
in the matter of: the Resource Management Act 1991

and

in the matter of: a number of applications to take and use water from
the Upper Waitaki catchment

Brief of evidence of Raewyn Lesley Moss

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REFERENCE: JM Appleyard (jo.appleyard@chapmantripp.com)
BG Williams (ben.williams@chapmantripp.com)

Chapman Tripp
T: +64 3 353 4130
F: +64 3 365 4587

119 Armagh Street
PO Box 2510, Christchurch 8140
New Zealand

www.chapmantripp.com
Auckland, Wellington,
Christchurch



BRIEF OF EVIDENCE OF RAEWYN LESLEY MOSS

INTRODUCTION

- 1 My full name is Raewyn Lesley Moss.
- 2 I am Meridian Energy Limited's (*Meridian*) Manager – Natural Resources. I have held this position for six years. In this position I am responsible for managing all natural resources related affairs associated with Meridian's existing generation activities and new business developments, including new hydro and wind generation proposals.
- 3 In this role I was responsible for managing Meridian's response to third party water takes in the Upper Waitaki Catchment, and associated litigation which provided clarity on Meridian's existing resource consent entitlements. I was also responsible for preparing Meridian's submission and case to the Waitaki Catchment Water Allocation Board (WAB) hearing.
- 4 Prior to becoming Meridian's Manager – Natural Resources, I held the position of Environmental Consultant with Meridian for a period of three years. My responsibilities in that role included:
 - 4.1 Managing consents and compliance for both the Waitaki and Manapouri Power Schemes; and
 - 4.2 Establishing and assisting with the implementation of Meridian's Sustainability Policy and reporting framework.
- 5 Before joining the electricity industry I worked in New Zealand, Indonesia and the UK in environmental and quality consulting and assurance roles. Prior to these roles I was a Senior Scientist for the Wellington Regional Council responsible for the Council's resource consent compliance programme established once the Resource Management Act 1991 (RMA or Act) was enacted, and waste management planning for the Region.
- 6 I hold the qualifications of Bachelor of Science from Victoria University, 1987 and Certificate in Management and Diploma in Management from Henley Management College, Henley-on-Thames, UK, 1995 and 1998 respectively. I am a member of the Institute of Environmental Management and Assessment (UK), the Resource Management Law Association (NZ) and the International Association of Impact Assessment.
- 7 I am authorised to give this evidence on behalf of Meridian.
- 8 In preparing this evidence I have reviewed:

- 9 Cumulative Water Quality Effects of Nutrients from Agricultural Intensification in the Upper Waitaki Catchment – Summary Report; GHD on behalf of Mackenzie Water Research Limited (MWRL), August 2009;
- 10 The Waitaki Catchment Water Allocation Regional Plan (WRP);
- 11 The evidence I presented to the WAB on the draft WRP; and
- 12 The evidence of **Mr Turner** and other relevant witnesses presenting on behalf of Meridian.

SCOPE OF EVIDENCE

- 13 In this evidence I outline:
 - 13.1 An introduction to Meridian;
 - 13.2 A general overview of the Waitaki Power Scheme and its various features;
 - 13.3 The history of the development of the Waitaki Power Scheme, including the transfer of Crown water rights to the Electricity Corporation of New Zealand (ECNZ);
 - 13.4 The actions Meridian has undertaken in confirming its water rights in the Upper Waitaki Catchment and its involvement in third party resource consent applications to take water;
 - 13.5 The background to the agreement between Mackenzie Irrigation Company (MIC) and Meridian and its value / implications for Meridian; and
 - 13.6 The position of Meridian’s Board in relation to the provision of derogation approval to various types of activities in the Upper Waitaki Catchment.

INTRODUCTION TO MERIDIAN

- 14 Meridian is a limited liability company wholly owned by the New Zealand Government. It is one of three companies formed from the split of ECNZ on 1 April 1999.
- 15 Meridian’s Statement of Corporate Intent states that:

“Meridian Energy’s nature and scope of activities is the generation of electricity (including the ownership and operation of related assets), the management of water related infrastructure, and the marketing, trading and retailing of energy and wider complementary products, solutions and services, primarily within New Zealand.”

- 16 As a State Owned Enterprise, Meridian is required by statute to operate as a successful business. A component of that requirement is to be an organisation that exhibits a sense of social responsibility by having regard to the interests of the community.
- 17 The Company’s objectives include maximising long-term shareholder value by its commitment to sustainable management and the development of natural, physical and human resources utilised in its business.
- 18 Meridian is the single largest generator of electricity in New Zealand and generates electricity only from renewable sources. Meridian’s hydro and wind generation capability account for approximately 31% of New Zealand’s electricity generating capacity, while Lakes Tekapo and Pukaki account for 57% of New Zealand’s hydro storage capacity. Needless to say, Meridian’s electricity generation infrastructure is critical to the performance of the New Zealand economy and to the social wellbeing of people and communities.
- 19 When Meridian was formed on 1 April 1999 it acquired the assets associated with the Waitaki Power Scheme, the Manapouri Power Scheme and the Brooklyn Wind Turbine.
- 20 Since then Meridian has continued to operate, maintain and develop these assets and investigate, consent, design and build new generation assets such as the Te Apiti Wind Farm in Manawatu (90MW), the White Hill Wind Farm in Northern Southland (58MW), and Project West Wind, which is presently being constructed on the south-west coast of Wellington (143MW).
- 21 Meridian continues to upgrade and enhance its existing hydro generation assets in the Waitaki Catchment and at Manapouri. In this regard, we are currently undertaking the half-life refurbishment of the Benmore Power Station which will increase generation performance from the Station by 3% upon completion. Meridian is also actively investigating and pursuing options for further new renewable generation capacity throughout New Zealand.
- 22 With respect to the Waitaki Catchment since the WRP was made operative Meridian has made two applications for resource

consents to take and use water from the Lower Waitaki Catchment which have been heard against the backdrop of the WRP.

- 23 The first are applications to take, use and discharge water from Lake Waitaki for hydro generation associated with the North Bank Tunnel Scheme. Consent was granted in relation to those applications in December 2008 and an appeal against the grant was heard by the Environment Court in June/July 2009. At the time of writing this evidence a decision on the appeal is imminent.
- 24 The second application is a joint application with South Canterbury Irrigation Trust to take 20 m³/s (cumecs) from the Lower Waitaki for use for irrigation of 40,000 hectares of land in South Canterbury. This is described as the Hunter Downs Irrigation Scheme. At the time of writing this evidence we are awaiting a decision from the Regional Council's Commissioners on this application.

OVERVIEW OF THE WAITAKI POWER SCHEME

- 25 The Waitaki River has been recognised as a major potential source of hydro-electricity since the turn of the twentieth century. As is discussed below the development of this potential commenced with the construction of Waitaki Power Station, and the subsequent commissioning of a further seven power stations in the upper and middle Waitaki Catchment.
- 26 Today the Waitaki Power Scheme includes eight hydro power stations, four canal systems, and numerous dams, weirs, and other control structures with a combined generation capacity of 1,723 MW.
- 27 A diagram outlining the arrangements of the Waitaki Power Scheme is attached as **Appendix A**, while a description of the Scheme is outlined below. The key details of each of the power stations are summarised in Table 1.

Table 1: Waitaki Power Scheme – Key Statistics

Item	Tekapo A	Tekapo B	Ohau A	Ohau B/C	Benmore	Aviemore	Waitaki
Commissioned	1951	1977	1979	1984/1985	1965	1968	1935
Average annual energy output	160 GWh	820 GWh	1140 GWh	960 GWh (x2)	2200 GWh	940 GWh	500 GWh
Station generation capacity	25 MW	160 MW	264 MW	212 MW (x2)	540 MW	220 MW	90 MW
Number of generating units	1 x 25 MW	2 x 80 MW	4 x 66 MW	4 x 53 MW	6 x 90 MW	4 x 55 MW	6 x 15 MW (unit 7 retired)
Net head	30.5 m	145.7 m	59 m	47.5 m	92 m	37 m	21.5 m
Turbine details	1 x vertical Kaplan turbine	2 x vertical Francis turbines	4 x vertical Francis turbines	4 x vertical Francis turbines	6 x vertical Francis turbines	4 x vertical Francis turbines	7 x vertical Francis turbines (1 retired)

Description of the Waitaki Power Scheme

- 28 The Waitaki Power Scheme begins at Lake Tekapo in the north-east corner of the Mackenzie Basin, with control of the level of the lake and use of this stored water (largely) for electricity generation purposes. Copies of the key resource consents authorising the operation of the Waitaki Power Scheme are provided in **Appendix B** and are referred to in **paragraphs 59 to 74** below.
- 29 The level of Lake Tekapo is managed as a result of a control gate across the natural lake outlet to the Tekapo River. The operating range of Lake Tekapo is controlled by resource consents granted to Meridian. These consents set an extreme minimum control level of 701.8m and a maximum control level of 710.9m. The conditions of consent also require Meridian to cease taking water from Lake Tekapo between the 1st of October and the following 31st of March if the lake level is below 704.1m, unless a situation exists where there is an electricity shortage in either the South Island or New Zealand.
- 30 However, the consents to dam the Tekapo River do not require Meridian to provide a minimum flow or flushing flows to the

river, although occasional flow releases for recreational purposes are required in the upper Tekapo River. These flows are discussed in more detail in the evidence of **Mr Turner** and **Dr Griffiths**.

- 31 At the time of the WAB hearings the draft Plan (supported by submitters) included a requirement to restore a minimum flow in the Tekapo River. The Board deleted this in its final decision citing as one of the reasons that there would be costs resulting from foregone generation.¹
- 32 The intake on the southern shoreline of Lake Tekapo allows water to be conveyed via a tunnel to the Tekapo A Power Station, the tailrace of which is the commencement of the Tekapo Canal. While water from Lake Tekapo most frequently enters the Tekapo Canal via the Tekapo A Power Station, it can also be released from the lake control gate at State Highway 8 and diverted back into the canal through a gate structure at Lake George Scott (as is the case with water released for recreational purposes). The resource consents for the operation of the lake control gate across the outlet of the Tekapo River allow Meridian to discharge up to 850 cubic metres per second (cumecs) down the Tekapo River during flood or emergency events. The evidence of **Dr Griffiths** will discuss the frequency and range of flows down the Tekapo River.
- 33 The Tekapo Canal effectively enables the transfer of water from Lake Tekapo to Lake Pukaki. It is 27km long and travels in a south-west, then western direction to the shore of Lake Pukaki. The canal is constructed in sections, some sections being 'cut' through terrain and others being constructed from 'fill' material. It is consented to carry a flow of approximately 130 cumecs. It traverses some major tributaries of the Upper Waitaki Catchment, including Fork Stream, Irishman Creek and the Mary Burn.
- 34 At the conclusion of the Tekapo Canal, water is discharged, via penstocks, to the Tekapo B Power Station which sits in the bed of Lake Pukaki. The generation of electricity at the Tekapo B Power Station is entirely dependent on the water being delivered by the Tekapo Canal (i.e. there are no supplementary flows that contribute to generation at the Station).
- 35 Lake Pukaki is New Zealand's principal hydro storage lake and is impounded by the Pukaki High Dam across the outlet of the Pukaki River. The lake level has been raised twice in history, once when the Pukaki Low Dam was constructed in the late 1940's/early 1950's, and then again in the mid-1970's when the

¹ Para 133 Appendix 1 Decision

Pukaki High Dam was constructed to increase its storage capabilities. The current consents held by Meridian for the Pukaki (High) Dam set an extreme minimum control level of 518m and a maximum control level of 532.5m. Water is released from the lake either through the spillway to the Pukaki River (during times of flood or for recreational releases) or, as is the norm, into the Pukaki Canal. The resource consents for the spillway enable Meridian to discharge a flow of up to 3,400 cumecs down the Pukaki River. As with the Tekapo River, Meridian is not required to provide a minimum flow or flushing flow down the Pukaki River. Recreational releases are required on an annual basis for kayaking in the river.

- 36 At the time of the WAB hearings submitters asked for releases to be provided to maintain a minimum flow in the Pukaki River. The Board decided not to provide for such releases as the costs (including of foregone generation) would outweigh the benefits.²
- 37 The Pukaki Canal is 12km long and travels in a south-west direction, passing behind Twizel township and traversing the Twizel River and Tay Stream. The canal is also constructed in sections of 'cut' and 'fill' and is designed to take a maximum flow of 560 cumecs. In combination with water which flows from Lake Ohau into the Ohau Canal, the Pukaki Canal enables water to be used for generation at the Ohau A, B and C Power Stations. Of note is that the Pukaki Canal has an overtopping spillway structure approximately 950m downstream of its outfall from Lake Pukaki. This spillway is provided to prevent overtopping of the canal embankments in an emergency situation and is not intended for routine use. Meridian is authorised to discharge up to 560 cumecs from the canal, across land, to the Pukaki River.
- 38 The Pukaki Canal converges with the Ohau Canal near Old Glen Lyon Road. The Ohau Canal enables water from Lake Ohau to be diverted for electricity generation through the Ohau A, B and C Power Stations (in combination with Lake Pukaki water). It is 8.4km long and has a maximum flow capacity of approximately 200 cumecs. The waters of Lake Ohau are impounded by a control weir across the natural outlet of the lake to the Ohau River. The lake has an extreme minimum control level of 519.45m and a maximum control level of 519.75m. Meridian is required to maintain a minimum flow down the Upper Ohau River as part of its resource consent conditions. The required flow is 8 cumecs between the 1st of May and the 31st of October and 12 cumecs between the 1st of November and the 30th of April.

² Para 137 Annexure 1 Decision

- 39 The combined flow of the Pukaki - Ohau Canal is diverted through the Ohau A Power Station which discharges into Lake Ruataniwha; an important recreational amenity in the Mackenzie Basin (as outlined by **Mr Greenaway** in his evidence).
- 40 Lake Ruataniwha only has a small operating range of 300mm (458.5m – 458.8m) and was formed by the construction of the Ruataniwha Dam across the bed of the lower Ohau River. Meridian is not required to provide a minimum flow or flushing flow down the Lower Ohau River and spill events down the river are infrequent.
- 41 Again at the WAB hearings submitters asked for releases to the lower Ohau River. The Board was not persuaded to provide for these releases and cited the costs of foregone generation in their reasoning.³
- 42 Water from Lake Ruataniwha is diverted into the Ohau B – C Canal, which feeds the Ohau B and Ohau C Power Stations (both 'in canal' stations). The Ohau B – C Canal is approximately 10km long and designed to carry a maximum flow of 560 cumecs. Immediately downstream of the Ruataniwha Dam and the commencement of the Ohau B – C Canal is the Wairepo Arm. The Wairepo Arm was created by large borrow pits from canal construction being incorporated into the right bank of the Ohau B – C Canal to provide a recreational area. It is called the Wairepo Arm after the Wairepo Creek, the waters of which flow into this area and are included in the canal flows.
- 43 The collective inflows of Lakes Tekapo, Pukaki and Ohau normally discharge into Lake Benmore via the tailrace of the Ohau C Power Station. Lake Benmore was created by the formation of the Benmore Dam in the bed of the Waitaki River and primarily collects flows from the Ohau C tailrace and the Ahuriri Catchment. The lake has an operating range of 0.95m and water can be discharged to Lake Aviemore (the lake below) either through the Benmore Power Station or the spillway gates. The Benmore Power Station is also the South Island end point for the HVDC link between the South and North Islands.
- 44 Lake Aviemore receives almost all of its inflows from Lake Benmore and has an operating range of 0.6m. As with the Benmore Power Station, flows are discharged via either the Aviemore Power Station or the spillway gates on the dam structure to Lake Waitaki.
- 45 The final station in the Waitaki Power Scheme is the Waitaki Power Station, which is also the oldest. The Waitaki Power

³ Para 137 Annexure 1 Decision

Station is a concrete arch dam that has an overtopping spillway as opposed to spillway gates like at the Benmore and Aviemore Dams. Lake Waitaki has a consented operating range of 2.1m (228.7m to 230.8m) and the discharge of generation flows through the station controls the flow in the Lower Waitaki River. Meridian's consent for the Waitaki Power Station require a minimum discharge of 120 cumecs into the Lower Waitaki River, although the mean flow provided to the Lower Waitaki River is approximately 362 cumecs based on 73 year hydrology records.

- 46 Finally as I mentioned previously Meridian has sought consent to take and use water from Lake Waitaki for the North Bank Tunnel Concept (*NBTC*). *NBTC* proposes to take up to 260 cumecs of water from Lake Waitaki and divert the flow into a tunnel along the north bank of the Lower Waitaki River. The tunnel would discharge at Stonewall, approx 34km downstream of Waitaki Dam. *NBTC* would have an installed capacity of up to 285MW and generate approximately 1,100 to 1,400GWh per annum.

The Importance of the Waitaki Power Scheme

- 47 Lakes Tekapo and Pukaki provide approximately 57% of New Zealand's national hydro storage. This storage is critical to enabling the traditionally higher summer inflows to Lakes Tekapo and Pukaki to be retained so that hydro power can be generated cheaply and reliably during the winter periods when consumer demand is highest. The storage within the Waitaki Power Scheme is also used to effectively enable the variable supply that goes with the daily cycle of use - that is, peaks in the morning and evening, and lower supply requirements overnight and at weekends.
- 48 The Waitaki Power Scheme also has a critical role in supporting the transfer of electricity to the North Island through the HVDC link during certain conditions (acknowledging that more recently the HVDC link is being used to bring electricity from the North Island to the South Island due to increasing demand in the South Island in recent years). Its flexibility enables North Island thermal stations to be supplemented with peak capacity generation during the morning and evening consumer peaks, or South Island hydro storage to be conserved and South Island generation to be supplemented from North Island generation, when hydro storage and inflows are low. Without this variability, both the North Island and South Island would need to install more, but poorly utilised, standby generating capacity to provide a reliable and secure electricity supply.

HISTORIC CONSENTS FOR THE WAITAKI POWER SCHEME

- 49 In this section of my evidence I outline the history of consenting the Waitaki Power Scheme as it provides the background context for the agreement reached between Meridian and the Mackenzie Irrigation Company (*MIC*).
- 50 The initial construction of the power stations on the Waitaki River was authorised by an Order in Council (OIC) dated 24 April 1929, which provided approval for the Minister of Public Works to erect, construct, provide, and use certain works, appliances, and conveniences in connection with the utilisation of water-power from the Waitaki River for the generation, storage, transmission, distribution and sale of electrical energy in terms of section 311 of the Public Works Act 1928. A copy of the 1929 OIC is attached as **Appendix C**.
- 51 Construction of the first power station on the river, at the Waitaki Dam, commenced in 1928 and was commissioned in 1934-35 with two generators. Subsequent development of the power station means there are now seven generators incorporated into the Waitaki Power Station (although one has been retired).
- 52 A subsequent OIC dated 27 September 1939 authorised the Minister of Public Works to erect, construct, provide, and use works, appliances and conveniences in connection with the utilisation of water-power from Lake Tekapo for the generation, storage, transmission, distribution and sale of electrical energy in terms of section 311 of the Public Works Act 1928. A copy of the 1939 OIC is attached as **Appendix D**.
- 53 The Water and Soil Conservation Act (WSCA), passed in 1967, significantly changed water management and allocation in New Zealand. The WSCA vested all use of water in the Crown and established a complex regulatory structure for the administration and control of water resources. The Waitaki Catchment Board as the Regional Water Board became responsible for administering the new system for other than Crown water rights. The WSCA also provided for a system of Crown water rights administered by the National Water and Soil Conservation Authority with separate procedures for "*waters of national importance*". The WSCA included a section that allowed the Governor-General by Order in Council to declare any natural water to be of national importance.
- 54 By OIC dated 7 October 1968 and 11 November 1968, the waters of the Fork Stream, Lake Tekapo, Lake Pukaki, and Lake

Ohau and the waters flowing from Lake Tekapo, Lake Pukaki, and Lake Ohau, to the points where they discharge into Lake Benmore were declared by the Governor-General to be of "National Importance" pursuant to section 23 of the WSCA. A copy of the 1968 OIC's are attached as **Appendix E and F**.

- 55 On 18 August 1969, the Governor General, by a further OIC, granted the Minister of Energy the right to dam, use, discharge, divert and take water in those water bodies. A copy of the 1969 OIC is attached as **Appendix G**.
- 56 This OIC contained three schedules. The First Schedule described the rights to divert, dam, discharge waters around Lakes Tekapo, Pukaki, Ohau and Benmore.
- 57 The Second Schedule provided for rights of renewal of the OIC for a further period of 21 years, specifying that:
- "The rights hereby conferred on the Ministry of Electricity are granted for a period of 21 years from the date of this OIC with successive rights of renewal for further periods of 21 years for so long as the Ministry of Electricity requires the use of the water for the generation of electricity."
- 58 The Third Schedule made allowance for the Waitaki Catchment Commission to grant consent to the taking of 520 cusecs (14.7 cumecs) with a total annual volume of 140,000 acre-feet (172,688,460 cubic metres) for irrigation. This Third Schedule has been the subject of subsequent political and legal debate, through declaratory proceedings covered later in my evidence, and which became the impetus for Meridian to enter into an agreement with irrigators in the Upper Waitaki Catchment. I cover this further in my evidence between **paragraphs 75 to 98**.

FORMATION OF ECNZ AND MERIDIAN

- 59 Electricity Corporation of New Zealand (*ECNZ*) was established in the late 1980's as a state-owned enterprise. The State-Owned Enterprises Act 1986 then provided for the transfer of assets including water rights to State-Owned Enterprises. A sale and purchase agreement between ECNZ and the Crown signed on 31 March 1988 (but retrospective to 1 April 1987) provided for the sale of all of the Crown's interest in the assets and managing of the contracts.

- 60 At the same time the 1988 amendment to the Water and Soil Conservation Act abolished the separate category of Crown water rights (previously granted under section 23) and deemed them to be water rights granted by the Regional Water Board. However, the 1969 Order in Council was saved by section 58(3) of the Amendment Act.
- 61 As ECNZ had become the statutory and contractual successor to the Minister of Energy it gave an undertaking to the Crown to formally apply for water rights under the Water and Soil Conservation Amendment Act 1988 before 31 March 2003.
- 62 By early 1989 ECNZ had decided that the expiry of the first term of the Order in Council (August 1990) was the appropriate date to aim for in applying for water rights for the Waitaki Power Scheme rather than waiting until closer to 2003.
- 63 In May 1990, ECNZ made applications under the Water and Soil Conservation Act for water rights for the operation of the Waitaki Power Scheme. At that stage, the Order in Council of 1969 was still in force but was due to expire in August of that year. The applications and associated technical reports are voluminous so I have not attached them to this evidence but they are available if required.
- 64 The process undertaken for public consultation in respect of the consents related to Waitaki Power Scheme, was probably unique at the time with the process beginning in March 1989 well before the applications for the consenting of the Scheme were lodged.
- 65 An inaugural meeting of the Upper Waitaki Water Resource Working Party (*the Working Party*) was held on 15 and 16 March 1989 and was chaired by the Waitaki Catchment Board. Sixteen interest groups attended including: Mackenzie District Council, Department of Conservation, South Canterbury Acclimatisation Society (now South Central Fish & Game Council), Waitaki Valley Acclimatisation Society (now South Central Fish & Game Council), Water Resources Survey (now Environment Canterbury), Waitaki Catchment Board (now Environment Canterbury), South Canterbury Catchment Board (now Environment Canterbury), Ministry for the Environment, Opihi Augmentation Society (the predecessor of the Opihi River Development Company and the Aoraki Water Trust) and Ministry of Agriculture and Fisheries (now Ministry of Agriculture and Forestry).

- 66 Further interest groups joined the Working Party process during 1989 and 1990. Eight meetings were held in total. The Working Party was a public forum open to anyone with an interest in the Waitaki Catchment. The minutes of the meetings show that they were well attended by various parties with interests in future irrigation including the Opihi Augmentation Society, Federated Farmers Groups, Benmore Irrigation Limited, Ngai Tahu, Department of Conservation, Acclimatisation Societies (now Fish and Game Councils) and Forest and Bird.
- 67 At the conclusion of the process the parties agreed by consensus what the terms of the consents should be including what means would be most effective to address adverse effects, or to enable opportunities for other parties.
- 68 The outcome was a package of measures which the Working Party agreed was appropriate to enable them all to support consents for the Scheme for a further 35 years.
- 69 The package which was provided to the Panel hearing the consent applications included:
- 69.1 Draft water rights with proposed terms and conditions;
 - 69.2 A series of contractual arrangements with each of the stakeholders represented at the Upper Waitaki Resources Working Party (which included representative interests from the lower Waitaki River). I have provided as **Appendix H** a summary document setting out the core arrangements agreed to with each stakeholder to assist the Commissioners and copies of these stakeholder agreements are **Appendix I**;
 - 69.3 In addition to the series of individual contractual arrangements an overarching stakeholder agreement was entered into between ECNZ and the represented stakeholders on the Working Party (*the main stakeholder agreement*). Under the main stakeholder agreement the parties agreed to the granting of the water rights, on the basis that, where appropriate, the provisions and conditions in the document would form conditions of the water rights. A copy of this has been included in **Appendix J**.
- 70 The parties to the main stakeholder agreement included the Minister of Conservation, South Canterbury Fish and Game Council, Ngai Tahu Trust Board, Benmore Irrigation Company Limited, The New Zealand Canoeing Association Incorporated, Mackenzie District

Council, Lower Waitaki Irrigation Company, Morven Glenavy Ikawai Irrigation Company, Maerewhenua District Water Resource Co Ltd, Transit New Zealand, South Canterbury Branch Royal Forest and Bird Society of New Zealand Incorporated, and New Zealand Salmon Anglers Association Incorporated.

- 71 Following a hearing of the applications, the Regional Council's Standing Tribunal recommended that the water rights be granted, with an expiry of 30 April 2025. The Recommendation set out the conditions of the water rights numbered 1 to 22 as agreed with stakeholders via the main stakeholder agreement. A copy of the recommendation is attached as **Appendix K**.
- 72 Subsequent to this, the Regional Council endorsed the Standing Tribunals decision and duly notified ECNZ and other parties, by letter dated 5 February 1991, that the water rights had been granted. A copy of the letter is attached as **Appendix L**.
- 73 The Resource Management Act 1991 came into force on 1 October 1991 and provided for the recognition of the water rights as resource consents, under section 386, which deemed the water rights held under Section 21(3) of the Water and Soil Conservation Act to be resource consents under the RMA.
- 74 During the 1990's ECNZ's assets were progressively divided into separate groups and transferred to newly formed SOE's. ECNZ's physical assets and resource consents for the operation of the Waitaki and Manapouri Power Schemes were subsequently transferred to Meridian at the establishment of Meridian Energy Limited on 1 April 1999.

WATER RIGHTS AND THIRD PARTY APPLICATIONS

- 75 Prior to 2001 there was very little interest demonstrated by individual farmers in taking water for irrigation from the Upper Waitaki Catchment. However, with changes to the agricultural industry the impacts on Meridian's operations due to individuals seeking to take water from the Waitaki Power Scheme became a very serious and real risk for Meridian.
- 76 In the early 2000's Meridian was faced with a number of applications to take water from either the canals or storage lakes for irrigation in the Upper Waitaki Catchment, together with a significant proposal to take water out of the catchment from

Lake Tekapo for irrigating South Canterbury proposed by the Aoraki Water Trust.

- 77 Following an assessment of potential irrigable areas within the Upper Waitaki Catchment, and in the wider South Canterbury area it was recognised by Meridian that the threat to its operations could be significant if water from the Catchment was diverted to the consumptive use of irrigation. As a result, since 2001 Meridian has recognised the threat posed by applications to take water and has opposed new applications for resource consent to take water from the Upper Waitaki Catchment; a position that was endorsed by Meridian's Board.

The Environment Court Declaration

- 78 On 15 April 1991, the Canterbury Regional Council issued to ECNZ certificates recording the grant of the water rights and the conditions and terms applying to the rights. However, the certificates did not fully state all the parameters of the rights. That is, the certificates only recorded the maximum rate of take or use in cumecs.
- 79 Given the threat posed by applications for water for irrigation Meridian was concerned about the way its consents were expressed. Meridian considered that the scope of the existing water permits, as applied for by ECNZ and granted by the Canterbury Regional Council, was not fully expressed in the certificates issued by the Council and this gave rise to a need to refer to a number of other documents in order to obtain a full picture of Meridian's consents. These documents included ECNZ's original applications, the Standing Tribunal's 1990 Report and Recommendations and the Canterbury Regional Council's 5 February 1991 letter, together with a number of Stakeholder Agreements entered into by the parties to the consents and ECNZ.
- 80 Against that background, and in the face of a growing number of applications to take water from the Upper Waitaki Catchment (as well as a lack of understanding by third parties over Meridian's entitlements), Meridian sought a declaration from the Environment Court in 2003. The declaration sought to establish the parameters of Meridian's water rights without the need to refer to the various documents previously outlined and to avoid potential confusion, particularly amongst members of the public as to what Meridian's water permits authorised.
- 81 On 9 September 2003 the Environment Court issued a declaration determining the extent of Meridian's existing consents. In particular, it confirmed the consents were to take or use water at specified rates and maximum volumes, 24 hours

per day, all year round. A copy of the decision is attached as **Appendix M**.

- 82 The resource consents for the operation of the Waitaki Power Scheme are therefore now properly expressed in the volumetric terms they were applied for. The consent relating to the Tekapo A Power Station, for example, was declared to allow Meridian to take surface water all year round from Lake Tekapo:
- 82.1 At a maximum rate of 130 cumecs;
 - 82.2 For a maximum number of hours per day of 24;
 - 82.3 At a maximum daily quantity of 11.232 million cubic metres per day; and
 - 82.4 For a maximum operating period of seven days per week for 12 months per year.
- 83 The resource consents for each power station were declared by the Court to be expressed in the same manner.

Aoraki and the Resource Management (Waitaki Catchment) Amendment Bill/Act

- 84 Following numerous applications for water being lodged with the Regional Council, on 2 September 2003 the then Minister for the Environment Marian Hobbs announced that the Government would prepare special legislation for the Waitaki Catchment. On 11 September 2003 the Minister announced the call-in of outstanding applications for resource consents to take water within the Waitaki Catchment. This included Meridian's applications for Project Aqua⁴ together with over 200 other applications for water in the catchment.
- 85 The Resource Management (Waitaki Catchment) Amendment Bill (the Bill) was introduced to Parliament on 3 December 2003 and following its first reading was referred to the Local Government and Environment Select Committee to report back to Parliament. The Select Committee reported the Bill back to Parliament on 22 March 2004.
- 86 On 19 December 2003, Pukaki Farms Ltd, Star Holdings Ltd, Aoraki Water Trust together with the Timaru District Council and Mackenzie District Council (AWT et al) applied to the High Court pursuant to the Declaratory Judgements Act 1908 for declarations relating, amongst other things, to the extent of the

⁴ Project Aqua was a former hydro-electric development proposal based on the south bank of the lower Waitaki River, comprising a water take at Kurow, canal, 6 power stations and a discharge back to the river in the vicinity of the SH1 road bridge

rights Meridian held for the operation of the part of the Waitaki Power Scheme at Tekapo, the ability of Environment Canterbury (ECan) to grant subsequent resource consents over a particular resource, and the powers of ECan to draft plan provisions in light of these matters.

- 87 Meridian applied to have the AWT declaration application struck out or stayed pending the Bill being finalised upon the grounds that it did not disclose a cause of action. The hearing of the strike out application occurred on 22 and 23 March 2004 before Justice Fogarty.
- 88 The Select Committee report on the Bill became available on 22 March 2004 and was provided to Justice Fogarty and was the subject of submission and argument on the strike out application. The Select Committee had amended the Bill to the extent that Justice Fogarty considered that the committee might have intended to amend the RMA to change the first come first served approach to resource allocation. Justice Fogarty declined to strike out the AWT et al application.
- 89 Project Aqua was cancelled the following week. One of the reasons given was the uncertainty created by Justice Fogarty's decision. That is, the refusal to strike out AWT et al's application raised the possibility that water that would otherwise remain in the Upper Waitaki Catchment may be directed through Burkes Pass and this impacted on the assumptions made in Project Aqua as to the amount of water which would flow in the Lower Waitaki River and was also a significant impact on the eight existing power stations in the Waitaki Power Scheme.
- 90 Following the cancellation of Project Aqua, Minister Hobbs announced on 1 June 2004 that the Bill would nevertheless proceed but it would be simplified. The Bill was amended by Supplementary Order Paper process including deleting provisions that Justice Fogarty previously considered might remove first come first served as the allocation approach and was passed into legislation in September 2004. A copy of the Minister's speech upon the second reading of the Bill as recorded in Hansard is attached as **Appendix N**.
- 91 On 22 and 23 September 2004, the AWT et al declaration application received its substantive hearing before Justices Chisholm and Harrison in a sitting of the full bench of the High Court at Timaru. Pukaki Farms and Star Holdings withdrew prior to the hearing on the basis of commencing discussions with Meridian in relation to the irrigation needs of farmers in the Upper Waitaki Catchment.

- 92 The wording of the declarations being sought by AWT was modified during the course of the hearing but ultimately two declarations were sought and these are summarised at paragraph 20 of the decision. Their Honours issued a written decision on 30 November 2004 and declined to grant any declarations in favour of AWT et al. In essence the decision confirmed that the Upper Waitaki Catchment is fully allocated via the grant of consents to Meridian and other existing users, and further consents could not be granted as these would derogate the rights Meridian (and other existing users) had to take all available water flowing into the Catchment. A copy of the High Court decision is attached as **Appendix O**. There were no appeals from that decision.

MIC – MERIDIAN AGREEMENT

- 93 As indicated as a consequence of the withdrawal of Pukaki Farms and Star Holdings from the High Court proceedings, Meridian commenced discussions in October 2004 with farmers in the Upper Waitaki Catchment in respect of their irrigation interests with a view to reaching agreement on a volume of water that Meridian would make available to farmers such that this agreement could be put before the WAB established under the special Waitaki legislation to develop an allocation plan for the catchment – being the WRP.
- 94 Firstly Meridian asked farmers to form a collective so that we were not required to undertake complicated multi party discussions with numerous individual farmers. Consequently, the Mackenzie Irrigation Company (MIC) was formed with a mandate to represent the farmers of the Upper Waitaki Catchment in negotiations with Meridian.
- 95 An agreement was reached in principle by the end of 2004, on the basis that the remaining volume of water which had not already been taken up under the irrigation provisions of the 1969 OIC be made available for irrigation. This volume was to be used in the catchment between Lake Tekapo and the Waitaki Dam and the uptake of the volume was agreed to be trached over time to minimise the impact on Meridian. The total volume made available under the agreement is 150 million m³ per annum. A copy of the agreement is attached as **Appendix P** to my evidence. The details of the agreement are addressed more fully in the evidence of **Mr Turner**.
- 96 The rationale for Meridian entering into an agreement with MIC took into account the following factors:

- 96.1 Meridian regards itself as part of the Upper Waitaki Catchment community. The successful operation of the Waitaki Power Scheme requires strong relationships with those “resident” in the Upper Waitaki Catchment, particularly those whose land was taken or affected by the original establishment of the Waitaki Power Scheme;
- 96.2 At the time the Waitaki Power Scheme was established the 1969 OIC set aside water for irrigation use in the Upper Waitaki Catchment;
- 96.3 Although the 1969 OIC had expired and had no ongoing legal status, Meridian recognised a moral obligation that the OIC conferred on the operator of the Waitaki Power Scheme to ensure that water was available for within catchment needs. In part the MIC agreement was seen as implementing a historical expectation;
- 96.4 Farmers in the Upper Waitaki Catchment are limited by geography in respect of where they can source water (i.e. there are no other water sources available to them);
- 96.5 MIC is able to act as a single entity on behalf of all of the Upper Waitaki Catchment farmers. This meant Meridian had only one entity to deal with and was not itself having to make decisions about allocations to individuals;
- 96.6 Certainty for Meridian was achieved through the knowledge that the amount of water made available and hence “lost” to generation was capped; and
- 96.7 The agreement with MIC contains important provisions that enable water to be made available to current and future irrigators on a least cost basis to Meridian and with reduced overall energy impacts. To provide for this, a tranching system for spreading the total allocation, both spatially and temporally was agreed.
- 97 The final agreement between MIC and Meridian was presented to the WAB by both parties with a request for the agreed allocation to be provided for within the WRP. The Board did not grant the relief specifically in the terms sought by MIC and Meridian as the Board considered they could not allocate water to individuals, companies or entities, only to activities but the Board indirectly included this allocation within Table 5 of the WRP.
- 98 Subsequently both Meridian and MIC appealed the final plan to the High Court on the basis that the final Plan did not reflect the High Court decision in *Aoraki*. The High Court directed amendments to the Plan including the inclusion of footnote 23A

to Table 5 to confirm that the Upper Waitaki Catchment is fully allocated and that therefore derogation approvals are required. A copy of the High Court decision is attached as **Appendix Q** to my evidence.

MERIDIAN'S POSITION ON DEROGATION APPROVALS

- 99 As has already been explained in the legal submissions of **Ms Appleyard**, the decision of the High Court in the AWT et al proceedings and the subsequent decision of the High Court on the MIC - Meridian appeal means that any new or replacement resource consent application to take and use water in the Upper Waitaki Catchment requires the derogation approval of Meridian. Without such approval ECan cannot legally grant resource consent to any applications to take and use water.
- 100 Given this situation and following the finalisation of the WRP and ultimate need to process the consents which had been called in by the Minister for the Environment in 2003, Meridian's Board of Directors formalised a strategy in July 2007 for considering resource consent applications to take and use water in the Upper Waitaki Catchment and in what circumstances derogation approval would be provided.
- 101 This strategy was developed in recognition of the following factors:
- 101.1 The fact that there are multiple categories of use of water provided for in Table 5 of the WRP and that some of these categories are to benefit commercial development and others are for public benefit (i.e. domestic water supply);
 - 101.2 The agreement that Meridian had signed with MIC and the provision that had been made to provide derogation approval to applications for irrigation up to 150 million m³ per annum by 2013 (subject to MIC fulfilling its obligations under the agreement);
 - 101.3 That holders of existing resource consents to take and use water and replacement consent applicants had also made investments in infrastructure on the basis of their existing water entitlements;
 - 101.4 That many of the existing resource consents to take and use water were uncertain with respect to possible annual allocations; and

- 101.5 That the abstraction of water by third parties has a lost generation and financial impact for Meridian and that we have an obligation to operate as a successful business as well as exhibit a sense of social responsibility.
- 102 The strategy establishes the following circumstances in which Meridian will provide its derogation approval to resource consent applications to take and use water in the Upper Waitaki Catchment:
- 102.1 Resource consent applications to renew existing water takes for agricultural and horticultural activities that are seeking an annual volume that is efficient and on terms consistent with their existing entitlement;
- 102.2 Resource consent applications for new water takes for agricultural and horticultural activities that are on terms consistent with the MIC – Meridian Agreement;
- 102.3 Resource consent applications to renew existing water takes for industrial and commercial, town and community supply, and tourism and recreation activities that are efficient and on terms consistent with their existing entitlement;
- 102.4 Resource consent applications for new water takes for town and community supply where the applicants are seeking volumes that are reasonable for the communities they are servicing and do not include any water intensive industries as part of the supply;
- 102.5 Resource consent applications for new water takes for industrial and commercial, and tourism and recreation activities where the applicant is prepared to compensate Meridian for the lost generation potential associated with their water take.
- 103 This strategy enables Meridian to provide renewal applicants and prospective applicants with a clear direction regarding their ability to obtain the Company’s derogation approval. All of the resource consent applications subject to these hearings qualify under clause 102.1 and 102.2 of the Board’s strategy and therefore have been given derogation approval by Meridian.

POSITION OF WATER QUALITY

- 104 Lastly I explain Meridian’s position with regard to the current applications overall.

- 105 The MIC – Meridian agreement only deals with the amount of water that would be available to irrigators if they gain consents.
- 106 At the time of the MIC – Meridian agreement we were concerned about potential water quality effects of new irrigation and the agreement preserves Meridian’s right to submit on the applications with respect to concerns we have regarding water quality.
- 107 Therefore the derogation approvals need to be seen in this light. Whilst they are confirmation that Meridian consents to water being made available to irrigators and therefore foregone from electricity generation, the approvals are not a section 94 approval to the granting of consents. Our position on water quality and any other effects on infrastructure is preserved and will be presented at this hearing by other witnesses.

Dated: 16 September 2009

Raewyn Lesley Moss