



Fact sheet

March 2012

Supplementary information for permit applications to interfere with bed or banks of watercourses

Why is this information provided?

This information has been prepared to assist applicants for permits to interfere with bed or banks of watercourses (under the *Rights in Water and Irrigation Act 1914*) to identify issues that may impact on watercourses and identify suitable management strategies to address these.

Why is a permit required?

The health and wellbeing of a watercourse's ecology depend on its bed and banks. The bed and banks define the flow regime for a particular watercourse and provide the environment for local vegetation and fauna to flourish.

Disturbing or interfering with the bed or banks of a watercourse has the potential to alter the flow regime, cause erosion and adversely impact on other users and the local vegetation and faunal communities relying upon it.

When is a permit required?

To protect the local ecology of watercourses, the *Rights in Water and Irrigation Act 1914*, which forms the basis for water resource management in this state, requires persons proposing to interfere with the bed or banks of watercourses to apply to the Department of Water for a permit.

With reference to surface water resources, the department exercises the powers under the Act to grant licences to take water (under section 5C of the Act) and permits to interfere with bed or banks of watercourses in proclaimed or prescribed areas (under section 17 of the Act), and in some cases proclaimed areas (under section 11 of the Act) or non-proclaimed areas (under section 21A of the Act) that are accessed by a road or reserve.

A map of proclaimed surface water areas is available on the department's website.

How can I manage my impact on watercourses?

The following principles provide the framework against which applications for permits to interfere with water, bed or banks of a watercourse are assessed.

Applicants should adopt these guiding principles when preparing permit applications to minimise impacts on watercourses.

Applicants are required to plan their activities to achieve the following key principles. Regulation 4 of the Rights in Water and Irrigation Regulations 2000 requires applicants to provide the department with information that the department requires to assist in assessing a permit application.

Applicants should demonstrate that the key principles have been considered by being able to justify suitable site selection (addressing key principles 1 to 5) and an appropriate work schedule (addressing key principles 6 to 8) when preparing an application for a permit.

Key principles are:

1. Avoid interference or obstruction of the water, bed or banks of watercourses, wherever practicable.
2. Dams on watercourses are discouraged, where there are viable off-stream alternatives.
3. Reduce watercourse crossings to a minimum and consolidate watercourse crossings with other infrastructure, where practicable.
4. Avoid permanent pools, bends or high velocity sections of watercourses.
5. Minimise disturbance to riparian vegetation, riparian zones and flood plains.
6. Mitigate the risks or impacts from site disturbance, including erosion, sedimentation, weed introduction, vegetation clearing, loss of habitat and changes to ecological values.
7. Prevent the discharge of pollutants and materials into watercourses.
8. Rehabilitate or revegetate the site following construction to maintain or improve riparian zone function.

What management strategies can I adopt?

Where interference of the bed or banks cannot be avoided, the objectives and strategies for managing that interference are provided below.

Diversion of watercourses

Objective: Diversion of watercourses should generally not be undertaken. If unavoidable, impacts from the altered flows on the upstream and downstream environment should be minimised.

Strategy: Construction or maintenance works should be scheduled for the dry season when pumping and diversion of water flows are at a minimum. Excessive ponding of water upstream of the works should be avoided. Measures should be implemented to ensure water quality and aquatic fauna are suitably managed.

Native vegetation management

Native vegetation management is addressed under the *Environmental Protection Act 1986*. The Department of Environment and Conservation can provide advice on where environmentally sensitive areas are located. Clearing in environmentally sensitive areas must be undertaken in accordance with the *Environmental Protection Act 1986*. In non-environmentally sensitive areas, clearing may occur in accordance with a permit to interfere with bed and banks issued under the *Rights in Water and Irrigation Act 1914*.

Objective: Clearing of vegetation must be kept to the minimum required for safe and efficient operations.

Strategy: Where clearing is required, any shrubs or trees removed should be spread across the rehabilitated area to provide physical protection and a possible seed source, and inhibit both wind and wash erosion.

Topsoil management

Objective: Minimise disturbance to topsoil. Topsoil is a valuable seed bank of native species, and also has beneficial microbiological properties.

Strategy: Should the removal of topsoil be required during the works it should be saved for future rehabilitation purposes. Topsoil and subsoil should be stockpiled separately and it should not enter the watercourse. Topsoil should be replaced immediately following completion of construction works to ensure the biotic viability of the soil is maximised. Where stones are present in topsoil, they should be retained as they reduce erosion and wind velocities at ground level and act as a trap for seeds assisting in their survival.

Ripping

Objective: Minimise the amount of ripping required following completion of works.

Strategy: Limit the size of access tracks into the riparian zone, thus minimising the amount of ripping required following completion of the works. Bare and compacted areas such as stockpile area, works areas, tracks and other surfaces that have become compacted during construction activities are to be ripped to enable the area to return to its original condition. Care should be taken to avoid trees and shrubs as the ripping may cause damage to root systems.

Erosion and sedimentation control

Objective: Erosion and sedimentation risks must be minimised or controlled to minimise impacts on the watercourse and its water quality.

Strategy: Slopes must be kept stable at all times to ensure that sediment is not delivered to the watercourse. Erosion control methods such as revegetating disturbed slopes, use of diversion drains, sediment traps or contoured or stabilised embankments may be required.

Site rehabilitation

Objective: Rehabilitation should be undertaken to return the site to a condition that is similar or improved compared to its original condition.

Strategy: Rehabilitation requirements may include stabilising of slopes, spreading of stockpiled topsoil, planting of local, native vegetation, seeds or seedlings and undertaking follow-up weed control or erosion and sedimentation control until the site has been suitably re-established.