

STAFF REPORT

TO: Chairman and Members, Engineering Services Committee
FROM: Jeff Cuthbertson, Utilities Manager
DATE: 20 November 2007
SUBJECT: **UTILITIES MANAGEMENT REPORT**

1 GENERAL

The maintenance contractor has continued to perform well over the past month and operational issues have been kept to a minimum. A joint audit at the end of October involving TDC, MWH and Downer EDi Works staff, included inspections of reactive and planned work and proved that the contractor is maintaining TDC systems to the required high standards, and therefore resulted in the contractor achieving good performance in Water, Wastewater and Stormwater. The current spending on the contract is tracking well within budget. Monthly contract meetings were held on 24 October at MWH, Richmond, and on 14 November at Downer Edi Works/.

The telemetry system has, in general, also performed well over the last month. The main concern continues to be the volume of radio communication errors which is being addressed in the proposals being prepared by Brian Davis, Radio Communication Specialists. He is to provide a report detailing the optimisation of the system. The report is expected at the end of this month.

A third party audit of the telemetry operational system is also to be undertaken in December by Electrocare Technologies. This is to ensure the system software is being maintained and developed appropriately and in accordance with the requirements of contract 688, and in line with industry trends and developments.

2 WATER

2.1 General

Public Health Risk Management Plans (PHRMPs') have been completed and applications for funding have been submitted to the Ministry of Health for Upper Takaka and Tapawera water schemes. The PHRMP's form a critical part of applications for funding assistance to upgrade the treatment plants for the schemes. Collingwood is also a scheme that is likely to attract some funding assistance for some additional items to enhance the water treatment process at that plant, and a PHRMP for the scheme is also in progress.

The Health (Drinking Water) Amendment Act 207 obtained Royal assent in late October 2007. Staff have yet to receive a printed copy of the Act. A report will be forwarded to a future Engineering Services Committee meeting outlining how the Act will affect Council's water supply services.

Last month, water main bursts occurred on the 150mm Mapua supply main, a 100mm main in

Whites Road, Hope and the 40mm main in Waller Street, Murchison. Other issues included:

- an extended outage in Riwaka due to valve repairs on the HDPE ridermain;
- switch faults at Pohara water treatment plant (WTP) causing continuing backwash cycles;
- Communications failure and low battery at Brightwater reservoir causing overflows;
- Telemetry aerial vandalised at Collingwood WTP; and
- Chlorine regulator fault occurred at Brightwater WTP resulting in bacto transgression. The follow up test was clear.

Mapua Watermain Break

Failure of the Mapua watermain occurred on Friday 2 November 2007, on a section of pipe on Rabbit Island. The failure was significant due to a longitudinal split along a full pipe length and caused the rapid emptying of the original Pomona Road reservoir. The second reservoir was protected by recently installed automatic valve work which detected a rapid loss of water from the system and protected the water in storage. Repair of the water main was completed by mid afternoon and contractors continued flushing of the water mains into the early evening. Supply was maintained to the majority of consumers through the day (at reduced pressure) although some higher properties were temporarily without water.

The failure of the main also affected the pressure booster pump at the Mapua wharf, with grit and other material entering the water main and causing the pump to fail. Contractors continued to work on this pump over the weekend and restored full supply by Sunday evening.

Renewal works that have been recently instructed include:

- the replacement of filter media and pumpstation roof at Pohara WTP;
- Winns pumpstation electrical upgrade
- Richmond fire hydrant and valve replacements; and
- additional telemetry at the Wai-iti dam.

Firewell testing and groundwater depth testing of firewells in Motueka and Takaka is to be undertaken as a requirement of contract 688. Some minor delays have occurred in testing of firewells due to difficulties in procuring the appropriate pumping equipment, however the programme is underway and continues throughout December.

2.2 Water Capital Projects:

Brightwater Reservoir

The reservoir construction contract has been awarded to Donwer EDi Works. Construction is planned to commence after January. Designation has been granted to cover the site containing the proposed reservoir.

Dovedale Rural Water Supply

The scheme has continued to operate within its limits and without significant issues. Programmed upgrade works are underway. The Thorn pumpstation electrical upgrade and reservoir control valve installation are near completion.

Redwoods Rural Scheme

The Golden Hills Road pumpstation chlorine system was overhauled this month in line with the annual operations proposal.

Seaton Valley Main

The tender for the Seaton Valley main closed on 14 November 2007 and five tenders were received. The tenders are being evaluated and an award is expected within the fortnight. Construction is expected to commence in late January/early February.

3 STORMWATER

3.1 General

Significant rainfall was experienced in the month of October, with the highest recorded for Bainham of 701mm (182% of normal). The Motueka Valley was the worst affected with most sites recording more than 200% of normal rainfall.

Groundwater levels are normal to above normal due to the October rainfall.

Routine stormwater maintenance was undertaken in accordance with the annual schedule, flood inspection sites were pre-inspected due to heavy rain warnings. Scheduled monthly drain maintenance was completed by the mowing subcontractor (Malcolm Watson).

The following incidents occurred as a result of heavy rainfall between 10 and 14 October 2007:

- Creek flooding at 32 Hampden Street, Murchison; the stormwater channel had subsided and the creek could not cope with excess water during heavy rainfall.
- Collins Road, Richmond; localised flooding due to an inadequate bubble-up-sump system. Flows were pumped into the local drain to alleviate the problem.
- Patons Rock outfalls; ongoing blockages were managed under the maintenance contract.

Programmed proactive maintenance and pre-clearing of stormwater inlet structures has reduced the impact of the reasonable sized rain events. Other minor maintenance works included the installation of seals to Trewavas Street tide flap-gates and investigation into the removal of old culverts and rock protection work in Surrey Road drainage reserve.

3.2 Stormwater Capital Projects:

Borck's Creek/Headingly Lane Channel

Adcock & Donaldson have completed the contracted works for this stage of channel widening. The pre-cast access bridge has been installed and has attained code compliance. The completed work result was more than satisfactory and the outcome for the affected adjacent property owner was pleasing.

Croucher Street/Bird Street/Elizabeth Street, Richmond

Detailed designs and negotiations with landowners have continued for this work with a view to

advertising tenders in December 2007. The work proposed will involve construction of a new trunk stormwater system down D'arcy Street, under the Richmond deviation and through private properties to the Waimea estuary.

Kaiteriteri Stormwater Improvements – Martins Farm Road

This work was awarded to Ching Contracting Ltd and is practically complete. Some aspects of the work were difficult but the contractor has achieved a pleasing result. The work is expected to be completed by early December.

Seaton Valley Stream, Mapua

Design investigations and preparation of a resource consent application have continued for works in the Seaton Valley Stream. Works for which consent will be sought include: construction of an additional culvert through the causeway, widening of the existing stream and flood channels and replacement of two culverts on private property.

Construction work proposed this year will include construction of the additional culvert through the causeway and additional culverts and stream widening, as funds allow. Additional channel and culvert work will follow in subsequent years.

Discussions continue with potentially affected parties (adjacent landowners, iwi, Department of Conservation and Parks & Reserves).

4 WASTEWATER

4.1 General

All treatment plants were routinely checked throughout the month and pumpstations cleaned. The sewer flushing programme is in place and underway as per the required schedule.

Blockages occurred in the gravity line at Burnside, 82 Beach Road Richmond, 1 Pethybridge Street Motueka, and a break occurred in the 100mm main outside 31 Waller Street Murchison. The following mechanical issues also occurred:

- ongoing problems with the pumpstation at 45 Trewavas Street, Motueka due to high levels of infiltration during wet weather;
- St Arnaud pumpstation #2: pump 2 failed and is to be fitted with new seals;
- Biofilter fan at sunbelt pumpstation is under repair;
- Aerator #4, Motueka aeration pond, is under repair following a failure due to water passing through a bearing seal and into its windings.

4.2 Treatment Plants:

Three monthly sampling was carried out in October showing total suspended solids (TSS) and faecal compliance at all of Collingwood, Motueka, Tapawera and St Arnaud sites. Significant rainfall events had caused increases in TSS, and inflows had exceeded average limits and design capacity at St Arnaud and Collingwood respectively.

UV filter bulbs at the Collingwood WWTP were noted to have surpassed their life showing diminished intensity and once replaced results returned to UV intensity of over 30%.

4.3 Capital works

Lodder Lane Sewer Main Replacement

This contract has been awarded to Ching Contracting Ltd and includes the construction of the shared off-road cycleway/footpath along the length of Lodder Lane, above the proposed pipeline, as well as a separable portion of bracket-supported pipework beneath the Motueka River Bridge. The tendered price was within budget and construction on site is expected to be underway within the next fortnight. Sections of welded PE pipe are currently undergoing pre-installation laboratory controlled strength testing.

Takaka Sewer and Pumpstation Upgrades

Contract tender documentation and construction plans are being finalised and this contract is to be tendered by mid-December. Further investigation bores have been drilled to determine the impact, if any, of localised groundwater, and have proven that the preferred Burnside site is suitable for the new pumpstation. The new pumpstation will include emergency storage chambers, telemetry, alarms, and improved configuration, some features of which are lacking in the existing flood-prone Cassidys Corner pumpstation. Consultation has been undertaken with adjacent property owners and the Motupipi Stream Care group.

The contract also includes the Takaka Primary School and Waitapu pumpstation upgrades, and replacement of associated rising mains.

Wastewater Renewals Projects

Design has commenced on the next stage of Wastewater Pipeline replacements in Motueka. The contract will be tendered early in the new calendar year.

The design of the pipeline replacement in Gladstone Road, Richmond, is complete and is to be constructed in conjunction with the upgrade of Gladstone Road between Oxford Street and McGlashen Ave by Transit New Zealand.

Tenders are soon to be invited for the supply of mechanical screens for Tapawera and Collingwood Wastewater Treatment ponds. There is a reasonable lead-in period required to fabricate the screens and the work is to be completed prior to end of June 2008.

Detailed design for the upgrade of the Tapawera WWTP is substantially complete. The tender for the construction of these works will then be advertised.

5 SOLID WASTE

5.1 Kerbside recycling and bag collection

Kerbside collection of recyclables and refuse has continued, with good performance by the contractor.

Over the last two months a separate kerbside collection of paper and cardboard was rolled out on a trial basis to selected businesses in Richmond and Motueka. This trial is running on the back of existing "at-source" diversion and schools collection that the contractor is operating. Evaluation of the success of this trial will indicate the feasibility of rolling this

collection out over a wider area.

5.2 Resource Recovery Centres

Operations at the five Resource Recovery Centres continued over the period, with no significant operational issues.

Richmond

Installation and certification of the weighbridge at Richmond is now complete, with heavy vehicles no longer required to detour to a third party weighbridge. The weighbridge will also prove valuable providing more detailed recycling totals and in auditing smaller loads entering the site (which are charged on a volume basis).

Additional hard-standing areas have recently been constructed at the site to provide additional areas for the storage and loading of recyclables and waste. Additional improvements to the compactor bin load-out area and to drainage on the site have commenced and are programmed over the next six months.

Mariri

Work programmed for the site in the new year includes construction and commissioning of a weighbridge, improvements to signage, roading and drainage and investigations into a water supply for the site.

Takaka

Construction of a car dismantling and a recyclables processing shed at Takaka has commenced. Improvements to the site water supply and to glass processing facilities are programmed for the new year.

Murchison

Council conducted negotiations with the preferred tenderer for the construction of a transfer facility at the Murchison landfill. Further information is expected to be available at the meeting.

5.3 Waste Education and Waste Minimisation

The focus of waste education works this financial year on Construction and Demolition ("C&D") Waste continues. Three building companies are actively participating in waste minimisation efforts on selected building sites and four further companies are proposing work in this area.

Public education at A&P shows this year is continuing to focus on composting. This theme was particularly popular last year and is being conducted in association with Nelson City Council.

5.4 Waste Management Plan

Council staff met with Nelson City Council staff in October to discuss the structure that a joint waste management plan may take. Further work is proposed in the new year, particularly as new legislative requirements become clear.

5.5 Waste minimisation (solids) bill

The above private members bill is currently before the Local Government Select Committee. A recent Supplementary Order Paper (SOP) has been recently tabled by the government, substantially changing the bill and renaming it to the Waste minimisation and resource recovery bill.

This proposed bill and its amendments, has the potential to substantially change the landscape of the waste and resource recovery industry in New Zealand. In particular it proposes:

- Product stewardship of “priority products” -products of high environmental, economic or social impact
- Introduction of a levy on waste to landfill (initially at \$10 per tonne), and distribution of this income to local government and to waste minimisation activities
- Clarification of local government’s responsibilities in relation to waste management and the requirements for waste management and minimisation plans
- Increased requirements for reporting by all waste and resource recovery operators, coupled with improved national reporting

Council made submissions on the original bill in August 2006 and was invited to make further submissions on the SOP in late September of this year. Because of the unfortunate timing of the submissions period, staff made a submission on the SOP (attached), but without the opportunity to put the submission before the committee.

6 COASTAL WORKS

6.1 Old Mill Walkway Stage 1

The certificate of practical completion was issued for this work in October with only minor remediation works outstanding for this contract. Planting of the area adjacent to and north of the new works is proposed in the autumn.

Strong northerly winds in associated with a spring tide in early October resulted in some erosion to the north of the works. No substantial damage to the new works was sustained.

Construction of Stage 1 of the coastal protection has substantially exhausted the funds allocated for this project in the 2007/2008 year. Although some preparatory work has commenced for consenting of further stages of the work, no further work is likely to be possible within existing budgets.

7 PROFESSIONAL SERVICES CONTRACT 461

A number of meetings between Council and MWH were undertaken in the first two weeks of September to complete the preliminary work towards the extension of Contract 461 for Utilities Professional Services. A summary of all documentation and a record of discussions or agreements was prepared and presented to the Engineering Manager and Chief Executive

for formal approval at the end of September 2007. Approval was granted to extend the contract from 1 July 2008 to 30 September 2011, and TDC staff look forward to working with MWH staff to meet Council's targets.

8 TENDERS

Tenders awarded since the last meeting:

No.	Contract name	No. of tenders received	Successful tenderer	Amount	Highest amount	TDC estimate	Budget for this item
664	Riwaka to Motueka Rising Main – Stage 1	5	Ching Contracting	\$908,249	\$1,164,479	\$1,142,641	\$1,045,000
698	Brightwater Reservoir	3	Downer EDi Works	\$1,267,522	\$1,573,492	\$1,344,000	\$1,350,000
710	Kaiteriteri Stormwater Improvements – Martin Farm Road	4	Ching Contracting	\$86,132	\$131,455	\$95,295	\$117,380

9 RECOMMENDATION

THAT the report be received.

Jeff Cuthbertson
Utilities Asset Manager