Ravensdown Napier Works

Source Control Management Plan

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ravensdown

Document Information

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Document Review

ROLE	NAME	VERSION
Partner – Mitchell Daysh Ltd.	Stephen Daysh	V1.1

Document Sign-off

ROLE	NAME	SIGNATURE	DATE
Works Manager	Andrew Torrens		23/11/2021

Contents

1. Purpose

This Source Control Management Plan (**SCMP**) has been prepared as part of the November 2021 Ravensdown Napier Works resource consent applications and covers the following matters:

- A background discussion.
- Management Plan objectives.
- Identification of opportunities for better source control, as recommended by independent assessments of the site.
- A monitoring and reporting process.
- Prioritisation of the improvement.
- A schedule of actions to be implemented, along with a timetable of works.

2. Background

The Napier Works Sustainable Site Project (**NWSSP**) embraces a step change on site in the management and treatment of discharges. This step change is reflective of:

- The strong desire for Ravensdown to be outward looking, responsive and respectful towards both its Napier neighbours and wider stakeholders by championing excellence in environmental performance and compliance.
- The location of the Site adjacent to the significant Waitangi Estuary area, and on a main arterial route between Napier and Hastings.
- The new requirements for water quality set out in national and regional planning documents.

Water treatment will consist of a multi-step treatment train, which will be installed in a phased approach as outlined in detail in the *Water Discharge Strategy - Ravensdown (November 2021a)* and *Adaptive Management Plan -Ravensdown (November 2021d)*.

In October of 2009, Hawkes Bay Regional Council (HBRC) gazetted the Awatoto airshed as Polluted. Both Ravensdown and HBRC conduct regular air quality monitoring, including particulate monitoring, within the Awatoto region. As part of continual improvement, a best practice review has highlighted potential to improve concentrations of particulate, fluoride, and other airborne emissions from site and this is outlined in detail in the *Air Discharge Strategy – Ravensdown (November 2021b)*.

Source control methods are often the most cost-effective and efficient way of reducing contaminant entering the site stormwater and treatment system and fugitive emissions to air. Improved source control is a centrepiece of bot Discharge Strategies.

3. Management Plan Objectives

The overall project objective for the NWSSP is:

"To establish the most sustainable long-term solution for treatment and discharges from the Ravensdown Napier Works to enable the continued operation of the site"

The specific objectives of the SCMP are:

- To eliminate if possible, or otherwise minimise contamination at its source prior to entering the stormwater collection and on-site treatment systems.
- To eliminate if possible, or otherwise minimise fugitive emissions to the local air shed environment.
- To formalise ownership and timeframes for the agreed improvement actions.

4. Identification of Opportunities for Improvement

In preparing to apply for the new resource consents, Ravensdown have commissioned the following reports from subject matter experts:

- Acid Plant Process Review – *Ivell (November 2021)*
- Manufacture Plant Process Review - *Heubsch (November 2021)*
- Stormwater Improvements Plan – *Delagarza (October 2021)*
- Air Discharge Dispersion Modelling and Air Quality Effects – *Chilton (November 2021)*

The information and recommendations contained in these reports have been considered in developing this SCMP.

Ravensdown have also engaged with their own site staff in order to get the best possible understanding of source points, and a practical view on solutions.

5. Prioritisation of Recommended Actions

Four aspects have been considered in prioritising the recommended improvements:

- The risk of contamination of stormwater, or fugitive airborne release.
- The resulting impact on water or air quality.
- The estimated cost of completion.
- The estimated time required for completion.

A granular high-medium-low rating has been applied to each action in order to assign a priority.

6. Monitoring and Reporting

Each year Ravensdown will undertake a review to determine whether the SCMP actions completed have affected environmental outcomes. The review will include:

- Measured concentrations of PM_{10} and $PM_{2.5}$, fluoride, and sulphur dioxide at ambient air monitoring stations.
- Measured concentrations of contaminants in stormwater samples taken before and after treatment devices.
- Measured concentrations of contaminants in discharge water samples.

Ravensdown will prepare an annual report in line with the proposed consent conditions. This report will include a section summarising:

- Progress against the SCMP.
- Effectiveness of the actions completed.
- Changes or updates required to the SCMP.
- New actions to be added to the SCMP.

7. Review

This plan is a living document and should respond to changes on the site. It will be reviewed at least annually and updated as necessary to:

- Add new opportunities or actions that have been identified.
- Where necessary re-prioritise actions.
- Remove completed actions from the list.
- Update action owners or timeframes as required.

8. Site Improvement Action Schedule

AREA	DESCRIPTION	PRIORITY	ACTION OWNER	TIMING[1]	NOTES
Site wide	Ensure a 6 monthly Preventative Maintenance task is in place to identify cladding repairs required.	**High**	Andrew Torrens	6 months	
	Ensure a 3 monthly Preventative Maintenance task is in place for guttering and down pipe inspection and cleaning.	**High**	Andrew Torrens	6 months	
	Ensure a 3 monthly Preventative Maintenance task is in place for repairs to hardstand surfaces.	Medium	Andrew Torrens	1 year	
	Ensure routine Preventative Maintenance tasks are in place for inspection and cleaning of stormwater infrastructure.	**High**	Andrew Torrens	6 months	Reoccurrence timing and tasks required will be unique for different parts of the system.
	Ensure a thorough SOP is in place for routine sweeping of hardstand surfaces.	**High**	Andrew Torrens	6 months	
Acid Plant	Ensure an annual Preventative Maintenance task is in place for condition assessment of all acid plant gas ducts.	Medium	Grant Whitfield	1 year	To minimise fugitive release of SO_2 and SO_3 gases.
	Investigate opportunities for reduction, or better dispersion of, restart SO_2 from the furnace.	**High**	Reuben Manson	1 year	
Intake	Install perimeter underdrains around Intake Structure	Low	Jonathan Love	5 years	
	Install physical barriers (doors) on building entry/exit	Medium	Ross Kettle	3 years	
	Install stormwater interceptor at Intake	Medium	Ross Kettle	4 years	
	Investigate addition of dust collection at conveyor drop points.	Medium	Ross Kettle	4 years	

[1] Time from consent grant.

AREA	DESCRIPTION	PRIORITY	ACTION OWNER	TIMING[1]	NOTES
Sulphur Store 1	Repair building envelope	Low	Jonathan Love	5 years	To be considered in context of the building replacement project.
Sulphur Store 2	Repair building envelope	Low	Jonathan Love	5 years	To be considered in context of Sulphur Store 1 replacement project, which will extend Sulphur Store 2.
	Install stormwater infrastructure east of Sulphur Store 2	Low	Grant Whitfield	5 years	This may also require regrading of the hardstand surfaces to allow surface drainage.
Rock Store 1	Repair building envelope	Medium	Jonathan Love	4 years	This includes covering the gap between the roof line and wall of the building.
	Install guttering and respective downpipes to stormwater infrastructure.	Medium	Ross Kettle	2 years	
	Install dust suppression curtains to bay doorways.	**High**	Ross Kettle	1 year	
Rock Store 2	Repair building envelope	Medium	Jonathan Love	4 years	This includes covering the gap between the roof line and wall of the building
	Install guttering and respective downpipes to stormwater infrastructure	Medium	Ross Kettle	2 years	
	Install dust suppression curtains to bay doorways.	**High**	Ross Kettle	1 year	
Rock Store 3	Repair building envelope	Medium	Jonathan Love		
	Install guttering and respective downpipes to stormwater infrastructure	Medium	Ross Kettle	2 years	
South Canopy	Repair building envelope	**High**	Jonathan Love	1 year	Multiple locations of water ingress at interface of Rock Store roofs.
	Cover existing catch pits inside structure	**High**	Helen McCarthy	1 year	
	Install physical barriers (doors) on building entry/exit	**High**	Ross Kettle	1 year	

AREA	DESCRIPTION	PRIORITY	ACTION OWNER	TIMING[1]	NOTES
	Install threshold drains at building entries/exits	**High**	Ross Kettle	1 year	Not required if canopy is extended between Manufacturing and Despatch 1. Include catchment of reticulating down pipe from manufacturing.
North Canopy	Install physical barriers (doors) on building entry/exit	Medium	Ross Kettle	3 years	
	Install threshold drains at building entry/exit	**High**	Ross Kettle	1 year	
	Reticulate downpipes to stormwater infrastructure	Medium	Ross Kettle	2 years	
Manufacturing	Install threshold drains at building entry	**High**	Grant Whitfield	1 year	
	Investigate opportunities for better capture of fluoride, or optimisation of scrubbing in the Manufacture hygiene scrubber process.	**High**	Reuben Manson	1 year	
	Install dust collection at conveyor drop points.	Medium	Grant Whitfield	3 years	
Between Despatch 1 and Manufacturing	Install Stormwater Interceptor	**High**	Helen McCarthy	1 year	Could consist of either a strip drain or v channel and catch pit. Includes reticulating down pipe from manufacturing.
	Extend canopy	**High**	Grant Whitfield	1 year	To be considered in context of the Scrubber replacement project, and timed appropriately.
Despatch 1	Install threshold drains at building entries/exits	**High**	Ross Kettle	1 year	Not required if canopy is extended between Manufacturing and Despatch 1.
	Install dust suppression curtains to bay doorways.	Low	Ross Kettle	5 years	

AREA	DESCRIPTION	PRIORITY	ACTION OWNER	TIMING[1]	NOTES
Despatch 2	Install dust suppression curtains around dressing plant.	Medium	Ross Kettle	3 years	
	Install guttering and respective downpipes to stormwater infrastructure	Medium	Ross Kettle	2 years	
	Install physical barriers (doors) on building entry/exit	Medium	Ross Kettle	3 years	
	Install threshold drains at building entry/exit	Medium	Ross Kettle	3 years	
	Regrade hardstand surface to reduce surface ponding	Medium	Ross Kettle	4 years	On site there was a large concrete structure blocking the water path to the concrete covered drain, alternatives to this should be considered to freely discharge to stormwater infrastructure
Flexi Shed	Repair building envelope	**High**	Jonathan Love	1 year	Missing wall panels and holes in roof. Reticulation of down pipes may be required to eliminate water ingress.
	Install physical barrier (door) on building entry/exit	Medium	Ross Kettle	3 years	
	Install threshold drains at building entry/exit	**High**	Ross Kettle	1 year	
	Reticulate downpipes to stormwater infrastructure	Medium	Ross Kettle	2 years	
Site exit	Install stormwater infrastructure North of Despatch 2	Medium	Ross Kettle	3 years	This may also require regrading of the hardstand surfaces to allow surface drainage
	Install wheel wash	Low	Ross Kettle	5 years	
	Repair damaged hardstand surfaces	Medium	Jonathan Love	2 years	This is a site wide requirement, with emphasis on highly trafficked areas especially the Site Exit.

AREA	DESCRIPTION	PRIORITY	ACTION OWNER	TIMING[1]	NOTES
	Install kerbs	Medium	Ross Kettle	4 years	Approximately 200 to 250m of kerbs required
Main Drain	Cover main drain east of Despatch 2	**High**	Helen McCarthy	1 year	Establish a sweepable surface to remove accumulation of dust from Despatch 2
Waitangi Road tunnel	Install perimeter underdrains around Waitangi Road tunnel	Low	Ross Kettle	5 years	
Office	Install kerb	Low	Ross Kettle	5 years	Approximately 5 to 10m of kerb required