

2. BIO-SOLIDS TO CANTERBURY FORESTS: UPDATE

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Corporate Plan Output: Liquid Waste	

The purpose of this report is to update the Council on progress towards bio-solids application to Canterbury forests. Application commenced in August last year but has been temporarily halted to allow some of the resource consent conditions to be resolved.

BACKGROUND

Bio-solids are the organic solids recovered from the wastewater treatment processes and treated so that they are suitable for reuse in the environment. Until mid 1997 bio-solids were applied to the Bromley Farm land and the Bexley landfill areas as a soil conditioner and fertiliser. It has also been used on two Christchurch parks, Cuthberts Green and Rangers park in the mid 1980s to rejuvenate the soil to better support grass.

Following an extensive review of Bio-solids reuse options in 1989 the Council chose forest application as the main reuse option to pursue. Overseas experience was researched and trials carried out in 1991/1992 in local forests. The experience and scientific knowledge gained from these trials clearly indicated tree growth benefits, best application rates, and techniques for a full-scale forest project.

The Council then confirmed its decision to progress towards forest application as the main bio-solids reuse option. Consents were lodged for application of Bio-solids to 1500 hectares of Canterbury forests in the Dunsandel, Burnham, Chaney's areas, all owned by the Selwyn Plantation Board. Extensive consultation was held with local people and the consents were finally granted in October 1998. The consents contain significant requirements for environmental monitoring. Successful forest application depends on having the bio-solids in a de-watered state, ie the consistency of damp soil. This de-watering equipment was commissioned in June 1997 and provided the means to convert the liquid bio-solids to the de-watered form. Since that time whilst suitable forest application equipment is being developed the bio-solids has been used almost entirely at the Burwood landfill to rehabilitate the landfill surface to better support plant growth.

COMMENCEMENT OF FOREST APPLICATION

Forest application started in August 2000 in the Dunsandel forests with application as part of Government funded trials involving the Forest Research Institute, Landcare, University of Canterbury and Lincoln University. Application to the trial areas took approximately fifteen days. Two further applications were made to demonstrate the system and application equipment to delegates from the Australasian Soil Science Conference and to a potential forest application contractor from Auckland. No further application has been made to any forest areas pending resolution of certain problems with the consent conditions. Local people and Selwyn District Councillors have expressed concern at the consent problems and wish to see these matters resolved before any further application of bio-solids. If the consent conditions cannot be fully met an application for variation of consent condition will need to be made. The need for public notification of any application for variation is dependent on whether the effects of the proposed variation are considered by the consenting authorities to be minor or not.

CONSENT CONDITION BREACHES

There are two consents covering the forest application; a Land Use Consent from the Selwyn District Council and a Discharge Consent from Environment Canterbury. The problems with these consents relate to four conditions:

- Dry solids content of the bio-solids (ECan and SDC consent)
- Transportation routes (SDC consent)
- Fencing of Forest areas where bio-solids have been applied (SDC consent)
- Location of one (of the 5) groundwater monitoring wells (ECan consent)

The issues of transport routes and fencing have been resolved, as there was scope for different interpretations of these conditions. Resolution has been reached by negotiation and consideration of the original intent of the conditions.

The location of the groundwater monitoring well and the dry solids consent condition require some further work to clearly show the likely impacts of these changes. When this change in impact has been quantified in each case, formal application for a variation will be lodged. It is expected that the impacts of these changes will be minor and that the application will not need to be notified. The process of gaining variation to the two consent conditions should be relatively simple.

AGREEMENT WITH SELWYN PLANTATION BOARD.

The Selwyn Plantation Board has expressed a wish to have a formal agreement covering the application of bio-solids to its forests as the Board will incur some costs in having the bio-solids applied. These costs relate to maintenance and provision of access to the forest blocks. While positive tree growth response is expected from bio-solids application this has yet to be proven on full scale application in Canterbury. An agreement has been drafted by the City Solicitor and is now with the Selwyn Plantation Board.

In summary the basis of the Agreement is that the Selwyn Plantation Board will allow the Council to apply bio-solids to its land whilst the Council will maintain responsibility for the appropriate Resource Consents and meet the costs of maintaining forest access (e.g. removal of wind blow). The basis of payment is defined by the quantity of bio-solids applied and will be around \$75,000 per annum.

SUMMARY

While the move to forest application has been slower than anticipated and held up by minor problems with some of the consent conditions, it is expected that full-scale forest application will commence in the next few months. An agreement between the Selwyn Plantation Board and the Council to apply bio-solids to forests is ready to be signed.

Recommendation That the City Water and Waste Operations Manager (Mike Bourke) be authorised to sign the agreement with the Selwyn Plantation Board subject to the final approval of the City Solicitor.