



Report 08.775
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Committee Finance, Evaluation and Risk
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Wholesale Water Infrastructure Assets - Review of Insurance Policy

1. Purpose

To obtain the Committee's approval for a revised policy for the insurance of Wholesale Water Supply infrastructure assets against material damage.

2. Significance of the decision

The matters for decision in this report do not trigger the significance policy of the Council or otherwise trigger section 76(3) (b) of the Local Government Act 2002.

3. Referral to Parks, Forests and Utilities Committee

This report will also be submitted to the Parks, Forests and Utilities Committee for consideration at its meeting on 23 October.

4. Current provisions

The Bulk Water infrastructure assets are currently insured against material damage with the exception of pipelines, tunnels and the Stuart Macaskill Lakes. This difference in treatment is because these assets are considered to be much less susceptible to accidental damage or damage from fire or flood. The assets are self insured by way of a reserve called the Bulk Water Earthquake Damage Repair Fund supplemented by a borrowing facility to fund the balance of any loss experienced. This fund was set up following the approval of report 95.173 in May 1995.

Current practice, adopted in 2003, is to deposit \$750,000 into this reserve each year. The reserve currently stands at about \$13M. A loan facility is held for the balance of the expected damage cost.

The current estimate of Maximum Probably Loss (MPL) for these self insured assets is \$36.6M. This estimate is based on the damage that could be caused by movement of the

Wellington Fault and is an update of a series of detailed studies undertaken by consultants in 2002.

In addition to the above, significant sums have been spent and are continuing to be spent in improving the resilience of the water supply system and on mitigation measures such as storing spare pipe for use in making repairs following an earthquake.

5. Reasons for change

Since the decision was made in 1995 to self insure some assets a number of changes have occurred:

- A substantial reserve, worth almost \$13M, has accumulated, providing the opportunity to seek insurance quotes based on a large excess.
- Insurance premiums are currently relatively low.
- The cost of bank credit lines looks set to increase substantially in the near future.
- The estimated MPL has increased in real terms due to better analysis and techniques for assessing seismic damage.

6. Equity issues

Earthquakes are not random events like floods; they have recurrence intervals which can be estimated. Movement of the Wellington fault is expected on average every 500 to 770 years¹. The cost of repairing or making good the damage from a Wellington fault event could therefore be spread over a period of at least 500 years.

However the fault last moved 340 to 490 years ago¹ and there is a 10% chance of movement in the next 50 years. That is, the odds are stacking up.

It is probably unreasonable and impractical to spread the cost over more than (say) 100 years. That is, in terms of current 2008 dollars the community should not be expected to contribute more than \$366,000 p.a. At the current annual contribution level of \$750,000 the community is effectively paying for the damage cost in approximately 50 years, ignoring any accrual of interest.

¹ From *Stuart Macaskill Lakes Insurance Review*, November 2002, Sinclair Knight Merz

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7. Options Available

7.1 Status quos

If contributions to the fund were continued at \$750,000 p.a., the interest on the fund was 8.75% (the current rate) and the rate of increase in the damage cost was 3% p.a., the fund would fully cover the MPL in about 13 years time, provided no calls were made on it.

7.2 Discontinuing contributions to the reserve fund

If inflation is taken as 3% then the MPL will increase by approximately \$1M per year. An interest rate on the reserve fund of about 8% is required to match this. Under these conditions, even if contributions to the reserve fund are stopped, the shortfall to be met by either borrowing or insurance is likely to remain at about \$24M.

7.3 Earthquake Insurance cover

Earthquake cover for the currently self insured assets has been quoted at \$380,000 p.a. to cover assets worth \$453.5M with an estimated MPL of \$36.6M. The drawback with insurance is that the excess, which is \$10M, will be called upon first, so that if the damage cost was significantly less than the estimated MPL the bulk of the cost would be met from the reserve fund and the pay out from the insurance may be relatively small.

7.4 Borrowing Facility

The cost of maintaining a credit line to ensure funds are available following an earthquake is currently 8 base points (0.08%). However the cost of a new facility to cover the \$24.0M short fall is in the vicinity of \$94,000 to \$192,000 pa. Previously the banks were happy to provide committed unused credit lines. This has changed recently with banks now expecting credit lines to be used given the scarcity of credit. There is also the remote possibility that a bank may not extend/honour a committed credit in time of a major earthquake event.

While even at this substantially increased rate the cost of a credit line is only half the cost of insurance, the two are fundamentally different. Money borrowed under a credit facility still has to be paid back. Should the maximum credit be drawn, and assuming an 8% interest rate, then the community cost for interest alone would be \$1.92M p.a. In the wake of a major earthquake there will be a high demand for credit and it is very likely that interest rates would be higher than 8%, if in fact the money is actually available. This cost is far higher than the \$366,000 p.a. suggested in section 2 above, and would be imposed on a community severely damaged and traumatised by the earthquake, and having to meet a wide range of other extraordinary costs.

8. Discussion

Taking insurance cover is the most effective method of spreading the cost of earthquake damage over a long period of time. While securing a bank facility is cheaper, it potentially imposes a significant burden on the community following an earthquake.

The current quote for insurance is consistent with the above assessment of an appropriate annual contribution. However there are some risks with insurance cover. The first is that insurance premiums are volatile. The current quote is believed to be quite low, and could increase in future years. The second risk with insurance cover is that two moderate seismic events could occur in quick succession. The first might deplete the reserve fund which then may not be able to be rebuilt quickly enough to meet the excess cost of a second event. Alternatively, small or moderate earthquakes could occur at any time, resulting in damage below the level if the insurance excess reducing the amount in the reserve fund.

However, a pragmatic approach would be to insure to the level suggested in this report with the balance of the current finding of \$750,000 p.a. being allocated to the reserve fund.

9. Recommendations

That the Committee:

1. **Receives** the report.
2. **Notes** the content of the report.
3. **Approves** the insurance of the Water pipeline, lake and tunnel assets for earthquake damage to the maximum probable loss, with an excess of \$10M.
4. **Notes** that the total annual contribution to mitigating the risk of seismic damage to pipeline, lake and tunnel assets remain at \$750,000 adjusted annually at the forecast rate of inflation used in compiling the LTCCP.
5. **Agrees** that the balance between the annual insurance premium and the total amount budgeted for damage mitigation is added to the Earthquake Damage Repair Fund.
6. **Notes** that these provisions be reviewed every five years or if the insurance premium increases significantly more than the rate of inflation.
7. **Notes** that recommendations 3, 4, 5 and 6 are subject to the approval of the Parks, Forests and Utilities Committee meeting on 23 October.

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