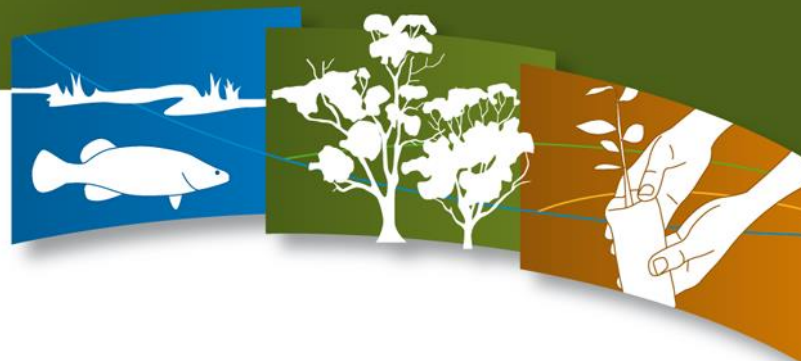


Works on Waterway Guidelines

Extractive Industry



Introduction

An extractive industry is defined as the extraction or removal of stone from land if the main purpose of that removal is for:

- The sale or commercial use of the stone; or
- Use in construction, building, road or manufacturing works.

Stone includes gravel, sand, building stone and clay.

Approval is required from the CMA where the extractive works will interfere with the bed or banks of a waterway, or within the floodplain inundation zone, where the CMA has floodplain management powers.

Approval may be required from the Department of jobs, Precincts and Regions (Earth Resources Regulation) and your local government authority for the removal of stone from any land. It is recommended you contact the relative authority to determine what permits are needed, before undertaking any works.

Generally, extractive works within waterways may only be permitted if they are a component of a regional waterway management strategy, or it can be demonstrated to the CMA that there are clear net benefits to the environment or stability of the waterway.

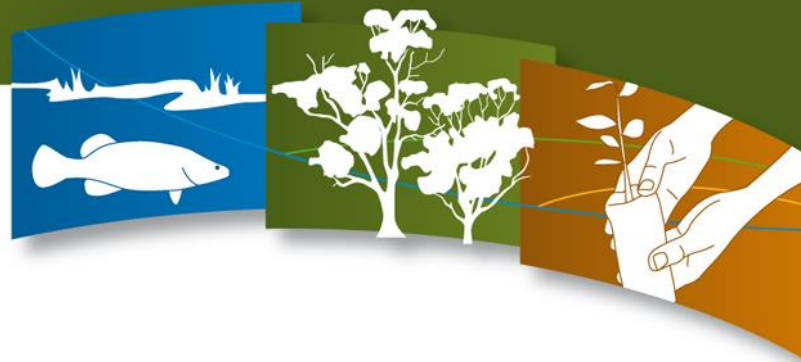
Potential Waterway Impacts

The potential issues associated with sand and gravel extraction within waterways include the following:

- Acceleration of erosion and sedimentation.
- Deepening the bed may trigger headward erosion or bank erosion.
- Altered flow regime during and after the works.
- Loss of habitat for in-stream biota.
- Loss of gravel beds for fish breeding.
- Disturbance during fish breeding season.
- Loss of vegetation on stream banks.
- Loss of large woody debris.
- Potential for the stream to change course.
- Potential to alter floodplain flows.
- Potential for contaminants from machinery to reduce water quality.
- Increased sediment runoff.

Works on Waterway Guidelines

Extractive Industry



In view of the above impacts, the in-stream removal of sand and gravel is now discouraged in Victoria by general CMA policy, which is consistent with the approach in New South Wales by the Department of Primary Industries.

Assessment Criteria

The factors to consider with these applications are described below. Reference should also be made to a copy of the applicant's Work Plan and Rehabilitation Plan submitted to Earth Resources Regulation, where appropriate.

Regional Strategies

The initial consideration is whether the works are consistent with Regional Strategies. Where extractions are not specifically mentioned in regional strategies, then the works may be able to proceed subject to the need for the works being clearly demonstrated and the works being undertaken in an acceptable manner.

Location and Extent

The location and extent of any approved extraction within a waterway will be determined on a case by case basis, having regard to geomorphological processes.

Methodology

- The preferred approach is for the extractions to move upstream and occur above the low flow water level.
- The rehabilitation should be undertaken concurrently with the works. Where buffer zones are required these should be established before the extractions commence.
- The finished slopes must be stable. Maximum slopes at the upstream and downstream of the site to be 1(v):10(h), with side slopes of 1(v):3(h).
- Works are to be planned to avoid vehicles tracking through the stream.
- Effective measures are to be specified to minimise turbid water leaving the site from access tracks and the works area.
- No machinery with defective hydraulics that would discharge fluid is permitted in the stream environment.

Site Rehabilitation

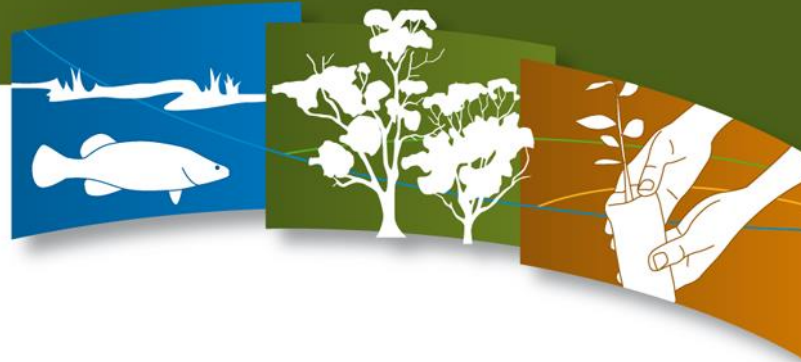
The works site is to be rehabilitated. For minor extraction works the rehabilitation plan is covered by the standard permit conditions. For large scale works for which Earth Resources Regulation issue a permit, information is required showing:

Works on Waterway Guidelines

Extractive Industry



NORTH CENTRAL
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- Revegetation plan using native indigenous plants.
- Variability in physical characteristics.
- Pool/riffle sequence restored.
- Provision for fish passage.
- Large woody debris replaced.
- Access tracks are scarified and topsoiled.
- Maintenance program is defined for a period of 2 years to monitor site and ensure vegetation becomes established, and weed invasion is suppressed.

Overall approval for extraction will be dependant on there being a clearly established net environmental gain.

References

The following publications by Earth Resources Regulation provide a comprehensive background for Extractive Industries:

- Extractive industry work plan guideline (2018)
- Code of practice for small quarries (2010)