

Kapiti Coast Wholesale Water Supply

Draft Brief for a Project Investigation

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This brief is for professional services to investigate and prepare a preliminary project report for connecting the Wellington Regional Council's (WRC's) wholesale water supply system to Kapiti Coast District Council's (KCDC's) water supply system.

1. Background

Following a request from a Regional Councillor, the Water Group of the WRC produced an initial report indicating it is technically feasible to connect the KCDC and WRC water supply systems. This is to enable KCDC to be supplied with potable water from the WRC wholesale water supply system. A number of options were considered, including a partial supply and a full supply under summer conditions. The Water Group is only able to supply water to Drinking Water Standards New Zealand 2000, water would be both chlorinated and fluoridated.

Kapiti District Council has now requested more accurate costings.

2. Scope

The scope of the work is to include:

- 2.1 Estimates for two pipeline routes, pumping stations and associated infrastructure which would allow KCDC to be supplied with its full summer demand to [Paekakariki, Paraparaumu and Waikanae].

The two route options are:

- Judgeford to SH1 at Paremata via the north side of the harbour, and then SH1 to [Waikanae or Paraparaumu].
- Judgeford to Paekakariki via the Paekakariki hill road and then SH1 to [Waikanae or Paraparaumu].

- 2.2 Hold preliminary discussions with Transit New Zealand, Porirua City and KCDC about factors which may affect the construction and investigations costs.
- 2.3 Identify any land issues which would need to be resolved prior to construction starting.
- 2.4 Identify all regulatory processes and constraints which may impact on the construction. In particular water abstraction consents.
- 2.5 Investigate any new supporting infrastructure which may be required which is not directly connected to the new pipeline. For example Te Marua Water treatment plant upgrading and a water source at Te Marua.

3. **Assumptions**

Estimates will be based on a number of assumptions. These are to be stated.

4. **Output**

A report indicating the costs for the two routes with supporting information and comments. It will also include pumping needs, operating costs and whether there is any upgrading required for supporting infrastructure.

5. **Programme of Work**

The report is to be completed [] weeks after the requested information has been received from KCDC.

Information Requirements

Required from KCDC are the following:

1. Confirmation the proposal is required as a supplementary rather than a replacement water supply for Paraparaumu and Waikanae.
2. Advise if the pipeline would be used to supply water to Paekakariki on a year round basis, or only as a supplementary source.
3. Connection points to the KCDC system. Both the locations and elevations, preferably reservoirs. Also advise whether or not an air break is possible at each connection point. Availability of power at the connection points. Size of existing reservoirs.
4. Reliability of Supply. Indicate whether sufficient water is required to meet a 1 in 50, 1 in 100, or 1 in 200 year drought situation, or some other level of reliability. The WRC currently supplies water to existing customers with a level of reliability which will meet a 1 in 50 year drought.
5. Quantity
 - 5.1. Using the reliability information in Section 4, produce an annual volume supply – duration curve with either 50, 100 or 200 values depending on the reliability of supply scenario sought. If this is not available advise the annual average quantity and the maximum annual quantity, split between summer and the remainder of the year.
 - 5.2. Supply for either the 50, 100 or 200 year scenario, the maximum daily, seven day and monthly demands.
 - 5.3. Transmission at a uniform flow will lead to significant economies. Advise whether there is sufficient reservoir storage to allow for this. If not, indicate how the flow rate will have to vary throughout the day.
 - 5.4. Advise how the quantities in 5.1, 5.2 and 5.3 will change overtime and the life required for the pipeline.
 - 5.5. Indicate how the quantities in 5.1 to 5.4 will be split if there is more than one off take point.
 - 5.6. Supply plans showing the main pipelines in the KCDC system.
 - 5.7. Advise any other information which may be relevant to the project study.