

REPORT

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Prepared for: Compliance Committee
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Subject: Memorandum of understanding between Otago Regional Council and Fonterra Co-operative Group Ltd

1. Précis

As a result of a recent meeting between Otago Regional Council and Fonterra, a Memorandum of Understanding (MoU) was drafted to achieve a shared vision. This paper reports the content of the draft MoU.

2. Background

At the last Compliance Committee meeting (31 January 2006) a report was submitted to outline the actions that were to be taken by ORC to address the Fonterra Co-operative Group Limited (FCG) Stirling discharge non-compliance. Just prior to the Committee meeting FCG sent a facsimile to the Chair of the Compliance Committee requesting a meeting with the Compliance Committee and senior Council management to discuss this report and agree on what further action was required.

The Committee accepted the request from FCG and moved that a meeting be held between Fonterra representatives, Council Chair, Committee Chair and senior Council management.

3. Meeting between ORC and FCG

The meeting was held on 14 February 2006 at the Regional House, Dunedin. FCG was represented by Dr Jim Barnett (Environment Portfolio Manager), Ms Karen Leov (National Manager, Natural Resource Group), Mr Ian Goldschmidt (South Island Environmental Manager) and Mr Tony Smith (Site Manager, Stirling) and ORC was represented by Cr Stephen Cairns (Chair), Cr Duncan Butcher (Chair, Compliance Committee), Mr Graeme Martin (Chief Executive) and Dr Selva Selvarajah (Director Resource Management).

At this meeting both parties agreed to work together on a shared vision of clean healthy water for the Matau branch of the Clutha River. As decided at the meeting FCG drafted a Memorandum of Understanding (MoU) outlining the actions required to achieve the shared vision. Following correspondence between FCG and ORC the contents of the draft MoU have been agreed. The draft MoU is appended to this report.

4. The new MoU between ORC and FCG

As stated above the signatories of the MoU will share a common vision of clean healthy water which is defined in the MoU as “...*Clean healthy water means water that meets or exceeds the requirements of recreational water use (including contact recreation) and healthy aquatic habitat and ecosystems, and does not affect downstream water users...*”.

The key actions and timeframes for these actions in the MoU are as follows:

- a) FCG will reduce or eliminate the presence of faecal bacteria in waste water. This action will be implemented by August 2006 unless decided by both signatories that a better solution can be achieved by including faecal bacteria removal in the implementation for reducing organic, nutrient and any other chemical loading.
- b) FCG will reduce the organic, nutrient and any other chemical loading substantially and as far as practical by commissioning treatment systems by December 2007.
- c) Any resource consents to undertake the above activities be applied for by FCG before June 2007.

5. Recommendation

Selva Selvarajah

Director Resource Management

**Memorandum
of
Understanding
for period
from March 2006 to June 2008
between
Otago Regional Council
and
Fonterra Co-operative Group Ltd**

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1 Preface

A Memorandum of Understanding (MOU) is a formal non-binding commitment between two or more signatories for a common goal or goals.

In this case, Otago Regional Council (ORC) and Fonterra Co-operative Group Limited (Fonterra) have entered into a MOU with a goal of working together to achieve a desired environmental outcome.

2 Vision



The signatories to this MOU agree to work together to achieve the shared vision of clean healthy water for the Matau branch of the Clutha River. Clean healthy water means water that meets or exceeds the requirements of recreational water use (including contact recreation) and healthy aquatic habitat and ecosystems, and does not affect downstream water users.

3 Statutory Framework

The Resource Management Act provides the overarching environmental legislation with the purpose of promoting the sustainable management of natural and physical resources. The shared vision for the Matau branch of the Clutha River and the commitment of the parties to this MOU is set against the statutory framework of the Resource Management Act, and must necessarily be considered in that context.

4 Scope, Exclusion and Limitations

The scope of this MOU is as follows.

- The discharge of wastewater from the Fonterra Stirling manufacturing site to the Matau branch of the Clutha River.
- The treatment systems, operating practices and technological developments that influence the quality and quantity of wastewater discharged.
- The receiving water quality of the Matau branch of the Clutha River from the point of discharge from the Stirling manufacturing site.

Limitations to this MOU, which are considered relevant, are noted below.

Nothing in this MOU restricts Fonterra from participating in any resource consent process (its own or involving another organisation) or any RMA submission process as and when determined necessary.

5 Expiry

This MOU will remain in effect until 1 June 2008 unless terminated with the written agreement of both parties.

The expiry date coincides with the implementation of the upgrade of the discharge which is specified in section 7.2 of this MOU.

6 Background

6.1 Current Resource Consents

Resource consent number 97057_V2 authorises the discharge of up to 3000m³/day of wastewater, washwater and polisher water to the Clutha River. There are a number of conditions attached to the consent detailing monitoring requirements, receiving water quality requirements and discharge quality requirements.

Resource consent number 97660 authorises the discharge of up to 780m³/day of reverse osmosis plant polisher water to the Clutha River. Similarly a number of conditions are attached to the consent.

Resource consent number 2004.204 authorises the discharge of up to 500 m³/day of low strength process wastewater. A number of conditions are attached including that the combined total daily discharge volume of all three consents must not exceed 3500 m³/day.

6.2 Compliance

A satisfactory level of environmental compliance with resource consent conditions relating to discharge volumes, chemical oxygen demand (COD) and suspended solids (SS) concentrations has been achieved at the Stirling site in recent years. In the 2004/2005 season, a total of three environmental non compliances were recorded and in the 2005/2006 season to date one environmental non compliance has been recorded.

Past river aquatic habitat and ecosystem surveys undertaken by Fonterra indicated periphyton and sewage fungus growth and adverse effects on some invertebrates downstream of the discharge.

6.3 Previous MOU

In July 2004 Fonterra and ORC entered into a MOU which required Fonterra to achieve the following key objectives.

- The preparation and implementation of an action plan to isolate and eliminate faecal bacteria from all wastewater discharges to the river by 1 April 2005. 'Eliminate' in the context of this MOU was below 10cfu/100ml at all times or
- If unable to comply with the above, lodge an application to change conditions of the existing resource consent or for a new consent by 1 June 2005.
- Full compliance with the COD loading limits in the discharge at all times through the installation and commissioning of an acid dosing system by 31 December 2004.

The work undertaken by Fonterra to fulfil the objectives of that MOU is summarized below:

- A comprehensive faecal coliform and E coli monitoring programme across a number of wastewater streams from various parts of the site and in the river itself.
- Installation and commissioning of the acid dosing system on the DAF plant to reduce both organic loading and microbiological levels.
- Assessment of water quality and on the growth of both periphyton and sewage fungus.
- Assessment of historical and current water quality and biological monitoring information.
- Additional periphyton surveys.
- Additional wastewater and receiving water quality monitoring.
- Additional diving inspections.
- An investigation of options for land disposal and tertiary treatment of wastewater. This involved an assessment of the suitability of soils for wastewater irrigation as well as an assessment of biological treatment (anaerobic and aerobic) as well as the option of an ocean outfall.

6.4 Wastewater Quality Improvements

The following table shows the typical current quality of wastewater discharge from the Stirling site and is provided as the baseline from which improvement can be measured.

Stirling	BOD (kg/day) maximum	Suspended Solids (kg/day) maximum	E coli (cfu/100 mL) average	Inorganic Nitrogen (kg/day) median	DRP (kg/day) median
Fonterra Stirling	4,200	1,750	3500	308	123

The faecal coliform and E coli levels in the wastewater were reduced significantly through the work undertaken during the MOU period to an average of about 3500 cfu of E coli /100ml.

6.5 River Water Quality Enhancements

The work undertaken by the previous MOU was able to show that when the Clutha River meets the guideline value for primary contact recreation upstream of the Stirling site diffuser, the river also meets it below the discharge point.

The work to be undertaken through this MOU will aim to ensure the requirements of recreational water use, are, consistently met below the discharge and where possible are improved upon by reducing or eliminating the risk of the presence of pathogens in the discharge, periphyton growth and sewage fungus growth in the river.

7 Understanding and Commitment

The signatories to this document record their understanding that:

- Adverse effects of the wastewater discharge on the Matau branch/Clutha River are not authorised or acceptable under any river flow conditions, including low flow events. Adverse effects are also inconsistent with the shared vision for the river.
- There is a commitment by Fonterra to reduce the impacts of the Stirling site wastewater discharge on the Matau branch/Clutha River so that the shared vision can be realised and the river water is consistently at or better than the requirements of recreational water use, healthy aquatic habitat and ecosystems, and water quality for downstream users.
- The realisation of the vision will necessitate additional wastewater treatment facilities being installed at the Stirling site in a staged plan of improvement.

7.1 Wastewater Quality Investigations

Fonterra shall investigate the following matters:

- Options for elimination, reduction or treatment of faecal bacteria contamination of the wastewater in order to reduce or eliminate the levels of faecal bacteria as far as is practical.
- Options for reducing the organic loading and nutrient loading of the wastewater through additional treatment systems that are appropriate for the application.

7.2 Implementation Timeframes

Fonterra shall endeavour to implement the following:

- Reduce or eliminate the presence of faecal bacteria (measured as E coli in the wastewater) as far as practical by
 - a) isolating, collecting and treating separately the waste streams containing the high concentrations of E coli, or
 - b) treating the wastewater prior to discharge to the Matau branch of the Clutha River.

-► This will be implemented by 1 August 2006 unless it is determined by both signatories that a better solution can be achieved for both signatories by including E coli removal in the implementation for reducing organic, nutrient and any other chemical loading.

- Reduce the organic, nutrient and any other chemical loading of the wastewater substantially and as far as practical by commissioning treatment system(s) by
 - 1 December 2007
- Any necessary consents to undertake the above activities are applied for before 1 June 2007.

In addition, Fonterra will continue a focus on product loss reduction and other process efficiency gains in order to minimise the concentration of contaminants in the wastewater stream.

7.3 Progress Reporting

The signatories to this document record their agreement to meet on a three monthly basis to review progress to the MOU and provide feedback on the steps to achievement of the vision.

The meetings will be co-ordinated by Fonterra.

In addition Fonterra will provide a written progress report at six monthly intervals and outline the work that is being undertaken, the key findings and an update on the implementation plan.

7.4 Monitoring

Fonterra will undertake the river water quality monitoring necessary to measure the improvement in water quality with staged improvement in wastewater quality. This may include the following monitoring, timed to occur following implementation of a staged improvement in wastewater quality:

- Analysis of representative grab samples of the combined wastewater discharge for BOD and LMW BOD (low molecular weight biological oxygen demand) analysis.
- Analysis of representative water samples from the Matau branch for E coli, BOD, dissolved reactive phosphorus, total oxidised nitrogen, ammoniacal nitrogen and any other contaminants as agreed by both signatories.
- Continuation of daily wastewater volume measurement and composite sample quality analysis.

8 MOU Core Working Group

Fonterra commits to providing the necessary resources to enable the obligations of this MOU to be met.

8.1 Contact Details

The core MOU group and contact details are:

<i>Fonterra</i>	Karen Leov Jim Barnett Ian Goldschmidt Tony Smith
<i>ORC</i>	Graeme Martin Selva Selvarajah Stephen Cairns Duncan Butcher

9 Communication and Consultation

The signatories to this document acknowledge the importance of communication and consultation for the achievement of the shared vision and the ongoing relationship between the parties.

9.1 Dealing with Conflict

In the event that the signatories to this document are in conflict, then a meeting of the parties will be organised and every effort will be made to resolve the issue.

9.2 Media Protocol

In the event that the signatories to this document agree that there is an opportunity for media coverage of the activities of the MOU then a joint media statement will be prepared.

10 Cancellation of the MOU

In the case of difficult or irreconcilable conflict between the signatories, the MOU could be cancelled by both or either of the signatories following a meeting between both signatories.

11 Signatories

This protocol is entered into with effect from.....March 2006.

Signed by _____ and _____ and _____

