

Desilting dams guideline



Part 1

1.1 Introduction

Dams are important resources and should be managed appropriately. They are subject to relevant legislation and associated documents relating to Water Affecting Activities in the Green Adelaide region.

If done correctly, desilting can assist in keeping your dams in good condition. From time to time a dam will need to be cleaned out. Silt and accumulated sediments, along with salts, can build up in dams, affecting water quality and quantity.

This guideline provides information to landholders on understanding dam desilting responsibilities and potential issues.

The information is presented in two parts.

- Part 1 to assist you in understanding and meeting your legal obligations under the *Landscape South Australia Act 2019* (LSA Act).
- Part 2 to provide information about how to undertake the activity to ensure it is consistent with the principles in the Green Adelaide Water Affecting Activity (WAA) Control Policy.

1.2 Understanding your legal obligations

In South Australia, all people have a general statutory duty under the LSA Act to act reasonably and responsibly in relation to the management of natural resources. This includes an obligation to maintain and not damage a watercourse, floodplain, or lake.

1.3 Desilting a dam

This activity is authorised under the Green Adelaide WAA Control Policy, as being able to be undertaken without a permit, if it is done in accordance with the WAA Control Policy principles. However, if the activity modifies the dam in any other way, increases the dam's capacity beyond its original capacity, or involves construction of a new dam, a permit or development approval will likely be required. Contact Green Adelaide for more information.

The conditions for undertaking desilting works on dams can be found in the Green Adelaide Water Affecting Activity Control Policy, and below in Step 2. The policy is available on the Green Adelaide website: greenadelaide.sa.gov.au/discover/water-plans-permits

1.4 Penalties may apply

Undertaking a Water Affecting Activity (WAA) without a permit where a permit is required, breaching of the permit conditions, or breaching the principles of the Green Adelaide WAA Control Policy is an offence under the LSA Act. If you are unsure whether the works you are proposing to do will require a permit, call Green Adelaide for advice before conducting any works.



1.5 How do I use this guideline?

Step 1: Confirm whether your property is in the Green Adelaide region by consulting the map at <https://www.greenadelaide.sa.gov.au/about-us#ourarea> or by contacting Green Adelaide.

Step 2: Does your activity comply with the WAA Control Policy conditions listed below? If yes, you may proceed with your activity in accordance with Section 2 of this procedure.

WAA Control Policy Conditions

A permit is not required for desilting a dam provided it:

- a) involves the removal of unconsolidated material deposited since dam construction or since the dam was previously desilted;
- b) excavated material removed from desilting shall not be deposited within a watercourse, lake or floodplain of a watercourse (104(4)(d), and must be securely stored away from any waterway to ensure it does not return to the waterway. For example, removed sediment must not be deposited on the dam wall or within 20m of the high water level of the dam or the top of the banks of a watercourse.
- c) dewatering of any sediment removed must be undertaken in a manner to prevent discoloured water from returning to the watercourse (104(4)(f). For example, appropriate sediment control measures should be used such as hay bales or sediment fences to manage stored sediment until it is disposed of or reused.
- d) the capacity of the dam is not increased beyond its original size; and
- e) desilting or removal of material from the dam must not result in dam wall/s being modified 104(4)(a).

Note: Desilting a dam **while there is standing water present in the dam, may require a Dredging Permit issued by the EPA.** Contact the EPA on (08) 8204 2004 for more information.

Part 2: how to desilt a dam

2.1 Regular dam maintenance is good practice

Dams require regular inspection and maintenance to prevent costly structural failures and ensure the best possible water quality and quantity is available to be extracted. It is good practice to inspect dams, spillways, and catchments when both full and dry to plan for any required maintenance works. In particular checking for cracking when empty, seepage through the dam wall when full, and scour of spillways. Addressing these issues through silt removal in order to provide good bonding for clay liners is approved under this section.

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2.2 Dams collect and store surface water

Dams are designed to collect and store surface water. In the Green Adelaide region, some dams have failed due to their siting, poor materials, poor construction methods, or lack of adequate design.

Some dams may fail because of leaks due to a lack of impermeable soil or material. Consideration of the initial construction of a dam, such as the siting, size, depth and catchment before undertaking any desilting works is important for its lifespan. For example, a clay liner may have been installed to minimise leakage, or the dam's base level may have been set and constructed above a saline ground water table to avoid salinity issues. Interactions with saline groundwater and surface water have caused dams to turn salty.

It is strongly recommended that desilting be carried out when dams are dry or have been dewatered. There is to be a minimum distance of 20 metres between any waterway and the fuelling site for machinery used to undertake the desilting activity.

If desilting will result in any changes to the dam walls, including slope, a permit will be required prior to works commencing.

To minimise risk it is suggested that an experienced contractor is engaged to help plan and/or undertake any required works or cleaning out of dams.

Help and further information

Green Adelaide

greenadelaide.sa.gov.au/discover/water-plans-permits

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