

Trenching

If you have any questions about this procedures sheet contact Rotorua Lakes Council - Pollution Control

1. WHEN SHOULD I USE THIS SHEET?

This Best Management Practice (BMP) applies to all sites where trenching is occurring, regardless of site size or duration of works.

2. WHAT'S THE AIM?

Stormwater systems must only drain rain.

To manage sediment laden water runoff and reduce the amount of sediment leaving a site, helping to protect downstream receiving environments (e.g. kerb channels, stormwater cesspits, groundwater and natural water bodies) from sedimentation and water quality degradation.

3. WHY MANAGE TRENCHING?

Trenching may involve the exposing of soils, surface cutting, excavations and earthworks, works in and around trees, dewatering and reinstatement. These activities all pose a level of environmental risk, the most common risk being the discharge of sediment.

Stormwater and groundwater can also accumulate in trenches, resulting in sediment laden water that must be managed appropriately.

Sediment (e.g. clay, soils, silt and sand) is a natural substance and may appear harmless. However, if discharged to receiving environments in excess of naturally occurring levels, it can result in significant adverse effects.

Increased amounts of sediment in our waterways can:

- Clog the gills of fish and damage other sensitive tissues through abrasion;
- Suffocate aquatic plants, fish and insects by smothering them;

- Reduce the amount of light entering the water, which can stop plants and algae growing – removing a major food source for fish and insects;
- Interfere with fish vision making them vulnerable to predators or unable to see their prey; and
- Increase the risk of flooding.

4. SITE MANAGEMENT AND ENVIRONMENTAL CONTROLS.

FORWARD PLANNING – BEFORE YOU START WORKS.

- Identify the potential environmental risks and define how these can be mitigated or reduced through site practices or environmental controls.
- Identify the path of trenching, mark the location of underground services (refer to Useful Links and Information below) and where trenching works are likely to occur in and around trees. Gain any necessary approvals, protect and carefully manage works to avoid impacts on services and trees.
- Check the lay of the land and decide where any run-off is likely to go. Pay particular attention to receiving environments.
- Steeper sites can be more difficult to manage and may require a higher level of control.
- Have a plan to deal with incidents and emergencies.
- Identify a person who will be responsible for ensuring environmental practices and controls are followed and implemented prior to starting works.
- Coordinate with other Utility Companies when undertaking works on services to minimise the amount of trenching required.



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ENVIRONMENTAL PRACTICES AND CONTROLS.

- Check the weather forecast. Try to avoid opening trenches when there is a risk of high rainfall.
- Maintain a grass berm between trenches and the roadside when one is present.
- Minimise the area of disturbance by staging works where possible.
- Put in place diversions (e.g. bunding, sandbags etc) at stages uphill of the site to divert clean stormwater around the works. This will help to reduce the amount of water that you have to manage.
- There is no one solution for what controls to put in place when trenching – it is scale and contaminant dependant and it's up to you to work out what is appropriate.
- If surface (concrete and asphalt) cutting is required, determine and implement appropriate site practices and environmental controls (refer to All Works Involving Concrete, Cement, Lime and Asphalt Pollution Factsheet for more help).
- Remember that any water that comes into contact with unset concrete or asphalt fines, dust or washings must not enter the receiving environment. Protect receiving environments through good site practices or controls, such as bunding, sandbagging, blocking off stormwater cesspits, or using a wet vacuum or vacuum truck to collect any contaminated water or slurry.
- To help manage sediment and sediment laden water, install stormwater cesspit protection measures as a form of secondary control (refer to the Cesspit Protection BMP for help). Often multiple cesspits will need to be protected.
- When working in close proximity to receiving environments or on steep sites, install down slope sediments controls, such as silt fences or sediment bunds.
- Working soil should be placed upslope of the trench so that any runoff will flow into the trench.
- Ensure sound dewatering practices are followed should dewatering need to occur (refer to the Dewatering BMP for more help).
- Avoid stockpiling of soil and spoil on site if at all possible.
- If stockpiling is required, identify an appropriate area for spoil or stockpiling of soil away from receiving environments. Do not stockpile material near stormwater cesspits, kerb channels, near any surface water body or in over-land flow paths or on gradients steeper than 15%.
- Put in place clean water diversions, sediment controls (e.g. bunding, silt fences etc) and cover stockpiles (e.g. with a tarpaulin, polythene sheet or geotextile fabric) to prevent sediment runoff.
- Rehabilitate all disturbed areas as soon as possible and stabilise exposed soils by turfing, laying geotextile

or applying straw or a hay mulch.

- If surface reinstatement is required, determine and implement appropriate site practices and environmental controls (refer to All Works Involving Concrete, Cement, Lime and Asphalt BMP for more help).

MONITORING AND MAINTENANCE.

- Regularly assess site practices and environmental controls to make sure that they are mitigating or reducing environmental risk to an acceptable level.
- Ensure that no discharge is occurring. Adjust practices or controls if they are not working efficiently.
- Regularly inspect and clean out sediment controls and secondary cesspit protection.
- Regularly sweep up any sediment or dust and dispose of it appropriately so that it will not become airborne or enter surface water.
- Once works are complete remove environmental controls. Inspect stormwater cesspits and remove any contamination associated with site works.

5. TIPS.

Although this BMP presents a range of accepted best practice methods, there are many ways of achieving the above aim.

- Minimise the area of disturbance by staging works where possible.
- Inspect site controls at least once a day to ensure they are working properly.
- Remember that cesspit protection measures are only to be used as secondary sediment control devices. Correct site practices and environmental controls will reduce the reliance on these devices.

6. USEFUL LINKS AND INFORMATION.

- Go to www.rdc.govt.nz/stormwater, 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 Utility BMPs
 - Dewatering;
 - Potentially Contaminated Sites;
 - Spills and Emergency Management;
 - Cesspit Protection;
 - General Site Management and Housekeeping; and
 - All Works Involving Concrete, Cement, Lime and Asphalt Pollution Factsheet.
- Go to www.beforeudig.co.nz or call 0800 B4UDIG (0800 248344) to locate underground services.

If a discharge occurs that has the potential to, or has entered the stormwater system or natural receiving environments, contact the Rotorua Lakes Council 24 HOUR POLLUTION HOTLINE on (07) 348 4199 immediately.

For access to this BMP and to find the other BMP information sheets, go to the link below:

www.rotorualakescouncil.nz/stormwater

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