

CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN	September 2019
Roseville College – SWELL Centre 27-29 Bancroft Avenue, Roseville NSW 2069	Rev 1

CONSTRUCTION & ENVIRONMENTAL MANAGEMENT PLAN

Roseville College - SWELL Centre
27-29 Bancroft Avenue, Roseville NSW 2069

September 2019

CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN	September 2019
Roseville College – SWELL Centre 27-29 Bancroft Avenue, Roseville NSW 2069	Rev 1

The Manager has developed this CEMP specifically for the above project.
The CEMP includes reference to the Principal Contractor's overall integrated management system requirements and critical issues associated with this project with regards to Work Health and Safety and the Environment.

Construction & Environmental Management Plan Revision Record				
Revision	Date	Revision	Prep. By:	Authorised By:
1	30/09/19	Revision 1	Paul Christopher	EPM
Company	Name and Address			Phone/ Fax
(PRINCIPAL CONTRACTOR) To be appointed Managing Director – Construction Construction Manager Project Manager Site Manager	To be Appointed			
Client Details (PRINCIPAL)	Roseville College 27-29 Bancroft Avenue, Roseville NSW 2069			Phone:
Consultant or Superintendent (SUPERINTENDANT)	EPM Projects Pty Ltd Jordan Graham			Mobile: Phone:
Register of Controlled Construction & Environmental Management Plans Issued				
Location & Person Issued to			Date	Copy No.
Controlled Copy - issued to EPM for DA Submission			30/09/2019	1

CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN	September 2019
Roseville College – SWELL Centre 27-29 Bancroft Avenue, Roseville NSW 2069	Rev 1

Table of Contents

SECTION 1 - INTRODUCTION	4
SECTION 2 - CONSTRUCTION METHODOLOGY & PROJECT PLAN	5
2.0 THE SITE AND PROPOSED CONSTRUCTION WORKS	5
2.1 SITE ACCOMMODATION & TEMPORARY SERVICES	6
2.2 SECURITY	8
2.3 ENVIRONMENTAL MANAGEMENT AND CONDITIONS	8
2.4 TRAFFIC MANAGEMENT	17
2.5 OH&S	17
2.6 COMMUNITY INFORMATION	17
2.7 PRE-COMMENCEMENT CHECKLIST	18
2.8 PLANNING FOR EMERGENCIES (ACCIDENT OR MAJOR INCIDENT REQUIREMENTS)	18
2.9 RESTRICTION OF ENTRY TO SITE	18
2.10 PROTECTIVE EQUIPMENT REQUIREMENTS	19
2.11 SPECIFIC ENVIRONMENTAL PROTECTION METHODS REQUIRED FOR PROJECT	19
2.12 HAZARDOUS MATERIALS AND DANGEROUS GOODS REGISTER	19
2.13 EMERGENCY CONTACT NUMBERS	20
2.14 ENVIRONMENTAL INCIDENTS AND EMERGENCIES	20
2.15 ENVIRONMENTAL TRAINING	20
2.16 CEMP REVIEW	21
SECTION 3 - DUST MANAGEMENT PLAN	22
3.0 INTRODUCTION	22
3.1 SITE LOCATION	22
3.2 DUST SOURCES	23
3.3 DUST CONTROL CRITERIA	23
3.4 DUST CONTROL MEASURES - CONSTRUCTION PHASE	23
3.5 MONITORING AND REPORTING	23
3.6 CORRECTIVE ACTIONS	24
3.7 SUMMARY CHART OF DUST CONTROL MEASURES	24
SECTION 4 - COMMUNITY CONSULTATION AND COMPLAINTS HANDLING	27
4.0 INTRODUCTION	27
4.1 OBJECTIVES	27
4.2 COMPLAINT MANAGEMENT PROCEDURE	27
4.3 ONGOING MONITORING AND CONTROLS	27
4.4 COMMUNITY CONSULTATION	28
SECTION 5 - WASTE MANAGEMENT PLAN	29
5.0 INTRODUCTION	29
5.1 WASTE REDUCTION	29
5.2 WASTE MANAGEMENT	31
5.3 TRAINING	33
5.4 WASTE MANAGEMENT - CONSTRUCTION WORKS	33

CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN	September 2019
Roseville College – SWELL Centre 27-29 Bancroft Avenue, Roseville NSW 2069	Rev 1

Section 1 - Introduction

As part of the new **SWELL Centre** for **Roseville College** a preliminary Construction & Environmental Management Plan (CEMP) has been prepared in support of the submission of the Environmental Impact Statement and the Development Application to the Department of Planning and Environment.

This Preliminary CEMP will be used as a guide by the appointed Principal Contractor for the works undertaking the works to ensure the works are completed in a safe, orderly and efficient manner.

While the CEMP addresses the relevant requirements of the development, it is noted that the Contractor undertaking the works may further develop the Plan and tailor it to meet the specific requirements of each phase of the project. A formal review process will be put in place to specifically monitor and address traffic access to the site for the construction.

This Contractor will progressively develop specific inspection, test plans and checklists to meet the outline performance criteria in each section of the attached plan as well as being the contact for Construction Environmental Management issues.

An information and complaints handling process will be maintained by the Contractor where the contact number will be displayed at site entrances for contact and lodgment of complaints during construction activities. Any construction information or complaints will be investigated, and a reply will be forwarded to the respective enquiry.

The CEMP addresses the following items:

- The general constraints of the site and an overview of management issues to be addressed. Community Consultation and Complaints Handling, incident reporting, regular reporting and access to information.
- Constructions Methods and Site management issues
- Construction Traffic Management Plan
- Stormwater Management Plan
- Unexpected finds protocol
- Landscape Management plan
- Communication consultation and complaints handling.

CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN	September 2019
Roseville College – SWELL Centre 27-29 Bancroft Avenue, Roseville NSW 2069	Rev 1

Section 2 - Construction Methodology & Project Plan

2.0 The Site and Proposed Construction Works

The site is located at 27-29 Bancroft Avenue, Roseville. The site can be accessed from Bancroft Avenue and via the rear of the site through Recreation Avenue.

The site is located within the existing Roseville College campus and the campus is bounded by substantial residences and an adjacent tennis club to the South of the site.

The current site is currently the location for sports courts and an existing residence that is required to be demolished.

The site development works include the following:

- Demolition of the existing courts
- Demolition of the existing residence to the East of the site
- Bulk Excavation and shoring works
- Civil & Drainage works
- Construction of a two-storey car park with concrete roof structure
- Construction of new gym, classrooms and concrete roof structure
- Construction of an indoor pool complex with a concrete roof structure
- Construction of roof top playing courts
- Remedial and widening works to Recreation Avenue
- Fencing and Landscaping

The building site will be managed by the appointed Principal Contractor upon handover of a vacated site ready for the dilapidation inspection and reporting and establishment of the site perimeter security and site amenities to allow for the commencement of the works.

Construction Program / Staging / Elements

Project Commencement: Mid 2020
 Project Completion: July 2021

The detailed Construction Program for the project is attached in Appendix B. The project can generally be broken into the following stages:

Enabling works

- Includes site establishment, sediment controls, fire services re-routing and Recreation Avenue roadworks.
- Site works including Demolition of existing structures, shoring systems, bulk earthworks, footings and drainage commencement.

CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN	September 2019
Roseville College – SWELL Centre 27-29 Bancroft Avenue, Roseville NSW 2069	Rev 1

Building Structure

- Includes Concrete structure including cast insitu wall structure and columns.
- Suspended slabs to the carpark, plant and classroom areas.
- Suspended concrete roof construction over the entire complex.
- Structural Steel elements to the façade and shade structures that form the playing court areas.

Building Envelope

- Includes Roofing finishes and Façade Finishes.
- This stage will overlap with the building structure and internal services and finishes stage.

Internal Services & Finishes

- Includes installation of all fire, electrical, hydraulic and mechanical services. Includes internal wall and ceiling linings and fix off through to completion.
- This stage will overlap with the Building envelope and external finishes stages.

External Works

- Includes pavements, landscaping and external metalwork trades.
- Will overlap with the internal finishes stage.

The following is a list in order of all major items to be undertaken during construction:

- Demolition works – existing residence and court area
- Bulk Excavation
- Piling/Shoring works
- Detailed Excavation
- Formworks and concrete structure trades
- Stormwater
- Structural Steel
- Wall Cladding systems
- Fire, Hydraulic, Mechanical & Electrical Services
- Internal carpark concrete slabs
- External concrete slabs
- Aluminium Windows & Louvres
- Fitout
- Roller shutters
- Extensive Landscaping and Fencing Works

2.1 Site Accommodation & Temporary Services

Site Accommodation and Site Compound

It is proposed that the site compound will be located along the Bancroft Avenue frontage. Pedestrian visitor and worker access will be via Bancroft Avenue with

CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN	September 2019
Roseville College – SWELL Centre 27-29 Bancroft Avenue, Roseville NSW 2069	Rev 1

adequate separation between construction workers and the Roseville College school entry.

Further access to the existing Hydrant Booster assembly and a corridor through and into the School on the Eastern boundary of the construction site must be maintained at all times.

Fire Rescue NSW will be advised and invited to inspect the site post site establishment to ensure the local Brigade are aware of the site conditions and possible impairments to the fire response measures that may be affected by the ongoing construction works.

Primary delivery access will be via Recreation Avenue and where necessary secondary materials delivery will be via Bancroft Avenue for major concrete pours and materials deliveries which cannot be achieved via Recreation Avenue.

The Bancroft Avenue boundary set-back area will be utilised for site accommodation, the storage of construction materials and plant, along with the housing of storage containers. The entire site will be fenced at all times.

Temporary Services

Power to the site compound will be taken from a new temporary supply provided via the permanent supply located on site once the new infrastructure has been completed and made available. Sufficient street temporary power sources are available either via Bancroft or Recreation Avenue.

- The temporary switchboard will be erected at the site compound and reticulated within the site to suit requirements.
- Power for each work area will be taken from the nearest accessible switchboard. A separate temporary distribution board containing ELCB's will be provided at each work area for protection of the workers and the power source.
- Water Service – temporary water service connection to feed the site compound area will be taken from the permanent water point located on site once the new infrastructure has been completed and made available, until then all site water will be bottled water for human consumption and storage containers for sanitary use. Temporary water supplies will be run to the site from this source.
- Sewer Service – A temporary sewer connection will be made for the connection of the ablution facilities within the site compound.

Temporary Toilets

Temporary ablution facilities will be installed within the site compound area to service the construction staff, these facilities will be connected to both water and sewer at main compound.

CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN	September 2019
Roseville College – SWELL Centre 27-29 Bancroft Avenue, Roseville NSW 2069	Rev 1

Make Good on Completion

All temporary connections will be terminated and made good prior to the completion of the project. Reinstatement will include removal of all temporary pipes, cables, lights, switchboards, buildings, fencing and signage or any other element used during the construction of the site.

2.2 Security

The site will be secured with an A class semi-permanent fence to the street boundaries and the eastern Boundary.

A 2.4m plywood hoarding system will be erected between the school campus and the site on the Western Boundary of the site. All semi-permanent fencing will be shadecloth protected. (ATF/Fence panelling systems will not be acceptable.)

A double gate will be installed to the temporary vehicle crossover from Both entries Bancroft Avenue and Recreation Avenue. Recreation Avenue will be secured with a sliding gate system. All gates are to be padlocked outside of site working hours. Visitors to the site are required to report to the site office located at the site entry. All visitors will then be inducted prior to gaining access to the site.

Separate pedestrian access gates and pathways will be established adjacent to both vehicle entry points.

2.3 Environmental Management and Conditions

Scope

This CEMP describes the procedures of Principal Contractor site environmental management plan.

Objectives

To define the environmental management systems to be followed in this report. Develop and implement site specific processes to manage environmental risks and issues.

Integrate site specific environmental management systems with company procedures and policies.

Report on any incident or occurrence during construction that causes material harm to the environment.

Implement all reasonable and feasible measures to prevent and/or minimise any harm to the environment that may result from the development.

CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN	September 2019
Roseville College – SWELL Centre 27-29 Bancroft Avenue, Roseville NSW 2069	Rev 1

Responsibility

The Project Manager is responsible for implementing the procedures outlined in this plan. It is also their duty to ensure compliance with the procedures and updating where required as construction progresses.

The Project Manager may deem it necessary to allocate specific responsibility for procedures in this report based on site resources and practicality. Where necessary, the responsibilities will be appointed verbally and confirmed through email.

References

- ISO 9001 Quality Management
- AS 4801 OHS Management Systems
- ISO 14001 Environmental Management Systems
- Principal Contractor's Integrated Management System Manual.

General

The Project Manager shall be responsible for the preparation and maintenance of this procedure.

The Project Manager shall assign environmental management responsibilities to appropriate project staff i.e. establishing and maintaining environment controls.

The Project Manager is to ensure that the communication of environmental management information to and from internal and external parties is addressed.

Environmental Due Diligence

Due diligence principles will be included in the development of all project documentation as required.

The environmental due diligence principles applied to the development of the Project Management Plan are the:

- Inclusion of environmental management responsibility to all personnel and staff working on the project;
- Application of legal and environmental policy requirements to construction activities;
- Identification and management of environmental issues;
- Emergency response procedures for any incidents that may result in potential impact to the environment; and
- Development of safe work method statements (incorporating environmental controls), inspection and test plans for all construction activities to protect the environment.

CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN	September 2019
Roseville College – SWELL Centre 27-29 Bancroft Avenue, Roseville NSW 2069	Rev 1

Project Management Plan

The Project Manager in consultation with the Construction Manager are to assess the Head Contract and all associated documents and reports on environmental requirements and detail these requirements into the following sections of this plan.

The Project Manager in consultation with the Construction Manager is to produce appropriate environmental processes for inclusion in the CEMP where project specific requirements necessitate additional controls.

The Project Manager and the Site Manager are to identify and manage all environmental records and comply with the CEMP and the Construction Integrated Management Plan and Procedures.

Environmental Policy

Apply Principal Contractor Integrated Management Plan to all projects as the project environmental policy. Development conditions and Client environmental objectives will take precedence when the policy documents conflict with site specific requirements.

Environmental Aspects and Impacts

Within the CEMP, the project activities are considered together with the associated environmental aspects and then the potential impacts are identified.

In accordance with Sections 3-8 of this plan, the Project Manager is to review the impacts and identify the significant environmental risks, which could be caused by construction of the project as detailed below:

- List all construction activities under the control of the Principal Contractor that have the potential to interact with the environment, such as material selection, purchasing, and all relevant physical construction activities;
- Determine the environmental aspects for each activity, e.g. environmental aspects for a concrete pour include noise, water pollution and solid waste;
- Consider activities beyond the control of the project e.g. flooding, which could have environmental aspects and significant environmental impact;
- Identify the significant environmental impacts that could arise from each environmental aspect of each activity e.g. impacts for a concrete pour include complaints about noise, pollution of a water course from wash down, and burden on a land fill if excess concrete is not recycled; and
- Consider impacts over the lifecycle of the project as some changes may realise longer term benefits (sustainability). Material selection may have an impact on natural resources. Include beneficial as well as adverse impacts.

CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN	September 2019
Roseville College – SWELL Centre 27-29 Bancroft Avenue, Roseville NSW 2069	Rev 1

Review of Activity and Impacts

It is important the activities are relevant for the particular project and that all the activities, consequent aspects and impacts, which may arise over the life of the project, have been identified and reviewed. A review of the site environmental risks due to changes to the work environment, activities, internal and external influences, and change to process or methodology will take place monthly.

Construction work as outlined in the program will have the controls implemented before work commences. As the construction works progress, the control measures implemented will be updated and altered in accordance with the development consent to management or eliminate the environmental risk. For example, an activity such as a concrete pour for slabs contains environmental risks such as noise, water pollution, and solid waste. The environmental impact is any change/effect in the environment as a result from the activity. This can lead to complaints from neighbours about noise, pollution of a local watercourse, and excessive unused concrete not recycled and disposed of in the local landfill. As these risks become apparent/evolve, a review of the process will be undertaken as required. I.e. immediately to control the risk and new measures implemented once the review is undertaken.

Legal Requirements

The Project Manager is to identify all legal, contractual requirements, licences, and permits which are applicable to environmental management at commencement and progressively during the construction of the project.

- Determine legislation applicable to the identified potentially significant environmental impacts;
- Identify notifications, licences, and approvals etc. required by applicable legislation; and
- Identify all relevant contractual requirements.

A copy of each approval, licence, permit or other condition imposed by a public authority must be maintained within the HSEQ project folders. This allows for any additional conditions imposed to be identified and included in the follow up approval.

Principal Contractor in conjunction with the client are obligated to meet the requirements of statutory authorities, relevant Legislation, Codes of Practice and guidelines and relevant council authorities. Compliance management for the construction of the project will be managed through an integrated framework of monitoring, inspection, auditing, and reporting, as set out in the CEMP and the Integrated Management Plan.

CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN	September 2019
Roseville College – SWELL Centre 27-29 Bancroft Avenue, Roseville NSW 2069	Rev 1

The relevant legislation to the building works is as follows:

Subject	NSW Legislation
Pollution Control	Protection of the Environment Operations Act 1997
	NSW Water Management Act 2000
	Protection of the Environment Operations Act (Clean Air Regulation 2010) 1997
Contaminated Land	Contaminated Land Management Act 1997
Chemical Storage	WHS Act 2011 and WHS regulation 2017
Waste Management	Waste Avoidance and Resource Recovery Act 2001
	Protection and Environment Operations Act (Waste) 2014
Conservation and Heritage	Environmental Planning and Assessment Act 1979 (As amended)
	Environmental Planning and Assessment Regulation 1994 (As amended)
	Biodiversity Conservation Act 2016 & Biodiversity Conservation regulation 2017
	National Parks and Wildlife Act 1974
	Local Land Services Act 2014
	Heritage Act 1977
	State Environmental Planning Polices, SEPP 19-Bushland in Urban Areas
	Soil Conservation Act 1938
	Protection of the Environment Operations Act (Noise Regulation 2010) 1997
	Environment Protection and Biodiversity Conservation Act 1999

Objectives and Targets

The primary aim / objective of the CEMP and the Integrated Management System is to provide a framework of procedures to identify and minimise the impacts of the construction on the project with regard to the environment.

The CEMP identifies environmental objectives and targets which are measurable and consistent with Principal Contractor Environmental Policy and specific project requirements.

The Project Manager may review the project's environmental requirements and revise the CEMP to determine further suitable objectives. They are also encouraged as continuous improvement, to review and revise the objectives and targets on an annual basis if the project timeframe is 12 months or longer.

CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN	September 2019
Roseville College – SWELL Centre 27-29 Bancroft Avenue, Roseville NSW 2069	Rev 1

Environmental Controls

The Project Manager is to establish and maintain adequate environmental controls to ensure that project activities are carried out in accordance with the CEMP and Principal Contractor Integrated Management system.

Section 6 "Soil and Water Management Plan" of the CEMP and Section 3 "Dust Management Plan" of this procedure are to be used as a guideline in setting up the controls.

Risk Assessment

The following risks are to be eliminated and avoided where possible:

- Pollution;
- Loss of species; and
- Complaints.

In very simple terms, many environmental issues will be managed if we control noise, dust and visual impacts on the surrounding area. A minimum objective is to comply with relevant environmental legislation and regulations, and client's expectations of the above risks onsite.

Environmental Risk Assessment for specific construction activities will be undertaken for all new projects and activities utilising the principle in the CEMP. The Project Manager will be responsible for facilitating Environmental Risk Assessment in consultation with the construction team and specific sub-contractors as required. The Safe Work Method Statement (SWMS) / Environmental Work Method Statement (EWMS) process will be the day to day process through which environmental risk will be managed. Principal Contractor considers any risk categorised as high as a significant aspect and requires attention to either be rectified or monitored as required. The risk assessment process is a required procedure to address the evolving construction tasks and their impact on the environment.

Other forums for undertaking environmental risk assessments during construction include:

- Informal site meetings; and
- Toolbox Talks.

Monitoring and Measurement of Environmental Requirements

The Project Manager is responsible for supervising, managing the environmental monitoring, and arranging specialists / consultants to help establish monitoring systems if detailed within the contract documents for the project.

CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN	September 2019
Roseville College – SWELL Centre 27-29 Bancroft Avenue, Roseville NSW 2069	Rev 1

All monitoring is to be conducted in accordance with EPA approved methods, Australian Standards or, in the absence of an Australian Standard, industry acceptable procedures. The minimum frequency and standard for monitoring is listed in applicable approvals, licences, and regulations. The EPA “Approved Methods” will be used for all testing required under the Environment Protection Licence. Where testing is conducted by a non-accredited organisation, proof of appropriate quality control is required.

The Project Manager/appointed team member must conduct a walk around the site each week and record the environmental issues in the integrated management plan. The walk around consists of:

- Any disturbed ground which will generate dust in dry windy conditions;
- Any disturbed ground which is exposed to erosion;
- Construction waste and litter removal; and
- Sediment control devices to be securely erected and in the right place.

The Project Manager may also periodically check that all environmental controls are satisfactory and meet contractual requirements using the Weekly Environmental Checklist Inspection Log or Daily Site Inspection Report as a record document. The HSE Manager is required to conduct environmental audits on projects on a 6 monthly basis to ensure compliance with project and organisational requirements. Site inspections will also be undertaken after all significant rainfall events.

Results outside regulatory standards or project targets will be treated as a non-conformance, rectified, and new procedures will be implemented as appropriate by the Project Manager. All changes, additions and modifications to procedures will be distributed as necessary to ensure non-conformances are corrected.

Waste Management

The Project Team are to endeavour to avoid the use of excess materials and production of waste. Where possible, waste materials (such as offcuts) will be reused on site. Waste will be recycled as appropriate. When deciding how to minimise waste impacts, the Project Manager and Site Manger need to consider whether the construction activity will generate surplus material which can be recycled or disposed off-site.

The NSW EPA Waste Classification Guidelines are the principal reference for waste management in NSW for determining waste classification, transport, and disposal requirements. Refer to appendix I “Waste Management Plan” of this CEMP.

Waste Storage and Disposal

The Site Manager must ensure that adequate rubbish receptacles (recyclable and non-recyclable bins, skip bins) are provided. These must be serviced regularly to ensure that the construction site remains tidy.

CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN	September 2019
Roseville College – SWELL Centre 27-29 Bancroft Avenue, Roseville NSW 2069	Rev 1

Littering or dumping of unwanted waste or disposal of surplus construction materials or permitting such activities on any land on or around the site, is illegal unless specifically permitted by a regulatory authority. The disposal of waste will be on a regular basis and disposed of in a waste facility authorised for that waste. This includes using licensed transporters for waste classifications when required.

The Project Manager will maintain records to provide evidence that recycled, reused or disposed of waste meets legislative requirements.

Emergency Response

The Project Manager and Site Manger are to identify and prevent any adverse environmental impact situations and possible emergency incidents. Refer to Principal Contractor Project QSE Management Plan for emergency procedures.

Subcontractor Management

The Project Team are to manage subcontractor's activities in compliance with Principal Contractor CEMP and QSE Plan. The Project Team is to ensure that the subcontractor is aware of their project environmental requirements prior to commencing work.

Non-Conformance

The Site Manger and Project Manager is to record any environmental non-conformances raised and rectified as required in accordance with the HSEQ Plan.

Auditing / Inspections and Evaluating Compliance

The Project Manager must prepare a schedule of regular comprehensive audits or inspections to verify that management controls are effective, and that evaluation of legal and other requirements have been assessed. They must arrange for the audits / inspections to be carried out as per the schedule by suitably qualified personnel.

The Project Manager must take appropriate action and inform the Construction Manager where a potential problem has been identified and monitor whether the action is effective.

Evaluating compliance with the legal and Council requirements that are applicable to the Principal Contractor's environmental management plan which will take the form of:

- Auditing;
- Workplace Surveillance (Internal / External); and
- Project Reviews.

CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN	September 2019
Roseville College – SWELL Centre 27-29 Bancroft Avenue, Roseville NSW 2069	Rev 1

Working Hours

All construction works associated with this development shall be carried out in accordance with the development consent granted by the NSW Government Department of Planning and Environment. Application Number: SSD 6917.

- Monday to Friday – 7:00am to 6:00pm
- Saturday – 8:00am to 1:30pm
- No construction work shall be carried out on Sundays or Public Holidays.

Should work or delivery of goods be required outside the specified hours due to safety or emergency reasons, the relevant authorities may be contacted with the reasoning for the cause and the likely duration of the activity and be undertaken if possible and where necessary further control permits secured for the works.

Erosion & Sediment Control

During the construction works, all reasonable measures will be taken to minimise soil erosion and the discharge of sediments and pollutants from the site.

The works will be carried out in accordance with the erosion & sediment control plan developed for the project and the latest version of the managing Urban Stormwater: Soils and Construction guideline.

Dust Management

The generation of dust on site will be reviewed and all best management practices will be undertaken to minimise the causes during construction works. This includes all reasonable and feasible mitigation measures to prevent and minimise dust and odour emissions from the construction and any visible offsite air pollution.

Construction Waste Management

During the construction works, the generation of waste on site will be reviewed and all reasonable measures will be undertaken to minimise the causes.

- Liaise with design consultants to ensure that Environmental considerations are incorporated into the design;
- Review design documentation and carry out a hazard assessment to brief the project team;
- Verify designs for compliance with Acts, Regulations & applicable Standards and Codes of Practice;
- Facilitate the resolution of any environmental complaints;
- Prepare Environmental Reports, which are submitted to the Board of Directors for review and discussion;

CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN	September 2019
Roseville College – SWELL Centre 27-29 Bancroft Avenue, Roseville NSW 2069	Rev 1

- Schedule and allocate education and training courses as necessary to satisfy project requirements;

2.4 Traffic Management

During times of large volumes of construction traffic (i.e. concrete pours), traffic control will be provided to assist in the safe navigation of vehicles back onto the public roads and prevent disruption to the normal traffic flow.

All works are to be carried out in accordance with the Preliminary Construction Management Plan (CTMP) as prepared by PTC Consultants.

2.5 OH&S

A detailed Site Specific Safety Plan will be developed by the appointed Principal Contractor as part of the HSEQ Plan in accordance with relative statutory requirements; a copy of this will be available for review on site.

2.6 Community Information

With the property owner occupying part of the campus site and the site being located within a residential area community consultation will be essential to ensure lines of communication are established to keep residence informed of;

- Major construction activities – concrete pours
- Milestones and target reporting.
- Establishing effective complaints management and response procedures for the project.

Additionally, contact signage will be provided on the site fencing which will provide contact details if information or concerns regarding the construction works is required.

CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN	September 2019
Roseville College – SWELL Centre 27-29 Bancroft Avenue, Roseville NSW 2069	Rev 1

2.7 Pre-Commencement Checklist

YES – A tick in this box indicates that the activity has been considered and is addressed

TBC – (TO BE COMPLETED)

tick in this box indicates that the activity has not been considered and must be addressed prior to commencement or prior to that activity starting.

N/A – A tick in this box indicates that the activity does not apply to this project.

Pre start or Start Up Activities

	Yes	TBC	N/A
Superintendent notified 24 Hr's prior to starting.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Construction Management Plan submitted and approved by the Department of Planning & Environment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Municipal Council notified of start and any inconvenience to the Public.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
All necessary permits obtained	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Underground services located. Authorities notified regarding work near their services. Further notification during progress work is required.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Overhead obstacles identified. Authorities notified regarding work near their services. Further notification during progress work is required.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Survey Lot Pegs or basis for set out in place and set-out can be completed.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Planned Compound and Amenities Setup.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Ensure all construction plans & specifications are certified and marked for construction. All Drawings, Specifications, CEMP, ITP's, SWMSs are.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Ensure all updated & revised documentation is provided to site for construction	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Existing trees and Vegetation protected or permission given to remove if necessary.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
OH&S and Environmental Hazards Identified: Silt traps arranged / Noise Dust and Vibration controls in place etc	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Traffic management plan – reviewed & implemented	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Toolbox Meetings to be held on a regular basis during the course of the works when required	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

2.8 Planning for Emergencies (Accident or Major Incident Requirements)

	Yes	N/A
First aid officer on site: Principal contractor to be appointed details to be advised		
Prepare a Specific Site Safety Plan and nominate an Evacuation Procedure.	<input type="checkbox"/>	<input type="checkbox"/>
A Mobile Phone and all Emergency Numbers are Available and displayed on site.	<input type="checkbox"/>	<input type="checkbox"/>
Adequate Provision for First Aid on Site.	<input type="checkbox"/>	<input type="checkbox"/>
Principal Contractor management to be notified of any Incident or Injury during the Job immediately.	<input type="checkbox"/>	<input type="checkbox"/>
Injuries and Incidents will be Recorded in Accident Report/Investigation Book	<input type="checkbox"/>	<input type="checkbox"/>
Monthly Reports to be used to review and correct or control all non conformances and identified Hazards	<input type="checkbox"/>	<input type="checkbox"/>

2.9 Restriction of Entry to Site

(Protect Workers, Members of the Public and to Prevent Unauthorised Entry)

	Yes	N/A
No Entry and/or other Warning Signs will be Placed at the Entrance to Site	<input type="checkbox"/>	<input type="checkbox"/>
Barricades will be used where necessary (open trenches and excavations)	<input type="checkbox"/>	<input type="checkbox"/>
Traffic Management Controls are Planned and Available	<input type="checkbox"/>	<input type="checkbox"/>
Warning devices (reversing beepers & flashing lights are on all motorised mobile equipment)	<input type="checkbox"/>	<input type="checkbox"/>
Public Access Ways will be Controlled (close footpath and divert pedestrians)	<input type="checkbox"/>	<input type="checkbox"/>
Foreman is aware of Signs and Traffic Control	<input type="checkbox"/>	<input type="checkbox"/>

CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN	September 2019
Roseville College – SWELL Centre 27-29 Bancroft Avenue, Roseville NSW 2069	Rev 1

2.10 Protective Equipment Requirements

(It is necessary to wear the following Protective Equipment for Particular Work Activities (Discuss in detail at the Toolbox Meeting)

	Yes	N/A
Reflective Safety Vests shall be worn at all times.	<input type="checkbox"/>	<input type="checkbox"/>
Sun Hats & Clothes to protect from sunburn are provided to all Principal Contractor personnel and recommended for all subcontractor staff.	<input type="checkbox"/>	<input type="checkbox"/>
Safety Footwear shall be worn at all times.	<input type="checkbox"/>	<input type="checkbox"/>
Ear Muffs/ or Plugs, Safety Glasses, Face Masks and Gloves are to be worn as per SWMS PPE Directions.	<input type="checkbox"/>	<input type="checkbox"/>
Sun Screen is readily available on site and recommended		
Hard Hats shall be worn.	<input type="checkbox"/>	<input type="checkbox"/>

2.11 Specific Environmental Protection Methods Required for Project

Take these issues to the Job Environmental Analysis for Analysis in this CEMP

	Yes	N/A
Assessment of Specific Hazards associated with: Sediment & Erosion Control Pumping or Dewatering Protection of Fauna Vegetation or Protection from Noxious Weeds Local Noise Requirements are known	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
Litter and Housekeeping on the Site is controlled via waste skip	<input type="checkbox"/>	<input type="checkbox"/>
Waste Minimisation and Disposal	<input type="checkbox"/>	<input type="checkbox"/>

2.12 Hazardous Materials and Dangerous Goods Register

	Yes	N/A
A Material Safety Data Sheet MSDS and register shall be available should there be a requirement for use of dangerous goods on the site.	<input type="checkbox"/>	<input type="checkbox"/>
Where new dangerous goods are used, they shall be listed as a Hazard in the Job Safety Analysis of this Construction Management Plan and assessed in accordance with the Hazard and Risk Analysis Safety Procedure.	<input type="checkbox"/>	<input type="checkbox"/>

CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN	September 2019
Roseville College – SWELL Centre 27-29 Bancroft Avenue, Roseville NSW 2069	Rev 1

2.13 Emergency Contact Numbers

Principal Contractor to be appointed – to be advised

Site Manager:

Project Manager:

Head Office:

Emergency Services Safety Environment and Damage to a Service

Police Ambulance and Fire Metro Area		000
Local Hospital	Northshore Hospital	(02) 9881 1555
Gas	AGL	131 909
Electricity	AUSGRID	13 13 88
Phone	Telstra	132 203
Water	Sydney Water	132 090
Service Locations	Dial Before you Dig	1100
EPA	NSW EPA Pollution Line	131 555
Council	Willoughby Council	02 9777 1000
NSW DPE	Department of Planning	1300 305 695
NSW OEH	Office of Environment and Heritage	02 9995 5000

Other Contact Numbers Appropriate to the Site or Project

Foreman:	To be confirmed
HSE Manager	To be confirmed
Project Superintendent	EPM Projects
Roseville College – Site owner/operator	To be confirmed

2.14 Environmental Incidents and Emergencies

To ensure that all elements of the Principal Contractor's activities that interact with or may cause change to the environment are recognised, an assessment has been conducted on the key activities to be undertaken by the Principal Contractor and its Subcontractors, to identify the associated environmental aspects and impacts of the project. Reporting on all incidents will be undertaken in accordance with Section 147 & 148 of the Protection of the Environment Operations Act 1997.

2.15 Environmental Training

Principal Contractor will induct all workers before they commence onsite. As part of the induction process, the Foreman will review their SWMS for potential environmental

CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN	September 2019
Roseville College – SWELL Centre 27-29 Bancroft Avenue, Roseville NSW 2069	Rev 1

hazards and notify all workers of environmental risks onsite. All workers are to immediately report all environmental incidents to the foreman.

2.16 CEMP Review

The CEMP will be reviewed within three months of a determination of a modification or the submission of an incident report.

CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN	September 2019
Roseville College – SWELL Centre 27-29 Bancroft Avenue, Roseville NSW 2069	Rev 1

Section 3 - Dust Management Plan

Objectives

To develop the Dust Management Plan with respect to air quality. To minimise the dust and odour emission for the project. To implement appropriate controls and best management practice to suppress dust, odour and other suspended particles and to minimise any visible off-site air pollution that occurs as a result of the development during its construction.

3.0 Introduction

Key Management Issues

The generation of dust from the site can be a major nuisance to local activities as well as creating unacceptable working conditions. The key measures to addressing this issue are as follows:

- Implement best management practice, including all reasonable and feasible measures to prevent and minimise dust and odour emissions from the construction of the development;
- Limit areas of disturbance to the minimum necessary;
- Install mitigation devices to reduce the transfer of spoil and dust;
- Install rumble grid to entrance of site to stop transfer of dirt onto public roads.

Required Actions

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

Prior to Construction Works

- Ensure that all equipment used and all facilities erected on site are designed and operated to control the emission of smoke, dust, fumes and any other air impurity into the atmosphere;
- Spray earthworks, roads and other surfaces as necessary with water;
- Install erosion and sediment control devices.
- Install dust fencing to all areas where identified as a requirement.

3.1 Site Location

Refer to Appendix A, for details of the site location.

CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN	September 2019
Roseville College – SWELL Centre 27-29 Bancroft Avenue, Roseville NSW 2069	Rev 1

3.2 Dust Sources

The potential sources of dust from the construction works include:

- Demolition works
- Bulk material handling
- Vehicular traffic
- Bare areas on site
- Earthmoving activities

3.3 Dust Control Criteria

The dust control measures are to provide awareness of the following:

- protection of workers
- protection of general public on and off site
- minimisation of dust into storage facilities
- minimisation of dust generation into the general environment
- Minimise any visible air pollution from leaving Lot 1B work site.

3.4 Dust Control Measures - Construction Phase

- All disturbed areas shall be stabilised as soon as practicable to prevent or minimise wind-blown dust;
- A water application method is to be employed daily or more often as conditions require to dampen work areas and exposed soils to prevent the emission of excessive dust from the site;
- the tailgates of all trucks leaving the premises must be securely fixed prior to loading or immediately after unloading to prevent loss of materials;
- Bare areas shall be watered daily or more often as conditions require;
- Trucks with loads are to be covered;
- Trucks leaving site with be inspected and drive over a rumble grid to ensure dirt is not tracked onto the road. Tyres to be sprayed if the truck has excessive dirt on wheels and arches.
- Subcontractors to maintain all construction equipment to ensure exhaust emissions comply with Protection of the Environment Operations Act 1997 and the Protection of the Environment Operations (Clean Air) Regulation 2010;
- Waste material shall not be burnt on the site and no fires of any kind shall be lit;
- All waste material will be removed from the site in a manner described in the Waste Management Plan

3.5 Monitoring and Reporting

Principal Contractor will monitor levels of dust deposition and air quality, the effectiveness of dust emission controls on the construction site and the impacts of any nuisance on adjoining properties or other affected properties. Principal Contractor's

CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN	September 2019
Roseville College – SWELL Centre 27-29 Bancroft Avenue, Roseville NSW 2069	Rev 1

Site Manager will be responsible for the monitoring of performance using the following methods:

- Visual assessment of settled dust at site boundaries on a daily basis
- Visual assessment at the boundaries of the site on a fortnightly basis.

Should dust emission exceed acceptable levels, or complaints received with respect to excessive dust from construction activities, written reporting of observations of the dust monitoring will then be recorded and will be available to the clients Project Manager as required. All cases of non-compliance and corrective actions will be brought to the attention of the clients Project Manager immediately.

3.6 Corrective Actions

Principal Contractor's representative will review and analyse the cause of detected non-conformance with the appropriate subcontractor (if applicable) and develop a corrective action to prevent repeat non-conformance. This would include the following actions where appropriate:

- Increase in the frequenting of watering down of bare areas
- Re-planning of vehicle routes around the site off bare areas when high wind conditions are forecast
- A review of programmed activities in bare areas in times of forecast high wind conditions
- Clean public roads with street sweeper.

A response will be sent to any complainant including the proposed corrective actions to be undertaken where applicable.

The following table indicates the principles and sequencing to be employed for dust management on the site.

3.7 Summary Chart of Dust Control Measures

Control	Timing	Methodology	Responsibility	Monitoring & Reporting	Performance Measure
Exposed surfaces to be kept moist by spraying with water or dust suppressant	Once per day minimum in dry weather. Further assessments will be made as required by weather conditions (i.e windy conditions will require more monitoring)	Water cart to spray exposed surfaces to keep moist.	Contractor (Site Manager) & Subcontractors (Subcontract Foreman)	Daily inspection by foreman & site manager	No visible dust

CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN	September 2019
Roseville College – SWELL Centre 27-29 Bancroft Avenue, Roseville NSW 2069	Rev 1

Control	Timing	Methodology	Responsibility	Monitoring & Reporting	Performance Measure
Exposed surfaces and temporary stockpiles left for prolonged periods to be sealed with dust suppressant, or sprayed with water	one week from completion of activity where feasible	Water cart to spray exposed surfaces	Contractor (Site manager) & Subcontractors (Subcontractor foreman)	weekly inspection by foreman	No visible dust
Record and schedule of approved equipment to be kept including type, noise compliance certificate, time and duration of use and noise mitigation measures employed	prior to construction commencement	Within one month of being on the project.	Contractor (Site Manager) & Subcontractors (Subcontract Foreman)	to be included in sub-contractors work method statements. Sub-contractor audit Site manager daily site diary to monitor	Records maintained
Plant and equipment to be fitted with standard pollution control devices	prior to construction commencement	-	Contractor (Site Manager) & Subcontractors (Subcontractor Foreman)	pre-construction inspection, maintenance as required. Monthly inspection by Contractor HSEQ Manager	Copies of compliance certificates held in site offices Plant and equipment meet Protection of the Environment Operations (Clean Air) Regulation 2010 requirements
Excavated material (including stockpiles) to be kept in a damp state	as required where feasible	-	Contractor (Site Manager) & Subcontractors (Subcontractor Foreman)	To be put into Work Method Statements for the sub-contractor. Daily inspection by foreman.	No visible dust
Trucks transporting loose material to and from the site	ongoing	All trucks to have covered loads when transporting loose material to and from site.	Contractor (Site Manager) & Subcontractors (Subcontract Foreman)	Compulsory inspection at gate prior to entrance into site and exit from site.	No visible loose material from trucks

CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN	September 2019
Roseville College – SWELL Centre 27-29 Bancroft Avenue, Roseville NSW 2069	Rev 1

Control	Timing	Methodology	Responsibility	Monitoring & Reporting	Performance Measure
Dust generating activities to cease when wind speeds exceed 10m/s, dust emissions from construction are visible and moving towards properties.	as required	-	Contractor (Site Manager) & Subcontractors (Subcontract Foreman)	daily monitoring by Contractor Site Manager. Contractor Site Manager to review forecast for the following day on a daily basis and plan work activities accordingly.	No visible dust
Material from site tracked onto estate and public roads	Ongoing	Install and maintain stabilised site access/ Truck wash down and rumble grid	Contractor (Site Manager) & Subcontractors (Subcontract Foreman)	Continuous monitoring by all Contractor and subcontractor employees	No Visible dust on estate roads.
no incineration or burning on site	at all times	-	Contractor & Subcontractors (all employees)	Continuous monitoring by all Contractor and subcontractor employees	No fires or incineration on site

CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN	September 2019
Roseville College – SWELL Centre 27-29 Bancroft Avenue, Roseville NSW 2069	Rev 1

Section 4 - Community Consultation and Complaints Handling

4.0 Introduction

The purpose of the plan is to provide details of procedures in place to handle community complaints during construction.

4.1 Objectives

The overall principles for complaints management during the construction phases are;

- Accurately record the details relating to a complaint.
- Ensure that the senior representative of the contractor is notified of the complaint.
- Notification to the clients Project Manager of the complaint.
- Address the nature and the cause of the complaint with the site team, and develop measures to avoid repeat occurrence of the problem.
- Notify the party that instigated the complaint as to the outcome and communicate the remedial measures that will be adopted.

4.2 Complaint Management Procedure

- Record the complaint details on the site log.
- Notify the clients Project Manager of the complaint and the details.
- Review the nature and the cause of the complaint with the contractor's senior representative.
- Address the parties responsible for the activity that caused the complaint.
- Agree procedures that will avoid re occurrences of the same and notify the site management team.
- Contact the complaint originator and advise of the cause and the implemented action procedure.
- Issue a brief written summary of the above items to the local council inspector for their records and future reference.

4.3 Ongoing Monitoring and Controls

Where ongoing or numerous complaints (more than 1) are received for similar issues, the Project Manager will arrange for a meeting with himself, the Site Manager, HSEQ Manager and any other stakeholder to discuss the issue and determine the ongoing controls required to help satisfy the complainants concerns. The Site Manager will monitor the controls and record this in the Weekly Environmental Inspection Log. The

CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN	September 2019
Roseville College – SWELL Centre 27-29 Bancroft Avenue, Roseville NSW 2069	Rev 1

Project Manager and HSEQ Manager will monitor the controls put in place monthly during their Monthly Site Safety Audit. If during this monitoring it is determined that the controls are ineffective then further controls will be determined and implemented.

The corrective actions determined in the above process will be communicated to the complainant. Should any further complaints of the same issue from the same complainant be received, a meeting will be held between all stakeholders and the complainant to attempt to address the issue to the satisfaction of the complainant where it is reasonable to do so.

4.4 Community Consultation

The Principal Contractor will initiate appropriate channels of communication with relevant external parties if noise complaints are made. The Principal Contractor will also co-operate with the Client and the responsible authority in any required community consultation initiatives.

CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN	September 2019
Roseville College – SWELL Centre 27-29 Bancroft Avenue, Roseville NSW 2069	Rev 1

Section 5 - Waste Management Plan

5.0 Introduction

This Waste Management Plan details the commitment to the development regarding services and capabilities in respect to waste removal, management and recycling of materials removed from this work site.

In accordance with all EPA requirements all waste generated onsite will be classified in accordance with the EPA's Waste Classification Guidelines (DECCW, 2009) or any superseding document and disposed of to a facility that may lawfully accept the waste.

During the construction works all waste will be monitored and minimised.

An Inspection of the site and a review of the building materials adopted have shown that there will be two basic types of waste generated on site, these being solid and liquid waste.

5.1 Waste Reduction

The focus will be on minimizing waste by implementing the Waste Management Plan which will address the following:

Reducing Solid Waste

- packaging from site material
- excess material
- soil from excavations
- timber
- gyprock
- metal
- brick and concrete

To reduce the amount of solid waste going to Landfill, the endeavour will be to:

- Recycle materials off site at an authorized waste management facility
- Separate materials on site in designated recycling skips
- Buy materials with minimum packaging
- Stockpile and reuse on site

Reducing Liquid Waste

- Site clean up
- Wash down areas

CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN	September 2019
Roseville College – SWELL Centre 27-29 Bancroft Avenue, Roseville NSW 2069	Rev 1

- Brick cutting waste
- Dust control waste

To counter liquid waste on the project, only clean water will be discharged into the storm water drain. Where possible avoidance generating any dirty water and when encountered, will attempt to use such water for irrigation or as a means of suppressing dust.

Waste Minimisation

Major subcontractors will be encouraged to submit waste minimisation details including the following:

- Practical measure associated with their works to prevent waste entering the site
- Waste resulting from their work which can be recycled are to be actively managed as part of their waste reduction plan
- Alternative products containing recycled materials that could be utilised in the works which conform and meet design specification
- Ordering the right quantities of materials and prefabrication of materials where possible
- Minimising site disturbance and to limit unnecessary excavation
- Careful sourcing separation of off-cuts to facilitate re-use, resale or efficient recycling

Construction Stage

In order to reduce waste on site during the construction stage, all construction personnel will be instructed to do the following:

- Order materials to size
- Not to over order
- Order pre-cut or prefabricated materials
- Reduce packaging at source
- Separate reusable or recyclable materials from waste
- Establish a designated concrete wash down system on site for concrete trucks and pumps. The area will be adequately signed and designed so that any excess drainage from area will be contained within the site boundaries
- Bins to be inspected regularly

Bin System

A Separation system will be achieved through the use of separation bins for recyclable materials and non-recyclable waste materials where suitable.

Additional bins will be provided where practical to further separate waste between different materials.

Materials collected for recycling may include:

- Food Waste

CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN	September 2019
Roseville College – SWELL Centre 27-29 Bancroft Avenue, Roseville NSW 2069	Rev 1

- Glass
- Concrete and bricks
- Timber
- Aluminium
- Metal
- Plastic
- Paper, cardboard and plasterboard

The subcontractors will be responsible for the daily cleaning of their respective work areas and for placing all their waste in the nominated waste bins

If a particular bin is found to be contaminated by waste material from a subcontractor, that particular subcontractor will be liable for the cost associated with tipping or sorting of that bin.

Signs will be located on each bin indicating what type of waste may be placed in that bin.

Packaging

All suppliers of building materials will be encouraged to nominate packaging minimization and reuse initiatives. Bulk handling and reusable transport containers will be encouraged.

Waste Quantities

The quantity of potential waste material is estimated by:

- Quantifying materials for the project
- Apply waste margins allowed in ordering materials
- Copy these amounts of waste into the waste management plan

Conversion to volume of waste materials

All volume of waste material will be converted from cubic metre to tonnage once the waste has been weighed at a licensed transfer station.

5.2 Waste Management

Waste will be separated and/ or stored onsite for re- use and recycling

The proposed waste management contractor will recycle / re-use 80% of demolition and construction waste by weight (so as to reduce contribution to landfill by stated percentage)

Site operations will ensure minimal waste creation and maximum reuse and recycling by:

- Staff training

CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN	September 2019
Roseville College – SWELL Centre 27-29 Bancroft Avenue, Roseville NSW 2069	Rev 1

- Employment of Waste Management Contractor
- Recycled materials used in construction
- On-going checks by site supervisors
- Separate area or bins set aside for sorted waste
- Clear signage of waste areas

Measure of Performance / Monitoring

A waste management contractor will be involved in the early stage of the project to ensure effective planning for waste management

The waste management contractor will be responsible for providing monthly reports to the Site Manager. Records will also be kept on site by the foreman and site manager in the Weekly Environmental Inspection Log. These reports will indicate the volume of waste removed from site, waste type, the amount of waste recycled and bin size.

Reports on percentage of material recycled will be included by the Project Manager in monthly project reports to be presented to senior management. Where waste recycling is not occurring to the standard required by both Principal contractor and the Client, discussions will be held with the waste contractor to determine if there are ways in which recycling levels can be improved

Corrective Actions

Where a subcontractor has caused a bin to become contaminated unduly, the Site Manager will be advised, by a non-conformance report. All corrective action taken by the subcontractor shall be monitored and recorded against the non-conformance procedure, all of which shall be at the cost of the offending subcontractor.

Disposal

Disposal of waste to landfill will be as a last resort only. Landfill sites or waste transfer stations will:

- Require correct handling for dusty or hazardous wastes
- Offer discounts for sorted materials

Records of disposal shall be kept. Any disposal of waste that is deemed hazardous shall be disposed of at a EPA approved and licensed facility.

The waste management contractor will insure that we endeavour to better the State Governments Waste Minimisation Act 1995, to the amended Waste Avoidance and Resource Recovery Act of 2001 in which part of the act calls for the reduction of demolition and construction waste by 50% going directly to land fill sites.

MATERIALS RECYCLED AT DEPOTS

Pallets	To pallet producers and recyclers
Steel	To scrap metal yard for reprocessing
Aluminium	To scrap metal yard for reprocessing
Copper	To scrap metal yard for reprocessing
Timber	To builders or appropriate tip to be recycled as garden product, alternate fuels or reprocessing abroad.
Cardboard	To cardboard & paper recyclers
Plasterboard	To plasterboard manufactures for reprocessing
Wire	To scrap metal yard for reprocessing
Concrete	To concrete recyclers to be crushed used in road bases, driveways etc.
Bricks	To builders or concrete recyclers to be crushed and reused
Rubble	To concrete recyclers to be crushed and reused
Cable drums	Drum recyclers for reuse
Soil / Dirt	Screened into clean filling sand, land remediation or cover etc
Gas Bottles	To bottle distributors and or scrap metal yard
Glass	To Glass recyclers for reprocessing
Green Waste	Processed into garden products, firewood, landscapers etc
Polystyrene	When uncontaminated sent for reuse

5.3 Training

Waste Minimisation will be part of the site environmental awareness program that will be incorporated into the site induction program

The responsibility to ensure that waste materials go into the correct bins will be with everyone working on the site

5.4 Waste Management - Construction Works

DESTINATION			
REUSE & RECYCLING		DISPOSAL	
Type of Material	ON-SITE	OFF-SITE	Nominated recycler
Excavation Material	Reuse as site fill where appropriate	Removed by earthworks contractor to licensed recycling facility and site that is approved to receive the material.	To be confirmed

CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN	September 2019
Roseville College – SWELL Centre 27-29 Bancroft Avenue, Roseville NSW 2069	Rev 1

Bricks	Sorted on-site for recycling but no reuse	Removed and recycled by contractor	DATS or similar contractor
Concrete	Sorted on-site for recycling but no reuse	Removed and recycled by contractor	DATS or similar contractor
Timber	Sorted on-site for recycling but no reuse	Removed and recycled by contractor	DATS or similar contractor
Plasterboard	Sorted on-site for recycling but no reuse	Removed and recycled by contractor	DATS or similar contractor
Metals	Sorted on-site for recycling but no reuse	Removed and recycled by contractor	DATS or similar contractor
Other Waste e.g. ceramic tiles, paints, plastics, PVC tubing, cardboard.	Sorted on-site for recycling but no reuse	Removed and recycled by contractor	DATS or similar contractor

The aim is to whenever possible reduce the generation of construction waste or to recycle as much waste material as possible.

The waste management plan will follow the preferred hierarchy of avoidance/reduce, re-use, recycle, treat and dispose. Best Practice should be adopted wherever possible, to achieve waste minimisation and reduction.

In addition, the project will:

- liaise with Subcontractors to identify areas where they can reduce waste and reuse materials in their respective trades;
- meet local, state and federal waste minimisation legislation and environmental standards;
- prevent pollution and damage to the environment;
- protect the safety and health of our employees and the public;

Major subcontractors will be encouraged to submit waste minimization details including the following:

- Practical measure associated with their works to prevent waste entering the site
- Waste resulting from their work which can be recycled are to be actively managed as part of their waste reduction plan
- Alternative products containing recycled materials that could be utilised in the works which conform and meet design specification
- Ordering the right quantities of materials and prefabrication of materials where possible
- Minimising site disturbance and to limit unnecessary excavation
- Careful sourcing separation of off cuts to facilitate re-use, resale or efficient recycling

In order to reduce waste on site during the construction stage, all construction personnel will be instructed to do the following:

- Order materials to size
- Not to over order

CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN	September 2019
Roseville College – SWELL Centre 27-29 Bancroft Avenue, Roseville NSW 2069	Rev 1

- Order pre- cut or prefabricated materials
- Reduce packaging at source
- Separate reusable or recyclable materials from waste
- Establish a designated concrete wash down system on site for concrete trucks and pumps. The area will be adequately signed and designed so that any excess drainage from area will be contained within the site boundaries
- Bins to be inspected regularly

A Separation system will be achieved through the use of separation bins for recyclable materials and non-recyclable waste materials.

Additional bins will be provided where practical to further separate waste between different materials.

Materials collected for recycling include:

- Food Waste
- Glass
- Concrete, bricks and tiles
- Timber
- Aluminium
- Metal
- Plastic
- Paper, cardboard and plasterboard

The subcontractors will be responsible for the daily cleaning of their respective work areas and for placing all their waste in the nominated waste bins.

Signs will be located on each bin indicating what type of waste may be placed in that bin. Site operations will ensure minimal waste creation and maximum reuse and recycling by:

- Staff Training
- Employment of a Waste Management Contractor
- Recycled materials used in construction
- On- going checks by site supervisors
- Separate area or bins set aside for sorted waste
- Clear signage of waste area.