hardstands;
3. The processing of the concrete will be carried out on the existing redundant approaches (hardstands) ensuring existing vegetation is not disturbed;
4. Tree Protection measures to be installed in accordance with Contract Specification with reference to the “Preliminary Arboricultural Impact Report” dated May 2007;
5. All trees listed for retention must be protected from damage during site works

PART 9: TRAFFIC MANAGEMENT PLAN

1.0 Principles

The Traffic Management Plan has been prepared specifically for the requirements of the CODCD Enabling Works Project at the University of Sydney.

Purpose of TMP

This Traffic Management Plan (TMP) details how DECC propose to manage traffic movements entering and exiting the site (project generated traffic) as well maintaining the traffic conditions of the public using surrounding roads.

TMP Consultation

This Traffic Management Plan (TMP) was developed in consultation with the following:

1. George Petropoulos (DECC – Supervisor)
2. Frank Lombardi (DECC – Project Manager)

Traffic Management Risks

A **risk assessment** was carried out to identify the risks associated with traffic movements. The major risks are noted below:

1. Entering site at the Parramatta Road Gate;
2. Exiting site at the Parramatta Road Gate;
3. Truck movements within the site;
4. Pedestrian movements on the footpaths.

The following **control measures** will be implemented to mitigate the hazards of the above risks.

1. **Entering site at Parramatta rd Gate (Approx 3 semi loads per day (avg) for 16 week period)**

- ✓ The site will adopt a LEFT-IN Principle;
- ✓ Site vehicles will adhere to existing speed zones;
- ✓ Traffic controls/signs will installed to warn pedestrians/motorists of demolition works;
- ✓ Traffic controls/signs will be installed to warn pedestrians/motorists of turning vehicles;

2. **Exiting site at Parramatta Rd Gate (Approx 3 semi loads per day for 16 week period)**

- ✓ The site will adopt a LEFT-OUT Principle (where possible);
- ✓ Flagmen to be used for vehicles not using LEFT-OUT principle;
- ✓ Site vehicles to adhere to existing speed zones;
- ✓ Traffic controls installed to warn pedestrians/motorists of demolition works;
- ✓ Traffic controls/signs will be installed to warn pedestrians/motorists of turning vehicles;

3. **Truck movements within the site;**

- ✓ Delineate truck movement area and loading area from demolition work zones;

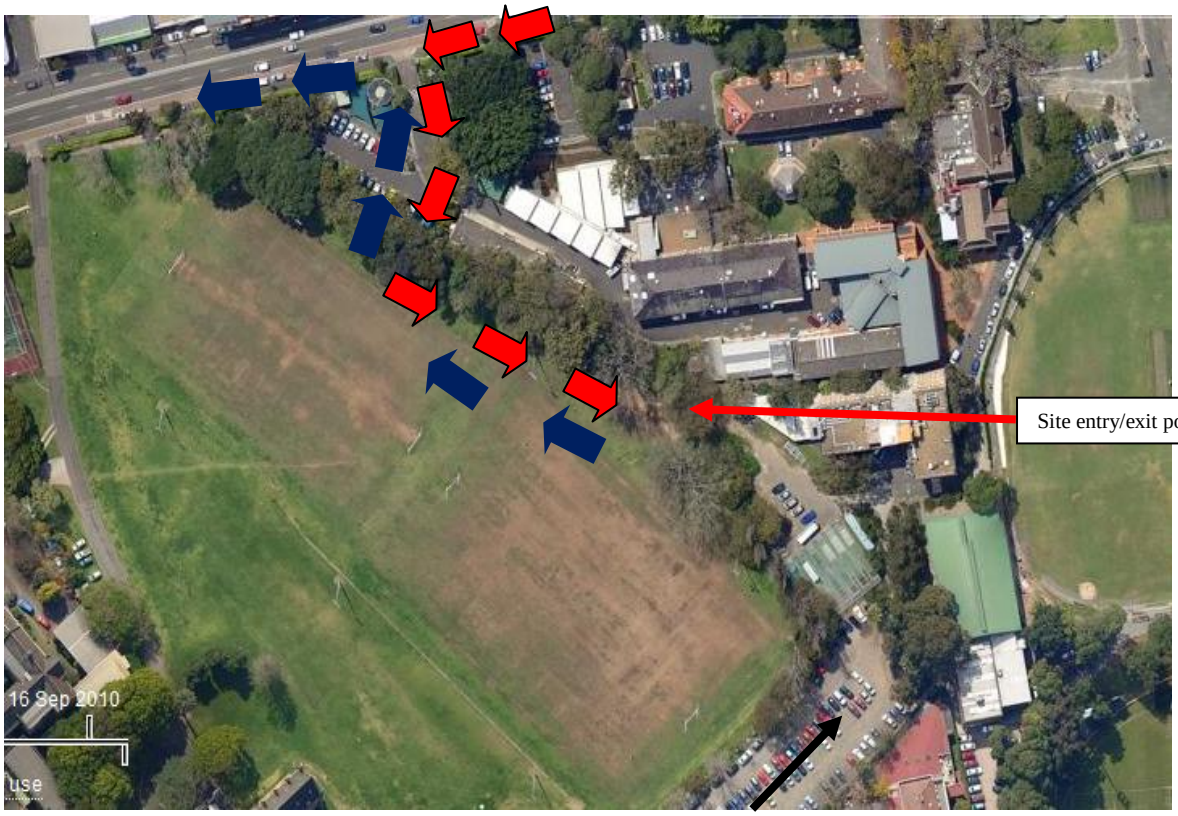
4. **Pedestrian movements along footpath, oval and hospital**

- ✓ Barricade and prevent pedestrian interface/accessing at high risk areas;
- ✓ Divert pedestrians to alternate footpaths

1.5 Traffic Controls and Vehicle Management Plans

DECC will engage accredited traffic controllers to develop the Traffic Control Plans and Vehicle Management Plans.

The Plans will be developed in accordance with the following:



Trucks entering site – "Left In" Principle (Approx movements in = 3 semi loads per day on average)

Trucks exiting site – "Left out" Principle (Approx movements out = 3 semi loads per day on average)

Machinery floated (during approved hours ONLY) ie excavators and crusher from Missenden Road

APPENDIX A – SITE LAYOUT DRAWINGS

APPENDIX A1 - Erosion and Sediment Control Drawings

APPENDIX A2 – Tree Retention and removal drawings (Architectural Drawings)

APPENDIX A3 – Arbocultural impact Report (May 2007)

APPENDIX A4 – Hazardous Materials Report

APPENDIX B – Possible Licences/Approvals/Permits/Notifications

Legislation	Approvals/Permits required	Obtained (yes/no)Special conditions of note
Environmental Planning and Assessment Act	Construction Certificate from Private Certifier or from the City of Sydney Council	Not required
Contaminated Land Management Act 1997	Construction works and remediation of any contaminated materials if identified must comply. Where contaminated material is identified, there is a duty to report to the EPA.	If required
Heritage Act 1977	Approval is required before the excavation or disturbance of non-indigenous relics.	If required

Note: DECC to obtain approval from Workcover to commence demolition Works via submission of "Notification to commence demolition Works"

APPENDIX C – Emergency Contacts

Organisation	Name	Contact Number
Emergency Controller (Demolition Environmental Civil Contractors)	*George Petropoulos*	0406 428 832 george@decc.com.au
Principals Authorised Person	Andrew Durbridge	0409 317 653 adurbridge@dblproperty.com
Project Manager (DECC)	Frank Lombardi	0449 250 907 frank@decc.com.au
Project Engineer	Brenton Watson	 Brenton@decc.com.au
Site Foreman (DECC)	Ryan Kinney	0449 250 905
Environmental Manager	George Petropoulos	0406428832
NSW Police	Operator	000
NSW Fire Brigade	Operator	000
NSW Ambulance Service	Operator	000
St Vincents Hospital		8382 1111 30 Victoria Street, Darlinghurst NSW
Rural Fire Services	*In an emergency:* *Information line:*	000 1800 679 737
SES		**132 500 (Emergency)** 4251 6111
Poisons Information	Operator	131126
Department of Energy and Climate Change (DECC)	*Operator*	131 555 (02) 9995 5555
DWE (previously DIPNR)	*Operator*	(02) 8281 7777

PRIOR TO ANY ACTION, IDENTIFY MATERIALS INVOLVED & OBTAIN PERSONAL PROTECTIVE EQUIPMENT

APPENDIX D - Environmental Spill Incident Management Procedures

PRIOR TO ANY ACTION, IDENTIFY MATERIALS INVOLVED & OBTAIN PERSONAL PROTECTIVE EQUIPMENT

	Action	Responsibilities	Comments
1	Stop further leak	Person causing/finding leak	If leak from oil drum, roll drum so that leak area is uppermost. If leak from pipe, close valve etc.
2	Inform supervisor	Supervisor/Person	Stop human and vehicular traffic and isolate area.
3	Determine the site of the leak	Environmental Manager/ Construction Manager	For major leaks ring 1300 851 050 and notify superintendent. If spill has escaped offsite/into creek/ ring Environmental Manager
4	Form barrier around leak/spill	Foreman / Superintendant	Use foam barrier material in kit. Use soil/sand if kit not available.
5	Where possible divert water suitably sized operational sediment control device/Emergency response unit.		
6	Stop the spreading of leak	Foreman / Superintendant	Transfer fuel/oil from spill drum into another drum etc.
7	Put barrier around drains/outlets	Foreman / Superintendant	Seal drain grates by putting sand bags etc. around them.
8	Obtain oil spill kit* and apply oil absorbent on spill	Foreman / Superintendant	Use "absorbent W" or equivalent.
9	Clean up/remove absorbent material to bin **	Foreman / Superintendant	Use "Chem-Oil-A-Way" or equivalent for clean-up of area. Use brush/pan provided in kit.
10	Clean up hard surface by excavating contaminated soil	Foreman / Superintendant	Stockpile contaminated material in designated area
11	Drum roll as much loose surface as possible. Supervisors	Foreman / Superintendant	Stockpile contaminated material in designated area
12	Inform Environmental Manager and fill in Incident Log Form	Environmental Manager	Record incident and review procedures
13	Advise relevant authority/s as necessary.		

* oil spill kit available at both compounds.
** bin located at Construction Compounds.

D1 - Emergency Procedure for the breakdown of Sediment Control Devices

	Action	Responsibilities	Comments
1.	Inform area supervisor of problem/exact location and the magnitude	Person causing/ discovering the problem	Assess whether the problem can be promptly rectified
2.	If uncontrollable, notify sediment control crews	Supervisor	State the magnitude of the problem and the materials required
3.	Divert flow away from existing waterways	Supervisor & available machinery	Stop vehicular traffic and construct an earth bund or diversion drain
4.	Form a barrier around the affected area. Establish emergency berm (earth or sandbags) to trap sediment or reduce flow. Where possible divert dirty water to suitably sized operational sediment control device	Emergency response unit	
5.	Work on the restoration of original control device	Supervisor/Operators	Stem the flow and replace damaged control device
6.	Assess impact and devise remedial action for affected waterway and embankment	Environmental Manager	Proceed with water quality monitoring
7.	Apply buffering solutions/agents if required	Emergency response unit	Monitor affects of this application
8.	Clean away sediment build-up deposits prior to departing area.	Supervisor/Operators	Utilise available machinery
9.	Record all stages of event on Environmental Incident Report form and investigate causes	Environmental Manager/Supervisor	Witness accounts/ photographs/ monitoring results
10.	Review remedial actions and ascertain whether process of response can be improved	Environmental Manager/Supervisor	Initiate change in the process if required
11.	Review incident to determine if environmental system failure. Improve system if required.	Environmental Manager/Supervisor	Initiate change in system if required

D2 - Emergency Procedure for Preparing for Impending Storm Events

	Action	Responsibility	Comments
1.	Awareness of impending significant storm event and notification to all supervisors	Construction Managers	Forecasts from Weather Bureau
2.	Notify sediment control crews	Supervisors	
3.	Inspections to be undertaken of sediment control devices in critical areas	Supervisors	Assessment of their condition or status
4.	Ensure silt fences/hay bales/ sandbagging repairs performed	Sediment control crews/ Supervisors	Sediment build-up removed Devices in good condition
5.	Sediment basins to be able to function at full capacity and diversion drains are placed	Sediment control crews/ Supervisors	Discharge treated stored waters Remove sediment build-up
6.	Ensure stockpiles are in a state of stability and not in a position to impact on public thoroughfares/watercourses	Supervisors	Packed/sealed/covered. Surrounded on low side with sediment fencing
7.	Ensure that hazardous substances storage areas/ bunds are in order	Supervisors	Stored appropriately Spillage's cleaned up
8.	Ensure adequate supplies of control devices are on hand	Sediment control crews	Sediment fencing/ sandbags/hay bales/etc.
9.	Personnel to be on hand for emergency work during storm event	Supervisors	Preparedness for breakdowns

D3 - Contingency plan: Management of contaminated water generated by an emergency situation

1. Contaminated Water resulting from an Emergency
2. Person discovering the pollution incident to immediately contact the Forman/Superintendent.
3. Foreman/Superintentdent to contact the Environmental Manager.
4. Environmental Manager to contact the EPA Pollution line, Fire brigade and other relevant Authorities, such as Fisheries NSW as soon as practicable after the incident
5. Superintendent/Foreman to ensure source of pollution is contained. Divert flow away from waterway, form barrier around the affected area and where applicable use spill equipment to absorb spill.
6. Superintendent/Foreman to ensure emergency beam (mini boom (for oil), earth, sediment fences or sandbags) is established to prevent water flow and further pollution downstream.
7. If the contaminated water can be contained onsite, ie. within a sedimentation basin, Environmental Manager to continue water quality monitoring and dispose in accordance with DEC requirements and/or in accordance with DEC Waste Guidelines.
8. If pollution within an existing waterway then implement mitigation measures as directed by EPA and other relevant authorities.

D4 – RTA Environmental Incident Reporting Procedure (to be adopted for the CODCD Enabling Works Project)

INCIDENT LEVELS

The use of the terms “minor” and ”major” for this Procedure defines the level of response required by staff:

- “minor” indicates that work crews can manage the incident as part of their usual duties.
- “major” indicates that assistance other than the regular work crews would be required and that the incident must be reported to a higher level and may need to be reported to the DECC and other regulators.

It is the responsibility of managers at the local level to decide if an environmental incident is minor or major. In determining the appropriate category for an incident, consideration must be given to the potential for an environmental incident to escalate from its current status and/or level of impact.

Minor (Environmental) Incident:

An incident that has an impact or is likely to have an impact on the environment but can be readily handled by work crews, with limited or no adverse impacts on the environment, clients, stakeholders, community, RTA operations or the well-being of staff. This level of incident is typically resolved as part of the normal operations of the work group or by pre-arranged response protocols and is reported at the local level, verbally to management and through the Environmental Incident Report Form (refer Appendix 3).

Major (Environmental) Incident:

An incident of magnitude that requires considerable levels of resourcing support (or potential to develop to such magnitude) and has, or is likely to have, significant impact (within the meaning of the POEO Act) on the environment, clients, stakeholders or community. This includes incidents that:

- require notification to other authorities (eg DECC, Hazmat, Health, Agriculture, Fisheries); involve a high level of work to clean up;
- have widespread actual or potential adverse impact on the environment or community health; and/or
- have potential to have an adverse impact on the well-being of staff or the public.

This level of incident must be reported **immediately** and escalated through reporting channels to management/environment staff verbally and a written form must be provided by the next working day (using the Environmental Incident Report Form – refer Appendix 3). This level of incident may need to be reported to the DECC.

It is the responsibility of the local management to report major incidents to local environment staff and to the Environment Branch. It is the responsibility of environment staff to whom the incident is reported to give advice on whether the incident must be reported to the DECC. If the relevant manager/environment staff cannot be contacted, project staff must notify the DECC pollution line directly.

INCIDENT REPORTING

It is important that there is consistency in the way that the environmental incident is reported. Therefore, incidents must be reported by project staff and project managers through the *Environmental Incident Report Form* (refer Appendix 3). The incident report form and any subsequent reports must include factual information. Speculation about the causes and outcomes must be excluded. The completed reports must be forwarded through environment staff to the EMS Coordinator in Environment Branch.

The information from the form will be entered into the Corporate Environmental Incident register for the purposes of record keeping, reporting (eg annual environment report) and to monitor and improve responses to environmental incidents. Directorates are encouraged to keep their own environmental incident registers to manage environmental issues at the local level.

Information contained in the form or report should be verified by the relevant Project Manager by checking:

- the initial reports of the incident – who made the first report, at what time, and what information was provided, what instructions for actions were given; and
- the incident diary or field notes kept by those involved in the incident – identify and
- investigate any inconsistencies.

Should initial forms or reports be subsequently found to have ambiguities or other errors, then these should be annotated with full explanation and clarification within the initial forms/reports. A copy of the original form/report must be retained on file.

Incidents which may have caused material harm to the environment or which are potential breaches of the POEO Act or conditions of environmental approvals may be investigated and prosecuted by the DECC. The General Manager Environment Branch must be contacted in relation to these incidents and document control must be observed. This includes any communications, documents, records, written statements or reports (for example, emails and file notes) internally between RTA personnel.

Under the POEO Act, the DECC can issue a Notice to Provide Information requesting any and all information regarding an incident to assist in their investigations of alleged pollution incidents, for example letters, emails, memoranda, drawings, files and other project information. The RTA must submit any information requested by the DECC. Communications with Legal Branch, for the purpose of obtaining legal advice in relation to incidents, may be subject to legal professional privilege. Documents subject to legal privilege are not required to be produced to the DECC under a Notice to Provide Information. Environment Branch will provide advice and will co-ordinate a response with Legal Branch. Legal Branch will assist in the investigation of incidents, prepare legal advice and assist with the preparation of reports to DECC.

DECC

ABN 93 118 380 484

RTA ENVIRONMENTAL INCIDENT REPORT FORM

Incident Report Number: (to be filled in by EMS Co-ordinator)_____

This form is to be completed: - for ALL environmental incidents which occur due to RTA works or on RTA worksites

- by Senior Site Management, Resident Manager, Works Supervisor, Project Manager

Remember to be succinct, stick to the facts and do not make assumptions. Only record information you know to be correct.

Project Name		**Region**
Date of Incident:	**Time of Incident:**	**AM/PM**
Duration of Incident: hr/min		
Description of Incident (provide a brief description of what happened during the incident)		
EXACT location of the incident: (include landmarks and features, nearest cross street, etc to make it easier to identify at a later date)		
Extent of incident: (provide sketch if appropriate and attach to this form)		
Quantity or volume of material escaped or causing incident: (provide a known amount or an estimate if quantity unknown)		
Estimate of distance to nearest waterway: (waterway can include stormwater drains and dry watercourses)		
Type of activity that caused incident: (what works were in progress at the time of the incident?)		
How was the incident identified ? (e.g. RTA employee, Council, community, complaint)		
Name & Contact of complainant: (where relevant)		

Type of Incident: (tick category)		
❑ Spill (including fuel, oil, waste material or other polluting substance)	❑ Erosion and sedimentation incident (Go to Schedule 1)	❑ Contaminated water discharge (if involves muddy water, go to Schedule 1)
❑ Noise Emission/Complaint	❑ Unauthorised/accidental damage to heritage item	❑ Unauthorised/accidental vegetation removal or harm
❑ Other (provide details)		

DECC
ABN 93 118 380 484

Level of Incident: (tick category)		
Level	**Example**	**Action**
☐ minor	e.g. no material has escaped the site or caused material harm to the environment – it is easy to clean up without additional assistance	Go to page 2 of this form
☐ major	eg material has escaped the site causing pollution of downhill/downstream areas which will require clean up involving other agencies and/or additional resources not available to local site management. Damage has occurred or is likely to occur to the environment.	Go to pages 2 and 3 of this form

Any other details of the incident (including any information which did not fit in spaces above, as well as any special circumstances of the day or the location):

What immediate actions/control measures were taken to rectify or contain the incident?

Any corrective/preventive actions undertaken?

Name:	Position:
Signature:	Date:

Note: If the Department of Environment and Climate Change does not need to be contracted , those first two pages of the completed form are to be sent / faxed to the relevant Environmental staff.

DECC
ABN 93 118 380 484

RTA ENVIRONMENTAL INCIDENT REPORT FORM **Page 3**

(ONLY complete this page if the environmental incident was reported to the Department of Environment & Climate Change (DECC))

To be completed by: the relevant Unit or Branch Manager – eg Senior Project Manager, Road Services Project Manager, Registry Manager, Vehicle Regs Manager	
Was DECC notified? YES / NO **Who Notified the DECC?** _____ **Name:** **Position:** **Notification method:** ☐ telephone ☐ on site **Date of notification:** / / **Time of notification:** _____ AM/PM	
Has there been a DECC Pollution Line Complaint? YES / NO	**DECC Complaint No:**
Other authorities notified and why:	

Name:	**Position:**
Signature:	**Date:** / /

If the DECC was contacted, ALL pages of the completed form must be forwarded IMMEDIATELY to the General Manager, Environment Branch. (Fax: 02 9218 6970)

Refer to the RTA's **Environmental Incident Reporting Policy and Procedure** *which is to be followed.*

APPENDIX E – PROJECT SWMS