

# **KANE**

## **ENVIRONMENTAL MANAGEMENT PLAN**

### **PARRAMATTA NRL CENTRE OF EXCELLENCE AND COMMUNITY FACILITY**



## REVISION HISTORY

REVISION HISTORY				Frequency of Review	
				<input type="checkbox"/> Monthly <input checked="" type="checkbox"/> Quarterly <input type="checkbox"/> Annually	
Document	Revision	Change Description	By	Sign	Date
EMP	1	First Issue Authorised for use	Project Manager		

All Documents are controlled in accordance with the Kane Constructions Business Management System

### SCHEDULE 3 (Clause Ref 3.5)

#### Environmental Management Plan

Who shall implement	Project Manager to prepare for implementation on site
When to implement	Each Project
How to use/implement	<p>The Project Manager shall prepare and authorise for use the Project Environmental Management Plan EMP. In preparing the EMP, the Project Manager must:</p> <ul style="list-style-type: none"> <li>• insert names of Kane staff into the chart</li> <li>• detail consultation process</li> <li>• prepare environmental risk assessment and checklist</li> <li>• prepare incident response flowchart</li> </ul>

<b>REVISION HISTORY .....</b>	<b>2</b>
<b>1 Introduction.....</b>	<b>4</b>
1.1 Project Team Chart.....	4
<b>2 Consultation and Communication.....</b>	<b>5</b>
2.1 Site Induction.....	5
2.2 Currency and Awareness of Environmental Information.....	5
<b>3 Training and Competency .....</b>	<b>5</b>
3.1 Kane Staff.....	5
3.2 Non Kane Staff.....	5
<b>4 Hazard Identification and Risk Control .....</b>	<b>5</b>
4.1 Risk Assessment.....	5
<b>5 Environmental Aspects .....</b>	<b>6</b>
5.1 Noise.....	6
5.2 Dust.....	6
5.3 Waste.....	6
5.4 Chemicals.....	6
5.5 Land Contamination / Soil Contamination.....	6
5.6 Erosion and Sediment.....	6
5.7 Flora / Fauna.....	6
5.8 Mud on Road.....	6
5.9 Heritage Sites.....	7
5.10 Air Pollution.....	7
<b>6 System Implementation and Responsibilities.....</b>	<b>7</b>
<b>7 Incident notification, investigation and response .....</b>	<b>7</b>
7.1 Incident notification.....	7
7.2 Investigation and action taken.....	8
<b>8 AUDITING FREQUENCY .....</b>	<b>8</b>
8.1 Internal.....	8
8.2 External.....	8
<b>9 Attachments.....</b>	<b>9</b>
<b>ATTACHMENT 1 - Schedule of Acts, Regulations, Standards and Codes of Practice ....</b>	<b>10</b>
<b>ATTACHMENT 2 - Risk Assessment and Checklist.....</b>	<b>14</b>
<b>ATTACHMENT 3 - Environmental Induction.....</b>	<b>16</b>
<b>ATTACHMENT 4 - Incident Response Flowchart.....</b>	<b>23</b>
<b>ATTACHMENT 5 - Improvement Notice .....</b>	<b>26</b>
<b>ATTACHMENT 6 - Quarterly Audit Report .....</b>	<b>28</b>
<b>ATTACHMENT 7 - Confirmation of Responsibilities.....</b>	<b>31</b>
<b>10 PROJECT SPECIFIC REQUIREMENTS.....</b>	<b>33</b>
10.1 Sub-Plans.....	33
10.2 Hours of Work.....	33
10.3 24 Hour Contact Details.....	34
10.4 Community Consultation and Complaint Handling Procedure.....	34
10.5 Environmental Aspects.....	34
10.5.1 Stormwater.....	34
10.5.2 Dust and Odour.....	35
10.5.3 Flora and Fauna Management.....	35
10.5.4 Contamination Management.....	35
10.6 External Lighting Compliance.....	35
10.7 Waste Classification.....	35
10.8 Recommendations from Project Reports.....	36
<b>APPENDIX A - CONSTRUCTION PEDESTRIAN &amp; TRAFFIC MANAGEMENT PLAN .....</b>	<b>37</b>
<b>APPENDIX B - CONSTRUCTION NOISE &amp; VIBRATION MANAGEMENT PLAN.....</b>	<b>38</b>
<b>APPENDIX C - AIR QUALITY MANAGEMENT PLAN.....</b>	<b>39</b>
<b>APPENDIX D - CONSTRUCTION WASTE MANAGEMENT PLAN .....</b>	<b>40</b>
<b>APPENDIX E - CONSTRUCTION SOIL &amp; WATER MANAGEMENT PLAN .....</b>	<b>41</b>
<b>APPENDIX F - UNEXPECTED FINDS PROTOCOL.....</b>	<b>42</b>
<b>APPENDIX G - TREE PROTECTION PLAN .....</b>	<b>43</b>

## 1 INTRODUCTION

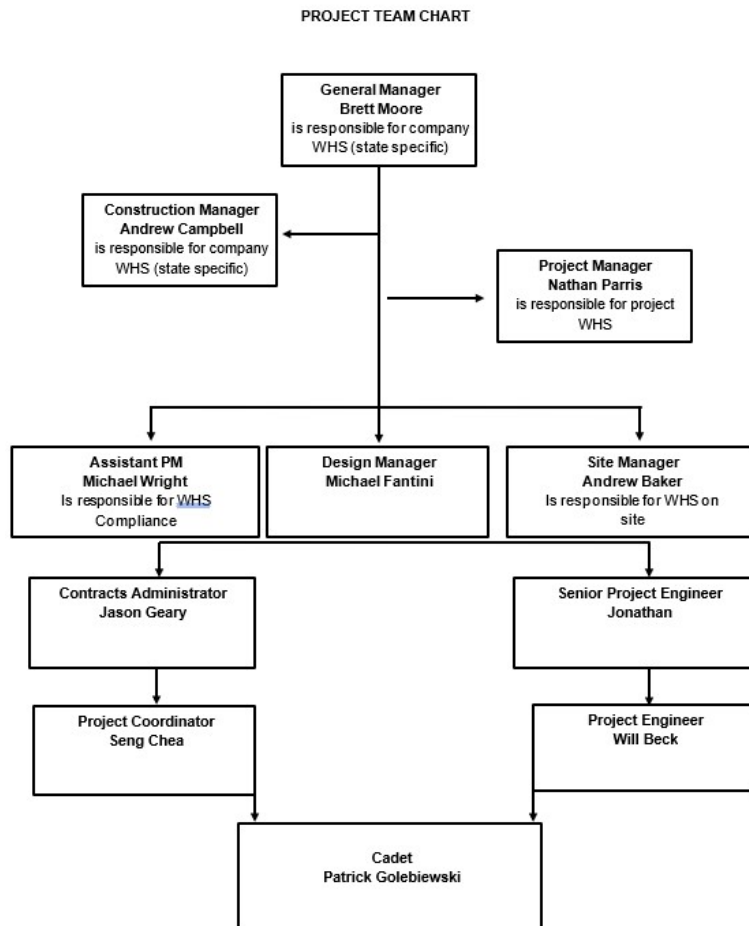
The Kane Constructions Environmental Management System is third party certified to ISO 14001 and developed for functionality and use at construction site level. The system is designed so that when implemented, will assist in achieving the objectives of the Kane Environmental Management Policy.

The Environmental Management Plan facilitates a systematic approach to site environmental management by applying the processes, checklists and forms of the Kane EMS to achieve compliance with relevant Environmental Legislation. When implemented on site, the checklists and forms of the Kane EMS become a record of project environmental management. We audit internally for compliance with the Kane EMS and randomly select sites for third party surveillance auditing for compliance with ISO 14001.

The Environmental Management Plan is developed to identify workplace environmental hazards, assess risks and implement control measures associated with activities, products and services over which Kane have control or influence.

The Kane project team is identified in the chart below. The project staff responsible for environmental management is assessed for competence, understanding and acceptance of the environmental responsibilities. Confirmation of this is provided – refer Attachment 7

### 1.1 Project Team Chart



## 2 CONSULTATION AND COMMUNICATION

### 2.1 Site Induction

Before commencing work, all visitors must report to the site office for a site specific induction where employees and service providers are presented information contained in the Environmental Induction Booklet (*refer Attachment 3*). Consultation and communication processes established are communicated at the site induction. All workers are encouraged to express their views on environmental issues direct to the Site Manager.

### 2.2 Currency and Awareness of Environmental Information

Kane Constructions seek Environmental advice and assistance and keep updated with changes to Environmental legislation, regulations and guidelines through the following (not limited to);

- Environmental Protection Authority Victoria
- Office of Environment and Heritage NSW
- Department of Environment and Resource Management QLD
- Department of the Environment, Climate Change, Energy and Water ACT
- Standards Australia Update emails etc.

During toolbox talks, the Site Manager shall communicate relevant alerts, newsletters, bulletins, results of audits, corrective actions etc. consistent with current activities on site. These shall be recorded using the OHSMS Schedule W-Record of Meeting proforma.

## 3 TRAINING AND COMPETENCY

### 3.1 Kane Staff

Kane Constructions ensures ongoing Environmental Management and Awareness training for all employees based on skill gaps. This targets the needs of individual people and relates appropriately to their roles and responsibilities. Certificates of competency are maintained in staff personnel files and available to validate competency upon request.

### 3.2 Non Kane Staff

The employer is responsible for providing their employees with the relevant training and supervision so they have the necessary competency and skills to undertake their responsibilities.

## 4 HAZARD IDENTIFICATION AND RISK CONTROL

### 4.1 Risk Assessment

An Environmental Risk Assessment and Checklist is prepared by the Project Manager to identify environmental aspects associated with the activities to be undertaken (*refer Attachment 2*). The risk of those aspects occurring and causing environmental impact is rated, and control measures identified to reduce the risk.

The Site Manager is responsible for ensuring the control measures determined in the Environmental Risk Assessment and Checklist are implemented and remain effective. The aspects that have significant impact and assessed to be of higher risk must be given the highest order of priority.

## 5 ENVIRONMENTAL ASPECTS

### 5.1 Noise

Sources can be, but not limited to, in the forms of plant/machinery, radios and various construction methods. The Site Manager will ensure noise and vibration levels meet acceptable standards and statutory requirements. Calibrated noise meters are available at Kane to monitor noise levels.

### 5.2 Dust

Disturbance of ground conditions, vehicle movement, dry powdery soils and stockpiled soils have potential to generate dust throughout the site. The Project Manager will identify sources and apply appropriate controls while the Site Manager will ensure the controls are managed effectively. Special, high quality hoarding which meets environmental and infection control standards may be required in operational healthcare facilities.

### 5.3 Waste

The accumulation of waste resulting from demolition works, construction works, packaging, office tasks and amenities will be managed accordingly by Kane and/or engaged subcontractors. The Site manager shall ensure facilities are provided to adequately dispose of all types of waste.

### 5.4 Chemicals

Various chemicals stored on site include but not limited to fuels, oil, paint and adhesives which may have an impact on the environment if not handled appropriately. The Site manager will ensure minimum quantities of chemicals are stored correctly on site and empty packaging is disposed of in accordance with state laws and regulations.

### 5.5 Land Contamination / Soil Contamination

Various activities may contribute to the contamination of land and soil including wash water, brick cutting and plaster. Effective controls shall be implemented to ensure contamination to soil is minimised.

### 5.6 Erosion and Sediment

Rain and/or water used on site over recently disturbed or bare areas of soils have potential to carry sediment off site and cause erosion impacting native vegetation and water courses. The Site Manager shall minimise the disturbance of vegetation to reduce the likelihood of sediment loss and erosion.

### 5.7 Flora / Fauna

Plant/machinery and various forms of construction work can impact negatively on surrounding flora and native vegetation. Protection of existing native vegetation from the impacts of construction work shall be implemented by the Site Manager.

When native fauna is encountered, it must not be disturbed. Notify the Site Manager if you see any fauna which is in the way of conducting work. Disturbing, injuring or killing native fauna without a permit may lead to prosecution.

### 5.8 Mud on Road

Vehicle movements after heavy rain events increase the risk of transferring mud and dirt onto public roads. The Site Manager shall put controls in place to ensure the risk of mud on roads is minimised.

## 5.9 Heritage Sites

Various forms of construction work including demolition can have an impact of the cultural heritage of an existing building or site. The heritage significance of the building shall be determined by the Project Manager and the Site Manager shall ensure agreed protection methods are implemented on site.

## 5.10 Air Pollution

Poor plant maintenance and exhaust emissions will impact the quality of the air. The Site Manager shall ensure that incoming plant is assessed and confirmed to be maintained in accordance with manufacturer's recommendations. Other sources of air contaminants shall be contained and managed appropriately.

## 6 SYSTEM IMPLEMENTATION AND RESPONSIBILITIES

Site staff have responsibility for implementation of the following site specific Environmental Management system procedures and related Kane Business Management System procedures. Responsibilities listed below must be read in conjunction with the Kane EMS responsibilities (refer Clause 3.1). The priority, order and timeframes in which the items below are implemented may differ as determined by the Project Manager to suit the project construction programme and the findings of the environmental risk assessment.

<b>Project Specific Systems</b>	<b>Corporate Responsibility</b>	<b>Individual Responsibility</b>
1. Include Environmental Management as a fixed agenda item of meetings	Kane	Kane PM, CM, CA
2. Develop the Environmental Management Plan EMP and all attachments	Kane	PM
3. Deliver Site Induction (including policy, controls, incident response)	Kane	SM
4. Implement the environmental controls identified in the EMP	Kane and Subcontractors	SM, Subcontractor Supervisor
5. Implement Incident Response procedure (where incidents occur)	Kane and Subcontractors	SM, Subcontractor Supervisor
6. Raise Non-conformance reports and initiate corrective and preventative action	Kane and Subcontractors	SM, Subcontractor Supervisor
7. Communicate alerts, incidents etc via Toolbox Meetings	Kane and Subcontractors	SM, Subcontractor Supervisor
8. Update site noticeboard with material waste data sheets	Kane	SM
9. Monitor and evaluate environmental controls (document weekly)	Kane and Subcontractors	SM, Subcontractor Supervisor
10. Measure and evaluate the effectiveness of the EMP	Kane	PM

## 7 INCIDENT NOTIFICATION, INVESTIGATION AND RESPONSE

### 7.1 Incident notification

All site employees are responsible for notifying the Site Manager if they witness a pollution incident including leak, spill or escape of a substance or pollution incident causing or threatening public or property harm. In the event of an incident, the clean up process shall be managed under the direct supervision of the Site Manager. The Site Manager is responsible for reporting notifiable incidents to the relevant environmental authority in accordance with Attachment 4 Incident Response Flowchart.

## 7.2 Investigation and action taken

Procedural and/or legislative Non-conformances are identified, investigated, corrected and prevented by raising an Improvement Notice (refer Attachment 5). When raised, Kane Site Management documents the non-conformance and recommendation on how to correct the non-conformance. The Improvement Notice recipient is required to document the action taken to rescind the notice. Kane Site Management determines if the rectification is complete and adequate to prevent recurrence.

If the incident is of a large magnitude and poses high risk, the Site Manager shall contact and allow emergency services to manage the clean up process. Such incidents shall be investigated using Kane OHSMS Schedule M/2 - Incident Investigation to determine how the incident occurred, how to prevent recurrence and how procedures may require revision to improve preparedness and response. The findings of an investigation are reviewed by the Construction Director, Systems Manager, Systems Coordinator, and Construction Supervisor NSW/QLD with a view to disseminating the lessons learnt to all projects.

## 8 AUDITING FREQUENCY

### 8.1 Internal

Quarterly Audit Report (refer Attachment 7) is used by the Project Manager to audit effective implementation of the Kane EMS. Points are awarded for effective implementation and points taken where noncompliance is observed. The audit facilitates recognising good practice environmental management and requires actions be documented where improvement is necessary. Each site is audited quarterly (minimum) close to the end of each reporting period on a day determined by the Project Manager. The audit report is issued to the Systems Manager for VIC projects or Construction Supervisor for NSW/QLD projects to review against company objectives/targets and identify trends that may appear (positive and negative). The audits are scheduled at the end of the following months (or otherwise scheduled to avoid holiday and extremely busy periods i.e. lead up to Christmas)

- March (Jan – Mar)
- June (Apr – Jun)
- September (Jul – Sept)
- December (Oct – Dec)

Random EMS audits are undertaken by the Systems Manager/Coordinator (VIC) and Construction Supervisor (NSW/QLD). Reports are prepared and distributed to all staff on the project for actioning and for information to the Directors in each state.

### 8.2 External

Kane Constructions certification to ISO 14001 – Environmental Management requires third party surveillance audits be undertaken. Projects are selected randomly. Each audit confirms if the company certification should remain. Corrective action must be promptly closed where identified.

It is not uncommon for head contracts to require external audits of projects. The auditor is commonly required to have Lead Auditor competency. Audit frequency and reporting requirements differ based on project complexity and risks.



## 9 ATTACHMENTS

Attachment	Document Title	Document Number	Revision
1	Schedule of Acts, Regulations, Standards and Codes of Practice	EMS-SYS-SCH3-ATT1	A2
2	Risk Assessment and Checklist	EMS-SYS-SCH3-ATT2	A2
3	Environmental Induction	EMS-SYS-SCH3-ATT3	A2
4	Incident Response Flowchart	EMS-SYS-SCH3-ATT4	A2
5	Improvement Notice	EMS-SYS-SCH3-ATT5	A2
6	Quarterly Audit Report	EMS-SYS-SCH3-ATT6	A2
7	Confirmation of Responsibilities	EMS-SYS-SCH3-ATT7	A2

The below table identifies the documents associated with this EMP, however are integrated with and presented in the Kane Occupational Health and Safety Management System.

Document Title	Document Description	Document Number	Kane OHS / BMS Reference
Skills Register	Register of training /competency	OHS-SYS-SCHD	OHS Schedule D
Post Tender Interview	Contract document detailing environmental management obligations of all subcontractors engaged	NA	Section 8.26
Incident Investigation	Form completed for the purposes of investigating incidents	OHS-SYS-SCHM2	OHS Schedule M2
Site Induction Record	Form completed by all inductees detailing personal and employment details	OHS-SYS-SCHP	OHS Schedule P
Record of Consultation	Form used to record consultation / communication	OHS-SYS-SCHW	OHS Schedule W

# ATTACHMENT 1 - SCHEDULE OF ACTS, REGULATIONS, STANDARDS AND CODES OF PRACTICE

Who shall implement	Construction Director/Secretary All Project Staff site	- Maintain currency of documentation - Ensure availability of publications for the use on site
When to implement	Bi Annually As required	- Maintain Currency - Provide documentation
How to use/implement	The list of publications is available to confirming legal obligations / best practice controls / guidance material for works on site. All <i>Commonwealth</i> legislation applies across Australia. All other legislation is relevant to the state of NSW.	

Publication	Source
<b>Acts</b>	
<b><u>Environment Protection</u></b>	
Protection of the Environment Administration Act 1991	NSW Legislation and Parliamentary Document Website <a href="http://www.legislation.nsw.gov.au/">http://www.legislation.nsw.gov.au/</a>
National Environment Protection Council (NSW) Act 1995	Search using title OR
Protection of the Environment Operations Act 1997	
Smoke Free Environment Act 2000	Commonwealth Legislation Website <a href="http://www.comlaw.gov.au/Home">http://www.comlaw.gov.au/Home</a>
Contaminated Land Management Act 1997	Search using title
<b><u>Planning and Environmental Impact Assessment</u></b>	
Waste Avoidance and Resource Recovery Act 2001	
Commonwealth Environment Protection (Impact of Proposals) Act 1974	
Environment Protection and Biodiversity Conservation Act 1999 ( <i>Commonwealth</i> )	
<b><u>Heritage and Other Land Protection Legislation</u></b>	
National Parks and Wildlife Act 1974	
<b><u>Other Acts with Potential to Affect Construction Activities</u></b>	
Health Administration Act 1982	
Road and Rail Transport (Dangerous Goods) Act 1997	
Water Act 2007 ( <i>Commonwealth</i> )	



Publication	Source
<p><b>Other Standards and Guidelines</b></p> <p><b>ISO</b></p> <p>ASNZS ISO 19011:2002 - Guidelines for Quality and/or Environmental Management Systems Auditing</p> <p>ISO 14001:2004 – Environmental Management Systems</p> <p><b>Biodiversity</b></p> <p>The National Strategy for the Conservation of Australia’s Biological Diversity 1996</p> <p>The NSW Biodiversity DRAFT Strategy</p>	<p>Copy available in Head Office – Contact the Construction Assistant</p> <p><a href="http://www.environment.gov.au/biodiversity/publications/strategy/index.html">http://www.environment.gov.au/biodiversity/publications/strategy/index.html</a></p> <p><a href="http://www.environment.nsw.gov.au/biodiversity/nswbiostrategy.htm">http://www.environment.nsw.gov.au/biodiversity/nswbiostrategy.htm</a></p>
<p><b>Australian Government Department of Defence</b></p> <p>Defence Environmental Strategic Plan 2010-2014</p>	<p>Department of Defence Infrastructure Management Website</p> <p><a href="http://www.defence.gov.au/environment/ems.htm">http://www.defence.gov.au/environment/ems.htm</a></p>

## ATTACHMENT 2 - RISK ASSESSMENT AND CHECKLIST

ATTACHMENT 2 - ENVIRONMENTAL RISK ASSESSMENT and CHECKLIST (CI 3.5.1)				ASSESS RISK RATING IN ACCORDANCE WITH THE BELOW RISK CLASSIFICATION TABLE						
Job No.				Job Title		Determine the RATING for each aspect (including any site specific) after consideration of the standard risk control: <b>KANE</b>				
Prepared By :				Position : Project Manager		After implementation of the standard risk controls, is there:			H - HIGH	
Date of Review				Risk Review undertaken by (list names / company);		• Minimal potential for public or other complaint • Minimal potential for pollution (mitigated with minor damage)			M - MEDIUM	
Review Number				Date Approved:		• No potential for public or other complaints • No potential for a legal breach • No specific contract requirement • No specific permit requirement • No specific authority requirement			L - LOW	
No	ASPECTS	SOURCE	STANDARD RISK CONTROLS	Residual Risk Rating (H, M, L)	Additional Risk Controls Required (where risk rating is H)	No. of Compliant Controls Observed	No. of Non-Compliant Controls Observed	Minor Actions Required (Improvement Notice (Attachment 5) to be raised where significant Non-compliance is observed)	Initial and Date when action Completed	
1	Noise	Plant / Machinery Construction Methods Radios	<ul style="list-style-type: none"> <li>Plant /machinery maintained in accordance with manufacturer recommendations</li> <li>Silencers placed on large compressors / generators</li> <li>Comply with council work hours</li> <li>Limit volume of radios</li> <li>Utilise prefabricated materials</li> </ul>							
2	Dust	Ground disturbance Vehicle Movement Dry powdery soils	<ul style="list-style-type: none"> <li>Protect areas of vegetation and minimise clearing / disturbance</li> <li>Cover exposed ground with mulch or other suitable material</li> <li>Restrict vehicle movements</li> <li>Dampen surfaces (seek approval where water restrictions apply)</li> <li>Landscape and re-vegetate as soon as possible</li> <li>Seed or cover soil stockpiles</li> <li>Special, high quality hoarding which meets infection control standards installed for operational healthcare facilities</li> </ul>							
3	Waste	Demolition Construction Works Packaging Office Amenities	<ul style="list-style-type: none"> <li>Utilise separate recycle bins for paper, steel etc (space permitting on site)</li> <li>Use bin contractors who sort and recycle construction waste</li> <li>Utilise existing client facilities for domestic recyclables (paper, cans etc)</li> <li>Recycle demolished materials wherever possible</li> <li>Place lids on domestic waste bins for odour and vermin control</li> </ul>							
4	Chemicals	Fuel Oil Paint Adhesives	<ul style="list-style-type: none"> <li>No bulk storage of fuel / oil on site (fuel tankers to visit site as required)</li> <li>Paints, adhesives stored on site at minimum quantities in vented containers/rooms</li> <li>All storage of chemicals shall comply with the Material Safety Data Sheet</li> <li>Major servicing of plant e.g. where large quantities of oil requires changing shall be undertaken off site</li> </ul>							
5	Contamination (from slurry / wash water) & Soil Contamination	Paint Plaster Concrete Brick / Paver cutting	<ul style="list-style-type: none"> <li>Use paint wash trough. Settled solids should be removed by an appropriate waste disposal company</li> <li>Designate a washing up and brick cutting area away from stormwater drains. Build an earth bund to contain wash water from concrete, plaster, brick cutting</li> <li>Designate a washing up and brick cutting area away from stormwater drains. Build an earth bund to contain wash water from concrete, plaster, brick cutting</li> <li>Documented evidence of contaminated soil removed from site is accepted by landfill facility</li> </ul>							
6	Erosion and Sediment	Disturbed / cleared soils Rain events	<ul style="list-style-type: none"> <li>Protect and maintain natural vegetation and minimise clearing / disturbance</li> <li>Connect downpipes to stormwater drainage as soon as possible or pipe roof water onto grassed areas</li> <li>Install sediment fences close to the site boundary and drains where surface water may carry sediment off site</li> <li>Place gravel saudades across pit openings</li> </ul>							
7	Flora / Fauna	Plant / Machinery Construction Works	<ul style="list-style-type: none"> <li>Trees, shrubs etc is protected by flagging, roped off i.e."No Go Zone"</li> <li>Vehicles parked outside of tree root zone to avoid damage</li> <li>No entry to fenced off areas, no pets on sites, stick to access roads, and notify Site Manager of any fauna</li> </ul>							
8	Mud on Road	Muddy site Vehicle Movements Significant Rain Event	<ul style="list-style-type: none"> <li>Crushed rock placed in areas of vehicle movement</li> <li>Restrict vehicle movements on un-vegetated/exposed ground</li> <li>Cover exposed trafficked ground with mulch or other suitable material</li> <li>Protect areas of vegetation and minimise clearing / disturbance</li> <li>Remove water from site by connecting downpipes to stormwater drainage</li> <li>Install rumble strips at site exit to promote cleaning mud off vehicle tyres</li> </ul>							
9	Heritage Sites	Demolition Construction Works	<ul style="list-style-type: none"> <li>Project documentation to be closely reviewed for areas of Heritage significance</li> <li>Any Heritage significance to be identified during site induction</li> <li>Agreed protection measures to be included in the work method statement</li> </ul>							
10	Air Pollution	Plant / Machinery	<ul style="list-style-type: none"> <li>Plant / machinery maintained in accordance with manufacturer recommendations</li> <li>Plant / machinery exhaust emissions monitored for smoke (should not observe continuous smoke for longer than 10 seconds)</li> </ul>							
<b>Total Compliant and Non-compliant Observed</b>								<b>This Week</b>		
								<b>Since Project Started</b>		

## ATTACHMENT 3 - ENVIRONMENTAL INDUCTION



**ATTACHMENT 3 (Clause 3.5.2)**





**Environmental Induction Booklet**

<b>Environment Policy</b>	All personnel (Kane Constructions and Subcontractors) must be committed to achieving the objectives of Kane's Environment Policy. The policy is posted on the noticeboard or induction room for all inductees to read
---------------------------	---

<b>Incident Response</b>	All site employees are responsible for notifying the Site Manager if they witness a pollution incident including leak, spill escape of a substance or pollution incident causing or threatening public or property harm
--------------------------	---

<b>Waste Data Sheets</b>	The Site Noticeboard is updated as required with Material Waste Data Sheets (good practice environmental control information) for all to read
--------------------------	---

<b>NOISE</b>	<p><b>Source</b></p> <ul style="list-style-type: none"> <li>• Plant / Machinery</li> <li>• Construction Methods</li> <li>• Radios</li> <li>• Unnecessary</li> </ul>
	<p><b>Risk Controls</b></p> <ul style="list-style-type: none"> <li>• Plant /machinery maintained in accordance with manufacturer recommendations</li> <li>• Silencers placed on large compressors / generators</li> <li>• Comply with council work hours</li> <li>• Limit volume of radios</li> <li>• Utilise prefabricated materials</li> </ul>

<b>DUST</b>	<p><b>Source</b></p> <ul style="list-style-type: none"> <li>• Ground disturbance</li> <li>• Vehicle Movement</li> <li>• Dry powdery soils</li> <li>• Cutting</li> <li>• Infection Control</li> </ul>
	<p><b>Risk Controls</b></p> <ul style="list-style-type: none"> <li>• Protect areas of vegetation and minimise clearing / disturbance</li> <li>• Cover exposed ground with mulch or other suitable material</li> <li>• Restrict vehicle movements</li> <li>• Dampen surfaces (seek approval where water restrictions apply)</li> <li>• Landscape and re-vegetate as soon as possible</li> <li>• Seed or cover soil stockpiles</li> </ul>





- Special, high quality hoarding which meets infection control standards installed for operational healthcare facilities



## WASTE

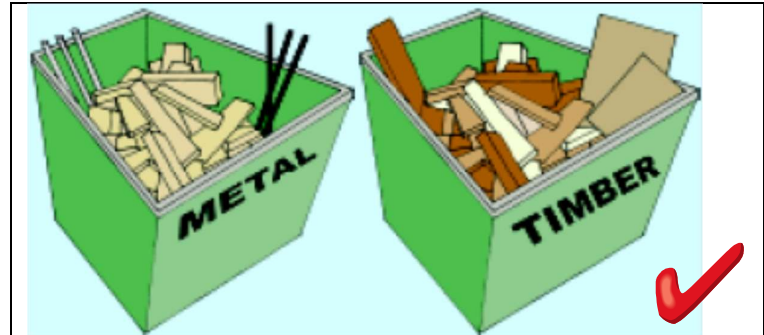
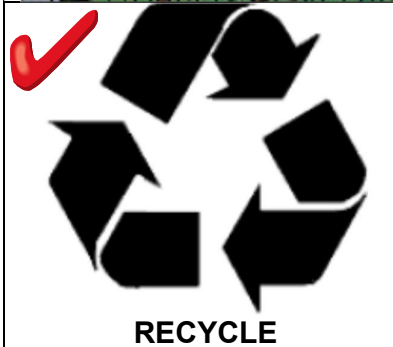
### Source

- Demolition
- Construction Works
- Packaging
- Office
- Amenities





### Risk Controls




- Utilise separate recycle bins for paper, steel etc (space permitting on site)
- Use bin contractors who sort and recycle construction waste
- Utilise existing client facilities for domestic recyclables (paper, cans etc)
- Recycle demolished materials wherever possible
- Place lids on domestic waste bins for odour and vermin control



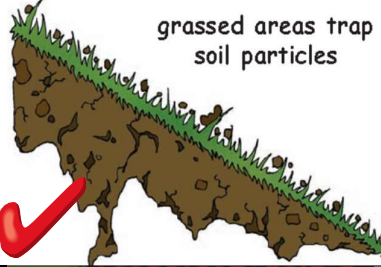

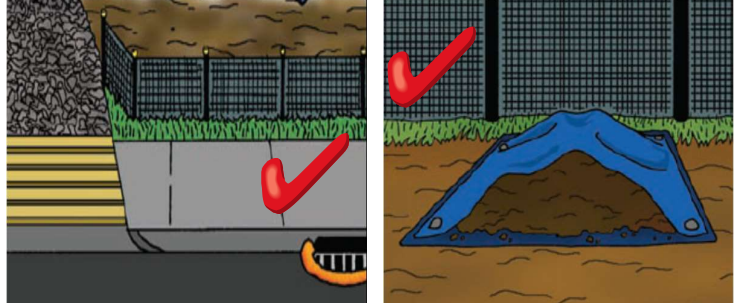
### Source


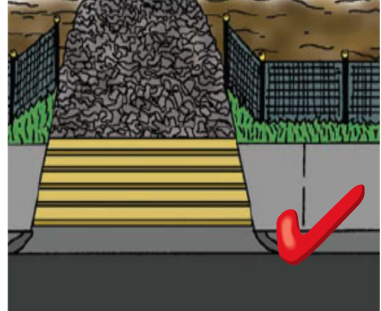
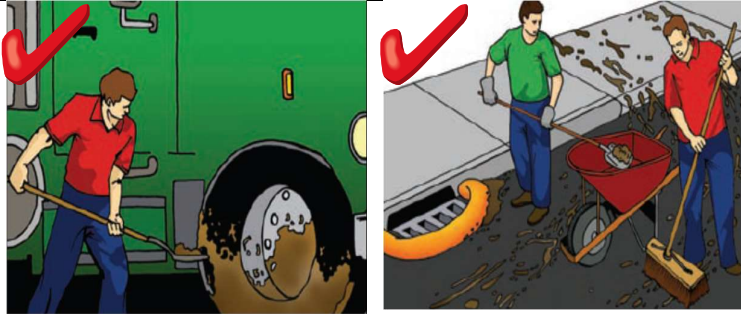
- Fuel

<p><b>CHEMICALS</b></p>	<ul style="list-style-type: none"> <li>• Oil</li> <li>• Paint</li> <li>• Adhesives</li> </ul>
	<p><b>Risk Controls</b></p> <ul style="list-style-type: none"> <li>• No bulk storage of fuel / oil on site (fuel tankers to visit site as required)</li> <li>• Paints, adhesives stored on site at minimum quantities in vented containers/rooms</li> <li>• All storage of chemicals shall comply with the Material Safety Data Sheet</li> <li>• Major servicing of plant e.g. where large quantities of oil requires changing shall be undertaken off site</li> </ul>
	

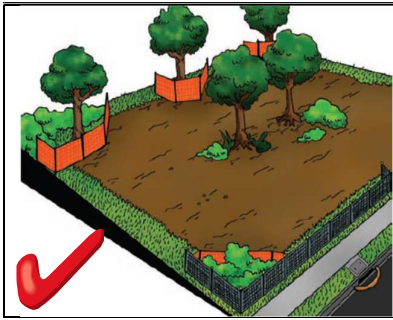
<p><b>CONTAMINATION (FROM SLURRY/ WASHWATER)</b></p>	<p><b>Source</b></p> <ul style="list-style-type: none"> <li>• Paint</li> <li>• Plaster</li> <li>• Concrete</li> <li>• Brick / Tile / Paver cutting</li> </ul>
	<p><b>Risk Controls</b></p> <ul style="list-style-type: none"> <li>• Use paint wash trough. Settled solids should be removed by an appropriate waste disposal company</li> <li>• Designate a washing up and brick cutting area away from stormwater drains. Build an earth bund to contain wash water from concrete, plaster, brick cutting</li> <li>• Designate a washing up and brick cutting area away from stormwater drains. Build an earth bund to contain wash water from concrete, plaster, brick cutting</li> <li>• Documented evidence of contaminated soil removed from site is accepted by landfill facility</li> </ul>
	

<p><b>EROSION AND SEDIMENT</b></p>	<p><b>Source</b></p> <ul style="list-style-type: none"> <li>• Disturbed / cleared soils</li> <li>• Rain events</li> </ul>
--	---

 <p>grassed areas trap soil particles</p>	<p><b>Risk Controls</b></p> <ul style="list-style-type: none"> <li>• Protect and maintain natural vegetation and minimise clearing / disturbance</li> <li>• Connect downpipes to stormwater drainage as soon as possible or pipe roof water onto grassed areas</li> <li>• Install sediment fences close to the site boundary and drains where surface water may carry sediment off site</li> <li>• Place gravel sausages across pit openings</li> </ul>
 <p>ROOF WATER connected to storm water or piped onto grassed area</p>	

<p><b>MUD ON ROAD</b></p>	<p><b>Source</b></p> <ul style="list-style-type: none"> <li>• Muddy site</li> <li>• Vehicle Movements</li> <li>• Significant Rain Event</li> </ul>
	<p><b>Risk Controls</b></p> <ul style="list-style-type: none"> <li>• Crushed rock placed in areas of vehicle movement</li> <li>• Restrict vehicle movements on un-vegetated/exposed ground</li> <li>• Cover exposed trafficked ground with mulch or other suitable material</li> <li>• Protect areas of vegetation and minimise clearing / disturbance</li> <li>• Remove water from site by connecting downpipes to stormwater drainage</li> <li>• Install rumble strips at site exit to promote cleaning mud off vehicle tyres</li> </ul>
	

<p><b>FLORA / FAUNA</b></p>	<p><b>Source</b></p> <ul style="list-style-type: none"> <li>• Plant / Machinery</li> <li>• Construction Works</li> </ul>
	<p><b>Risk Controls</b></p>



- Trees, shrubs etc is protected by flagging, roped off i.e. "No Go Zone"
- Vehicles parked outside of tree root zone to avoid damage
- No entry to fenced off areas, no pets on sites, stick to access roads, and notify Site Manager of any fauna

## AIR POLLUTION



### Source

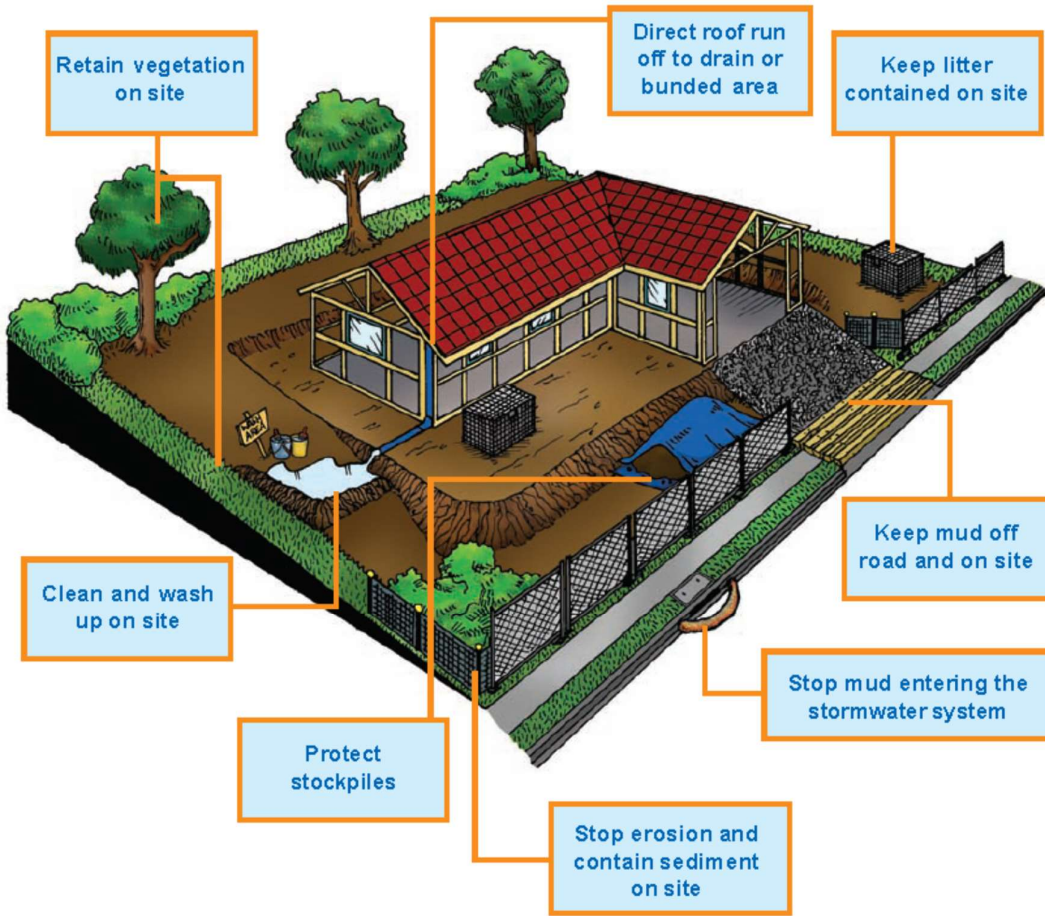
- Plant / Machinery

### Risk Controls

- Plant / machinery maintained in accordance with manufacturer recommendations
- Plant / machinery exhaust emissions monitored for smoke (should not observe continuous smoke for longer than 10 seconds)

**SUMMARY**

**Risk Controls**



## ATTACHMENT 4 - INCIDENT RESPONSE FLOWCHART

## ATTACHMENT 4 (Clause 3.5.3)

### Incident Response **NSW**

#### New South Wales

Organisations operating under the Office of Environment and Heritage (OEH) issued environmental licences are required to notify pollution incidents by calling the OEH Pollution Watch Line.

Pollution incident means an incident or set of circumstances during or as a consequence of which there is or is likely to be a leak, spill or other escape or deposit of a substance, as a result of which pollution has occurred, is occurring or is likely to occur. It includes an incident or set of circumstances in which a substance has been placed or disposed of on premises, but it does not include an incident or set of circumstances involving only the emission of any noise.

- Protection of the Environment Operations Act 1997 (links are to the [NSW legislation](#) website):
  - Section 116: It is an offence to willfully or negligently cause any substance to leak, spill in a manner that harms or is likely to harm the environment.
  - Section 120: It is illegal to pollute or cause or permit pollution of waters.
  - Section 124-126 Businesses must maintain and operate equipment and deal with materials in a proper and efficient manner to prevent air pollution at all times.
  - Section 139 and 140: It is an offence to allow noise from your premises to be generated as a result of the failure to maintain or operate machinery.
  - Section 142: It is an offence to pollute land
  - section 147: Meaning of material harm to the environment
  - section 148: Pollution incidents causing or threatening material harm to the environment
  - section 149: Manner and form of notification
  - section 150: Relevant information to be given
  - section 151: Incidents not required to be reported
  - section 152: Offence for breaching duty to notify pollution incidents
  - section 153: Incriminating information

The OEH relies on everyone in the community to report pollution. The community is encouraged to call the OEH Pollution Watch Line when the following is noticed:

- Smoke or odours from an industry or business
- Spills or slicks in waterways
- Illegal dumping of wastes
- Noise from a factory or industrial complex
- Littering
- Smokey Vehicles

#### **OEH POLLUTION WATCH LINE**

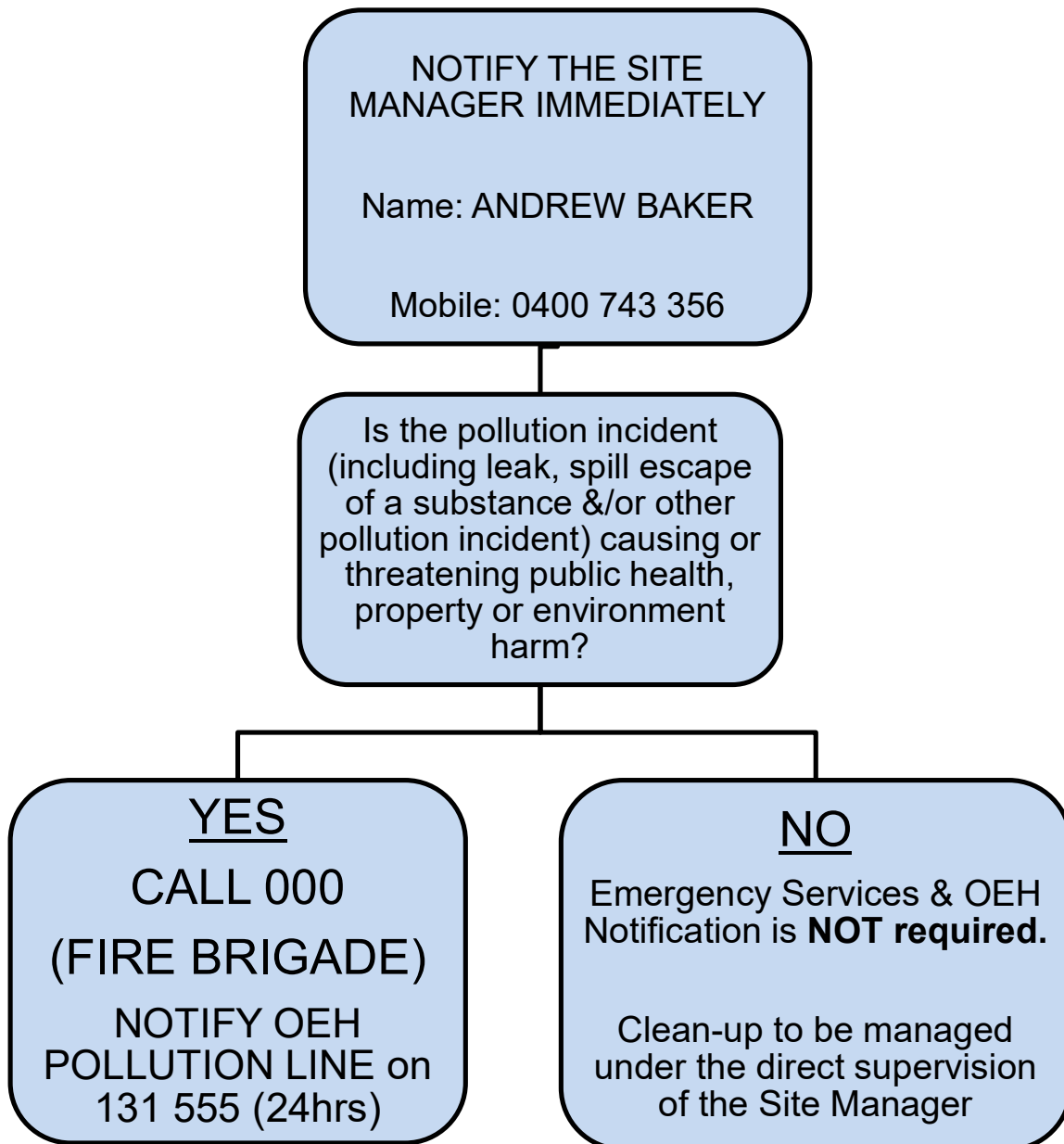
**Metropolitan – 131 555 (24 hours)**

All site employees are responsible for notifying the Site Manager if they witness a pollution incident including leak, spill escape of a substance or pollution incident causing or threatening public or property harm. When notified, the Site Manager shall implement the attached Incident Response Flowchart.



Incident Response

In the event of an ENVIRONMENTAL INCIDENT  
(all types of incidents) notify the **Site Manager**



## ATTACHMENT 5 - IMPROVEMENT NOTICE

## ATTACHMENT 5 (Clause 3.5)

### Improvement Notice

This notice is issued as a consequence of your failure to maintain adequate environmental controls during the performance of your contract works

<b>PROJECT</b>	<b>PROJECT NO.</b>
<b>SITE MANAGER</b>	<b>DATE</b>

TO: ..... FROM: .....  
 ..... Company Name ..... Company Name

<input type="checkbox"/> Noise	<input type="checkbox"/> Dust
<input type="checkbox"/> Waste	<input type="checkbox"/> Chemicals
<input type="checkbox"/> Contamination (slurry, washwater, oil)	<input type="checkbox"/> Erosion and Sediment
<input type="checkbox"/> Flora / Fauna	<input type="checkbox"/> Mud on road
<input type="checkbox"/> Heritage	<input type="checkbox"/> Air Pollution
<input type="checkbox"/> Other	<input type="checkbox"/>

**Where this Improvement Notice is issued as a result of an environmental incident, IDENTIFY ACTION TAKEN TO CLEAN UP**

**ACTION TAKEN TO ELIMINATE THE CAUSE** (i.e re-induction, improved control measure etc)

**VERIFICATION OF ACTION TAKEN** (Kane Site Management use only)

Action verified as completed  
 Action inadequate (describe why inadequate)

.....  
 .....

**Signed:** .....

**Date:**.....  
 Kane Representative

**In the event the company issued this notice fails to action, all costs incurred to undertake these works will be back-charged.**

<input type="checkbox"/> Labour to Rectify	<b>Distribution:</b>
men x hours =	<input type="checkbox"/> Site File
Total Hours	<input type="checkbox"/> Project Manager
	<input type="checkbox"/> Subcontractor

# ATTACHMENT 6 - QUARTERLY AUDIT REPORT

**ATTACHMENT 6 (Clause 4.1.2)**



**Environmental Management Audit**

Who shall implement	Project Manager (Auditor) - Audit and submit report Site Manager (Auditee) - Implement actions identified
When to implement	Quarterly (minimum)
How to use/implement	Project Manager to check compliance, with the Site Manager, of all items against actual site record/observations and score out of 150. If not applicable, write N/A and award total points. Do not award negative points. Lowest score possible is zero. Any issue identified shall be listed ( <i>immediate actions required column</i> ) and actioned by the Site Manager ( <i>sign and date in the closed column</i> ). The report is to be issued to the Systems Manager (Vic) or Construction Supervisor (NSW/QLD).

<b>Job Title</b>		<b>Period Audited</b>
<b>Site Manager</b>	<b>Job No.</b>	<b>Date Audited</b>

\* if not applicable write N/A and award total points

EMS Sch / CL Ref	Audit Criteria	* Points Scored	Immediate Actions Required	Closed Sign/Date
Sch 1B	1. All EMS (body and schedules) implemented on site is the most current revisions i.e check documents against revision control table ( <i>Award 15 points, less 2 points for each document not current</i> )			
Sch 3	2. Environmental Management Plan is signed, dated and prepared using current revision ( <i>15 points if signed, dated and current. Less 10 points if not signed and dated. Zero points if not current revision used</i> )			
Sch 3 Att 2	3. Environmental Risk Assessment and Checklist prepared ( <i>15 points if prepared, less 10 points if not signed and dated by PM, less 10 points if risk rating is not completed, less 5 points if names of attendees not listed, zero points if not prepared</i> )			
Sch 3 Att 2	4. Environmental Risk Assessment implementation ( <i>15 points for completed weekly checks, less 10 points for weeks not completed, zero points for no implementation</i> )			
Sch 3 Att 2	5. Tally of Compliant / Non-Compliant Controls Maintained ( <i>5 points, less 2 points if tally not updated, zero points if no tally</i> )			
Sch 3 Att 2	6. Environmental Risk Assessment minor actions required ( <i>10 points for minor actions required and closed out, less 2 points each action not closed out</i> )			



EMS Sch / CL Ref	Audit Criteria	* Points Scored	Immediate Actions Required	Closed Sign/Date
Sch 3 Att 3	7. Environmental Induction Booklet displayed in induction room (10 points for induction book displayed, zero points if not displayed)			
Sch 3 Att 4	8. Incident Response Flowchart completed with Site manager's name and displayed on site noticeboard (10 points if completed and displayed, less 5 points for not displaying on the noticeboard and zero points if not completed)			
Sch 3 Att 5	9. Improvement notices raised and closed out (20 points for notices closed out, less 10 points for each notice raised and not closed out)			
Sch 4	10. Materials Waste Data Sheets displayed on site notice board relevant to stage of project works (10 points, less 2 points for each data sheet not relevant to works)			
Sch 3 Att 6	11. Quarterly environmental reporting statistics are submitted by the requested date (15 points, less 10 points if not submitted on time)			
Sch 3 Att 6	12. Are issues/actions repeated from previous audits? (10 points, less 10 points if answered Yes without an explanation why the issues/actions are repeated from previous audits)	Yes/No	If Yes, list the reasons why the issues/actions are not actioned from previous audits	
4.1.2	13. Is the Kane EMS effective in achieving the objectives and targets? (10 points, less 10 points if answered No without an explanation why the system is not effective)	Yes/No	If No, list why (i.e system change, training etc)	

Total Points achieved	Date Immediate Actions must be closed by
maximum score 160	write date above
<p>If maximum points are <b>not achieved</b> on the Audit Criteria 1 and 2 above, the Total Points achieved for this audit shall default to "Improvement Required"</p> <p>If maximum points are <b>not achieved</b> on the Audit Criteria 3, 4 and 6 above, the Total Points achieved for this audit shall default to "Unsatisfactory Result"</p>	
Between 90 - 100% (144 – 160) Points	Kane EMS trainer/mentor suitable to train young foreman
Between 70 – 89 % (112 – 143) Points	Good Implementation (above average implementation)
Between 50 – 69 % (80 – 111) Points	Improvement Required (average implementation)
Below 50 % (0 – 79) Points	Unsatisfactory result (Non-conformance report and re-induction)

Print Name .....  
(Site Manager)

Print Name.....  
(Project Manager)

Distribution

Site File

Systems Manager/Systems Coordinator (VIC)/Construction Supervisor (NSW, QLD)

## ATTACHMENT 7 - CONFIRMATION OF RESPONSIBILITIES

## ATTACHMENT 7



### Confirmation of Responsibilities

The project staff responsible for management of environmental management is assessed for competence, understanding and acceptance of their environmental responsibilities. Confirmation of this is provided below.

Each individual shall complete the table to verify the items listed below. Write either Yes or No (alongside the item in your column only) sign and date.

**Item 1** I understand my responsibilities identified in the Kane EMS (revision A2)

**Item 2** I understand my responsibilities identified in the Environmental Management Plan (revision 1)

**Item 3** I was consulted and given opportunity for input in the development of this Environmental Management Plan

**Item 4** I am competent to carry out my responsibilities identified in the Kane EMS and this Environmental Management Plan

**Item 5** I will carry out my responsibilities identified in the Kane EMS and this Environmental Management Plan

Name	Position	Item 1 Yes/No	Item 2 Yes/No	Item 3 Yes/No	Item 4 Yes/No	Item 5 Yes/No	Sign	Date
Nathan Parris	PM							
Michael Wright	Assistant PM							
Dale Hammett	CM							
Michael Fantini	DM							
Andrew Baker	SM							
Jonathan Paparoulas	SPE							
Jason Geary	CA							
Will Beck	PE							
Seng Chea	PC							
Patrick Golebiewski	Cadet							





## 10 PROJECT SPECIFIC REQUIREMENTS

The follow sections on the EMP has been added to specifically address project specific requirements in setout in the SSD Consent Conditions, Principals Project Requirements and Project Preliminaries.

### 10.1 Sub-Plans

The below listed sub-plans from part of this in this Environmental Management Plan to address specific requirements setout in the SSD Consent Conditions. These sub-plans are attached as Appendices to this plan.

Sub-Plan and Appendix Title	PREPARED TO COMPLY WITH
Construction Pedestrian and Traffic Management Plan (CPTMP)	SSD Consent Condition C10(a)(xii) and C11
Construction Noise and Vibration Management Plan (CNVMP)	SSD Consent Condition C10(b) and C12
Air Quality Management Plan (AQMP)	SSD Consent Condition C10(c) and C13,C14 & C15
Construction Waste Management Plan (CWMP)	SSD Consent Condition C10(d) and C16
Construction Soil and Water Management Plan (CSWMP)	SSD Consent Condition C10(e) and C17
Unexpected Finds Protocol (UPF)	SSD Consent Condition C10(f), (g) and B36 & C24
Tree Protection Plan	Principals Project Requirements 10.4

### 10.2 Hours of Work

In accordance with the SSD Conditions of Consent, working hours are between

- 7:00am to 6:00pm Monday to Friday
- 8:00am to 1.00pm Saturday will be undertaken.

Rock breaking, rock hammering, sheet piling, pile driving and similar activities may only be carried out between the following hours;

- 9:00am to 12:00pm Monday to Friday
- 2:00pm to 5:00pm Monday to Friday
- 9:00am to 12:00pm Saturday.

### 10.3 24 Hour Contact Details

The below contact details are publicly available.

Communication Method	Contact Details
Telephone (24 hour)	1300 606 773
Post	ATTN: The Project Manager PNRL Centre of Excellence Project Kane Constructions Pty Ltd 2 John Street Waterloo NSW 2017 Australia Post: PO Box 243 Alexandria 2015
Email	pcoe_enquiries@kane.com.au
Emergency Contacts	Nathan Parris – 0401 395 980 Michael Wright – 0403 045 215

### 10.4 Community Consultation and Complaint Handling Procedure

Refer to Kane Project plan **PCoE Community Liaison & Stakeholder Engagement Plan** for full details however summary of community consultation and complaint handling procedure is outlined below.

#### Community Consultation

All relevant authorities, residents, businesses, and others affected by project works will be informed of the project activity and timeframes. This will occur periodically through the project in the form of door knocks and/or letterbox drops as appropriate. Details of the project's complaints and enquiries procedure will be provided in these letterbox drops.

Any community notification notices will be provided to the Superintendent for review prior issue to the community.

#### Complaint Handling Procedure

Enquiries about the works from external parties are recorded on the Communications and Complaints Register.

Any complaints concerning any aspect of the project are registered, investigated, and recorded detailing the nature of the complaint, the complainant and actions taken as a result of the complaint.

The Project Manager ensures that any complaint received is investigated promptly and that appropriate action is taken.

Kane will promptly notify the Superintendent of any external enquiries and/or complaints received during the project.

### 10.5 Environmental Aspects

The following additional control will be implemented on site.

#### 10.5.1 Stormwater

Refer the sub-plan Construction Soil and Water Management Plan for the details of these controls

### 10.5.2 Dust and Odour

The following controls will be implemented to manage dust and odour on site;

- Physical barriers must be erected at right angles to the prevailing wind direction or be placed around or over dust sources to prevent wind or activity from generating dust emissions;
- All materials must be stored or stockpiled at suitable locations and stockpiles must be maintained at manageable sizes which allow them to be covered, if necessary, to control emissions of dust and/or VOCs/odour;
- The surface should be dampened slightly to prevent dust from becoming airborne but should not be wet to the extent that run-off occurs;
- All vehicles carrying spoil or rubble to or from the site must at all times be covered to prevent the escape of dust or other material;
- All equipment wheels must be washed before exiting the site using manual or automated sprayers and drive through washing bays;
- Gates must be closed between vehicle movements and must be fitted with shade cloth; and
- Cleaning of footpaths and roadways must be carried out regularly.

### 10.5.3 Flora and Fauna Management

Further to section 5.7, as part of the SSD Consent Conditions (condition no. C10) we need to comply with all recommendations and mitigation measures detailed in the Biodiversity Assessment Report dated 29/7/22. To briefly summarise the requirements, Kane are required to need to;

- Manage weeds
- Delineate site clearing extent
- Install tree protection measures
- Carry out pre-clearance surveys during site clearing
- Install sediment control measures
- Carry out landscaping and replanting works
- Habitat salvage where possible

A project Ecologist will be engaged to provide assistance and advise of any issues relating to fauna and flora during the works.

### 10.5.4 Contamination Management

An expected finds protocol has been prepared for this project. This addresses contamination management. Refer Appendix F.

## 10.6 External Lighting Compliance

Kane will ensure that all external lighting will be designed and installed in accordance with all relevant Australian Standards. Certification of the electrical design will be provided by a qualified electrical engineer and certification of the works being installed in accordance with the design and applicable standards will be provided prior to occupation.

## 10.7 Waste Classification

Douglas Partners have carried out a Detailed Site Investigation (Contamination) Report. Following this report they have provided a Preliminary Waste Classification for excavated material to be removed on site.

## 10.8 Recommendations from Project Reports

The below sub-plans have been prepared and address the following;

- a) Construction Pedestrian and Traffic Management Plan, prepared to included the relevant recommendations outlined in the Traffic Impact Assessment report, by WSP.
- b) Construction Noise and Vibration Management Plan, prepared to include the relevant recommendations and mitigation measures detailed in the Noise and Vibration Assessment, by Resonate
- c) Air Quality Management Plan that includes the relevant recommendations and mitigation measures detailed in the Air Quality and Odour Assessment, by SLR
- d) Tree Protection Plan, prepared to included the include the relevant recommendations detailed in the Arboricultural Impact Assessment, by Earthscape Horticultural Services,
- e) Unexpected Finds Protocol, prepared (in part) to address the requirements detailed in the Aboriginal Cultural Heritage Assessment Report and Statement of Heritage Impact, by Coast History & Heritage
- f) Unexpected Finds Protocol, prepared (in part) to address the requirements detailed in the Detailed Site Investigation (Contamination) Report, by Douglas Partners
- g) An environmental scientist will also inspect and test the ground following removal of the Daracon Compound (incl road base) and demountable buildings, to address the recommendation detailed in the Detailed Site Investigation (Contamination) Report, by Douglas Partners

**APPENDIX A - CONSTRUCTION  
PEDESTRIAN & TRAFFIC  
MANAGEMENT PLAN**

**APPENDIX A**

**APPENDIX B - CONSTRUCTION NOISE &  
VIBRATION MANAGEMENT PLAN**

**APPENDIX B**

**APPENDIX C - AIR QUALITY MANAGEMENT PLAN**

**APPENDIX C**

**APPENDIX D - CONSTRUCTION  
WASTE MANAGEMENT PLAN**

**APPENDIX D**



**APPENDIX E - CONSTRUCTION SOIL &  
WATER MANAGEMENT PLAN**

**APPENDIX E**

**APPENDIX F - UNEXPECTED FINDS PROTOCOL**

**APPENDIX F**

**APPENDIX G - TREE PROTECTION PLAN**

**APPENDIX G**