



Report PE-04.651  
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Committee Utility Services  
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## Duplication of Kaitoke Water Main, State Highway 2 to State Highway 58 - Purchase of Pipe

### 1. Purpose

To obtain approval to purchase steel concrete lined pipe for the duplication of the Kaitoke to Karori water main from State Highway 2 to State Highway 58.

### 2. Exclusion of the Public

Grounds for exclusion of the public under section 48(1) of the *Local Government Official Information and Meetings Act 1987* are:

*That the public conduct of the whole or relevant part of the proceedings of the meeting would be likely to result in the disclosure of information for which good reason for withholding would exist, i.e., commercial negotiations.*

### 3. Background

The Kaitoke to Karori main supplies water from Te Marua Water Treatment Plant to Upper Hutt, Porirua, and the northern and western suburbs of Wellington, including Kelburn and Karori.

There is a major risk of significant damage to the Kaitoke main adjacent to the junction of State Highways 2 and 58. The existing pipeline route traverses a steep hillside above Haywards Stream. This hillside is vulnerable to earthquake induced landslides. It is estimated that 360 m of pipeline would be damaged when the Wellington Fault ruptures. The topography of the area will make pipeline repair difficult. It is estimated it would take 90 to 120 days to repair the 360 m of damaged pipeline. This delay to the reinstatement of reticulated water supply to a large area of the Wellington Region is highly undesirable.

Report No. 03.146, *Possible Kaitoke Water Main Diversion State Highway 2 to State Highway 58*, which outlined the proposal, was presented to the Utility Services Committee on 25 March 2003 in Report No. 03.146.

A copy of this report is attachment 1.

Greater Wellington Water's business plan includes the construction of a new pipeline from State Highway 2 to State Highway 58 over two financial years 2004/5 and 2005/6.

#### **4. Route Selection**

Two potential routes for the new pipeline have been identified. The favoured route follows alongside State Highway 2 from the existing pipeline at the Haywards Stream crossing south to McDougall Grove. The route is then along McDougall Grove to 37 McDougall Grove. From there it follows the southern boundary of Transpower land (within their land) to State Highway 58. The route then follows State Highway 58 to connect back into the existing main at the State Highway 58/Old Haywards Road intersection. Refer to attachment 2. The length of this route is approximately 1,150 m.

The less favoured and longer route continues south along McDougall Grove to a walkway that heads up a gully to State Highway 58 and then north along State Highway 58. The length of this route is approximately 1,420 m.

A geotechnical assessment has been carried out for both these alternative routes. Both routes would significantly mitigate the risk associated with the existing pipeline route. Negotiations are proceeding with Transpower to secure a pipeline easement through its land. It is anticipated that those negotiations will be successful.

#### **5. Retaining the Existing Pipeline**

Report No. 03.146 stated that:

*Once the diversion is complete, the superseded section of the existing water main would be decommissioned to reduce the risk of water damage from water main breaks.*

This assessment has been reconsidered and a different conclusion reached.

Retaining the existing pipeline to operate in parallel with the new pipeline will reduce the energy for pumping water along the pipeline. It will also provide some additional security if the new pipeline needs to be shut down for maintenance or repair. The risk of water damage from a break on the pipeline will be mitigated by the installation of automated shut-off valves, which will isolate the section of pipeline between the eastern side of Silverstream Bridge and Haywards Pumping Station. The shut-off valves are necessary, even if the existing section of pipeline is abandoned.

#### **6. Quotations Received**

The following quotations were received for the supply of 1,067 mm OD x 7.9 mm wall thickness x 12 m steel concrete lined pipe manufactured in accordance with NZS 4442:1988, *Welded Steel Pipes and Fittings for Water, Sewage and Medium Pressure Gas*:

Steelpipe New Zealand Ltd - 1,200 m @ \$476.00/m	\$571,200.00
Tyco Flow Control Pacific Pty Ltd - 1,200 m @ \$664.17	\$797,004.00

Prices exclude GST and are fixed for a 30 day period.

Steelpipe New Zealand Ltd is the only manufacturer of large diameter steel concrete lined pipe in New Zealand. They manufacture the pipe in Auckland. Tyco Water Ltd manufactures the pipe in Australia. The cost quoted is in line with other recent purchases of pipe.

The pipe fabricator is able to supply the pipe to meet the programme.

## 7. Finance

Finance for this project is split over two financial years. The 2004/5 Annual Plan includes a budget of \$800,000 and the draft 2005/6 Annual Plan includes a budget of \$1,000,000.

The preliminary estimated cost for this project is:

	\$
Pipe purchase	571,200
Valve purchase	30,000
Pipeline installation contract	850,000
Cut-ins by Operation Group	30,000
Consultants	50,000
Design and Contract administration	110,000
Contingency	100,000
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	1,741,200
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The total estimated project cost is within the allocated budget.

## 8. Environmental Considerations

The works will have some impact on the environment. An Environmental Impact Assessment will be carried out under the Utility Services Division Environmental Management System. The impacts will be managed and controlled through appropriate design and construction contract conditions.

Care will be taken to minimise the removal of vegetation on Transpower land. After pipeline installation the route will be replanting, maintaining a narrow corridor for maintenance. The Contractor's work time will be managed to minimise the disruption to traffic flows.

Hutt City Council has advised that the project may require a resource consent under the Utilities and Earthworks sections of its District Plan. This will be clarified when more details have been submitted and discussed with Hutt City Council.

The placing of the order should be held over until a definite response is received and the Divisional Manager, Utility Services is satisfied that resource

consent issues will not hold up the project.

## 9. Communications

There are no communications opportunities arising from this report.

## 10. Recommendation

*That:*

- (1) *Subject to the Divisional Manager, Utility Services being satisfied that resource consents issues are not an impediment, an order be placed with Steelpipe New Zealand Ltd for the purchase of 1,200 m of 1,067 mm OD steel concrete lined pipe for the sum of \$571,000.*
- (2) *Authority be given for the expenditure of an additional 5 percent on account of cost increases prior to placing the order.*

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Attachments:

- 1 Report No. 03.146
- 2 Aerial photograph of Haywards Duplication