

Report 99.484

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

Reallocated Capital Expenditure

1. Purpose

To obtain approval to reallocate capital expenditure to two projects in 1999/2000 where there is insufficient budget.

2. Background

The Capital Works Programme for 1999/2000 was finalised in June this year. The assumptions used for two projects unfortunately were not correct.

Firstly, the new switchboard at the Gear Island Water Treatment Plant. This was scheduled to be completed in the previous financial year but will now be completed in the first quarter of the 1999/2000 financial year. No funding provision was made for the current year. Even so, the completed cost will now be higher than the original budget and therefore additional funding is required.

Secondly, refurbishment of the Orongorongo to Karori main (OK main) on either side of the Karori Road tunnel. Financial provision has been made for this in the current Capex budget, but the amount is insufficient.

3. Project Description and Funding

3.1 Gear Island Switchboard

As a result of concentrating our aquifer extraction through the Knights Road well field, the Gear Island Water Treatment Plant will only operate as an emergency plant. This

is one of the requirements of our new resource consent. However, it was recognised over a year ago that the switchboard at Gear Island was at the end of its economic life and therefore needed replacing. If an emergency arose, a high degree of certainty is required so that the Gear Island equipment can operate. Accordingly, provision was made to replace the switchboard in the 1998/99 financial year and a sum of \$250,000 allocated. At the end of the financial year a total of \$241,000 had either been spent or accrued. A sum of \$51,000 is required to complete the project. This is \$42,000 in excess of the original estimate. The reasons for the increase are as follows:

- The switchboard cost \$210,000 against an estimated cost of \$180,000. This estimate was originally provided by a switchboard manufacturer.
- \$12,000 for some partition work, provision to provide an emergency generator at a later date if required and provision for pumping from the Moera aquifer if development of this aquifer proceeds, which seems likely. All three items were not included in the original budget.

3.2 **Refurbishment of OK Main Near the Karori Tunnel**

The terminal of the Kaitoke pipeline was originally at the Karori Reservoir. From this point water was supplied to Karori and Kelburn Reservoirs, and the Aro Street Zone of the city, plus parts of the southern and eastern suburbs of Wellington City on an as required basis.

There was a high degree of security of supply at the terminal point because if the Kaitoke pipeline was not in use water could be drawn from the Karori Reservoir. In addition, before the Wainuiomata Water Treatment Plant was commissioned, water from the Orongorongo River used to be pumped from Thorndon to the Karori Reservoir when needed. Now, with the construction of the Ngauranga Reservoir and the decommissioning of the Karori Reservoir, supply to the particular areas just mentioned is dependent on a single 8 km pipeline. This runs from the new Ngauranga Reservoir to a terminal point adjacent to the old Karori Reservoir. The OK main from Thorndon to Karori is currently not in use.

Risk is regarded as being a function of the daily quantity of water supplied, the length of pipeline and the number of pipelines. Hence, supply to the Aro Street Zone and the suburbs of Karori and Kelburn, through a single pipeline, has the highest risk of all our supply points.

The quantity of water consumed by these three areas during the winter period is approximately 10 ML per day. This is 13 percent of Wellington City's consumption or approximately two-thirds of the consumption of Porirua or Upper Hutt Cities. The degree of risk associated with the pipeline between Ngauranga Reservoir and Karori is considered to be unacceptable. A project has been included in the 1999/2000 Capex budget to bring the OK main between Thorndon and Karori back in to service for use in an emergency or when extended maintenance is carried out on the pipeline between the Ngauranga Reservoir and Karori.

This recommissioning will normally provide an emergency service. The Thorndon pumps are capable of providing 20 ML per day, which is greater than the summer

daily peak requirement. It is proposed to refurbish the OK main in two stages. Provision has been made in the 1999/2000 Capital Works programme for \$150,000 for the first stage. Originally it had been intended to concrete line the section of the pipe between The Rigi and Waiapu Road which includes the Karori Road tunnel.

Detailed investigation work has shown some difficulties with this and is now proposed to slip line the old pipe with a new polyethylene pipe. The advantages of this include greater structural integrity, some potential for movement across the Wellington Fault, and less traffic disruption, particularly through the Karori Tunnel during construction work. Also, for construction convenience, the length of pipe in the first stage is about 15 percent greater than was originally envisaged. The revised estimate for this is \$220,000, which includes a 15 percent contingency.

It is proposed to carry out the second stage of the work during the 2000/2001 year. A preliminary figure for this work is \$900,000. To ensure that we do not repeat the current problem of having an inadequate budget, it is proposed to carry out design work for this in the current financial year and an additional sum of \$15,000 is sought for this. Total projected expenditure for this project in 1999/2000 is \$235,000 compared with a budget of \$150,000.

4. **Financial**

It is proposed that the additional finance sought for these two projects would come from the overall capital budget for 1999/2000. This will either be from other projects that come in under budget or deferring some minor works. Capital expenditure transfers sought are:

	\$
• Gear Island switchboard installation	\$ 52,000
• Orongorongo Karori main: Thorndon to Karori pipeline rehabilitation Stage 1	\$ 85,000

Total	\$137,000

5. **Recommendations**

That the Committee recommend that the Policy and Finance Committee:

- (1) *Approve a further \$52,000 to complete the Gear Island Water Treatment Plant switchboard installation.*
- (2) *Approve an increase from \$150,000 to \$235,000 for the first stage of the rehabilitation of the OK main from Thorndon to Karori.*

- (3) *Note that both projects will be contained within the total approved capital expenditure of \$4.165 M for 1999/2000.*

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