McConnell Dowell - OHL Joint Venture

CLIENT: ROADS AND MARITIME SERVICE

PROJECT: PACIFIC HIGHWAY UPGRADE - KUNDABUNG TO KEMPSEY

LOCATION: NSW

PROJECT NO.: 2602

Quality Management System

POLLUTION INCIDENT RESPONSE MANAGEMENT PLAN

QMS number 025–Y028–2602

Rev	Date	Details	By	Reviewed	Approved
A	18/11/14	Document Drafted	L.Watson	J.Hamilton	T.Jackson

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HOME WITHOUT HARM
EVERYONE EVERYDAY

GLOSSARY/ ABBREVIATIONS

Acronyms	Glossary
ARA	Appropriate Regulatory Authority
CEMP	Construction Environmental Management Plan
EPA	Environment Protection Authority (NSW)
EPL	Environment Protection Licence
ER	Environmental Representative
eWMS	Environmental Work Method Statement
MSDS	Material Safety Data Sheets
NSW	New South Wales
OEH	Office of Environment and Heritage (NSW)
PIRMP	Pollution Incident Response Management Plan
POEO Act	Protection of the Environment Operations Act

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1.0 INTRODUCTION

1.1 BACKGROUND

This Pollution Incident Response Management Plan (PIRMP) has been prepared to identify and manage the risk of pollution incidents and facilitate a coordinated management response to pollution incidents during the upgrade of the Pacific Highway between Kundabung and Kempsey.

A PIRMP is required for all projects that hold an Environment Protection Licence (EPL). The requirements were introduced through amendments to the Protection of the Environment Operations Act 1997 (POEO Act) and the Protection of the Environment Operations (General) Regulation 2009, (POEO(G) Regulation).

The requirement is to prepare, keep, test and implement a pollution incident response management plan.

1.2 PURPOSE OF THE PLAN

The primary purpose of the plan is to identify and manage the risk of pollution incidents, plan the project response to pollution incidents and to facilitate coordination with the relevant response agencies.

The objectives of the plan are to:

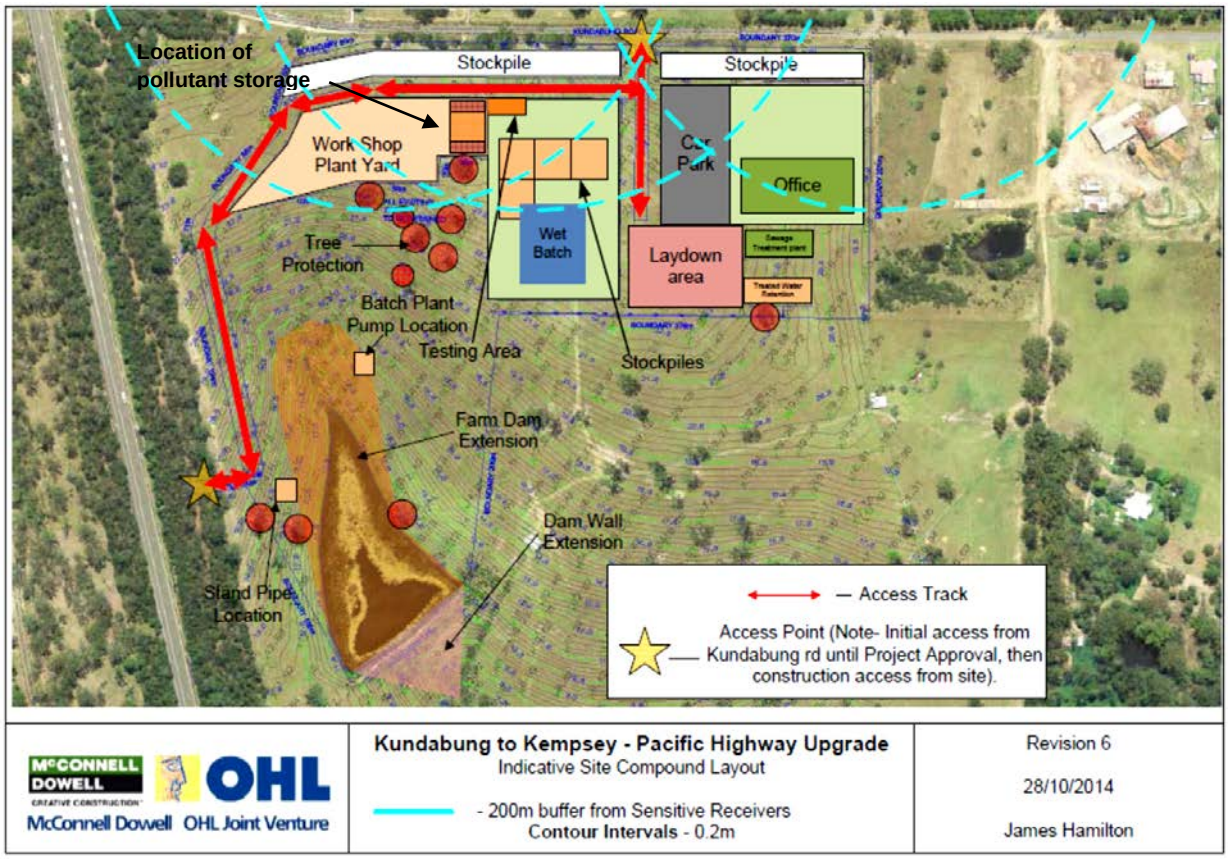
- minimise and control the risk of a pollution incident at the premises of the Kundabung to Kempsey Pacific Highway Upgrade Project ('the Project' or 'K2K') through the early identification of risks and the development of planned actions to minimise and manage those risks;
- ensure timely communication about pollution incidents to construction personnel, Environment Protection Authority (EPA), relevant response agencies/authorities and the community who may be affected by the impacts of a pollution incident; and
- ensure that the plan is properly implemented by trained staff, identifying persons responsible for implementing it, and ensuring that the plan is regularly tested for accuracy, currency and suitability.

1.3 SCOPE

This PIRMP for the Pacific Highway Upgrade, Kundabung to Kempsey project covers pollution incidents that cause actual or potential material harm to the environment and/or human health. This PIRMP applies to the 'scheduled activity' to which the Environment Protection License (EPL) relates. Outlined in the location drawing **Figure 1.1** is the location of:

- The office which will act as the Incident Control Center; and
- The location of potential pollutant storage, which is to be within the workshop and plant yard.

Figure 1.1: Site Compound Location and Layout



1.4 LEGISLATIVE AND REGULATORY REQUIREMENTS

1.4.1 Relevant Legislation

Key environmental legislation relating to pollution incident response management includes:

- *Protection of the Environment Operations Act 1997* (POEO Act);
- *Protection of the Environment Operations (General) Regulation 2009*; and
- *Protection of the Environment Operations (General) Amendment (Pollution Incident Response Management Plans) Regulation 2012.*

1.4.2 Guidelines and Standards

- *Environmental guidelines: Preparation of pollution incident response management plans, 2012.*

1.4.3 Legislative requirements

The specific requirements for pollution incident response management plans are set out in Part 5.7A of the POEO Act and the POEO (G) Regulation. A summary of the key requirements are:

- holders of environment protection licences must prepare a pollution incident response management plan (section 153A, POEO Act);
- the plan must include the information detailed in the POEO Act (section 153C) and be in the form required by the POEO(G) Regulation (clause 98B);

- licensees must keep the plan at the premises to which the environment protection licence relates or, in the case of trackable waste transporters and mobile plant, where the relevant activity takes place (section 153D, POEO Act);
- licensees must test the plan annually in accordance with the POEO(G) Regulation (clause 98E); and
- if a pollution incident occurs in the course of an activity so that material harm to the environment is caused or threatened, licensees must immediately implement the plan (section 153F, POEO Act).

2.0 POLLUTION INCIDENTS

Pollution is known to exist in many forms and broadly relates to water, land, air and noise. This plan applies only to those pollution incidents as defined in the Environmental guidelines: Preparation of pollution incident response management plans. The guidelines provide the following definition of a pollution incident to be:

"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."

2.1 POLLUTION INCIDENTS THAT ARE TO BE NOTIFIED

A pollution incident is required to be notified to the EPA and appropriate regulatory authorities (ARA) if there is a risk of 'material harm to the environment', which is defined in section 147 of the POEO Act as:

(a) harm to the environment is material if:
  (i.) it involves actual or potential harm to the health or safety of human beings or to ecosystems that is not trivial, or
  (ii.) it results in actual or potential loss or property damage of an amount, or amounts in aggregate, exceeding $10,000 (or such other amount as is prescribed by the regulations), and

(b) loss includes the reasonable costs and expenses that would be incurred in taking all reasonable and practicable measures to prevent, mitigate or make good harm to the environment.

Each of the following response agencies needs to be informed of pollution incidents quickly, so action can be coordinated to prevent or limit harm to the environment and human health generally:

- appropriate regulatory authority (ARA);
- Environment Protection Authority (EPA) if they are not the ARA;
- NSW Ministry of Health, local Public Health Unit;
- WorkCover NSW;
- local authority, if they are not the ARA; and
- Fire and Rescue NSW.

2.2 TYPES OF POLLUTION INCIDENTS

Pollution incidents that could potentially occur at a construction site and are covered by this plan include: material, such as waste materials, fuel etc, that travel beyond the site boundary causing or potentially

causing adverse impact to the environment or community; and discharge of waters from site not in accordance with the project Environment Protection Licence condition.

Small spills that do not leave the site boundary and are cleaned up without material environmental harm or residual environmental impact are most likely not required to be notified to the EPA or other authorities, however all such incidents are to be recorded and reported in accordance with client and/or organisational requirements.

An environmental incident may include a major spillage or leak, failure of a pollution control device such as a bund or basin, major settlement, collapse of bank or embankment, or catastrophic events i.e. flood or fires.

Three levels of classification are adopted and described in the **Roads and Maritime Services Environmental Incident Classification and Reporting Procedure (QMS# 025-E017-2602).**

2.2.1 Category One Incidents

Category One Incidents are potentially the most serious environmental incidents and they will generally reflect breaches of environmental legislation. Category One Incidents involve significant pollution or degradation of the environment and/ or community and require long term recovery. They are either Environmental breaches, Conservation breaches, Heritage breaches or Planning breaches.

2.2.2 Category Two Incidents

Category Two Incidents are those incidents which can be effectively managed at site level with little or insignificant adverse impact on the community, environment or on the project/site operations. A routine incident will be handled as part of normal operations, within the site. There are three examples of Category Two Incidents; spills that do not leave the site boundary and have been cleaned up without material harm, a fire which is contained on site or the failure to implement a component of the Construction Environmental Management Plan.

2.2.3 Reportable Events

Reportable events are incidents that fall outside the scope of reasonable controls and mitigation. Generally they are related to erosion and sediment control, unexpected archeological finds, unexpected discovery of a threatened species, unexpected discovery of contaminated soil or any formal complaint or warning from a regulatory agency.

The Environmental Manager and the Project Manager in consultation with the NSW Environment & Sustainability Manager are responsible for classifying the level of incident.

3.0 IDENTIFICATION AND RISK ASSESSMENT

The McConnell Dowell – OHL JV (the JV) approaches construction activities in a planned and controlled manner, taking into account potential environmental risks, to prevent pollution incidents from occurring on the Project.

Preventive measures include:

- construction planning including environmental risk assessment;
- implementation and maintenance of identified control measures;
- compliance with legislative and regulatory requirements, including the project Environment Protection Licence (EPL);
- implementation of, and compliance with, requirements of the Construction Environmental Management Plan (QMS#025-Y001-2602) and associated sub-plans (Various); and
- implementation and compliance with the requirements of this plan.

3.1 RISK ASSESSMENT

The risk management style of assessment has been utilised to identify and assess environmental aspects associated with the activity relative to the EPL, and to implement appropriate mitigation strategies to minimise the likelihood of environmental risks or incidents associated with each aspect. This process involves:

1. Identifying the risk/aspect
2. Analysing the risk/aspect (determining likelihood and consequence)
3. Evaluating the risk/aspect
4. Treating the risk

All identified aspects are assessed based on the risk assessment matrix displayed Table 3.4. Risk assessment is based on (1) the likelihood of an impact occurring as a result of the aspect; and (2) the consequences of the impact if the event occurred. The McConnell Dowell – OHL Joint Venture definition of likelihood and consequence is detailed in Table 3.4, Risk Assessment Matrix.

Following this assessment, each impact is assigned a risk category which range from “Low” (low likelihood and consequence) to “catastrophic” (high likelihood and consequence).

More detailed risk assessments are within the relevant sub-plans of the CEMP and include specific control measures that must be implemented.

Table 3.4 Risk Assessment Matrix

Risk Rating (R)			**LOW [1-3]** Broadly acceptable - Manage by routine procedures	**MODERATE [4-6]** Tolerable – With identified controls fully implemented	**HIGH [8-12]** Undesirable - Additional controls required to reduce risk		**VERY HIGH [15- 25]** Intolerable - Do not start activity
Disciplines will review likelihood and consequences in line with their specific parameters as noted			**CONSEQUENCE**				
			1 = Insignificant	**2 = Minor**	**3 = Moderate**	**4 = Major**	**5 = Catastrophic**
			ENVIRONMENT – Minor localised environmental harm rectified within hours. No protected habitat or species affected	**ENVIRONMENT** – Minor transient environmental harm that requires days for recovery. No protected habitat or species affected	. **ENVIRONMENT** – Significant environmental harm that requires weeks for recovery. Environmental incident involving protected species or habitat	**ENVIRONMENT** – Very serious long term environmental harm or contamination that takes years to recover. Damage to protected species or habitat as a result	**ENVIRONMENT** – Severe environmental harm or contamination resulting in permanent environmental damage. Endangered species and habitat destroyed
LIKELIHOOD	**5 =Almost certain**	**Is expected to occur**	**M-5**	**H -10**	**VH-15**	**VH-20**	**VH-25**
	4=Likely	**Will probably occur in most circumstances**	**M-4**	**H-8**	**H-12**	**VH-16**	**VH-20**
	3=Possible	**Should occur at some time**	**L-3**	**M-6**	**H-9**	**H-12**	**VH-15**
	2=Unlikely	**Could occur at some time**	**L-2**	**M-4**	**M-6**	**H-8**	**H-10**
	1=Rare	**May occur only in exceptional circumstances**	**L-1**	**L-2**	**L-3**	**M-4**	**M-5**

Table 3.6 Risk Assessment

ASPECT	POTENTIAL IMPACT	RISK ANALYSIS			
		Low	Moderate	High	Very High
Vegetation clearing	Surface Water pollution			X	
Topsoil stripping	Surface Water pollution			X	
Bulk earthworks	Surface Water pollution				X
	Dust emissions causing a notifiable incident		X		
	Surface Water pollution – Acid Sulfate Soils		X		
	Soil / land pollution – Acid Sulfate Soils		X		
Drainage works	Surface Water pollution				X
Bridge construction	Surface Water pollution			X	
	Groundwater pollution			X	
Ground disturbance of unexpected contamination	Exposure to construction workers				X
	Surface Water pollution				X
	Exposure to community				X
	Groundwater pollution				X
Construction of drains and re-alignment of creek beds	Surface water pollution				X
Paving/Asphalting	Surface water pollution			X	
	Groundwater pollution			X	
	Soil / land pollution			X	
Fuel and chemical storage areas	Surface water pollution				X
	Groundwater pollution		X		
	Explosion / fires			X	
	Soil / land pollution				X
Grout injection	Surface water pollution			X	
	Grout injection releases underground gases				X
	Groundwater pollution				X
Sewerage treatment/storage facilities	Surface water pollution			X	
	Soil / land contamination			X	
	Groundwater contamination			X	
Crushing/Grinding	Oil / Fuel spills causing water pollution			X	
	Oil / fuel spills causing soil/land contamination			X	
	Dust emissions impacting community		X		
Fuel Deliveries	Fuel spills causing water pollution			X	
	Fuel spills causing soil/land contamination			X	
Motorway Traffic Incidents	Surface Water pollution				X

3.2 CONTROL MEASURES

Pre-emptive control measures rest with thorough planning of construction activities and the involvement of key personnel in that planning process. The project CEMP requires that Environmental Work Method Statements (EWMS) are prepared for all activities that carry an inherent level of environmental risk or community interest. All method statements will be prepard to identify risks, ensure sound environmental practices are implemented, and to minimise the risk of environmental incidents or system failures. They will specify actions to be undertaken to ensure compliance with the CEMP and will draw on the mitigation measures detailed in the specific sub plans detailed in Annexures of the CEMP.

Incident control measures such as spill kits, sand bags, sediment fence and flagging tape will be predominantly stored at the main site compound (Kundabung Road Compound), however smaller supplies and resources may also be available within material stockpiles located along the project corridor.

4.0 PREPAREDNESS

The McConnell Dowell – OHL Joint Venture acknowledge that the key to effective incident prevention on site is via ongoing monitoring, surveillance and training. During the course of construction the following preventative strategies will be implemented onsite:

- daily inspections of active work sites;
- completion of Environmental Inspection Checklist;
- issue and quick close-out of non-compliance notices (as required);
- prompt maintenance and repairs;
- ongoing environmental training;
- environmental audits of worksites, sub-contractors and general compliance; and
- environmental and safety information on hazardous substances (e.g. SDS) will be available at the main site office and where such substances are to be stored.

Testing of environmental response procedures will be conducted annually in accordance with the POEO Act. Additional testing will be carried out in areas where a pollution risk is present, such as in workshops and work areas in close proximity to water courses. Personnel involved in emergency response activities will be provided with specific training.

An up-to-date list of emergency response personnel and relevant organisations (emergency services, EPA, etc) will be maintained at the main office and site compounds. A copy of this emergency contact list is provided in Table 6.1.

4.1 RESPONSIBILITIES

The details of how this sub plan will be implemented and the responsibilities for implementing each mitigation measure are detailed below. These responsibilities will be issued to all relevant personnel on appointment to the Project and/or as part of their site induction programme.

The personnel detailed in Table 5.1 would be responsible for activating the plans and managing the response on a 24 hour basis. The Project Manager and/or the Environmental Manager have responsibility for enacting the Pollution Incident Response Management Plan. The Emergency Controller (i.e.

Superintendent) has the responsibility for implementing/coordinating management measures detailed within this plan.

Table 5.1: 24 hour contact details

Name	Position Title	24 hour contact details
Paul Dunn James Blackmore	Supervisor ***EMERGENCY CONTROLLER***	*0428 901 862* *0424 526 677*
Tony Jackson	Project Manager	*0437 144 204*
Murray Stewart	Construction Manager	*0458 309 137*
James Hamilton	Environment Manager	*0428 272 138*
Steve O'Brien	Safety Manager	*0418 783 016*
Cassandra Allen	Community Relations	*1800 154 724*

Specific responsibilities for the implementation of the management measures identified in this plan are identified in the following tables.

Table 5.2: Supervisor (Emergency Controller)

Action	Timing
Responsible for the overall onsite implementation/coordination of management strategies detailed within this Pollution Incident Response Management Plan	As required
Contact emergency services, such as NSW Fire & Rescue, HAZMAT and/or Police for immediate response actions	As required
Maintain communications with emergency services	At all times
Coordinate the response to the incident, including working to ensure the safety of others in the first instance	At all times

Table 5.3: Project Manager

Action	Timing
Responsible for enacting the Pollution Incident Response Management Plan as required	As required
Ensure appropriate resources are available to implement the Pollution Incident Response Management Plan.	At all times

Table 5.4: Environmental Manager Responsibilities

Management Procedures	Timing
Responsible for enacting the Pollution Incident Response Management Plan in consultation with the Project Director as required	As required
In the event of an environmental incident, such as a spill, investigations of the mitigation measures and determine the potential for improved mitigation measures	As required
Reporting of environmental incidents to the relevant authorities in accordance with CEMP	As required
Ensure the plan is tested every 12 months.	Every 12 months
Provide training to project personnel about this plan and responsibilities	As required
Amend this plan as necessary	As required

Table 5.4: Community Relations Coordinator

Action	Timing
Coordinating the notification of the effected community in response to an incident.	As required
Assist the Environmental Manager in the testing of the plan.	Every 12 months
Review and revise the Community Liaison Plan	Where required or every 12 months.
Maintain contact lists for community notifications	As required

All site personnel, staff and sub-contractors have a role and responsibility in minimising the risk of a spill and controlling the impact if one occurs. This will be reinforced through the project induction and on-site training. Further details are provided in the CEMP.

4.2 TRAINING

All employees, contractors and utility staff working on site will undergo site induction training and environmental training with the objective of improving awareness and practice of positive environmental management including minimising the potential for pollution incidents and pollution incident response. Environmental training and induction will address:

- this plan;
- individual responsibilities;
- notification requirements;

- pollution incident response personnel; and
- spill minimisation measures and spill response.

Records would be kept of all personnel undertaking the site induction and training, including the contents of the training, date and name of trainer/s.

Key staff (detailed in Section 5.1) will undertake more comprehensive training relevant to their position and/or responsibility. This training may be provided as “toolbox” training or at a more advanced level by the Environmental Manager. Records will be kept of all personnel undertaking the site induction and training, including the contents of the training, date and name of trainer/s.

Records would be kept of all personnel undertaking the PIRMP training, including the contents of the training, date and name of trainer/s. Key staff will undertake more comprehensive training relevant to their position and/or responsibility. This training may be provided as “toolbox” training or at a more advanced level by the Environmental Manager.

Further details regarding the content of staff induction and training are outlined in the CEMP.

5.0 RESPONSE

The following framework support is provided to support incident response.

5.1.1 Define the problem

Establish the details of the immediate problem to facilitate the identification of short term response options.

5.1.2 Manage the situation

- the safety of any person, including neighbours, worker and others potentially impacted, e.g. downstream water users, is the priority;
- minimise environmental damage as quickly as possible. In a spill situation, use sandbags, absorbent material, soil, an excavation or barrier to prevent the pollutant from reaching a watercourse;
- advise the Project Manager and Environmental Manager of the incident/emergency as soon as possible;
- Project Director and/or Environmental Manager will report the incident to the relevant stakeholders (i.e. RMS, DP&E; Environmental Representative, etc.) (as required);
- Immediately advise the client and relevant stakeholders (i.e. DP&E Environmental Representative) verbally and in writing within 48 hours;
- the Environmental Manager, in consultation with the Project Manager will advise the following organisations if the incident ‘causes or threatens to cause material harm to the environment*’ immediately in accordance with the POEO Act requirements:
    - EPA;

- Ministry of Health (via the Public Health Unit)
- Work Cover Authority;
- Local Authority (i.e. council) if the EPA is not the appropriate authority; and
- Fire and Rescue NSW

- clean up the problem.

"Pollution incidents causing or threatening material harm to the environment must be notified to EPA. A 'pollution incident' includes a leak, spill or escape of a substance, or circumstances in which this is likely to occur. Material harm to the environment includes on site harm, as well as harm to the environment beyond the premises where the pollution incident occurred. An incident is considered to be notifiable to EPA if the actual or potential harm to the health or safety of human beings or ecosystems is not trivial OR if actual or potential loss or property damage (including clean-up costs) associated with a pollution incident exceeds $10,000. In accordance with the POEO Act 1997, it is an offence not to report incidents to the EPA where actual or potential harm to the health or safety of human beings or ecosystems is not trivial OR if actual or potential loss or property damage (including clean-up costs) associated with a pollution incident exceeds $10,000."

5.1.3 After the event

- develop an action plan to prevent a similar incident occurring again; and
- prepare a report on the incident.

A list of key contacts, phone (business and after hours) will be maintained and displayed (Table 6.1).

Table 6.1 Emergency Contacts

Organisation	Name	Position	Phone Number
McConnell Dowell – OHL Joint Venture	Tony Jackson	Project Manger	*0437 144 204*
	Murray Stuart	Construction Manager	*0458 309 137*
	Paul Dunn James Blackmore	Supervisor **EMERGENCY CONTROLLER**	*0428 901 862* *0424 526 677*
	Steve O'Brien	Safety Manager	*0418 783 016*
	James Hamilton	Environmental Manager	*0428 272 138*
	Cassandra Allan	Community Relations Coordinator	*0422 698 476*
RMS	Stefan Everingham	RMS Environmental Officer	*0427 430 605*
OEH/EPA Hotline	-	-	*131 555*
OEH/EPA Representative	Stuart Murphy	EPA Representative	*0408 634 153*
Public Health Unit **Regional Health Unit**	-	Business Hours: *9515 9420* After Hours: *9575 6111*	
WorkCover Authority	-	-	*13 10 50*

Organisation	Name	Position	Phone Number
Kempsey Shire Council	-	-	*9789 9300*
Kempsey District Hospital	-	-	*6562 6155* *19 River Street*
NSW Fire and Rescue	-	Pollution incidents	*000 /* *1300 729 579*
Bushfire Information Line	-	-	*1800 679 737*
Police, Fire, Ambulance	-	Call first if incident presents immediate threat to human health or property	*000*
SES	-	-	*132 500*
Poisons Information	-	-	*131 126*
Hazardous Waste Contractor Emergency Spills	*[TBC]*	*[TBC]*	*[TBC]*
WIRES	-	-	*1300 094 737*
Electricity	Energy Australia	Ausgrid	*131 388*

5.2 NOTIFICATIONS

The Environmental Manager, following consultation with the Project Manager will advise the following organisations if the incident 'causes or threatens to cause material harm to the environment immediately in accordance with the POEO Act requirements:

- EPA;
- Ministry of Health (via the Public Health Unit)
- Work Cover Authority;
- Local Authority (i.e. council) if the EPA is not the appropriate authority; and
- Fire and Rescue NSW

The Environmental Manager will notify the Project Manager of all environmental incidents and the McConnell Dowell Group Environmental Manager of any incidents which may require agency / regulator notification.
In addition, the Environmental Manager will notify the Client in accordance with the CEMP and contract requirements.
The information that needs to be reported is:

- time, date, location and likely duration of incident;
- location of place where pollution is occurring or likely to occur;
- type of incident (e.g. chemical spill, water pollution etc.);
- extent of incident (e.g. magnitude of spill, area covered etc.); and
- action taken or proposed to be taken to deal with the incident and any resulting pollution or threatened pollution.

Notifications to authorities must be verbal communication (i.e. – via telephone call.)

5.3 COMMUNITY NOTIFICATIONS

Early warnings for affected or potentially affected community members for any pollution incident will be communicated to those members in consultation with relevant authorities. The means of communication will vary based on the size and severity of the pollution incident.

For air pollution incidents that may affect community members, those community members may be asked to either close their doors and windows and stay indoors until further notice or the vacate the premises. For water pollution incidents that may affect community members, those community members may be asked to avoid use of the water until further notice.

The McConnell Dowell – OHL Joint Venture will provide regular updates of any pollution incidents either via letterbox drop, notices in local papers and/or via door knocks as required in consultation with relevant authorities.

6.0 REVIEW AND IMPROVEMENT OF THE PIRMP

6.1 CONTINUAL IMPROVEMENT

Continual improvement of this plan will be achieved by the annual evaluation of the implementation of the PIRMP, evaluation of environmental incidents and the testing of this plan.

The continual improvement process will be designed to:

- identify areas of opportunity for improvement of pollution incident which leads to improved environmental performance;
- determine the root cause or causes of non-conformances and deficiencies;
- develop and implement a plan of corrective and preventative action to address non-conformances and deficiencies;
- verify the effectiveness of the corrective and preventative actions;
- document any changes in procedures resulting from process improvement; and
- make comparisons with objectives and targets.

Testing of this plan is required to be undertaken, as a minimum, once every 12 months. Testing is to be carried out in such a manner as to ensure that the information in this plan is relevant, up to date, and that the plan is capable of being implemented in a workable and effective manner.

The plan will be similarly reviewed within one calendar month of having been implemented.

Personnel involved in emergency response activities will be provided with specific training.

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

6.2 PLAN UPDATE

As described in the CEMP, between the scheduled audits and reviews, a register of issues will be maintained to ensure that any issues are recorded for future action.

Changes to this plan will be approved by the Environmental Manager and the Project Manager and documented in the document control section for each revision. A copy of the updated plan and changes will be distributed to all relevant stakeholders.

APPENDIX 1 – INVENTORY OF POLLUTING SUBSTANCES

LIST OF POLLUTING SUBSTANCE STORAGES/USES AT SITE INITIAL ASSESSMENT		
Site Name: *Pacific Highway Upgrade – Kundabung to Kempsey*	Responsible person: *James Hamilton*	Date: *November 2014*

Name / description	Covered under Haz Chemicals?	Amount stored	Location of storage	Map reference	Need for early warning[1]	Pre-emptive action ref	Ref to safety coverage	Ref to Hazard and likelihood assessment
CHEMICALS (raw materials and products which can cause pollution)								
MATERIALS (e.g. stockpiles, silos, bulk solids etc)								
AQUEOUS (e.g. dams, wastewater tanks, other water storage area)								
SUBSTANCES IN PROCESSES (substances which could be emitted)								

[1] Early warnings relate to informing neighbours who may be affected by the emission of this substance. If this substance is of a type and quantity which may reach neighbours then early warning assessment of actions is required to be undertaken.

APPENDIX 2 – HAZARD AND LIKELIHOOD RISK ASSESSMENT FOR INVENTORY OF POLLUTING SUBSTANCES

HAZARD AND LIKELIHOOD RISK ASSESMENT AND CORRECT CONTROL MEASURES		
Site Name: *Pacific Highway Upgrade – Kundabung to Kempsey*	Responsible person: *James Hamilton*	Date: *November 2014*

Name / ref of pollutant / chemicals	Description of Hazard / Incident leading to hazard	Level of impact	Likelihood	Priority	Impact on neighbours[2]	Control Measures Corrective Action Coverage under other Plans
1. Compound solid storage	Substance may become airborne due to high winds if packages left open	Minor	Unlikely	Low	N	• Solids to be in undercover location or covered
	Contamination of waterways if solid mobilised	Minor	Unlikely	Low	N	• Solids to be in undercover location or covered
	Mobilisation of fallen substance on ground when loading/ unloading	Minor	Unlikely	Low	N	• Any spills to be swept up and disposed of following occurrence
2.Compound liquid storage	Release of spill from container during loading and/or unloading and storage	Minor	Moderate	Medium	N	• Containers to be stored on sealed ground away from watercourse. • Following each use, checks on valves and caps to be undertaken
3. Storage of concrete curing compounds	Release of spill from container during loading and/or unloading and storage	Moderate	Moderate	Significant	N	• Compounds to be located in self bunded tank • Tanks to be located within concrete bunded area • Filling procedure of tank to be developed and displayed on tank • Bund to be monitored and cleaned out when necessary

[2] If the incident may impact on neighbours then it will need to trigger the early warnings assessment and actions

4. Panel shop solid storage	Substance may become airborne due to high winds if packages left open	Minor	Unlikely	Low	N	• Solids in undercover location
	Contamination of waterways if solid mobilised	Minor	Unlikely	Low	N	• Solids in undercover location
	Mobilisation of fallen substance on ground when loading/ unloading	Minor	Unlikely	Low	N	• Any spills to be swept up and disposed of following occurrence
5. General liquid storage	Release of spill from container during use or storage	Insignificant	Unlikely	Low	N	• Storage of chemicals in small volumes not expected to cause pollution • All of these chemicals are stored within bunds and/or undercover
6.Workshop liquid storage	Release of spill from container during use or storage	Insignificant	Minor	Low	N	• Storage of chemicals in small volumes not expected to cause pollution • All of these chemicals are stored within bunds and/or undercover
7. Waste oil storage	Release of spill from container or spills when pouring into container	Moderate	Unlikely	Medium	N	• Waste oil storage in bunded container • Smaller drums of waste oil in use when servicing to be stored in trolley bund
8. Diesel storage	Release of spill from container during loading and/or unloading and storage	Moderate	Moderate	Significant	N	• Diesel to be stored in self bunded tank • Fill points to have grated storage underneath in case of spillage • Storage grates to be monitored and cleaned out when necessary

9. Storage of Gypsum	Substance may become airborne due to high winds if packages left open	Minor	Unlikely	Low	N	• Substance is unlikely to cause environmental harm. • Solids to be in covered or bagged
	Contamination of waterways if solid mobilised	Minor	Unlikely	Low	N	• Solids to be in covered or bagged
	Mobilisation of fallen substance on ground when loading/ unloading	Minor	Unlikely	Low	N	• Any spills to be swept up and disposed of following occurrence
10. Sediment basins and storage dams	Unauthorised discharge of "dirty water" from sediment basins and storage dams	Moderate	Moderate	Significant	N	• Sediment basins to be designed to capture nominated rainfall in EPL • Sediment basins to be added to licence • Storage dams designed to have no inflow • No pumping into sediment basins and storage dams when capacity high • Approval to be sought from environmental team when pumping into sediment basins and storage dams
11. Dust	Generation of dust from site	Moderate	Moderate	Significant	N	• Dust controlled by water carts on site • Community complaint line established and advertised to community • Dust monitoring to be undertaken in response to community complaints

12. Diesel fumes	Generation of diesel fumes from site	Minor	Unlikely	Low	N	• Diesel fumes on site to be monitored on a daily basis • Plant and machinery to be regularly serviced • Plant and machinery to be checked at the commencement of each day to identify any issues