CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN

FOR

Project No	366
Project Name	Loreto Normanhurst – Carparks & PUDO Project

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1.0 - INTRODUCTION

This Construction Environmental Management Plan (CEMP) has been prepared by COWYN Building Group to address requirements of Condition C14 of SSD 8996 dated 21 October 2021 for Substage No's 1, 2 & 3.

The CEMP will identify the potential environmental impacts and determine management protocols to manage such environmental impacts throughout construction. COWYN Building Group will be responsible for implementing and maintaining the CEMP.

Substages No's 1, 2 & 3 have no impact on significant vegetation on the southern side of the site or species movement within and adjoining the site, accordingly the requirements of C14 (i) & (j) are not addressed within this CEMP.

2.0 - PROJECT DETAILS

Consent No:	SSD 8996 dated 21 October 2021
Internal Project Number	366
Project Name	Loreto Normanhurst – Carpark & PUDO Project
Project Address	91-93 Pennant Hills Road, Normanhurst NSW 2076
Site Manager Name (24hr Contact)	Kell Portass (0431 001 085)
Head Office Phone	(02) 9790 7511
Head Office Email	admin@cowynbuilding.com.au
COWYN WHSEQ Representative	Bob Moroz (0417 060 371)

Description of Project	SSD 8996 dated 21 October 2021 for Substage No's 1, 2 & 3 No. 1: Reconfigure P3A Osborn Road Carpark; Hard and soft landscaping No. 2: Construct through site road incl 3 pick up/drop off spaces; No. 3: Reconfigure P2 Admin carpark; demolition existing tennis courts and sheds; construct P1A tennis court carpark including two new tennis courts; hard and soft landscaping
Proposed Commencement Date	**09/12/2021**
Proposed Completion Date:	**25/05/2021**
COWYN Building Group will subcontract the following trades: Demolition; Groundworks; Piling; Concrete, Formwork & Reinforcement; Structural Steel; Masonry; Roofing & Roof Plumbing; Aluminium Windows & Doors; Claddings & Linings; Metalworks; Hydraulic Services; Electrical Services; Mechanical Services; Soft & Hand Landscaping & Other Trades as Applicable	
COWYN Building Group as the principal contractor intend to subcontract all or part of the works identified in the above sub trade list and will ensure that all subcontractors provide a Safe Work Method Statement for their specialised work. All SWMSs are to be prepared in accordance with the site-specific risk assessment and key elements chart of the Project Risk Assessment. COWYN Building Group will review the SWMS using a SWMS checklist together with relevant evidence of the subcontractor's current workers compensation policy and public liability insurance.	

2.2 - Legislative Requirements

Proposed works will be carried out in accordance with the following Acts & Regulations:

- Environment Protection and Biodiversity Conservation Act 1999 and
- Protection of the Environment Operations Act 1997
- WHS Act 2011 & Building Code of Australia / National Construction Code
- All other relevant environmental legislation, regulations, measures, guidelines and codes of practice.
- The National Park and Wildlife Act 1974
- Heritage Act 1977

2.3 - Hours of Work

Construction, including the delivery of materials to and from the Site, may only be carried out between the following hours:

Monday to Friday	7am-5pm
Saturday	8am-1pm
Sunday / Public Holidays	No work permitted

2.4 - Responsibility

The below table sets out the various parties responsible for the proposed works, their responsibilities and contact details:

Party	**Role / Responsibility**	**Contact Details**
Project Superintendent (PS)	Oversee Principal Contractor & ensure all works are completed in accordance with regulatory standards & CEMP	Luke Gladwish 0421 904 833
Principal Contractor	Ensure all works are completed in accordance with regulatory standards & CEMP	COWYN Building Group (02) 9790 7511
Principal Contractor PM	Project Manager will ensure all works are completed in accordance with regulatory standards & CEMP	Shaun Cohen 0448 978 124
Principal Contractor SM (24 hr contact)	Site Manager / Site Supervisor will be on site at all times to organise trades and ensure compliance with CEMP. SM will also be responsible for the following: - ensuring personnel receive environmental training - maintaining environmental records - completing environmental monitoring - notifying the PS of complaints - notifying the PS of non-conformances and actions taken to rectify them - managing significant environmental incidents and reporting them to the PS - Ensuring that all relevant licences, permits and consents are in place.	Kell Portass 0431 001 085

3.0 – GENERAL MANAGEMENT REQUIREMENTS

3.1 – Environmental Awareness and Training

All personnel who intend to work on the proposed development will be made aware of their environmental obligations and be provided with relevant training prior to commencing work on site.

COWYN Building Group will provide the relevant training including a detailed site induction with emphasis on CEMP, emergency response induction, use of spill kits and obligations in the relevant regulations. COWYN Building Group will conduct regular toolbox talks and site meetings, and will manage the site in in conformance with its Integrated Management System, which has been designed in accordance with the following:

- ISO9001:2015
- ISO14001:2015
- ISO450001:2018

3.2 - Environmental Management Records

Appropriate records that demonstrate conformance with the environmental obligations identified in this CEMP will be maintained for a period of 7 years.

These records will including induction and training records, complaint and incident reports, licenses and permits where required, waste transfer receipts, fill validation reports, environmental inspection and compliance reports, waste classification reports, COWYN Building Group's Integrated Management System records and other documents as deemed required.

All records will be made available for review by the PS upon completion of the works or at any time as required.

3.3 - Monitoring / Auditing

COWYN Building Group will be responsible for monitoring and auditing environmental performance on site. Each environmental aspect will be monitored against the control measures outlined in 4.1- 4.12 and SWMS. The following table sets out environmental aspects to be monitored, frequency of monitoring and staff member responsible for the monitoring:

Environmental Aspect	Monitoring Frequency	Person Responsible
Site Management	Daily	Site Manager
Erosion & Sediment Control	Daily	Site Manager
Asbestos Control	As required	Site Manager & Contractor
Air Quality Management (Dust Control)	Prior to operation of plant and as Required	Site Manager & Contractor
Water Quality Management	As required	Site Manager
Noise Management	As required	Site Manager
Land Contamination	As required	Site Manager & Project Manager
Waste Management	As required	Site Manager
Cultural Heritage Management	As required	Site Manager / Heritage Consultant

3.4 – Reporting

COWYN Building Group will prepare a brief written report monthly incorporating the following details;

- Results of all inspections and monitoring events.
- Any actions arising from inspections.
- Targets that have not been met and a description of the corrective action taken to address any failure to meet targets.
- Summary of complaints received on site
- Summary of environmental incidents and emergencies, response measures and corrective actions.

These reports will be prepared in the form of site meeting minutes. A copy of the report will be provided to the PS within 2 business days of the site meeting.

3.5 - Complaint Handling

COWYN Building Group will notify the PS immediately upon the receipt of any compliant. Complaints will be registered and recorded in the following manner

Any feedback that is received shall be reviewed by the Project Manager. This includes formally received written feedback and general comments and feedback received during meetings and site inspections. Where any feedback is received that may be negative or a complaint, a non-conformance shall be raised. This ensures that the information is recorded and can be analysed to determine appropriate corrective and preventative actions. All customer feedback will be reviewed during the management review meeting to identify any trends that may be occurring to help with continual improvement of our performance.

For all negative feedback and complaints, the contact shall be given a formal response and kept up to date with implementation of corrective and preventative action.

3.6 – Non Conformance with Targets

All Non-Conformances will be registered and managed in accordance with WHSEQ management plan.
Environmental observations to be carried out via Procore management system observation forms (SMP.5.1A – SMP.5.1G)

Non Conformance report forms will be made available to the PS upon request.

3.7 - Environmental Incidents and Emergencies

COWYN Building Group will be responsible for managing environmental incidents. All incidents and emergencies will be reported to the PS as soon as possible.

Spill response procedures are to be initiated in the event of a spill and contaminated areas are to be remediated to pre-spill / incident conditions, in accordance with the *relevant regulations* and other regulations as required.

SPILL RESPONSE PROCEDURES
Major Spill - Fuel and oil spills greater than 10 litres, spills involving toxic chemicals or spills that threaten drains and channels.
Emergency Procedures should consider the immediate danger to persons, ensure effective containment, and clean up, appropriate disposal of waste material and notification to all relevant authorities. Do not touch any harmful substance. Take precautions to protect yourself if necessary. Notify the site supervisor Raise the alarm – evacuate persons not involved in contamination from the area. Isolate contaminated individuals and treat as per MSDS. Isolate affected persons, keep on site, and notify Emergency Services if necessary. Close doors to prevent further contamination. Secure the area to keep non-emergency response personnel away from danger. Assist the emergency response personnel and supply the Material Safety Data Sheet/s if the chemical/s are known. In conjunction with expert assistance, minimise the spread of contamination and commence decontamination/clean up procedures.
Minor Spill - Fuel and oil spills less than 5 litres, or spills that are non-threaten to drains and channels.
1. Containment - spills must be cleaned up promptly and thoroughly. 2. Approach with care - many harmful chemicals lack colour or offensive odours. Never assume that they are harmless. 3. Identify the chemical/s and hazards involved – check Material Safety Data sheet. 4. Use the information on the physical and chemical properties of the material to judge response and/or evacuation procedures. 5. Decontaminate equipment, clothing and personnel, including any victims, on site if necessary. 6. Dispose of contaminated equipment and materials only after receiving specialist advice. 7. Ensure emergency procedures are in place and practiced.

Incidents will be reported and managed via Procore. Incident Report SMP.4.1 to be completed.

3.8 – Licenses & Permits

COWYN Building Group will be responsible for ensuring all relevant licenses, permits and approvals are in place prior to commencement of onsite works, All subcontractors will be required to submit Site Specific SWMSs, Insurance Particulars & Relevant Licenses to the WHS Officer for approval prior to being permitted to commence work on site.

Prior to works at the site, the following permits will be required for the following subtrades:

Trade	Permit	Frequency	Person Responsible
Excavation – Bulk & Detailed	Excavation	Monthly	Site Manager & Contractor
General Metalwork	Hot works Permit	Daily	Site Manager & Contractor

4.0 – IDENTIFICATION OF ENVIRONMENTAL ISSUES

The environmental issues associated with this project and the management measures that will be implemented and maintained by COWYN Building Group and all subcontractors are specified in the table below:

Activity	Aspect	Impact	Likelihood	Consequence	Risk
Site Management	Poor practice	Non-conformance with approved CEMP targets and environmental non-compliance.	Possible	Massive	Severe
Demolition works	Poor practice	Non-conformance with approved CEMP targets and environmental non-compliance	Unlikely	Massive	Severe
Demolition works	Material handling	Contaminated material mishandled resulting in contamination of site	Highly Unlikely	Massive	High
Demolition works	Wind during demolition	Pollutants exceed specified air quality	Possible	Major	High
Demolition works	Wind during demolition	Cross contamination to adjoining sites	Possible	Major	High
Demolition works	Unexpected find	Demolition uncovers contaminated material	Unlikely	Major	High
Removal of Demolished material	Control of materials	Removed materials contaminated and cause contamination at fill site	Highly Unlikely	Major	Moderate
Removal of Demolished material	Control of materials	Removed materials illegally dumped	Practically Impossible	Massive	Moderate
Excavation	Exposed soil	Erosion of exposed surfaces causing sediment to enter drains and natural water ways	Possible	Major	High
Excavation	Vehicle movement over exposed soil	Tracking of soil onto local roadways	Possible	Moderate	Moderate
Excavation	Wind over exposed soil	Erosion of exposed surfaces causing dust	Possible	Minor	Low
Excavation	Unexpected find	Excavation uncovers contaminated materials	Possible	Major	High
Excavation	Unexpected find	Excavation uncovers article of aboriginal or European cultural heritage significance	High Unlikely	Massive	High
Equipment operation	Emission of pollutants	Pollutants exceed specified air quality standards	High Unlikely	Moderate	Low
Equipment operation	Emission of noise	Noise exceeds specified standards causing disruption to neighbours	Possible	Minor	Low
Washing of plant equipment on site	Poor practice	Wash water (containing detergent, sediment or other pollutants) enters and pollutes stormwater drains and natural water ways	Possible	Moderate	Moderate
Refuelling of equipment on site	Poor practice	Spillage enters soil, causing soil contamination and / or groundwater contamination	Possible	Moderate	Moderate

Importation of fill material	Control of fill quality	Contaminated fill imported to site causing soil contamination	Highly Unlikely	Major	Moderate
Removal of excavated material	Control of materials	Removed materials contaminated and cause contamination at fill site	Highly Unlikely	Major	Moderate
Removal of excavated material	Control of materials	Removed materials illegally dumped	Practically Impossible	Massive	Moderate
Storage of solid waste material	Poor practice – containment	Stored materials escape and litter blown onto surrounding land and water waters	Possible	Major	Moderate
Storage of solid waste material	Poor practice - containment	Stored materials attract scavengers (birds) and create hazard to aviation	Unlikely	Moderate	Moderate
Disposal of waste materials	Control of materials	Waste materials illegally disposed and contaminate land or waterways	Highly Unlikely	Major	Moderate
Unapproved works to building	Cultural heritage	Unapproved works destroy or damage a heritage building	Highly unlikely	Major	Moderate
Maintain cultural heritage significant item	Cultural heritage	Poor workmanship or installation around the cultural heritage significant item	Possible	Major	High

The below tables were used to assist in the compilation of the above Environmental Issue Identification:

Risk Matrix Table

	Likelihood					
Consequence	**Practically impossible**	**Highly Unlikely**	**Unlikely**	**Possible**	**Quite Likely**	**Common occurrence**
Catastrophic	High	Severe	Severe	Severe	Severe	Severe
Massive	Moderate	High	Severe	Severe	Severe	Severe
Major	Low	Moderate	High	High	Severe	Severe
Moderate	Low	Low	Moderate	Moderate	High	High
Minor	Negligible	Low	Low	Low	Moderate	Moderate
Slight	Negligible	Negligible	Lo	Low	Lo	Low

Risk Rating

Rating	
Severe	Significant damage, medium to long term or permanent effect, off site impacts, significant cost to repair
High	Extensive damage, medium to long term effect, off site and moderate to high cost to repair
Moderate	Moderate damage, short to medium term effect, off-site impacts repairable at low to moderate cost
Low	Discernible impact, short term effect, site impact only, repairable at little cost
Negligible	No discernible impact, no action required

MANAGEMENT OF ENVIRONMENTAL ISSUES:

Environment Issues will be managed in accordance with the schedules detailed below:

4.1 - SITE MANAGEMENT				
Objective: To ensure the smooth implementation and integration of the CEMP into the work plan.				
Target: CEMP implemented as documented during construction				
Environment Issue / risk	**Management Requirement**	**Action**	**Responsibility**	**Timing**
Non-conformance with approved CEMP	Prevent non-conformances with CEMP	• Ensure that the project activities are conducted in accordance with the requirements of the CEMP	Site Manager	Prior to and during construction
		• Carry out environmental inspections and coordinate site activities as required by the CEMP	Site Manager	During construction
		• Promptly advise the PS of any environmental management action to be taken to maintain compliance with this CEMP and relevant statutory requirements	Site Manager	As required
		• Ensure a copy of the CEMP is always available (Via Procore) and is updated and amended as works progress (as required)	Site Manager	During construction
		• Advise the PS immediately if environmental harm or potential harm occurs within or near the construction site	Site Manager	As required
		• Ensure that site activities are conducted in accordance with the requirements of the CEMP	Site Manager	During construction
		• Undertake environmental management actions as directed by the PS	Site Manager	As directed
		• Ensure that all personnel under their direct control are aware of potential environmental impacts, and required minimum environmental control measures	Site Manager	Prior to commencement

4.2 - EROSION & SEDIMENT CONTROL				
Objective: To minimise the quantity of soil lost during construction due to land-clearing and minimise the generation of contaminated stormwater and the impact of contaminated stormwater on receiving waters.				
Target: No erosion and/or sedimentation impacts during the construction phase.				
Environment Issue / risk	**Management Requirement**	**Action**	**Responsibility**	**Timing**
Soil erosion and sedimentation	Minimise erosion and prevent sedimentation	• Installation of geofabric material over pit lids and placement of sediment control fencing as necessary to stop run off	Site Manager	Prior to construction
Soil erosion	Minimise erosion	• Stage works (when suitable) to minimise the area of land exposed at any time.	Site Manager	During construction
		• Direct stormwater run-off around the site / exposed surfaces where practicable.	Site Manager	During construction
		• Stabilise cleared area as soon as practicable after completion of works.	Site Manager	
		• Restrict vehicle movements to well defined access roads and identify no-go areas clearly via signage / taping.	Site Manager	During construction
	Prevent erosion of stockpiled material	• Minimise the number, area and time of exposure of stockpiled construction / landscaping materials	Site Manager	During construction
		• Locate construction / landscaping material stockpiles at least 10 metres from drainage lines and natural waterways (when suitable)	Site Manager	During construction
		• Testing to occur for determination of excavated spoil	Site Manager	During construction
		• Following test results either use spoil as backfill on site (if of appropriate quality) or remove spoil from site and dispose of at the appropriate waste management facility/ landfill	Site Manager	During construction
Sedimentation	Prevent sedimentation of waterways	• Install all sediment control measures in accordance with the “Managing Urban Stormwater: Vol 1 Soils and Construction”. 4th Edition, Landcom.	Site Manager	Prior to commencing construction
		• Install erosion and sediment control measures at appropriate locations, including along drainage lines, down slope of exposed surfaces and at the site perimeter as required.	Site Manager	Prior to commencing construction
		• Sweep local roads as tracking of sediment to roads occurs, additional measures to be implemented should this be an ongoing issues i.e wheel wash or cattle grid prior to leaving site.	Site Manager	As required during construction
	Monitoring	• Monitor all construction activities for compliance with the CEMP requirements	Site Manager	During construction

4.2 - EROSION & SEDIMENT CONTROL				
Objective: To minimise the quantity of soil lost during construction due to land-clearing and minimise the generation of contaminated stormwater and the impact of contaminated stormwater on receiving waters.				
Target: No erosion and/or sedimentation impacts during the construction phase.				
Environment Issue / risk	**Management Requirement**	**Action**	**Responsibility**	**Timing**
		• Inspect and review the effectiveness of sediment control devices daily, and before and after rainfall and rectify as required • Inspect roadway sediment tracking daily	Site Manager Site Manager	Daily / During construction Daily / During construction
	Corrective action	• Clear, repair and / or replace erosion and sediment control whenever inspections show signs of non-compliance or ineffective operation	Site Manager	Daily / As required
	Reporting	• Cease work in the immediate vicinity of ineffectively operating erosion and / or sediment control devices until corrective action has been implemented. • Prepare and maintain a log of the effectiveness of the erosion and sediment control devices, including recommendations for improvements. Report to PS.	Site Manager Site Manager	As required Monthly during construction

4.3 - ASBESTOS CONTROL				
Objective: To ensure there are no health or safety risks or loss of amenity due to the mishandling of asbestos				
Target: Fully contain asbestos when removing from site with zero complaints throughout the duration of the demolition process				
Environment Issue / Risk	**Management Requirement**	**Action**	**Responsibility**	**Timing**
Asbestos contamination	Prevent asbestos contamination	• Assess proposed asbestos removal and prepare project specific asbestos removal SWMS in conjunction with Class A Asbestos removal contractor	Site Manager	Prior to commencement.
		• Prevent asbestos contamination through completing removal during weather appropriate periods where practicable i.e in minimal to no wind conditions.	Site Manager	Prior to commencement.
		• Maintain watering equipment on-site and use to suppress Asbestos as required	Site Manager	During construction
		• Maintain hazmat containment bags/ plastic for packaging and containment of all asbestos fragments once removed from the existing structure.	Site Manager	During construction
		• Appropriately wrap all asbestos and cover in the vehicle to be delivered to licensed contaminated waste disposal facility in accordance with NSW EPA requirements.	Site Manager	During construction
		• Maintain waste transfer certificates on site for the duration of the works and provide a copy to the PS	Site Manager	During construction
	Monitoring	• Visually monitor asbestos removal and assure asbestos handling practices are being followed	Site Manager	Daily during construction
		• Air monitoring to be completed during the demolition and removal of asbestos where the asbestos present is Friable or if the asbestos is non-friable but in a fragile state.	Site Manager	Demolition
		• Log waste disposal, including type and volumes of Asbestos disposed and maintain waste transfer certificates on site. Provide a copy of all waste transfer certificates to the PS.	Site Manager	During construction in monthly report
	Corrective Action	• Cease Asbestos removal until corrective actions are implemented to remove asbestos in a controlled environment or when wind conditions abate.	Site Manager	As required during construction
		• Implement contamination suppression measures when asbestos contamination is visible dust evident (i.e. water dust generating areas, bas all contaminated material, cover stockpiled materials).	Site Manager	As required during construction
	Reporting	• Log all complaints including the date, time, name and contact number (where relevant) subject of complaint, weather conditions at the time and the action taken to address. Report to PS.	Site Manager	As soon as practicable after receipt of complaint
		• Log all non-conformances including the date, time, weather conditions and action taken to address. Report to PS.	Site Manager	During construction in monthly report
		• Inspection and clearance certificate provided by an independent asbestos assessor. Clearance certificate to be lodged to PS for their records	Site Manager	Upon completion of Asbestos removal

4.4 - DUST CONTROL				
Objective: To ensure there are no health or safety risks or loss of amenity due to the generation of dust				
Target: Zero dust complaints for the duration of the construction phase				
Environment Issue / Risk	**Management Requirement**	**Action**	**Responsibility**	**Timing**
Dust	Minimise dust impact	• Avoid or minimise dust-generating activities during windy conditions where practicable.	Site Manager	During construction.
		• Implement on-site speed limit and / or driving policy to minimise dust generation	Site Manager	During construction
		• Maintain watering equipment on-site and use to suppress dust as required, ensuring that excess water does not enter excavations	Site Manager	During construction
		• Install wind fences where appropriate	Site Manager	During construction when warranted
		• Any Crushers to be used on site to have dust suppression sprinklers incorporated	Site Manager	During construction
		• Crusher Stockpiles to be either covered with membrane or dust suppression sprinklers used	Site Manager	During construction
		• Avoid Crushing during windy conditions where possible.	Site Manager	During construction
	Monitoring	• Visually monitor dust emissions and potential dust generating activities	Site Manager	Daily during construction
		• Monitor and review activities regularly for non-compliances or complaints.	Site Manager	During construction
	Corrective Action	• Cease dust-generating activities until corrective actions are implemented to suppress dust or when wind conditions abate.	Site Manager	As required during construction
		• Implement dust suppression measures when visible dust evident (i.e. water dust generating areas, cover stockpiled materials).	Site Manager	As required during construction
	Reporting	• Log all complaints including the date, time, name and contact number (where relevant) subject of complaint, weather conditions at the time and the action taken to address. Report to PS.	Site Manager	As soon as practicable after receipt of complaint
		• Log all non-conformances including the date, time, weather conditions and action taken to address. Report to PS.	Site Manager	During construction in monthly report
		• Log the date, time and nature of dust suppression activities. Report to PS.	Site Manager	During construction in monthly report

4.5 - WATER QUALITY MANAGEMENT (SURFACE)				
Objective: To ensure that the quality of surface water leaving the site is acceptable during the construction phase.				
Target: Maintain or improve pre-construction surface water quality.				
Environment Issue / Risk	**Management Requirement**	**Action**	**Responsibility**	**Timing**
Water pollution	Prevent pollution of surface water by sediment, fuel and other material	• Minimise the volume of stormwater run-off flowing from the site to the adjacent drainage lines and waterways, as far as practical. Divert runoff around the site / redirect runoff around exposed surfaces wherever practicable.	Site Manager	Prior to commencing and during construction.
		• Protect existing drains, pits, conduits and openings which are to remain in service in the vicinity of the works by appropriate measures (i.e. straw bales, silt fences etc)	Site Manager	Prior to commencing construction
		• Restrict plant wash down to designated wash areas on site.	Site Manager	During construction
		• Restrict refuelling of plant and equipment to designated areas on site. (All refuelling is to be undertaken by mobile transfer, no fuels are to be stored on the site).	Site Manager	During construction
		• Develop and maintain procedures, including contingency plans, to ensure accidental spills are responded to immediately and prevented from entering groundwater, stormwater and waterways.	Site Manager	Prior to construction
		• Train all site personnel in contingency plans and emergency response procedures.	Site Manager	Prior to construction
	Monitoring	• Inspect water quality control measures on routine basis to confirm effective operation / maintained as required (e.g. spill control kits, chemical stores)	Site Manager	During construction
		• Visually inspect water quality on routine basis for evidence of contamination (e.g. discolouration, fuel sheen, odour).	Site Manager	During construction
	Corrective Action	• Undertake corrective action in accordance with the outcomes and recommendations of the water quality monitoring program.	Site Manager	As required
	Reporting	• Log all complaints and incidents including the date, time, name and contact number (where relevant) subject of complaint, weather conditions at the time and the action taken to address. Report to PS.	Site Manager	As soon as practicable after receipt of complaint
		• Water quality monitoring, if required, must be conducted and reviewed by an appropriately qualified professional who can advise the Contractor regarding compliance with quality targets.	Site Manager	As required

4.6 - NOISE				
Objective: To ensure nuisance noise from noise and vibration does not occur.				
Target: Zero noise complaints for the duration of the construction phase.				
Environment Issue / Risk	**Management Requirement**	**Action**	**Responsibility**	**Timing**
Nuisance noise and / or vibration	Minimise noise impact on surrounding environment	• Restrict work hours in accordance with relevant authority approval (DA / CDC)	Site Manager	During construction.
		• Seek EPM Projects approval for all works that need to be conducted outside these hours.	Site Manager	During construction
		• Fit and maintain appropriate noise attenuation equipment to on-site plant and equipment in accordance with manufacturer's specifications.	Site Manager	During construction
		• Meet specified requirements for construction noise.		During construction
	Monitoring	• Undertake noise monitoring as directed by the PS / PS. (Note: Noise monitoring is not required however if noise complaints are received, qualitative or quantitative monitoring may be required to investigate the complaint). Provide a copy of the results to the PS and advise the action taken to alleviate nuisance noise.	Site Manager	As directed.
	Corrective Action	• Consider and implement relevant strategies for noise abatement as per AS 2436-1981 'Guide to Noise Control on Construction, Maintenance and Demolition Sites' in the event nuisance noise becomes the basis for consistent complaints that are not deemed frivolous or vexatious.	Site Manager	During construction
	Reporting	• Log non-conformances and corrective action taken. Report to PS.	Site Manager	Immediately after incident
		• Log complaints including the date, time, name and contact number of the complainant, weather conditions and other relevant details of the incident including the corrective actions taken. Report to PS.	Site Manager	Immediately after notification
		• Maintain an onsite record of any noise monitoring conducted during construction whether undertaken in the normal course of the works or at the request of the PS / PS. Provide a copy of the monitoring results to the PS at completion of the works.	Site Manager	As required

4.7 - LAND CONTAMINATION (NEW)				
Objective: To prevent contamination of the site.				
Targets: Nil contamination of the site during the works – All solid, liquid and chemical wastes will be contained, collected and appropriately disposed.				
Environment Issue / Risk	**Management Requirement**	**Action**	**Responsibility**	**Timing**
Soil contamination	Minimise impact on surrounding environment	• **Provide documentary evidence that all fill to be brought onto site is free of contamination.** (i.e. Fill is VENM or fill meets requirements of the Relevant regulations	Site Manager	Prior to and during construction as required
		• Cease work in the immediate vicinity of suspected contaminated soil, including asbestos contaminated soils, and notify the PS immediately. Follow unexpected find protocol. Manage and dispose the material in accordance with the requirements of regular Regulations, OEH Waste Classification Guidelines, Protection of the Environment Operations Act 1997 and Protection of the Environment Operations (Waste) Regulations 2014.	Site Manager	During construction
		• Maintain waste transfer certificates for removal of contaminated materials to an appropriate landfill facility on site and provide a copy to the PS on completion of the remedial works.	Site Manager	During construction
		• Ensure all staff are wearing the appropriate PPE when working around contaminated soil including gloves, respirators, disposable coveralls, Long sleeve shirts, & Long pants.	Site Manager	Prior to construction
Soil / water contamination		• Ensure vehicles / equipment operating at the site are in good condition (i.e. not leaking fuel / oil). Remove / or repair damaged vehicles / equipment immediately.	Site Manager	During construction
		• Identify area for routine maintenance on Site Map (if required, see below)	Site Manager	Prior to construction
		• Undertake routine equipment maintenance and cleaning at an off-site location. Where this is impractical, and subject to prior approval from the PS, equipment maintenance and cleaning may occur at a designated area subject to all waste product / contaminated soil being removed and disposed appropriately at completion of the works.	Site Manager	During construction
		• Conduct emergency maintenance in a manner that minimises the potential for spills / contamination.	Site Manager	During construction
		• Maintain appropriate types and quantities of spill response materials in a readily accessible location.	Site Manager	During construction
		• Ensure all staff are aware of the location, composition and correct use of spill response	Site Manager	During construction
		• Ensure all waste is classified in accordance with OEH Waste Classification Guidelines prior to leaving site and only licenced facilities will be used for disposal.	Site Manager	During construction

4.7 - LAND CONTAMINATION (NEW)				
Objective: To prevent contamination of the site.				
Targets: Nil contamination of the site during the works – All solid, liquid and chemical wastes will be contained, collected and appropriately disposed.				
Environment Issue / Risk	**Management Requirement**	**Action**	**Responsibility**	**Timing**
		• Ensure any hazardous materials to be removed from site are removed by licenced contractors and disposed of in accordance with regulatory and Workcover requirements		
	Corrective Action	• Initiate spill response procedures immediately in the event of a chemical/fuel spill. • Remediate contaminated areas to pre-spill / incident conditions, in accordance with the *Relevant regulations* and other relevant regulations.	Site Manager Site Manager	During construction As required
	Monitoring	• Monitor all vehicles / equipment operating at the site to ensure it is properly maintained.	Site Manager	During construction
	Reporting	• Notify the PS (02 9452 8300) immediately in the event of a hazardous chemical spill of any size, a fuel spill greater than 10 litres or any spill that threatens or enters stormwater drains. • Maintain a register of all emergencies or incidents involving spills or land contamination at the site. Include details of the location of the incident, the response taken and response outcomes. Notify the PS of all emergencies / incidents that have occurred – Provide a nil report where no emergencies / incidents occur.	Site Manager Site Manager	Immediately during construction During construction in monthly report

4.8 - LAND CONTAMINATION (EXISTING)				
Objective: To prevent disturbance or remove any existing contamination of the site.				
Targets: Maintain or improve site contamination quality – All solid, liquid and chemical wastes will be contained, collected and appropriately disposed.				
Environment Issue / Risk	**Management Requirement**	**Action**	**Responsibility**	**Timing**
Soil contamination	Minimise impact on surrounding environment	• Identify area of potential contamination and ensure all staff are aware of the potential contaminated location, composition and appropriate course of action if in the circumstance contamination poses risk to their health or environment	Site Manager	Prior to construction
		• Ensure all staff are wearing the appropriate PPE when working around contaminated soil	Site Manager	Prior to construction
		• Maintain existing pavements where possible to minimise requirement for management of contaminated soil requiring offsite disposal & minimise contact with contaminated soil, or ground water that would need health and safety requirements such as air monitoring and respiratory protection.	Site Manager	During construction
		• Cease work in the immediate vicinity of suspected contaminated soil, including asbestos contaminated soils, and notify the PS immediately, following unexpected finds protocol.	Site Manager	During construction
		• All excavated soil to be stockpiled in lined & covered skip bins and tested for suitability for reuse on site or waste classification for offsite disposal.	Site manager	During construction
		• **Provide documentary evidence that all fill to be brought onto site is free of contamination.** (i.e. Fill is VENM or fill meets requirements of Schedule 3 of the Relevant regulations and contains no asbestos containing materials).	Site Manager	Prior to and during construction as required
		• Maintain waste transfer certificates for removal of contaminated materials to an appropriate landfill facility on site and provide a copy to the PS on completion of the remedial works.	Site Manager	During construction
Soil / water contamination		• Ensure the excavation procedures are completed in a manner that minimizes the potential for disturbance of existing contamination.	Site Manager	During construction
		• Ensure all waste is classified prior to leaving site and only licensed facilities will be used for disposal.	Site Manager	During construction
		• Ensure any hazardous materials to be removed from site are removed by licenced contractors and disposed of in accordance with regulatory and Workcover requirements	Site Manager	During construction
	Corrective Action	• Consult the PS and develop Remediation plan for the removal of the contaminated areas if in encountered in accordance with the *Relevant regulation*	Site Manager	As required

4.9 - WASTE MANAGEMENT (GENERAL)				
Objective: To prevent / minimise environmental impact of wastes generated on site.				
Targets: Nil contamination or environmental impact at the site by waste. Minimal waste discharged from works to the environment				
Environment Issue / Risk	**Management Requirement**	**Action**	**Responsibility**	**Timing**
Resource depletion	Minimise resource use	• Implement a waste minimisation plan that examines opportunities for waste avoidance, reduction, reuse and recycling	Site Manager	Prior to construction
Soil / water contamination	Minimise impact of waste on surrounding environment	• Contain all waste materials generated on site in appropriate storage containers prior to removal off-site.	Site Manager	During construction, once per week as a minimum.
		• All waste soil & fill to be treated as contaminated until tested which involves segregation and placed within a lined skip bin for containment prior to removal from site	Site Manager	During construction
		• Upon determination of waste test results, remove all waste products generated on site to an appropriately licensed waste disposal facility in accordance with NSW EPA requirements. .	Site Manager	As required during construction and at least 1 x week
		• Maintain waste transfer certificates on site for the duration of the works and provide a copy to the PS	Site Manager	During construction in monthly report
		• Provide bins for construction workers and staff at locations where they consume food. Putrescible waste must be stored in a covered container at all times to prevent bird hazards.	Site Manager	During construction
	Monitoring	• Inspect property boundaries (internal and external) to ensure litter / waste does not accumulate at the boundary or escape to neighbouring properties.	Site Manager	Weekly during construction / daily during windy conditions
		• All waste soil & fill to be tested by approved laboratories for NATA accredited analysis	Site manager	During construction
		• Log waste disposal, including type and volumes of materials disposed and maintain waste transfer certificates on site. Provide a copy of all waste transfer certificates to the PS.	Site Manager	During construction in monthly report
	Corrective Action	• Undertake remedial action immediately in the event waste containment is compromised at any time during the works	Site Manager	During construction
		• Collect litter that has escaped from the site or is negatively impacting the boundary immediately and contain appropriately until it can be appropriately disposed.	Site Manager	During construction
	Reporting	• Log all non-conformances and corrective action taken. Report to PS.	Site Manager	During construction in monthly report.
		• Log all complaints re-waste management issues including the date, time, name and contact number of the complainant, and other relevant details, describe corrective actions taken to address matter. Report to PS.	Site Manager	Immediately after notification.

4.10 - WASTE MANAGEMENT (DEMOLITION)				
Objective: To prevent / minimise environmental impact of demolition wastes removed from site.				
Targets: Nil contamination or environmental impact at the site or disposal facility by waste. Minimal waste discharged from works to the environment				
Environment Issue / Risk	**Management Requirement**	**Action**	**Responsibility**	**Timing**
Resource depletion	Minimise resource use	• Prepare a demolition waste management plan that examines proposed demolition works and identifies appropriate disposal of demolition waste whether that be disposal, reuse or recycled	Site Manager / Contractor	Prior to construction
		• Incorporate waste management targets and measures into the demolition waste management plan	Site Manager	Prior to construction
Soil / water contamination	Minimise impact of waste on surrounding environment	• Contain all demolition waste materials in appropriate storage containers or stockpiles prior to removal off-site. (contaminated material excluded)	Site Manager	During construction
		• Remove all waste products generated on site to an appropriately licensed waste disposal facility in accordance with NSW EPA requirements.	Site Manager	As required during construction and at least 1 x week
		• Provide bins for construction workers and staff at locations where they consume food. Putrescible waste must be stored in a covered container at all times to prevent bird hazards.	Site Manager	During construction
	Monitoring	• Assess current weather conditions and assure they are suitable for demolition works to proceed	Site Manager	Pre-Demolition
		• Inspect demolition practices and ensure demolition works are completed in a controlled manner with demolition waste continually removed from the works zone.	Site Manager	Weekly during construction and daily during windy conditions
		• Log waste disposal, including type and volumes of materials disposed and maintain waste transfer certificates on site. Provide a copy of all waste transfer certificates to the PS.	Site Manager	During construction in monthly report
	Corrective Action	• Cease works should the weather prevent the demolition works from continuing in a controlled manner	Site Manager	During construction
		• Undertake remedial action immediately in the event waste containment is compromised at any time during the works	Site Manager	During construction
	Reporting	• Log all non-conformances and corrective action taken. Report to PS.	Site Manager	During construction in monthly report.
		• Log all complaints re-waste management issues including the date, time, name and contact number of the complainant, and other relevant details, describe corrective actions taken to address matter. Report to PS.	Site Manager	Immediately after notification.

4.11 - CULTURAL HERITAGE				
Objective: To avoid damage to items or areas of cultural heritage significance				
Targets: No damage to items of cultural heritage significance that may be identified during the course of the project.				
Environment Issue / Risk	**Management Requirement**	**Action**	**Responsibility**	**Timing**
Maintain cultural heritage significance	Identify cultural heritage significant items relative to the proposed works	• Review Heritage assessment if available and identify cultural heritage significant items within the building zone	Site Manager / Project Manager / Heritage Consultant	Prior to construction
		• Assess whether any of the new proposed works are within the vicinity of any cultural heritage significant items	Site Manager / Project Manager	Prior to construction
	Prevent any unapproved works from occurring	• Implement cultural heritage work zone work plan if necessary	Site Manager	Prior to construction
		• Incorporate targets and measures into the cultural heritage work zone work plan	Site Manager	Prior to construction
		• Ensure any new installations are in accordance with the design documentation		
	Minimise impact of new works on cultural heritage significant items	• Review and assure any new installations are non-intrusive or impact the integrity of the cultural heritage significant item	Site Manager	During construction
	Monitoring	• Inspect installations as they proceed and ensure works are in accordance with the design documentation and are completed in accordance with the cultural heritage work zone work plan	Site Manager	Weekly during construction
		• Complete Archival Record of any new installations completed and report to the PS.	Site Manager / Heritage consultant	During construction / Post installation
	Corrective Action	• Cease works should works impact on the cultural heritage significant item	Site Manager	During construction
		• Undertake remedial action (under the guidance of the heritage consultant) immediately in the event the cultural heritage significant item is compromised at any time during the works	Site Manager	During construction
	Reporting	• Log all non-conformances, and corrective action taken. Report to PS.	Site Manager	During construction in monthly report.
		• An archival record to be prepared in accordance with the NSW heritage office practices. Report to PS.	Heritage consultant	Immediately after notification.

4.12 - HOT WORK				
Objective: To prevent any explosive risk arising whilst hot works are completed				
Targets: No explosive /flammable damage occurring on site				
Environment Issue / Risk	**Management Requirement**	**Action**	**Responsibility**	**Timing**
Explosive / flammable	Identify potential explosive/ flame risk when working within contaminated areas	• Identify area of potential contamination on Site Map (if required, see below) • As per the Construction Contamination Management all control measures in the 'Hot Work' table	Site Manager / Project manager	Prior to construction
		• Ensure all staff are aware of the potential contaminated location, composition and appropriate course of action if in the circumstance contamination poses risk to their health or environment	Site Manager	Prior to construction
		• Ensure staff are trained in emergency response procedures	Site Manager	Prior to construction
		• Ensure all staff are wearing the appropriate PPE when working around contaminated soil including gloves, respirators, disposable coveralls, Fire extinguisher etc	Site Manager	Prior to construction
		• Establish work zone for hot works to occur and no other workers are at risk should an issue arise	Site manager	Pre-construction
	Prevent any threat of explosive or flame from occurring	• Prior to any work Hot works beginning on site "Hot works permit" to be issued to subcontractor, including any hot work near or in excavated areas.	Site Manager	Prior to construction
		• Ensure no flammable substance is within the vicinity of the worker.	Site Manager	Prior to construction
		• Ensure contractor is using equipment in accordance with the SWMS and manufacturer's instructions	Site Manager	Prior to construction
		• Ensure any new installations are in accordance with the design documentation	Site Manager	During construction

4.13 - EXTERNAL CONSTRUCTION LIGHTING				
Objective: External lighting to control the obtrusive effects of outdoor lighting				
Targets: To prevent any light pollution and nuisance to neighbouring properties				
Environment Issue / Risk	**Management Requirement**	**Action**	**Responsibility**	**Timing**
Light Pollution	Identify potential light pollution sources and mitigate sources of obtrusive light to neighbouring properties during construction	• Identify most suitable locations for temporary construction security lighting that will limit obtrusive light emission to neighbouring properties	Site Manager	Prior to construction
		• Ensure that security lighting is LED type and low height and low intensity to avoid spill lighting to neighbours and night sky	Site Manager	During construction
		• Ensure all unnecessary lighting is switched off when site is being locked up to avoid unnecessary light being emitted from the construction site.	Site Manager	During Construction

5.0 – UNEXPECTED FINDS PROTOCOL

5.1 - Unexpected Finds Protocol –Asbestos Contamination

The following protocol is to be followed for all unexpected finds in relation to possible contaminations.

1. Immediately cease works in the suspected contaminated area and contact the site supervisor.
2. Site Supervisor to contact PM. PM To contact PS about the unexpected find.
3. Assess human health risk present and determine if evacuation procedure to be implemented.
4. The Site Supervisor to establish restricted work zone around Asbestos contaminated area with a physical barrier.
5. If possible, relocate workers to another work location away from potential contamination as a precautionary measure
6. Provide appropriate PPE to staff within vicinity i.e. disposable coverall, respirators etc.
7. Site foreman to make preliminary inspection on scale of contamination, if greater then 10m2 or friable asbestos present, Hazmat consultant to be engaged.
    i. Hazmat consultant to attend site and determine scale of contamination present
    ii. Land contamination remediation plan to be prepared. COWYN Building Group to liaise with PS to in providing the most appropriate remediation plan. PS to review prior to implementation
8. Remediation plan to be implemented.
9. COWYN Building Group to engage class A Licenced Asbestos removalist contractor to remove Asbestos contaminated material from site in accordance with the WHS requirements and Asbestos SWMS.
    i. Air quality monitoring to occur throughout the removal process
10. Inspection and clearance certificate provided by an independent asbestos assessor
11. Clearance certificate submitted to PS hard copy kept in site office.
12. Dismantle work zone barrier

5.2 - Unexpected Finds Protocol – Contaminated Land

1. Immediately cease works in the suspected contaminated area and contact the site supervisor.
2. Site Supervisor to contact PM. PM to contact PS about the unexpected find.
3. Assess human health risk present and determine if evacuation procedure to be implemented.
4. The Site Supervisor to establish restricted work zone around contaminated area with a physical barrier.
5. If possible, relocate workers to another work location away from potential contamination as a precautionary measure
6. Provide appropriate PPE to staff within vicinity i.e. disposable coverall, respirators etc.
7. Site Supervisor to make preliminary inspection on scale, if greater then 10m2 Hazmat consultant to be engaged.
    i. Hazmat consultant to attend site and determine scale of contamination present
    ii. Land contamination remediation plan to be prepared. COWYN Building Group to liaise with PS to in providing the most appropriate remediation plan. PS to review prior to implementation
8. Remediation plan to be implemented nominating safe method of remediation or removal.
9. COWYN Building Group to engage subcontractor to remove or remediate contaminated material from site in accordance with the WHS requirements and developed SWMS for contaminated land
    i. Air quality monitoring to occur throughout the removal process (if required under RAP)
10. Inspection and clearance certificate provided by an independent assessor
11. Clearance certificate submitted to PS hard copy kept in site office.
12. Dismantle work zone barrier

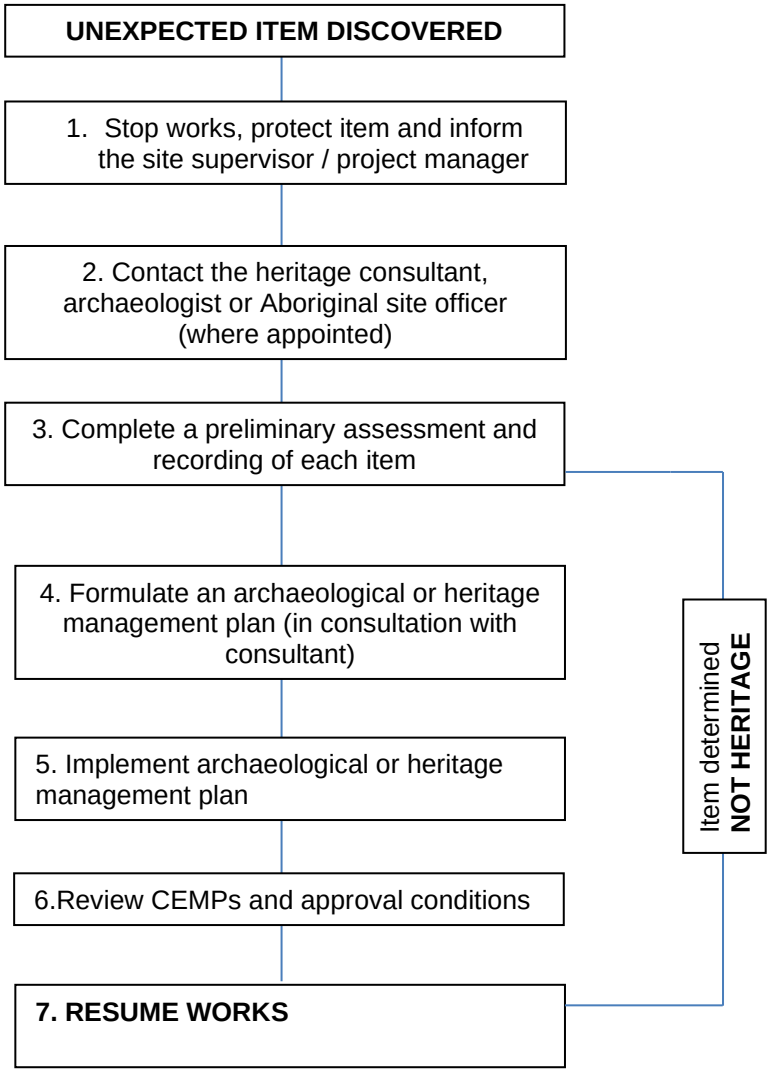
5.3 - Unexpected Finds Protocol – Aboriginal & Non-Aboriginal Heritage Items

Definitions

The National Park and Wildlife Act 1974 protects **Aboriginal objects** which are defined as: “any deposit, object or material evidence (not being a handicraft made for sale) relating to the Aboriginal habitation of the area that comprises New South Wales, being habitation before or concurrent with (or both) the occupation of that area by persons of non-Aboriginal extraction, and includes Aboriginal remains” Examples of Aboriginal objects include stone tool artefacts, shell middens, axe grinding grooves, pigment or engraved rock art, burials and scarred trees

The Heritage Act 1977 protects **relics** which are defined as: “any deposit, artefact, object or material evidence that relates to the settlement of the area that comprises NSW, not being Aboriginal settlement; and is of State or local heritage significance” 7 . Relics are archaeological items of local or state significance which may relate to past domestic, industrial or agricultural activities in NSW, and can include bottles, remnants of clothing, pottery, building materials and general refuse

Overview of Procedure



Unexpected Items Procedure

1. Stop Work, Protect item and inform Site Supervisor / Project Manager

a. Stop all work in the immediate area of the item and notify the project manager or team leader
b. Establish a 'no-go' zone around the item. Use high visibility fencing where practical
c. Inform all site personnel about the no go zone
d. Inspect, document, and photograph the item

2. Contact the archaeologist, heritage consultant or aboriginal site officer (where appointed)

a. Contact the project consultant o discuss the location and extent of the item and to arrange a site inspection, if required.
b. Where there is no project archaeologist, heritage consultant or aboriginal heritage consultant engaged on the project, engage a suitable qualified consultant to carry out an assessment on the find.
c. Where the item is likely to be an aboriginal object, speak with your aboriginal cultural heritage advisor to arrange for a site officer to assess the find. Generally, an aboriginal site officer would be from the relevant local land council.
d. If required, provide the photos taken at step 1d to the consultant.

3. Preliminary Assessment and recording of the find

a. in some cases, the consultant may determine from the photographs that no inspection is required by no constraint exists for the project. Any such advice should be provided in writing and confirmed by the PM or PS. If so, proceed to step 7.
b. arrange for site access for the consultant to inspect the item as soon as practicable. In most cases, a site inspection will be required to ascertain a preliminary finding.
c. Subject to the consultant feedback, works may recommence from a set distance away from the find. This is to protect any further items that may be present but no yet detected
d. The consultant may provide advice after the inspection and assessment that no heritage constraint exists for the project. Any such advice should be provided in writing and confirmed by the PM or PS. If so, proceed to step 7.

4. Prepare a Management Plan

a. The consultant must prepare the management plan shortly after the site inspection. The plan should contain:
    i. Description of the feature
    ii. Historic context
    iii. Likely significance
    iv. Heritage approval and regulatory requirements
    v. Relevance to other project approvals and management plans
b. The consultant must submit this plan to the PM / PS outlining all relevant issues. The plan shall be submitted as soon as practicable. Given the management plan is an overview of all the necessary requirements it should take no longer than two working day to submit the plan
c. The PM / PS must review the management plan to ensure that all requirements can reasonably be implemented. Seek additional advice from senior management for clarification on implementation, if required.

5. Implement Management Plan

a. Implement the management plan. Where impact is expected, this would include such things as a formal assessment of significance and heritage impact assessment, preparation of excavation or recording methodologies, consultation with the interested parties, obtaining approvals etc.
b. Where approvals are required, make contact with the relevant authority (consultant or otherwise) to arrange for inspections or necessary documentation to be provided to facilitate the approval. project scheduling may need to be revised where extensive delays are expected. PM and PS to co-ordinate this.
c. Where statutory approvals (or project approval modification) is required, impact on the relics must not occur until the consultant / authority approvals are received.
d. Where statutory approvals are no required, recording is recommended by the consultant. Sufficient time must be allowed for this to occur.
e. Ensure short term and permanent storage locations are identified for archaeological materials or other heritage material is removed from site, where required.

6. Review CEMPs and Approval Conditions

a. check whether written notification is required to be sent to the regulator before recommencing the works. where this is not explicit in the conditions, expectations should be clarified with the consultant.
b. Update the CEMP, site mapping and project delivery program as appropriate.

7. Resume Work

a. Seek written clearance to resume the project work from the consultant engaged for the unexpected find.
b. Resumption of works must be in accordance with the relevant consultant approvals and determinations.
c. If required, ensure the archaeological excavation and heritage reporting approval conditions are completed within the relevant time frames.
d. Is separate additional unexpected items are discovered, this procedure must begin again from step 1.

6.0 - Appendices

6.1 – Construction Traffic and Pedestrian Management Sub-Plan (CTPMSP)

6.2 – Construction Noise & Vibration Management Sub-Plan (CNVMSP)

6.3 – Construction Soil and Water Management Sub-Plan (CSWMSP)

6.4 – Construction Waste Management Sub-Plan (CWMSP)

6.5 – Waste Classification & Validation Report

6.6 – Biodiversity Development Assessment Report