Builders Pocket Guide

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IECA
International Erosion Control Association
AUSTRALASIA
Award Winner 2014

Builders Pocket Guide

practical advice on managing worksites and the environment

3rd Edition

Scan the QRs with your smartphone/tablet to view additional information, advice and learning materials

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Environment Canterbury Regional Council
Kaunihera Taiao ki Waitaha

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SITE SAFE

For more information go to
www.sitesafe.org.nz/MainMenu

IECA
International Erosion Control Association
AUSTRALASIA

For more information go to
www.austieca.com.au

This Builders Pocket Guide contains helpful information on:

- **Best practices for your building site**
- **How to control and minimise your environmental impact**
- **How to prevent erosion and sediment runoff on site reaching gutters, drains, streams and rivers.**

This guide will help you manage your environmental impact and comply with the Resource Management Act 1991 (RMA), and regional and local council rules and regulations.

It's intended to provide easy, effective and realistic advice on how to adopt control methods to support good site practice so you can manage your site and minimise (or totally remove) your impact on waterways and the wider environment.

By developing and working to your site plan, waste management plan, and an erosion & sediment control plan, you will prevent pollution to land, air and stormwater drains – which flow into our streams and rivers.


Downner
All Visitors Must Report to Site Office
Requirements for protection that must be worn on site
ASSEMBLY POINT
SITE HAZARD
Site Manager:
Contact Number:
First Aiders:
Assembly Point:
On Site Safety Rep:
Permit Number:
Number of Days Without Incident or Accident:
Next toolbox meeting
Last Updated:
Item
Hazard/Risk
For more information go to www.bpg.co.nz
STOP!
Think about where that runoff goes!
Use your brain, not the drain
Drains and gutters go to the streams

Contents

ECOLOGICAL CONSIDERATIONS

We're counting on you to help protect our waterways.

Further information is available at www.cleanwaterways.org.nz

Ecological considerations

If in doubt – Stop and Shout! Only disturb or expose the soil that you need to. Keep muddy/dirty runoff away from gutters, drains, streams and rivers.

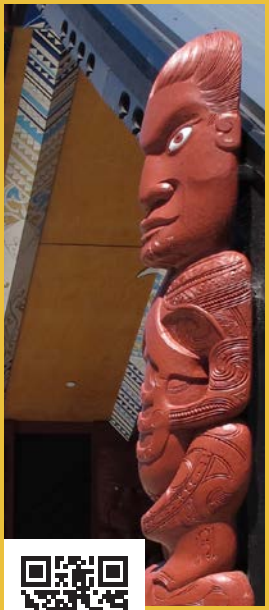
Many people are already doing a lot to help protect the waterways. Protection is important so we can continue to enjoy boating, fishing and our next generation (your children and grandchildren) will be able to enjoy them as well.

We're counting on you to think about how your work will affect the land, water or air where you are working. Construction work could damage ecosystems by poisoning land or water, removing plants and trees or killing the fish, insects, birds and animals that live there.

With your commitment and by using this guide, you can help protect our waterways and encourage others to do the right thing.

See our website www.bpg.co.nz or www.eosecology.co.nz for more information.

CULTURAL CONSIDERATIONS



Cultural considerations

Māori are the tangata whenua of Aotearoa (New Zealand) and hold traditional and contemporary authority and responsibilities in the area.

Key concepts for Māori include taking an approach to resource management that applies ki uta ki tai (mountains to sea) that is catchment based. The primary goal for Māori is maintaining and enhancing the mauri (life-giving essence) of a resource. The mauri of a resource is degraded if it no longer has the capacity to support traditional uses and values.

Water plays a unique role in the traditional economy and culture of Māori and the preservation of values associated with waterways is of the utmost importance. For Māori, preserving these values involves ensuring that no contaminants of concern are discharged into waterways. Achieving this requires a very high standard of control over all potential contaminants, including sediment that may enter waterways.

The proximity of construction sites to any wāhi tapu, settlement or historical sites is also important, as is the need to avoid impacts on indigenous species and their habitats wherever possible.

Consider contacting your local Rūnanga* to discuss in further detail any possible cultural impacts your works may have. Your local Rūnanga welcome these enquiries.

* A list of Rūnanga contacts is available from your regional council.

For more information, see the New Zealand Historic Places Trust website: www.historic.org.nz or see Heritage New Zealand website: www.heritage.org.nz

Cultural considerations

IMPORTANT!

Accidental Discovery

Immediately following the discovery of material that could be an archaeological site, Kōiwo and/or Taonga, you must stop all work immediately, secure the discovery area and notify the ***New Zealand Historic Places Trust, 03 363 1880.***

Mō tātou, ā, mō kā uri ā muri ake nei

"For us and our children after us"

Protecting the mauri of a waterbody requires:

- Protecting the integrity and cultural uses of lakes, rivers and wetlands by preventing unnatural mixing of waters from different sources
- Preventing the direct discharge of contaminants to water, in particular the discharge of human wastewater
- Requiring the discharge of water from agricultural and industrial wastewater to pass through land before it enters a river, lake or wetland
- Encouraging the restoration of wetlands and riparian margins because of their ability to trap and remove some types of pollutants.

Papatūānuku (Mother Earth) supports life including all people, flora and fauna. Waterways represent the blood vessels that supply nourishment to her and, through her, to all living things.

CONTAMINATED SITES

Listed Land Use Register

Environment Canterbury Regional Council
Kaunihera Taiao ki Waitaha

Home | Advice & Info | Services | Our Responsibilities | News & Notices | Get Involved | About Us

Overview | FAQs

What is the Listed Land Use Register (LLUR)?

The LLUR is a land use database that Environment Canterbury uses to manage information about land that is, or has been, associated with the use, storage or disposal of hazardous substances.

We need the LLUR to help us manage information about sites that have had hazardous activities or industries on them. By managing this information, we can then help you to manage any potential risks to your health or the environment that the site may pose from exposure to contaminants.

Contaminated sites

Contamination is not always obvious. Soil and groundwater can be heavily contaminated, but you may not be able to see or smell it. Always take a precautionary approach and act safely.

IMPORTANT!

If you find contamination on site, or you are not sure what you have found ...

Stop work immediately

Safely isolate the area and protect yourself, workers and neighbours.

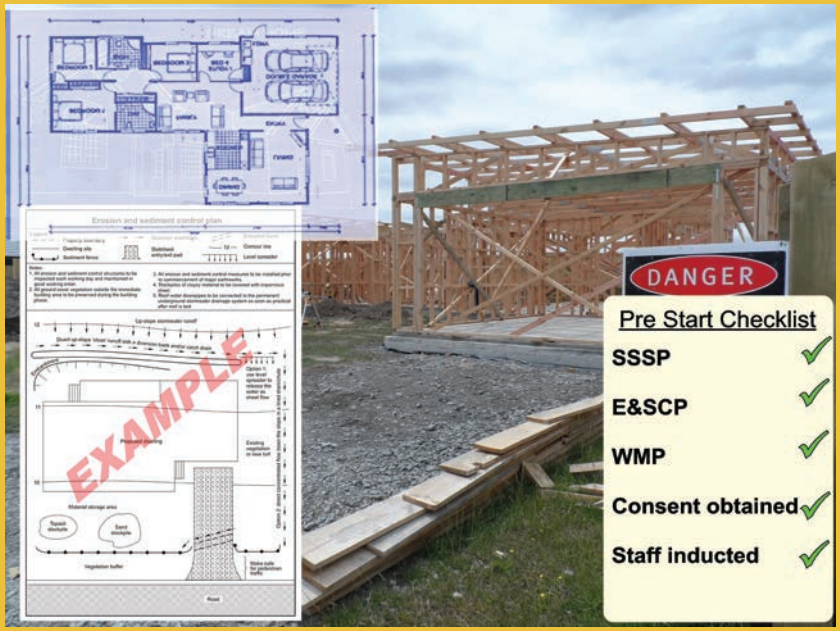
Contact your local or regional council and ask for an environmental health officer.

- **BEFORE YOU START, CHECK THE PREVIOUS LAND USE OF THE SITE**
  Contact your local or regional council to find out if any hazardous activities have taken place on the land, which may have caused lasting contamination of the ground. Refer to www.mfe.govt.nz for the full hazardous activities and industries list (HAIL). See our website www.bpg.co.nz or llur.ecan.govt.nz for more information.

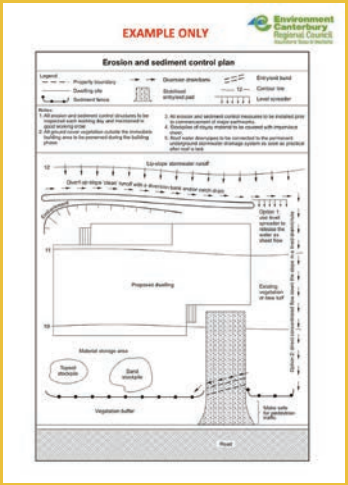
- **DEVELOP A SITE MANAGEMENT PLAN**
  If there has been a hazardous activity on your site, you will need a Site Management Plan (SMP). It might be easier for you to contact a contaminated land specialist to help you develop your SMP.

- **BE SAFE**
  Always protect yourself and your workers by using appropriate personal protective equipment (PPE). Your SSSP must include information specific to the LLUR risks on your site. See page 17 for further information or contact Site Safe on 0800 SITESAFE.

PRECONSTRUCTION PLANNING AND SITE LAYOUT



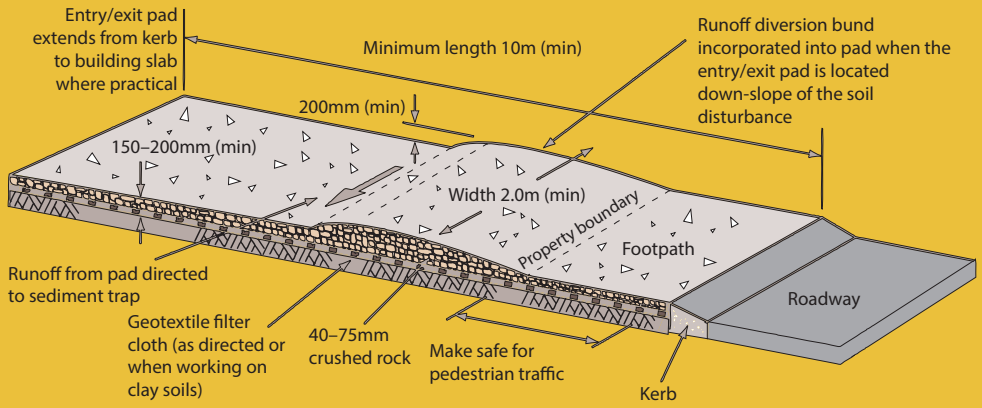
Preconstruction planning and site layout



- **Before you start work on site, contact your local and/or regional council** to find out if any of your work will require a consent, or if anything on your site is protected (plants, trees, wildlife). Make sure you read and understand any consent conditions for the project.
- Create an **erosion & sediment control plan (E&SCP)** and a **waste management plan (WMP)**. Show and explain the plans to all staff on site and make sure everyone knows what their responsibilities are.
- **Avoid exposing large areas of land** at one time and keep land disturbance to a minimum.
- **When the building is finished, make sure the site is stabilised** and won't cause problems with runoff and dust when you leave.

Following these Guidelines will not necessarily ensure compliance with rules in regional, district and city plans and the conditions on resource consents required to undertake these activities. Before commencing any earthworks you must obtain all the necessary consents from the relevant district, city and regional councils.

STABILISED ENTRY/EXIT PAD



Site access – all sites

If in doubt – Stop and Shout! Only disturb or expose the soil that you need to and build access points in the right place and the right size.

- Take some time to choose a suitable access point. Stabilise by laying geotextile fabric prior to aggregate being placed if clays have been exposed.
- The access point should be made out of crushed rock/stone or clean aggregate (AP40-65) free of silts. Ensure you compact it.
- The entrance/exit should be topped up with aggregate as required to form a bump large enough (200mm minimum) to contain runoff from your site.
- Alternatively, install a suitable barrier using either wood, reinforced compost sock or both depending on your site to contain mud/dirt/runoff within the work area.
- Once you have made your site access point, make sure everybody uses it.

◀◀ SEE DIAGRAM ON OPPOSITE PAGE

Human interaction with the environment is not one way, the environment can harm you as well as you can harm it. Make sure your SSSP includes actual or potential impacts on the worker; heat, cold, wet, dust, groundwater & soil contamination. Remember to include the appropriate safety response.

Use QR code for further advice. www.sitesafe.org.nz

Create and maintain a Site Specific Safety Plan (SSSP).

SIGNAGE

Make sure signs are in place, checked, updated and followed throughout the build.

PPE AND INDUCTIONS

Make sure all new arrivals have the right personal protective equipment (PPE) for your worksite and undergo a site induction & safety briefing.

CHECKS AND AUDITS

Carry out regular checks and update the safety board and staff as soon as any new hazards are identified.

REPORTING

Record and report any incidents or near misses.

TRAINING

Site Safe has a range of forms, factsheets, training information and courses for you and your staff. Go to the website or contact your nearest Site Safe Office (0800 SITESAFE) for more information.

DUST CONTROL

Dust control

If in doubt – Stop and Shout! Only disturb or expose the soil that you need to.

WARNING: Dust is an environmental issue and a health & safety issue, all unconsolidated stockpiles need to be stabilised or covered as soon as practicable.

DEVELOP AND USE A DUST MANAGEMENT PLAN (DMP), YOU CAN CONTROL DUST BY:

- **Spraying** water lightly on exposed areas with a sprinkler, a hose or fine spray, or a k-line **(short term)**
- **Covering** exposed areas with well-fixed plastic sheeting, tarpaulins or other geotextiles **(short term)**
- **Covering** exposed areas with compost, wood mulch, geo-binders, gravel, hydroseed or grass if the area will be exposed for longer periods **(medium/long term)**
- **Avoid driving** over stabilised areas. Limit your speed and driving around site. **(medium/long term)**

Stabilise work areas as soon as possible to avoid erosion, subsidence and dust.

Hydroseeding (pictured) or geo-binders can be used to stabilise exposed work areas and reduce dust. See pages 19 & 23 for further details.

Site stabilisation

If in doubt – Stop and Shout! Only disturb or expose the soil that you need to. Cover and stabilise areas as soon as possible.

AVAILABLE OPTIONS:

GRASS SEED (FLAT SITES)

This is an option over spring and autumn months. Requires regular watering. Not recommended if water usage is difficult or expensive.

STRAW MULCH (FLAT SITES)

This can be used as a short-term measure through winter and summer when grass seed growth is slower.

TURF/READY LAWN (FLAT SITES)

Easily laid on a well-prepared level area. Be sure to follow the manufacturer's instructions. Continue with ongoing maintenance.

WOOD MULCH/WOOD CHIP/BARK CHIP (FLAT SITES)

Wood mulch, wood chip and bark chip can be used as cover for exposed areas and for landscaping. They are more suited to level sites and can handle a small amount of disturbance.

Geo-binder

Silt fence and vegetation buffer

COMPOST (FLAT/SLOPING SITES)

Compost works well on sloping sites. Spread the compost over exposed areas. This will stabilise the ground and act as a base for vegetation.

HYDROSEEDING (FLAT/SLOPING SITES)

You will need to contact a local contractor to apply this option. It provides more immediate protection.

MATERIAL COVERINGS (FLAT/SLOPING SITES)

Use well-pegged or tied-down tarpaulins, plastic sheeting, geotextile or fibre matting. These all provide temporary protection for soil from wind and rain. Requires regular maintenance.

GEO-BINDER (STABILISING POLYMERS) (FLAT/SLOPING SITES)

Geo-binders can be used to quickly stabilise and minimise dust issues on worksites. Geo-binders are spray applied and are particularly useful for stabilising large areas that need to be set aside or fenced to prevent damage to stabilised areas from workers and machinery. (Contact your regional council before using to make sure you are complying with its rules.)

Covered stockpiles

Stockpiling and topsoil

During demolition or building work, there is the potential for runoff from stockpiled materials and topsoil.

If in doubt – Stop and Shout! Only disturb or expose the soil that you need to. Cover and stabilise areas as soon as possible.

- Where possible, avoid stockpiles by only ordering the supplies you need and have waste materials removed from site.
- Stockpiles should be placed at least 10m away from any surface water including: streams, lakes, rivers, waterways or stormwater systems, gutters, kerbs and channels.
- Stockpiles should be in a sheltered position and must be within the sediment control measures on your site, not under trees.
- Stockpiles should be covered. See page 19 and 23 for options.

SUMP PROTECTION

1.

2.

Sump protection

If in doubt – Stop and Shout! Install erosion & sediment control measures (bunding, sump covers and silt fences) before works begin.

To prevent runoff of muddy/silty water into gutters and drains, use one or more of the following measures:

1. **CATCH PIT (SUMP PROTECTION):** Install a specially designed bag inside the drain sump to catch any dirty or silty runoff which allows water to flow through. **DO NOT USE for concrete or paint washwater.**
2. **COVERING:** If the drain grate can be lifted, use a barrier cloth or plastic sheet over the sump and hold it in place by using the grate. This must prevent any water seeping through. Only use this method when there is no risk of causing flooding elsewhere.
3. **BUNDING:** Use a sediment sock/tube or sand bags to trap sediment but still allow water to flow through to prevent flooding. **DO NOT USE for concrete or paint washwater.**

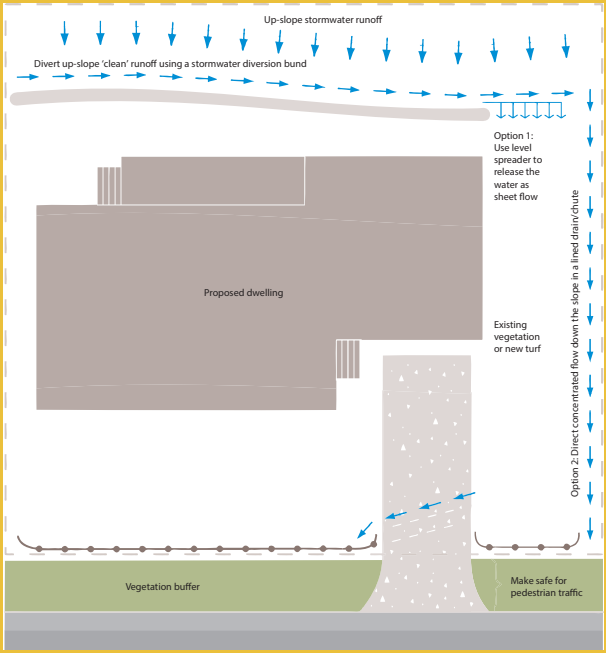
Check these measures daily and remove when no longer needed.

Diversion of clean 'runoff' around site

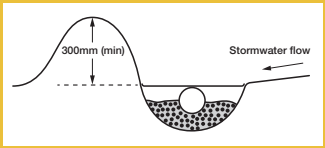
Option 1: Use level spreader to release the water as sheet flow.

Option 2: Direct concentrated flow down the slope in a lined drain/chute.

Note: Make sure any diverted stormwater does not cause flooding to adjoining properties and meets permitted levels to enter the stormwater network.



Diversion of clean 'runoff' around site



Diversion bunds can be formed to help divert clean stormwater (around the works area), to prevent runoff onto open or disturbed ground.

- Diversion bunds can be made from a raised edge of topsoil or turf (minimum 300mm) or a compost sock of similar size.
- Any diversion channel made needs to be stabilised.
- Re-direct clean stormwater runoff from above your site and across more stable areas such as grass into the nearest kerb and channel, or into a roadside swale so that extra stormwater does not run through your site and cause problems.
- It is important to contact your local council to gain approval for your stormwater discharge into their drainage networks before you start work. Unauthorised discharges are a breach of the Resource Management Act.

Use temporary downpipes as soon as possible & replace with permanent pipes when practicable.

Connection of downpipes

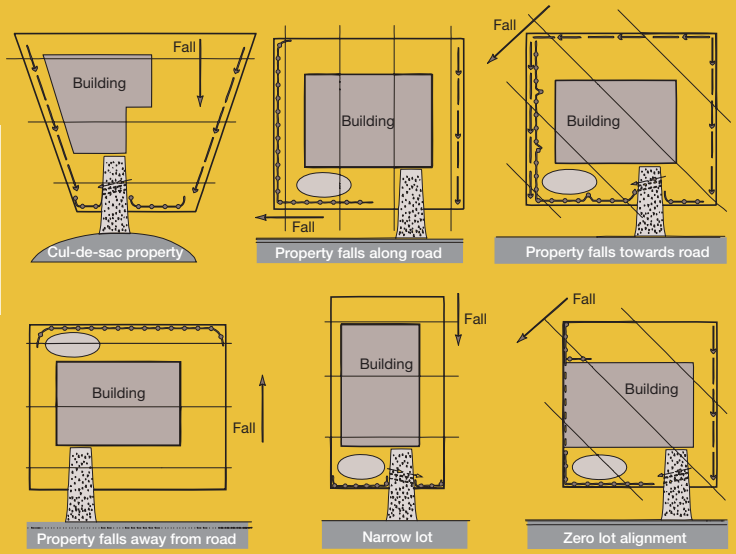
If in doubt – Stop and Shout! Connect downpipes as soon as possible to reduce the amount of stormwater on your site.

- Use temporary downpipes as soon as possible, check regularly and maintain until replacing with permanent pipes when practicable.
- During construction, you can divert clean roof runoff to the roadside gutter or drain by connecting a temporary non-perforated pipe to the downpipe outlet.
- Make sure the pipe is in a place where it won't be damaged or driven over.
- Connect downpipes to soak pits as soon as possible if they are part of the final design.

TYPICAL DRAINAGE AND SEDIMENT FRONT LAYOUTS

KEY

- Contour lines
- Fall (runoff direction)
- Sediment pond
- Sediment/silt fence
- Site access



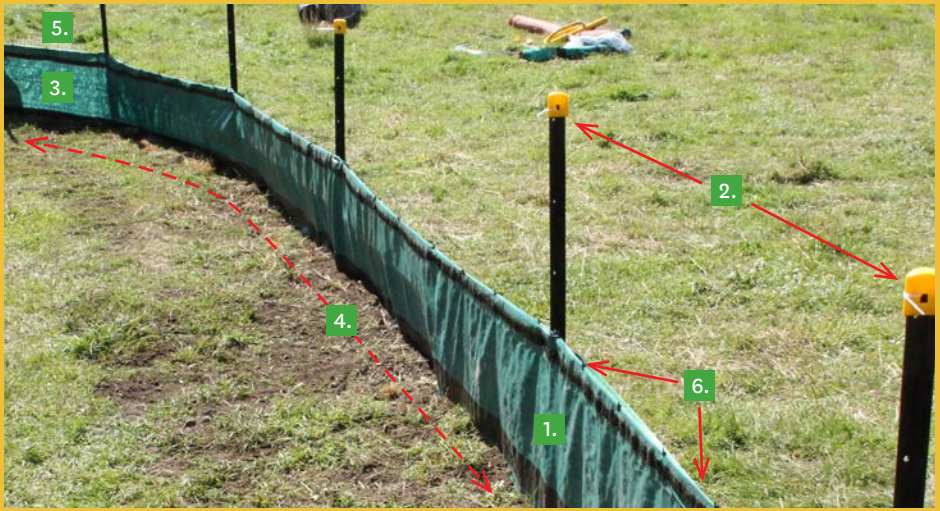
Sediment/silt fences and socks

If in doubt – Stop and Shout! Plan and install sediment/silt fences or socks before you start work on your site. If you leave it until there's a problem, it's too late!

Sediment/silt sock

Tie and peg down to secure

- A sediment/silt fence is a barrier to stop silt and sediment runoff leaving a building site; choose the best option for your worksite.
- A sediment/silt sock is filled with compost which can be used as a barrier to stop silt and sediment runoff.
- The fence or sock needs to be in the right place across the down-slope to stop runoff. See www.bpg.co.nz for a video on how to install a sediment fence and for more information.
- Check the fence or sock weekly and before and after any heavy rainfall. Dig out and remove any sediment/silt build-up.
- If you think the location of the fence or sock on a plan is wrong, contact the plan designer to discuss amending the plan – there is no point installing the fence or sock if it isn't going to work.



If installing a mesh fence as reinforcement to construct a super silt fence, fasten the mesh to the 'Y' posts first and insert it in the trench to the full 200mm depth.

Place the sediment fence fabric in the trench, backfill and compact the soil so that the sediment fence will remain in place if firmly pulled.

How to install a sediment/silt fence

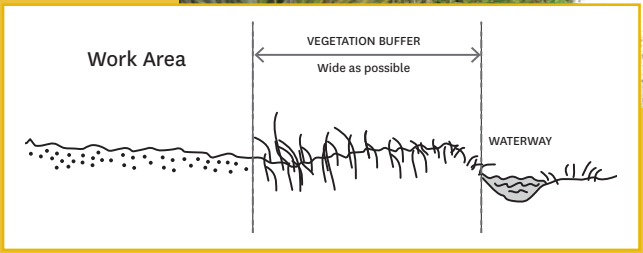
Make sure you install your sediment/silt fence in the right place and in the right way.

IMPORTANT: Check for services (buried cables and pipes), BEFORE you start work.

1. Use approved sediment fence fabric, contact your supplier to make sure you get the right product.
2. Install steel 'Y' posts (waratahs) or wooden fence posts 2m apart (or as recommended by your supplier) and drive them to a minimum depth of 400mm. Place safety caps on all your posts.
3. Install wings/returns at either end of the sediment fence projecting up-slope at least 500mm (vertical height) to prevent flow bypass (stormwater running around the fence and leaving your site).
4. Dig the trench line a minimum of 200mm deep and 100mm wide up-slope of the 'Y' posts.
5. Beginning at one end with the first 'Y' post, which is a minimum of 400mm from the ground, thread a HT support wire through the 'Y' posts. For extra strength, you can add a second wire at a height of 150mm above the ground.
6. Secure the fabric to the up-slope side of posts and support wires. Fasten with wire ties, heavy-gauge wire staples or gang nails. Continue to fasten fabric to wire with wire ties or fastening clips at 150mm intervals.

Once all work has finished on site, and the site is completely stabilised, ensure the fence and all materials are removed and recycled or disposed of correctly.

Vegetation buffers



Vegetation buffers

- Don't clear any more vegetation than you have to.
- A vegetation strip (buffer) will help reduce the amount of dust and sediment generated and filter out sediment from runoff.
- Make the buffer as wide as possible along open drains, swales or waterways to trap sediment runoff from site.

NATIVE PLANTS CAN HELP PROTECT BY:

- Providing shade
- Maintaining stream temperatures
- Reducing weeds
- Preventing erosion
- Reducing flooding
- Providing wind breaks
- Providing food and a place for wildlife to live in and move through
- Stopping mud and runoff reaching the rivers and streams.

For links to useful information on plant lists and protected trees in Canterbury, see page 59 at the back of this guide.


GEO-TUBE


SET UP


START DEWATERING


CARRY OUT REGULAR CHECKS

Dewatering

Dewatering refers to pumping water out of a hole or excavation. If in doubt – Stop and Shout! Take the time to plan and use the right dewatering system and remove the sediment/silt before entering stormwater, streams or rivers*.

IMPORTANT!

Contact your local and/ or regional council **before you start any dewatering to gain the correct approvals or find out what is permitted or needs authorisation/consent.*

Dewatering can be done in one of three ways: wellpointing, using an existing bore, or direct pumping.

WELLPOINTING (SYPHONS)

Wellpointing involves installing a number of small perforated pipes (syphons) around the area to be excavated and to a depth greater than the intended base of the excavation. The syphons are connected to a larger pipe and water is pumped out to lower the groundwater level around the excavation area.

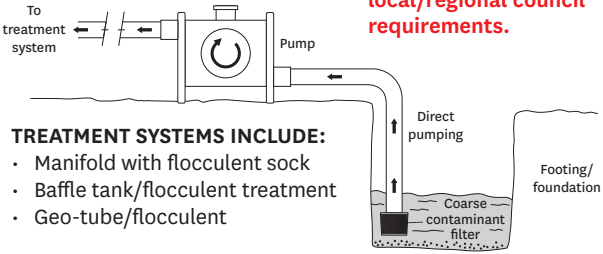
Water from a wellpointing system usually runs cleanly after an initial burst of dirty water at the start and is best used where groundwater is high. However, it is not the best method for stormwater or a burst pipe. Wellpointing requires planning and may require a specialised contractor to carry out the work.

SPEAR SYPHON SYSTEM

BAFFLE/SETTLING TANKS

DIRECT PUMPING

DISCHARGE must meet local/regional council requirements.



TREATMENT SYSTEMS INCLUDE:

- Manifold with flocculent sock
- Baffle tank/flocculent treatment
- Geo-tube/flocculent

DIRECT PUMPING

Direct pumping involves placing a pump in the base of the hole or excavation area and pump the water out. This is an inexpensive and efficient method of pumping water from a hole. Dirty water can be pumped back into the trench or excavation until it runs clear. This can be useful when pumping starts.

WARNING: The pumped water is usually very dirty and needs to be carefully treated to remove the dirt before it reaches the stormwater kerb and channel or a waterway, see diagram opposite for treatment options.

EXISTING BORE (WARNING: THIS IS THE LEAST PREFERRED OPTION AND COULD PERMANENTLY DAMAGE YOUR BORE)

Using an existing bore is a similar method to wellpointing, except the bore is already established and the water should run very cleanly from the start. However, the bore must be close to the proposed excavation area and be a similar depth if the bore is to be effective.

REMEMBER to contact your local council before you start any dewatering from your worksite into a stormwater network.

WORKING WITH CONCRETE

PLEASE DO NOT pour concrete or asphalt wastewater into gutters, drains or stormwater sumps.

Working with concrete and asphalt wastewater

If in doubt – Stop and Shout! Take the time to plan and use the right system.
Contain ALL wastewater including conrete & acid washwater and remove it correctly.

Concrete wastewater is toxic. If it reaches streams and waterways, it will kill fish and plant life. Dilution is not an option. It would take 1 million litres of water to dilute 1 litre of alkaline wastewater back to a safe pH level of 6–7. Acid washwater is just as harmful. Instead, deal with it by following these four easy steps.

1. **Check** – weather forecast. When possible choose a dry day.
2. **Contain** – the washwater. Make a bunded area at the base of your worksite.
3. **Capture** – all washwater on your worksite in the bunded area.
4. **Clear** – the bunded area by pumping the washwater into a container (1000 litre cube or similar).

Note: All washwater must be handled and disposed of by an approved liquid waste handler.
For more information, go to our website www.bpg.co.nz (use the QR code below).

Scrape up any remaining dry sediment and dispose of it with other clean/hardfill.

Use a similar approach to handle asphalt runoff and waste. Contact your concrete/asphalt supplier or regional council if you need more information.

REMEMBER to obtain a *Wastetrack* receipt for all washwater taken off site.

CONTAINED WASH SYSTEMS

Paint washwater

If in doubt – Stop and Shout! Take the time to plan where to store materials. Have the right equipment and procedures in place to clean your brushes and rollers.

Trade Painters have four options for dealing with paint washwater:

1. **Contained wash system** – buy, hire or build your own
2. **Trade waste licence** – you will also need a pre-treatment system – discuss this with your local council
3. **Brush and roller cleaning service** – check our website www.bpg.co.nz for further details
4. **Washwater drop-off contract** – check our website for further details.

- Remove excess paint from brushes, rollers and trays before washing.
- Keep paint and washwater away from hard-sealed surfaces leading to gutters, stormwater drains and waterways.
- Return unused/left-over paint to your paint supplier or take it to your nearest council Eco-Depot.

PLEASE DO NOT pour paint or paint washwater into gutters, drains or stormwater sumps.

PLASTER WASHWATER AND WASTE

Plaster wash system

1. Wash/clean up
2. Settle (overnight)
3. Separate (clear water from solids/sludge)
4. Reuse (clear water for new mix)

WARNING: Incorrect and unlawful disposal of solid or liquid waste may result in:

- Loss of accredited status (and future work) by your main contractor
- A fine or prosecution.

PLEASE DO NOT pour plaster or plaster washwater into gutters, drains or stormwater sumps.

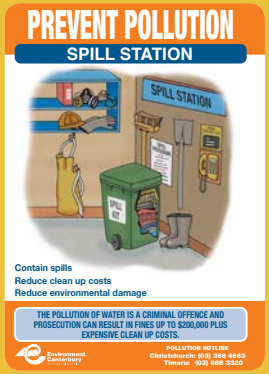
Plaster washwater and waste

If in doubt – Stop and Shout! You need to correctly dispose of waste plaster, grout and other textured finishes, just like other trade waste and washwater.

Here are a few options to consider:

- **Scrape off waste** from tools and into a bucket or waste skip then sand off remaining hardened waste before you start work the next day.
- **Use two or more buckets** to wash tools and containers then leave overnight to settle. Use settled water the next day to make up your next batch of product and scrape out any sludge waste into another container for disposal. See our website www.bpg.co.nz for more information.
- **Use a contained wash system** available from trade or paint stores. Dispose of any unused washwater correctly.
- **A trade waste licence** is available for larger businesses. Contact your local council for more details.

- **Blue** spill kits for general spills.
- **Yellow** spill kits for chemical spills.
- **Red** spill kits for oil/fuel spills.



Spill management

If in doubt – Stop and Shout! Take the time to plan where materials are stored. Have the right equipment and procedures in place to deal with any spills as soon as they happen.

Have a spill response plan and a spill kit on site. Make sure everyone on your site knows where they are and are trained to use them.

1. Be safe

- Identify the source
- Wear protective equipment.

2. Stop the source

- Turn off the tap or valve or plug the leak
- Roll the container so the hole is on the top.

3. Protect the stormwater

- Block access to stormwater drains or unsealed surfaces
- Contain the spill with suitable material.

4. Notify

- Contact your supervisor
- Inform Environment Canterbury's Pollution Hotline 0800 76 55 88.

5. Clean up and dispose responsibly

- Do not hose or sweep the spill down a stormwater drain
- Call your disposal contractor to remove spilt material and equipment.

6. Restock and review

- Replace materials and equipment
- Review the incident. (How can you stop it happening again?)

CONTAINED FUEL STATION

BUNDED FUEL TANK

If in doubt – Stop and Shout! Take the time to plan where to store fuel. Have the right equipment and procedures in place to deal with any spills as soon as they happen.

FIELD REFUELLING STATION

If you make a dirt bund it must have a protective liner.

- **Have a spill kit and response plan** on site and know how to use it.
- **Choose a refuelling area at least 20m** away from any waterways, gutters and drains, then tell people only to refuel in that area. Place the fuel container(s) (cans or bowser) inside a bund that is big enough to hold 110% of all fuel stored on site.
- **Use drip trays** or an absorbent mat to catch any spilled fuel.
- **Check the bund weekly,** and before and after any rain. If the bund fills with rain water, empty it. If any contamination is present, it must be removed by a waste disposal contractor.

BUNDED AND SEALED STORAGE AREA

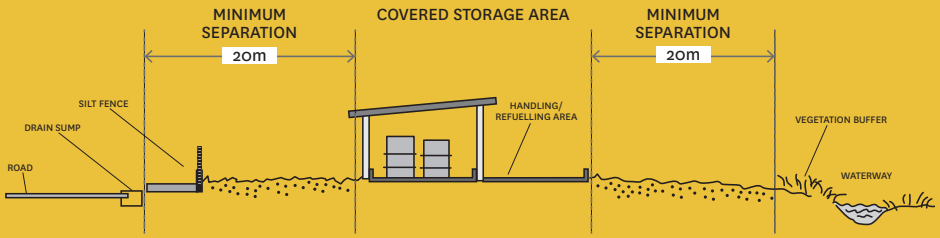
Storage of materials

If in doubt – Stop and Shout! Take the time to plan where to store materials. Have the right equipment and procedures in place to deal with any spills as soon as they happen.

GOOD STORAGE PRACTICES ARE TO:

- **Have a spill kit on site** and train your staff how to use it
- **Store liquids** within secondary containment
- **Store substances:**
  - away from stormwater drains and waterways
  - on an impermeable surface (e.g. concrete)
  - under cover
  - secure against vandalism/theft
  - away from high traffic areas
- **Label** all storage containers
- **Check the above regularly** especially before and after any rain.

STORAGE AND HANDLING DIAGRAM



For more information, go to www.epa.govt.nz

Use our QR code for further advice.

Handling of materials

If in doubt – Stop and Shout! Take the time to plan where to store materials. Have the right equipment and procedures in place to deal with any spills as soon as they happen.

GOOD HANDLING PRACTICES ARE TO:

- **Have a spill kit** on site and train your staff how to use it
- **Allocate** and mark loading/unloading areas away from drains, gutters and waterways
- **Use drain covers** if moving materials/liquids near drains or waterways (e.g. drain covers)
- **Contain leaks and spills** during transfer.
- **Use covered areas** for loading and unloading
- **Check and maintain** equipment regularly and before and after any rain.

WASTE MANAGEMENT PLANNING

Most favoured option

Reduce — lowering the amount of waste produced

Reuse — using materials repeatedly

Recycle — using materials to make new products

Recover — recovering energy from waste

Landfill — safe disposal of waste to landfill

Least favoured option

Waste management planning
(recycling and clearing your site)

Manage your waste and save some money! Create a waste management plan (WMP).

Think about what kind of waste you will be producing and how you can recycle, divert or dispose of it. Set yourself a challenge to reduce the waste you send to landfill by 10% every month.

JUST FOLLOW THIS SIMPLE GUIDE

- **Reduce** the amount of materials you start with. Buy only what you need.
- **Reuse** the materials you have on site. Anything you can reuse is one thing less to buy.
- **Recycle** what waste you can. Buy materials that you can recycle and divert waste from landfill.
- **Landfill** waste is the most expensive option and should be your last resort.
- **Cover** your bins to prevent stormwater contamination.
- **Earn some money.** Some wastes, such as scrap metal, can be sold on as a resource.

Set up ways of separating your waste on site. Sort your waste into separate bins rather than throwing everything into one skip. There are companies that will provide the bins and collect your waste. Go to www.bpg.co.nz for more information.

WARNING: Burning or burying demolition or construction waste is prohibited and can result in a fine or prosecution.

HAZARDOUS WASTE DISPOSAL

Hazardous waste disposal

If in doubt – Stop and Shout! Stop work immediately if you think or are sure you have found any of the following types of waste on your site:

ASBESTOS WALL BOARD

For more information visit
www.asbestosaware.co.nz

STOP & CHECK:

- **Asbestos**
- **Waste oil**
- **Contaminated soil**
- **Biohazards**

CHECK & DISPOSE:

- **Treated timber**
- **Household waste**
- **Demolition waste**
- **Old fridges/heat pumps**

If you find any of these wastes, contact your site supervisor or the Pollution Hotline **0800 76 55 88** to best manage the hazardous waste and then contact a removal expert to help remediate the risk.

If you find any of these wastes, refer to the site specific environmental management plan (EMP) for the correct handling and disposal methods.

Go to our website for further information **www.bpg.co.nz** or call us on **03 353 9007.** If phoning from outside Christchurch, call **0800 32 46 36.**

WARNING: Burning or burying any of the above wastes is prohibited and can result in a fine or prosecution.

Useful websites and contacts

CCC: WATERWAYS, WETLANDS AND DRAINAGE GUIDE
www.ccc.govt.nz
Christchurch City Council: 03 9418 999

STREAMSIDE PLANTING GUIDE
www.ccc.govt.nz

ENVIRONMENT CANTERBURY
Pollution Hotline: 0800 76 55 88

TO CHECK FOR A CONTAMINATED SITE
Environment Canterbury's Listed Land Use Register (LLUR)*
llur.ecan.govt.nz

HISTORIC PLACES TRUST
www.historic.org.nz

EROSION AND SEDIMENT CONTROL
www.ecan.govt.nz

ENVIRONMENT CANTERBURY
Consent applications
www.ecan.govt.nz

ASBESTOS AWARE
www.asbestosaware.co.nz

Please note that not all contaminated sites are on the Listed Land Use Register.

Disclaimer

Environment Canterbury (ECan) endeavours to ensure that the information in this publication is accurate and current. However, it does not accept liability for any error or omission.

The information in this publication is intended to cover the best possible environmental management practices, systems and advice that Environment Canterbury has access to. However, the information is provided as general guidance only and is not intended as a substitute for specific advice. Practices, systems and advice may vary depending on the circumstances applicable to your situation. The information may also be subject to change at any time without notice.

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Te Mana Haumanu ki Waitaha

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Rebuilding Infrastructure

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MAHI HAUMARU AOTEAROA

IECA
International Erosion Control Association
AUSTRALASIA

SITE SAFE

Fletcher

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SAFETY SOURCE

NZ ARMY
NGATI TUMATAUENGA

Builders Pocket Guide

Practical advice on managing worksites and the environment

This guide has been produced by Environment Canterbury for those carrying out and regulating land-disturbing activities. It aims to help them reduce the adverse environmental effects of development.

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