A guide to minimising the effects of residential land repair

This guide will assist property owners who are undertaking small scale residential land repair works. It includes techniques that can be used to minimise the effects on surrounding property owners and the environment.

Planning your repair works

Before you start your property's land repair works, take the time to plan what work you are going to do and how you're going to do it. This guide will provide you with an understanding of what you need to consider before undertaking your works. If you need help with your property's land repair works, consider engaging a land repair specialist to manage and undertake the work on your behalf.

Preconstruction and planning

Take the time to plan your land repair works so you can minimise future issues and delays. Run through the Builders Pocket Guide www.bpg.co.nz/1.html for more tips about what you need to consider before you start your works.

Neighbours

Get in touch with your neighbours before you start your repair works and let them know what you will be doing and when — especially if the work involves noise, dust or vibration. If you are not carrying out the work yourself, you may wish to provide them with an on-site contact phone number for the contractor.

Health and safety

If you are undertaking the works yourself, make sure you take all the necessary precautions to ensure your safety. If you are engaging a land repair specialist, the contractor will be responsible for meeting all health and safety requirements. See the Builders Pocket Guide for more information www.bpg.co.nz/health-safety.html.

Underground services

Before you start your land repair work, check the location of underground services within your property.

The Christchurch City Council (see contact details below) may be able to provide you with information about water, stormwater and sewer pipes.

For details about the location of telephone, internet and power cables, you should contact the appropriate utility company. See the Yellow Pages for contact details.

Land contamination

Existing land contamination on your property is not always observable. For more information on steps to take before carrying out your works, and what to do if you discover contaminated material refer to the Builders Pocket Guide www.bpg.co.nz/3.html

Refer to the contaminated land repair guide at www.ccc.govt.nz/landrepair

Environment Canterbury Regional Council
Kaunihera Taiao ki Waitaha

Christchurch City Council

Minimising the effects of your repair works

General earthworks

If earthworks are not managed properly, it can result into sediment loss to waterways, groundwater contamination and dust production.

To prevent sediment entering waterways and to avoid groundwater contamination, see the tips and links to further information below:

- When possible, carry out earthworks in dry weather conditions.
- Minimise the amount of vegetation removed adjacent to waterways www.bpg.co.nz/veg.html
- Install sediment control devices around waterways and stockpile areas before starting work – to prevent sediment run-off into waterways – by using silt bags, hay bales or silt fences www.bpg.co.nz/fences.html
- Keep machinery away from stream banks and out of waterways www.bpg.co.nz/refuelling.html
- Protect stormwater drains and grates from sediment run-off by using silt socks or bunds www.bpg.co.nz/sump-protect.html
- Backfill excavated areas and stabilise the site as soon as possible.
- Cover stockpiles to prevent sediment run-off.
- Limit areas of excavation to above the existing ground water level where possible.
- For further information check out Environment Canterbury's Erosion and Sediment Control Guide for Small Sites and the Builders Pocket Guide www.bpg.co.nz

Riparian areas

Riparian areas are the narrow strips of vegetation located adjacent to a waterway. Land repair works adjacent to riparian areas need to be managed carefully as these areas provide important habitat for a variety of animal species. For more information visit www.ecan.govt.nz/publications/General/RiparianZonesWetlandsE0470.pdf

Care must be taken to ensure that your works do not result in the destruction of vegetation, erosion of the banks and discharges of sediment into water. If you need to undertake works in riparian areas, take care to minimise the amount of vegetation disturbed and when replanting, choose plant species which provide habitat for native animal species. For more information visit www.ccc.govt.nz/cityleisure/parkswalkways/environmentecology/streamsideplanting/index.aspx.

Dewatering

Dewatering is the process of pumping water out of an excavated hole. Some land repair work may require dewatering before land repairs can be carried out. Where dewatering occurs near a waterway, the pumped out water needs to meet a high standard before it can enter a waterway. Care also needs to be taken to prevent erosion of stream banks. To minimise adverse effects, follow the tips below:

- Where possible, carry out works in dry weather conditions to minimise the volume of dewatering water produced.
- Minimise vegetation and tree disturbance.
- Protect stream banks from erosion. Install bank protection, using sacks or tarpaulins along stream banks and disperse any clean/treated dewatering water over the sacks/tarpaulins to ensure scouring of the bank is avoided.
- Avoid discharging your dewatering water directly to a surface water body. Options for managing your dewatering water include:
  - Discharging dewatering water back into land.
  - On sites with good soil drainage, direct any dewatering water into an excavated hole, located away from your works area. This method allows the works to be carried out in dry conditions and avoids sediment discharges into surface water.
  - Capturing dewatering water and settling out sediments before discharging into surface water.
  - Pumping dewatering water back into land is not a feasible option for sites with poor drainage or sites with a high water table. For these sites, dewatering water will need to be captured and sediments settled out before any discharge to surface water can occur. See the options below:
    - Use large containers to capture all of the water you have pumped out and allow the water to rest so that the silts and sediments drop out of the water column and settle on the bottom of the container.
    - Pump out the clear water from the top of the container either back onto land, or into the waterway.
    - Dispose of the material in the bottom of the container back onto the work site away from waterways.

Dust

Wherever practical to do so, limit dust. If possible, carry out earthworks in calm conditions. If you start to notice dust blowing around your work site, consider the following measures:

- Use sprinklers or a spray nozzle on your garden hose and dampen down the earthworks area to minimise dust.
- Replant or stabilise the earthworks area as soon as the earthworks are completed.
- Cover soil stockpiles with tarpaulins, plastic sheeting or geotech material.
- Use digger buckets to smooth down larger soil stockpiles.
- Do not place materials or earth stockpiles under tree driplines (beneath the tree branches), as the tree canopy can channel rainfall into a concentrated area. Stockpiles can also affect the roots of trees, and the branches/canopy can become damaged while placing or removing materials. In addition, you may disturb bird nesting, feeding and roosting areas.

Noise

To minimise noise nuisance to surrounding neighbours use low noise machinery and equipment wherever possible. Work involving noisy equipment should be limited to Mondays to Saturdays between the hours of 7am and 5pm and should not be carried out on Sundays or public holidays.

Vibration

If it is necessary to use machinery and construction methods resulting in ground vibration, this should be undertaken for short periods of time only. You may wish to let your neighbours know in advance when this will be happening.

Traffic and access

If your repair works will involve heavy vehicle movements, consider how these vehicles will safely access the site and any impacts on the road or footpath outside your property, for example:

- Controlling / monitoring the vehicle crossing area for pedestrian safety (especially if you live near a school).
- Keeping the road area (including vehicle crossing area and affected footpath) clear of obstacles / hazards where possible.
- Repairing any damage to the road berm or footpath after the works have been completed.

Material disposal

Any unsuitable excavated material must be disposed off-site to an approved dumpsite.

www.ccc.govt.nz/homeliving/rubbish/ecodepotstransferstations/index.aspx

www.ccc.ecocentral.co.nz/services/ecodrop

If evidence of contaminated soils, such as coloured, stained soils or odorous soils, are found during the works then you should stop work and contact the Council's environmental health officer for advice (contact details below).

Protected trees

Land repair works involving either excavating or filling material near valued vegetation such as protected trees can damage or even kill the vegetation. Special care needs to be taken when working near vegetation or trees that you would like to keep.

Refer to the land repair near trees guide at www.ccc.govt.nz/landrepair

Ecological effects

Consider the ecological impacts of your works before you commence land repair. See the Builders Pocket Guide www.bpg.co.nz/4.html

Archaeological and cultural considerations

Water holds particular significance to Maori, so you will need to consider cultural requirements when working near waterways.

In addition, archaeological material may be uncovered when carrying out land works. If the works disturb or uncover koiwi tangata (human remains) or taonga (treasured objects), you should stop work and contact Environment Canterbury, the local Upoko Runanga and Ngái Tahu for further advice. For more information on what to do in these situations, refer to the Builders Pocket Guide www.bpg.co.nz/2.html

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PO Box 73014, Christchurch 8154
Telephone 941 8999. Facsimilie: 03 941 8267
Or visit our website: www.ccc.govt.nz

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