

**ALLIANCE GROUP LIMITED**

**Lorneville Plant Reconsenting**

**Report on pre-application  
consultation**

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**Date: 27 November 2015**

**Alliance Group Limited**

**Lorneville Plant Reconsenting**

**Report on pre-application consultation**

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## EXECUTIVE SUMMARY

Alliance Group Limited (“Alliance”) is a large meat processing and export company and operates the Lorneville plant which is situated about 7 km north of Invercargill. A number of the key consents, including the wastewater discharge and air discharge consents, are due to expire on 7 August 2016. Alliance is preparing applications to renew its key consents and has undertaken a substantial consultation process to support these applications.

Alliance initiated consultation on these consents in March 2013. Its intention was to initiate consultation early, provide substantial technical information, identify concerns and allow sufficient time to resolve concerns before the applications were lodged. Alliance arranged 29 consultation meetings over 2.5 years.

An important feature of this consultation programme was that Alliance had well-established positive working relationships with key stakeholders. The key water-related stakeholders include Southland Fish and Game (SFG), Department of Conservation (DOC), Public Health South (PHS) and Te Ao Marama (TAM) as well as the regulatory agencies being Environment Southland (ES), Invercargill City Council (ICC) and Southland District Council (SDC). Consultation with parties potentially affected by localised impacts built on the established Alliance Lorneville community group.

Key elements of the consultation process followed for this application were:

- Pre-application consultation began early and 2.5 years before the applications were due to be lodged.
- A project plan was prepared and discussed with the regulators (ES, ICC, SDC) at the outset and later with the Lorneville community and a wastewater technical working party (TWP).
- A TWP was established, meeting six times, and was provided with extensive technical information on wastewater treatment, river and estuary water quality and ecology, environmental effects, proposed consent conditions and a wastewater environmental monitoring plan. A site inspection of the plant, wastewater treatment plant (WWTP) and Makarewa River was undertaken.
- Alliance consulted the TWP as a whole and also, where required, consulted individual members of the TWP.
- Consultation was undertaken with iwi (TAM), a Cultural Values Report (CVR) was commissioned and an iwi values and mitigation table prepared jointly.
- All members of the TWP provided written support in principle for the proposed primary wastewater treatment upgrade.
- A summary AEE was prepared and provided to the TWP and to attendees of the public information evening.
- The wider Lorneville community was invited to two consultation meetings and a public information evening.

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- A public information evening was arranged and in spite of widespread publicity was only attended by six parties.
  - The Wallacetown Community Board (WCB) was consulted and provided written support for the reconsenting with 35 year consent terms.
  - Additional consultation was undertaken on recreation effects of wastewater discharges and water abstraction.

Overall, the consultation process for the Alliance Lorneville reconsenting has been robust and included substantial technical consultation particularly on the wastewater discharge and its environmental effects. Agreement has been reached with key stakeholders on the proposed primary wastewater treatment upgrade and most of the proposed consent conditions. Key stakeholders are now well informed of Alliance's proposals but the consent term of 35 years remains an area of disagreement. In spite of extensive publicity the Lorneville community and wider public appear to show little concern about the reconsenting with modest attendance at community meetings and the public information evening.

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## 1. Background

Alliance Group Limited (“Alliance”) is a large meat processing and export company and operates the Lorneville plant which is situated about 7 km north of Invercargill. The Lorneville plant accounts for about half of Alliance’s total meat processing and holds thirteen resource consents. A number of the key consents, including the wastewater discharge and air discharge consents, are due to expire on 7 August 2016. Alliance is preparing applications to renew its key consents and to lodge these applications with Environment Southland (ES) and Invercargill City Council (ICC) by the end of November 2015. No applications are required to Southland District Council (SDC). Although expiring at a later date, Alliance is also applying to renew the consent to abstract water from the Oreti River and the associated consent which allows maintenance of the intake channel.

This report summarises the pre-application consultation carried out by Alliance in relation to the renewal of its resource consents. Appendix 1 lists the consents that are being sought.

Alliance initiated consultation on these consents in March 2013 which provided over 2.5 years to consult key stakeholders and the general community. Consultation began with the preparation of a project plan and discussing this with the regulators to confirm that the planned consultation was appropriate. Alliance’s intention was to initiate consultation early, provide substantial technical information, identify concerns and allow sufficient time to resolve concerns before the applications were lodged. Alliance arranged 29 consultation meetings over 2.5 years.

An important feature of this consultation programme was that Alliance had well-established positive working relationships with key stakeholders. These relationships had been developed through the Alliance’s Maitua plant wastewater discharge consent process and also through various consent processes associated with the Lorneville plant. Appendix 2 provides a chronology of pre-application consultation. Further details, such as meeting notes, meeting presentations, correspondence, completed feedback forms etc. are available from Alliance or the author.

## 2. Approach to Consultation by Alliance

Effective resource consent consultation requires identification of all parties who may be affected or interested in the proposal, informing these parties of the proposal and the opportunity to express their concerns and/or support to the applicant. Once concerns are identified then Alliance has the opportunity to investigate the concerns and propose resolution to the relevant parties in the hope that the concerns can be resolved informally before the resource consent application is lodged. Even if all concerns are not resolved an effective consultation process provides the applicant with clear information on issues and concerns that should be addressed in the application. An effective consultation process should also result in better informed affected parties and improve the efficiency and effectiveness of the formal consent process.

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The range of consents being sought resulted in two main groups of potentially affected parties. One group was primarily interested in water-related activities, such as the discharge of wastewater to the Makarewa River, and the abstraction from the Oreti River, while the other group was primarily interested in localised effects resulting from discharges to air and discharges to land.

The key water-related stakeholders are well known to Alliance and include Southland Fish and Game (SFG), Department of Conservation (DOC), Public Health South (PHS) and Te Ao Marama (TAM). Individuals are also potentially interested in water-related activities but are more difficult to identify. Some form of public notice was required to identify individual interested parties.

TAM represents the interests of iwi. It was established early in the consultation process that TAM would represent the interests of the three local runanga (Waihopai, Awarua and Hokonui) and keep Te Runanga o Ngai Tahu (TRONT) informed on this project.

Consultation with parties potentially affected by localised impacts built on the established Alliance Lorneville community group. This group meets annually and is briefed on Lorneville operations and given the opportunity to raise concerns. For this consultation process the area for distribution of meeting invitations was expanded and took into account the maximum area of potential air emissions impact determined from dispersion modelling and odour impact assessments.

A wastewater technical working party (TWP) was established to enable key water-related stakeholders and regulators to be provided with detailed technical information on wastewater treatment and receiving environment effects to allow for technical discussions with Alliance and its consultants and to progress the variety of detailed technical issues that were likely to arise. The TWP was also provided with detailed information relating to the abstraction from the Oreti River and was briefed on all consent applications to be made by Alliance.

Key elements of the consultation process followed for this application were:

- Pre-application consultation began early and 2.5 years before the applications were due to be lodged.
- A project plan was prepared and discussed with the regulators (ES, ICC, SDC) at the outset and later with the Lorneville community and TWP.
- A TWP was established, meeting six times, and was provided with extensive technical information on wastewater treatment, river and estuary water quality and ecology, environmental effects, proposed consent conditions and a wastewater environmental monitoring plan. A site inspection of the plant, wastewater treatment plant (WWTP) and Makarewa River was undertaken.
- Alliance consulted the TWP as a whole and also, where required, consulted individual members of the TWP.

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- Consultation was undertaken with iwi (TAM), a Cultural Values Report (CVR) was commissioned and an iwi values and mitigation table prepared jointly.
  - The wider Lorneville community was invited to two consultation meetings and a public information evening.
  - All members of the TWP provided written support in principle for the proposed primary wastewater treatment upgrade.
  - A summary AEE was prepared and provided to the TWP and to attendees of the public information evening.
  - A public information evening was arranged and in spite of widespread publicity was only attended by six parties.
  - Additional consultation was undertaken on recreation effects of wastewater discharges and water abstraction.

This consultation process followed the principles of best practice resource consent consultation outlined by the Ministry for the Environment (2015, 1999).

### **3. Community Consultation**

The consultation programme for this consent application involved three main components being community consultation, TWP consultation and consultation on recreation effects. This section reports on the outcome of community consultation which comprised the wider Lorneville community and a Public Information Evening.

#### **3.1 Lorneville Community**

The Alliance Lorneville plant is located within a largely rural area with the settlements of Lorneville and Wallacetown nearby. Alliance facilitates an annual meeting of the Lorneville community inviting its nearby neighbours and the residents of Wallacetown. For this consultation programme the invitation area for the Lorneville community was extended to 2 km north and east of the processing plant, 4 km south of the WWTP and 4 km downstream (southwest) to the confluence of the Makarewa and Oreti rivers to take into account the maximum area of potential air emissions impact determined from dispersion modelling and odour impact assessments. Invitations were distributed to 494 properties of which about 280 were distributed to Wallacetown residents.

The Lorneville community was invited to two community meetings and the Public Information Evening. The meetings were held on 31 July 2013 and 6 August 2014 and covered the usual plant operations update as well as the consent renewal project plan, key aspects of wastewater treatment and discharge, water abstraction and air discharges and the associated technical assessments. A two-page newsletter on the consenting project was distributed prior to the 2014 meeting. The first meeting was attended by nine neighbours which included two couples. ES was represented at both meetings.



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Neighbours at the first meeting completed feedback forms which indicated that the community meeting was helpful, and that no further information nor any additional specific meetings were required with Alliance at that time. The issues identified by meeting attendees included:

- fresh air and water;
- odour emissions especially from dead stock processing in spring, fellmongery and wastewater treatment ponds;
- visual and health effects of boiler emissions;
- contaminant discharges to land including the expansion of wastewater discharges to land;
- consideration of all nutrient discharges in the Oreti catchment, not just those from Alliance operations;
- impacts of recent expansion of processing activities at Lorneville; and
- recognition of improved odour emissions.

Overall, consultation with the Lorneville community showed that there was little concern expressed over the renewal of the Lorneville plant consents with a modest attendance (about 1% of distributed invitations) at two community meetings. Those that attended the opportunities, confirmed the key issues that Alliance should address and were generally supportive of the Alliance plant.

### **3.2 Public Information Evening**

A public information evening was held at Alliance Lorneville on 26 August 2015. The evening included technical displays, summary application reports, air quality, water quality and planning consultants and Alliance staff available to answer questions and an opportunity to complete feedback forms. The evening was well advertised through distribution of 484 leaflets to the Lorneville community, email notification to TWP and Alliance staff, newspaper advertisements in the Southland Times and Southland Express, a newspaper article and listing in the Southland Times events column. In spite of this comprehensive promotion, there were only six attendees (which included one couple) and five of whom completed feedback forms. All agreed that the information evening was helpful, with three parties supporting the granting of consents, one party unsure and one party not supporting the granting of the consents.

The issues raised on the feedback forms included:

- health effects of boiler emissions;
- odour emissions;
- light pollution; and
- odour from biosolids land discharges.

Two parties required further information and one party wished to meet Alliance representatives. These actions have been attended to.

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### **3.3 Wallacetown Community Board (WCB)**

Alliance consulted three representatives of the WCB including the chairman at a meeting on 24 September 2015. A WCB representative had also attended the July 2013 Lorneville community consultation meeting. Alliance provided an update on the reconsenting project and outlined the main proposed mitigation as well as confirming that application would be made for the same volume of water abstraction and wastewater discharge. Alliance confirmed that it would apply for 35 year permits given the significant investment in wastewater treatment that it intended to make. Alliance explained that there was no advantage in disinfecting wastewater at present because of high upstream bacterial loads.

WCB representatives were supportive of the Lorneville plant reconsenting and pointed out that the Lorneville plant provided considerable employment for the Wallacetown community. It was also indicated that WWTP odours were considerably improved. WCB representatives agreed to provide written support for the reconsenting with 35 year consent terms. This was provided on 12 October 2015.

## **4. Technical Working Party (TWP)**

### **4.1 Technical Working Party - Overview**

Alliance established a wastewater technical working party (TWP) for this consent process on 19 November 2013 and followed the successful model employed for the Alliance Matura wastewater discharge consent in 2002 – 03. The members of the TWP were:

- Southland Fish and Game
- Department of Conservation
- Public Health South
- Te Ao Marama
- Southland District Council
- Invercargill City Council
- Environment Southland.

The TWP met six times over two years prior to the application being lodged and followed an agreed protocol. Meetings were facilitated by an Alliance consultant and meeting notes circulated to TWP members. Considerable technical information was provided to the TWP including:

- consent renewal project plan and timetable;
- proposed TWP protocols
- Alliance Group Limited and Lorneville plant background information;
- existing wastewater treatment and discharge;
- approach to Makarewa and Oreti rivers and New River Estuary assessment;

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- results of river and estuary investigations;
  - Assessment of Effects of existing wastewater discharge and recommended mitigation;
  - proposed primary wastewater treatment upgrade;
  - wastewater characterisation, treatment options and recommended treatment upgrade;
  - wastewater and receiving water monitoring proposals;
  - Oreti River abstraction;
  - land disposal options;
  - groundwater investigations;
  - summary AEE;
  - proposed consent conditions.

A site inspection of the processing plant, WWTP and Makarewa River was also provided. The TWP was offered the opportunity to review the complete draft AEE but it was agreed that the summary document was sufficient.

A key outcome of the TWP consultation process was the agreement of all TWP members to “support in principle” the proposed primary wastewater treatment upgrade. This upgrade was to achieve compliance with recommended in-river ammonia concentrations by reducing the ammonia-N concentration in the treated wastewater discharge by 75% when compared to 2013 levels.

An important aspect of the upgrade proposed by Alliance was the proposed consent term of 35 years with implementation of the primary wastewater treatment upgrade by year 15. Most members of the TWP were concerned with a 35 year term and were more comfortable with a 25 year term. There was also some preference for implementing the wastewater treatment upgrade sooner than 15 years. SDC, however, supported the 35 year term and the staged approach to wastewater treatment upgrades.

At the final TWP meeting Alliance presented responses to various issues raised by SFG, DOC and PHS, presented a summary AEE and proposed consent conditions. Although a large measure of agreement was achieved with the TWP a number of outstanding issues remained. These are summarised in the sections that follow.

## **4.2 Environment Southland (ES)**

Environment Southland (ES) is a member of the TWP and has been represented at all meetings. The TWP process has provided a useful forum for ES to gain an early understanding of the consent applications and associated technical information as well as hear first-hand the concerns and consensus achieved between Alliance and the stakeholders. As the primary regulator, ES was constrained from pre-determining the outcome of the consent process and this limited the extent of their agreement that ES could provide particularly during the final meeting of the TWP.

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Alliance consulted ES over the project plan at the start of the project (7 March 2013) to confirm the general approach, the required consent applications, the range of technical assessments, the consultation programme and the key issues to be addressed in the applications. ES was also provided with occasional technical briefings and project updates in addition to those received at TWP meetings.

### **4.3 Invercargill City Council (ICC)**

Invercargill City Council (ICC) was represented at all but one TWP meeting and as with ES the TWP process provided ICC with an early understanding of the consent application and associated technical information. ICC also has a regulatory function in this process although only for one landuse consent. ICC was consulted on the project plan at the start of the project (7 March 2013) to confirm the approach by Alliance. ICC confirmed at that time that ES would be the lead regulatory agency for this consent process.

### **4.4 Southland District Council (SDC)**

Southland District Council (SDC) had a relatively minor role in the TWP process attending only two meetings. Alliance however consulted SDC over the project plan at the start of the process (7 March 2013) to confirm amongst other things that no consent applications were required from SDC. Although SDC had a modest involvement with the TWP, Alliance contacted SDC directly regarding the proposed primary wastewater treatment upgrade. SDC provided “support in principle” for the proposed primary wastewater treatment upgrade and specifically provided support for a 35 year term.

SDC recommended that Alliance consult the Wallacetown Community Board which has occurred and is reported above.

### **4.5 Te Ao Marama (TAM)**

Alliance has consulted TAM as a member of the TWP and through “one-on-one” meetings. TAM attended two TWP meetings and Alliance met them separately on seven occasions including site visits during 2014 – 15 for both Dean Whaanga and TAM consultant, Jane Kitson (Kitson Consulting).

Consultation with TAM began with Alliance outlining the consent application project plan, providing background information on Alliance Group, the Lorneville plant and the Lorneville WWTP, clarifying that Alliance intended to apply for 35 year permits and providing a site inspection of the processing plant, WWTP and the Makarewa River. Key aspects that arose early in the consultation with TAM were:

- TAM would represent the interests of Waihopai, Awarua and Hokonui Runanga and TRONT;
- TAM acknowledged that the Alliance Lorneville plant makes a significant contribution to the Southland economy and provides much needed employment;

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- iwi takes a Southland-wide view of discharges and regarded the reduction in combined wastewater discharges from the Lorneville, Makarewa and Maitai plants as a significant environmental benefit;
  - deterioration of New River Estuary water quality and ecology was a significant concern for iwi;
  - a Cultural Values Report (CVR) should be prepared and Kitson Consulting assisted with this. A CVR would include an inspection of the catchment by iwi and a review of existing documents;
  - Ngai Tahu were normally reluctant to agree to more than a 25 year term for wastewater discharge permits;
  - iwi noted that environmental compensation was an acceptable approach where adverse effects on the environment in one locality were compensated for by environmental enhancement in another locality;
  - avoiding the discharge of human waste to water was desirable for iwi but this aspect was not clear-cut because other communities still discharged human waste to water and the Alliance discharge included human waste from Wallacetown.

Kitson Consulting prepared a CVR for TAM and this was presented to Alliance and its consultants on 15 October 2014. TAM explained that the CVR was not a Cultural Impact Assessment (CIA) and did not replace consultation with iwi. The CVR outlined the cultural landscape of the Makarewa River catchment and lower Oreti River catchment and clarified the four key values for iwi:

- kaitiakitanga (stewardship)
- mahinga kai (food gathering)
- ki uta ki tai (mountains to the sea)
- whanaungatanga (health and wellbeing).

TAM also explained that freshwater mussels (waikakahi) were an important taonga and that iwi would not give up on trying to restore their population. Alliance noted that in their investigations no mussels had been observed and the setting of site-specific ammonia criteria would not include the very low ammonia levels required by freshwater mussels.

The CVR formed the basis for consultation between iwi and Alliance. Alliance outlined its river assessments and wastewater treatment investigations to iwi as well as details of an environmental upgrade plan which included current proposed wastewater treatment upgrades and proposed habitat improvements of an oxbow on Alliance land and fencing and planting of Makarewa River riparian areas.

After consideration by the TAM Board, iwi provided support in principle for the proposed primary wastewater treatment upgrade but could not support a 35 year term. A 25 year term was however acceptable to iwi.

During discussions with TAM it was made clear (by TAM) that a 75% reduction

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in nitrogen discharge to the Makarewa River was a significant improvement. TAM also accepted that separation of human wastewater from general plant wastewater was not practicable. Alliance also outlined the proposed continued abstraction of water from the Oreti River. This continued abstraction was agreeable to TAM.

The culmination of pre-application consultation between Alliance and iwi was the completion of an Iwi Values and Mitigation Table. The latest version is included in Appendix 3. It was agreed with iwi that a formal CIA was not necessary and that the table in Appendix 3 represented an agreed position between Alliance and iwi. TAM commented that the consultation process with Alliance and the preparation of the Iwi Values and Mitigation Table had been positive for iwi.

Preparation of the Iwi Values and Mitigation Table was an iterative process and began with TAM proposing the table with the first two columns (Iwi Core Pillar Values and Iwi Needs) completed. Alliance then completed the three remaining columns (Proposed Mitigation by Alliance, Proposed Monitoring and Relevant Consent Conditions dated 22-07-15). Finally, TAM proposed additions and commentary as shown in the table. The table as annotated in Appendix 3 is acceptable to Alliance.

Key aspects of the agreed position between Alliance and iwi are:

- iwi support in principle the proposed primary wastewater treatment upgrade;
- iwi do not support a 35 year term but do support a 25 year term;
- iwi have a strong preference for land disposal of all wastewater and for avoiding human waste discharges to water. Iwi accept that these preferences are not practicable in this case;
- Alliance has committed to an Environmental Monitoring Plan, a Habitat Enhancement Plan, annual monitoring reports, pre- and post-upgrade aquatic biological and fish health surveys, ongoing iwi consultation, a wastewater treatment upgrade plan, continual improvement, avoidance of fish or eel stranding within the water take channel or on the riverbanks, enabling practicable access to Alliance land, post-treatment upgrade review and participation in a catchment-wide water quality approach.

#### **4.6 Southland Fish and Game (SFG)**

SFG was represented at all meetings of the TWP and provided written comment on receiving water limits, Oreti River water take and on proposed conditions. SFG also provided comments on recreation effects which are discussed in Section 5 of this report.

During the pre-application consultation, SFG made a number of specific comments on receiving water limits for periphyton, nitrate, ammonical-nitrogen, dissolved oxygen, E coli, clarity, temperature, pH and foams and scums. Reference was made to the National Policy Statement for Freshwater, Southland Regional Water Plan and the Resource Management Act. SFG also questioned

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why a 15 year delay was needed before implementing the primary wastewater treatment upgrade.

Although SFG recognises the priority of Alliance's water takes from the Oreti River, SFG recommends that Alliance should consider voluntary water conservation measures at the 7-day Mean Annual Low Flow (MALF). SFG also recommended that water take screening arrangements should reflect NIWA recommendations.

Alliance considered all SFG comments and made a number of adjustments including increasing dissolved oxygen, temperature and pH limits. SFG made the following points on the proposed consent conditions:

- SFG acknowledges that the Makarewa River below the Alliance discharge has little if any suitable periphyton habitat;
- nitrate limits should at least reflect existing water quality and the requirements of Southland Regional Water Plan and the RMA;
- SFG supports the reduction in ammonia discharge but concerned with the 15 year delay;
- insufficient post upgrade discharge and receiving water limits;
- no E coli discharge limit (post upgrade) or receiving water limit;
- concern at reduction in water clarity limit;
- SFG supports Alliance changes to temperature, pH and foams and scums conditions;
- no annual nitrogen and phosphorus limits;
- no proposed improvements during the 20 years following the primary wastewater treatment upgrade;
- greater justification needed for 35 year term.

Alliance has considered these comments and made a number of adjustments to the proposed conditions lodged with the application.

#### **4.7 Department of Conservation (DOC)**

DOC was represented at all but one TWP meetings and provided written comment on the general approach and proposed conditions.

DOC pointed out that the New River Estuary is significant and that the Makarewa River has significant ecological values but is not outstanding. Many of the limits sought by Alliance are "bottom line limits" and do not seek to improve fresh water values. DOC however recognises that some significant improvements are being proposed. DOC also considered that the proposed consent term is too long.

DOC pointed out that the New River Estuary is in a poor state but provides important habitat and is an important fishery nursery. The Makarewa River also provides a migratory pathway for fish. Sediment nutrient targets and monitoring should be considered by Alliance.

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The main points made by DOC on the proposed consent conditions were:

- the fish community in the Makarewa River is surprisingly diverse and is regarded as “significant” and requiring protection;
- state “C” in the NPS should be the minimum state for the Makarewa River;
- vulnerable life stages (eggs and larvae) should be considered in setting limits;
- the RWP objective of 10% improvement in surface water quality should be given effect by Alliance;
- the proposed 35 year consent term is very long;
- DOC supports the proposed temperature, pH and foams and scums limits;
- the reduction in visual clarity standard is not supported;
- no consent condition is proposed for dissolved oxygen post upgrade;
- DOC recognises the effort in reducing ammonia discharges but wished to see improvement before the proposed 15 year implementation date;
- nitrate discharge should be reduced over the life of the permit;
- a receiving water E coli limit should be added;
- discharge limits post-upgrade should be included;
- greater clarity should be provided over review conditions and greater assurance that water quality would be improved;
- DOC supported the Environmental Monitoring Plan (EMP) but wished to see an opportunity for the TWP to be consulted over any review of the EMP;
- concern at 50 mm depth of wastewater irrigation to land; and
- a variety of other relatively minor technical matters.

A number of these comments reflect those made by SFG. As with SFG, Alliance has considered all these comments and made a number of adjustments to the conditions lodged with the application.

#### **4.8 Public Health South (PHS)**

PHS was represented at all but one TWP meetings and provided written comments on the consultation process, E coli and wastewater disinfection, the wastewater discharge permit and the proposed conditions. PHS also provided written comments on recreation effects which are discussed in section 5 of this report. PHS was supportive of the consultative approach taken by Alliance to these consent applications.

Although PHS supported in principle the proposed primary wastewater treatment upgrade, PHS was very keen to see a commitment from Alliance to reduce E coli discharges to the Makarewa River even if upstream levels were elevated. This was reiterated a number of times during the pre-application consultation.



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Towards the end of the pre-application consultation, Alliance committed to undertaking a review, 10 years after the commencement of the consents, which would examine E coli levels in the Makarewa River and determine the practicability of treatment e.g. disinfection. This commitment appeared to satisfy PHS concerns regarding river bacterial levels and PHS acknowledged that a delay in the review and potential E coli treatment was reasonable in this case.

PHS provided the following comments on the proposed conditions:

- PHS congratulated Alliance on committing to an upgrade of the existing wastewater treatment plant;
- no receiving water limits for E coli have been proposed in conditions or the EMP;
- PHS considered that a 35 year consent duration was too long and proposed a maximum of 20 – 25 years; and
- PHS recommended that Alliance review the EMP once the Oreti River catchment NPS limits had been set.

## **5. Consultation on Recreation Effects**

### **5.1 Background**

During the preparation of the Alliance Lorneville resource consent applications it was determined that further specific background was required on the effects on recreational values. Consultation meetings with key stakeholders were undertaken during 24 – 25 September 2015 and they were given prior notice of the recreation aspects for consultation.

Stakeholders were supplied with a summary AEE and had previously participated in TWP consultation and thus were fully briefed on the consent applications, including supporting technical information and proposed consent conditions. During consultation on recreation aspects a number of other matters were discussed and these are included in this report. The following stakeholders were consulted:

- Southland Fish & Game
- Te Ao Marama
- Department of Conservation
- Public Health South
- Southland District Council
- Invercargill City Council
- Wallacetown Community Board.

Some followup telephone consultation with individuals involved in eeling and whitebaiting in the lower Makarewa River was also undertaken.

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## 5.2 Outcome of Consultation on Recreation Effects

DOC provided written comment on recreation aspects rather than meet Alliance and SFG and PHS provided written comment after the consultation meeting. SDC and ICC were also contacted and asked for information on recreation aspects. SDC recommended that WCB be consulted, which was carried out, while ICC did not respond.

The main **recreation-related points** to emerge from this consultation round were as follows:

- Stakeholders were pleased with the proposal from Alliance to include a specific condition requiring Alliance to undertake a review 10 years from the commencement of the consent of river E coli levels and the practicability of additional treatment (disinfection). PHS specifically agreed with the 10 year review timeframe and thought the delay in disinfection treatment was reasonable in this case.
- PHS pointed out that historically the Makarewa River was a popular recreational destination but industrial and agricultural development had reduced its recreational value considerably.
- The 2007 – 08 National Angling Survey was the most recent available and provides angler information for the Makarewa River as a whole and the Oreti River above and below Lumsden. Specific information on the Makarewa River below the Alliance wastewater abstraction is not available.
- SFG confirmed that the Makarewa River is not a destination fishery and that the Oreti River is a much more highly valued fishery than the Makarewa River generally and particularly the Makarewa River below the Alliance discharge. There are no SFG access points to the river below the Alliance discharge but SFG would be very keen to work with Alliance to improve public access.
- SFG considered that the Alliance discharge to the Makarewa River and the Oreti River abstraction do not, in themselves, deter freshwater angling and conversely if the Alliance activities ceased then current angling is unlikely to be affected.
- Stakeholders suggested the following additional contacts or groups for recreation consultation:
  - Whitebaiters Association
  - Commercial Eelers Association
  - Invercargill and Waihopai rowing clubs
  - Water skiers
  - Duck hunters
  - Waka ama
  - Jet boaters

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- Jet skiers

- During the consultation on recreation effects a number of other recreational groups were suggested for further consultation. Most of these groups represented users of the lower Oreti River or New River Estuary which are some distance downstream. Direct effects of the Alliance discharge or abstraction are unlikely to be able to be differentiated from general water quality effects at those locations. The possible exceptions to this are whitebaiters or eelers who may use the lower Makarewa River downstream of the Alliance discharge. Alliance consulted two individuals involved in commercial eeling and two individuals involved in whitebaiting.
- SFG also referred to the 2013 New Zealand Angling Values Survey. This survey reported results for the Oreti River, above and below Lumsden, and the Makarewa River as a whole. The survey was distributed online to a random sample of licence holders with some parallel telephone surveying. One hundred and thirty-three respondents identified the Oreti River above Lumsden, 138 identified the Oreti River below Lumsden and 18 identified the Makarewa River as fished over the last 3 – 5 years with mean enjoyment scores of 2.67, 2.33 and 2.44 respectively. Further information is available in the report on enjoyment factors.
- SFG reported the comments of a newly appointed field officer who indicated that the lower Makarewa River “offers some good trout fishing” especially for younger anglers, mainly from Wallacetown, due to its proximity. WCB comments support these views.
- WCB representatives thought that abstraction from the Oreti River would have little impact on recreation.
- WCB were also of the view that no mitigation measures beyond those currently proposed were necessary.
- TAM and SFG anticipate that measures proposed by Environment Southland will improve water quality of the Makarewa River above the Alliance discharge.
- PHS referred to the 2015 Southland Recreational Water Survey. PHS confirmed that no respondent to this survey identified the Makarewa River as a recreation location but that the Oreti River and New River Estuary were regularly used for a variety of recreational activities. The Oreti River was deemed the second most popular bathing site in Southland behind Oreti beach.
- PHS thought that wastewater discharges to water would deter water-based recreation even though SFG thought that this would not apply to angling in the lower Makarewa River.
- DOC commented that little is known of recreational eel fishing in either the Makarewa or Oreti rivers but the Alliance wastewater discharge has potential health effects through water contact and eel flesh contamination and recreational limitations due to reduced eel populations.

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- DOC also considered that whitebaiting was popular in the Oreti River. The Makarewa River did not provide inanga spawning habitat while spawning was likely to occur between Dunns Road and Ferry Road on the Oreti River. Potential effects of the Alliance discharge on whitebait were similar to the eel fishery.
  - DOC thought that the relative impact of the Alliance wastewater discharge may increase over time as river water quality and habitat improved.
  - DOC also expressed concerns about the cumulative and chronic effects and the effects on the vulnerable life stages of fish.

Consultation with two commercial eelers and two recreational whitebaiters resulted in the following comments regarding the eel and whitebait fishery of the lower Makarewa River:

- The lower Makarewa River supports a productive commercial eel and recreational whitebait fishery in spite of the discharge of treated wastewater from the Alliance Lorneville plant.
- Recreational eeling in the lower Makarewa River appears to be minor while about five whitebaiters regularly fish the area in the vicinity of the discharge but up to 15 whitebaiters may on occasion be present.
- Access to the lower Makarewa River appears to limit recreational fishing while the Alliance wastewater discharge does not appear to limit eeling or whitebaiting.

Stakeholders also made **comments on the overall consent process**. The main points made on the overall process were as follows:

- SFG and TAM restated their concern regarding the proposed 35 year consent term while WCB expressed support for 35 year consents.
- SFG thought that Alliance and SFG were largely “on the same page”.
- WCB representatives considered that odour impacts on Wallacetown were minor and were much improved.
- WCB has provided written support for 35 year consents.
- TAM confirmed their support in principle for the primary wastewater treatment upgrade while acknowledging that human sewage would continue to be discharged to the Makarewa River as part of the Alliance discharge.
- TAM and Alliance were largely in agreement with the updated iwi values and mitigation table. Additions to the table proposed by TAM on 25 September 2015 were agreeable to Alliance.
- Comments made by TAM on the proposed conditions (except the term) were largely acceptable to Alliance.

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## 6. Discussion and Conclusions

Alliance has embarked on a robust pre-application consultation process as part of the preparation of applications for the key consents for the Lorneville plant. The consultation process has achieved the principles for good consultation included in the Ministry for the Environment guidelines and has exceeded normal practice for resource consent consultation. Consultation began early, substantial technical information was provided, many opportunities were made for stakeholder comment, some adjustments to the proposals were made by Alliance and a large measure of agreement between Alliance and key stakeholders resulted. Public participation was however modest in spite of extensive publicity. A number of stakeholders have congratulated Alliance on its positive approach to consultation.

This consultation process included 29 meetings and consisted of community consultation, including both the nearby Lorneville community and general public; a wastewater TWP and consultation specifically on recreation effects.

Consultation with the Lorneville community built on existing annual meetings but with an expansion of the invitation area to 2 km to the north and east, 4 km to the south and 4 km southwest. In spite of 494 invitations only a modest (about 1% of distributed invitations) attendance resulted at two meetings. This low attendance is likely to reflect a low level of concern with the reconsenting of the Lorneville plant. Those neighbours that attended the community meetings were generally supportive of Alliance, satisfied with the proposed consultation and identified issues that Alliance was largely aware of and intended to address in its applications.

The public information evening was similarly attended by few people despite widespread publicity. Once again, this appears to indicate a low level of community concern. The issues raised at the information evening were those that Alliance was already addressing in the applications. The information evening identified three parties where further consultation would be desirable and Alliance has progressed this.

Consultation with representatives of the WCB, including its chairman, confirmed a low level of concern from the nearest settlement. This was confirmed in writing and included support for a 35 year consent term.

Establishment of the TWP was the cornerstone of this consultation process and included substantial technical consultation particularly on the wastewater discharge and water abstraction consents. The TWP built on a similar model used for the Alliance Matura wastewater discharge permit and involved a number of the same agencies. The TWP met six times with presentation of a considerable amount of technical information relating to the Lorneville plant, the existing WWTP, river and estuary assessments, wastewater treatment alternatives, monitoring proposals and proposed consent conditions. Members of the TWP, including the regulators, are now well informed of the applications and supporting technical assessments. It is expected that the formal consent process will be able to be more focused and efficient as a result of the level of pre-application consultation.

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A key outcome of the TWP consultation process was the agreement of all TWP members to “support in principle” the primary wastewater treatment upgrade. The proposed upgrade is to achieve compliance with recommended in-river ammonia concentrations by reducing the ammonia-N concentration in the treated wastewater discharge by 75% when compared to 2013 levels.

An important aspect of the upgrade proposed by Alliance was the consent term of 35 years with implementation of the primary wastewater treatment upgrade by year 15. Most members of the TWP were concerned with a 35 year term and were more comfortable with a 25 year term. There was also some preference for implementing the wastewater treatment upgrade sooner than 15 years. SDC, however, supported the 35 year term and the staged approach to wastewater treatment upgrades.

Although there was a large measure of agreement, members of the TWP raised a number of technical concerns with the proposed consent conditions. Alliance has made some adjustments to the initial set of conditions and is considering further adjustments. The final position of Alliance on these matters will be documented in the application to be lodged with ES in late 2015.

Consultation with iwi (TAM) was also a substantial and successful component of the consultation programme. During the seven one-on-one meetings and site inspections with TAM, and two TWP meetings, much technical information was shared by Alliance and detailed explanation of iwi concerns given by TAM. A CVR was prepared which outlined the cultural landscape and clarified the four key iwi values, namely:

- kaitiakitanga (stewardship)
- mahinga kai (food gathering)
- ki uta ki tai (mountains to the sea)
- whanaungatanga (health and wellbeing).

TAM, representing the views of Waihopai, Awarua and Hokonui Runanga, provided support in principle for the proposed primary wastewater treatment upgrade but could not support a 35 year term. A 25 year term was however acceptable. Similar views were expressed by SFG, DOC and PHS.

The outcome of consultation with TAM was the finalisation of an Iwi Values and Mitigation Table prepared jointly by TAM and Alliance. This table clarifies iwi core pillar values and iwi needs and proposes mitigation, monitoring and relevant consent conditions. The final version of the table included some additional commentary from TAM to ensure that iwi preferences were noted for land disposal of wastewater and for avoiding human waste discharge to water even if these preferences were not practicable in this case. TAM was particularly positive about Alliance’s proposals to improve the habitat of an onsite oxbow and to fence and plant Makarewa River riparian areas, where practicable.

TAM also noted that the reduction in combined wastewater discharge from the Makarewa, Mataura and Lorneville plants was a significant environmental benefit

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for Southland. TAM supported the continued abstraction of water from the Oreti River, while SFG recognised the priority of the Alliance abstraction above other upstream takes.

SFG and DOC made a number of technical comments regarding wastewater discharge and receiving water limits during the consultation process. Alliance made some adjustments and at the time of preparing this report was considering how best to address the remaining items. Although both SFG and DOC recognised the significant benefit of the primary wastewater treatment upgrade both organisations would prefer the upgrade to be implemented sooner and would prefer improvements to be made throughout the consent term and especially during the 20 years after the upgrade is implemented.

PHS also supported the proposed primary wastewater treatment upgrade but was concerned that no treatment of bacterial (E coli) discharges was proposed. Alliance initially proposed a review of river E coli levels and the practicability of treatment after the primary wastewater treatment was implemented. Alliance was clear that disinfection of wastewater is unlikely to improve the recreation grade of the Makarewa River unless upstream E coli levels improve. Alliance now proposes to undertake the E coli and disinfection review 10 years after the commencement of the consent. This adjustment appears to satisfy a number of stakeholders and in particular PHS who have primary responsibility for public health.

Consultation on recreation effects was undertaken to provide further background for the assessment of these effects. Surveys of recreation use of the lower Makarewa River and lower Oreti River and recreational impact assessments were not considered necessary in this case but consultation with relevant stakeholders was expected to provide some useful commentary. Alliance met SFG, TAM, PHS and WCB and received written comment from DOC. The primary conclusions of the consultation on recreation effects were:

- The proposal by Alliance to review river E coli levels ten years from the commencement of the consent was favourably received by stakeholders.
- The Makarewa River below the Alliance discharge is not a destination fishery; has considerably less angling value than the Oreti River; and has little public access.
- The Alliance discharge to the Makarewa River and the abstraction of water from the Oreti River have, in themselves, little impact on angling numbers.
- The WCB, as representatives of the nearest community to Lorneville, have few concerns regarding the impact of the Alliance discharge and abstraction on recreation in the Makarewa and Oreti rivers.
- There is little numerical information on recreation in the Makarewa River below the Alliance discharge and the Oreti River below the Alliance abstraction. The lower Oreti River is however used for a wide number of recreational activities including swimming, water skiing, whitebaiting,

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eeling, fishing, duck hunting and boating (rowing, waka ama, jet boating, jet skiing).

During the consultation on recreation effects a number of other recreational groups were suggested for further consultation. Most of these groups represented users of the lower Oreti River or New River Estuary which are some distance downstream. Direct effects of the Alliance discharge or abstraction are unlikely to be able to be differentiated from general water quality effects at those locations. The possible exceptions to this are whitebaiters or eelers who may use the lower Makarewa River downstream of the Alliance discharge. Alliance consulted two individuals involved in commercial eeling and two individuals involved in whitebaiting.

This consultation confirmed that the lower Makarewa River supports a productive commercial eel fishery and productive recreational whitebait fishery with up to 15 whitebaiters present on occasions. In the opinion of the four river users consulted, the Alliance discharge does not adversely affect the eeling or whitebaiting resource. This is in contrast to the potential adverse effects on the lower Makarewa River eel and whitebait fishery voiced by DOC.

Overall, the consultation process for the Alliance Lorneville reconsenting has been robust and included substantial technical consultation particularly on the wastewater discharge and its environmental effects. Agreement has been reached with key stakeholders on the proposed primary wastewater treatment upgrade and most of the proposed consent conditions. Key stakeholders are now well informed of Alliance's proposals but the consent term of 35 years remains an area of disagreement. In spite of extensive publicity the Lorneville community and wider public appear to show little concern about the reconsenting with modest attendance at community meetings and the public information evening.

## **7. References**

Ministry for the Environment, 2015. Consultation for Resource Consent Applicants. An everyday guide to the RMA. Series 2.2. Publication number: ME1183. 21 pp.

Ministry for the Environment, 1999. Striking a balance. A practical guide on consultation and communication for project advocates. 72 pp.



## **APPENDIX 1**

### **Consents being Sought by Alliance**

## **Consents Being Sought by Alliance**

- A discharge permit to discharge treated wastewater to the Makarewa River.
- A discharge permit to discharge treated wastewater via spray irrigation to land.
- A discharge permit to discharge treated wastewater to land for temporary storage purposes.
- A discharge permit to discharge biosolids to land and to an onsite monofill.
- A discharge permit to discharge contaminants from an industrial process to land.
- A discharge permit to authorise the discharge of contaminants and odour to air.
- A water permit to take water from the Oreti River.
- A land use consent to undertake maintenance works (channel clearance) associated with the water take from the Oreti River.

## **APPENDIX 2**

# **Chronology of Consultation**

## Consultation Chronology

Date	Party	Consultation
7 March 13	Environment Southland	Outline project plan
7 March 13	Invercargill City Council	Outline project plan
7 March 13	Southland District Council	Outline project plan
31 July 13	Lorneville community	Outline project plan
21 October 13	Environment Southland	Technical briefing
19 November 13	Technical Working Party #1	Establish TWP Outline project plan Background environmental information
5 December 13	Technical Working Party #2	Plant, WWTP and river tour River and estuary assessment
21 January 14	Te Ao Marama	Outline project plan Plant, WWTP and river tour
17 February 14	Te Ao Marama	Confirmation of iwi consultation arrangements
7 April 14	Te Ao Marama	Discuss Cultural Values Report
30 April 14	Technical Working Party	Update newsletter
12 May 14	Environment Southland	Update meeting
16 May 14	Kitson Consulting	Plant, WWTP and river tour
6 August 14	Lorneville community	Progress report on reconsenting project
8 August 14	Kitson Consulting/Te Ao Marama	Provision of Cultural Values Report (CVR)
10 September 14	Mataura TWP-includes TAM, SFG, PHS, SDC and ES	Lorneville Reconsenting Project Update
15 October 14	TAM/Kitson Consulting	Discussion of CVR and presentation of FSL Ecology and Water Quality Investigations
4 November 14	Technical Working Party	Distribute FSL Receiving Environment Report (October 2014)
13 November 14	Technical Working Party #3	Present FSL river and estuary investigations, FSL/AES effects assessment and recommended mitigation and AGL primary wastewater mitigation proposal.

2 December 14	Technical Working Party	Distribute meeting notes, presentations (FSL, AES, Alliance) and AEE (FSL, AES)
8 December 14	Te Ao Marama	Followup Cultural Impact Assessment and propose consultation
12 December 14	Te Ao Marama	Te Ao Marama outline Cultural Impact Assessment process and accept proposed meeting
17 December 14	Technical Working Party	Distribute PDP Summary Wastewater Report
15 January 15	Te Ao Marama	Follow up Te Ao Marama re consultation meeting
19 January 15	Technical Working Party	Email re Technical Working Party #4 meeting agenda and attendance confirmation
20 January 15	Te Ao Marama	Follow up Te Ao Marama re consultation meeting
28 January 15	Te Ao Marama	Consultation meeting re wastewater upgrade
29 January 15	Technical Working Party #4	Meeting re wastewater upgrade and request for support in principle
29 January 15	Public Health South	Positive comment re Technical Working Party consultation process
20 February 15	Te Ao Marama	Progress report from Te Ao Marama
24 February 15	Public Health South	Plant visit for Jo Grimwood and Linda Robertson
25 February 15	Te Ao Marama	Support in principle with caveats
19 March 15	Technical Working Party	Distribute Technical Working Party #4 minutes and presentations and advance notice of Technical Working Party #5 on 6 May
19 March 15	Southland District Council	Request 'support in principle'
19 March 15	Southland District Council	Support in principle for primary wastewater upgrade including support for 35 year term
6 April 15	Technical Working Party	Followup meeting reminder
13 April 15	Technical Working Party	Meeting reminder and provision of monitoring proposals and Oreti River take AEE
13 April 15	Te Ao Marama	Request for Cultural Impact Assessment of Oreti River take
14 April 15	Public Health South	Clarification of 'support in principle' and explanation of Public Health South position

		on E coli and disinfection
23 April 15	Public Health South	Outline Alliance position on disinfection
6 May 15	Technical Working Party #5	Outline wastewater monitoring proposals, Oreti take AEE and other land disposal and ground water investigations
6 May 15	Department of Conservation	Feedback from Department of Conservation
11 May 15	Environment Southland	Outline Alliance approach to air consent
18 May 15	Te Ao Marama	Consultation meeting – recap and discussion of mitigation
19 May 15	Technical Working Party	Distribute meeting notes and presentation
19 May 15	Environment Southland	Confirmation of no further comment
20 May 15	Southland Fish & Game	Comment from SFG
4 June 15	Environment Southland	Lorneville site inspection for air discharge matters
10 June 15	Te Ao Marama	Email confirmation that Alliance was preparing mitigation proposals
12 June 15	Environment Southland	Alliance provision of draft key technical documents and proposed consents for review
13 July 15	Technical Working Party	Invitation to final programmed TWP meeting
22 July 15	Technical Working Party	Distribute Summary AEE, proposed consent conditions and Environmental Monitoring Plan (wastewater discharge)
29 July 15	Te Ao Marama	Send iwi values and mitigation table
3 August 15	Te Ao Marama	Send Technical Working Party presentation regarding Te Ao Marama feedback
4 August 15	Technical Working Party #6	Response to comments from stakeholders Summary AEE Proposed consent conditions
17 – 26 August 15	Public Information Evening	Publicity including neighbourhood leaflet, email to Technical Working Party, newspaper advertisements (2x Southland Times, 1x Southland Express), email to Alliance staff, media release and Southland Times events column listing
19 August 15	Technical Working Party	Send Technical Working Party #6 meeting minutes and reminder re feedback on proposed conditions

19 August 15	Environment Southland (Hilary Lennox)	Comments on conditions and technical reports conveyed to Alliance
26 August 15	Public Information Evening	Displays on consent process, wastewater treatment, river and estuary ecology, effects on river and estuary, Oreti River abstraction, land discharges, air emissions and Lorneville operations. Summary applications, consultants and Alliance staff available. Feedback forms Six attendees
27 August 15	Public Health South	Comment on wastewater discharge permit
31 August 15	Southland Fish & Game	Comments on proposed conditions
1 September 15	Department of Conservation	Comments on proposed conditions
4 September 15	Stan McDonald	Acknowledge boiler issues and indicate that relevant reports will be sent later
4 September 15	Glen Darragh	Forward Information Evening displays; acknowledge biosolids odour concern and indicate relevant report will be sent later
9 September 15	Public Health South	Comment on proposed conditions
16 September 15	Department of Conservation	Written comment on recreation effects
21 September 15	Te Ao Marama	Confirmation of presence of freshwater mussels in Lower Oreti 3 km downstream of Makarewa River confluence
24 – 25 September	Southland Fish & Game Wallacetown Community Board, Te Ao Marama, Public Health South	Consultation on recreation effects
25 September 15	Southland Fish & Game	Written comment on recreation effects
12 October 15	Wallacetown Community Board	Written support for reconsenting and 35 year term
13 October 15	Public Health South	Written comment on recreation effects
23 October – 13 November	Mossburn Enterprises (Mark Thompson, Victor Thompson) Maurice (Mo) Casey George Wishart	Consultation on effects of wastewater discharge on Makarewa River eeling and whitebaiting

27 October 15	Environment Southland	Alliance provides updated position and further background to proposed consent conditions
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## **APPENDIX 3**

### **Iwi Values and Mitigation Table (29/9/15)**

## Alliance Lorneville Reconsenting 2015 –Proposals to Recognise Iwi Values

### *Comments from Kitson Consulting Ltd (for Te Ao Marama Inc)*

#### Context:

- A Cultural Values Report (CVR), not a Cultural Impact assessment, was provided for the Alliance Lorneville Reconsenting proposed wastewater discharge.
- Makarewa & Oreti River are important cultural landscapes.
- Ngai Tahu whānui view resource management from ki uta ki tai – holistically, from mountains to the sea, and includes Ngai Tahu whānui as part of the landscape/ecosystem. The Activities of AGL will affect the whole catchment.
- Mahinga Kai is central element to Ngāi Tahu Whānui cultural identity and well-being.
- The following particular points were made in the CVR in relation to the proposed Alliance Lorneville wastewater management:
  - The need to separate human waste from food gathering areas.
  - Food gathering occurs in the area downstream and upstream of the area (mahinga kai can move in and through the discharge area).
  - The adverse effects of human waste discharge on wāhi tapu/archaeological sites near and downstream of this area.
  - The potential effects of ammonia on taonga species.
  - The expectation set up in the Iwi Management Plan that wastewater disposal practice will improve over time and with improved technology.
  - The expectation of restoration and protection of mahinga kai outlined in the Iwi Management Plan.
- Alliance sought support in principle (in part or in whole) of the following:
  - The discharge of treated wastewater to the Makarewa River (and then Oreti River and New River Estuary)
  - The primary mitigation for this discharge will be a 75% reduction of TN concentration,
  - The 75% TN reduction would be achieved by year 15.
  - The duration of the consent is proposed to be 35 years.
  - Human sewage will be part of the discharge to water.
- After considering the Alliance proposal, the cultural values report, policies in the IMP, past responses to similar proposals, as well as the economic and social benefits of the Alliance Lorneville, the TAMI board gave their support in principle to all the above points, expect the duration of the consent. The IMP does not allow for consents exceeding 25 years, as that is making decisions for the next generation. It is important to note that in the IMP there is a strong preference for effluent to be treated by a land-based solution, to filter and cleanse contaminants. Where this is not practical or feasible, and discharge to water is proposed, then adverse effects must be mitigated through treatment to a very high standard and robust monitoring programs.
- TAMI provided a table with some core values and the respective needs to enable AGL and TAMI to explore appropriate consent conditions. Feedback on this and comments on the consent conditions, environmental monitoring plan is provided below

#### Method used to feedback on Alliance proposal:

- Makarewa River Cultural Values Report and presentation provided to Alliance
- TAMI presentation to Alliance 18 May 2015
- Meetings with Alliance and consultations and as part of the Technical Working Party (when Dean & Jane were available). Dean & Jane missed the 4<sup>th</sup> August TWG meeting that discussed the Summary AEE, Draft Consent Conditions & Environmental monitoring plan.
- Reviewed the summary AEE 22-7-2015 , consent conditions 22-7-2015, environmental monitoring plan 20-7-2015 & Iwi mitigation Table 28-7-2015

Comments on Alliance Iwi mitigation Table (dated 28-7-2015). Comments in blue.

Iwi core pillar values	Iwi needs	Proposed mitigation by Alliance	Proposed Monitoring	Relevant consent conditions (Proposed Conditions 22-7-15) <a href="#">See comments on proposed conditions in the section below.</a>
Kaitiakitanga	Protect, Restore & Reciprocity	<ul style="list-style-type: none"> <li>• Setting limits on wastewater discharge and receiving water to protect existing Makarewa River ecosystem to ensure no reduction in water and habitat quality.</li> <li>• Wastewater treatment upgrade to provide further protection for Makarewa River ecosystem and to substantially reduce Alliance’s contribution of nutrients to the lower Makarewa and Oreti Rivers and estuary.</li> <li>• Pre and post wastewater upgrade aquatic biological and fish health surveys</li> <li>• Restoration of oxbow habitat and riparian planting where appropriate along Makarewa River and identification of further opportunities to restore habitat and improve biodiversity on Alliance Lorneville land. These habitat enhancements offset potential wastewater discharge including human sewage and water take effects.*</li> <li>• Habitat enhancements to be identified in consultation with Te Ao Marama and documented in the Habitat Enhancement Plan for the Alliance Lorneville property.</li> </ul>	<p>Discharge and river limits and monitoring – Environmental Monitoring Plan (EMP)</p> <p>Pre and post wastewater upgrade aquatic biological and fish health monitoring.</p> <p>Habitat Enhancement Plan.</p> <p>Annual monitoring report.</p>	<p>Discharge to wastewater conditions:</p> <ul style="list-style-type: none"> <li>• Condition 3 – Environmental Monitoring Plan</li> <li>• Conditions 5 and 6, 14 and 15 – biological and fish health monitoring</li> <li>• Conditions 8 – 10 – discharge and river limits</li> <li>• Conditions 11 – 16 – Wastewater Treatment Upgrade</li> <li>• Condition 17 – Habitat Enhancement Plan</li> <li>• Condition 21 – Annual Report</li> </ul>

	Participation & connection	<ul style="list-style-type: none"> <li>Alliance to continue to consult iwi during the consent term and involve iwi as primary partner in the implementation of the Habitat Enhancement Plan.</li> </ul>	Iwi consultation **	Discharge to wastewater conditions: <ul style="list-style-type: none"> <li>Condition 17 – Habitat Enhancement Plan</li> <li>Conditions 24 – 27 – consultation with TWP</li> </ul>
	Best practices, improvement & in a timely manner	<ul style="list-style-type: none"> <li><b>Commitment to continual improvement.</b> Alliance will keep abreast of all technological and best practicable options with respect to its Plant operations. Alliance is committing to upgrading its wastewater system. This upgrade will be progressively implemented and fully commissioned within 15 years of any consent being granted.</li> <li>Along with regular daily, weekly and monthly monitoring of the discharge and receiving waters, on an annual basis Alliance will prepare a monitoring report which will assess compliance with the water quality limits and provide a comparative assessment of the annual discharged loads of certain parameters against preceding seasons. The purpose of this report is to ensure that the discharge quality and effects within the receiving water does not deteriorate from current conditions, and will also serve to ensure that any changes to the overall catchment water quality are identified.</li> <li>A substantial review of wastewater treatment and effects on the river – estuary ecosystem will be undertaken by year 25. Any practicable improvements identified by this review will be implemented as soon as is practicable following the outcome of the review process.</li> </ul>	Wastewater Treatment Upgrade Plan Annual Monitoring Report Wastewater Treatment Review	Discharge to wastewater conditions: <ul style="list-style-type: none"> <li>Conditions 11 – 16 – Wastewater Treatment Upgrade</li> <li>Condition 21 – Annual Report</li> </ul>

<p>Mahinga Kai</p> <p>A central element to Ngai Tahu whānui cultural identity</p>	<p>Desirable conditions – environment &amp; condition of species</p>	<ul style="list-style-type: none"> <li>Annual reporting to ensure that the discharge quality and receiving water quality does not deteriorate as set out above is proposed.</li> <li>A survey to establish the health of fish around the wastewater discharge zone will be undertaken within 5 years (baseline) and pre- and post-wastewater treatment upgrade.</li> <li>Any clearance of the water intake channel will be undertaken in accordance with best practice (agreed upon by iwi) and contractors will be advised to ensure that the intake channel is checked for eels (and other fauna) prior to work commencing and that material extracted is placed in such a way so it does not result in any fish or eel stranding.</li> </ul>	<p>Discharge and river limits and monitoring – Environmental Monitoring Plan</p> <p>Pre and post wastewater aquatic biological and fish health monitoring.</p> <p>Habitat Enhancement Plan.</p> <p>Annual monitoring report.</p> <p>Pre channel clearance inspection for eels and avoidance of fish, eel or other aquatic fauna stranding.</p> <p>Drain clearance best practice SOP (not part of the consent but part of overall commitment to better land management practices)</p>	<p>Discharge to wastewater conditions:</p> <ul style="list-style-type: none"> <li>Condition 3 - EMP</li> <li>Conditions 5 and 6 – biological and fish health monitoring</li> <li>Conditions 8 – 10 – discharge and river limits</li> <li>Conditions 11 – 16 – Wastewater Treatment Upgrade</li> <li>Condition 17 – Habitat Enhancement Plan</li> <li>Condition 21 – Annual Report</li> </ul> <p>Channel Clearance conditions:</p> <ul style="list-style-type: none"> <li>Condition 5</li> </ul>
	<p>Habitat</p>	<ul style="list-style-type: none"> <li>The Makarewa River habitat has been assessed as part of this application and will be reassessed before and after the wastewater treatment upgrade.</li> </ul>	<p>Pre and post wastewater aquatic biological and fish health monitoring.</p> <p>Habitat Enhancement Plan.</p> <p>Annual monitoring report.</p>	<p>Discharge to wastewater conditions:</p> <ul style="list-style-type: none"> <li>Conditions 5 and 6 – biological and fish health monitoring</li> <li>Conditions 8 – 10 – discharge and river limits</li> </ul>

				<ul style="list-style-type: none"> <li>• Conditions 11 – 16 – Wastewater Treatment Upgrade</li> <li>• Condition 17 – Habitat Enhancement Plan</li> <li>• Condition 21 – Annual Report</li> </ul>
	Life stages & co-dependant species present	<ul style="list-style-type: none"> <li>• The Makarewa River habitat has been assessed as part of this application and will be reassessed before and after the wastewater treatment upgrade.</li> </ul>	<p>Pre and post wastewater aquatic biological and fish health monitoring.</p> <p>Habitat Enhancement Plan.</p> <p>Annual monitoring report.</p>	<p>Discharge to wastewater conditions:</p> <ul style="list-style-type: none"> <li>• Condition 3 - EMP</li> <li>• Conditions 5 and 6, 14 and 15 – biological and fish health monitoring</li> <li>• Conditions 8 – 10 – discharge and river limits</li> <li>• Conditions 11 – 16 – Wastewater Treatment Upgrade</li> <li>• Condition 17 – Habitat Enhancement Plan</li> <li>• Condition 21 – Annual Report</li> </ul>
	Access	<ul style="list-style-type: none"> <li>• Access by iwi to sites of interest on Alliance Lorneville land (e.g. oxbow, Makarewa River riparian zones) will be freely given subject to logistics and appropriate safety measures.</li> <li>• <a href="#">Includes desirability to access</a></li> </ul>	<p>Iwi consultation <a href="#">(including monitoring of indicators of success)**</a></p>	<p>Discharge to wastewater conditions:</p> <ul style="list-style-type: none"> <li>• Condition 17 – Habitat Enhancement Plan</li> <li>• Conditions 24 – 27 – consultation with TWP</li> </ul>

29 September 2015

Ki uta ki tai	Linkage to the wider catchment & processes	<ul style="list-style-type: none"> <li>Alliance recognises that actions taken at its Lorneville plant can affect the whole Oreti River catchment e.g. reduction in nutrient discharges contribute (in a small way) to improvements in the estuary and avoidance of impacts on migratory fish has upstream benefits. Alliance also acknowledges that iwi believe that a positive action at Lorneville (e.g. oxbow habitat improvement) will result in benefit to the wider region.</li> <li>Participation in a catchment wide approach</li> </ul>	<p>Iwi consultation (including monitoring of indicators of success). ** Post implementation review of upgrade and overall water quality in catchment in order to identify whether any further upgrades are necessary and practicable (this was in the AEE)</p>	<p>Discharge to wastewater conditions:</p> <ul style="list-style-type: none"> <li>Condition 17 – Habitat Enhancement Plan</li> <li>Conditions 24 – 27 – consultation with TWP</li> </ul>
Whanaungatanga	Health & wellbeing	<ul style="list-style-type: none"> <li>Continued operation of the Lorneville plant provides employment for the community, including iwi, and enhances health and wellbeing. Health and wellbeing includes being a safe work place, sustainable in business, and being part of the community</li> <li>Fish will be safe for human consumption</li> <li>Also includes minimising pathogens and contaminants that people may encounter from gathering mahinga kai &amp; recreational activities</li> <li>Participation in a catchment wide approach</li> </ul>	<p>Iwi consultation (including monitoring of indicators of success)** Fish health &amp; contaminant monitoring? Monitoring fish are safe for human consumption? &amp; safe to harvest?</p>	<p>Discharge to wastewater conditions:</p> <ul style="list-style-type: none"> <li>Conditions 6 and 15 – Fish Health Survey</li> <li>Condition 17 – Habitat Enhancement Plan</li> <li>Conditions 24 – 27 – consultation with TWP</li> </ul>

Note: This table and columns 1 & 2 was first proposed by Te Ao Marama on 18 May 2015 as a vehicle for discussion of mitigation and consent conditions.

\* More of an attempt to offset this - would be good to recognise that TAMU policy is opposed to discharge of human waste to water, but in its decision-making had to consider this over all factors, including the cost and technology available as well as the economic benefits of AGL to the region. There is an expectation set up in the Iwi Management Plan that wastewater disposal practice will improve over time and with improved technology.

\*\* Needs to be meaningful consultation and not a 'tick' box' exercise. It might be useful to set up expectations in a MoU or something similar?

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## Questions/comments:

### *Draft Conditions*

#### **Treated Wastewater to Water:**

*General condition: 2.* This resource consent authorises the discharge of up to 22,730 m<sup>3</sup>/day of treated wastewater from the Alliance Lorneville waste water treatment ponds to the Makarewa River.

- Even in low flow conditions? Is there no condition on low flows?

#### *Condition 3: Environmental Monitoring Plan:*

- Iwi involvement in reviewing such a plan to ensure values are being measured? Role of iwi and/or technical working party not mentioned? Or is this part of condition 27- "The purpose of the Lorneville Wastewater Technical Working Party shall be to ... review results ... and recommend reviews of consent conditions if necessary."
- Use Maori & English name for tuna eg eel/tuna – so no confusion for those who don't know the Maori word for these species.

#### *Receiving Water Discharge Limits – Pre Wastewater Treatment Plant Upgrade. 9:*

- Faecal Coliforms limits after zone of reasonable mixing? You have bottom of the pipe limits, but if discharging same amount to varying flows, which will alter concentrations – potentially very concerning in high flows.
- Where is the linkage to the limits set in 7 (Treated Wastewater Limits – Pre Wastewater Treatment Plant Upgrade) – there seems to be a disjunct here?

#### *Wastewater Treatment Upgrade: 13:*

- No limits/stds on Faecal coliforms (or pathogens or containments arising from human sewage) or DRP?
- Where the linkages between what is monitored in 7 and what are is monitored here.

#### *Wastewater Treatment Upgrade 16 c:*

- Review should probably also consider water quality improvements in the Makarewa, and the future requirements for improvements required in both catchments (the Oreti FMU). This is part of Whanaungatanga & Kaitiakitanga.
- Reductions in Total Phosphorous concentration not mentioned (was quoted in an Alliance presentation as approximately 45%).

### *Monitoring Plan:*

- No detail on fish health surveys.
- How monitor on Life stages & co-dependant species present and link in reporting?
- Monitoring fish are safe for human consumption & safe to harvest?
- Monitoring of habitat enhancement
- Recreational safety monitoring?
- Iwi consultation - monitoring of indicators of success



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*Sticking point:*

- proposed consent term of 35 years