

**Batemans Bay Bridge Replacement Project
Pollution Incident Response Management Plan
EPL 21182**

This Pollution Incident Response Management Plan (PIRMP) has been prepared for the Batemans Bay Bridge Replacement Project (the Project) and should be read in conjunction with the Project Construction Environmental Management Plan (CEMP) and the Emergency Response Plan (ERP). This plan has been prepared in accordance with Section 153C of the *POEO Act* and the *POEO (G) Regulation*.

1) Objective

The objectives of this PIRMP are to:

- Ensure comprehensive and timely communication about a pollution incident to staff at the premises, the Environment Protection Authority, Roads and Maritime Services (RMS) (the Client) and other relevant authorities specified in the *POEO Act* (such as local councils, NSW Health, WorkCover NSW, and Fire and Rescue NSW), and people outside the project who might be affected by the impacts of a pollution incident.
- Minimise and control the risk of a pollution incident associated with the construction of the project by requiring identification of risks and the development of planned actions to minimise and manage those risks.
- Ensure that the PIRMP 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.

2) Hazard Identification and Pre-emptive Measures

The management plans associated with the CEMP identify environmental aspects associated with the construction of the Project. The plans that identify potential hazards relevant to pollution include Soil & Water Management Plan, Waste Management Plan, Air Quality Management Plan and Construction Noise and Vibration Management Plan. Table 1 lists the main potential hazards associated with the work activities and Table 2 provides a risk assessment of these hazards.

TABLE 1 Hazard Identification

Aspect	Hazards
Soil & Water	<p>The ERP and the Soil & Water Management Plan details hazards to soil and water. Hazards include:</p> <ul style="list-style-type: none"> • Storage of fuel and chemicals; • Refuelling; • Earthworks increasing the risk of erosion and sedimentation; and • Tree clearing, topsoil stripping and soil disturbance.

Waste	<p>The Waste Management Plan details hazards associated with resources and waste. Hazards include:</p> <ul style="list-style-type: none"> • Liquid waste: • Concrete slurries drilling muds, lubricants. • Liquid waste from human waste storage facilities (sewage). • Fuels, oils, greases, engine coolant. • Hazardous wastes.
	<ul style="list-style-type: none"> • Adhesives, lubricants, cleaning agencies, water treatment chemicals and other plastic material. • General solid waste: • Non-recyclable and other putrescible general solid waste. • Spoil, concrete, metallic materials, brick, rubble, soils. • Drained and crushed oil filters, rags and other absorbent material that do not contain free liquids.
Air	<p>The ERP and the Air Quality Management Plan detail hazards associated with Air. Hazards include:</p> <ul style="list-style-type: none"> • Air contamination (Dust); and • Gas Leaks.
Noise and Vibration	<p>The Construction Noise and Vibration Management Plan details hazards associated with noise and vibration. Hazards include:</p> <ul style="list-style-type: none"> • Undertaking works outside approved construction hours; • Works exceeding noise management levels; • Work not in accordance with EPL 21182; • Vibration from project activities impacting surrounding built structures.
Natural Disasters	<p>Refer to Section 2 of the ERP.</p>

TABLE 2 Risk Assessment

Hazard	Inherited Risk Level	Pre-Emptive Actions*	Residue Risk Level
Sediment laden water leaving the site, including mud tracked onto roadways	D	<ul style="list-style-type: none"> - Vehicle wash out/shaker grid - Hard stand at site entry/exit - Procedures for dewatering - Sediment basins - Progress earthworks in conjunction with establishment of ERSED controls 	E
Pollution of land or water (stormwater) from hydrocarbon/chemical spills from plant or refuelling/fuel storage	D	<ul style="list-style-type: none"> - Plant hazard assessment conducted - Daily plant checklists - Site Environment Plans (SEP) identifying fuel storage and refuelling locations - SEP identifying spill kit locations 	E
Pollution of land or water from chemical and hazardous waste, contaminated soil, concrete waste	D	<ul style="list-style-type: none"> - Identify storage locations on SEP - Establish waste material management process - Establish concrete waste area and concrete washout, show location on SEP 	E
Generation of dust from mobile plant/vehicles and exposed areas	C	<ul style="list-style-type: none"> - Speed restrictions on traffic movements on site - Dust suppression (e.g. water carts and stabilisers) - Trucks to cover loads 	D
Impacts to local receivers due to noise and vibration	C	<ul style="list-style-type: none"> - Comply to approved construction hours and out of hours work permits - Communicate with the local community on out of hours works and general project activity updates/notifications - Program high noise activities for standard construction hours and apply respite periods as required 	D

Note - This is not an exhaustive list of pre-emptive actions. For further information refer to relevant Environmental Management Plan.

Likelihood rating	<i>Almost Certain</i>	D	C	B	A	A
	<i>Likely</i>	D	D	C	B	A
	<i>Possible</i>	E	D	C	C	B
	<i>Unlikely</i>	E	E	D	C	B
	<i>Rare</i>	E	E	D	D	C
		1	2	3	4	5
		Consequence rating				

Table 3 Likelihood Rating

Rating	Criteria
Almost Certain	>99% probability, or Expected to occur in most circumstances, or Could occur within “days to weeks”, or Will occur repeatedly without corrective action being taken
Likely	50-99% probability, or Will probably occur in most circumstances, or Could occur within “weeks to months”
Possible	20-50% probability, or Might occur sometime, or Could occur within “months to years”
Unlikely	1-20% probability, or Could occur but would not be expected, or Could occur in “years to decades”
Rare	<1% probability, or Occurrence requires exceptional circumstances, or Only occur as a “100 year event”

3) Inventory of Pollutants

The Work, Health and Safety (WHS) Management Plan requires that that a Safety Data Sheet (SDS) and a Hazardous and Dangerous Substances Register be kept at all chemical storage and handling locations and which will provide an inventory of the pollutants on site. The location of pollutants to be stored/held on site shall be identified in the relevant SEPs per work activity, including storage methods.

4) Safety Equipment

A list of pre-emptive actions (or mitigation measures) to be implemented during construction of the Project to minimise or prevent the risks to human health and the environment is outlined within Section 2 (Action Plans) of the ERP, WHS Management Plan and CEMP documentation. These documents include a description of safety equipment and activity-specific equipment required to address hazard, risk and safety issues. For example, spill kits will also be available on site for all personnel to use with locations identified within the SEP.

5) Maps

A set of maps showing the location of the premises, the surrounding areas that are likely to be affected by a pollution incident, the location of potential pollutants on the premises, the location of any stormwater drains on the premises, and the discharge locations of the stormwater drains to the nearest watercourse or water body will be developed within the CEMP and associated Sub-Plans and SEPs.

6) Environmental Emergency Contact Details

The following authorities contact details are listed in Section 2.24 of the ERP.

TABLE 4 Emergency contact details

	Authority	Phone Number
1	NSW EPA	131 555
2	Department of Health – Batemans Bay Health Service	02 4475 1500
3	SafeWork NSW (Wollongong)	13 10 50 (24/7) / 02 4222 7333
4	FoodSafe NSW (Oyster Farmers)	1300 552 406
5	Local Authority - Eurobodalla Shire Council	02 4474 1000
6	Department of Primary Industries (fisheries)	02 4478 9100 / 0427 855 008
7	Fire and Rescue	000

7) Notification

For pollution incidents associated with the project the Notification Protocol shall be initiated in accordance with Section 1 of the ERP. Local community stakeholders that may be potentially affected by a pollution incident will be notified in accordance with Sections 1 and 2.24 of the ERP. The potential impacts and communication mechanisms with community stakeholders following a pollution event, in order to minimise the risk of harm, is set out in Table 5 below. Communications and engagement activities, tools and implementation, enquiries and complaints mechanisms to notify the community with will be set out in the BBB Community Involvement Plan.

TABLE 5 Emergency contact details

Pollution Incident Scenario	Potential Impacts	What to do	Who to Notify	When	Communication Mechanism
Fuel or oil spill into waterway / Marine Park	<ul style="list-style-type: none"> - Contamination of oyster stocks - Damage to Marine Park ecosystems 	<ul style="list-style-type: none"> - Shut down oyster lease activities - Notify Marine Park users 	Oyster lease managers / Batemans Marine Park	<ul style="list-style-type: none"> - 1 hour - Following clean up 	<ul style="list-style-type: none"> - Telephone
Large release from sediment dam	Siltation of Watercourse	<ul style="list-style-type: none"> - Avoid entering the watercourse - Cease pumping any water 	Downstream users	<ul style="list-style-type: none"> - 3 hours 	<ul style="list-style-type: none"> - Door knock / - Telephone - Letter drop
Chemical spill entering drain	Exposure to chemicals	<ul style="list-style-type: none"> - Avoid entering drain - Don't drink any water originating from drain 	Adjacent residents / businesses	<ul style="list-style-type: none"> - 3 hours - Following clean up 	<ul style="list-style-type: none"> - Door knock - Telephone - Letter drop

8) Pollution Incident Response Scenarios

- Air Supply Contamination – Refer to Section [A] ERP
- Bio-Hazard / Blood Spill – Refer to Section [D] ERP
- Fire (Building / Bush) – Refer to Section [M] ERP
- Gas Leak (Mains / Cylinders) – Refer to Section [O] ERP
- Spills or Releases – Refer to Section [Y] ERP and Section 11 of this PIRMP.

9) Training

Details regarding the nature and objectives of any staff competence, training and awareness are outlined in Section 1.8 (Strategy) of the ERP. Several forms of environmental training will be provided. Examples include:

- A project site induction, including environmental roles and responsibilities;
- Toolbox talks;
- Environmental Work Method Statements; and
- Environmental awareness training for specific issues.

The Environment Manager will undertake training and maintain a register of all project site inductions and environmental training carried out.

10) Testing and Review

The testing of this plan shall to be carried out in such a manner as to ensure that the information included in this plan is accurate and up to date and the plan is capable of being implemented in a workable and effective manner. Any such test is to be carried out:

- Routinely at least once every 12 months, and
- Within 1 month of any pollution incident occurring in the course of an activity to which the licence relates so as to assess, in the light of that incident, whether the information included in the plan is accurate and up to date and the plan is still capable of being implemented in a workable and effective manner.

In accordance with the Regulation, testing of this PIRMP will occur:

- Initially within three months after EPL 21182 approval;
- Every 12 months thereafter, while construction continues; and
- Within 1 month of any Category One pollution incident during the construction of the Project.

Testing of the PRIMP will involve:

- Desktop simulation; or
- Practical exercise or drill.

Records will be kept in accordance with the CEMP and Section 1 of the ERP.

11) **Pollution Incident Response – Spills / Releases**

Note – Response personnel are to ensure the safety of self and others prior to or when carrying our spill / release recovery.

Actions during the Emergency

(a) Person/s Encountering the Spill or Release

1. Identify type of spill / release	Is it contained (e.g. banded) or uncontained (going to drain)? Damaged / leaking containers should be addressed using the same process.
2. Identify the material	Is it flammable, toxic, corrosive, etc.? Refer to label, signage, MSDS, etc.
3. Conduct risk assessment	Is the area safe, have you been trained, is it going to drain? NOTE: If the spill is beyond your control at this point contact the Chief Warden
4. Wear appropriate PPE	Gloves, goggles, apron, respirator, etc. in accordance with the MSDS. Ensure the safety of self and others.
5. Eliminate ignition sources	For flammable substances (or assumed flammable substances) remove energy supply to nearby switchboards, electrical equipment, power points and flames, static or sparks.
6. Take precautions	Avoid slipping, creating sparks, or breathing in vapors
7. Contain the spill / release	Use containment booms, bunds or similar to prevent runoff to storm water drains
8. Clean up	Use pads, pillows, and other absorbent materials to soak up spill and then bag in labeled containers. Flush any residue off surfaces and also contain.
9. Notify	Report spill to area supervisor, complete the John Holland Incident Notification and Investigation report through the JHET system. Complete any client incident notification reports. Notify external authorities in line with Table 4.

(b) Chief Warden

The spill/release should be contained as soon as possible, using appropriate absorbents (booms, absorbent granules, pads) if it is believed safe to do so, based on information at hand. Particular attention should be paid to drains / water courses and these may need to be dammed using appropriate bunding

(c) Person/s Responsible for Spill/Release Clean Up

The person responsible for the substance should manage the spill/release as specified on the Materials Safety Data Sheet (MSDS) or by the manufacturer/supplier of the substance. On arrival at the scene, if the spill/release is significantly large, adversely uncontained or in any other way deemed unsafe ensure that the affected area has been evacuated. Additional actions will include:

- Prevent unauthorised access to the area
- Consideration should be given to site environmental conditions and a decision made as to whether further evacuation of the area is required
- Ensure that persons assemble in a well-ventilated, safe area, upwind from the spill/release
- Considerations, instructions and advice relating to specific spill types must be followed for the safety of colleagues, other persons and the environment.

Important – Notifying Fire Brigade

- The Fire Brigade HAZMAT Team is to be notified immediately for any hazardous substance spill beyond our control. This call should be made via '000'.
- The Fire Brigade should also be informed via a '000' call if the spillage has caused evacuation, entered drainage systems or is a size or nature that Site personnel have insufficient resources or training to safely and effectively manage.
- All information regarding the spill should be reported to the Officer-In-Charge of the Fire Brigade on arrival at the scene.

Oil and Grease Considerations:

- Stop the leak at the source
- Determine the type and size of the spill
- Protect storm water drains by forming barriers or blocking them
- Prevent any runoff into storm water drains - use the containment booms, located in the spill prevention kits, to confine small spillages (up to 200L).
- Spills that cause or potentially threaten material harm must be notified to the relevant authorities
- Spills of 1000 litres or more must be reported to the Regional HSEQ Manager
- Wear personnel protective equipment (PPE) located in the spill prevention kits to prevent skin and eye contamination and to avoid breathing any vapor. PPE includes overalls, splash apron, eye goggles, gloves (PVC or neoprene), footwear, and appropriate breathing apparatus.
- Clean up method will be dictated by the quantity spilled
- Emergency (Teflon pneumatic) pump for pumping out drains and holding pits. Spilled material must be pumped into approved (degassed), sealed, and labelled 200L steel drums
- Cleaning equipment (mops, squeegees etc.) for directing liquid spills into bund or holding pits
- Spill response kits for absorbing minor spills
- Ensure that the spill area has been appropriately cleaned and is no longer a hazard.

Turbid/ Sediment Laden Water:

- Inform Supervisor of problem, /exact location and the estimated volume magnitude
- If uncontrollable, notify Project Environment Manager / PER
- Divert flow away from existing waterways
- Create barriers and block any storm water drains
- Contain the spill by forming a barrier around the affected area. Establish emergency berm (earth or sandbags) to contain trap storm water/sediment laden water or reduce flow. Where possible turbid/sediment laden divert dirty water to suitably sized operational sediment control point or basin device.
- Work on the source control / restoration of original control device e.g. tank, embankment. basin
- Assess impact and devise remedial action for affected waterway and embankment
- Apply buffering solutions/agents or pump out if necessary
- Remove sediment build-up deposit

Powder and Dust Release Considerations:

- Identify any outside area, where the powder could be dispersed to the environment.
- Wear personnel protective equipment, located in the spill prevention kits, to prevent skin and eye contamination. i.e. overalls, splash apron, eye goggles, gloves and rubber boots
- Wear a breathing mask or face mask to prevent inhalation of the powder.
- PREVENT ANY EMISSION TO THE ENVIRONMENT. Where possible close doors and windows in the vicinity of the spill. If a large amount of powder is spilled in an external area, organise cover sheets to be placed over the spill to prevent dispersion from wind etc. during the cleanup time.
- Collect all of the material, by using one of the following methods:
 - Vacuum Cleaner (check that the material is not explosive under pressure)
 - Bulk tanker removal (vacuum pump)
 - Emergency (Teflon pneumatic) pump
 - Cleaning equipment (mops, squeegee, buckets, etc.)
- All materials must be contained in appropriate, sealed and labeled containers
- Flush the remaining residue with copious amounts of water
- Contact the Project Environment Manager / PER, who will be responsible for the correct disposal of all containers according to the corresponding waste disposal procedures
- All materials used in the cleanup of hazardous powder materials (e.g. vacuum filters, mop heads, tarpaulins, etc.) shall be considered contaminated with the hazardous substance(s) and must be managed as hazardous wastes unless deemed otherwise by the environmental team.

CAUTION

- SLIP HAZARDS – AVOID SPILL ZONE & STOP AREA ACCESS / TRAFFIC FLOW
- TOXIC VAPOURS – MAXIMISE VENTILATION & WEAR BREATHING APPARATUS
- FIRE HAZARDS - ELIMINATE IGNITION SOURCES & HAVE FIRE EXTINGUISHER READY

Dangerous Goods:**CAUTION**

- IDENTIFY THE CLASS OF DANGEROUS GOOD (AS DESCRIBED BELOW) AND THE INHERENT DANGEROUS PHYSICAL PROPERTY OF THAT CLASS (SEE PRODUCT MSDS)
- CONTROL THE IDENTIFIED DANGER OR ANYTHING THAT MIGHT INCREASE THE EXPOSURE TO THAT DANGER
- RESPOND TO THE SPILL AS PER ACTION STEPS OUTLINED FOR THE “PERSON ENCOUNTERING THE SPILL/RELEASE” AT THE START OF THIS SECTION

Compressed Gases (Class 2)

Flammable Compressed Gases (Class 2.1) – May be ignited by heat, sparks or flames. Vapors may travel to a source of ignition and flash back to cylinder. Gases present a vapor explosion hazard indoors, outdoors, and in sewers. Vapors may cause dizziness or suffocation. Contact of gas on skin will cause severe frostbite. Fire may produce irritating or poisonous gases.

Non-Flammable, Non-Toxic Compressed Gases (Class 2.2) – Cylinders may explode in a fire. Vapours may cause dizziness or suffocation. Contact of gas on skin will cause severe frostbite.

- Verify the leak source and identify the type of gas leaking
- Eliminate any hazards such as incompatible substances or ignition sources
- Take precautions - including the alerting of others in the area and isolating the situation
- Ensure appropriate personal protective equipment is utilised, this includes positive pressure self-contained breathing apparatus and thermal gloves
- Control the leak and extinguish any fires.

Flammables (Class 3)

- Eliminate all sources of ignition
- Prevent any runoff into stormwater drains - use the containment blocks (booms), located in the Hazchem spill kits, to confine the spillage
- Wear personal protective equipment (i.e. overalls, splash apron, eye goggles, gloves, rubber boots), located in the spill prevention kits, to prevent skin and eye contamination
- Identify any fire risk
- Ensure ventilation systems are in full operation (adjust to suit where possible) and remain operational until such time as the hazardous atmosphere dissipates

Oxidizing Substances; Organic Peroxides (Class 5)

- Class 5 substances will generate large amounts of oxygen when exposed to heat, metals and many chemicals. High concentrations of oxygen can result in the initiation of severe fires in any combustible material.
- All Class 5 substances shall be kept separate from other dangerous goods classes and any combustible material by at least 5 metres in a well-ventilated area, or in an approved Class 5 storage cabinet.

Toxic and Infectious Substances (Class 6)

- All class 6 poisons shall be stored in areas complying with the Dangerous Goods Regulations.
- Class 6 goods shall be kept at least 5 metres away from foodstuffs and dangerous goods of other classes, or alternatively be separated by a liquid tight wall.

Corrosive Substances (Class 8)**Neutralise using soda ash - NEVER add water to corrosive substances**

Hypochlorite Solution and Peroxide Acids - use glass or plastic equipment for storage for disposal. Avoid use of all metals

Ammonia - volatile, containers can develop pressure with an increase in temperature. Do not store near heat. Exercise extreme care when opening containers as they may be pressurised

Ammonia, Hydrochloric Acid, Acid Phosphoric, Acid Thioglycolic and Acid Sulphuric 98% - use full face respirator with appropriate approved canister.

- Prevent any runoff into stormwater drains - use the containment blocks (booms), located in the Hazchem spill kits, to confine the spillage.
- Wear personnel protective equipment (i.e. overalls, splash apron, eye goggles, gloves, rubber boots and appropriate protective full-face respirator), located in the spill prevention kits, to prevent skin and eye contamination.

(c) Actions following the Spill / Release Pollution Incident**Person/s Responsible for the Spill / Release Clean Up**

- All waste should be removed consistent with regulatory requirements and local waste disposal procedures.
- Complete an Incident Notification and Investigation Report form through the JHET system. Complete any client incident notification reports.

Internal Notifications:

- Notify senior management in line with ERP
- Notify JH Regional HSEQ Manager

External Notifications:

- EPA if a pollution incident causes or threatens material harm to the environment, including a spill, leak or escape of a substance.
- NSW Roads and Maritime project representative for Batemans Bay Bridge Replacement
- All other external authorities as required in line with Table 4 of this PIRMP.