Pelican Pavilion, Collaroy Beach Hotel Rock Protection Maintenance Activities Construction Management Plan

Hemmes Trading Pty Ltd

29 August 2017
Final
PA1691

Royal HaskoningDHV
Enhancing Society Together

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1 INTRODUCTION

1.1 Overview

This Construction Management Plan (CMP) has been prepared for the rock protection maintenance activities for Pelican Pavilion at the Collaroy Beach Hotel (refer **Figure 1**).

This CMP provides an understanding of the potential impacts of the construction work on the environment and proposed environmental controls.

Figure 1 Location Plan

1.2 Objectives

1.3 Objective

Objectives of this CMP are to:

- allocate responsibility for implementation of this CMP;
- ensure that construction is carried out in accordance with environmental statutory requirements;
- ensure environmental impacts are avoided where possible, and where unavoidable, reduced to as low a level as practical;
- ensure that sufficient monitoring is conducted to quickly identify environmental impacts of the construction;
- ensure that any necessary corrective actions are performed in a timely and appropriate manner; and
- respond to changes in environmental conditions through review and auditing of the monitoring and control programs.

2 PROPOSED MAINTENANCE ACTIVITIES

2.1 General

Pelican Pavilion is located adjacent to the north-eastern corner of the Collaroy Beach Hotel. Storms in early June 2016 associated with an East Coast Low resulted in beach erosion, displacement of rock protection, and loss of backfill material. The rock and backfill material has been strewn at the back of the beach leaving voids under the structure. The voids are most prevalent under the central and northern parts of the structure.

Royal HaskoningDHV undertook an inspection of the site on Tuesday 5 July 2016 following the storms in early June 2016. It was recommended by Royal HaskoningDHV that rocks that had become dislodged from immediately in front of the structure and were lying 'free' on the sandy beach should be repositioned and/or removed. Foreign materials in the form of timber, metal and the like should be removed from the beach. Repositioning and/or removal of the strewn rocks will improve beach amenity and safety, as would the removal of the foreign materials.

2.2 Indicative Construction Activities

As described above, the existing larger rocks that have become dislodged from immediately in front of the structure should be repositioned back into the face of the rock protection and interlocked. Preference should be given to the larger rocks being placed in the area of the footings. Smaller rocks such as cobble sized and nominally 300mm should be placed behind the repositioned larger rocks in such a way that they are not free to move seaward, or should be removed from the beach where quantities are too great to be accommodated in this way. Foreign materials in the form of timber, metal and the like should be removed from the beach.

The following construction activities will be required. All work is to be carried out under the supervision of a coastal engineer approved by Council.

1. **Site Establishment (Mobilisation and Set up):**
   - Site establishment (fencing etc.)
   - Mobilisation of excavator
   - Construction of temporary access ramp to beach at southern corner of carpark adjacent to the Pavilion
   - Preparation of sorting and stockpile area to north of site (refer **Figure 2**)

2. **Protection of the Works from Coastal Hazards:**
   - Construction of temporary sand bund to protect the works area against wave action (refer **Figure 2**).

3. **Excavation:**
   - Excavation in front of and adjacent to Pavilion down to the water table/cemented sand layer located at approximately 0 mAHD to uncover rocks and foreign materials
   - Use of a screening bucket on excavator to isolate rock and foreign material

4. **Stockpiling:**
    - Sorting and stockpiling of rock and foreign material in the back beach area to the north of the Pavilion (refer **Figure 2**)

5. **Repositioning of Rock:**
    - Large rock to be repositioned back into the face of the rock protection and interlocked
    - Preference for large rocks to be placed in the area of the footings
    - Smaller rocks (cobble sized and nominally 300mm) to be placed behind the repositioned larger rocks in such a way that they are not free to move seaward

6. **Removal of foreign material:**
    - Removal offsite of stockpiled foreign material and disposal to an appropriate licensed waste facility

7. **Site Disestablishment (Clean Up and Demobilisation):**
    - Sifting of sand excavated as part of the works using an excavator with screening bucket and finer mesh
    - Placement of sifted sand in front of Pavilion to cover the rock and grooming of the beach to a natural profile
    - Final clean-up of the site to its preconstruction state and demobilise all plant and equipment for handover of site to Council

2.3 Working Hours

The following working hours are proposed:

- Monday to Friday 7am to 5pm
- No work on Saturday, Sunday or Public Holidays

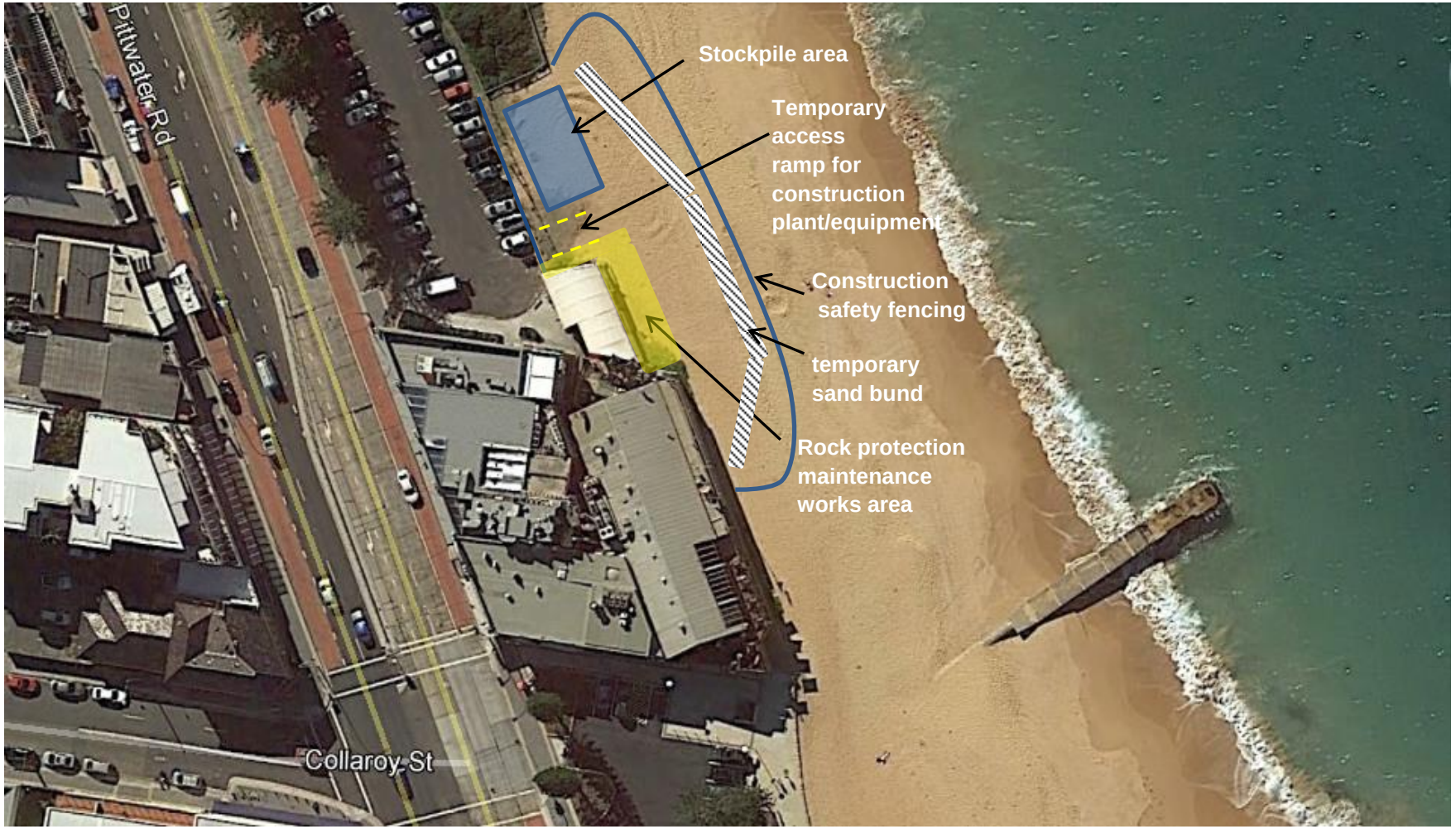


Figure 2 Site Plan

2.4 Roles and Responsibilities

The table below sets out the responsibilities for managing the environmental risks during rock protection maintenance activities.

Role	Responsibility
Project Manager (Hemmes Trading Pty Ltd)	• Appointment of a qualified and experienced Site Supervisor and Contractor • Monitoring of performance of Site Supervisor and Contractor • Undertakes communications with key stakeholders
Site Supervisor - Coastal Engineer (Royal HaskoningDHV)	• Represents the Project Manager on-site • Supervises daily activities of the Contractor • Monitors the Contractor's implementation of the CMP by undertaking regular inspections • Acts on incidents/emergencies • Review and sign-off on corrective actions
Contractor and Subcontractor (to be confirmed)	• Environmental management of works through compliance with this CMP • Monitoring and reporting • Incidents investigation and initiation of corrective and preventative actions • Reporting of non-compliances and corrective actions to the Site Supervisor

2.5 Compliance Obligations

The rock protection maintenance activities are to be undertaken under Part 5 of the EP&A Act. In accordance with Section 110 under Part 5 of the EP&A Act, Council is the determining authority for these works. This CMP has been prepared to accompany the Part 5 approval.

2.5.1 Licenses and Permits

The Contractor shall comply with all approvals obtained. The Contractor shall maintain a register of all permits and licences required, including information on:

- regulatory authority;
- licence/permit reference;
- purpose;
- licence holder; and
- expiry/renewal date.

Council shall be consulted regarding required access approvals. (i.e. Parks & Reserves and requirements).

2.6 Site Specific Risk Assessment

The Contractor shall complete the draft site specific risk assessment included as **Attachment A** to this CMP. It is the Contractor's responsibility to update the draft site specific risk assessment based on their selected work method and submit the risk assessment to the Project Manager for approval prior to commencing work on site.

2.7 Training and Awareness

The Contractor shall induct all personnel involved on the project before they commence work on site. As a minimum, the induction shall involve:

- environmental aspects and impacts of the construction work;
- environmental management responsibilities;
- environmental controls and mitigation measures;
- work, health and safety management and procedures; and
- emergency management and procedures including duty to notify.

2.8 Amendments

The CMP may be updated or amended prior to or during the course of construction subject to the approval of Council.

3 SITE MANAGEMENT

3.1 Site Layout

The indicative site layout is shown on **Figure 2**.

Site amenities if required will be located within the site boundaries at all times. The location and type of any site amenities will be determined closer to the commencement of construction.

3.2 Site Boundaries

Prior to the commencement of construction works, a temporary construction safety fence will be installed along the general lines shown on **Figure 2**. The fence will consist of star pickets with paraweb fencing or similar.

3.3 Site Storage

Construction materials and waste will be stored within the dedicated stockpile area. No materials will be stored outside of the site boundary/perimeter fencing.

4 ENVIRONMENTAL AND SAFETY MANAGEMENT

The following control measures shall be implemented by the Contractor.

4.1 Geology

- Repositioning of rock recovered during the works into the rock protection unless the rock is considered unsuitable in the opinion of the coastal engineer
- Placement of sifted sand to cover the rock protection work

4.2 Coastal Processes

- Use of temporary sand bund on the seaward side of the works using sand excavated from the beach, to provide some protection to the works area against wave action during construction
- Works to be undertaken under the supervision of a Coastal Engineer approved by Council

4.3 Existing Users and Access

- Use of construction barrier fencing along the sandy portion of the beach seaward of the proposed works and use of signage

4.4 Safety and Amenity

- Incorporation of construction barrier fencing, to ensure public and worker safety
- Control of vehicular and pedestrian movements on adjacent roads, within the car park and on the beach
- Signage

4.5 Traffic and Parking

- Management of trucks using the beach car park.

4.6 Noise

- Beach users and surrounding businesses notification of the proposed works and hours of operation
- Provision of a Council contact for the works in the event of any complaints

4.7 Water Quality

- Maintenance by the Contractor of onsite environmental safeguards such as an emergency spill kit and procedures to contain and collect potential leakage and spillage of fuels, oils and greases from plant and equipment

4.8 Waste Management

- Containment and stockpiling of all foreign material and waste, and any unsuitable rock, generated during the construction activities before removal and disposal off-site to prevent it from entering the marine environment

5 MONITORING AND REPORTING

The following reporting will be undertaken

- Site personnel register, to be completed at induction
- Site walkover check, to be completed by Site Supervisor during daily site inspections to check compliance and record corrective measures required
- Environmental incident reports (**Attachment B**), to be completed on site and promptly notified to the Site Supervisor and Project Manager
- All complaints shall be noted and reported to Council, the Project Manager and relevant authority if appropriate
- Where appropriate, the incident will also be investigated and action taken to minimise any adverse environmental effects wherever possible

ATTACHMENT A

RISK ASSESSMENT

Site:		Date Prepared:	

1. RESPONSIBILITIES

The Contractor will conduct inductions for all workers prior to commencing site work. A record of site inductions and/or daily toolbox meetings will be kept by the Contractor for future reference.

All Contractor workers engaged in site work are required to wear the necessary Personal Protective Equipment (PPE) as noted in this document. The consumption of illegal drugs and alcohol is prohibited.

2. DESCRIPTION OF WORK

This brief, step by step work summary is to be completed prior to work commencing to assist in the identification of possible hazards:

1. Site Establishment (Mobilisation and Set up)
2. Protection of the Works from Coastal Hazards
3. Excavation
4. Stockpiling
5. Repositioning of Rock
6. Removal of foreign material
7. Site Disestablishment (Clean Up and Demobilisation)

UNDERGROUND SERVICES AFFECTED BY THE WORKS: ☐Yes ■No If **YES**, complete table below:

Underground Service	Affected? (Y/N)	Located? (Y/N)	Marked? (Y/N)
Electricity			
Gas			
Water			
Phone / Cable			

3. RISK ASSESSMENT

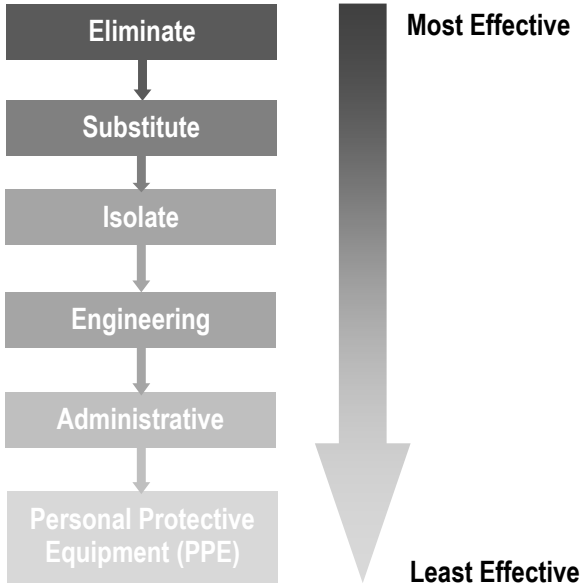
Risk Assessment Table

Consequence or Impact of Hazard	Level of harm	A	P	U	Likelihood/Probability	Risk Rating
H-Potential death, permanent or long term disability or illness, significant detrimental environmental impact	**H**-High	1	1	2	**A**-Almost certain could happen at any time	**1-**Immediate action is required
M-Potential temporary disability or illness requiring medical attention, short term environmental impact	**M-**Medium	1	2	3	**P**-Possible risk could happen occasionally	**2-**Control the risks/ hazards a.s.a.p.
L-Potential minor injury requiring first aid or minimal environmental impact	**L**-Low	2	3	3	**U**-Unlikely may happen rarely	**3-**Control risks with routine procedures

When assessing the risk of a particular hazard remember:

- The rating you use should indicate the importance of the action required to minimise the Risk posed by the Hazard.
- The more Hazards you identify the greater the overall Risk on the site.
- Overall Risk increases as the number of people exposed to a Hazard increases.
- The more serious the potential impact to a person's health from a Hazard the greater the Risk.
- The frequency of exposure to a Hazard will increase the Risk.

Hierarchy of Controls



Eliminate – 'Design out' the hazard when new materials, equipment and work systems are being purchased for the workplace;

Substitute - Substitute less hazardous materials, equipment or substances and use smaller sized containers;

Isolate – Separate the workers from hazards using barriers, enclosing noisy equipment and providing exhaust or ventilation systems;

Engineering – Use engineering controls to reduce the risks such as guards on equipment, hoists or other lifting and moving equipment;

Administrative – Minimise the risk by adopting safe working practices or providing appropriate training, instruction or information.

Personal Protective Equipment – Make sure that appropriate PPE is available and used correctly.

<u>The Work Process</u> - **"Risk Rating"** and **"Who is Responsible"** is to be completed prior to work commencing. Additional Site Specific Requirements are to be entered following this section:

Steps	Step by Step Procedure	Possible Hazards	Risk Rating	Safety Controls	Who is responsible?
1	**Site Establishment (Mobilisation and Set up)**	• Working near a road • Interactions with the public	2	• Traffic & pedestrian management • Construction barrier fencing • Signage including Council contact details	**Contractor**
2	**Protection of the Works from Coastal Hazards**	• Wave damage to incomplete works • Water entering excavation • Interactions with the public • Noise • Collision with workers • Weather conditions	2	• Monitor weather conditions • Maintain bund • Construction barrier fencing • Where practical turn off equipment when not in use, minimise idling • Operate machinery only between 7am and 5pm (Mon - Fri) • Do not approach working plant/equipment without first having the attention of the operator and after he/she has made it safe to approach. • Do not work or approach plant from its blind spots. • Do not work within the swing arch of plant • Wear appropriate PPE: Safety shoes (steel cap boots), hard hat, safety glasses/goggles, high visibility vest, hearing protection and appropriate clothing	**Site Supervisor** **Contractor**
3	**Excavation**	• Collision with workers • Noise • Excessive ground disturbance/undermining of building footings • Fuel spill • Weather conditions	2	• Do not approach working plant/equipment without first having the attention of the operator and after he/she has made it safe to approach. • Do not work or approach plant from its blind spots. • Do not work within the swing arc of plant • Where practical turn off equipment when not in use, minimise idling. • Operate machinery only between 7am and 5pm. • Works to be undertaken under the supervision of a Coastal Engineer approved by Council	**Contractor**

Steps	Step by Step Procedure	Possible Hazards	Risk Rating	Safety Controls	Who is responsible?
				• Disturbance to ground surfaces to be kept to a minimum to achieve objectives • Disturbed areas will be backfilled as soon as possible and in a progressive manner as works are completed where possible. • Spill kits to be kept on site • Ensure plant is well maintained. • Construction of temporary sand bund for protection of works during wave action • Wear appropriate PPE: Safety shoes (steel cap boots), hard hat, safety glasses/goggles, high visibility vest, hearing protection and appropriate clothing	
4	**Stockpiling**	• Weather conditions • Foreign material and waste entering the marine environment	3	• Wear appropriate PPE: Safety shoes (steel cap boots), hard hat, safety glasses/goggles, high visibility vest, hearing protection and appropriate clothing • Containment and stockpiling of all foreign material and waste, and any unsuitable rock, generated during the construction activities before removal and disposal off-site to prevent it from entering the marine environment	**Contractor**
5	**Repositioning of Rock**	• Manual handling • Crush hazard • Weather conditions	3	• Consider the shape, size and weight of the objects handled • Adopt correct lifting techniques • When required, use two people to lift objects or mechanical aids • Wear appropriate PPE: Gloves, Safety shoes (steel cap boots), hard hat, safety glasses/goggles, high visibility vest, hearing protection and appropriate clothing	**Contractor**

Steps	Step by Step Procedure	Possible Hazards	Risk Rating	Safety Controls	Who is responsible?
6	**Removal of foreign material**	• Working near a road • Interactions with the public • Inappropriate disposal of waste	3	• Traffic & pedestrian management • Construction barrier fencing • All waste material to be disposed of to a licenced waste facility	**Contractor**
7	**Site Disestablishment (Clean Up and Demobilisation)**	• Working near a road • Interactions with the public • Small rocks contained in sand used to cover the works	2	• Traffic & pedestrian management • Construction barrier fencing • Signage including Council contact details • Screening of sand used to cover the works	**Contractor**

4. RESOURCES, QUALIFICATIONS AND PERMITS REQUIRED

Minimum number of workers required to complete this work	(Insert No. of workers)
Licences required to complete this work	Licence No: Held By:
Additional qualifications, permits and/or experience required to complete this work	(Insert additional qualifications etc. if required)
Additional training required to complete this work	(Insert additional training if required)

5. SAFETY RESPONSIBILITIES

The **Site Safety Representative** for this project is _____, he/she can be contacted on _____.

The **Health and Safety Representative (HSR)** for this project is _____, he/she can be contacted on _____.

All workers:

→ **WILL** be required to have relevant site experience.
→ **WILL** be required to attend site inductions, project inductions and possess current WH&S General Induction for Construction Work in NSW card.

Work Health and Safety - Responsibilities

a) _____ will be responsible for identifying and assessing the hazards associated with the works, and documenting the hazard control measures to be taken.

b) _____ will be responsible for compliance with Work Health and Safety (WHS) legislation, regulations, standards, codes, and the site-specific Sites Safety Rules.

c) _____ will be responsible for assessing and monitoring subcontractors' capabilities, and for making sure they meet WHS requirements.

d) _____ will request and review all subcontractors risk assessments and SWMS.

e) _____ will be responsible for managing the acquisition and communication of WHS information to managers, supervisors and people working on site.

f) _____ will be responsible for preparing, maintaining and making accessible the register of hazardous substances.

g) _____ will be responsible for maintaining first-aid stocks.

h) _____ will be responsible for managing accident and emergency procedures.

i) _____ will be responsible for keeping WHS records.

j) _____ will be responsible for workplace injury management and rehabilitation.

6. TRAINING RESPONSIBILITIES

The HSR will:

a) identify the WHS training needs of management, supervisors and workers on site;

b) make sure that appropriate training is carried out internally and/or by Safe Work Australia accredited trainers;

c) make sure that all personnel attend general construction WHS induction training before starting work;

d) make sure that all personnel attend adequate site-specific induction, work activity and refresher safety training;

e) conduct induction training, task training and refresher safety training for everyone working on site; and

f) keep appropriate records of WHS training.

7. INCIDENT MANAGEMENT

If an emergency occurs, ring for help on 000 or 112 from a mobile phone.

The HSR will:

a) be available (both during and outside normal working hours) to prevent, prepare for, respond to and recover from incidents; and

b) make sure that the procedures for contacting the relevant person(s) are communicated and clearly displayed on the sites.

8. PLANT AND EQUIPMENT

Plant and Equipment used on site includes but is not limited to:

Plant and/or Equipment	Inspection and maintenance checks required

9. PERSONAL PROTECTIVE EQUIPMENT (PPE)

PPE for this task includes but is not limited to:

1	Hard hats	6	Hearing protection
2	Safety boots	7	Sun protection
3	Safety glasses / goggles	8	(Insert PPE)
4	Protective gloves	9	
5	High visibility clothing / vests	10	

10. ACCESS

No access by other parties shall be permitted into the work area whilst work is in progress. (modify if other parties require access)

11. LEGISLATION, REGULATIONS, CODES AND STANDARDS

The following reference documents have been identified as relevant to this project. :

a) Work Health and Safety Act 2011
b) Work Health and Safety Regulations 2011
c) COP Managing Risks in Construction Work
d) COP First Aid
e) COP Hazardous Manual Tasks
f) COP How to Manage Work Health and Safety Risks
g) COP Managing the Work Environment and Facilities
h) COP Managing Noise and Preventing Hearing Loss
i) COP Managing Risks for Electrical Work
j) (Insert others as required)

ATTACHMENT B

ENVIRONMENTAL INCIDENT/COMPLAINT REPORT

Any accident or incident which may impact on the environment **MUST** be reported.
Any complaint **MUST** be recorded and reported.

Accident/Incident Date: _____ Time: _____

Time, Date, Location and Duration of Incident:

_____

_____

_____

Person Reporting: _____

Nature / Details of Incident / Quantity of Pollutants etc:

_____

_____

_____

_____

Actual or Suspected Cause:

_____

_____

Action Taken or Proposed Action – Management & Prevention:

_____

_____

Contractor: _____

Reported to: _____

Signature: _____