

Pollution Incident Response Management Plan (PIRMP)

Dunbogan Quarry

Revision:	Date:	Status:	Prepared/Reviewed by:
7	07.05.2022	Issued for use	D Thiedeke
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9	30.06.2024	Issued for use	D Thiedeke

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HTA-E-SOP-001

Hy-Tec Industries

Safety Management System

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Pollution Incident Response Management Plan (PIRMP)

Contents

1. Element 21 (SMS extract)
2. Appendix 21A - Environmental Incident Definition and Response Flow Chart
3. Appendix 21B - Environmental Response Plan Drill Report
4. ABL-HSE-GSS-12-03 - Emergency Response Contact Details
5. Appendix 4B - Management Structure Register
6. Appendix 3B - Mine Plan (Site Map)
7. Appendix 17B - Hazardous Substance Register
8. Appendix 7K - Risk Management Process
9. Appendix 7D - Risk Assessment Tool
10. Appendix 8G - Environmental Hazard Management Matrix
11. Appendix 7F - Hazard Register/Principal Mine Hazard Register
12. Appendix 19B - PPE Equipment Matrix
13. Appendix 1A - Document control

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21. ENVIRONMENTAL INCIDENT RESPONSE – POLLUTION INCIDENT RESPONSE MANAGEMENT PLAN

21.1 PURPOSE

C&A Hy-Tec Quarries have systems in place to ensure all environmental/pollution incidents and hazards are controlled and monitored in line with the relevant state legislation.

21.2 SCOPE

This element applies to all C&A Hy-Tec Quarry employees, contractors, sub-contractors and visitors to ensure that all individuals are aware of requirements with regards to environmental incident issues. This element is used in conjunction with ABL-HSE-GSS-11 for reporting. If a pollution incident occurs in the course of an activity, so that material harm to the environment (within the meaning of **Part 5.7 – Duty to notify pollution incidents** - section 147 – NSW POEO Act) is caused or threatened, the person carrying on the activity must immediately implement the site’s pollution incident response management plan in relation to the activity required by this Part and report any incident / incidents that cause or threaten material harm **Immediately** after becoming aware of the incident.

21.3 PROCEDURE

All hazards relating to human health or the environment will be described in the Environmental Hazard Management Matrix (**Appendix 8G**). The details of the pre-emptive action to be taken to minimize or prevent any risk of harm to human health or the environment arising out of the relevant activity will be recorded in a JHA (**Appendix 7C**) and/or a Risk Assessment (**Appendix 7D**). Risks will be minimised using the Risk Management Process (**Appendix 7K**).

An inventory of potential pollutants on the premises will be recorded in a Hazardous Substance Register (**Appendix 17B**). This register will also include the quantity and location of the pollutant.

A description of the safety equipment or other devices that are used to minimize the risks to human health or the environment and to contain or control a pollution incident are listed in the PPE Equipment Matrix (**Appendix 19B**) and Hazard Register (**Appendix 7F**).

The names, positions and contact details of key individuals at the quarry are kept in the Management Structure Register (**Appendix 4B**).

The contact details of each relevant authority are required to be available and displayed. Examples of required authorities are below:

- (a) EPA/OEH
- (b) Local Council
- (c) Local DPI office
- (d) Safe Work
- (e) Fire and Rescue
- (f) Water Catchment Authority
- (g) Ministry of Health
- (h) Department of Agriculture, Water and the Environment

A neighbourhood contact list will be maintained at the site. In an emergency incident, the appropriate neighbours will be contacted by the Quarry Manager or delegate and will be updated as required by the Quarry Manager / delegate. Constant communication such as 2-way radios, mobile phones and Business Communication (Toolbox) Meetings etc. (**Appendix 6B**) will be used as early warning mechanisms to communicate with site staff and management throughout the incident or other times.

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An Environmental Incident Definition and Response Flow Chart (**Appendix 21A**) has been produced for guidance on the process of dealing with a pollution incident. "Pollution" means:

- (a) water pollution, or
- (b) air pollution, or
- (c) noise pollution, or
- (d) land pollution.

Definition - "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.

The mine plan (**Appendix 3B**) will show the location of the premises with the property boundary and any other relevant detail.

The qualifications and training competencies of all employees will be recorded as required in the Training Register (**Appendix 11F**).

It is a legislative requirement for this plan to be tested and updated on an annual basis and within one month of an incident. To complete this requirement a Pollution Incident Response Drill Report (**Appendix 21B**) has been prepared. The checklist includes the major elements of the plan that require testing. This PIRMP is to be reviewed and updated as required at least annually to ensure that incident response systems are fully functioning and are ready to be implemented if an incident occurs. This requirement shall be listed as an action item and scheduled on the environmental compliance planner. Training records should be stored on site and in the Hy-Tec Intranet data base.

The plan will be controlled and reviewed in accordance with Element 5. Any changes will be recorded along with the date in the SMS Amendment Sheet (**Appendix 1A**).

21.4 REFERENCES

- [Environmental Protection Act 1994](#)
- [Protection of the Environment Operations Act 1997](#)
- [Protection of the Environment Operations \(General\) Amendment \(Pollution Incident Response Management Plans\) Regulation 2012](#)

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Appendix 21A

Environmental Incident Definition and Response Flow Chart

"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.

Meaning of material harm to the environment

(1) For the purposes of this Part:

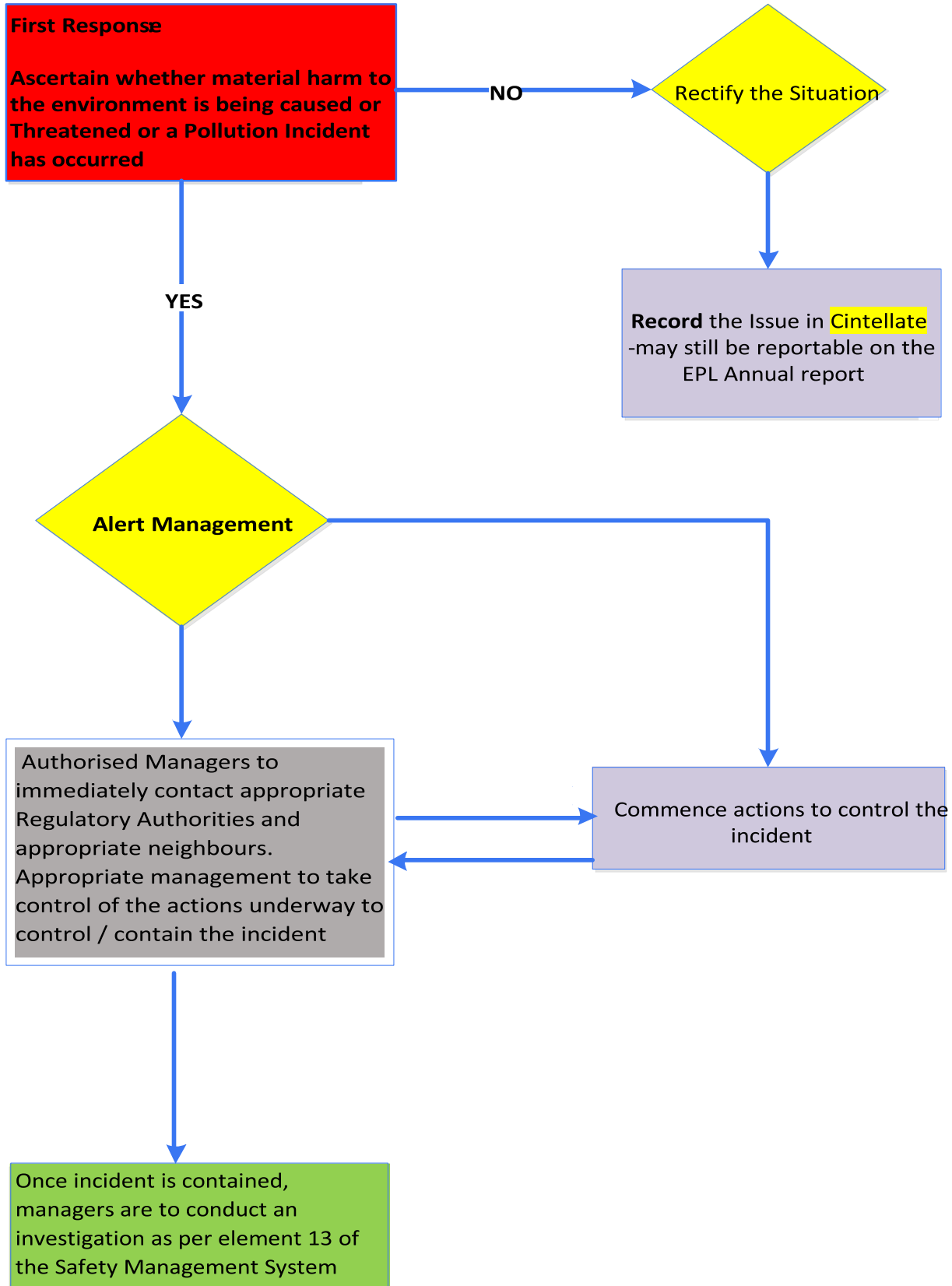
(a) harm to the environment is material if:

(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.

(2) For the purposes of this Part, it does not matter that harm to the environment is caused only in the premises where the pollution incident occurs.





ABL-HSE-GSS-12-03

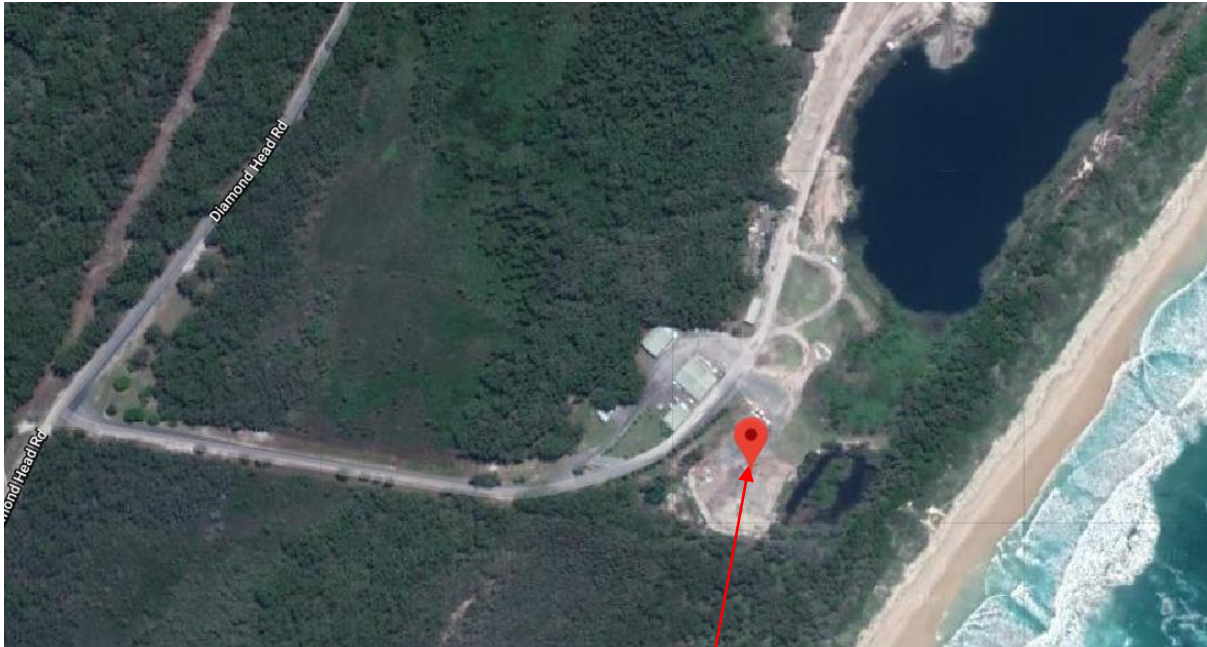
EMERGENCY RESPONSE CONTACT – DUNBOGAN QUARRY

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EXTERNAL EMERGENCY RESPONSE ORGANISATIONS			
Service	Emergency Contact	General Enquiry	Address
Ambulance	000		
Department of Industry – Water	02 93386600	0293386600	www.industry.nsw.gov.au/water
Department Planning & Environment	1300 305695		www.planning.nsw.gov.au
Department Primary Industries	1300 814609		www.resourcesregulator.nsw.gov.au
Doctor		(02) 5525 1111	152 Greenmeadows Drive Port Macquaire 2444
E.P.A	131555		
Fire Brigade	000	(02) 6559 9127	33 Castle St, Laurieton NSW 2443
Hospital	000	(02) 5524 2000	Wrights Rd, Port Macquarie NSW 2444
Port Macquarie Hastings Council	(02) 6581 8111		council@pmhc.nsw.gov.au
Ministry of Health		02 93919000	www.health.nsw.gov.au
Poisons Information Centre	N/A	13 11 26	www.poisonsinfo.nsw.gov.au
Police	000	(02) 6559 9044	101 Bold St, Laurieton NSW 2443
SafeWork	13 10 50	13 10 50	contact@safework.nsw.gov.au
State Emergency Service	13 25 00	N/A	www.ses.nsw.gov.au

If any emergency service (**Police, Fire or Ambulance**) is called to site, a nominated employee must meet the response team at the front gate (Lot 142 Diamond Head Rd, Dunbogan) to the Quarry and escort them to the required location.

List of Neighbourhood contacts to be maintained at the Quarry – **For privacy reasons, this list is not to be published.**



Helicopter Directions For emergency purposes

Latitude & Longitude 31° 40' 35.3" South — 152° 48' 24.1" East

Being 31 degrees, 40 minutes and 35.3 seconds south / 152 degrees, 48 minutes and 24.1 seconds East

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Appendix 4B

Register of persons occupying positions in the Management Structure

Position	Name	Responsible for activating Incident Response Plan (Y/N)	Authority to Notify (Y/N)	Responsible to Manage Pollution Incident (Y/N)	Finish Date
Chief Operating Officer Concrete/Aggregate	Andrew Dell (02 9751 7130 / 0417 607450)	N	Y	N	
National Planning & Development Manager	Darryl Thiedeke (02 9751 7130 / 0409 652 022)	N	Y	N	
General Manager HSE Adelaide Brighton Ltd	Steven De Musso (0439 740 293)	N	Y	N	
General Manger NSW & NNSW	David Cilento (0418 162 498)	N	Y	N	
Hy-Tec HSE Advisor	Joe Perulero (0479 188 381)	N	Y	N	
Area Manager NNSW	Paul O’Connor (0438 599 834)	Y	Y	N	
Sales Manager NNSW Quarries	Rick Gleeson (0447 697 122)	Y	N	Y	
Quarry Manager	Logan Marshal (0439 850 806)	Y	N	Y	
Logistics & Maintenance Manager NNSW	Roger Narine (0408 261 722)	Y	N	Y	
Production Supervisor – Dunbogan	Peter Cavanaugh (02 6559 9834)	Y	N	Y	
Quarry Worker	James Robb	Y	N	N	
Transport Supervisor	Dan Jenkins (0429 654 411)	Y	N	Y	
Administration	Tracy Ross (6559 9834)	Y	N	N	

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Appendix 21B












Environmental Response Plan Drill Report

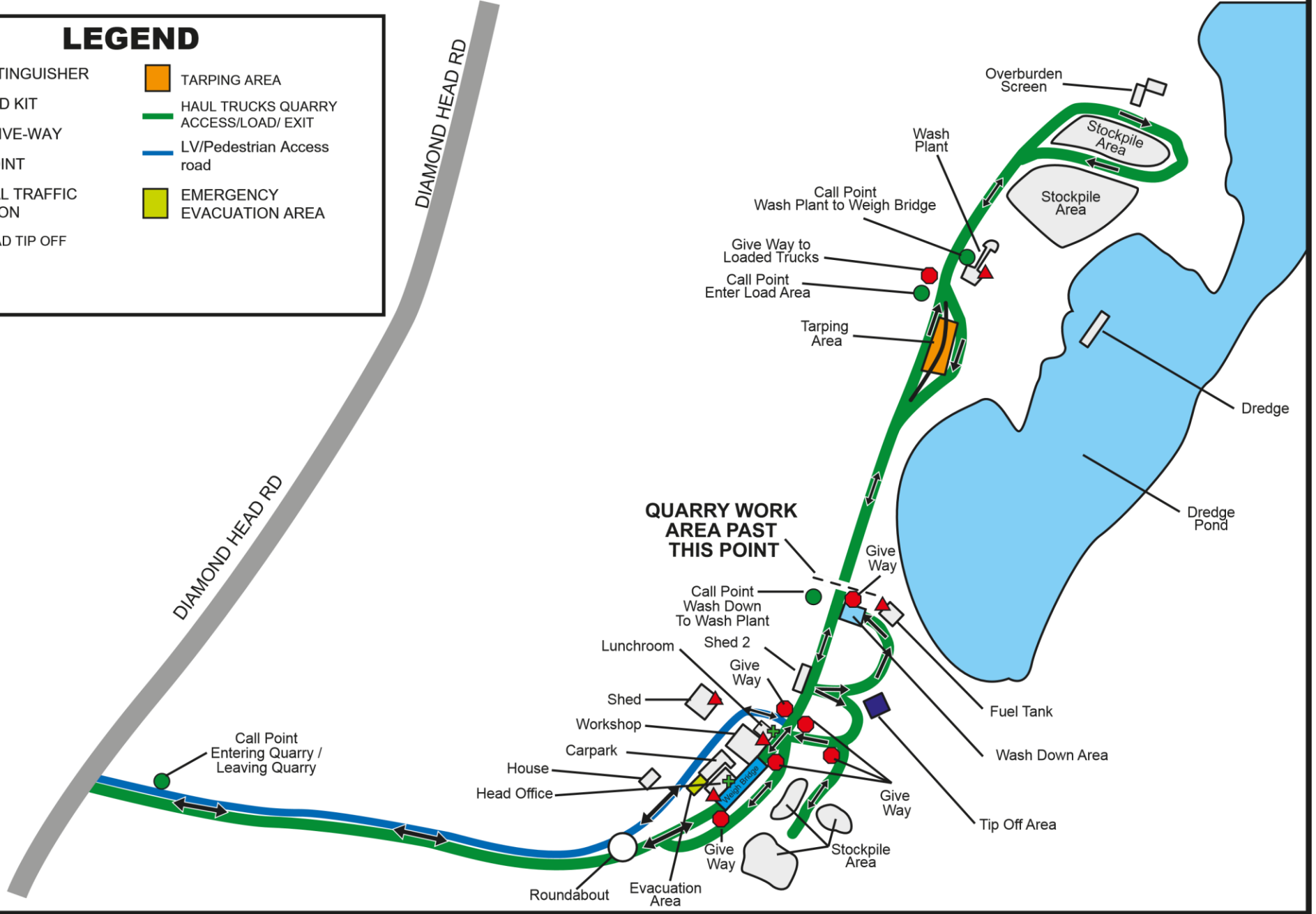
Site/Location:		Date of Drill / Environmental Issue	
Method Used for initiating response:			
Time of Environmental incident:		Was Management contacted?	
Was Incident contained?		Method/equipment used?	
Was regulatory Authority notified?		Name of reporting person?	
Name of regulatory authority reported to		Contact person at Reg. Authority?	
Was incident adequately cleaned up?		Was waste disposed of correctly?	
Comments on the Drill / Environmental Emergency:			
Corrective actions to be adopted as a result of this Drill / Environmental Emergency		By whom	By Date
Report Compiled by			Date

DUNBOGAN QUARRY

LOT 132 DIAMOND HEAD ROAD

LEGEND

- | | | | |
|---|---------------------------|---|--------------------------------------|
|  | FIRE EXTINGUISHER |  | TARPING AREA |
|  | FIRST AID KIT |  | HAUL TRUCKS QUARRY ACCESS/LOAD/ EXIT |
|  | STOP/ GIVE-WAY |  | LV/Pedestrian Access road |
|  | CALL POINT |  | EMERGENCY EVACUATION AREA |
|  | GENERAL TRAFFIC DIRECTION |  | OVERLOAD TIP OFF AREA |
|  | OVERLOAD TIP OFF AREA | | |





ChemAlert's distinct colour rating system to allows for an easy visual interpretation of the hazard level associated with chemical substances.

The three distinct colours and their meaning are as follows:

GREEN

Low Health Hazard with normal use.

User Check List:

- Read the SDS and ChemAlert report thoroughly before using the product
- Clarify any concerns you might have about the product or its application
- If PPE is specified, are workers experienced in its use?

AMBER

Moderate Health Hazard with normal use.

User Check List:

- Read the SDS and ChemAlert report thoroughly before using the product
- Clarify any concerns you might have about the product or its application
- Is there a safer substitute?
- Is the area adequately ventilated?
- Does the area of application need to be isolated?
- Is air monitoring required to evaluate exposure levels?
- Have safe work practices or procedures been established?
- If PPE is specified, are workers experienced in its use?

RED

High Health Hazard with normal use.

User Check List:

- Read the SDS and ChemAlert report thoroughly before using the product.
- Clarify any concerns you might have about the product or its application.
- Does the product need to be used (can the product or task be eliminated)?
- Is there a safer substitute?
- Is the area adequately ventilated?
- Does the area of application need to be isolated?
- Is there a first aid officer or nurse available?
- Is air monitoring required to evaluate exposure levels?
- Have safe work practices or procedures been established?
- Are medical records kept for those handling this product?
- If PPE is specified, are workers experienced in its use?



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Stock Register

(Location Name: Adbri Limited/ CONCRETE & AGGREGATES/ NRTH NEW SOUTH WALES/ HY-TEC/ DUNBOGAN QUARRY H.O.,
Child Locations Included)
(Sort By: Product Name, Filter By: None)

Stock Number	Product Name				Supplier (Emergency Contact)				
	Hazardous	Dangerous Good	UN number	Packing Group	Hazchem Code	Status	In Stock Inventory	Risk Assessment	SDS Date
198	ACETYLENE				BOC LIMITED (AUSTRALIA) (1800 653 572 (24/7) (Australia only))				
	Yes	DG 2.1	UN 1001	-	2SE	Approved	Yes	Available	03-Mar-2023
772	AJAX SPRAY N WIPE STONE SAFE KITCHEN MULTI-PURPOSE BAKING SODA				COLGATE-PALMOLIVE PTY LTD ((02) 9037 2994)				
	Yes	No	-	-	-	Approved	Yes	Available	04-May-2021
2530	ALUMINIUM SULPHATE SOLID				SIGMA COMPANIES GROUP PTY LTD (1800 127 406)				
	Yes	No	-	-	-	None	Yes	-	03-Jun-2020
497	AUTOMOTIVE DIESEL FUEL				AMPOL AUSTRALIA PETROLEUM PTY LTD (FORMERLY CALTEX AUSTRALIA) (1800 033 111)				
	Yes	No	-	-	-	None	Yes	-	23-Jun-2021
2537	BRAKE CLEANER				WURTH AUSTRALIA PTY LTD (1300 657 765/ 13 11 26)				
	Yes	DG 2.1	UN 1950	-	2YE	None	Yes	-	03-Jul-2023
2526	CHEMTECH CT20 WASH 'N' WAX				ITW AAMTECH AUSTRALIA (1800 039 008)				
	Yes	No	-	-	-	None	Yes	-	23-Dec-2022
2534	DELO SYN ATF HD				CHEVRON AUSTRALIA PTY LTD (0427 495 187)				
	Yes	No	-	-	-	None	Yes	-	22-Aug-2021
2531	FLAMESTOP (ABE) (ABCE) EXTINGUISHERS				FLAMESTOP AUSTRALIA PTY LTD (0425 342 729)				
	Yes	DG 2.2	UN 1044	-	-	None	Yes	-	14-Jan-2021
2529	HYDRATED LIME				CEMENT AUSTRALIA PTY LIMITED ((07) 3335 3000; 1300 236 368/ 13 11 26)				
	Yes	No	-	-	-	None	Yes	-	27-Mar-2023
2532	INOX MX8 AEROSOL				CANDAN INDUSTRIES PTY LTD ((07) 5574 8205)				
	Yes	DG 2.1	UN 1950	-	2YE	None	Yes	-	31-Oct-2021
2533	INTERNATIONAL THINNER/EQPT CLEANER (GTA220)				INTERNATIONAL FARG AB (+44 (0)844 892 0111)				
	Yes	DG 3	UN 1263	PG III	•3Y	None	Yes	-	19-Sep-2019
2527	MINERAL TURPS				HAYMES PAINT ((03) 5342 6200 (7:30 to 5:30 Mon to Fri))				
	Yes	DG 3	UN 1300	PG III	3Y	None	Yes	-	22-Nov-2021
2500	MOBIL DELVAC MODERN 15W-40 FULL PROTECTION				AMPOL AUSTRALIA PETROLEUM PTY LTD (FORMERLY CALTEX AUSTRALIA) (1800 033 111)				
	No	No	-	-	-	None	Yes	-	05-Oct-2021
1094	MOBILGEAR 600 XP 220				AMPOL AUSTRALIA PETROLEUM PTY LTD (FORMERLY CALTEX AUSTRALIA) (1800 033 111)				
	No	No	-	-	-	None	Yes	Available	07-Oct-2021
1830	MOBILGREASE XHP 222 SPECIAL				AMPOL AUSTRALIA PETROLEUM PTY LTD (FORMERLY CALTEX AUSTRALIA) (1800 033 111)				
	No	No	-	-	-	None	Yes	-	06-Oct-2021

Stock Register

(Location Name: Adbri Limited/ CONCRETE & AGGREGATES/ NRTH NEW SOUTH WALES/ HY-TEC/ DUNBOGAN QUARRY H.O.,
 Child Locations Included)
 (Sort By: Product Name, Filter By: None)

Stock Number	Product Name				Supplier (Emergency Contact)				
	Hazardous	Dangerous Good	UN number	Packing Group	Hazchem Code	Status	In Stock Inventory	Risk Assessment	SDS Date
1827	MOBILTRANS HD 10W				AMPOL AUSTRALIA PETROLEUM PTY LTD (FORMERLY CALTEX AUSTRALIA) (1800 033 111)				
	No	No	-	-	-	None	Yes	-	06-Oct-2021
1082	MOBILTRANS HD 30				AMPOL AUSTRALIA PETROLEUM PTY LTD (FORMERLY CALTEX AUSTRALIA) (1800 033 111)				
	No	No	-	-	-	None	Yes	-	06-Oct-2021
197	OXYGEN, COMPRESSED				BOC LIMITED (AUSTRALIA) (1800 653 572 (24/7) (Australia only))				
	Yes	DG 2.2 / 5.1	UN 1072	-	2S	Approved	Yes	Available	19-Aug-2021
1845	PREMIUM UNLEADED PETROL				AMPOL AUSTRALIA PETROLEUM PTY LTD (FORMERLY CALTEX AUSTRALIA) (1800 033 111)				
	Yes	DG 3	UN 1203	PG II	3YE	None	Yes	-	19-Sep-2023
2535	WEEDMASTER ARGO DUAL SALT TECHNOLOGY HERBICIDE				NUFARM AUSTRALIA LIMITED (1800 033 498)				
	Yes	No	-	-	-	None	Yes	-	29-May-2020

SAFETY MANAGEMENT SYSTEM

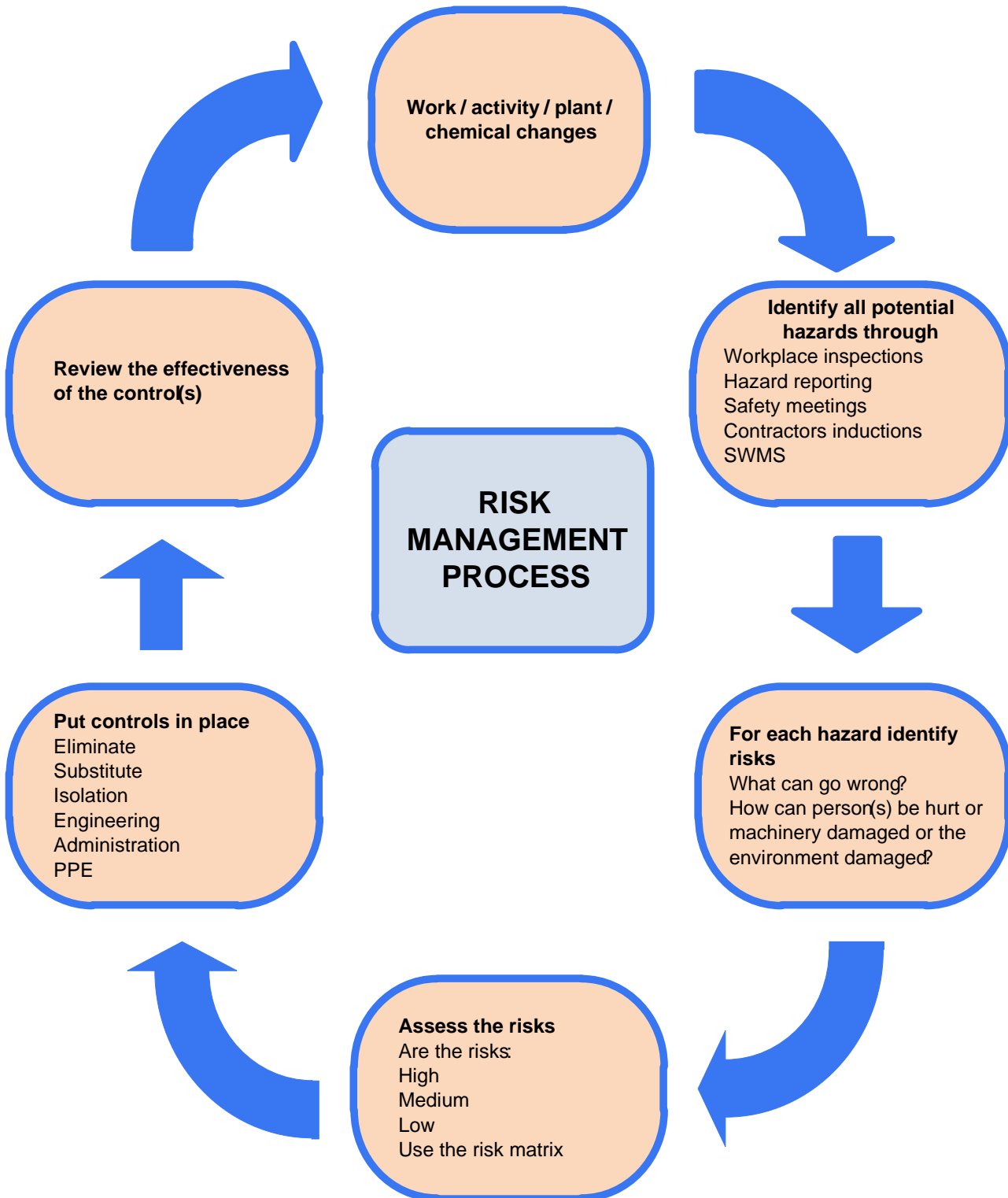
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Appendix 7K

Risk Management Process





ABL-HSE-GSS-07-01

RISK ASSESSMENT TOOL

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Risk Assessment Guidance

Refer to consequence table in "ABL-HSE-GSS-07-04 HSE Risk Assessment Process". Only Safety examples are provided below.

CONSEQUENCE (the extent of the harm or damage with current controls in place)

Negligible	- Minor Injuries requiring First aid Treatment.
Minor	- Single or multiple injuries requiring medical treatment.
Serious	- Single or multiple injuries requiring hospitalisation and incurred a loss of more than one full shift.
Significant	- Single severe injury causing irreversible permanent disability or impairment or single fatality.
Catastrophic	- Incident with short or long term effects causing multiple fatalities.

LIKELIHOOD (the chance of the situation occurring with current controls in place)

Rare	- The consequence may only occur in exceptional circumstances or 'the probability is close to zero'.
Unlikely	- The consequence is not likely to occur. There is confidence that it will not occur although it is conceivable.
Possible	- The consequence could occur sometime or 'I've heard of it happening'.
Probable	- The consequence is likely to occur. It is known to occur, or not surprised as it has happened' several times.
Very Likely	- It is almost certain that the consequence will occur. Common or frequent occurrence.

CONSEQUENCE	LIKELIHOOD				
	Rare	Unlikely	Possible	Probable	Very Likely
Negligible	1	2	4	7	11
Minor	3	5	8	12	16
Serious	6	9	13	17	20
Significant	10	14	18	21	23
Catastrophic	15	19	22	24	25

	Negligible	Minor	Serious	Significant	Catastrophic
Health & Safety	Minor Injuries requiring First aid Treatment. No ongoing health effects. Near Miss with the potential consequence for the injuries above	Single or multiple injuries requiring medical treatment No ongoing health effects. Near Miss with the potential consequence for the injuries above.	Single or multiple injuries requiring hospitalisation and incurred a loss of more than one full shift. Near Miss with the potential consequence for the injuries above.	Single severe injury causing irreversible permanent disability or impairment or single fatality. Near Miss with the potential consequence for the injuries above.	Incident with short or long term effects causing multiple fatalities. Near Miss with the potential consequence for the injuries above.
Environmental Impact	Minor incident with minimal or no lasting effects. Onsite uncontrolled release immediately contained. Clean-up completed within 12 hours. Less than 5 litre spill	Incident with minor effects on the environment. Onsite uncontrolled release not immediately contained or minor off site release. Clean-up completed within 72 hours. 10 to 20 litre spill.	Incident with medium term effects on the environment. Offsite uncontrolled release with an effect on the environment for one year.	Incident with serious environmental effects. Offsite uncontrolled release not contained causing of up to 10 years impact duration.	Catastrophic incident with impairment of the ecosystem function. Significant and identifiable risk to humans, animals and plant species.
Community	Low level incident Public concern restricted to one local complaint	Minor- medium impact issue Public concern with a small local group Potential for local media attentions	Medium impact issue Ongoing public concern with a local group or community Involvement of non-government organisation - Local media	Serious social incident Ongoing local and/or state issue. Involvement of government department/s and non-government organisations. National Media	Very Serious Incident Ongoing state or national issue. Involvement of federal government department/s and non-government organisations. National media
Cost or Damages	< \$10K	\$10K - \$50K	\$50K - \$150K	\$150K - \$1M	> \$1M
Investigation Team	Local Supervisor or Manager OHS representative or member of the OHS committee	Plant Manager Team Leader / Supervisor OHS Representative or Member of the OHS committee	Plant Manager (Investigation leader) HSE Manager Manager external to site OHS Representative or member of the OHS committee	Manager External to site or discipline (Investigation Manager) HSE Manager Site Manager OHS Representative External resources or assistance as required	Manager External to site or discipline (Investigation Manager) HSE Manager Site Manager OHS Representative External resources or assistance as required
Investigation Outcomes	Completion of incident report form including: Brief report covering: <ul style="list-style-type: none"> Description of incident Contributing factors Prevention Measures 	Completion of incident form: Brief report covering the following: <ul style="list-style-type: none"> Brief statement from person's involved and witnesses Description of incident Contributing factors Prevention measures 	Completion of incident form: Investigator Terms of Reference. Incident timeline. Detailed report covering the following: <ul style="list-style-type: none"> Detailed statement for person's involved and witnesses Description of incident Contributing factors Recommendations and prevention measures 	Completion of incident form: Investigator Terms of Reference. Incident timeline. Detailed report covering the following: <ul style="list-style-type: none"> Detailed statement for person's involved and witnesses Description of incident Contributing factors Recommendations and prevention measures 	Completion of incident form: Investigator Terms of Reference. Incident timeline. Detailed report covering the following: <ul style="list-style-type: none"> Detailed statement for person's involved and witnesses Description of incident Contributing factors Recommendations and prevention measures

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Appendix 8G

Environmental Hazard Management Matrix

HAZARD	SOURCE	HEALTH EFFECTS	INFO	MEASUREMENT	ASSESS RISK	CONTROLS	REVIEW	RESPONSIBLE
Dust	Traffic	Worker Health Issues; Eye injuries/infection.				Haul road is sand with a water truck used, when required during operating hours to minimise dust production from vehicles. All haul roads fitted with suitable erosion control, including drainage and sediment traps. Diamond Head Road is sealed therefore does not act as a source of dust production.		
	Plant	Respiratory problems due to inhalation. Skin allergic reactions due to contaminated dust.	Dust and water monitoring not required by EPL as operation effects were determined negligible.	Worker Health Measurement; Workers Health examinations conducted.	Worker 13 Environment 17	Dredging, processing and the return of silt and clay to the dredge pond are all wet processes with negligible potential for dust generation. Employees instructed on correct house-keeping to prevent dust/debris build up.		
	Dredging	Environmental Issues; Silt and contaminants washed into waterways and neighbouring land.	Ecological Monitoring not required by EPL as operations do not impact surrounding Ecology.	Environmental Measurement; Dams tested for quality of water. Environmental survey to monitor flora and fauna.		Workers trained in the selection and use off appropriate eye protection. Policies in place regarding mandatory use of eye protection i.e. double eye protection when grinding. Confined space to be cleared of all atmospheric hazards and air quality monitored. Air monitoring must be conducted by a competent person before and during confined space activity.	Worker 9 Environment 13	All
	Cleaning	Dust contamination affecting local ecosystem biodiversity.				Suitable PPE ie respirator or dust mask to be available and used. Ensure sufficient ventilation is available before entry proceeds. (Extraction fans must be used if welding is being carried out) Implementation of Closed Water Management System containing all dust and silt byproducts produced from production. Overburden produced silts used in rehabilitation of site.		

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Appendix 8G

Environmental Hazard Management Matrix

HAZARD	SOURCE	HEALTH EFFECTS	INFO	MEASUREMENT	ASSESS RISK	CONTROLS	REVIEW	RESPONSIBLE
Heat	Sun	Worker Health Issues; Dehydration. Exhaustion. Skin Damage.		Worker Health Measures; Incident and near miss reports.	Worker 13 Environment 1	Drinking water and sunscreen located in crib rooms, dredge and offices. Employees to partake in safe work methods with regard to heat, including adequate PPE. Employees educated on the dangers of heat stress and methods to combat the problem.	Worker 9 Environment 1	All
	Plant/Machinery					Working in heat and dehydration educational posters displayed in crib rooms. First aid officer on site during working hours. Adequate first aid equipment available.		
	Hot Work					Long sleeves and trousers worn during work activities and a hat when outdoors. Drivers to be instructed in Fatigue Management requirements. Ensure compliance with work/rest requirements as outlined in ABL-HSE GOS-29-02 Fatigue Management Requirements.		
	Tools					Mobile equipment to have functioning air conditioning system installed, when necessary windows tinted to protect drivers from sun exposure. Ensure hot work is conducted in a designated hot work area otherwise a Hot Work Permit/JSA/SWMS to be completed and filed. Only competent/trained personnel to carry out hot work. Screens in place to segregate hot work area.		

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Appendix 8G

Environmental Hazard Management Matrix

HAZARD	SOURCE	HEALTH EFFECTS	INFO	MEASUREMENT	ASSESS RISK	CONTROLS	REVIEW	RESPONSIBLE
Noise	Traffic	Worker Health Issues; Industrial Deafness.	Noise monitoring not required by EPL due to the low operating noise of dredging.	Worker Health Measurements; Worker Health Examinations. Worker Noise Exposure survey undertaken by external company.	Worker 14 Environment 1	Hours of work restricted. Transport - Monday-Friday 6:00-17:00, Saturday 6:00-13:00. Extractive – Monday-Friday 06:00-17:00, Saturday 06:00-13:00 Maintenance	Worker 10 Environment 1	All
	Plant		Quarry located a reasonable distance from non-quarry residential properties.	Worker noise PPE and knowledge examined to determine adequacy.		Regular maintenance carried out on equipment to minimise noise production. Sound proofing on mobile plant engine compartments. Instruction on selection and use of suitable hearing protection.		
	Dredging			Workers health examinations conducted. Hearing protection worn as required. PPE signage displayed in appropriate locations.				

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Appendix 8G

Environmental Hazard Management Matrix

HAZARD	SOURCE	HEALTH EFFECTS	INFO	MEASUREMENT	ASSESS RISK	CONTROLS	REVIEW	RESPONSIBLE
Hazardous Substances	Chemicals	<p>Worker Health Issues;</p> <p>Chemical burns.</p> <p>Fume inhalation.</p> <p>Poisoning.</p> <p>Flammable substances.</p>	Groundwater monitoring has determined dredging activities has had a minimal effect on groundwater quality.	<p>Worker Health Monitoring;</p> <p>Incident and Near miss reports.</p> <p>Workers health examination conducted.</p>	<p>Worker 13</p> <p>Environment 21</p>	<p>Employees trained in the safe handling and use of hazardous substances.</p> <p>MSDS register kept and maintained on site.</p> <p>Suitable storage facilities and bunded area available.</p> <p>Suitable PPE available and used at all times.</p> <p>Safer substances sourced and used where possible.</p> <p>Personnel suitably trained/informed in the process of refuelling plant and generators.</p> <p>Maintenance to be carried out in designated area.</p> <p>Danger signage in place (corrosive, etc).</p> <p>Procedures in place for major environmental incidents.</p>	<p>Worker 9</p> <p>Environment 14</p>	GB/PC
	Fuels	<p>Environmental Issues;</p> <p>Hazardous substances leeching into groundwater/waterways.</p>						

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HAZARD	SOURCE	HEALTH EFFECTS	INFO	MEASUREMENT	ASSESS RISK	CONTROLS	REVIEW	RESPONSIBLE
	Waste Oil (plant/machinery)					<p>diatomaceous earth and place into a container according to local legislation.</p> <p>8) Determine flammability and if required use spark-proof tools and explosive proof equipment. Dispose of via a licensed waste disposal contractor</p> <p>9) Contaminated absorbent material may pose the same hazard as the spilt product</p> <p>10) In the case of spillage on water, prevent the spread of product by the use of suitable barrier equipment.</p> <p>11) Recover product from the surface</p> <p>12) Dispose of via an appropriately licensed waste disposal</p> <p><u>Small Spill</u></p> <p>1) Stop leak without risk.</p> <p>2) Move containers from spill area</p> <p>3) Absorb with an inert material and place in appropriate waste disposal container.</p> <p>4) Determine flammability and if required use spark-proof tools and explosion-proof equipment.</p> <p>5) Dispose of via an appropriately licensed waste disposal</p> <p>Oils and hydraulic fluids to be disposed of in accordance with Environmental legislation.</p> <p>Long sleeved shirt and trousers worn during work activities.</p> <p>First aid officer on site during working hours.</p> <p>Adequate first aid equipment available.</p> <p>Employees trained in Environmental incident Response.</p>		

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HAZARD	SOURCE	HEALTH EFFECTS	INFO	MEASUREMENT	ASSESS RISK	CONTROLS	REVIEW	RESPONSIBLE
Water	Dams	<p>Worker Health Issues;</p> <p>Drowning.</p>	<p>Operations were concluded to have a negligible effect on groundwater flow into surrounding areas of the quarry.</p>	<p>Environmental Measures;</p> <p>Groundwater level monitoring program implemented, to involve monitoring regularly in accordance with the EMP.</p>	<p>Worker 14</p> <p>Environment 21</p>	<p>Water from undisturbed areas is diverted around the quarry, whilst water within the quarry extraction area is used in the closed water management system.</p> <p>In the event of a water breach Contingency Plans ready to be implemented.</p> <p>All external batters of ponds to be established with a slope no steeper than 1V:3H</p>	<p>Worker 10</p> <p>Environment 10</p>	GB/RC
	Catchments	<p>Environmental Issues;</p> <p>Surrounding E2 environmental lands contamination.</p> <p>Ground water level depletion.</p>	<p>Ecological Monitoring Program found quarry is not adversely impacting on the E2 land ecology.</p>	<p>If any adverse readings found during regular monitoring, then additional groundwater quality monitoring to be carried every 6 months.</p>		<p>Diversion drains surrounding dredge pond used to divert surface flows around pond and maintain flow into surrounding quarry area.</p> <p>Water management system employs regular maintenance to ensure effectiveness.</p> <p>Drainage designed to maximize flow volume diverted around quarry whilst providing short term detention to minimize effects on channel stability and downstream velocities.</p>		
	River System	<p>Localized Dunbogan region Ecology destruction.</p>	<p>Environmental report found quarry had little or no impact on Camden Haven River and Inlet net water flows.</p>	<p>Groundwater monitoring to be conducted regularly and should be tested for the following: pH; conductivity; nitrate; ammonia; Total Petroleum Hydrocarbons (TPH)</p> <p>Silt fences and water management system in place.</p> <p>Runoff from all disturbance areas directed to silt dams, dredge ponds and sedimentation dams where required.</p>				

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Environmental Hazard Management Matrix

HAZARD	SOURCE	HEALTH EFFECTS	INFO	MEASUREMENT	ASSESS RISK	CONTROLS	REVIEW	RESPONSIBLE
	Rainfall					If groundwater results show drop in water level a contingency plan is to be implemented, and groundwater model will be revised. During maintenance and works near bodies of water, two person work teams required for safety. Adequate PFD's available on dredge and in dingy. Man over board procedures in place.		
	Groundwater							

Waste Material	Production	Environmental Issues;	Sand extraction operation generates no waste with all extracted materials being sold, returned to the dredge pond or used in rehabilitation program.			Recyclable material is stored on site and periodically collected and taken off site for processing. Office waste or non-recyclables are also collected and disposed of off site in an approved manner.	Worker 1 Environment 5	Worker 1 Environment 5	GB/RC
	Office	Site Waste leaving quarry into local catchments.							

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Environmental Hazard Management Matrix

HAZARD	SOURCE	HEALTH EFFECTS	INFO	MEASUREMENT	ASSESS RISK	CONTROLS	REVIEW	RESPONSIBLE
Fire	Plant/Mobile Plant.	<p>Worker Health Issues;</p> <p>Burns to employees.</p> <p>Smoke inhalation</p> <p>Environmental Issues;</p> <p>Flora and Fauna destruction.</p> <p>Bushfire.</p>		<p>Worker Health Measurement;</p> <p>Incident and Near Miss reports.</p> <p>Environmental Measures;</p> <p>Fire department fire hazard monitoring.</p>	<p>Worker 22</p> <p>Environment 22</p>	<p>Ensure hot work is conducted in a designated hot work area otherwise a Hot Work Permit/JSA/SWMS to be completed and filed.</p> <p>Only competent/trained personnel to carry out hot work.</p> <p>Screens in place to segregate work area and hot work signs to be erected.</p> <p>Equipment to be in good condition and suitable for the task.</p> <p>Electrical equipment must be tagged and tested in accordance with AS3760.</p>	<p>Worker 15</p> <p>Environment 19</p>	<p>All</p> <p>Fire Warden;</p>
	Bushfires.					<p>Firefighting equipment fitted to all mobile plant.</p> <p>All employees trained in first attack firefighting.</p>		
	Electrical Fires.					<p>Use of flame retardant material where possible to cover susceptible equipment.</p> <p>Adequate fire extinguishers located throughout site.</p> <p>Use of correct PPE for the task/job.</p>		
	Power Tools					<p>Ensure that periodic testing of Fire extinguishers is conducted by an external service provider.</p> <p>First aid officer on site during working hours.</p>		
	Hot Work					<p>Fire Warden officer present on site during work hours.</p> <p>Adequate first aid equipment available.</p> <p>Bush fire emergency procedure in place.</p>		

DUNBOGAN Quarry - Risk Register

This contents of this risk assessment will be reviewed when new risk identified, procedural review and/or risk / controls not adequate

Risk Identification		Risk Score Without Controls (Inherent Risk)			Control			Risk Score with Controls (Residual Risk)			Further Action Required	
Work Activity	Risk relating to activity	Causes (What can cause the hazard to occur)	Consequence (Catastrophic = Principal Hazard)	Likelihood	Inherent Risk Score	Principal Hazard (if Applicable) Control / Management Plan	Control Description	Highest Control Level Achieved (Hierarchy of Controls)	Consequence (Catastrophic = Principal Hazard)	Likelihood	Residual Risk Score	Action Required to achieve Desired Residual Risk (to be managed in Cintillate)
Dredging Operations - Emergency Situation	> Fire on Dredge.	> Engine fire. > Winch or rope friction heating.	Significant	Possible	18	Not Applicable	> Dredge is fitted with fire extinguishers and inspected 6 monthly. > Dredge operator training in fire fighting. > Workers can swim and regular testing of swimming ability completed. > Life jacket (PFD) whilst accessing and operating the dredge. > Man down alarm system in place. > Engine bay access is located at furthest point away from operator and suitable escape points (engine bay is most likely point for fire). > Minimal storage of chemicals on board the dredge. > Engine bay kept clean and potential sources of fuel. > Back up boat with oars available shall incident occur on dredge.	Engineering / Redesign	Significant	Rare	10	
Dredging Operations - Emergency Situation	> Operator on Dredge requiring emergency assistance.	> Injury or health issue.	Significant	Possible	18	Not Applicable	> Man down alarm system in place. > Plant operator maintaining visual on dredge operator, checking for abnormalities. > Radio communication maintained throughout dredging operations. > Emergency evacuation drills completed annually. > Back up boat with oars available shall incident occur on dredge. > First aid equipment on dredge with competent first aiders onsite.	Administrative	Significant	Rare	10	
Dredging Operations - Emergency Situation	> Dredge stability and potential sinking.	> Poor maintenance / design of dredge.	Significant	Possible	18	Not Applicable	> Dredge designed for stability on water. > Body of water not large enough to significant water turbulence. > Dredge has 4 individually sealed compartments per hull, to prevent sinking should hull failure occur. > Hull integrity inspected bi-annually. > Freeboard inspection tool to ensure freeboard maintained and event on both sides of dredge.	Engineering / Redesign	Significant	Rare	10	
Dredging Operations - Maintenance of Dredge.	> Falling into the water, with possibly of drowning.	> Cleaning / maintenance of Dredge cutting head.	Significant	Possible	18	Not Applicable	> Dredge maintenance to only be completed at the bank. > Two people to complete dredge maintenance and responed to possible incident. > All maintenance work to be completed under clearance to work process. > Temporary bund to be established around dredge.	Isolation	Minor	Unlikely	5	
Dredging Operations - The normal operation of the Dredge onsite.	> Collision with other vehicles onsite.	> Travelling to fast in access boat. > Other vehicles in incorrect position. > Loss of control by land operating vehicle.	Serious	Possible	13	Not Applicable	> Only trained and competent operators to use the dredge and tender (boat). > Operator has a valid boat licence. > Dredge is the only equipment that operates on dam. > No public access to dam in which dredge operates. > UHF radio in place and clearance to work process in place should additional equipment need to access dam. > Equipment (dozer) feeding the dredge has a clear line of site at all times. > Road / workings not too steep to prevent rollaway if land vehicle failure, berms also in place.	Isolation	Minor	Unlikely	5	
Dredging Operations - The normal operation of the Dredge onsite.	> Falling into the water, with possibly of drowning using tender boat.	> Transitioning from the tender boat to the dredge. > Transitioning from the dredge to the tender boat. > Falling from tender from speed or loss of control	Significant	Possible	18	Not Applicable	> Only trained and competent operators to use the dredge and tender (boat). > Workers are required to be able to swim. > Life jacket (PFD) to be worn using tender and while accessing/egressing dredge, or performing maintenance alone or outside handrails. > Man down alarm system in place. > Workers able to transition between the dredge and tender using three points of contact by tying off tender close to dredge at inwards gate location. > Purpose built access points on dredge - inward swinging auto close gates.	Engineering / Redesign	Significant	Rare	10	
Dredging Operations - The normal operation of the Dredge onsite.	> Falling into the water, with possibly of drowning.	> Person falling from Dredge.	Significant	Possible	18	Not Applicable	> Only trained and competent operators to use the dredge. > Workers can swim and regular testing of swimming ability completed. > Life jacket (PFD) whilst accessing and operating the dredge. > Man down alarm system in place. > Barriers and handrails to prevent falling into water. > Rescue rings in place on the shore and dredge. > Plant operator maintaining visual on dredge operator, checking for abnormalities. > Access gates closed once operator is on Dredge. > Lighting in place in cases of poor visibility.	Engineering / Redesign	Significant	Rare	10	
Dredging Operations - The normal operation of the Dredge onsite.	> Crush to body part / limb.	> Entanglement with engine components. > Entanglement with winch. > Lacerations with ropes and pulleys	Serious	Possible	13	Not Applicable	> Moving engine parts are not needed to be accessed in normal operations. > Guards on pinch points of ropes and pulleys. > Gloves to be worn when handling ropes and pulleys. > Barriers in place to prevent access to winch in normal operation.	Isolation	Minor	Possible	8	

SAFETY MANAGEMENT SYSTEM

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Appendix 19B PPE Matrix

PERSONAL PROTECTIVE EQUIPMENT

Note: PPE use is a “minimum” risk control measure, however it can be used in conjunction with other safety controls.

LEGEND– M= Mandatory R = Recommended if required

SITE SPECIFIC RULES WILL DETERMINE WHAT PERSONAL PROTECTIVE EQUIPMENT (PPE) MUST BE WORN

Hazard/Activity	PPE Type											
	 HEAD PROTECTION MUST BE WORN Safety Helmet	 HEARING PROTECTION MUST BE WORN Hearing Protection	 EYE PROTECTION MUST BE WORN Eye Protection	 FOOT PROTECTION MUST BE WORN Safety Boots	 PROTECTIVE CLOTHING MUST BE WORN Long Clothing	 HAND PROTECTION MUST BE WORN Hand Protection	 SAFETY VEST MUST BE WORN Hi-Vis Clothing	 HALF FACE MASK RESPIRATOR MUST BE WORN Respiratory Equipment	 FACE SHIELD MUST BE WORN Face Shield	 WELDING MASK MUST BE WORN Welding Mask	 SAFETY HARNESS MUST BE WORN Safety Harness	
Employees/visitors	M	R	M	M	M		M					
Plant Operation	M	M	M	M	M	R	M	R	R			
Mechanical Maintenance	M	R	M	M	M	R	M	R	R		R	
Fabrication Work	M	M	M	M	M	M	M	R	R	R	R	
Hazardous Substances	M	R	M	M	M	M	M	R	R			
Workshop Activities	M	M	M	M	M	R	M	R	R	R		
Office Work				M	M		M					
Working at Heights	M	R	M	M	M	R	M	R	R	R	M	
Confined Spaces	M	M	M	M	M	R	M	R	R	R	R	
Cleaning Activities	M	R	M	M	M	R	M	R	R		R	

Concrete & Aggregates

PIRMP Document Control

Dunbogan Quarry

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Pollution Incident Response Management Plan Review Sheet

Plan	Revision No	Date	Review	Approved by (Planning and Development)
PIRMP	1.0	08.03.2013	Reviewed – no changes	D.Thiedeke
PIRMP	1.0	15.05.2014	Reviewed – minor changes made	D.Thiedeke
PIRMP	2.0	04.05.2015	Reviewed – update contacts	D.Thiedeke
PIRMP	3.0	12.05.2016	Reviewed – no changes	D.Thiedeke
PIRMP	4.0	09.05.2017	Reviewed – update contacts	D.Thiedeke
PIRMP	5.0	11.05.2018	Reviewed – no updates	D.Thiedeke
PIRMP	6.0	08.03.2019	Alterations to numerous sections	D.Thiedeke
PIRMP	7.0	07.05.2020	Minor changes – Management structure	D. Thiedeke
PIRMP	8.0	23.12.2022	Alterations to numerous sections	D.Thiedeke
PIRMP	9.0	30.06.2024	Minor changes – Management structure	D.Thiedeke