

## **Report 99.497**

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Report to the Utility Services Committee  
from Murray Kennedy, Strategy and Asset Manager

### **Commissioning of Hutt City Council's Rahui Reservoir**

#### **1. Purpose**

To advise the Committee of the proposed response to Hutt City Council's request to delay the commissioning of the new Rahui Reservoir.

#### **2. Background**

Hutt City Council has written to the Wellington Regional Council as a result of a request from the Petone Community Board. The Community Board would like the commissioning of the new Rahui Reservoir delayed until the results of Hutt City Council's fluoridation consultation process are known in late October.

If, in due course, Hutt City Council advises that non-fluoridated water is required for Petone and they are prepared to pay for system changes, then commissioning of Rahui could be delayed until late in 2000.

As a consequence, the Buick Street Pump Station would be expected to remain in service until then.

#### **3. Issues**

There are several issues to be considered in evaluating whether or not Buick Street can be kept operating until late in 2000.

##### **3.1 Power Costs**

Rahui Reservoir demands can be accommodated through the "Wellington" pumps at the Waterloo Water Treatment Plant operating for a longer period, rather than an

incremental increase in pumping capacity. Annual energy charges for Buick Street would be similar to the additional energy charges we will incur at Waterloo. Annual network charges for the Buick Street Pump Station are about \$15,000. Once pumping shifts to the Waterloo Water Treatment Plant we would expect to save this amount.

### 3.2 **Resource Consent**

Condition 6 of the resource consent requires us to operate in accordance with the documents submitted as part of the consent process. It was submitted that Buick Street was to close at the end of June 1999 when the new Rahui Reservoir was expected to be completed.

If the Buick Street closure were delayed more than another month or two, we would be obliged to apply for a consent variation. While it is expected this will be granted, the cost of preparation and fees would amount to about \$2,000.

### 3.3 **Aquifer Test**

One of the conditions for our aquifer resource consent is to undertake a major pump test. This is to be at the highest sustainable steady state quantity we can achieve for a two week period. Results from this test will refine the sustainable yield from the aquifer. Preparations are underway for a test in the March/April period next year. During the period of the test we will close Buick Street. Petone would be supplied with chlorinated and fluoridated water while the test was in progress.

### 3.4 **Timing for Delivery of Unfluoridated Water to Rahui**

Design work to provide unfluoridated water to the Rahui Reservoir has not started. It was not our intention to start the process until Wellington Regional Council had resolved all the issues with Hutt City Council. Although the changes to the fluoridation process, based on supplying unfluoridated Waterloo water to Rahui are unusual, they do not appear to be technically difficult. Water going to Wellington City and originating at Waterloo must have fluoride added at Gear Island. Blending occurs when fluoridated Wainuiomata water is also being supplied to Wellington through the 1050 mm mains. As a first step we would try and find a water authority overseas that tops up the fluoridation level of blended water. As far as timing goes there seems to be a trade-off. We could design a system, which may cover all possibilities. This can be installed relatively quickly but at some cost. Alternatively, we could stage the process and add enhancements as necessary to ensure the fluoride level is between the required level of 0.7 and 1.0 ppm. This is a least cost solution, and our preference, but takes longer than the other option.

### 3.5 **Buick Street Pump Station**

There has been an expectation that the Buick Street Pump Station would close for some time. Much of the system dates from when the pump station was built in 1964, 35 years ago. Depending on usage, pump station major overhauls are undertaken about every 30 years.

In response to Hutt City Council's letter a full mechanical and pipework inspection was carried out together with an independent electrical inspection. The latter raised some immediate concerns, which are being attended to.

To ensure that the station can be kept operating until the end of 2000, and we can meet our health and safety obligations, \$148,000 has to be spent. Of this, \$78,000 is for electrical work and \$70,000 for mechanical equipment and pipelines. There would be minimal residual value from the expenditure in 15 months time.

### 3.6 **Buick Street Operational Failure**

In the event there was an operational failure at Buick Street then we would not carry out any substantial repair work. Instead, Petone would be supplied with chlorinated and fluoridated water until Hutt City Council was able to commission the new reservoir. This may take up to a week. Chances of a failure though are minimised after the overhaul work mentioned in section 3.5 is completed.

### 3.7 **Hutt City Council Costs**

Hutt City Council would also face additional costs as a substantial portion of their commissioning work has been completed. Some of this would be repeated at the end of next year if there is a delay.

## 4. **Discussion**

Construction and commissioning of the new Rahui Reservoir has been a drawn out process. There are references to a new reservoir on the Wellington Regional Council files from the early 1980s. Finance was committed by both Councils two years ago and expenditure by the Wellington Regional Council on a rising main and recommissioning the OK main to deliver aquifer water to the new reservoir is in excess of \$700,000.

There are additional costs in the order of \$180,000 if the Buick Street Pump Station is to continue in service until the end of 2000. The balance is between these costs, which are public expenditure, and a possible desire by the Petone community to continue receiving unfluoridated water.

It is difficult to see that the perceived benefits outweigh the costs. Accordingly, it is proposed to ask Hutt City Council to complete the commissioning of the Rahui Reservoir as soon as practicable.

## 5. **Recommendations**

*That the Utility Services Committee:*

- (1) *Receive the report and note its content.*

- (2) *Note that costs of approximately \$180,000 would need to be expended to continue to operate the Buick Street Pump Station safely for a further period of time.*
- (3) *Agree, as a consequence, that the Council cannot meet the request to delay commissioning of the Rahui Reservoir.*
- (4) *Note, that upon advice from Hutt City Council that Rahui Reservoir has been commissioned, unchlorinated fluoridated water from Waterloo Water Treatment Plant will be supplied to that reservoir (this is likely to be the case in a short period of time).*
- (5) *Note, that upon request from Hutt City Council to supply unfluoridated aquifer water to Rahui Reservoir there will be a cost to Hutt City Council of approximately \$550,000 and a lead time of approximately 12 months to meet that request.*

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