

Clarrie Hall Dam spillway capacity upgrade

Community Newsletter No. 3



Council recently gained environmental approval to proceed with an upgrade of the Clarrie Hall Dam spillway.

The upgrade will increase the spillway capacity to ensure the dam can safely pass extreme flood events, in accordance with the requirements of the NSW Dam Safety Committee.

Environmental assessment

Approval was determined under Part V of the Environmental Protection & Assessment (EP&A) Act, based on a Review of Environmental Factors (REF) submitted by Council's Water Unit.

The REF was undertaken by NSW Water Solutions. It proposed measures to mitigate the potential environmental impacts associated with constructing and operating the spillway upgrade.

The REF was placed on public exhibition in September and the community was invited to provide submissions on the proposal. Submissions received raised issues such as adequate protection for significant flora and fauna species, best-practice weed control, and landscaping appropriate to the site.

Additional requirements

Based on the submissions and an assessment undertaken by Council's Development Assessment Unit, a number of additional conditions were

imposed by the REF determination to ensure any possible impacts are mitigated. They include:

- Implementation of a Construction Environmental Management Plan (CEMP) to ensure impacts from dust, noise, traffic and working hours are controlled.
- Measures to avoid air and water pollution and minimise the risk of loose or disturbed material being washed downstream during construction.
- Limiting vegetation clearing to designated areas only and ensure a registered spotter/catcher is present during tree removal operations.
- Restricting the dropping of dam water level to periods outside the comb-crested jacana's breeding season to avoid impacts to this threatened species.

The full list of conditions can be viewed on Council's website (see below).

Works required for upgrade

Based on the concept design, the works will comprise:

- Widening the existing spillway crest from 22m to 35m.
- Raising the existing spillway inlet walls and embankment parapet wall by 2.0m.

Dam fast facts:

- Location: Doon Doon Creek, a tributary of the Tweed River, 4km south-west of Uki.
- Dam investigation began in 1974.
- Dam opened in 1983.
- Dam type: Rock-filled embankment lined with concrete on the upstream face and with a concrete spillway through the left abutment.
- Useable storage volume: 15,000 megalitres.
- Dam embankment height: 45m.

Dam Spillway Capacity Upgrade continued . . .

This design was selected as it was the most cost effective option, while minimising environmental impacts. It requires no excavation into the adjoining rock face and therefore removes the need for blasting. In addition, it requires less vegetation removal than other options assessed.

Why does the spillway need to be upgraded?

Clarrie Hall Dam is extremely safe for day-to-day operations and can pass floods many times greater than the largest flood on record. However, the dam needs to be upgraded to meet the new standards established by the NSW Dams Safety Committee, to pass floods which might occur in extreme rainfall events. Such events have an extremely small probability of occurring.

When Clarrie Hall Dam was commissioned in the early 1980s, it complied with engineering standards of the day. Since then, the ability to predict rainfall and understand extreme weather patterns has improved. The spillway upgrade to meet the Dam Safety Committee's requirements must be completed no later than 2018.

Next steps

Council's consultant will now proceed with a detailed design of the works, taking into account all the conditions imposed by the REF determination. The detailed design is expected to be completed in mid to late 2012.

In parallel, Council will begin the procurement of construction contractors. It will begin in early 2012 with an Expression of Interest process and will conclude with tenders in late 2012.

The spillway upgrade would take approximately six months to construct. Subject to obtaining the necessary approvals, construction would be expected to start in 2013.

Further information

Further information about the spillway capacity upgrade can be obtained from Council's website at www.tweed.nsw.gov.au. Go to 'Our Services', click on 'Water and Wastewater' and then 'Clarrie Hall Dam'.

You can also register your interest in this and other water projects by sending an email to waterTSC@tweed.nsw.gov.au and asking to subscribe to the Interested Parties Register.

