

# Waimangaroa

## Water Supply Options

*Consultation document for consumers on the Waimangaroa Water Supply*

### Introduction

The community of Waimangaroa has been supplied with water from Conns Creek since the mid 1980s and consists of an intake structure adjacent to the old Denniston Incline. Prior to the Conns Creek intake, from 1954 water was drawn from what is now known as the Supplementary Intake.

The current supply is frequently damaged by high rainfall events, often leading to water outages. There are also considerable maintenance safety risks with the supply and, as an untreated water supply, it also remains on a permanent Boil Water Notice.

Buller District Council, in consultation with the Waimangaroa Water Board, has been investigating a safer, more resilient water supply for the Waimangaroa community, and would now like to put forward three options for the community to consider.

This document has been prepared to give residents and ratepayers in Waimangaroa the opportunity to consider these options before the public meeting on 30 April (see back page). Feedback can then be provided so Council can move forward on this important project.



*Conns Creek intake looking upstream June 2012.*

### Supply upgrade

The Ministry of Health approved CAP funding of \$402,639 in 2014 for the construction of a water treatment plant to provide suitably treated and compliant water for the Waimangaroa community. Preliminary site works for the treatment plant commenced in late 2014.

### Changes to the catchment

In early March 2015 a high rainfall event caused a major slip in the Conns Creek catchment, filling the creek bed and washing away the existing intake. Council engineers and contractors inspected the site and concluded that the intake would most likely need to be abandoned due to site instability.

### Back to the drawing board

Following the slip, Council met with the Waimangaroa Water Board (WWB) to discuss possible options.

Several alternative raw water options, along with the retention of Conns Creek, have been investigated and dismissed as unsuitable for supply.

Council has also investigated closing, transferring or deregistering the existing supply – this is contingent on the provision of an alternate potable water solution, such as rainwater tanks.

Installation of rainwater tanks at 144 locations at \$5,000 each is estimated to cost \$720,000. This option is unlikely to be eligible for CAP funding as this is a non-reticulated proposal.

Under the Local Government Act, Council can only transfer, close or deregister a water supply if the population served is less than 200. Waimangaroa's population exceeds this figure, ruling this option out.

Following further investigations, the options Council is now seeking your feedback on are:

- Britannia bore
- Westport connection
- Conns Creek weir

## Option 1: Britannia bore

Council drilled a test bore into the aquifer on Council road reserve adjacent O'Connors Road in October 2017.

Water samples taken from the test bore confirmed the aquifer had suitable water quality for a potable supply (subject to treatment).

A site for a production bore at the Britannia Track car park site was identified, which is upstream of farming activity. Drill logs indicate that the production bore site should access water from the same aquifer as the test bore site.

### Independent assessment

Following findings from the Havelock North water inquiry, Stantec was commissioned to address concerns and testing around farming activity, historical mining in the area and the expected level of treatment required to provide compliant water for the community.

Several control measures were identified to manage the risk of microbiological and chemical contamination on the raw water source, including a buffer zone around the site. A 12 month water quality monitoring period was also recommended.

### Further consultation

After further consultation with the WWB and neighbouring property owners, the test bore location was rejected due to the impact that buffer zone constraints would have on farming operations.

An alternative production bore location was identified at the Britannia Track car park, which was considered less susceptible to microbiological or chemical contamination. This is located on Council reserve and almost certainly draws from the same aquifer source, being upstream only a small distance. This is the proposed site of the Britannia Bore option.



## Option 2: Westport connection

Another alternative option also identified and investigated is the option to connect Waimangaroa to the Westport reticulated water supply.

This would involve laying approximately 12 kilometres of pipe from Stephens Road, along the Fairdown Straight, and following the railway line from The Pines corner to join into the Waimangaroa reticulation in Newcastle Street. This option would have the benefit of the shortest implementation time of the three options outlined.

The WWB expressed concerns over perceived taste and odour issues in the Westport water supply. The board indicated that these issues, along with the chlorination of the supply, would mean that this option would be unlikely to gain much community support.

Although there has been no formal consultation with



Westport Connection – 12 kilometre, 150mm (6") trunk main from Stephens Bridge to Newcastle Street.

Westport ratepayers, the prospect of a 20% first year rise without any service level increase is also unlikely to have support with this group of ratepayers.



## Option 3: Conns Creek weir

Various locations have been assessed from the confluence of Conns Creek / Waimangaroa River upstream to assess whether a suitable weir location is available to establish a new intake point. The main issue is the depth of the creek bed the further upstream we investigate, as illustrated in the graphic to the right. This makes running a gravity feed pipe from a new weir location difficult as the pipe would have to be laid on the side of the creek, making it as vulnerable to flood damage as the current intake is.

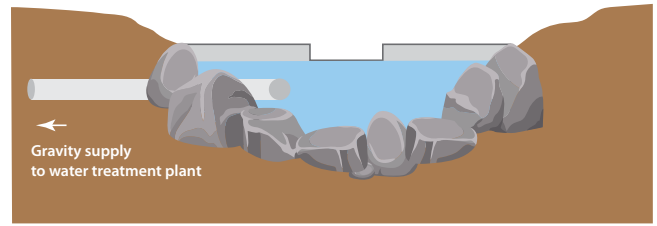
The only suitable weir location found was downstream of the Denniston Incline. This is located at an elevation of approximately 60 metres. The existing weir location is deemed to be unsustainable as a long term option due to vulnerability of the existing intakes and trunkmain.

### Other points to consider

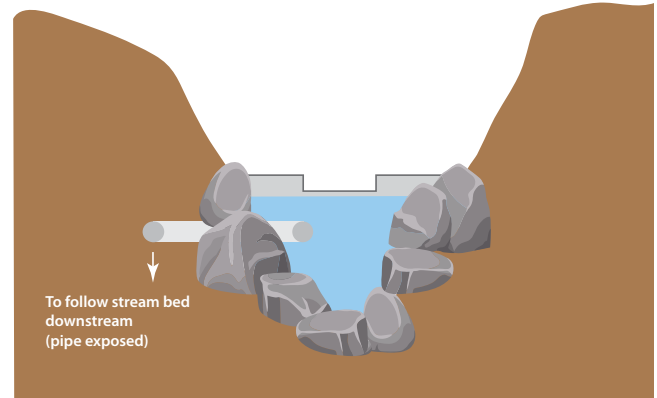
Consideration needs to be given to the following points regarding this option:

- There will not be enough head (pressure) for the system to operate and thus, would still require booster pump to enable adequate pressure within the reticulation (and for fire-fighting)
- A flood could destroy the new intake
- The existing trunkmain is susceptible to breakage and high maintenance costs in future
- The existing trunkmain will need to be replaced within the next 20 years

### DOWNSTREAM PROFILE

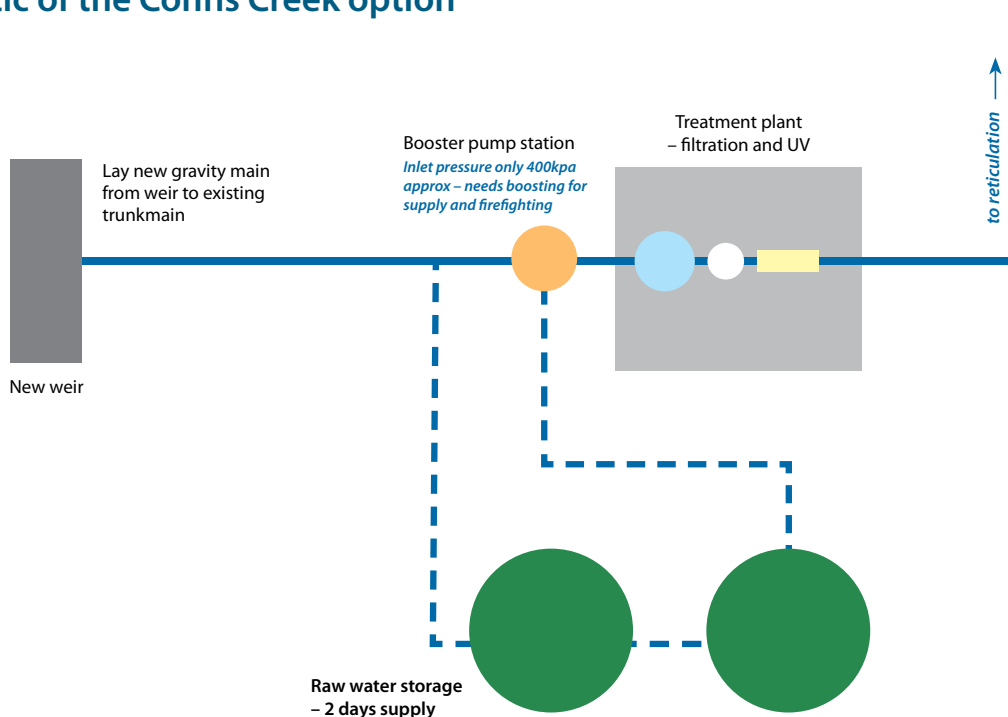


### UPSTREAM PROFILE



- Poor water quality may be experienced during extended rainfall events, requiring the introduction of raw water resulting in boil water notices.

## Schematic of the Conns Creek option



## How do these options stack up against each other?

Assessment of options matrix	Lifecycle cost	Long term sustainability	Water quality compliance	Resilience	Risk	DWS compliance	Total
1. Britannia Bore	4	5	4	5	3	4	25
2. Westport Connection	3	5	5	5	4	5	27
3. Conns Creek weir	3	2	2	2	2	2	13

Grading: 1 – Poor, 5 – Best

## How much will these options cost me?

Rates Comparison	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	27/28
1. Britannia Bore	\$426	\$1047	\$1070	\$1090	\$1120	\$1150	\$1180	\$1207	\$1237	\$1265
2. Westport Connection	\$426	\$934	\$955	\$978	\$1000	\$1025	\$1045	\$1080	\$1100	\$1125
3. Conns Creek weir	\$426	\$980	\$1005	\$1030	\$1060	\$1080	\$1105	\$1130	\$1160	\$1185

All prices include GST

## Affordability

The biggest consideration for Council and the WWB is costs of upgrading the supply for Waimangaroa ratepayers to be compliant with Drinking Water Standards.

After considering the costing analysis, the WWB expressed a high level of concern regarding affordability. Although the upgrade would provide a safe, compliant and resilient water supply, the ability for ratepayers to afford the proposed rates increase has prompted discussions between Buller District Council / Waimangaroa Water Board and Central Government / Canterbury District Health Board (CDHB).

## So what now?

Council would like ratepayers to consider the options outlined in this document and come along to the meeting that has been scheduled for

**5.30pm on Tuesday 30 April 2019  
at the Waimangaroa Hall**

The meeting will allow Council staff and the community to discuss these options, particularly the Conns Creek option, in further detail.

**Please email your feedback to:  
waimangaroa@bdc.govt.nz**

or alternatively drop your submission form into Council's Brougham Street office, Attn: Sam Murphy.

Following feedback from the community, Council staff will provide a report for Council for consideration and to make a decision on.

