

# Land Drainage Recovery Programme

*Reducing the risk of flooding throughout Christchurch City*

## Cashmere Worsleys flood storage basin – project update

### May 2019

The Cashmere and Worsleys Valleys have been identified as good places for a basin that will improve water quality in Cashmere Stream and the Ōpāwaho/Heathcote River, and reduce flood risk to properties around the lower and mid Ōpāwaho/Heathcote.

The first stage of the project is a structure in Cashmere Valley Drain, close to Worsleys Road, which will control when water is stored in the lower part of the valley is currently being constructed. It will hopefully be up and running in by September 2019. This will allow the lower valley to hold up to 500,000m<sup>3</sup> of water, and is designed to provide additional flood protection up to a 1-in-50 year rainfall event. The valley has also been contoured to allow as much sediment as possible to settle out prior to water leaving the valley. This will improve water quality in Cashmere Stream and the Ōpāwaho/Heathcote River.

The second stage of the project will be to construct a dam in the upper part of the Cashmere Valley to provide an additional 300,000m<sup>3</sup> of water. This stage of the project is currently being designed and will soon go through the resource consent process.

### Construction progress

Construction of the control structure on Cashmere Valley Drain commenced in March 2019 and will be completed by September. Once complete this structure will allow stormwater flowing off the hills into the Cashmere Valley to be controlled and stored during periods of heavy rainfall.

The construction of the control structure involves excavation in the existing Cashmere Valley Drain to allow a U-shaped concrete structure to be installed. This will house 2 bottom hinged gates that will be remotely operated once commissioned. Some images of general construction progress are shown below.



Reinforcement for the concrete walls being prepared



Sheet piles in area of main structure

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Completed earthworks adjacent to Cashmere Valley Drain



Stone from collapsed section of drain stockpiled for re-use

## Heritage Drain

The works also require dismantling some sections of the heritage stone lined drain, parts of which had previously collapsed. We are working with Heritage New Zealand and our archaeologists to ensure that the works leave the local heritage in a better state than before.

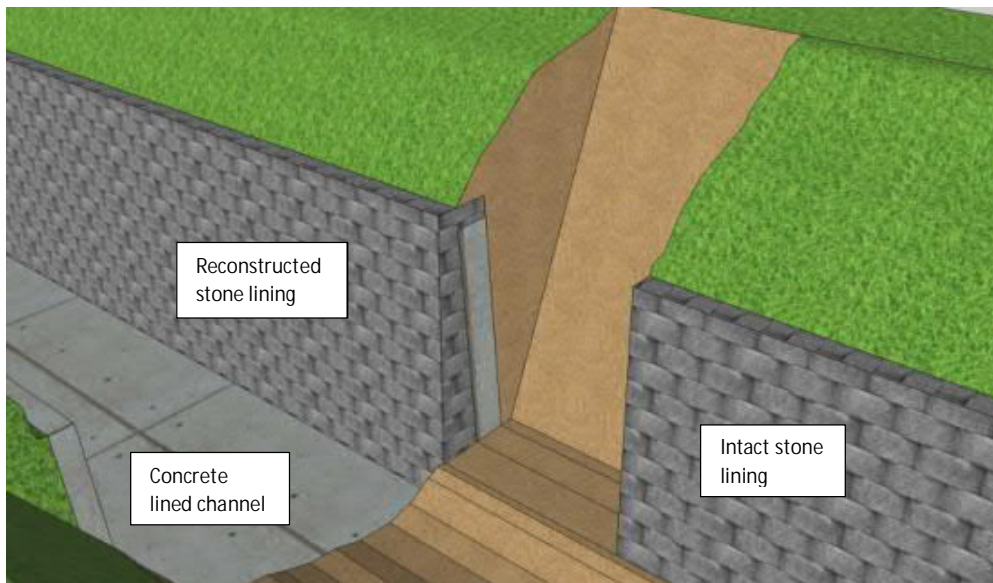
The stones have been removed and stored and the wall will be reconstructed to tie in with the remaining intact stone lining and the new structure. Below are some images showing how the drain looks and diagrams showing how it will be reconstructed.



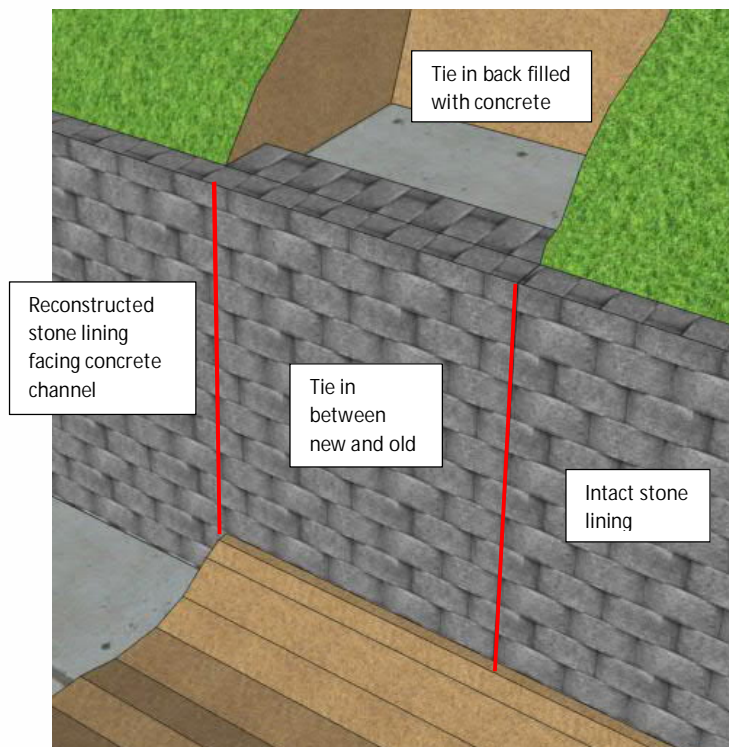
Interface between intact stone lining and area of drain being reconstructed

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Shows connection between intact stone lining and reconstructed channel



If you have any queries or concerns, please feel free to contact the Council using the details below.



[www.ccc.govt.nz/floodmitigation](http://www.ccc.govt.nz/floodmitigation)



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