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MORGAN CEMENT INTERNATIONAL PTY LTD



ENVIRONMENTAL MANAGEMENT MANUAL

MANUAL**ENVIRONMENTAL MANAGEMENT
MANUAL****PK-EM-0200**

Process Owner: Operations Manager NSW

Status: Approved

Issued: **29 May 2018****INDEX**

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1. INTRODUCTION

This Environmental Management System (EMS) has been prepared for use by Morgan Cement International.

The EMS aims to address the need for environmental safeguards and the adoption of environmentally sensitive work practices during work on Morgan Cement International sites.

This system will be the source document of all environmental protection issues related to the organisation and provide the facility to document the implementation and monitoring of these environmental requirements.

The environmental issues that may be required to be addressed will be determined from the list below:

- Water runoff to stormwater drains
- Waste disposal
- Noise
- Dust
- Asbestos
- Fuel & Chemicals
- Spillage of product

The Environmental Officer for Morgan Cement International is:

Mr Paul Bollen
Mobile Contact: 0407 667 220

Secondary Contact is:

Mr Greg Simpson
Mobile Contact: 0419 437 609

In general, all activities carried out on site must comply with the relevant provisions of all environmental legislation. The environmental officer shall be available to the EPA on a 24 hour basis and have authority to take any action to mitigate pollution on the site as directed by an authorised officer of the EPA.

2. DEFINITIONS

Environment:

Surroundings in which Morgan Cement International operates, including air water, land natural resources, flora, fauna, habitats, ecosystems, biodiversity, humans, (including human artifacts, culturally significant sites and social aspects) and their interaction. The environment in this context extends from within a site to the global system.

EPA:

Environment Protection Authority

Incident:

Any event caused by Morgan Cement International operations and activities that caused or may have caused adverse impact on any part of the environment, including breeches of environmental regulations. Incidents can be either of a "one off" (acute) or continuous (chronic) nature.

Hazard:

The intrinsic potential for an agent, activity or process to lead to an incident

Reporting Conditions

R1 – Annual Return Documents

The licensee must complete and supply to the EPA an Annual Return in the approved form comprising:

- a) Statement of Compliance; and
- b) Monitoring and Complaints Summary

At the end of each reporting period, the EPA will provide to the licensee a copy of the form that must be completed and returned to the EPA.

R2 Notification of Environmental Harm

R2.1 Notifications must be made by telephoning the Environment Line Service on 131 555

R2.2 The licensee must provide written details of the notification to the EPA within 7 days of the date on which the incident occurred.

Note: The licensee or its employees must notify all relevant authorities of incidents causing or threatening material harm to the environment immediately after the person becomes aware of the incident in accordance with the requirements of Part 5.7 of the Act

R3 Written Report

R3.1 Where an authorized officer of the EPA suspects on reasonable grounds that:

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- a) where this licence applies to premises, an event has occurred at the premises; or
- b) where this licence applies to vehicles or mobile plant, an event has occurred in connection with the carry out of the activities authorized by this licence, and the event has caused, is causing or is likely to cause material harm to the environment (whether the harm occurs on or off premises to which the licence applies); the authorized officer may request a written report of the event.
- R3.2 The licensee must make all reasonable inquiries in relation to the event and supply the report to the EPA within such time as may be specified in the request.
- R3.3 Details what information is required in the report (Refer to details in the Morgan Cement International Environment Protection Licence).
- R3.4 The EPA may make a written request for further details in relation to any of the above matters if it is not satisfied with the report provided by the licensee. The licensee must provide such further details to the EPA within the time specified in the request.

Risk:

Likelihood of an impact on people, the environment, property or a combination of these.

SDS:

Safety Data Sheet

N/A:

Not Applicable

Non-Conformance:

A situation which does not conform to the requirements of policies, standards or systems such as may be identified during audits and reviews. Also includes incidents.

Material Harm to the Environment:

For the purpose of the legislation harm to the environment is material if:

It involves actual or potential harm to the health and safety of human beings or to ecosystems that is not trivial, or

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 prescribed by the regulations, and

Loss includes the reasonable costs and expenses that would be incurred in taking all reasonable and practical measures to prevent, mitigate or make good harm to the environment

Immediately:

prompt and without delay

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Scheduled Activity – Cement or lime works – grind cement clinker

Fee Based Activity – cement or lime handling – 500,000 – 2,000,000t produced

Monitoring Requirements:

Type of Discharge Point	Description of Location
Discharge to Air	No.1 Mill dust collector stack.
Discharge to Air	No.2 Mill dust collector stack.
Discharge to Air	No.3 Mill dust collector stack.
Discharge to Air	Slag Dryer exhaust stack

4. RESPONSIBILITY AND AUTHORITY

All Morgan cement International employees have the responsibility to ensure that services provided to our customers are carried out in such a way as to minimise the effect and impact on the environment.

A proactive approach to all environmental issues is encouraged from all employees.

The following employees have essential responsibility and authority with regard to the implementation, ongoing maintenance and achievement of the Environmental Management Plan.

Operations Manager

- Ensures compliance with all environmental legislation
- Ensures environmental events are investigated and reported
- Sets monitors and achieves environmental objectives
- Ensures that all staff direct and indirect have been trained suitably in environmental matters.
- Ensures that all Environmental Management actions and monitoring is carried out
- Ensures all scheduled audits are conducted and that work practices and standards are maintained
- Ensures appropriate health screening is conducted for relevant employees
- Reports all significant environmental issues to the EPA

Environmental Officer

- Is the custodian of the EMP and ensures its effective distribution and Implementation.
- Is Morgan Cement International's first point of contact with day to regulatory bodies
- Ensures Environmental monitoring is carried out correctly
- Is responsible for reporting environmental issues internally and to the relevant regulatory bodies.
- Ensures environmental incidents are reported, investigated and followed up
- Responsible for the site environment audit program
- Ensures all efforts are made to comply with the sites environment company standards

Supervisor

- Ensures all operations are conducted in accordance with work instructions and environmental requirements.
- Undertake all duties in the appropriate manner in respect of environmental requirements.
- To observe Morgan Cement International's environmental policy and understand how their activities effect the environment.
- To immediately correct or bring to the attention of Morgan Cement International's Management any condition that would effect the environment.

Employees

- Undertake all duties in the appropriate manner in respect of environmental requirements.
- To observe Morgan Cement International's Environmental Policy and understand how their activities effect the environment.
- To immediately correct and bring to the attention of a Supervisor or Management any condition that would effect the environment.

5. ENVIRONMENTAL EVENT REPORTING**Environmental Event Reporting**

The environmental event notification and reporting system covers all environmental non-compliances against legislation, permits, customer requirements, Morgan Cement International standards and complaints received.

Environmental Event - Definition

An environmental event or incident is any event caused by Morgan Cement International operations and activities that caused or may have caused adverse impact on any part of the environment, including breeches of environmental regulations. Incidents can be either of a "one off" (acute) or continuous (chronic) nature.

Environmental events include but are not limited to:

- Infringement of the Morgan Cement International environmental standards.
- Release of an environmentally hazardous substance(s), such as a large product spillage
- An Environmental Protection Authority inspection where it is indicated verbally that a non compliant condition exists
- Discovery of an actual or suspected site contamination
- Verbal or written notification from any customers indicating non compliance with contract requirements

- Third party complaints or concerns with Morgan Cement International operations or processes
- Environmental incident near miss

Environmental Event Report

If an environmental event as described above occurs the incident shall be recorded in the Incident reporting system via proprietary software, Cintellate, capturing hazards, near miss, property damage, fire, vehicle, injury/illness and safety – No injury incidents and environment, quality and community complaints.

As much information is to be gathered for the Operations Manager to review as soon as practical.

If the incident does or is likely to be a breach of EPA Licence requirements urgent action must be taken and the Operations Manager informed immediately on 0407667220. The Operations Manger is to notify the appropriate regulatory authority (ARA). All of the agencies listed below are to be notified of the environmental event:

NOTE: only incidents that present an actual or likely risk of material harm to the environment need to be reported (see Definitions).

Fire & Rescue NSW	Phone: 000, or Fire and Rescue Unanderra 4272 1125
Environment Protection Authority	Phone: 131 555
WorkCover NSW	Phone: 13 10 50
Wollongong Council	Phone: 4227 7111 - After Hours 1300 557 980
Ministry of Health	Phone: 9391 9000

Notification Protocol

Where the pollution incident causes or threatens material harm to the environment or human health, all the following authorities must be notified:

- 1) The appropriate regulatory authority (ARA) for the activity under the POEO Act (usually the EPA or local council)
- 2) The EPA if they are not the ARA
- 3) The Ministry of Health (via Public Health Units)
- 4) WorkCover NSW
- 5) The local authority if it is not the ARA – a 'local authority' is a local council (being the council of an area under the Local Government Act 1993), or the Lord Howe Island Board for Lord Howe Island, or the Western Lands Commissioner for the Western Division, except any part of the Western Division within the area of a local council
- 6) Fire and Rescue NSW (**should be called first if the incident presents an immediate threat to human health or property**)

6. ENVIRONMENTAL AUDITING AND REVIEW**Environmental Auditing**

Morgan Cement International's environmental auditing program is designed to provide a clear and appropriate understanding of environmental performance. The auditing program is designed to cover each area of Morgan Cement International's operations and processes. The audit program requires an audit to be carried out annually.

Environmental Review

Morgan Cement International's environmental review is conducted at the regular management meetings.

Progress on monitoring control and incidents is covered in these meetings.

Environmental Plan Testing

The environmental plan will be tested annually or within one month of any environmental incident by the Operations Manager/Site Supervisor. Testing will be in the form of an audit to ensure that the items contained in the environmental management plan document are still correct and relevant for the activities and possible pollutants on site. The audit will also check that any listed controls are still in place and usable.

Test Dates or Environmental Incident

Date of Test of Environmental Plan/Environmental Incident	Next Test Due	Completed Yes/No	Person(s) Conduction Test
Implementation 1st October 2012	1st October 2013	No	
15/12/2014	15/12/2015		
Incident – 14/03/2015			
Tested – 13/04/2015	13/04/2016	Yes	P.Bollen/P. Foye
Tested – 13/04/2016	13/04/2017	Yes	P. Bollen
Tested – 13/4/2017	13/4/2018		
Tested – 13/4/2018	13/4/2019	Yes	P. Bollen

7. ENVIRONMENTAL MONITORING DATA

Legislative requirements

The specific requirements for the publication of monitoring results are set out in section 66(6) of the POEO Act. In summary, this provision requires that:

- licensees who undertake monitoring as a result of a licence condition publish monitoring data that relates to pollution within 14 days of obtaining the data
- licensees who maintain a website make the monitoring data available in a prominent position on the website
- licensees who do not maintain a website provide a copy of the monitoring data to any person who requests a copy of the data at no charge
- the data must be published in accordance with requirements issued in writing by the EPA.

There is a penalty for not publishing the results of monitoring in accordance with section 66(6). The legislation also includes a penalty for making available false or misleading results in accordance with section 66(7).

Licence Data Monitoring Requirements

Morgan Cement International is required to monitor total solid particle emissions from the dust collector stacks of the 3 site mill, as well as the slag dryer. These emissions are monitored by a predictive emission monitoring system and the results are calculated and graphed. MCI is required to conduct annual stack testing, ensure compliance with EPL limits, and report these to the EPA.

Morgan Cement International (MCI) Upgrade Project – Air Quality Assessment, Pacific Environment, 30 Jan 2018 shows MCI complies with all air quality requirements.

Publishing Monitoring Data Results

Morgan Cement International does not have an internet site so monitoring results are only available upon request. They can be picked up in person from the main office of Morgan Cement International Gate 7 Foreshore Road Port Kembla. Please note 14 days notice will need to be given prior to picking up the data in order to allow for the latest results to be printed out and bound for collection or posting.

Monitoring results can be posted out and can be requested either by phoning the Morgan Cement site on 02 4276 5000 or by e-mailing a request to Paul.Bollen@morgancement.com.au or by mail to Morgan Cement International PO Box 230 Port Kembla NSW 2505.

8. POLLUTION INCIDENT RESPONSE MANAGEMENT PLAN

Possible Pollution Incidents

The emergencies that could occur on site that would be considered as causing actual or potential material harm to the environment are:

- Silo rupture with external release (to air - loading station & weighbridge 3 silos) Likelihood = Rare
- Silo rupture with internal release (inside mill building or loading station & weighbridges 1 & 2 silos) Likelihood = Rare
- Product pipe/air slide rupture Likelihood = Rare
- Failure of valves allowing unabated continual flow from silo at loading areas Likelihood = Rare
- Vehicle interaction with loading station and weighbridge Likelihood = Rare
- Silo overfill due to high level cutout/detection failures. Likelihood = Possible

Flora & Fauna that could be affected

Green & Golden Bell Frogs – from runoff into ponds. It is highly unlikely that the frogs would be affected by the spill of product on site, however as a precautionary measure the people looking after them would be called in to check. Contact for this is Chris Wade on 0427 695 820.

Personnel – exposure to dust. Dust masks are available on site and would be given to everybody on site in the event of a spill.

Waterways & marine life – runoff into drains leading to harbour. All drains would be covered to prevent any product getting down into them.

Inventory of Potential Pollutants

Potential Pollutant	Maximum amount able to cause pollution event
Additive	40,000 litres
Lube oil for mills	1000 litres
Flyash	200 ton
Cement	3000 ton
Granulated Ground Blast Furnace Slag	400T
Clinker stored in bins	200 ton
Gypsum stored in bins	80 ton
Lime	70 ton
Noise	Noise Impact Assessment, Cardno, January 2018 – no additional measures required

Pre-emptive Actions

The actions to be taken to prevent any of the above listed possible pollution incidents will be regular maintenance checks carried out on all silos, bins and critical valves. These checks will be carried out as part of the overall general site maintenance. Silos/bins are fitted with high level probe to provide an early warning ensuring they are not overfilled.

- PKPM Silo Overfill Prevention Checks

Environmental Clean Up Equipment

The clean up equipment available on site are four spill kits for oil, chemical or product spills and are located in Workshop No.5 and Gate 10 Entry to rock shed. At the entry to the slag shed. & Weighbridge No.3. These kits contain the following or similar items:

Item	Number
Sorbent Chemical Folded 3M (C-FL550DD)	3
Disposable Overalls	2
Gloves – Solvex (37-145-8 Edmond)	2 pair
Powersorb Mini Boom (P200 3M 7.5cmx1.2 meter)	12
Powersorb Pillow (P200 3M 23cmx38cm)	8
Yellow Bag “Contaminated Waste”	5
Respirator or P2 Dust Masks	1
Specs Clear Wrap Around	2
Tarp	1

For small product spills shovels, wheelbarrows and tarps are available at various areas around site.

For large release of product sucker truck would be required and sourced from either Cleanaway or Veolia Environmental Services. (see below for contact numbers)

ICL also have a spill kit situated at their blending plant.

9. THE CONTROL OF POSSIBLE INCIDENTS -**Action to be Taken to Control Possible Incidents that could cause Actual or Potential Material Harm to the Environment****Internal Release**

Internal release would be when a bin, silo or other item ruptured or a valve failed so as to allow the unabated flow of product occurred inside a building e.g. inside the mill building or weighbridge 1 & 2 shed.

If this were to occur:

- The emergency evacuation alarm would be sounded as per the emergency procedure to alert any person on site to attend to the emergency assembly area therefore ensuring they were kept out of harms way.

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- If possible the flow/spillage will be stopped.
- All doors would be left shut to contain the spill.
- The environmental reporting section of this procedure would be activated.
- A vacuum truck would be brought in to suck up the spillage and recycle it to the product shed. The companies that would be used for this purpose are Cleanaway. contact No. (02) 42 752 222 or Veolia Environmental Services Contact No. 0407 492 356

External Release

External release would be when a silo or other item ruptured or a valve failed so as to allow the unabated flow of product occurred outside a building.

If this were to occur:

- The emergency evacuation alarm would be sounded as per the emergency procedure to alert any person on site to attend to the emergency assembly area therefore ensuring they were kept out of harms way.
- If possible the flow/spillage will be stopped.
- The environmental reporting section of this procedure would be activated.
- A vacuum truck would be brought in to suck up the spillage and recycle it to the product shed. The companies that would be used for this purpose are Cleanaway Contact No. 4275 2222 or Veolia Environmental Services Contact No. 0407 492 356.

Contact with Neighbours

Due to the site location it is unlikely that any neighbour would be adversely affected by a release of product on site. The following neighbours will be contacted at our earliest convenience.

- NSW Ports, contact No. 1300 922 524
- Ixom, contact No. 0401 715 019
- Independent Cement and Lime (ICL), contact No. 1300 440 072
- Metal Manufacturer's (MM), Contact No. 1800 804 631

10. TRAINING REQUIREMENTS

All employees & permanent on site contractors will be trained in the contents of the Environmental Management Plan and the appropriate response to an incident that could cause actual or potential material harm to the environment including:

- The contents of and how to use a spill kit.

- The procedure to be followed after a pollution incident and who should be contacted during and after the incident.
- The procedure on how to contain a product spill.

The objective of the training is to ensure all persons on site have the knowledge on what to do in the case of a pollution causing event on site.

Training will be conducted at 3 yearly intervals and records of training will be kept in the personnel files of the individuals trained and recorded in the Morgan Cement Training Matrix.

Training Records will be kept in employees files.

11. Green and Golden Bell Frog Management

Extracts from Plan of Management, Green and Golden Bell Frog, C. Wade April 2013

The management plan has three main objectives:

1. To maintain the four existing GGBF sub – populations
2. To increase the population of GGBF's at Port Kembla
3. To further connect the four GGBF sub – populations

Management of ponds and area:

- The two ponds should be maintained to retain approximately 80% open water
- Pond ends to be covered in emergent tall rush to provide cover
- Line of potted water plants along the length of the main pond
- Expedient removal of weeds (not with pesticides or herbicides)
- Periodic draining of ponds during winter time
- Minimum water levels of 50%
- Grass mowing by a "GGBF educated" horticulturalist
- Any significant predator populations (feral cats, foxes and rabbits) will be managed
- The habitat is to have limited controlled human access

A person with a scientific licence will conduct GGBF Monitoring. Annual reports will be completed.

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Consequences	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

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

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Health & Safety	Negligible	Minor	Serious	Significant	Catastrophic
	<p>Minor Injuries requiring First Aid Treatment</p> <p>No ongoing health effects.</p> <p>Near Miss with the potential consequence for the injuries above.</p>	<p>Single or multiple injuries requiring medical treatment</p> <p>No ongoing health effects.</p> <p>Near Miss with the potential consequence for the injuries above.</p>	<p>Single or multiple injuries requiring hospitalisation and incurred a loss of more than one full shift.</p> <p>Near Miss with the potential consequence for the injuries above.</p>	<p>Single severe injury causing irreversible permanent disability or impairment or single fatality.</p> <p>Near Miss with the potential consequence for the injuries above.</p>	<p>Incident with short or long term effects causing multiple fatalities.</p> <p>Near Miss with the potential consequence for the injuries above.</p>
Cost	Less than \$10K	\$10K – 50K	\$50K – \$150K	\$150K – \$1M	Greater than \$1M
Environment	<p>Minor incident with minimal or no lasting effects</p> <p>Onsite uncontrolled release immediately contained.</p> <p>Cleanup completed within 12 hours.</p> <p>Less than a 5 litre spill</p>	<p>Incident with minor effects on the environment.</p> <p>Onsite uncontrolled release not immediately contained or minor off site release.</p> <p>Cleanup completed within 72 hours.</p> <p>10 to 20 litre spill</p>	<p>Incident with medium term effects on the environment.</p> <p>Offsite uncontrolled release with an effect on the environment for one year.</p>	<p>Incident with serious environmental effects</p> <p>Offsite uncontrolled release not contained causing of up-to 10 years impact duration</p>	<p>Catastrophic incident with impairment of the ecosystem function.</p> <p>Significant and identifiable risk to humans animals and plant species</p>
Community	<p>Low level incident</p> <p>Public concern restricted to one local complaint</p>	<p>Minor- medium impact issue</p> <p>Public concern with a small local group</p> <p>Potential for local media attentions</p>	<p>Medium impact issue</p> <p>Ongoing public concern with a local group or community</p> <p>Involvement of non government organisation</p> <p>Local media</p>	<p>Serious social incident</p> <p>Ongoing local and/or state issue</p> <p>Involvement of government department/s and non government organisations.</p> <p>National Media</p>	<p>Very Serious Incident</p> <p>Ongoing state or national issue</p> <p>Involvement of federal government department/s and non government organisations.</p> <p>National media</p>
Legal	Prosecution unlikely	Short term involvement of regulator	Medium term involvement of regulator and potential for prosecution.	Serious breach fine or prosecution likely. Licence potentially effected.	Major breach Significant fine or litigation likely. Licence to operate threatened

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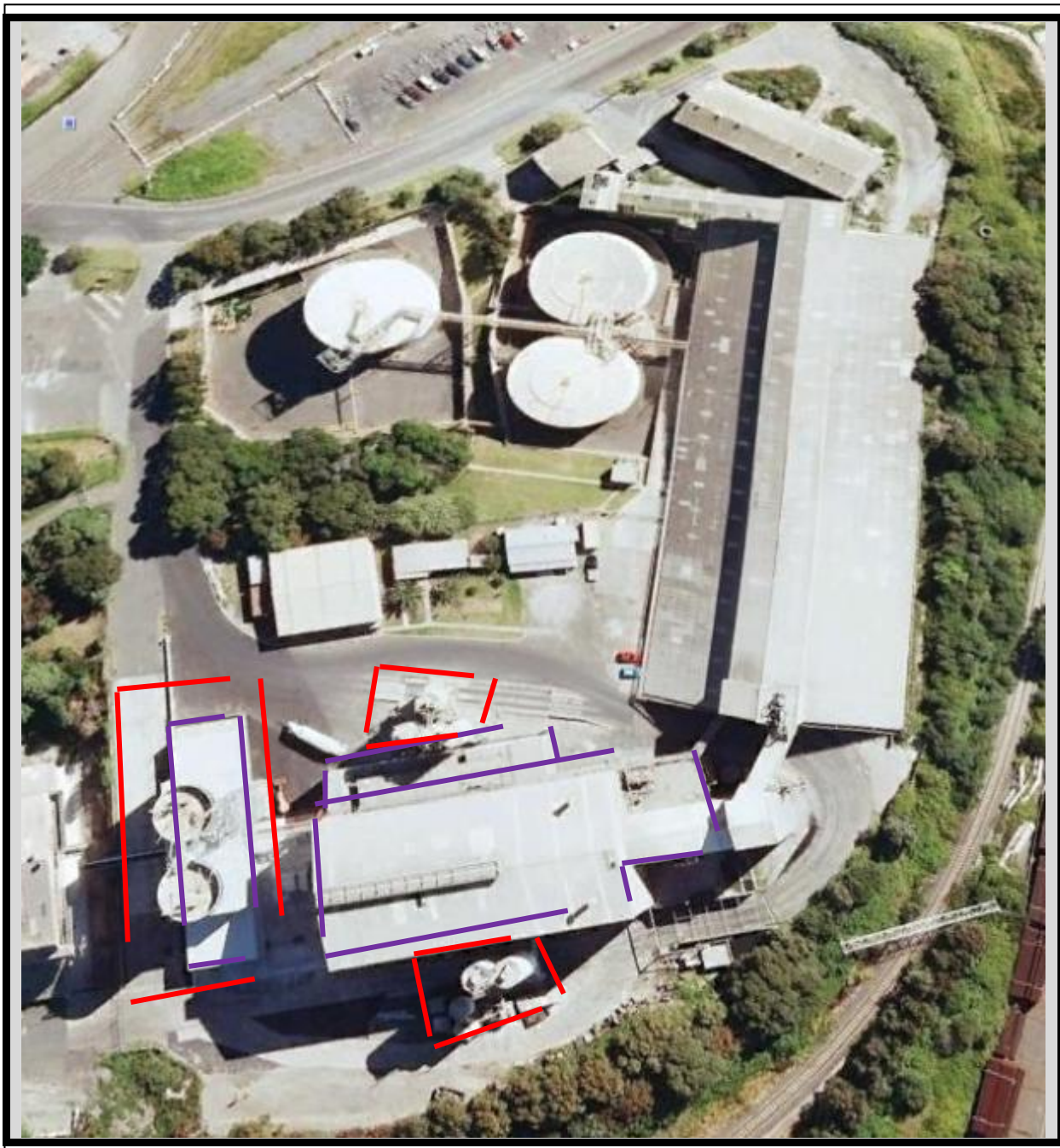
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14. MAP OF POSSIBLE IMPACT AREAS

AREAS LIKELY TO BE AFFECTED BY POSSIBLE INCIDENTS THAT COULD CAUSE ACTUAL OR POTENTIAL MATERIAL HARM TO THE ENVIRONMENT

Internal Areas Possibly Impacted ————

External Areas Possibly Impacted ————



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