

# WAIMAKARIRI | FLOOD PROTECTION PROJECT

NOVEMBER 2011

## ***Flood warning & emergency evacuation plan: consultation about to commence***

We have been working on the draft Flood Warning & Emergency Evacuation Plan (FWEEP) for the floodplain area between the primary and secondary stopbanks and will soon be consulting with all property owners and occupiers on the floodplain.

The purpose of the FWEEP is to:

- Ensure everyone has good information about flood risks and what might happen in a flood event (including how much warning can be provided and how you should respond to warning messages)
- Provide an opt-in system for people to get a warning from Environment Canterbury's that high flows in the river are expected which have the potential to cause a breach of the primary stopbank system
- Help people to prepare for a flood event and develop their own response plan for their household or property
- Set out procedures for evacuating the floodplain

Shortly we will be sending out an information pack on the draft FWEEP and inviting comment from everyone on the floodplain. This will be followed up with individual meetings with landowners to give you the opportunity to provide feedback and so that we can help you sign-up to the system and prepare a plan for your own household or property. These meetings are planned to start in late November/early December at the downstream end of Coutts Island floodplain and we will move progressively up the floodplain through January to March.

More details of timing and how you can be involved will be included with the information pack to be sent out shortly.

## ***Year one complete - year two underway***



The first year of the WFPP construction programme was completed in May and we are now well underway with Year two of the programme.

Over the past twelve months, we have constructed 3.3 km of new secondary stopbank, upgraded a large portion of the primary stopbank downstream of the State Highway 1 Bridge (including some major earthquake repairs) and placed 7,500 tonnes of rock protection at the northern end of the State Highway, road and rail bridges.

The success of the first year of the project is in no small means due to the cooperation and patience of all the landowners, neighbours and public who have had to put up with construction work on or near their property. We know it has been a difficult period for everyone with the construction work occurring along with the ongoing earthquakes. Environment Canterbury's would like to thank everyone involved for their co-operation.

We are now well underway with Year two of the construction programme. This focuses on protecting the southern abutments of the State Highway, road and rail bridges.

28,000 tonnes of rock is being placed around the bridge abutments as well as along the motorway abutment by the Otukaikino Stream. This rock is entirely sourced from Environment Canterbury's quarry at View Hill near Oxford.

As well as the rock protection work around the bridges, we will also be constructing some small sections of stopbank in the Sawyers Arms Road and Johns Road area. This will complete the secondary stopbank from the airport through to the confluence of the Outkaikino Stream and Waimakariri River. Also this year, we will be doing further upgrades - in conjunction with earthquake repairs - to the primary stopbank downstream of the bridges.

Anyone who is out and about around the regional park area may also see our surveyors at work. For the next three months we are undertaking survey work on the primary stopbanks so that we can confirm the stopbanks meet the scheme design standard and we can design upgrade and rock protection works programmed for years three and four.

*Everything is connected*

## THE 10 YEAR PLAN

The WFPP will take 10 years to complete. The resource consent sets out a specific sequence of works which must be followed to ensure that flood risks are not increasing in other areas of the system. The work programme is:

### The first three years

#### COMPLETED:

'Filling the gaps' in the existing secondary stopbank from the State Highway 1 bridge, up to and including the area at the end of the Christchurch Airport runway.

#### IN PROGRESS - YEAR 2:

Rock protection works around the State Highway 1, Main North Road and rail bridges and at the outlet of the Otukaikino Stream to protect the existing motorway stopbank.

Sawyers Arms Road and Johns Road stopbanking.

Upgrading the primary stopbank downstream of the bridges.

#### YEAR 3:

Upgrading the internal stopbank at the end of Coutts Island Road.

Upgrading three groynes on the northern bank of the river.

### The next five years

- Completion of the secondary stopbank from the airport to just upstream of Scarlett Oak Drive (at the upper end of McLeans Island), including the part removal of Crossbank.
- Upgrading the primary stopbank on the northern side between State Highway 1 and the Eyre Diversion, where necessary to meet the scheme design standard.
- Construction of a ring bank around the Stoneyhurst Timber Mill site at Dickeys Road.
- Upgrading the primary stopbank on the southern side in the areas of Kainga, Christchurch Ready Mix, Fulton Hogan, the historic Engelbrechts breach site and McLeans Island.
- Rock protection works on the northern side in the area between Lorimas Road and the Eyre Diversion.
- Rock protection works on the southern side between the historic Engelbrechts breach site and Crossbank.

### The following years

- Construction of the new Halkett secondary stopbank from McLeans Island to Thompsons Road.
- Completion of rock protection works and primary stopbank upgrades as necessary to ensure scheme design standards are met.

## Contact Us

This newsletter is sent to everyone on our project database. If you know of anyone who should be added to our database, want to change your contact details, or want more information, please do not hesitate to contact us.

#### For more information:

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## View hill quarry

A key component of the flood protection scheme is rock lining of stopbanks, berms and bridge abutments. The rock is used to protect the banks from erosion and scour and to prevent the river flows from attacking the stopbanks and bridge abutments.

Rock for the Waimakariri River (and other rivers in the Canterbury region) is sourced from Environment Canterbury's quarry at View Hill near Oxford. Typically, we need about 8,000 tonnes of rock for routine maintenance and repair work. With the Waimakariri Flood Protection Project, however, there is a need for an additional 200,000 of rock over 10 years. This rock will be used to protect the 'lifelines' across the river, namely the State Highway 1, Old Highway, and Rail Bridge. These bridges are 'lifelines' as they provide transportation routes in emergencies, as well as carrying telecommunication and power cables across the river. The rock will also be used to provide an additional level of protection to the primary stopbank system.

Rock is 'produced' by excavating it from within the quarry site. Soil and unsuitable rock material is removed to allow access to the good quality rock. This is then excavated and sorted in to different sizes. Rock is then transported to where it will be placed in the river. The size of the rock used will vary at different points in the river, depending on the river velocities and scour action expected.

To meet the demand for rock created by the Waimakariri Flood Protection Project, we have had to 'ramp up' rock production at our quarry. New resource consents have been obtained from Waimakariri District Council and Environment Canterbury Regional Council to allow us to increase production. The sediment control system has been expanded to ensure that there are no off-site effects from the quarry and a progressive rehabilitation plan is being put in place. On the site, there is also a piece of native beech forest which has been marked off and will be untouched by the quarry operations.

## Spotlight on Consent Conditions

Environment Canterbury Regional Council has resource consents from the Waimakariri District, Selwyn District and Christchurch City Councils as well as from Environment Canterbury itself. Together, there are over 150 different consent conditions which must be complied with, ranging over a variety of topics including construction methodology, consultation, approvals, ecological effects and archaeological protocols. This 'Spotlight on Consent Conditions' is a regular feature of the newsletter, highlight a different condition each issue.

## This Issue: Making Sure New Stopbanks are fit for purpose

Having completed the first year of the construction programme, it is timely to remember that it's not simply a case of building a new stopbank and then walking away, expecting it to do its job when the time comes. Regular inspections and maintenance work are required to make sure the stopbank does not become damaged in any way and to ensure that any settlement or post-construction issues are fixed. The consent requires a Chartered Professional Engineer to inspect new sections of stopbank every six months - for a two year period following construction. If any deficiencies in the stopbank are identified, Environment Canterbury is required to fix these as soon as possible. After two years, the stopbank is then incorporated in the Environment Canterbury routine operational and maintenance procedures.