

Best Management Practice Concrete and asphalt

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If you have any questions about this procedures sheet contact Auckland Council on 09 301 0101.

1. When should I use this sheet?

This applies to all sites involving concrete and asphalt works or use, regardless of site size or duration of works.

2. What's the aim?

Stormwater systems must only drain rain

To make sure no concrete or asphalt contaminated run off or slurry enters the receiving environment (stormwater drains, streams or the sea).

3. What's the problem with concrete and asphalt?

It pollutes the environment

Set or cured concrete or asphalt poses little risk to the environment unless it is cut or crushed. Any water that comes into contact with unset concrete, concrete fines, concrete dust or concrete washings becomes highly alkaline (i.e. it has a very high pH).

This water will burn and kill all fish, aquatic insects and plants that come into contact with it

You cannot dilute or filter this contaminated water to a level that is safe for discharge to the receiving environment. If it enters the sea or a stream, it only spreads the contaminated water further. It would take at least 100,000 litres of clean water to dilute the concrete fines from a very small cutting job to a neutral pH (pH7).

Asphalt / bitumen rinse and cutting waste water contains large amounts of hydrocarbons (i.e. like petrol), which are very toxic to people, plants and animals. Like concrete, you cannot dilute hydrocarbons to a level that is safe for discharge to the receiving environment.

4. Site management and environmental controls

Forward planning – before you start works

- Complete the Environmental Task Analysis Form to identify potential environmental risks and define how environmental risks can be mitigated or reduced through site practices or environmental controls – your 'environmental toolbox'. Remember your activities will need to be in accordance with the legal requirements defined in the Compliance Management Plan.
- Identify receiving environments (e.g. kerb channels, stormwater drains and natural water bodies).
- Check the lay of the land and decide where any run off is likely to go.
- Check the weather forecast – especially when blocking stormwater catch pits.
- Ensure you have the correct materials on site to implement controls. Filter cloth and hay bales cannot, will not and do not filter concrete wastewater.
- Make sure the person responsible (identified in Task Analysis) for ensuring environmental practices and controls has followed / implemented these prior to starting works.

Environmental practices and controls – during construction

- As the environmental risk of concrete or asphalt works is high, it is recommended that you completely block off stormwater drains with drain plugs and use a submersible pump or vacuum truck to remove contaminated run off from the catchpit.
- If this is not practicable then careful sandbagging or bunding around the catchpit grate can be used as an alternative.



Best Management Practice – Concrete and asphalt

- Minimise the amount of water used on site – as it means there is less to control.
- Remember that dust is also created during dry concrete or asphalt cutting. Use saws that can have a vacuum attached to minimise the amount of dust.
- Use a wet / dry vacuum, or vacuum truck for larger jobs, to collect all concrete or asphalt contaminated material or runoff on site.
- If this is not practical, then divert all run off to the construction pit or unsealed ground, away from surface water flow paths.
- Wash all equipment and tools in a designated wash area or on a large grassed area well away from stormwater drains, streams and the coast.
- Use of a tarpaulin sheets under concrete pumps and delivery chutes should be used to capture any spills.
- Do not allow concrete trucks or concrete pumpers to wash out on site unless there is a designated wash area.

Monitoring and maintenance

- Make sure the rate of flow of diverted or wash water does not exceed the ground's soakage capacity (e.g. no ponding), and clean up any fines or solids left after the water has soaked into the ground.
- Regularly check that drain plugs, sandbags or bunds are in place and are working effectively.

5. Tips

- Do not undertake concrete or asphalt works if there is a chance of heavy showers or rain.
- Inspect site controls at least once a day to ensure they are working properly. Take immediate action to remedy.
- Have a site specific spill response plan along with a spill kit and make sure all staff are well trained with the equipment and the plan.

6. Useful links and information

- Go to aucklandcouncil.govt.nz and search for 'pollution', here you will find a range of helpful information and links to the range of pollution related resources and educational materials.

- Refer to the following Stormwater Unit BMPs
 - Dewatering
 - Potentially contaminated sites
 - Dust and sediments
 - Spills and emergency management
 - Trees
 - Sites of significance.



If a discharge occurs that has the potential to, or has entered the stormwater system or natural receiving environments, contact the Auckland Council 24 HOUR POLLUTION HOTLINE on 09 377 3107 immediately.

► Find out more:

For access to this BMP and to find the other BMP information sheets, visit aucklandcouncil.govt.nz/stormwater

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