

STAFF REPORT

TO: Chairman and Members, Engineering Services Committee
FROM: Utilities Asset Manager, Jeff Cuthbertson
REFERENCE: W199
DATE: 21 November 2006
SUBJECT: **TAKAKA FIREWELLS**

1 PURPOSE

The purpose of this report is to inform the Engineering Services Committee and to get direction to provide a submission to Council's Annual Plan and LTCCP.

2 COMMENT

Staff have previously reported the situation with both the Takaka and Motueka fire-wells. This report was tabled at the ESC meeting on 8 June 2006. The New Zealand Fire Service also made a presentation on the limitations of the fire-wells in both townships at that meeting.

It was resolved that:

**Moved Crs Kempthorne/O'Shea
WK06/06/21**

THAT the Engineering Services Committee approve the funding to undertake the feasibility report to:

- a) **Establish a pressurised reticulation system around the Takaka Commercial Business District, including estimated costs and methods of payment for such a reticulation network.**
- b) **Undertake pipework linkages between the existing pressurised reticulation extremities in Motueka including costs and methods of payment.**
- c) **Report back to the Engineering Services Committee by October 2006 with a proposal to resolve the fire-fighting issues in the commercial areas of Takaka and Motueka that satisfies both Council and the New Zealand Fire Service needs.**

CARRIED

3 FEASIBILITY STUDY

Staff and MWH have reviewed four potential options and outcomes to provide a satisfactory fire-fighting capacity within part or the entire Takaka township. A copy of the full feasibility report "Takaka Fire-Fighting Water Supply" has been included with this report.

Four options have been described in the Executive Summary. However these options are more fully explained in Section 6 of the attached report.

4 EXECUTIVE SUMMARY

Takaka presently has no reticulated water supply system. Fire fighting is provided by fire wells that are considered by the Fire Service to be inadequate for the fire risks in the town. Drinking water is sourced by private wells on individual properties which introduces a public health risk and is not up to the expectations of the current drinking water standards.

This report considers the feasibility of constructing a fire fighting water supply to serve Takaka. Several options and sub-options are assessed based on the size of the area that could be covered by a reticulated system.

The first option includes a reticulated fire fighting water supply that covers the town centre only. It is proposed that the remainder of Takaka is covered by new fire wells which will be constructed to replace the existing fire wells. Two sub-options have been considered; Option 1a which includes a storage reservoir is constructed at an elevation to pressurise the reticulation; and Option 1b where reservoir is constructed at ground level beside the water bore. Option 1b will provide a lesser fire fighting service as the fire engines will need to suck water out of the reticulation. This option provides a low level of fire fighting service and thus should only be considered as a first stage in developing a more extensive system.

Option 2 considers a fire fighting water reticulation system around the "Takaka Triangle" formed by Commercial Street, Meihana Street and Motupipi Street. Option 3 considers a reticulation system covering the full Takaka township. None of Options 1 to 3 include for property connections and domestic water use.

Option 4 has been included to consider the implications of making the system a full potable water supply system with a connection to every property for domestic water supply. This would allow full community fire fighting coverage and potable water supply and is the conventional water supply system. Currently Takaka sources its drinking water from individual wells on each property. This introduces exposure to microbiological, protozoan and chemical contamination. As a community water supply this would not meet current drinking water standards. Because the bores are individual to each property, the current legal framework may not be able to force the community to install a compliant system; however the public health risk is still there at a level that is inconsistent with national standards and the levels of service for Council's own water supply systems.

The estimated costs and funding sources for these options is summarised in Table 1. Only Option 4 is likely to qualify for subsidy from either central government or Council under current policy. Central government are in the process of implementing a Drinking Water Assistance Programme (DWAP) to assist low deprivation areas get access to better quality drinking water. The criteria for this subsidy are not certain at this stage but only systems providing drinking water will qualify. Two DWAP subsidy scenarios have been looked at based on a 40% subsidy and a 60% subsidy.

The current Council policy on water supply scheme subsidies is that only full urban drinking water schemes will qualify for the 1/3rd subsidy. Since the fire fighting systems in Options 1 to 3 are not drinking water schemes that people connect to, they will not qualify for this subsidy.

Thus funding assessments for Options 1 to 3 are based on the full Takaka community meeting the full costs.

It is concluded that:

- The existing fire fighting facilities are inadequate and the manner in which the community sources their water does not meet the expectations of the current drinking water standards. Both of these are significant issues.
- Council could install a full drinking water system for the community which will solve both issues. This is the highest capital cost option but it may attract subsidy from Council and central government and may be the lowest cost to the community.
- Provided it is acceptable for fire wells to serve residential areas, a reticulation system could be installed to serve the highest fire risk areas of town (ie the central business district). The reticulation system could be systematically extended to cover large areas of Takaka, and ultimately to provide drinking water.

If the water supply system is developed in this manner, the Council are very unlikely to receive central government subsidy. The community would also not qualify for Council subsidy under existing policy. In the longer term, the community are likely to have to face the drinking water supply issues, and central government funding may not always be available.

Table 1**Summary of Options - Rough Order of Costs and Funding***

	Option 1a Town Centre – Conventional	Option 1b Town Centre – Alternative	Option 2 Takaka Triangle	Option 3 Full Takaka Township	Option 4 Full Potable Water Supply Scheme		
					Low DWAP Scenario (40%)	High DWAP Scenario (60%)	Zero DWAP
Capital Cost	\$1,376,000	\$1,100,500	\$1,617,000	\$2,146,000	\$4,000,000	\$4,000,000	\$4,000,000
Central Government Subsidy (DWAP)	nil	nil	nil	nil	\$1,600,000	\$2,400,000	nil
Council Subsidy	nil	nil	nil	nil	\$800,000	\$534,000	\$1,333,000
Community Share	\$1,376,000	\$1,100,500	\$1,617,000	\$2,146,000	\$1,600,000	\$1,066,000	\$2,667,000
Contribution as a Lump Sum Per Property	\$3,092	\$2,473	\$3,633	\$4,822	\$3,595	\$2,395	\$5,993
Contribution as Annual Targeted Rate Per Property	\$314	\$251	\$370	\$491	\$366	\$243	\$610

* Note: These costs are based on pre-feasibility investigations and have an accuracy of $\pm 30\%$

5 POTENTIAL FUNDING SOURCES

- 5.1 The Tasman District Council has, in the past, provided a 33-1/3% subsidy for fully-reticulated drinking water supplies from its water group account. This Council subsidy has been for the installation of high-pressure drinking water supplies. To date no subsidy has been provided by Council for either low-flow water supplies or fire-fighting supplies.
- 5.2 Central Government is at present working through the process of providing a Drinking Water Assistance Programme (DWAP) to assist low deprivation areas obtain a better quality drinking water scheme. Potentially Takaka could qualify for central Government assistance; however there is no assistance for providing a fire-fighting network.

For the purposes of this report we have assumed that potentially assistance from central Government could be as low as 40% and as high as 60%. It needs to be noted however that this is our best assessment at this time. Until the final parameters are outlined by Government no confirmation of these figures can be assured.

- 5.3 It is estimated that investigation and design of the desired option would cost in the order of \$200,000 (this figure is indicative only and requires clarification).

There is no funding within the LTCCP to undertake this work. To proceed with consultation a number of unknowns need to be clarified and the expectations of others need to be considered and refined.

The \$200,000 investigation and design would need to come from the direct area of benefit, that being the 465 lots. If the cost was to be funded over a short 5-year loan the estimated cost per property per year would be \$135. This could be levied through the Takaka Fire-wells Water Supply Area charge. This charge is currently \$16.50 per assessment.

6 FIRE SERVICE INPUT

The attached report "Takaka Fire Fighting Water Supply" has been sent to the New Zealand Fire Service. The Fire Service responded with the letter attached in Appendix 'A' of the report.

In summary, the New Zealand Fire Service's preferred reticulation option was option 3, ie fully reticulated fire-fighting system serving the entire Takaka township.

7 LEGAL OPINION

Please see attached letter from Julian Ironside, Fletcher Vautier Moore dated 22 November 2006.

8 SUMMARY

- Council has recognised that there is a potential problem with providing effective fire-fighting water in Takaka especially within the commercial area.

- The New Zealand Fire Service has also recognised this problem and has indicated that the present system of fire-wells is not adequate and that they support a fully reticulated fire-fighting network.
- In the past Council has provided a 33-1/3% subsidy for a high-pressure urban fully-reticulated potable water supply.
- Central Government, through the proposed DWAP scheme, could provide an additional source of funding for a fully potable water supply.
- Drinking water extraction in Takaka is from relatively shallow bores which:
 - a) will not meet/comply with the Drinking Water Standards;
 - b) are potentially at risk from microbiological, protozoa and general contamination.
- Four options to provide some form of reticulated fire-fighting network in Takaka have been outlined.
- It would appear from the information provided that the best long-term solution for the community is to provide a full reticulated potable water supply and to endeavour to obtain as much subsidy funding from other sources as possible.

9 RECOMMENDATION

THAT the Committee recommend that Council includes in the 2007/2008 draft Annual Plan the proposal to install a fully-reticulated potable water supply in Takaka, and to proceed by completing all feasibility investigations, design work, and community consultation activity.

Jeff Cuthbertson
Utilities Asset Manager