

## 5. CHRISTCHURCH WASTEWATER PLAN AND RESOURCE CONSENT REPORT FROM THE WASTEWATER SUBCOMMITTEE

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Corporate Plan Output: Liquid Waste	

The purpose of this report is to inform the Council of the feedback from public consultation since the Council's wastewater consent decisions in August 2000, and to recommend the Council proceed to apply for resource consents.

### INTRODUCTION

In August 2000 the Council adopted a preferred wastewater plan and related consent for consultation with the public. This was after four years of extensive investigation and preliminary consultation. The key physical elements of the plan were:

- completing the \$33 million capacity upgrade to the treatment plant, significantly improving the quality of the water entering the oxidation ponds and the estuary
- extensive modifications to the oxidation ponds, improving the kill of pathogens
- installing new UV disinfection equipment after the oxidation ponds so that water discharged will be of bathing quality before discharge to the estuary
- continuing to discharge to the western edge of the estuary for at least the next 15 years through a new submerged rock filter outlet from the ponds
- creating a "Green Edge" along the western side of the estuary, including an extensive ecological reserve, increased planting of native species, additional wetlands, improved recreational access, possible rerouting of Humphreys Drive, and experimental natural treatment of wastewater in engineered wetlands.

The Council also approved:

- preparation of a comprehensive and long-term wastewater management plan
- preparation of a memorandum of understanding with tangata whenua on the future management of the estuary Green Edge and environs, and related issues
- public consultation on the wastewater plan and consent options.

The full report and resolutions from the Council meeting in August are tabled.

The main purpose of this report is to summarise the feedback from the public consultation and present the views of the Wastewater Subcommittee on the responses the Council should take to this feedback.

### PUBLIC CONSULTATION PROCESS

The Council's information and consultation program consisted of:

- a news media launch on 4 September
- a pamphlet which was distributed to all letter boxes, including a feedback form
- a larger consultation report which was offered to all enquirers, including a more extensive feedback form
- a preliminary report on the assessment of environmental effects which was also offered (although few people took this opportunity)
- a website version of the larger consultation report, that also included the same feedback form
- extensive publicity through print media, radio and television throughout September
- a roadshow that went to city malls in the weekends throughout September
- two public meetings, in New Brighton and Mt Pleasant
- a door-to-door survey that obtained feedback from a random sample of 500 people
- oral hearings.

### BRIEF SUMMARY OF FEEDBACK FROM PUBLIC CONSULTATION

Extensive feedback came from all sources, including:

- **3223** replies to the letterbox pamphlets
- **444** replies to the consultation report (including the website version)
- **15** oral submissions.

The door-to-door survey revealed that:

- **89%** of people could recall seeing the Council's publicity on the subject and that
- **77%** believe the Council is handling the issue well.

These are unusually high figures, according to the Council's communication consultants.

Taken over all sources of feedback

- a large majority (**70%**) was in favour of the Council's total package, particularly in the responses to the letterbox pamphlet and in the random door-to-door survey.

An even larger proportion (over **70%**) supported:

- the Green Edge part of the package and
- the Council's wish to emphasise high quality treatment rather than disposal location.

On the major point of location of outfall,

- returns favoured the Council's preference (i.e. the estuary instead of an ocean pipeline) by a ratio of **6 to 1**, although the ratio was smaller (**2 to 1**) in the responses to the consultation report, and was reversed (**3 to 2**) from those who presented an oral submission.

Reasons for people's preferences were overwhelmingly about environmental effects and sustainability, regardless of which location they preferred, and almost all respondents ranked cost as the lowest consideration.

The Subcommittee has reviewed the issues carefully and will ensure that a detailed program of monitoring and research will be set up to investigate matters of concern. More details are given later in this report and in Appendix 2 (attached) of the concerns raised and the Subcommittee's responses. Some innovative ideas were also presented for the future, and the Council will be able to consider these during the term of a consent and in the development of the comprehensive wastewater management plan.

However in general the public feedback gives strong endorsement to the Council's views and will also be most helpful when establishing in legal forums that the Council has consulted widely in terms of the Resource Management Act.

#### **EXPERT TECHNICAL REVIEWS**

The lead consultants for the wastewater plan and consent have been URS (formerly Woodward-Clyde) and they have made extensive use of NIWA, a Crown Research Institute, and Unisearch, an Australian research company. This team was selected after competitive tendering that drew proposals from throughout New Zealand, plus some bids from Australia, USA and UK.

An external peer review team was assembled from experts in three areas of technology that were crucial to the Council's decisions – namely wastewater technology, estuarine ecology, and ocean and estuarine hydraulics.

The Council was fortunate in having highly expert teams that had strong roots in the city and knew the local situation well.

In addition all these teams have strong international links. URS is the local branch of a world-wide company, and their subconsultants and the peer reviewers are partners with world-wide companies, or have been recruited from overseas, or frequently attend overseas conferences or do consulting work around the world. In addition the Council from time to time has called in experts from overseas to examine and review key parts of its wastewater proposals, such as the new trickling filter/solids contact tanks, oxidation ponds and engineered wetlands. It is currently considering seeking European advice on nutrient recovery and recycling, to ensure these parts of the vision will use the leading edge of international practice.

#### **SUBCOMMITTEE RESPONSES TO PUBLIC CONCERNS**

A few hundred respondents took the opportunity to provide expanded comments. In addition to the public feedback and technical experts, the Council also obtained input from Environment Canterbury, who will be the initial recipients of a consent application, and from the Council's legal consultant. The Subcommittee has reviewed all this input very carefully.

The main concerns were about the following matters, and the Subcommittee's responses are also shown.

Concern	Response
1. There was a concern that <b>administration</b> of the wastewater system <b>could be passed to private service providers</b> .	The Council intends to retain public ownership and public control of the wastewater system.
2. There was concern about the <b>sustainability and environmental consequences of continuing to discharge to the estuary</b> , no matter how much effort is put into treatment, and about the <b>reliability of predictions on sea lettuce growth</b> .	The Council recognises that the estuary is a sensitive and complex environment and that we do not fully understand its ecology. However it is also acknowledged that there is debate amongst experts as to what level of nutrient supply is best for the estuary. So the Council plans to continue and expand existing research programs into the nutrient state of the estuary and to review the implications of this within five years. It should also be noted that the current capacity upgrade will reduce the amount of nitrogenous nutrients by about 50% for the next 10 to 15 years.
3. Some wanted a <b>greater assurance of public safety by installing an ocean pipeline</b> , thereby achieving greater dilution of the treated wastewater.	It is acknowledged that there would be greater dilution of wastewater with an ocean pipeline. However the Council's plan is to treat the wastewater to such a high degree that its adverse impact on the receiving environment becomes a minor consideration. It is planned to treat the wastewater to bathing standards at the end of the oxidation ponds, as measured by the usual indicator of faecal coliforms, and to monitor regularly the occurrence and level of other pathogens to ensure contact recreation standards are achieved. This information will be used in the future reassessment of wastewater plans.
4. Some wanted to ensure that the Council does <b>not delay a long-term decision</b> more than necessary.	It is considered the Council will be in a better position to make long term decisions in five to ten years' time when the outcomes of research and monitoring programs are known.
5. Some people have a desire to see a comprehensive <b>research and monitoring program</b> , with <b>clear public reporting</b> .	Research and monitoring programs are already under way, and further details, plus a more comprehensive program, will be developed with the help of members of the public and expert advisers during the consenting process. The Council will welcome the input of a public watchdog group and will ensure such a group is set up.
6. There is a desire to address <b>broader issues of wastewater reduction and reuse</b> , particularly treatment at source, nutrient recovery, and land disposal, and the need for a public education program.	The Council has already approved the development of a comprehensive and long-term Wastewater Management Plan, to address the broader concerns of the community and the Council. This plan will be prepared during 2001, but it will not remove the need for the plan and consent that are currently proposed by the Council. The option of land disposal has been extensively investigated and the Council has rejected it for the foreseeable future, as it would risk contamination of the city's groundwater, be very expensive, and probably impossible to organise on the scale required.
7. Some see a need to <b>clean up other parts of the city's waterways</b> , particularly the Avon and Heathcote rivers.	The Council is already trying to eliminate new sources of river pollution from new subdivisions and infill housing, and has accepted the need to work with Environment Canterbury to develop a joint water quality strategy.

In summary, the Subcommittee's view is that while there were legitimate concerns expressed about parts of the Council's preferred package, and there are gaps in our knowledge particularly about the condition of the estuary, there is not sufficient new information to require a change of direction. Further, the strength of community support for the Council's package is evident from the figures above. It is considered that a robust program of monitoring and research should be started soon, leading to more information for confident long-term decisions after five to ten years.

It is considered that the Council's preferred package presents a great opportunity for advancing a total wastewater strategy that will encourage reduction and reuse, turning wastes into resources, and for developing an attractive parkland along the western edge of the estuary. The concerns of the community, the Council and other parties will be monitored and researched so that as the performance is reviewed all other options, including an ocean pipeline, will still be able to be implemented if they are proved to be necessary and viable.

A table describing opinions and concerns, and the Subcommittee's responses, is given in more detail in Appendix 2.

#### BUDGET REQUIREMENTS FOR 15-YEAR CONSENT IMPROVEMENT PROGRAM

Budget requirements for capital improvements are scheduled in detail in Appendix 1 (tabled) and are summarised below.

<b>Requirement, \$M</b>	<b>2001/02</b>	<b>2002/03</b>	<b>2003/04</b>	<b>2004/05</b>	<b>2005/06</b>	<b>2006/07</b>	<b>Totals</b>
(a) reconfiguration of oxidation ponds	1.00						1.00
(b) outlet and diffuser		0.80					0.80
(c) UV disinfection			7.65	7.65			15.30
(d) green edge development					7.00	7.00	14.00
(e) monitoring and research	0.20	0.20	0.20	0.20	0.20		1.00
<b>Totals</b>	<b>1.20</b>	<b>1.00</b>	<b>7.85</b>	<b>7.85</b>	<b>7.20</b>	<b>7.00</b>	<b>32.10</b>
Provision in Council's 2000/01 financial plan	1.25	0.95	7.80	7.80	7.00	7.00	31.80
Extra requirement	-.05*	.05	.05	.05	.20	0	.30
<b>Totals</b>	<b>1.20</b>	<b>1.00</b>	<b>7.85</b>	<b>7.85</b>	<b>7.20</b>	<b>7.00</b>	<b>32.10</b>

\* Assuming \$100,000 programmed for 2000/01 is carried forward to 2001/02.

This table shows that \$300,000 capital is needed to meet the requirements for the 15-year program and this will be addressed in the forthcoming 2001/02 budget process.

#### STEPS REQUIRED TO CONFIRM THE PLAN AND OBTAIN A CONSENT

<b>Steps</b>	<b>Action planned</b>
1. Council to confirm <b>preferred wastewater plan and related consent applications</b>	Recommendations presented in this report for adoption at Council meeting on 14 December
2. Council and tangata whenua to complete <b>memorandum of understanding</b>	Tangata whenua meeting on 14 December is expected to ratify proposed agreement; copy to be presented to Council for adoption at its meeting on 14 December
3. Consultants to prepare final <b>Assessment of Environmental Effects and application documents</b>	Detailed plan developed for completion; to be reviewed and finalised by early March 2001
4. Council to obtain <b>comments on proposed consent conditions</b> from tangata whenua, working party, peer reviewers and ECan	Review teams to be confirmed; review required in February 2001
5. Council to develop <b>research and monitoring program</b> , especially for the estuary	Research is under way already; more details being developed in consultation with public and other experts; plans to be completed before consent applications lodged
6. Council to prepare <b>presentation of evidence</b> for Environment Canterbury hearings	Council has engaged legal counsel to lead the Council's case
7. <b>Green Edge development</b> to be progressed	Preliminary designs under way; some finance is budgeted for current year; action to be finalised once MoU is signed with tangata whenua
8. <b>Consent applications</b> to be lodged	Applications required to be lodged before end of March 2001
9. Comprehensive long-term <b>Wastewater Management Plan</b> to be developed	Consultative team to be assembled to help develop plan during 2001

**Recommendation:** 1. That the Council now adopt its preferred wastewater plan and consent applications as set out in its preliminary decision of August 2000, namely to:

- complete the \$33 million capacity upgrade to the treatment plant,
- modify the oxidation ponds to improve the kill of pathogens,
- install new UV disinfection equipment after the oxidation ponds to achieve bathing quality (i.e. reduce faecal coliforms to 200/100ml) before discharge,

- continue to discharge to the western edge of the estuary for the next 15 years through a new rock filter outlet from the ponds,
  - create a “Green Edge” along the western side of the estuary, including an extensive ecological reserve, increased planting of native species, additional wetlands, improved recreational access, and experimental natural treatment of wastewater in the oxidation ponds, engineered wetlands and adjacent land,
2. That the Council develop a research and monitoring program aimed at producing within five to ten years enough information for a long-term decision on the wastewater treatment and disposal system.
  3. That the Council set up an independent community group to monitor compliance with the consents, once they are granted.
  4. That the Council develop through a consultative process a comprehensive long-term wastewater management plan, including but not limited to investigation of methods for reduction in the quantity of wastewater, treatment at or near source, new treatment technologies at the main treatment plant, achievement of the highest possible standards of treatment, establishment of satellite plants, reuse of both bio-solids and purified wastewater, and public education, as elements to achieve the intentions of Part XXXI of the Local Government Amendment Act 1996.