

BEFORE THE SOUTHLAND REGIONAL COUNCIL

IN THE MATTER OF of the Resource Management Act 1991

AND

IN THE MATTER OF of an application by Alliance Group to divert water
from the Mataura River for the purposes of generating
electricity

STATEMENT OF EVIDENCE BY DOYLE JAMES RICHARDSON

21 NOVEMBER 2018

QUALIFICATIONS AND EXPERIENCE

1. My full name is Doyle James Richardson.
2. I hold a Bachelor of Science Degree majoring in Geography and a Post Graduate Diploma in Environmental Science from the University of Otago.
3. I have been employed at Alliance Group Limited (**Alliance**) for almost three years. In my current role as Group Environmental Manager I am responsible for overseeing all environmental issues for Alliance, including Alliance's seven processing sites. I have held this position for almost 18 months. Prior to joining Alliance I worked as a Principal Planner at Environment Southland for almost one year, an Environmental Scientist and Senior Environmental Scientist at Aurecon (Australia) for seven years, and Duffill Watts Consulting Group for three years in Palmerston North.
4. I have managed a number of consent applications for surface and groundwater abstractions in New Zealand and a number of projects that required environmental impact assessment and approvals to be sought in Australia.
5. I maintain an overview of environmental legislative compliance at all Alliance sites. I provide technical advice to sites as required particularly in areas of odour, water and wastewater.
6. I have primary responsibility for Alliance's continuing certification to the ISO 14001 Environmental Management Standard. Earlier this year, our business was certified to the updated 2015 ISO standard.
7. I have the responsibility for the resource consenting of the Maitua Hydro Electric Plant (**HEP**) operation and I am authorised to give this evidence on behalf of Alliance. My management of this process commenced in April 2016.
8. I have provided the specific Maitua knowledge required for the activity to be understood.

9. I have read and am familiar with the Assessment of Environmental Effects and technical reports attached to the AEE, and I have read the Section 42 Report and the briefs of evidence from John Kyle and Mark James.

SCOPE OF EVIDENCE

10. My evidence addresses the following matters:
 - a. Environmental management
 - b. Mataura site
 - c. Hydro-electric plant scheme
 - d. Value of HEP
 - e. Application process
 - f. Stakeholder relationships

ENVIRONMENTAL MANAGEMENT

11. Alliance's environmental policy commits to the sustainable management of the natural and physical resources its operations depend on. In meeting this commitment Alliance's environmental management systems are certified to the ISO 14001 environmental management standard. Alliance strives to meet or exceed relevant regulatory requirements and to continually improve its environmental performance. Alliance's environmental management systems are concerned with more than just compliance with resource consent conditions, although this is of course a major consideration. Extensive process control and compliance monitoring and key performance indicator programmes are in place and this is the way by which we measure our performance and develop baselines for renewed improvement objectives and targets. These certifications, objectives and programmes are fully implemented at Mataura.
12. Mataura employs a site Environmental Manager. Their primary responsibility is to manage and report on compliance with resource consents, to manage the extensive environmental monitoring and key performance indicator programmes implemented for the site, and to identify opportunities for improvement in environmental performance.

ALLICANCE

13. Alliance is a large meat processing and exporting company operating five meat processing and export plants throughout the South Island, and two plants in the North Island.
14. The company was established in 1948 and is now a wholly farmer-owned co-operative company. On an annual basis, Alliance processes approximately 6 million lambs, 1 million sheep, 200,000 cattle, 115,000 deer and 270,000 calves.
15. As a wholly farmer-owned co-operative company, all profits are returned to the company's farmer shareholder with a portion retained for growth. The company employs close to 5,000 people (Permanent and seasonal staff) and services about 5,000 farmer suppliers livestock. Alliance's annual turnover for the 2016/2017 season was \$1.53 billion and profit was \$20.2 million.

MATAURA SITE

16. Alliance owns and operates the Mataura Meat Processing Plant (the Mataura Plant or the Plant) located in Mataura, Southland. The Mataura Plant is located on the true right bank of the Mataura River in the Mataura township (refer Figure 1 of the AEE). The true left bank of the river is occupied by the former Carter Holt Harvey paper mill now an industrial site managed by the Mataura Industrial Estate (MIE).
17. The Mataura Plant is a vital component of the local and regional economy, employing approximately 500 people in the peak of the season and contributing approximately \$160 million per year to the economy (mostly in livestock payments) and approximately \$25 million per year for wages and salaries for the 2017/2018 season.
18. The Mataura Plant processes up to 1,000 beef cattle per day over two shifts at the peak of the season. The Plant generally operates 5 days per week, over almost 24 hours during peak processing. Sunday processing has also been undertaken recently for mycoplasma bovis infected stock. All processing (of stock killed at Mataura) is carried out on-site, except for some transfer of soft offal and bones off-site for further processing or rendering. Processed carcasses and meat cuts are

refrigerated and stored in on-site chillers and freezers. Water for a range of uses is abstracted from a hydro-race on the bed of the Mataura River.

THE HYDROELECTRIC PLANT AND HYDRO RACE

19. The Mataura Plant operation includes the diversion of water from the Mataura River into a race towards an open flume Francis Turbine capable of generating 530 kilowatt kW at a design flow rate of 9.5 m³/s and a fall of 7.25 m. Alliance holds an existing consent (98031) issued from the Southland Regional Council (or Environment Southland) to dam, divert and use water for the purposes of hydroelectric generation, and also consent to discharge water from the Plant back into the Mataura River.
20. The Southern Frozen Meat and Produce Export Company was granted permission to take water from the Mataura River in 1890 for hydroelectric generation. An upstream weir across the Mataura River was built between 1889 and 1892 so power generation facilities could be constructed for both the meat processing plant and the paper mill. This provided the opportunity for the Southland Frozen Meat and Produce Export Company to open a meat processing facility at the site in 1893.
21. Just when the diversion structure was completed during this development period is unclear; however it is evident that the HEPs at Alliance's site and the MIE site in Mataura have been operating for approximately 115 – 120 years. Diversion structures and the intake race are likely to have been in place either prior to or put in place during the plant upgrades in the 1920s or 1930s.
22. The processing plant was purchased by Alliance Group in 1989 together with the generation capacity from the HEP. The paper mill on the other side of the river (true left bank) was closed in the early 2000's, however the HEP station continues to be operated by Mataura Industrial Estate (separate to Alliance Group Limited) to supply electricity to the national grid.
23. The HEP at the Mataura Plant diverts water from the Mataura River via a U shaped weir and raceway structure (refer Figure 3 of the AEE). The diversion is upstream of the Mataura Falls water fall. The MIE operates the diversion structure

jointly with Alliance Group. The natural fall in the river provides the hydraulic head for the hydroelectric turbine.

24. The diversion operates under existing consent conditions that require a minimum water depth of 0.05m to be maintained over the weir at all times. The race where the water is diverted to, is approximately 375 m long and conveys approximately 6.0 – 10.0 m³/s of Mataura River water past the Mataura Plant to supply water to the HEP and to enable the authorised water abstraction for Plant operations including refrigeration cooling and other purposes.
25. The race within the building commences as a 7m wide section and reduces to 4 m wide just upstream of the screen/hydro intake. The screen has vertical bars across it approximately every 60 mm across the width of it. The maximum net head of the HEP is 7.25 m (refer Figure 2 of the AEE).
26. The HEP provides a reliable electricity source that is used directly for powering operations and activities at the Plant.
27. The Plant is a significant consumer of energy and having access to its own reliable source means it does not have to rely solely on any national or regional supplies. The scheme has no fuel costs and low operating and maintenance costs, and has been in existence for a significant period of time. It is a very efficient and effective means of generating up to 25% of the Plant's electricity requirement.
28. The power is provided by hydroelectric generation, which is also a renewable energy source. This type of energy generation is non-polluting. The infrastructure is existing, and the activity returns the water back to the river, once the waters energy has been harnessed to generate suitable electric power. The water is then available for further downstream uses.

VALUE OF HYDROELECTRIC PLANT

29. On average the hydro plant produces approximately 72,000 kW of energy per week, this converts to around \$35,000 worth of electricity savings for the Plant per month. This is a significant resource for the Plant.

30. The existing weir, HEP and associated infrastructure has also been in place for over a century and enable the Plant to operate efficiently and effectively. Improvements and maintenance in the infrastructure has occurred overtime and the capital value of the weir, race, HEP and associated structures is approximately \$4 million.

APPLICATION PROCESS

31. The application was lodged with Environment Southland in December 2016. The application included an application for a Discharge Permit associated with the discharge of water and sediment from the hydro-race as part of necessary maintenance to clear sediment and debris from the hydro-race located at the Plant.
32. The application was later amended to withdraw the application for the above discharge permit. A Certificate of Compliance (CC-20171501) was applied for, and granted, for this activity.
33. Key issues were identified during the preparation of the application, being the upstream migration of elvers, and the downstream migration of eels. Following a number of trials on different Elver mitigation strategies, MIE had developed a well-supported Elver Trap and Transfer system to help it meet its consent obligations. As such Alliance proposed to become a party to that Trap and Transfer programme, which has been developed further with the assistance of Dr Jacques Boubee. This seems to be generally well accepted with some details to be determined as discussed in other evidence.
34. Managing the issue of downstream eel movement was first proposed to be mitigated through turning the hydro scheme off during key risk times. Following consultation and a S92 further information request, it was decided that monitoring to determine if this, or another type of mitigation might be more suitable was proposed.
35. Alliance has had a number of meetings with the submitters, including the two pre-hearing meetings to determine the details of the monitoring. Through these meetings, the conditions, and the details of the monitoring programme have been

enhanced significantly with the assistance of Dr Jacques Boubée and Dr Mark James. Key changes include extending the monitoring duration each season, increasing the number of years for monitoring from one to up to five years, remote surveillance of the monitoring screen, potentially improving the trash screen design, and recording details of other species caught through the monitoring programme. I believe the engagement of these experts and the commitments Alliance have made through the draft conditions and monitoring programmes represents a significant and challenging commitment for Alliance to get the information needed to inform a way forward in the future.

TERM

36. Through previous experience, Alliance is aware of, and acknowledges Te Ao Marama's preference that consent terms are not granted for longer than 25 years, and as such, the application was for 25 years, rather than 35 years as allowed for by the Resource Management Act.
37. Alliance has worked hard to develop conditions suitable for a 25 year term including considerable opportunity for the involvement of the submitters throughout the life of the consent, including the ability to be involved in the actual monitoring and mitigation activities for Hokonui Runanga.
38. Given the extensive process that we have been through to date, and the robustness of the proposed consent conditions, an eight year term, as requested by the submitters, would not represent the most efficient use of everyone's resources, nor would it achieve a better environmental outcome. A long term consent allows Alliance to commit to mitigation for downstream eel movement, if required, as part of the consent, and there are a number of options available for mitigation should there be a need. This mitigation could potentially be in place before the end of an eight year consent term. An eight year consent would have to focus on monitoring only.

STAKEHOLDER RELATIONS

39. Communication with all stakeholders is a key component of Alliance's environmental programme and is a strong aspect of the Maitara plant's

relationship with the community and its key stakeholders. Alliance has annual Technical Working Party (**TWP**) meetings with the key Stakeholders as part of its wastewater discharge consent, and during these meetings, all plant matters of interest to Stakeholders are generally discussed. Te Ao Marama, Hokonui Runanga, Fish and Game and Department of Conservation form part of the TWP.

40. Through these working relationships, Alliance has undertaken an extensive consultation process which has involved the above parties, described above, plus consultation with Maitua Industrial Estate, Mossburn Enterprises and the Wyndham Angling Club.
41. Written Approval has been provided by the Wyndham Angling Club and Mossburn Enterprises, while Maitua Industrial Estate did not submit on the application.

CONCLUSION

42. In the time that has passed since work commenced on the application, the proposal has evolved significantly through the input of a number of people including Alliance staff members, technical experts, Environment Southland and stakeholders through many meetings and iterations of consent conditions and management plans. As a consequence, the offered consent conditions represent a significant and needed step forward for the management of the hydro-electric scheme for the Maitua Plant.
43. I ask that given the robustness of process that has been gone through to date, and the ability to manage the activity through adaptive and collaborative management offered in the conditions, that the consent be granted as applied for including a term of 25 years. This would represent a positive move forward where Alliance can get on with undertaking the necessary work to mitigate some impacts while collecting information on other impacts, so that it can mitigate those if needed.

Doyle Richardson

21 November 2018