IN THE MATTER	of the Resource Management Act 1991
AND	
IN THE MATTER	Application APP-20158595 to discharge treated wastewater and domestic sewage to water, discharge treated wastewater to land, discharge waste activate sludge (WAS) to land and WA and stockyard solids to an on-site monofil, discharge treated wastewater to land for temporary storage purposes, discharge contaminants to air, abstract and use surface water from the Oreti River, and to disturb the bed of the Oreti River in order to undertake periodic maintenance and clearance works associated with the water intake structure
BY	Alliance Group Limited

EVIDENCE OF JACOB JAMES SMYTH ON BEHALF OF FISH AND GAME NEW ZEALAND – SOUTHLAND REGION

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Introduction

1. My name is Jacob James Smyth. I am employed by Fish & Game New Zealand – Southland Region ('Fish & Game') as a Resource Management Officer based in Invercargill and have held this position since September 2008.

2. I hold a Bachelor of Arts with a major in history and a Bachelor of Law from the University of Otago (2001). I have been admitted as a Barrister and Solicitor by the High Court of New Zealand (May 2001).

3. My job entails assessing non notified and notified resource consent applications, regional policy statements and regional and district plans, for their effect on the game bird, trout and salmon fishery, and recreational hunting and angling values within the Southland region. In addition, I carry out field work associated with assessing and monitoring sports fish and game populations and the condition and trend of ecosystems as habitats for sports fish.

4. I am an active recreational angler and hunter and have had a life-long interest in recreational hunting and fishing. Excluding an 18 month period when I travelled overseas, I have held annual adult whole season sport fish and game licences every year since the early 2000's.

Statutory functions of Fish and Game Councils

5. The Southland Fish and Game Council is the statutory manager of sports fish and game birds within Southland Fish and Game Region under the Conservation Act 1987 and the Wildlife Act 1953.

6. Fish and Game Councils are statutory body established under the Conservation Act 1987 to:

    a. Manage, maintain and enhance the sports fish and game resource in the recreational interests of anglers and hunters (s 26Q(1));

    b. Assess and monitor the condition and trend of ecosystems as habitats for sports fish and game (s 26Q(1)(a)(iii));

    c. Represent the interests and aspirations of anglers and hunters in the statutory planning process (s 26Q(1)(e)(i)); and

    d. Advocate the interests of the Council, including its interests in habitats (s 26Q(1)(e)(vii).

The application

7. Alliance Group Ltd (the Applicant) has applied for a suite of consents associated with the ongoing operation, use and maintenance of its Lorneville meat processing plant (the plant). Specifically, six resource consents of 35 years duration are sought as follows:

    Discharge Permits:

    a. To discharge treated wastewater to land for temporary storage purposes. During periods of low river flow Alliance Group Limited may need to discharge

treated wastewater from an aerobic pond to a storage area. The storage area is 8.3ha and provides 83,000$m^3$of storage.

The activity is a discretionary activity under Rule 2(b) of the Regional Water Plan for Southland.

b. To discharge treated wastewater from the plant and treated domestic sewage from Wallacetown to the Makarewa River via a ditch at a rate of up to 22,730m^3/day.

The activity is a discretionary activity under Rule 2(b)(i) of the Regional Water Plan for Southland.

As part of the application an upgrade to the existing wastewater treatment system at the plant is proposed to be implemented by year 15 of the consent that is being sought.

c. To discharge treated wastewater to land in circumstances where it may enter water via an irrigation system. The discharge will be at a rate of up to 3,000m^3/day via K-line ponds to land owned by the Applicant.

The activity is a discretionary activity under Rule 2(b)(ii) of the Regional Water Plan for Southland.

The above consent will be surrendered by the Applicant and the discharge will cease once the upgrades to the wastewater treatment system as described above are completed.

d. To discharge treated wastewater to land as waste activated solids generated by the upgraded wastewater treatment system (referred to as biosolids in the application).

The activity is a discretionary activity under Rule 5.4.6 of the Regional Effluent Land Application Plan.

e. To discharge waste activated solids (biosolids) generated by the upgraded wastewater treatment system and stockyard solids to a monofill.

The activity is a discretionary activity under Rule 56 of the Regional Water Plan for Southland.

f. To discharge contaminants and odour to air from two coal fired boilers, plant operations and odour from the current and proposed upgraded wastewater treatment systems.

The activity is a discretionary activity under Rule 5.5.5 of the Regional Air Quality Plan.

Water Permit: to take 22,500m^3/day of surface water from the Oreti River at Lorneville for use in the meat processing plant.

The activity is a discretionary activity under Rule 18(e) of the Regional Water Plan for Southland.

Land Use Consent: to disturb the bed of the Oreti River to undertake periodic maintenance and clearance of debris to maintain a water intake structure and channel.

The activity is a discretionary activity under Rule 47 of the Regional Water Plan for Southland.

8. I have previously attended on behalf of Fish & Game the various stake holder meeting convened by the Applicant prior to filing of its application for the above suite of consents. The various dates of those meetings are set out in the evidence of Tony Dons on behalf of the Applicant. In addition, I have provided written and oral feedback to the Applicant through the consultation process it has facilitated.

9. On 16 May 2016, Fish & Game filed a written submission opposing the discharge to water and land permits, water permit and land use consent sought by the Applicant.

10. I agree with the view of Sarah Smith set out in the Staff Report for Hearing that:

    a. Overall, the application is to be considered to be a discretionary activity; and

    b. Under s 104B of the Resource Management Act 1991 ('the RMA') the Hearing Panel may grant or refuse consent for a discretionary activity, and if it grants the application, may impose conditions under s 108 of the RMA.[1]

Scope of evidence

11. I have prepared this evidence on behalf of Fish & Game on the suite of consents sought by the Applicant. My evidence is limited to the specific areas of interest for Fish & Game, namely effects on surface and ground water quality and surface water abstraction.

12. My evidence includes references and comments in response to the evidence provided by witnesses on behalf of Environment Southland and witness on behalf of the Applicant.

13. In preparing my evidence I have read the following documents received subsequent to information provided at affected stakeholder meeting convened by the Applicant, the application and accompanying AEE:

    a. Staff Report for Hearing drafted by Sarah Smith, Consents Officer, on behalf of Environment Southland (dated 27 June 2016).

    b. Evidence filed on behalf of Environment Southland, including:

        i. Brief of evidence of Gregory Ryder, Ryder Consulting (dated 24 June 2016); and

        ii. Brief of evidence of Rob Potts, Lowe Environmental Impact Limtied (dated 21 June 2015).

    c. Evidence filed on behalf of the Applicant, including:

        i. Brief of evidence of John Kyle, Mitchell Partnerships (dated 4 July 2016);

[1] Staff Report for Hearing, p. 8.

ii. Brief of evidence of Azam Kahn, Pattle Delamore Partners Limited (dated 4 July 2016);

iii. Brief of evidence of Daniel Hailes, Alliance Group Limited (dated 4 July 2016)

iv. Brief of evidence of Frances Wise, Alliance Group Limited (dated 4 July 2016);

v. Brief of evidence of Mark James (dated 4 July 2016);

vi. Brief of evidence of Michael Copeland, Brown, Copeland and Company Limited (dated 4 July 2016);

vii. Brief of evidence of Michael Fitzpatrick, Freshwater Solutions (dated 4 July 2016);

viii. Brief of evidence of Peter Callander Pattle Delamore Partners Limited (dated 4 July 2016);

ix. Brief of evidence of Richard Montgomerie (dated 4 July 2016); and

x. Brief of evidence of Tony Dons, Tony Dons Limited (dated 4 July 2016).

14. I have not considered the staff report, evidence and accompanying consent conditions with respect to air quality, which is not relevant to Fish & Game.

Outline of evidence

15. The principal issue in this case from Fish & Game's point of view is the effects of the Applicant's discharges to surface water and land and surface water abstraction.

16. My evidence will address the following matters with respect to the application:

a. Location of the application site;

b. Ecosystems approach to sports fishery management;

c. Makarewa River sports fish and game values;

d. Oreti River and New River Estuary sports fish and game values;

e. Response to evidence on behalf of the Applicant regarding sports fish and game values associated with the lower Makarewa and Oreti Rivers;

f. Comment on the draft consent conditions proposed by the Applicant; and

g. Comment on the consent durations proposed by the Applicant.

Location of the application site

17. The receiving environment for the proposed discharges are land and surface water bodies in the lower Oreti catchment, namely the lower reaches of the Makarewa and

Oreti Rivers and the New River Estuary. In addition, the Applicant proposes to take surface water from the lower Oreti River and to disturb the bed of the Oreti River for maintenance and clearance of debris to maintain its water intake structure and channel.

Ecosystems approach to sports fishery management

18. The lower Oreti catchment, including the tidal reaches of the Oreti and Makarewa Rivers and New River (Invercargill) Estuary have significant fish and game values.

19. All river and still water fisheries in Southland, including the Makarewa and Oreti fisheries, are wild and self-sustaining through natural spawning, rearing and recruitment of juvenile trout into the adult population. It is the standing of adult trout that provide the recreational trout fishing amenity and fishery productivity is related to habitat quality and ecosystem health. Migratory galaxiids or whitebait and smelt are particularly important keystone species that support coastal ecosystems such as the lower Makarewa and Oreti.

20. Spawning surveys undertaken by Fish & Game and its predecessor, the Southland Acclimatization Society, have identified brown trout spawning as occurring in tributaries of the Oreti and Makarewa Rivers upstream of the discharge. Due to the tidally influenced nature of the lower Makarewa River and nature of the substrate, i.e. predominantly soft bed, it is not recognised as being of particular value as trout spawning habitat, but does provide habitat for brown trout and passage for spawning brown trout moving between the lower and upper reaches.

21. Fish & Games approach to sports fishery management is to seek to maintain and enhance freshwater habitats through RMA policy and processes, including consents. Key features to be protected are water quality, water quantity and the characteristics of waterways such as: pools, runs, riffles, undercut banks, riparian cover and shade.

Makarewa River sports fish and game values

22. The Makarewa River rises in the Hokonui Hills as a number of good fishing streams (Lora, Otapiri, Hedgehope, Dunsdale and Titipua Streams) that leave the hills and combine to meander across the Southland plains before joining the main stem of the Oreti River at West Plains about 11km from Invercargill. The Makarewa River is tidal from the mouth to approximately 1km downstream of Wallacetown (per obs Cohen Stewart, Fish & Game Field Officer - Invercargill).

23. The middle and lower reaches of the Makarewa catchment are dominated by pastoral farming and water quality frequently falls below relevant standards. There can be prolific filamentous algae and cynaobacteria growth at time in the lower Makarewa River.[2]

24. The Makarewa River is highly modified in its lower reaches and water quality is moderate to poor. Major excavation and drainage works have substantially altered many of the Makarewa River characteristics. The middle and lower reaches of the Makarewa River are highly modified with large sections being straightened with

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[2] Heath, M. W., Wood, S. A. (2010) *'Benthic Cyanobacteria and Anatoxin-a and Homanatoixn-a Concentrations in Five Southland Rivers'* Cawthron Report No. 1841. 15pp plus appendices. Report available at: http://www.es.govt.nz/Document%20Library/Research%20and%20reports/Surface%20water%20quality%20reports/southland-cyanobacteria-report-2010.pdf

resulting losses of natural meanders, reduced sinuosity and channel length. In addition, drainage works have resulted in loss of extensive riparian wetlands. However, this does not mean that the Makarewa River fishery is low value.

25. The Makarewa River is an important brown trout fishery and angling resource. In addition to the brown trout fishery small numbers of Chinook salmon are known to make their way into the Makarewa catchment via the main stems of the Oreti and Makarewa Rivers. For example, a 15lb Chinook salmon of wild stock was caught by Cohen Stewart, Fish & Field Officer, on the Makarewa River at Council Road on 6 February 2012 (Waitangi Day), i.e. approximately 11.5km of the Applicant's discharge[3] (per obs Cohen Stewart).

Figure 1 – Chinook salmon caught by Cohen Stewart on 6 February 2012 on the lower Makarewa River at Council Road.[4]

Chinook salmon have been reported as being caught as far upstream in the Makarewa catchment as the Otapiri Stream in the vicinity of the Otapiri Gorge (per obs Cohen Stewart).

26. In this case:

a. The fishing season for the Makarewa River downstream of the Riverton – Invercargill Highway is open all year with a daily bag limit of 4 fish / day. Anglers are permitted to use fly, spin and bait fishing techniques.

[3] Measured using Google Earth.
[4] Photo credit – Cohen Stewart (photo taken 6 February 2012).

b. There is about 4km of fishable water between the Makarewa confluence and the point of the Applicant's discharge.[5]

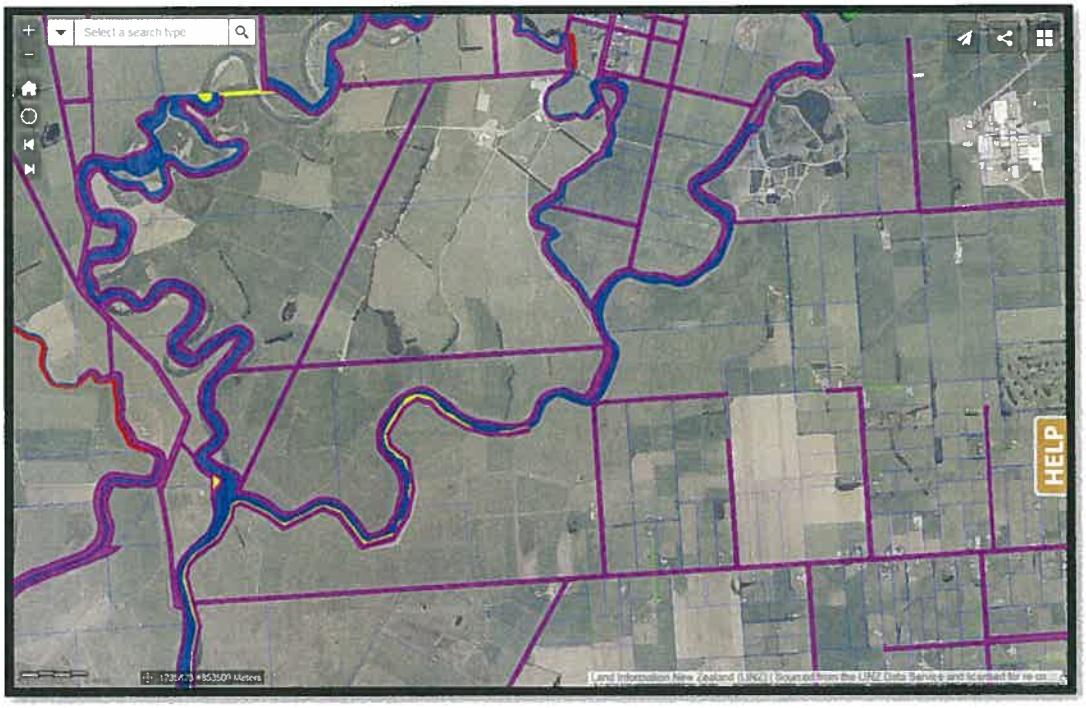

Figure 2 – Makarewa River downstream of the Applicant's discharge point.[6]

27. National angler use surveys are under taken by the National Institute of Water and Atmosphere ('NIWA) once every seven years to assess angler use in terms of angler visits person. Three surveys have been undertaken since the mid 1990's (1994/1995, 2001/2002 and 2007/2008). Results are currently pending for the 2014 / 2015 season.

NIWA estimates that that 25,510 ± 2,220 angler days were spent in the Oreti catchment during the 2007/2008 angling season, of which

a. 1,940 ± 690 angler days were spent on the main stem of the Makarewa River.

b. 13,330 ± 1,600 angler days were spent on the main stem of the Oreti River below Lumsden; and

c. A further 3,290 ± 650 angler days were spent on unspecified reaches of the Oreti River.

In comparison to the 2007/2008 angling season, 1,910 ± 610 angler days were spent on the main stem of the Makarewa River during the 2001 / 2002 season and 3,610 ± 670 angler days during the 1994 / 1995 season.[7] Based on the above figures, the main stem of the Makarewa River is the most heavily fished tributary of the Oreti River. For the avoidance of doubt, the tributaries of the Makarewa River, such as

[5] Measured using Google Earth.
[6] Purple shading indicates formed and unformed legal road. Blue shading indicates Crown river bed land.
[7] Unwin M. and Image K. (April 2009) *'Angler usage of lake and river fisheries managed by Fish & Game New Zealand: results from the 2007/08 National Angling Survey'*, NIWA, Appendix 1.

Dunsdale and Hedgehope Stream, were separately surveyed by NIWA and are not counted in the figures for the main stem of Makarewa River.

NIWA analysis of fishing effort provides that the highest angler use of the Makarewa River occurs over the period from October – May.

28. In 2013 NIWA conducted an angler survey of river fisheries managed by Fish & Game.[8] Randomly sampled respondents were asked to identify rivers that they had fished over the last 3 – 5 years, to rate their enjoyment of the fishery on a scale from 1 (least enjoyable) to 5 (most enjoyable) and to identify up to three reasons, from a list of 10, why they fished each river. These 10 reasons were: close to home, close to holiday home, ease of access to river, area of fishable water, scenic beauty, wilderness feeling, angling challenge, anticipated good catch rate; anticipate large fish and other (including a brief description). 431 rivers with at least 10 responses were analysised.

The two most highly ranked reasons by 18 respondents for fishing the Makarewa River (in order of importance) were ease of access (56%) and close to home (44%).[9]

The 'mean enjoyment score' ranking on a scale of 1 – 5 for the Makarewa River was 2.44, which falls between:

a. Scale point 2 – "Often enjoyable but not exceptional"; and

b. Scale point 3 – "Consistently enjoyable".

These results suggest that the Makarewa River fishery is valued by anglers because it is accessible, especially in its lower reaches, and it is close to Invercargill and Wallacetown.

In comparison, a mean enjoyment score of 2.44 for the Makarewa River compares favourable with other lowland sports fisheries in Southland that are located in intensively farmed and developed catchments. For example:

a. The mean enjoyment score for the Oreti River below Lumsden was 2.33 (based on 138 respondents), i.e. Scale point 2.

b. The mean enjoyment score for the Mataura River below Gore was 2.71 (based on 171 respondents), i.e. falling between scale point 2 and 3;

c. The mean enjoyment score for the Aparima River was 2.61 (based on 90 respondents), i.e. falling between scale point 2 and 3.

29. The Makarewa River provides a wide range of angling opportunities from bait fishing and spin fishing in the lower / tidal reaches to challenging fly fishing in the mid to upper reaches. From its confluence with the Oreti River to the main Invercargill – Lumsden Highway, the Makarewa River offers some good trout fishing, especially around the change of tides and in the early part of the season. Evening fishing with imitation whitebait lures, soft plastic baits or natural smelt are reliable fishing techniques in the lower reaches. Brown trout of 1 – 2kg are frequently caught in the lower reaches (per obs Cohen Stewart).

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[8] Unwin M. (November 2013) *'Values of New Zealand angling rivers – Results of the 2013 National Angling Survey prepared for Fish & Game New Zealand'*, NIWA.
[9] Ibid, Appendix C, p. 84.

30. The Makarewa River and its margins is also used for recreational game bird hunting during the season from May to July inclusive each year.

Oreti River and New River Estuary sports fish and game values

31. The tidal reaches of the lower Oreti River and its estuarine waters, the New River Estuary (commonly known as the Invercargill Estuary), have significant fish and game values for the following reasons:

    a. They are a significant habitat of indigenous and introduced water fowl, including game species that are recreationally during the game season.

       There is a long history of game bird hunting associated with the lower Oreti catchment, particularly with the New River Estuary.[10]

    b. The lower Oreti River and its estuarine waters

32. The Oreti River and its tributaries support a nationally significant brown trout fishery and angling amenity features which are recognized pursuant to the Water Conservation (Oreti River) Order 2008 ('the Oreti WCO) as including:

    a. The following protected waters with outstanding characteristics or features:

       i. Oreti main stem at Rocky Point at NZMS 260 E44 373 946 upstream to the forks at E42 345 450 – habitat for brown trout, angling amenity and value in accordance with tikanga Maori; and

       ii. Weydon Burn, Windley River and all other tributaries upstream of the Oreti River at E43 305 210 near Lincoln Hill – habitat for brown trout.

    b. The following waters to be protected for their contribution to outstanding features:

       i. Oreti River downstream of Rocky Point at E44 373 946 to the Wallacetown Bridge at E46 455 208 – habitat for brown trout and habitat for black-billed gulls; and

       ii. Groundwater hydraulically connected to the surface water of the Oreti River from Rocky Point at E44 373 946 upstream to the forks at E42 345 450 – habitat for brown trout, angling amenity and value in accordance with tikanga Maori.

33. Whilst the lower Oreti River downstream of the Applicant's discharge is not protected by the Oreti WCO, the river and its tributaries, including the lower Makarewa River, provide important passage for brown trout and Chinook salmon moving between the freshwater, estuarine and sea environment. Some form of seaward migration at some stage of the life cycle is a common feature of salmonid populations, including brown trout.[11]

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[10] http://www.stuff.co.nz/southland-times/68232243/duck-shooting-for-generations

[11] Hayes J. and Hill L., *'The Artful Science of Trout Fishing'*, Canterbury University Press, 2005, p. 50.

34. Whilst at sea or in estuarine waters brown trout can grow extremely fast. Accordingly, some seagoing or estuarine brown trout reach impressive sizes: fish over eleven kilograms have been taken from the Oreti River.[12] Much of the best sea-run brown trout fishing is to be had in New Zealand's most southern rivers such as the Oreti. Hence, the lower reaches of the Oreti River, its tidal tributaries and the New River Estuary are popular with anglers targeting estuarine and sea run brown trout.

35. In addition, the lower Oreti catchment is a significant resource for other recreational pursuits such as bathing, boating, rowing, white bait fishing, shell fish gathering, netting salt water fish and municipal water supplies.

36. The New River Estuary is in poor condition[13] with increasing eutrophication.[14] Stevenson and Robertson conclude in their 2013 report (prepared for Environment Southland) that:

"The 2013 macroalgal cover in New River Estuary had an overall condition rating of "POOR". Gross nuisance conditions of rotting macroalgae and poorly oxygenated and sulphide rich sediments are causing significant problems in the northwestern Waihopai Arm, and in sheltered areas in the western flats near Daffodil Bay and at Bushy Point. These areas require targeted management action. Macroalgae in the well flushed central basin and lower estuary is not currently causing significant problems, although a large increase in growths near the Oreti River mouth serves as a clear warning that problems may develop in the lower estuary if management action is not taken."[15]

I note that the AEE indicates that the Applicant's total nitrogen and phosphorus discharge contribution to the New River Estuary may be up to 6% and 7.6% respectively of the total nitrogen and phosphorus loads.[16]

37. The significance of the lower Makarewa and Oreti Rivers, including the New River Estuary, are recognised insofar as:

a. In 2008 the Ramsar site associated with the Waituna wetlands was extended by approximately 15,000 ha with the addition of the Toes Toes, Awarua Bay and New River Estuaries.

Great diversity of wildlife, including waterfowl and wading birds, is associated with the New River Estuary complex.

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[12] Ibid.

[13] Environment Southland & Te Ao Marama Inc (2011), *'Our Ecosystems: How healthy is the life in our water and our freshwater ecosystems? Part 2 of the Southland Water 2010: Report on the State of Southland's Freshwater Environment'*. Environment Southland. Invercargill. Publication number 2011/ 7 ISBN 0-909043-45-0.
Report available at:
http://www.es.govt.nz/Document%20Library/Research%20and%20reports/SOE%20reports/our-ecosystems.pdf

[14] Robertson, B. M., and Stevens, L. M. (July 2013*). 'New River Estuary Macroalgal Monitoring 2012/13'* Report prepared by Wriggle Coastal Management for Environment Southland, 11p. Report available at:
http://www.es.govt.nz/Document%20Library/Research%20and%20reports/Estuarine%20reports/new_river_estuary_-_macroalgal_monitoring_-_2012_2013.pdf

[15] Ibid, p. 9.

[16] AEE, Appendix D, *'New River Estuary Preliminary Nutrient and Sediment Load Estimates 2012 / 13'*.

b. The Oreti River has a statutory acknowledgement under the Ngāi Tahu Claims Settlement Act 1998 which recognises Ngāi Tahu's cultural, spiritual, historic and traditional association with the catchment.[17]

c. The Awarua Plain – Southland Estuaries, including New River Estuary and its adjoining wetlands, are recognised as regionally significant wetlands in Southland in Appendix B of the Regional Water Plan for Southland 2010 ('the RWP').

Response to evidence on behalf of the Applicant regarding sports fish and game values associated with the lower Makarewa and Oreti Rivers

38. The evidence of Tony Dons for the Applicant provides that:

a. *"Consultation on recreation effects confirmed that 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"*,[18] and

b. There are no identified Fish & Game access points to the lower Makarewa River below the Alliance discharge.[19]

In response:

a. I do not consider that it is appropriate to compare the Oreti River fishery in a broad brush manner with the Makarewa River fishery due to their differing catchment characteristics and scale. Such an approach ignores the nuances of each fishery and the reasons why individual anglers are attracted to each.

b. I accept that less angles fish the Makarewa River compared to the Oreti River below Lumsden, which has significantly more fishable water. However, I do not consider that the Makarewa River has considerably less angling value than the Oreti River below Lumsden based upon angler perception. As discussed at paragraph 26 of my evidence, research undertaken by NIWA for Fish & Game provides that the mean enjoyment score for the Makarewa River (2.44) exceeds the mean enjoyment score for the Oreti River below Lumsden (2.33).

c. In early October 2015 a Fish & Game access sign was placed on the unformed section of Moffat Road to facilitate access to the lower Makarewa. Specifically, it is an approximately 200m walk from the end of the formed section of Moffat Road (located downstream of the Applicant's discharge point) to the lower Makarewa River (per obs Cohen Stewart).

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[17] Refer to sections 205 206 and Schedule 50 - Statutory acknowledgement for Ōreti River of the Ngāi Tahu Claims Settlement Act 1998.
[18] Statement of Evidence of Tony Dons on behalf of Alliance Group Limited – 4 July 2016, paragraph 18.
[19] Ibid, paragraph 63(c).

Figure 3 – Fish & Game access signage at intersection of Moffat and West Plains Road[20]

Figure 4 – Fish & Game signage on Moffat Road reminding the public to "Please Shut Gate"[21]

d. The fact that there is only 1 Fish & Game sign on the lower Makarewa River below the Applicant's discharge does not mean that is no legal public access to and along the river that can be utilized by sports fish anglers and / or game bird hunters. As illustrated in Figure 2 of my evidence:

i. There is a continuous section of unformed legal road running parallel to the true right bank of the lower Makarewa River from the Invercargill – Riverton Highway to the Oreti River confluence.

[20] Photo credit – Cohen Stewart (photo taken 11 July 2016).
[21] Photo credit – Cohen Stewart (photo taken 11 July 2016).

Legal roads, whether formed or unformed, comprise public land. The public have a right to pass and repass over legal roads, whether formed or unformed.

Accurate information with respect to public access to rivers and there margins, including formed and unformed legal roads, is freely available from the Walking Access Commission website[22], which includes the ability to download GPS co-ordinates for on ground use if required.

ii. There are sections of unformed legal road running parallel to the true left bank of the Makarewa River both upstream and downstream of the Applicant's discharge point. Whilst this section of unformed legal road is not continuous, its length is nevertheless significant and can be utilized by anglers wishing to fish the lower Makarewa River.

In addition:

i. It is an approximately 650m walk upstream from the identified Fish & Game access point on the at lower Oreti River at West Plains Road[23] to the mouth of the Makarewa River , which links with an upstream section of unformed legal road on the true left bank.

ii. It is an approximately 300m walk from the end of the formed section of Crowe Road[24] in the immediate vicinity of the Applicant's discharge to the lower Makarewa River, which links with an upstream section of unformed legal road on the true left bank.[25] However, locked gates installed by the Applicant currently prevent the public passing and repassing over Crowe Road in an unrestricted fashion.

Figure 5 – Locked gates installed on Crowe Road.[26]

[22] https://www.wams.org.nz
[23] Fish & Game New Zealand – Southland Region leaflet, *'Fishing Surrounding Invercargill'*. Leaflet available free of charge from Fish & Game offices and sports fishing licence retailers in Southland.
[24] Measured using Google Earth.
[25] Measured using Google Earth.
[26] Photo credit – Cohen Stewart (photo taken 11 July 2016). Signage on each gate spanning Crowe Road reads "STOP REPORT TO FRONT WATCH HOUSE FOR ACCESS"

It is unclear what, if any, approvals have been provided to the Applicant under the Local Government Act 1974 to restrict public access to and along Crowe Road. In effect, installation of the above gates means that access to and along the margins of the lower Makarewa River is provided to the public at the Applicant's discretion.

iii. There are six identified Fish & Game access points on the upstream section of the Makarewa River between Invercargill – Riverton Highway and Winton – Hedgehope Highway.[27]

e. Fish & Game advised the Applicant during the consultation process that[28]:

i. A local Field Officer, Cohen Stewart, was working to improve angler access to the lower Makarewa River below the Alliance Plant, focusing on sections of unformed legal road that run from Clyde Street and Moffet Road to the lower Makarewa River.

ii. There is considerable opportunity to improve public access to the lower Makarewa River between Crowe and Moffet Roads and upstream of Boyle Road, where the surveyed river bed adjoining the Applicant's land has no Queens' chain, i.e. unformed legal road. I have suggested that this could be by way of the Applicant providing walking access from where the surveyed alignment of Crowe and Moffet Roads meet the surveyed bed of the lower Makarewa River and walking access from the end of Boyle Road.

iii. It would be very keen to work with the Applicant if it were interested in pursuing the above opportunities to improve public access to the lower Makarewa River.

To date, no response has been received from the Applicant regarding enhancement of public access to the lower Makarewa River. In this regard I note the evidence of John Kyle on behalf of the Applicant that public access to the Makarewa River is not actively promoted by the Applicant in the vicinity of the discharge to the Makarewa River or water abstraction from the Oreti River as follows:

"Public access to the rivers will not be prevented as a result of the proposals. However, however due to health and safety reasons, it is not actively promoted in the vicinity of its discharges or water abstraction."[29]

In response, I consider that public access to and along the lower Makarewa River is restricted by the Applicant's proposal as evidenced by the locked gates located on Crowe Road. As described in my evidence, Crowe Road provides legal access to the bed of the lower Makarewa River and upstream section of legal road running parallel to the true left bank.

In consideration of recreational values associated with rivers and streams there is generally goodwill between riparian landowners and recreationists.

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[27] Fish & Game New Zealand – Southland Region leaflet, *'Fishing Surrounding Invercargill'.*
[28] Communicated to Tony Dons and Frances Wise by e-mail dated 25 September 2015.
[29] Statement of Evidence of John Kyle on behalf of Alliance Group Limited – 4 July 2016, paragraph 4.15(j).

This is evidenced by many riparian landowner providing access over their land for sports fish anglers and game bird hunters to utilize rivers and stream, which in most cases are a public resource. Fish & Game has historically worked successfully with riparian landowners, including individual and corporate farming enterprises, and industry to provide practicable public access to rivers and streams in a manner which recognizes their existing activities, including addressing any health and safety concerns.

39. The evidence of Richard Montgomery for the Applicant provides:

"The lower Makarewa River provides a range of recreational values but the most significant are likely to be white baiting and game bird hunting. The lower Makarewa River supports a brown trout fishery but the extent of the use by trout anglers is unknown. The Southland Fish and Game Council information on angler access points indicates that there are three angler accesses in the lower Makarewa River, one at the Wallacetown-Lorneville Highway Bridge and two at Wallacetown at the ends of Collean Road and Clyde Streets. Given the poor access to the lower Makarewa River downstream of the Plant discharges and the abundance of popular and productive fisheries nearby in the Mataura, Aparima and Oreti Rivers, the angler use of the lower Makarewa is expected to be limited to occasional use by local anglers."[30]

In response, I consider that:

a. The lower Makarewa River provides a range of recreational values, including a locally important sports fishery. It is not clear what evidence Mr Montgomery relies upon in reaching his conclusion that the game bird hunting values of the lower Makarewa River are more significant than the sport fish angling values. From a recreational opportunity spectrum, the number of days sports fish anglers can legally fish on the lower Makarewa River (all year round, i.e. 365 days/year) substantially exceeds the number of days game bird hunters can legally hunt on lower Makarewa River (May – July inclusive, i.e. 92 days/year);

b. There is practicable and legal access to the lower Makarewa River downstream of the Applicant's discharge point.

c. The presence of other lowland fisheries, including the Oreti and Mataura Rivers that are recognized as national outstanding by Water Conservation Orders, within a 30 – 40 minute drive of Invercargill does not support the conclusion that use of lower Makarewa River is limited to occasional use by local anglers. In this case the lower Makarewa River contributes to the spectrum of recreational angling opportunities available to all sports fish anglers, irrespective of their residential location.

d. Connectivity between the Makarewa River upstream and downstream of the Applicant's discharge means that protection of instream values in both reaches is essential for maintaining the attributes that the Makarewa River currently holds, including its sports fishery attributes.

40. For the reasons set out above, I disagree with the statement in Dr Ryder's evidence for Environment Southland that:

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[30] Statement of Evidence of Richard Montgomery on behalf of Alliance Group Limited – 4 July 2016, paragraph 49.

". . . access to the section of river immediately downstream of the outcome is restricted and recreational use is minimal and largely restricted to eeling and white baiting."[31]

Comment on the consent conditions filed by the Applicant

41. I have reviewed the Applicant's set of draft consent conditions attached to the evidence of John Kyle and make comments in relation to the proposed water permit and discharge permits.

Water Permit - Abstraction from the Oreti River

Water conservation measures

42. By written submission I outlined concerns on behalf of Fish & Game about the proposed water conservation measures when flow fall below 53% of 7-day MALF at Wallacetown (4.2m³/s) and 42% of 7-day MALF at Wallacetown (3.3m³/s), which roughly correspond to 5 and 10 year low flows at Wallacetown (5 year low flow – 3.9m3/s and 10 year low flow – 3.15m3/s).[32] Specifically, I was concerned that the *Low Flow Contingency Plan for Abstraction from the Oreti River* did not provide clear objectives in terms of numerical reductions in take or include any requirement for the proposed abstraction activity to actually comply with the contingency plan. Upon reflection I accept that condition 3 of the proposed water permit drafted by the Applicant does provide for it to instigate various conservation measures as flow recedes below 4.2m³/s and 3.3m³/s at Wallacetown. This condition could however be strengthened to require reporting by the Applicant to the consent authority that water conservation measures have been commenced at the requisite flows.

Entrainment of fish

43. The AEE provides that the existing fish screening comprises a primary screen with 50mm bars and secondary screen with 12mm diameter holes), which are proposed to continue for five years post grant of consent. I concur with Dr Ryder that:

    a. The existing structure does not comply with NIWA recommendations for effective screening.[33] NIWA recommendations provide;

        i. Approach water velocity shall not exceed 0.12m/s;

        ii. Sweeping velocity shall be equal or greater than approach velocity; and

        iii. Maximum screening material opening size shall not exceed 3mm for woven mesh screens, 2mm for profile bar screens and 3.2mm for perforated plate screens.[34]

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[31] Statement of Gregory Ryder on behalf of Environment Southand – dated 24 June 2016, paragraph 5.48.

[32] http://www.es.govt.nz/rivers-and-rainfall/hydro-statistics/?s=Oreti-River-at-Wallacetown.

[33] Brief of evidence of Dr Greg Ryder for Environment Southland, dated 24 June 2016 – paragraphs 4.9 – 4.14.

[34] Jamieson D., Bonnett M., Jellyman D., Unwin M., (October 2007), *Fish screening: good practice guidelines for Canterbury*, NIWA client report: CHC2007-092, National Institute of Water & Atmospheric Research Ltd

b. A five year delay in fish screening improvement is not justified from an ecological approach. The evidence of Francis Wise suggests to me that the proposed five year delay for improvements in fish screening is for financial reasons as opposed to ecological reasons.[35]

I support the fish screening recommendations made by Dr Ryder at paragraph 4.15 of his evidence and proposed two year implementation period.

Consent duration

44. I agree with Mrs Smith's recommendation that a consent duration of 20 years should apply to the surface water abstraction from the Oreti River on the basis that the fishing screening conditions proposed by Dr Ryder are imposed, including installation of a compliant fish screen within 2 years of consent issue. The proposed 20 year term is consistent with other surface water takes in the Oreti catchment, which have been typically granted over the past 4 – 5 years by Environment Southland for 15 – 20 year durations. I consider that a common consent duration of 20 years should be imposed on the land use consent to disturb the bed of the Oreti River to maintain the intake channel in circumstances where its exercise is inherently tied to the water permit to abstract surface water from the Oreti River.

45. In this case, the priority of the Applicant's take over other surface water takes from the Oreti River, such as pastoral irrigation, is recognised by the fact that no minimum flows have been historically imposed on its consent. Specifically, the Applicant is not required to engage in flow sharing or an identified reduction in take as flow recedes toward 7-day MALF nor is the Applicant required to cease their take at an identified minimum flow to preserve instream habitat.

Discharge Permit - Discharge to surface water

Length of mixing zone

46. The Applicant proposes that the zone of reasonable mixing is increased from a point 200m downstream of the discharge point under the existing consent to a zone 350m downstream of the zone of reasonable mixing on the basis that:

a. Sampling at the consented point 200m downstream represents a health and safety issue; and

b. It has historically sampled at a point 350m downstream.

In short, there appears to be no ecological justification for the proposed increased zone of reasonable mixing downstream of the discharge point. Mixing research conducted by Alliance suggests that the discharge is well mixed 200m below the discharge point at both:

a. Low river flow and near low tide conditions; and

b. Low river flow and near high tide conditions. The issue under these conditions appears to relate to the fact that the discharge is not fully mixed 200m *upstream* of the discharge point.

[35] Statement of Evidence of Frances Wise on behalf of Alliance Group Limited – 4 July 2016, paragraph 48(c).

I note the comment of Dr Ryder that:

a. A mixing zone of 350m downstream of the Applicant's discharge point is a considerable distance for a mixing zone in a river; and

b. He does not consider that practical difficulties in sampling the river close to the outfall should be an overriding reason for extending the mixing zone distance.[36]

In this case, the increase in the mixing zone downstream results a physical increase in the area where effects, such as foams and scums, are permitted to occur. In this case, foam and scum production is reported as being more prevalent when the Applicant's discharge is occurring and have the potential to impact upon recreational amenity / aesthetics.

Visual clarity

47. The lower Makarewa River is classified as a lowland (soft bed) water body in the Regional Water Plan. Appendix G of the Regional Water Plan provides that when flow is below median flow in lowland soft bed water bodies, the visual clarity of the water shall not be less than 1.3m. This standard is carried through into the Proposed Water and Land Plan for lowland soft bed water bodies.

48. The Applicant's current consent requires that in-river clarity shall not be reduced more than 20% beyond the zone of reasonable mixing (200m downstream of the discharge point). Monitoring by the Applicant indicates that median clarity 350m downstream of the discharge is 0.38m. The AEE indicates that there is a consistent reduction in water clarity 350m downstream of the discharge resulting in reduced clarity >20% about 20% of the time, >33% about 5% of the time and >50% about 1% of the time. In addition,

49. The Applicant proposes that water clarity shall not be reduced by more than 33% downstream of the zone of reasonable mixing (350m) compared to the upstream monitoring site, i.e. in combination this provides for an increase in the zone of reasonable mixing and a decline in visual clarity. I concur with the comments of Dr Ryder at paragraph 5.16 of his evidence that:

a. The Makarewa River has low clarity in the absence of the Applicant's discharge, however the AEE indicated that it exacerbates the situation; and

b. This approach is inconsistent with Objective 4 of the Regional Water, which establishes a 10% improvement objective for visual clarity in lowland water bodies within 10 years of the Plan becoming operative, i.e. by January 2020.

Effluent BOD and river dissolved oxygen

50. I support the Applicant's proposed consent conditions, which provide upon issuing of the consent :

a. Dissolved oxygen standards downstream of the discharge shall be consistently maintained at not less than 6g/m3 and on any occasion less than

[36] Brief of evidence of Dr Greg Ryder for Environment Southland, dated 24 June 2016 – paragraph 5.40.

5g/m3, which falls within attribute C for dissolved oxygen set out in the National Policy Statement for Freshwater Management (NPS-FM); and

b. Inclusion of a maximum limit for soluble BOD_5 (<2g/m3) downstream of the zone of reasonable mixing.

51. In addition, I consider that consideration needs to be given to further improvement in dissolved oxygen standards post upgrade beyond attribute C of the NPS-FM.

Faecal coliforms

52. The Applicant proposed consent conditions include a faecal coliform limit on the discharge of 45,000 CFU/100mL . However, no limits are proposed in the draft consent conditions either immediately or post upgrade with respect to faecal coliforms downstream of the zone of reasonable mixing. Instead, the Applicant proposes reviewing the microbial load with the discharge and an assessment of its actual and potential effects on the Makarewa River environment and public health.

53. I consider that a faecal coliform limit of downstream of the zone of reasonable mixing is required for the following reasons:

a. Faecal coliforms are indicators of human health risk associated with contact recreation.

b. The Makarewa and Oreti Rivers are recognised sports fisheries and it is common for anglers to wade while fishing. A faecal coliform limit in the receiving waters is required to ensure that they are suitable for contact recreation, i.e. wading.

The NPS-FM establishes a national bottom line of 1,000CFU/100ml (annual median) to ensure that people are not exposed to a high risk of infection from contact with water during activities with occasional immersion and some ingestion of water, such as wading. The narrative accompanying the national bottom lines provides as follows: *"People are exposed to a moderate risk of infection (less than 5 risk) from contact with water during activities with occasional immersion and some ingestion of water (such as wading and boating). People are exposed to a high risk of infection (greater than 5% risk) from contact with water during activities likely to involve immersion."*

At levels >1,000CFU/100ml, i.e. attribute D and in excess of the national bottom line, the accompanying narrative provides as follows: *"People are exposed to a high risk of infection (greater than 5% risk) from contact with water during activities with occasional immersion and some ingestion of water (such as wading and boating).*

c. Objective 4 of the RWP which provides for a minimum of a 10% improvement in surface water bodies classified as lowland (soft bed) in (among other things) the levels of microbiological contaminants by 2020;

d. The RWP provides that faecal coliforms should not exceed 1,000 CFU/100ml for lowland (soft bed) water bodies, i.e. including the Makarewa River.

Ammonia

54. The Applicant's existing consent provides that ammonia in the receiving waters should not exceed <5.6g/m³ at pH8 and temperature of 20˚c. Updated draft consent conditions provide that:

a. Upon issuing of the consent the annual median annual median should not exceed <3.75g/m³ (at pH 8) and the 4 day rolling average and 95%ile should not exceed <4.75g/m³ at (pH 8).

Whilst annual median of <3.75g/m³ (at pH 8) represents an improvement on the status quo it does not compare well with the national bottom line for ammonia concentrations in lakes and rivers (annual median should not exceed <1.3g/m³ and annual maximum should not exceed 2.2g/m³ (based on pH 8 and temperature of 20°c)). The narrative attribute state for the national bottom line of in the NPS-FM provides as follows: *"80% species protection level: start impacting regularly on the 20% most sensitive species (reduced survival of most sensitive species)"*. The narrative for attribute state D (annual median >1.3g/m³ and annual maximum >2.2g/m³ (based on pH 8 and temperature of 20°c)) provides as follows: *"Starts approaching acute impact level (i.e. risk of death) for sensitive species)*.

b. Within 15 years of issuing of the consent the annual median should not exceed <1.9g/m³ (at pH 8), the 4 day rolling average and 95%ile should not exceed <4.75g/m³ (at pH 8) and the annual 95%ile median should not exceed <2.4g/m³ at pH 8.

55. I acknowledge that the Applicant is proposing both an immediate and stage improvement to its discharge in relation to ammonia concentration. However, I share Dr Ryder's concerns that:

a. The proposed conditions do not include any acute limit to avoid potential lethal effects within the mixing zone[37]; and

b. The 15 year delay to adopt further ammonia reductions does not appear to be based on any particular ecological or water quality issue.[38]

In relation to the 15 year delay I note that Mr Kahn's evidence for the Applicant provides that from a purely engineering perspective, the minimum timeframe to complete the waste minimisation and primary upgrades, confirm the design requirements, undertake design, tendering, equipment procurement, construct and successfully commission the treatment upgrade to comply with the 15 year ammonia standard could be completed in the vicinity of 10 years.[39]

Total oxidized nitrogen

56. I support the Applicant's proposed consent condition that provides that upon issuing of the consent the concentration of total oxidized nitrogen in the receiving waters

[37] Brief of evidence of Dr Greg Ryder for Environment Southland, dated 24 June 2016 – paragraph 5.41.
[38] Ibid, paragraph 5.43.
[39] Statement of Evidence of Azam Kahn on behalf of Alliance Group Limited – 4 July 2016, paragraph 26(d).

shall not exceed an annual median of 2.4g/m3 and an annual 95% of 3.5g/m3, which falls within attribute B for nitrate set out in the NPS-FM. This represents an improvement on the status quo in circumstances where the Applicant's existing consent does not include any limits with respect to total oxidized nitrogen in the receiving waters nor are there any limits for lowland (soft bed) water bodies set out in the Regional Water Plan or Proposed Water and Land Plan.

Dissolved reactive phosphorus (DRP)

57. I note Dr Ryder's comments that DRP concentration in the receiving waters downstream of the Applicant's discharge is typically an order of magnitude higher than at the upstream control site and at 0.35g/m3 is high for South Island rivers and very high relative to guidelines use to assess potential for nuisance algae and plant growth.[40]

58. I acknowledge that neither the Regional Water Plan nor the Proposed Water and Land Plan include any limits for DRP, however I note that:

    a. Objective 4 of the Regional Water Plan establishes a 10% improvement objective for DRP in lowland water bodies within 10 years of the Plan becoming operative, i.e. by January 2020; and

    b. That Dr Ryder recommends that the proposed treatment upgrade be required to reduce the concentration of DRP in the discharge significantly, (i.e. by at least half from 20g/m3) to reduce the phosphorus loss on the lower Makarewa River and New River Estuary.

59. The above reduction recommended by Dr Ryder appears prudent in circumstances where the New River Estuary is in poor condition with increasing eutrophication.

Comment on the 35 year consent durations proposed by the Applicant

60. The Applicant proposes that consents of 35 years duration are granted by Environment Southland, i.e. the maximum duration available under s 123 of the RMA, for each of the discharge permits sought.

61. Consent duration is one matter among a suite of conditions that may be applied to an activity to avoid, remedy or mitigate adverse effects and ensure that an activity is undertaken in a manner that meets the purpose of the RMA, i.e.:

> *"**Purpose***
> *(1) The purpose of this Act is to promote the sustainable management of natural and physical resources.*
> *(2) In this Act, **sustainable management** means managing the use, development, and protection of natural and physical resources in a way, or at a rate, which enables people and communities to provide for their social, economic, and cultural well-being and for their health and safety while—*
> *(a) sustaining the potential of natural and physical resources (excluding minerals) to meet the reasonably foreseeable needs of future generations; and*
> *(b) safeguarding the life-supporting capacity of air, water, soil, and ecosystems; and*

[40] Brief of evidence of Dr Greg Ryder for Environment Southland, dated 24 June 2016 – paragraph 5.30.

(c) *avoiding, remedying, or mitigating any adverse effects of activities on the environment."*

62. There is considerable case-law in New Zealand regarding how the duration of a resource consent should be decided.[41] In *Huntly Quarries Limited v Waikato Regional Council* A010/2008 [2008] NZEnvC (30 January 2008)[42] the Environment Court considered that the following factors should be taken into account in setting the term of consent:

a. The effectiveness of consent conditions to manage environmental effects;

b. The recent history of the Applicant's operations at and the applicant's record;

c. Sensitivity of the receiving environment;

d. Fluctuating and variable effects and reliance on human intervention;

e. Inconsistency with future standards; and

f. Reasonable certainty and security for the Applicant.

63. I consider each of the above factors in turn in relation to the discharge permits.

Effectiveness of consent conditions to manage environmental effects

64. I consider that the Applicant's AEE provides adequate information on the potential adverse effects associated with its discharges to land and surface water. However, I am concerned that there is a lack of detail on how site management will ensure that effects on the lower Makarewa and Oreti Rivers and the New River Estuary will be avoided, remedied or mitigated over the full 35 year terms of the discharge to water permit. Specifically:

a. The evidence of Dr Ryder for Environment Southland questions whether the Applicant's proposed consent conditions do effectively manage the environmental effects of the discharge to surface water. Specifically, Dr Ryder questions the adequacy of consent conditions in relation to dissolved oxygen concentration, visual clarity, reduction in faecal coliform concentration and load, phosphorus concentration and load, diffuser outfall, inclusion of an acute ammonia toxicity limit and requirement for a whole effluent toxicity testing using appropriate New Zealand freshwater species.[43] I acknowledge that improvements have been made by the Applicant post Dr Ryder's consideration of the draft consent conditions, however a number of Dr Ryder's concerns have either not been addressed or only partially addressed.

b. The 15 year delay for a range of improvements is not substantiated from an ecological or engineering approach. According to Mr Kahn's evidence the

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[41] For example: *PVL Proteins Ltd v Auckland Regional Council* A061/2001, *Brooke-Taylor v Marlborough District Council* W67/2004, *Genesis Power Ltd v Manawatu-Wanganui Regional* (decision of the High Court, Wild J cry 2004 485 1139), *Royal Forest & Bird Protection Society v Waikato Regional Council* A157/2006 and *Huntly Quarries Limited v Waikato Regional Council* A010/2008.

[42] Decision available at: http://www.nzlii.org/cgi-bin/sinodisp/nz/cases/NZEnvC/2008/23.html?query=Huntly%20Quarries

[43] Brief of evidence of Dr Greg Ryder for Environment Southland, dated 24 June 2016 - paragraph 6.1.

proposed improvements are achievable from an engineering point of view within 10 years. This suggests that the reason for the additional delay of 5 years is for financial reasons.

c. No further improvements in the discharge consents are proposed by the Applicant beyond the 15 year mark.

Recent history of operations and Applicant's record

65. The Staff Report does not provide any comment as to whether any breaches of the Applicant's existing discharge to surface water permit have been recently or historically recorded by Environment Southland. Accordingly, I cannot comment on what, if any, weight should be attached to this factor.

Sensitivity of the receiving environment

66. For the reasons set out at paragraphs 20 – 35 of my evidence I consider that lower Makarewa and Oreti Rivers and New River Estuary have important ecological value, including sports fish and game value. Given this context, combined with the nature of potential adverse effects associated with the discharge to surface water, I consider that the receiving environment(s) are sensitive.

67. In addition, the lower Makarewa and Oreti Rivers have degraded instream water quality and the New River Estuary is considered to be in poor condition with increasing eutrophication. I accept that the lower Makarewa and Oreti Rivers have degraded instream water quality and the New River Estuary is in poor condtion even in the absence of the Applicant's discharge, however evidence indicates that the Applicant's discharge exacerbates the situation. In short, the Applicant's discharge represents another stress on an already degraded environment.

Fluctuating and variable effects and reliance on human intervention

68. Mr Kahn's evidence for the Applicant details the waste minimisation, primary and secondary treatment upgrades proposed by the Applicant over the proposed 15 year implementation period. It is unclear to what extent if, if any, there will be fluctuating and variable effects and reliance on human intervention. However, it appears active management of the Applicant's discharge will be required on an ongoing basis.

Inconsistency with future standards

69. I note the disagreement between Mrs Smith for Environment Southland and Mr Kyle for the Applicant as to whether the discharge to surface water is general consistent with the relevant statutory instruments, including applicable objectives and policies.

70. In addition, I note Mrs Smith's comment that the site's location falls within the Oreti Freshwater Management Unit (FMU) area, in terms of Environment Southland's catchment limit setting process under the Proposed Water and Land Plan.[44] I consider that the Hearing Committee should be aware that Environment Southland is yet to give effect to the NPS-FM. The recently notified Proposed Water and Land Plan creates a regional policy framework for the NPS-FM to be given effect. I understand that:

[44] Staff Report for Hearing, p. 13.

a. Environment Southland will, over the next five or so years, undertake substantial community consultation to formulate specific freshwater objectives and limits to re-confirm the rivers values and management methods (in accordance with the criteria set out in the NPS-FM).

b. While the Regional Water Plan does seek to maintain and improve water quality throughout the region it is not achieving these outcomes. Environment Southland is in the process of notifying a revised regional water plan to, among other things, give effect to the requirements of the NPS-FM.[45]

71. I have read the review conditions (conditions 31 – 35) in the Applicant's proposed Discharge Permit – Treated Wastewater to Water, which are attached to Mr Kyle's evidence on behalf of the Applicant. In response, I do not consider that the conditions are sufficient for a consent duration of 35 years. Specifically:

a. There is no clause relating to evolving policies and objectives associated with new and relevant statutory instruments; and

b. There is no clause providing for Environment Southland at specified chronological intervals to either review the effectiveness of the conditions and to impose further or amended conditions if necessary, and / or to review the adequacy and necessity of monitoring.

72. In addition, I consider that the public perception of the nature and quality of the Applicant's discharge to surface water may change over time and what is acceptable today may not be acceptable in the future. I think that this is particularly likely in circumstances where there are recognised environmental and recreational values associated with the lower Makarewa and Oreti Rivers and the New River Estuary. In addition, there is scope for technological change over time with respect to treatment of wastewater.

Reasonable certainty and security for the Applicant

73. I accept that the Applicant is entitled to reasonable certainty and security, however there appears to be no ecological justification for the proposed consent durations of 35 years in relation to the discharge permits.

74. I do not consider that the Applicant's investment in upgrades associated with its wastewater treatment and resulting discharges would be prejudiced by a shorter term consent than 35 years in circumstances where s 104(2A) of the RMA specifically provides that the consent authority must have regard to the value of the investment of the existing consent holder when applying for new consent.

75. I consider that a 15 year consent period for the discharge to surface water permit is appropriate on the basis that:

a. The timeframe for relating to reporting on the selected option for upgrading be shortened to 2 years; and

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[45] I note the Environment Southland website currently states that the Council has: *". . . responded to the National Policy Statement through our Water and Land 2020 & Beyond project... The Water and Land 2020 & Beyond project has three main components . . . The second involves the forming of the new Water and Land Plan, which will replace the existing Regional Water Plan for Southland...".* (source: http://www.es.govt.)

b. The deadline for the implementation of the chosen upgrade option is shortened to 8 years after that (a total of 10 years until the upgrade is implemented and fully operation). This would not prevent the Applicant implementing its chosen upgrade option earlier if it wished to do so.

I consider that a 15 year period recognizes the improvements in the quality of the discharge proposed by the Applicant, the nature of the discharge, the sensitivity of the receiving environment and provides the Applicant with reasonable certainty and security. Similarly, the discharge of waste organic material to land should be granted for 15 years.

Signed: _____ Date: Monday, 11 July 2016

Jacob Smyth
Resource Management Officer
Fish and Game New Zealand – Southland Region