

Water Quality - Stormwater - Trade & Industrial Sites

Introduction

The stormwater system is designed to prevent flooding by draining rainwater from roofs and paved areas.

Stormwater is not treated and, in most areas of Hawke's Bay, discharges directly into streams, rivers or the sea.

All stormwater leaving a trade or industrial site has the potential to carry contaminants: oil leaks, spilt material or residues from storage areas. Even seemingly harmless things like milk are lethal to stream or river life. "Biodegradable" substances like foodstuffs and cleaning agents can cause significant environmental damage, as can other everyday chemicals like petrol and oil.

Protect stormwater – and yourself

The site occupier is responsible for making sure stormwater leaving a site is clean. This not only protects the environment, but will also minimise company liability in the event of environmental damage.

Enforcement action may be taken against your company if stormwater is polluted – either deliberately, by accidental spills that aren't properly cleaned up, or if reasonable steps weren't taken to avoid the entry of spilt material into the stormwater system.



Industrial pollution in stormwater

What can you do?

Good housekeeping and site management are the best ways to prevent discharges to stormwater, as well as helping your business run more efficiently.

- Maintain up-to-date site drainage plans and write a spill procedure.
- Educate your staff about the obvious risks and about good site management.
- Keep stockpiles and waste storage areas covered so that rain doesn't wash residue away.
- Install oil interceptors in refuelling areas, yards and carparks.
- Label stormwater grates "rain only", and paint stormwater manhole covers blue.
- Paint trade waste sewer manhole covers red to show they carry contaminated flows.



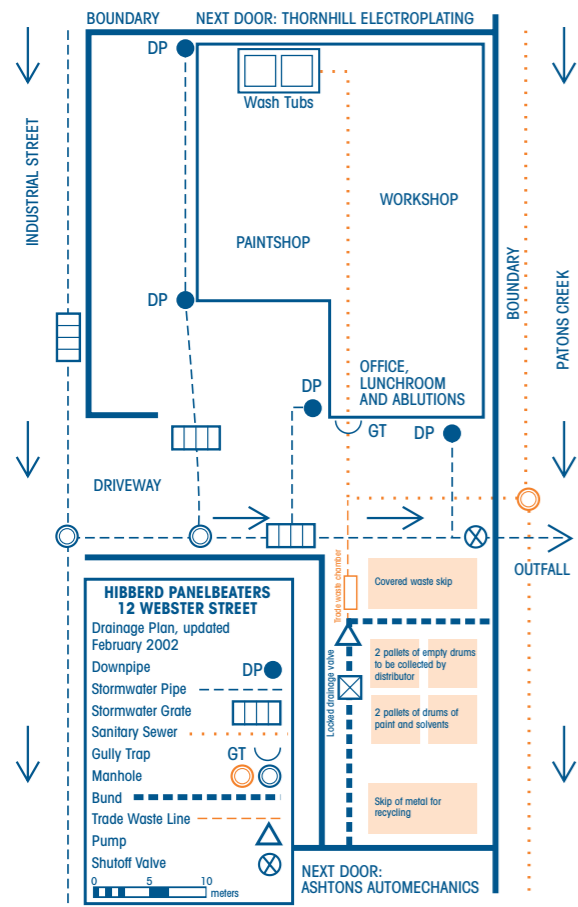
Ongoing contaminated runoff discharging to stormwater as a result of poor housekeeping

Drainage Plans

An up-to-date site drainage plan ensures everyone on your site knows where the drains are and what's going into them. Without one, your company could unknowingly be causing pollution, impacting on both the environment and your company liability.

If you don't have a drainage plan for your site, contact the landlord if your site is rented, or your district or city council. Otherwise, a drainage contractor or engineer should be able to investigate your site and draw a plan up for you.

Make sure the plan is checked and updated regularly.



Site Drainage Plan Example (courtesy Environment Canterbury)

Your site drainage plan should show:

- Stormwater pipes, grates and manholes (colour code these blue).
- Sanitary or trade waste sewers including inlets, traps, drains and manholes (colour code these red).
- Site boundaries, outdoor spaces and buildings.
- Open drains and areas where runoff might pond.
- What activities are carried out and where.
- What materials are stored and where.
- Neighbouring sites and sensitive areas, particularly nearby rivers, streams or beaches.

Bunded areas

Bunds are recommended on industrial sites and can range from major facilities, able to contain all of the liquids stored in containers inside them, to low nibs that stop spills from indoor work spaces escaping into yards.

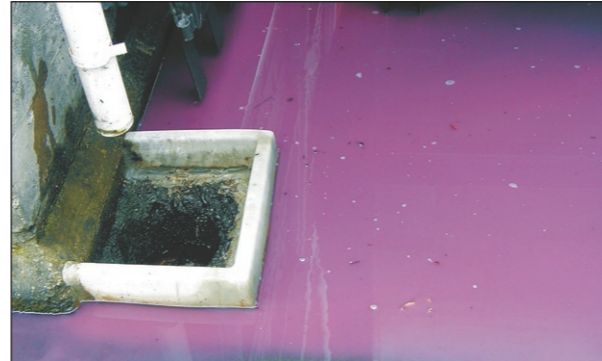
A bund lets you detect and control any small or slow leaks and will contain spills from sudden ruptures of tanks and drums.



Construction of an outdoor storage bund. The grate inside the bund drains to trade waste.



The most effective bunds are able to contain large volume spills, and are under cover to prevent them filling with rainwater.



A small bund on an industrial site to prevent spills entering a stormwater gully trap.

If your site is rented, consider purchasing portable bunds or spill pallets that can be taken with you if your company relocates.



Spill pallets are an easily transportable spill solution.

What about accidental spills?

Even on a well-managed site accidents happen, so you must be prepared. To reduce the impact of spills on your site, the following precautions are important.

- Make sure you know exactly what materials are on site at any time, and any handling requirements.
- Ensure you have easily accessible Material Safety Data Sheets for all chemicals stored on site.
- Identify high-risk areas and spills that could occur.
- Know what to do if a spill occurs.
- Set up a spill station, write a spill procedure and train your staff.



This site has a spill plan, so stormwater pollution from this spill was minimised.

Spill procedures

A basic procedure for spills on industrial sites is:

1. Be safe – what is the spill? What safety gear do you need?
2. Stop the source – turn off the tap, plug the leak or right the drum – if it is safe to do so.
3. Protect stormwater – confine the spill with sandbags or booms. Block stormwater grates with sandbags.
4. Notify – tell your supervisor. Inform Hawke's Bay Regional Council of any spills that may enter stormwater (Pollution Hotline: 0800 108 838 24hours/7days).
5. Clean up.
6. Dispose responsibly.
7. Restock and review – what can be learnt from this incident?



Stains on concrete are evidence of stormwater pollution occurring.

Quick Site Checklist

Walk around your site and look for signs that contaminants or pollutants have been getting into the stormwater system.

Can you see any of these on your site?	Yes	No
• Stains or corrosion of any surface, including along concrete heading towards or around stormwater grates.	<input type="checkbox"/>	<input type="checkbox"/>
• Marks on or near any stormwater grate or stormwater sump, or materials in them indicating that anything other than clean rainwater has got into them.	<input type="checkbox"/>	<input type="checkbox"/>
• Stormwater grates that are blocked with solid material like grass, plastic or litter.	<input type="checkbox"/>	<input type="checkbox"/>
• Puddles, discoloration, oil, grease or chemicals on the ground.	<input type="checkbox"/>	<input type="checkbox"/>
• Leaking or corroded machinery, equipment, valves, seals, containers or lines.	<input type="checkbox"/>	<input type="checkbox"/>
• Areas where absorbent materials (kitty litter, sawdust) have been used to soak up spills but have not been removed.	<input type="checkbox"/>	<input type="checkbox"/>
• Outdoor bunds where stormwater valves have been left open or are not securely locked.	<input type="checkbox"/>	<input type="checkbox"/>
• Litter or waste thrown behind buildings, over fences, onto foreshore or riverbanks.	<input type="checkbox"/>	<input type="checkbox"/>
• Containers that are stored in the open, including empty containers, storage tanks and bags of materials.	<input type="checkbox"/>	<input type="checkbox"/>
• Leaks, overflows or spills from tanks or containers left open or damaged, valves, taps or seals, pumps or hose connections, waste containers or drip trays.	<input type="checkbox"/>	<input type="checkbox"/>
• Containers unsafely stacked on top of each other.	<input type="checkbox"/>	<input type="checkbox"/>
• Containers that are not clearly labelled or not labelled at all.	<input type="checkbox"/>	<input type="checkbox"/>
• Evidence that anything other than rainwater is getting into the stormwater network.	<input type="checkbox"/>	<input type="checkbox"/>

If you answered "YES" to any of these items, you need to:

- Find out where the pollutants are coming from and why.
- Give someone responsibility, and appropriate authority for stopping pollution on your site.

Also in this series: "Domestic Stormwater"

For further information:

Please contact Regional Council Compliance Officers for further information & advice on any pollution issues

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