

STAFF REPORT

TO: Chair and Members, Engineering Services Committee

FROM: Jeff Cuthbertson, Utilities Asset Manager

REFERENCE: S314

SUBJECT: **Takaka Wastewater Treatment Plant – RESC-11-02-08-DEC**
Report prepared for meeting of 3 February 2011

1 PURPOSE

- 1.1 The purpose of this report is to provide information to the Engineering Services Committee on the proposed Takaka Wastewater Treatment Plant upgrade.

2 BACKGROUND

- 2.1 Council first proposed the Takaka Wastewater Treatment Plant upgrade in 2006.
- 2.2 Funding was included in the 2006-2016 Ten Year Plan and included renewal of the resource consent. The upgrade was intended to be completed in the 2007-2008 year.
- 2.3 The present facility was constructed in 1970 by the Golden Bay County Council.
- 2.4 The plant itself is quite simple in its operation. Effluent enters the plant and discharges directly into pond 1 then passes into pond 2. It is expected that effluent should be detained within these pond systems for approximately 30 days. After that the effluent leaves the pond system and enters a wetland. From the wetland effluent flows into two soakage sumps for discharge into the ground water.
- 2.5 Over a number of years effluent volumes have increased. The lack of a filtering screen has resulted in debris within the effluent being directed into the ponds. This debris is not sludge but generally plastic debris (waste) which cannot be treated. This waste along with the sludge has built up and reduced the intended detention period, and consequently reduced effectiveness of the treatment.
- 2.6 During periods of dry weather the wetland cannot always be completely covered in water. During periods of high river flow the wetlands have been inundated with river water scouring sections of the wetland. The effectiveness of the wetland has diminished over time.
- 2.7 The final discharge into ground water comprises two trenches located adjacent to the wetland. Sediment from the ponds is constantly blocking the soakage area. These blockages have sometimes caused a nuisance to neighbouring properties when effluent has left the soakage trenches and passed into the adjacent waterway.

- 2.8 The existing resource consent has several conditions that cannot always be met as a result of this type of treatment system. A major upgrade is required if resource consent conditions are to be satisfied.
- 2.9 The existing operational resource consent expired in August 2008 and since that time Council has been operating the treatment plant under Section 124 of the Resource Management Act "Exercise of Resource Consent while applying for new Resource Consent", sub-section (A). Council submitted a new resource consent six months in advance of the expiry of that consent.
- 2.10 Council has a budget of \$3,195,391 in the 2010-2011 Annual Plan to upgrade the wastewater treatment plant. It has been proposed to defer this funding to the 2012-2013 Annual Plan.

3 PROPOSED TAKAKA WASTEWATER TREATMENT PLANT UPGRADE

3.1 The proposed upgrade aims to improve the facility by:

- Installation of a 2-4 mm steep screen to remove all waste within the incoming effluent;
- Installation of an aerator lagoon to add oxygen into the effluent to increase microbiological activity;
- Upgrading the wetland with the installation of flood protection and a synthetic liner; New plants will be planted within the liner and all effluent will be retained;
- Installation of Rapid Infiltration Beds (RIBs). Treated effluent from the wetland is pumped into the RIBs for distribution into the ground water. Basically, RIBs are constructed ponds that have no base but allow free drainage of treated effluent into the ground water;
- Obtaining a new resource consent with conditions that can be met; and
- Desludging the ponds to maintain the detention period of the stored effluent.

3.2 Community Concerns

Members of the Takaka community have raised several concerns relating to the proposed upgrade. Council has received a petition from the community (attached) expressing those concerns. It would appear that concerns relate to:

- Council's purchase of land close to the community;
- Visual impacts;
- Odour impacts;
- The effect that disposal of treated effluent will have on their ground water bores;
- The potential for increased flooding of private land resulting from the upgrade.

4 CURRENT SITUATION

- 4.1 Staff have consulted with a number of parties for some time with the intention of providing information so that Council would achieve a longer-term resource consent.
- 4.2 During the 2008-2009 financial the ponds were de-sludged. The sludge was dewatered and trucked to the Eves Valley Landfill for disposal.

- 4.3 Council has been negotiating for some years to purchase 1.8 hectares of privately owned land. The land is intended to be used for the installation of the RIBs. This land is conveniently located adjacent to the existing plant and is a good distance from the Takaka River. This distance is important as it allows the treated effluent to enter the ground water system and have minimal to no effect on the Takaka River environment. It is accepted that, over time, UV treatment of the final effluent prior to discharge to the RIBs may be required.
- 4.4 A peer review of the proposed disposal method has been completed by NIWA as an independent expert. NIWA endorsed the proposed disposal method.

5 COMMUNITY CONSULTATION

- 5.1 It is proposed that the Mayor, Engineering Chair, Golden Bay Councillors and Golden Bay Community Board members should form a working party focusing on the planned Takaka Wastewater Treatment Plant Upgrade.
- 5.2 The working party would be responsible for reviewing the concerns and providing feedback to the Takaka community.
- 5.3 A recommendation will be provided to the Engineering Services Committee for confirmation of the final proposal.
- 5.4 Some of the issues that the working party should consider include:
- Is the existing location of the Takaka Wastewater Treatment Plant appropriate?
 - What are the costs and benefits of the existing site versus relocating to another site?
 - Should Council consider a different treatment process, eg mechanical?
 - Who will pay for the preferred treatment process?
 - What is the visual impact of the existing site on the Takaka community?
 - What are the vegetation/screening options for the current site?
 - What are the potential odour issues from the current site?
 - What is the impact (if any) of the treated effluent discharge to ground on private bores?

6 WHERE TO FROM HERE?

- 6.1 The proposed programme to reach a final decision on the Takaka Wastewater Treatment Upgrade proposal is:
- Report to the Engineering Services Committee on 3 February 2011 (ie, this report).
 - First meeting of proposed working party – February 2011.
 - Public meeting with the Takaka community (including working party members) – late February 2011.
 - Working party meetings as required to understand the options and resolve any issues.
 - Workshop to discuss the working party recommendations.

- Report to the Engineering Services – June 2011.
- Revise resource consent and designation application if required – December 2011.
- Proceed with design of upgrade – December 2011.
- Upgrade construction – Commence July 2012.

7 RECOMMENDATIONS

7.1 THAT the Engineering Services Committee receives this report, RESC-11-02-08.

7.2 THAT the Engineering Services Committee endorses the proposal to form a working party including the Mayor, Engineering Services Chair, Golden Bay Councillors and Golden Bay Community Board members to review issues and options for the proposed Takaka Wastewater Treatment Plant Upgrade as outlined in this report RESC-11-02-08.

7.3 THAT the working party report back to the Engineering Services Committee meeting on 23 June 2011 with a recommendation regarding the preferred option for the Takaka Wastewater Treatment Plant as outlined in this report RESC-11-02-08.

Jeff Cuthbertson
Utilities Asset Manager