

Criffel Water Limited (CWL)

Luggate Irrigation (LI) comprising Lake McKay Station Ltd (LMS) & Luggate Irrigation Company Ltd (LIC)

Decision Report

Criffel Water Limited
Luggate Irrigation Company Limited
Lake McKay Station Limited

Resource Consent Applications
to
Otago Regional Council

26 November 2019

Criffel Water Limited (CWL)

Luggate Irrigation (LI) comprising Lake McKay Station Ltd (LMS) & Luggate Irrigation Company Ltd (LIC)

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1 Introduction

[001] In April 2016 Criffel Water Limited (CWL) lodged an application to take water from the North Branch of Luggate Creek for the purposes of irrigation, stock water supply and hydroelectricity power generation. CWL is a company formed in December 2014 by seven people who currently hold mining privileges or deemed water permits to abstract water from Luggate Creek at the Criffel Weir.¹ CWL seeks a single water take consent to replace the deemed permits with the intent being that CWL will then manage that take and supply water to the CWL shareholders.

[002] In September 2018 Luggate Partnership, comprising Lake McKay Station Ltd (LMS) and Luggate Irrigation Company Ltd (LIC), lodged an application to take water from the North Branch and South Branch (the latter is also known as the Alice Burn) of Luggate Creek for the purposes of irrigation, stock water supply and a proposed residential development. LMS and LIC take from the South Branch of Luggate Creek and LIC additionally takes water from the North Branch of Luggate Creek. Both parties currently hold mining privileges or deemed water permits to abstract that water.

[003] We understand from Kate Scott's evidence that the preferred name for the Luggate Partnership is now Luggate Irrigation (LI).² The two LI applicants have recently requested that any new permits are issued separately to LMS and LIC.³

[004] CWL and LI sought consent durations of 35 years with a commencement date of 2 October 2021.

[005] On 19 September 2019 both applicants⁴ substantially amended their applications and amounts of water sought as follows:

	Criffel Water Ltd	Luggate Partnership
Primary allocation (L/s) Irrigation, stock water and domestic supply	358	180 ⁵
Primary Irrigation area (ha)	619	298
Primary allocation – Monthly maximum volume (m ³)	847,180	Not specified
Primary allocation – Annual volume (m ³)	4,570,995	Not specified
Primary allocation minimum flow at SH6 (L/s)	180	180
Supplementary allocation – Block 1 (L/s) Irrigation	170	80 ⁶
Supplementary allocation – Block 2 (L/s) Irrigation	80	86 ⁷
Supplementary allocation – Annual volume (m ³)	2,899,980	Not specified
Supplementary Irrigation area	400	278
Supplementary allocation – Block 1 Minimum flow at SH6	788	788
Supplementary allocation – Block 2 Minimum flow at SH6	1038	1038

[006] We discuss the revised applications in more detail in the body of this Decision.

The applications are granted for the reasons herein.

¹ Under s413(1) of the RMA mining privileges in existence in 1991 became deemed water permits. Under s413(3) of the RMA those deemed permits expire on 1 October 2021.

² Somewhat confusingly LI refers to both Luggate Irrigation Company Ltd (LIC) and Lake McKay Station Limited (LMS).

³ EIC Mike Kelly, paragraph 20.

⁴ By way of letters to ORC from Bridget Irving at Gallaway Cook Allan solicitors.

⁵ Luggate Irrigation 87 L/s and Lake McKay 93 L/s

⁶ Luggate Irrigation 27 L/s and Lake McKay 53 L/s

⁷ Luggate Irrigation 42 L/s and Lake McKay 44 L/s

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2 Appointments

[007] The Otago Regional Council (ORC), acting under section 34A of the Resource Management Act 1991, appointed independent hearing commissioners Jayne Macdonald,⁸ Allan Cubitt⁹ and Rob van Voorthuysen¹⁰ to hear and decide the applications.

3 Process Issues

3.1 Notification, submissions, written approvals and pre-hearing meetings

[008] The CWL application was limited notified¹¹ in January 2019 to Aukaha and Te Ao Marama. By the close of the submission period one submission¹² in opposition was received and the submitter requested to be heard. The nature and content of the submission was summarised in the s42A report.¹³ We adopt¹⁴ that summary but do not repeat it here for the sake of brevity.

[009] No written approvals relating to the CWL water take applications were obtained.

[010] The LI application was limited notified in July 2019 to Aukaha, Te Ao Marama, Te Runanga o Ngai Tahu, Otago Fish and Game (OFG), the Department of Conservation (DOC) and New Zealand Transport Agency (NZTA). By the close of the submission period three submissions¹⁵ in opposition were received and the submitters all requested to be heard. The nature and content of these submissions were also summarised in the s42A report.¹⁶ Again, we adopt that summary but do not repeat it here.

[011] No written approvals relating to the LI water take applications were obtained.¹⁷

[012] Pre-hearing meetings were held on 30 August 2019 and 20 September 2019 chaired by David Randle. We were provided with copies of the pre-hearing reports on 16 October 2019.

3.2 Section 92 requests

[013] On 29 April 2016 the ORC sought further information from CWL under s92 of the RMA. Information was sought regarding:

- actual historical water use including over the previous five years;
- details regarding the hydroelectricity proposal and its potential effects on the tributary and mainstem of Luggate Creek; and
- suitability of the proposed residual flow below Criffel Weir to maintain aquatic instream habitat.

[014] CWL's response¹⁸ dated 9 November 2017 was perfunctory at best. It provided water use data obtained subsequent to the s92 request but no response was provided regarding the second and third bullet points above.

⁸ Commissioner Macdonald is a lawyer based in Queenstown specialising in the area of environmental law. She has undertaken varied commissioner work for Environment Southland and Christchurch City Council.

⁹ Commissioner Cubitt has acted as an independent commissioner since 1999, having sat on numerous hearings for both District and Regional Councils around the South Island. He has both an LLB and a BA (Geography) from the University of Otago.

¹⁰ Commissioner van Voorthuysen is an experienced independent commissioner, having sat on over 285 hearings throughout New Zealand since 1998. He has qualifications in natural resources engineering and public policy and was a full member of the New Zealand Planning Institute (NZPI) from 1998 to 2016.

¹¹ Rule 12.1.4.8(a) of the Regional Plan: Water for Otago precludes public notification for applications to take and use water from rivers for which minimum flows have been set under the Plan. In this case, Schedule 2A of the Plan sets a minimum flow at the SH6 Bridge in Luggate.

¹² Aukaha representing Te Rūnanga o Ōtākou, Kāti Huirapa ki Puketeraki, and Te Rūnanga o Moeraki (collectively known as Kā Rūnaka).

¹³ Section 5.3.1.

¹⁴ As provided for by section 113(3)(b) of the RMA.

¹⁵ Aukaha, DOC, and OFG.

¹⁶ Section 5.3.2.

¹⁷ NZTA gave their written approval to the continued use of water conveyance infrastructure in the SH6 road reserve, but that does not seem relevant to the actual water take applications before us. Somewhat confusingly, Public Health South Te Waka Hauora appeared to provide a written 'disapproval' of the applications (Appendix 8 of the S42A Report) even though they were not notified.

¹⁸ Letter from Phil Page a partner at the law firm Gallaway Cook Allan.

- [015] On 30 January 2019 the ORC sought further information from LI under s92 of the RMA regarding:
- the location of proposed horticulture,
 - stock drinking water demand;
 - the location of the proposed lifestyle blocks and the domestic supply water required; and
 - a range of information regarding the intakes, the land to be irrigated and the use of water races.

- [016] LI responded to the ORC request on 8 March 2019 by way of a letter and several attachments, including aerial photographs of areas to be irrigated and intake flow meter printouts.

3.3 Officers' recommendations

- [017] The ORC s42A report authors, Alexandra King and Stephen Daysh, recommended that both applications be granted. At the conclusion of the hearing the authors retained that recommendation. We discuss the s42A report authors' more detailed recommendations in subsequent parts of this Decision.

3.4 Site visit, hearing and appearances

- [018] We conducted a site visit on Wednesday 23 October 2019 which included viewing Luggate Creek, the Criffel Weir and the general farming areas to be irrigated.¹⁹

- [019] We held a hearing in at the ORC offices in Dunedin on Thursday 24 October 2019 (for all applicants). The Director General of Conservation withdrew his right to be heard on 10 October 2019. We heard in person from Kā Rūnaka²⁰ (submitter on all applicants) and OFG²¹ (submitter on LIC and LMS).

- [020] The ORC s42A report and the applicants' evidence was pre-circulated in general conformance with a Minute we issued setting out a s42A report and evidence filing timetable. We provided written questions to the s42A authors on 4 October 2019 and received written answers to those questions on 11 October 2019. The questions and answers were copied to all participants. Kā Rūnaka and OFG helpfully pre-circulated statements of expert and lay evidence.

- [021] Copies of the statements of evidence are held by ORC. We do not separately summarise the matters covered here, but we refer to or quote from that material as appropriate in the remainder of this Decision. We took our own notes of any answers given to verbal questions that we posed to hearing participants.

- [022] The applicants' Reply submissions were provided verbally at the hearing and subsequently in writing on 8 November 2019. We closed the hearing on 12 November 2019, having concluded that we required no further information from any of the participants.

3.5 Consent category

- [023] Both applications are a restricted discretionary activity under Rule 12.1.4.4 of the Regional Plan: Water for Otago updated to July 2018 (RPWO). Matters of discretion are set out in Rule 12.1.4.8 of the RPWO.

3.6 Section 104(3)(d)

- [024] Counsel for Kā Rūnaka raised the issue of section 104(3)(d) of the RMA observing that the CWL application was notified to a smaller group of affected parties than the LI application. Kā Rūnaka was notified of both applications and while Te Rūnanga on Ngāi Tahu was notified of the LI application it was not notified of the CWL application. The same situation applies to DOC and OFG but neither of those latter parties raised the section 104(3)(d) issue.

¹⁹ Commissioner van Voorthuysen could not attend the site visit due to his flight into Queenstown not being able to land due to adverse weather conditions.

²⁰ Counsel Stephen Christenson, Dr Clucas, Maria Bartlett and Paul Whyte. Dr Michael Stevens was excused attendance as we had no questions for him.

²¹ Lay witness Nigel Paragreen. Morgan Trotter pre-circulated expert evidence for OFG but did not attend the hearing.

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[025] This matter was addressed by the s42A authors²² who advised the limited notification decisions were made at different times by two different ORC officers. Having considered this matter we are satisfied that the sustainable management of the Luggate Creek catchment is best promoted by continuing to consider the CWL and LI applications in an integrated manner. We also note that in response to our queries counsel for Kā Rūnaka advised that no prejudice arises from the ORC's notification decisions as iwi are able to fully participate in the hearing of both applications.

4 Section 104 and 104C matters

[026] We now address relevant aspects of the applications in terms of sections 104 and 104C of the RMA. However, before doing so we discuss the water allocation framework for Luggate Creek as contained in the RPWO and relevant aspects of the applications. In doing so we acknowledge that we are constrained by the matters of discretion in Rule 12.1.4.8 of the RPWO.

4.1 Luggate Creek water allocation framework

[027] Matter of discretion 12.1.4.8(i) addresses the allocation limits for the catchment and matter of discretion (ii) addresses whether the proposed takes are primary or supplementary allocations for the catchment.

4.1.1 Primary Allocation

[028] RPWO establishes a water allocation framework comprising both a primary allocation limit (a maximum instantaneous rate of take) by way of Policy 6.4.2(a) and a minimum flow by way of Policy 6.4.3. These figures are contained in Schedule 2A of the RPWO. The Luggate Creek minimum flow site is located at the SH6 bridge in the township of Luggate.

[029] For the Luggate Creek catchment the Schedule 2A primary allocation and minimum flow figures are:

Primary allocation	500 L/s
Minimum flow summer (1 November to 30 April)	180 L/s
Minimum flow winter (1 May to 30 October)	500 l/s

[030] However, RPWO Policy 6.4.2(b) effectively overrides the Schedule 2A primary allocation by setting an allocation comprising the sum of consented maximum instantaneous rates of take that existed at 28 February 1998. In this case we understand that the deemed permits currently held by CWL and LI sum up to an allocation of 1,024 L/s. That 'deemed' allocation is subsequently affected by RPWO Policy 6.4.2A²³ and for the applicants Mr Hickey advised the application of that policy reduces the primary allocation from 1,024 L/s to 785 L/s.

[031] Minimum flows (and to a lesser extent allocation volumes) are often set to safeguard aquatic values. In that regard the Luggate Creek catchment supports brown²⁴ and rainbow trout²⁵ and depauperate populations of native fish including long fin eels and kōaro. Those matters were detailed in the s42A report²⁶ and the evidence of Dr Richard Allibone. Dr Allibone advised that brown trout are confined to the lower reaches of Luggate Creek due to a barrier waterfall in the gorge area upstream of the Alice Burn confluence. He also advised that rainbow trout are present above and below Criffel Weir but not in the lower Luggate Creek, suggesting they were introduced into the weir pond.²⁷ We also note Mr Hickey's evidence that Luggate Creek has an MCI score of between 100 and 110 (indicating good water quality)

²² Section 42A Report, section 5.4.

²³ Policy 6.4.2A is to grant from within the primary allocation no more water than has been taken under the existing consent in at least the preceding five years.

²⁴ Restricted to the lower reaches of Luggate Creek due to a barrier waterfall in the gorge area upstream of the Alice Burn confluence.

²⁵ Present above and below Criffel weir but not in the lower Luggate Creek.

²⁶ Section 6.2

²⁷ EIC Richard Allibone, paragraphs 10, 12 and 16.

and that it is a healthy brown trout spawning stream.²⁸ Morgan Trotter for OFG similarly noted that Luggate Creek was an important brown trout spawning stream.²⁹

- [032] It is somewhat incongruous then that RPWO Policies 6.4.2(b) and 6.4.2A establish a primary allocation that is significantly higher than the RPWO primary allocation set in Schedule 2A. We note the observation of the Environment Court in *Lindis* that RPWO Policy 6.4.2 sets “a very unsatisfactory regime” and the RPWO is “out of date” with regard to both the NPSFM 2014 (Updated August 2017 to incorporate amendments from the National Policy Statement for Freshwater Amendment Order 2017) and Otago RPS.³⁰
- [033] Interestingly RPWO Policy 5.4.8 requires us to have regard to the natural flow characteristics of Luggate Creek, subject to the extent to which use and development has influenced those characteristics. Mr Hickey³¹ stressed the utility of the draft Proposed National Environmental Standard on Ecological Flows and Water Levels stating that “... it remains the most up to date and comprehensive guidance on setting ecological flows that is accepted by the scientific community.” Mr Hickey determined that the ‘natural’ Luggate Creek MALF was 637 L/s, albeit based on only 2 ½ years of data.³² If we take that figure and relate it to the ‘default values’ in the draft NES on Ecological Flows and Water levels³³ then the Luggate Creek minimum flow would be 90% of MALF or around 570 L/s and the allocation volume would be 30% of MALF or around 190 L/s.³⁴
- [034] Somewhat unsurprisingly then, submitters considered that the Luggate Creek catchment should be considered ‘over-allocated’. We note that for the applicants Ms Scott also appeared to consider the catchment to be over-allocated.³⁵ Objective B2 of the NPSFM requires the phasing out of any existing over-allocation.
- [035] In light of the above, it is gratifying that the applicants now only seek consent to take 538 L/s by way of ‘primary allocation’. That is only 8% higher than the Schedule 2A primary allocation limit of 500 L/s. We find the applicants’ revised position to be commendable and acceptable, notwithstanding that it does not entirely phase out existing ‘over-allocation’ relative to the RPWO Schedule 2A primary allocation limit. We also agree with submitters³⁶ that the applicants’ current position is a significant improvement on the ‘status-quo’ RPWO primary allocations of 1,024 L/s and 785 L/s. In saying that we observe that, as also noted by submitters,³⁷ 500 L/s may not necessarily be an appropriate primary allocation for this catchment but it is what is stipulated in the operative RPWO.

4.1.2 Supplementary Allocations

- [036] RPWO Policy 6.4.9(a) and Method 15.8.1A provide for supplementary takes. These are takes that occur at higher flows. In other regions they are sometimes referred to as ‘water harvesting’ takes, particularly where (as is mainly the case proposed here) those takes are used to fill water storage facilities. For these applications the RPWO provisions enable the abstraction of 250 L/s from a first Supplementary Block with a supplementary minimum flow of 788 L/s and the abstraction of 166 L/s from a second Supplementary Block with a supplementary minimum flow of 1038 L/s.
- [037] Mr Hickey advised that the applicants’ revised proposal to take 538 L/s as ‘primary allocation’ was based on an understanding that there would need to be significant water conveyance system upgrades over

²⁸ EIC Matt Hickey, Executive Summary paragraphs B and C.

²⁹ EIC Morgan Trotter, paragraph 11.

³⁰ *Lindis Catchment Group Inc v ORC* [2019] NZEnvC166 at [95] and [117].

³¹ Rebuttal Evidence Matt Hickey, paragraph 25.

³² EIC Matt Hickey, paragraph 34 and Table 2.

³³ Noting that Luggate Creek as a mean annual flow of 1.89 m³/s (Jowett page 5).

³⁴ At the hearing Mr Hickey advised that those ‘default’ values were not appropriate here because of the site-specific assessment underpinning Schedule 2A. We acknowledge and accept that evidence.

³⁵ EIC Kate Scott, paragraphs 84 and 147.

³⁶ EIC Maria Bartlett, paragraph 71.

³⁷ EIC Maria Bartlett, paragraph 70.

time at a significant cost. He further advised that the supplementary allocations with storage would replace the existing contour flood and border dyke areas for CWL and LIC and allow some expansion of irrigable area by all three parties using efficient infrastructure.³⁸

[038] We acknowledge the applicants' intention to replace existing border dyke and flood irrigation systems. In that regard we are not persuaded by Mr Simpson's evidence that those systems are an efficient use of water.³⁹ That goes against what we understand to be the widely accepted view that those systems are often inefficient as a result of an uneven application of water, excessive application depths, and surface runoff coupled with losses from open races. Border dyke and flood irrigation systems can also exacerbate nutrient leaching if the application depths exceed the soil's water holding capacity. We understand that even with precision land levelling the efficiency of overland flow systems is typically less than 65% compared to the efficiency for modern spray systems of 80% or more.

[039] Mr Morgan Trotter, an expert witness for OFG who did not attend the hearing, advised that in his opinion the applicants' regime would provide a significant ecological improvement to the existing flow regime, reducing the amount of time the Creek spent at minimum flow, improving flow variability, and producing more riffle habitat that would support macroinvertebrates and juvenile trout. He also thought it would provide more food for tuna (long finned eels).⁴⁰ Mr Paragreen, a lay witness for OFG, stated that although the supplementary allocations would have adverse effects, due to their nature and the high supplementary minimum flows, he believed they would be consistent with the relevant policy provisions.⁴¹ We conclude that OFG seemed to have no concerns regarding the supplementary allocations sought.⁴²

[040] Ms Bartlett⁴³ for Kā Rūnaka outlined Kāi Tahu's contrary views on the supplementary allocations:

Regarding the proposed supplementary allocation blocks, I understand that full utilisation of these will require some new on-farm storage in order to harvest higher flows within and outside the irrigation season, particularly for Criffel and Luggate Irrigation Company Limited. Given the long lead time to the expiry of deemed permits since the RMA came into force, I observe that the applicants have had the opportunity to invest in necessary infrastructure that would enable water harvesting and improve on-farm resilience in low flow conditions, whilst also potentially alleviating abstraction pressure on the waterbody during those times. I note that Lake McKay in particular have planned ahead with piping and storage over the last decade.

Supplementary allocation should only be granted where there is existing capability to effectively utilise or harvest higher flows, at a rate and volume that is consistent with that capability and existing storage capacity.

[041] We queried the s42A authors about the 'supplementary allocation' proposal. Their response⁴⁴ was:

"The proposed addition of supplementary allocation by the two applicants drops the primary allocation for the catchment while preserving instream values by ensuring that no less than 50% of the natural flow remains instream. As discussed in the [initial s42A] report the proposed use of the supplementary blocks which requires reasonable flows to be maintained instream during these supplementary takes will have a no more than minor effect on the catchment values in our opinion. The proposal is not expected to result in prolonged periods of flat-lining ... with flow variability largely mimicking that expected in the absence of abstraction, albeit with a lower baseflow than the natural flow regime. The main effect of the proposal is to reduce the amount of water taken at low flows (thereby resulting in higher flows than currently observed) but

³⁸ EIC Matt Hickey, paragraphs 58 and 59.

³⁹ Answers to Commissioners questions, Roger Simpson, 18 October 2019.

⁴⁰ EIC Morgan Trotter, paragraphs 17 and 25.

⁴¹ EIC Nigel Paragreen, paragraph 66.

⁴² We are unsure of the Director-General of Conservation's view on this matter as he withdrew his right to be heard.

⁴³ EIC Maria Bartlett, paragraph 73 and 74.

⁴⁴ File Note A1284304 dated 11 October 2019, page 1 of 12

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increasing the amount of water that is taken as flows recede from high flows. The addition of supplementary allocation is also consistent with policies 6.4.0A and 6.4.0C

[042] The advice of the s42A authors was consistent with that of the applicants' experts.

[043] On the weight of evidence before us we are satisfied that the applicants' proposal to take additional water as 'supplementary allocations' is appropriate. We do not consider that should be confined to LMS as sought by Kā Rūnaka as it is not unusual for 'high flow allocation' water (water harvesting) to be applied for in advance of constructing the necessary storage facilities for that water.

[044] However, consistent with Objective B3 of the NPSFM (*to improve and maximise the efficient allocation and efficient use of water*), we consider that any water allocated for irrigation purposes should be based on a modern and efficient irrigation system⁴⁵ that provides an appropriate depth of water⁴⁶ at a reasonable level of security of supply. We discuss this further in section 4.5 of this Decision.

4.2 CWL hydroelectricity proposal

[045] CWL originally proposed to use water for hydroelectricity power generation purposes but no details regarding the nature of that proposal were provided. The application stated⁴⁷ that the proposed irrigation "is likely to involve some storage" and that the "feasibility of this infrastructure would be improved if it could also be used for hydro-generation". Elsewhere⁴⁸ the application stated that CWL proposed to "place turbines within the irrigation equipment" or the "irrigation pipes".

[046] In September 2019 CWL advised ORC that the application to take and use water for hydro-electricity power generation was relinquished. We are heartened by that as we found that part of the CWL application to be deficient in the extreme, as highlighted by the ORC's April 2016 s92 request for further information.

4.3 Animal drinking water proposals

[047] Matter of discretion 12.1.4.8(iii) addresses the rate, volume, timing and frequency of water to be taken and used. We now address the water proposed to be used for animal drinking water.

4.3.1 CWL proposal

[048] The s42A authors' answers to our written questions advised that CWL had not applied for stock and domestic water.⁴⁹ However, that is incorrect as the CWL application states that the applicant sought consent to take water outside of the usual irrigation season to provide stock water to the CWL landowners.⁵⁰ We understand that when irrigation is occurring stock water is abstracted from the irrigation supply races. However, when irrigation is not occurring (May to August) those same irrigation races are used solely for stock water purposes. Given the losses that occur from the unlined races, a much greater volume of water is required to be taken from Luggate Creek for stock water purposes than would otherwise be the case.

[049] CWL's supporting technical report notes⁵¹ that for a 1,600ha command area the stock water requirement would be 120,000 litres per day or 1.4 L/s⁵² if a piped supply was used. If this occurred for 365 days the annual stock water volume would be 43,800m³. However, because an open race system is used to convey the stock water the applicant stated that over the four-month winter period 400,000 m³/month of

⁴⁵ That would not include border dyke or flood irrigation systems.

⁴⁶ Based on a combination of climate (location), soil type and crop type.

⁴⁷ Assessment of Effects (AEE), Section 3.5

⁴⁸ The applicant's assessment of the NPS for Renewable Electricity Generation 2011.

⁴⁹ File Note A1284304 dated 11 October 2019, page 2 of 12.

⁵⁰ AEE, Section 3.4.

⁵¹ Criffel Water Limited, Luggate Creek Water Volumes & Rate of Take, David Hamilton and Associates Ltd, 8 September 2015, (Hamilton 2015), section 6.5.

⁵² Assuming a stocking rate of 15su/ha at 5 L/su/day

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stock water is required (1,600,000m³ in total). That equates to 154 L/s for a 30-day month and a continuous 24 hour per day take. The applicant also stated that during the irrigation season when not all races are flowing an additional 120 L/s would be required (three races running at 40 L/s each) over and above irrigation needs. That equates to 311,040 m³/month based on a 30-day month. Somewhat confusingly, the applicant then applied the winter monthly volume to a 6-month period yielding a total of 1,866,240m³. Combining the above irrigation and non-irrigation season stock water volumes yields 3,466,240m³ which the applicant rounded up to 3,500,000m³.

[050] CWL therefore originally applied for 80 times more stock water (or an extra 3,456,200 m³) than would be otherwise be required for a modern, efficient piped system. That is clearly inconsistent with Objective B3⁵³ of the NPSFM. It is also inconsistent with Policy 6.4.0A of the RPWO (ensuring the quantity of water granted to take is no more than that required for the purpose of use).

[051] By the time of the hearing CWL no longer sought consent for stock water, relying instead on s14(3)(b)(ii) of the RMA. That enables the taking of water for the reasonable needs of a person's animals for drinking water provided that the taking or use does not, or is not likely to, have an adverse effect on the environment. We note that the RMA defines a 'person' as including "... a corporation sole, and also a body of persons, whether corporate or unincorporated." Section 14(3)(b)(ii) would therefore appear to enable CWL to abstract animal drinking water and so it does not need to be included in the consent sought by CWL.

[052] Nevertheless, we are not convinced that the proposed taking of 3,500,000m³ a year for that purpose could correctly be said to not have an adverse effect on the environment. However, that matter was not pursued by the s42A authors or any other party. Dr Amanda Bell advised us that it might take 5 to 7 years to replace the existing 'leaky' open race system used by CWL. We strongly encourage CWL to reduce their animal drinking water abstraction to a reasonable level as soon as possible and much earlier than in 5 to 7 years' time.

4.3.2 LI proposal

[053] LI has sought consent to take water all year round for stock water purposes. We understand that LI based their requirements on ORC recommendations for the daily needs of a variety of stock types and three distinct areas of land, namely the Tin Hutt Terraces, the Big River area and the Umbers block.⁵⁴ LI have also allowed for some losses in the distribution system. The total instantaneous rate of abstraction sought is 3 L/s which equates to 7,776m³ per month and 94,608m³ per year. Mr Kelly advised us verbally that the animal drinking water would be split evenly between LIC and LMS.

[054] We find the modest amount of animal drinking water sought by the LI applicants to be acceptable.

4.4 Luggate Irrigation (LIC) residential use

[055] LIC (through Murray Frost who has a 10% shareholding in LIC) proposes a 250-lot rural residential and rural lifestyle subdivision on 82ha of former LMS land.⁵⁵ The application notes that a 12ha block off Atkins Road on the northern outskirts of Luggate has recently been approved in the proposed QLDC District Plan for Rural Residential zoning. A 70ha block of on the terrace above SH6 has potential for further residential development, but would require either a Plan Change to rezone the land to Rural Residential or Rural Lifestyle, or a resource consent to enable that level of intensive development.⁵⁶

[056] The original AEE stated that the ORC generally recommends an allowance for rural dwellings of 3000 L/day in summer and 1000 L/day in winter at an annual average of 2000 L/day. Accordingly, the water supply scheme will be designed to deliver up to 3000 L/day for 250 dwellings. Murray Frost advised

⁵³ To improve and maximise the efficient allocation and efficient use of water.

⁵⁴ LP Application Form, page 11.

⁵⁵ The AEE states that this land was purchased by Minaret Resources Ltd formed by Murray Frost.

⁵⁶ EIC Mike Kelly, paragraph 23(ii).

that 8 L/s of primary allocation water was sought for domestic use purposes for both the 12ha block and the future 70ha block. At the hearing he confirmed that he was happy with the ORC recommended allowances.

[057] In terms of alternative potable water supply sources, Mr Frost advised that bores were investigated by previous owners but abandoned because of geological constraints. There is a spring on the property currently supplying three dwellings and based on some very basic short term testing he considered it might be able to supply up to 30 dwellings. Water was unlikely to be available from the town supply.⁵⁷ We are satisfied that there is a reasonable need to source water for the proposed residential development from Luggate Creek.

[058] Mr Frost also advised that as part of the subdivision consent process the QLDC would require him to produce the water permits that enable the domestic supply scheme to proceed. If a suitable supply could not be demonstrated, then obtaining the necessary subdivision and land use consents would be problematic.⁵⁸

[059] By our calculations 8 L/s equates to a maximum monthly volume of 20,736m³ and an annual volume⁵⁹ of 182,500m³. We note the s42A authors derived slightly different numbers⁶⁰ but agreed that an allocation should be made for this future residential development. We find that providing for this domestic supply is appropriate.

4.5 Irrigation proposals

[060] Matter of discretion 12.1.4.8(iii) addresses the rate, volume, timing and frequency of water to be taken and used. We now address the proposed use of water for irrigation.

[061] Normally an irrigation water take applicant would specify their irrigable area, intended crop and monthly and seasonal water demands for a given reliability of supply.

[062] In terms of adjoining regions and their more contemporary regional plans, we are aware that the Environment Canterbury Land and Water Regional Plan (Schedule 10) assumes an irrigation application efficiency of 80%, a system capacity to meet peak demand, a nominal irrigation season from 1 September to 30 April, demand conditions that occur 9 out of 10 years (equivalent to a 90-percentile demand) and a land use of intensive pasture production. Similarly, the Southland Water and Land Plan (Appendix O) stipulates use of a field-validated daily time-step irrigation demand model to calculate the annual irrigation volume for 90 percent (9 in 10 year) reliability taking account of crop and soil type, climatic factors and an irrigation application efficiency of 80%.

[063] Other regional councils that we are familiar with and who also allocate irrigation water for a 9 in 10 years security of supply include Hawke's Bay,⁶¹ Waikato⁶² and Northland.⁶³

[064] For the applicants Mr Page submitted that irrigation annual allocations should be based on the maximum demand, namely the 100-percentile annual demand.⁶⁴ We are not persuaded by Mr Page's submissions. As can be seen from the preceding references to other regions, allocating irrigation water for the maximum foreseeable annual crop water demand would be quite novel. If that approach was used as a precedent and applied region-wide in Otago it could result in locking up water that would rarely be used and that could not thereafter be allocated to other applicants. That is not an efficient use of a finite resource. In this case this is particularly relevant given the very long-duration consents sought by the applicants.

⁵⁷ Rebuttal Evidence, Murray Frost, paragraphs 4 and 5.

⁵⁸ EIC Murray Frost, paragraphs 13 and 14.

⁵⁹ Based on 2000 L/day on average.

⁶⁰ Page 21 of the s42A report.

⁶¹ Regional Resource Management Plan, Policy 32 for groundwater. For surface water the security of supply is 1 in 5 years (Policy 42).

⁶² Waikato Regional Plan, section 3.4.3 Policy 2.

⁶³ Northland Regional Plan, section D.4.13.

⁶⁴ Opening submissions, paragraph 28.

[065] For example, a future review of the RPWO could conceivably increase the primary allocation or establish seasonal allocation limits. If the CWL and LI applicants are granted more water now than is the norm in many other regions, then that could well exclude other parties from accessing that water in future decades.

[066] The ORC has previously commissioned Aqualinc to determine reasonable daily and seasonal irrigation water requirements.⁶⁵ We are familiar with the work of Aqualinc in other regions and acknowledge them to be reputable consultants. We therefore consider that Table 5 of the Aqualinc 2017 report should be used to determine irrigation water allocations for a 90-percentile annual demand. Consistent with the approach taken elsewhere, we consider that the maximum monthly volume should be based on the Aqualinc 2017 Table 5 Maximum monthly demand (namely enabling a system capacity that meets peak demand), noting our understanding that was also the approach taken by the s42A report authors.

4.5.1 CWL proposal

[067] The initial AEE⁶⁶ stated that the CWL command area was 1,500ha but only 966ha was currently irrigated. At that time the CWL shareholders considered a further 321ha could be irrigated, giving an irrigable area total of 1,287ha.

[068] In September 2019 CWL advised that the current irrigated area was only 619ha but a further 400ha could potentially be irrigated. The evidence of Dr Bell advised that CWL has 620ha of spray irrigation⁶⁷ and an opportunity to develop an additional 450ha of spray irrigation.⁶⁸

[069] We initially understood that the additional irrigation would all be from the supplementary allocations sought by CWL. That water would be taken at times of high Creek flow and stored for summer use. However, Mr Hickey advised that the first supplementary block (250 L/s with a proposed minimum flow of 788 L/s) could be used to irrigate lucerne early in the season up until December.⁶⁹ He posited that only the second supplementary allocation block of 250 L/s would require storage. He then⁷⁰ appeared to contradict this by stating that "*future irrigation area development will only occur with water taken via supplementary allocation at flows greater than 788 l/s at the SH6 flow site.*" That matter was not clarified at the hearing but it is somewhat moot given that we have already found that the use of supplementary allocations is 'environmentally' appropriate.

[070] The s42A authors recommended that CWL be allocated irrigation water for 1,019ha of which 620ha currently exists. Using Aqualinc 2017 the s42A report authors derived⁷¹ the following irrigation demand figures:

- An area of 1019ha
- An irrigation season of 8 months
- A monthly volume of 1,273,017m³ (769,417m³ primary allocation and 503,600m³ supplementary allocations)
- An annual volume of 6,409,673m³ (3,879,273m³ primary allocation and 2,530,400m³ supplementary allocations)
- An instantaneous rate of take of 358 L/s for the primary allocation, 170 L/s for the first supplementary allocation and 80 L/s for the second supplementary allocation.

⁶⁵ Aqualinc, Guidelines for Reasonable Irrigation Water Requirements in the Otago Region, Prepared for Otago Regional Council, C15000, 2017/07/24

⁶⁶ Ibid, section 6.1

⁶⁷ A combination of pivot irrigation (Wallis, Morris, and Cooper) and K-line (Jeremy Bell Investments Limited (Criffel Station), Feint and Corbridge).

⁶⁸ EIC Mandy Bell, paragraph 11.

⁶⁹ EIC Matt Hickey, paragraph 67.

⁷⁰ EIC Matt Hickey, paragraph 107.

⁷¹ File Note A1284304 dated 11 October 2019, pages 6 and 7 of 12.

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[071] We consider those values to be appropriate and so we find that CWL should be allocated these amounts of water for irrigation purposes. We do find however that in order to provide certainty, the maximum irrigable area applied for should be specified on the consent document. The same applies for the LI applicants.

[072] Also, as discussed earlier, CWL no longer seeks an allocation for animal drinking water. We note that the monthly and annual allocations set out above are lower than those sought by the applicant. We understand that to be a result of the s42A authors applying the 90thile seasonal demand figures from the Aqualinc 2017 report.⁷²

4.5.2 Luggate Irrigation (LIC and LMS) proposal

[073] For LI the s42A authors initially derived the following irrigation demand figures for us:

- An area of 571ha⁷³
- An irrigation season of 8 months
- A monthly volume of 926,013m³ (417,091m³ primary allocation and 508,922m³ supplementary allocations)
- An annual volume of 4,222,573m³ (2,545,262m³ primary allocation and 1,677,311m³ supplementary allocations)
- An instantaneous rate of take of 169 L/s for the primary allocation, 80 L/s for the first supplementary allocation and 86 L/s for the second supplementary allocation

[074] We note that some of the above primary allocation figures differ from those set out in the revised conditions tabled by Ms Scott at the hearing. The reason being, as advised by the s42A authors⁷⁴, LIC sought 211,227m³ per month but their highest historical monthly use is 168,000m³. LMS sought an annual volume of 1,389,990m³ whereas their highest historical annual use is only 1,345,187m³. As discussed in section 4.1 of this Decision, we understand that RPWO Policy 6.4.2A means that we are limited to allowing only the highest historical use figures.

[075] Mr Hickey advised that LMS and LIC now wish to have separate resource consents. That means that the LI allocations set out in paragraph [073] above need to be split between LMS and LIC. Ms Scott tabled amended allocation figures for those two entities at the hearing by way of revised conditions. We subsequently sought the s42A authors' advice on those tabled numbers and they provided us with an Excel spreadsheet of Aqualinc 2017 based calculations. We note that in terms of the primary allocation instantaneous rates (L/s) the LIC figures need to allow for animal drinking water (1.5 L/s) and residential domestic use (8 L/s). The LMS figures need to account for animal drinking water (1.5 L/s). The resultant figures are shown in the following table.

Allocations	Lake McKay Station	Luggate Irrigation Company
Primary (L/s) Total	93	87
<i>Irrigation</i>	<i>91.5</i>	<i>77.5</i>
<i>Animal drinking</i>	<i>1.5</i>	<i>1.5</i>
<i>Residential domestic</i>	<i>0.0</i>	<i>8.0</i>
First supplementary (L/s)	53	27
Second supplementary (L/s)	44	42
Primary monthly (m ³)	276,161	192,092
Supplementary monthly (m ³)	188,100	269,660
Primary annual (m ³)	1,215,282	918,620
Supplementary annual (m ³)	863,500	1,225,170

⁷² Section 42A Report, section 7.2.1.1, pages 18 and 19.

⁷³ Lake McKay Station at 278ha and Luggate Irrigation Company at 293 ha – EIC Matt Hickey paragraphs 73 and 74.

⁷⁴ Supplementary Clarification of Technical Matters, Alexandra Lucy King for Otago Regional Council, 24 October 2019.

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[076] We have used the figures in the above table in the consent conditions attached as Appendices 2 and 3 to this Decision. We note that the primary allocation total L/s figures are the same as those set out in the revised conditions tabled by Ms Scott. Some of the monthly and annual volumes differ from Ms Scott's tabled figures, which we understand to be the combined result of us separating out irrigation use from the animal drinking water (LIC and LMS) and domestic uses (LIC), the application of RPWO Policy 6.4.2A, and the different approaches taken to the seasonal (or annual) allocations (LMS and LIC).

4.6 Residual flows

[077] Mater of discretion 12.1.4.8(xi) addresses any need for a residual flow at the point of take.

[078] The specification of residual flows is important to ensure that streams are not dewatered (or run dry) as a result of abstractions. We note that Kā Rūnaka opposed the setting of 'hard numbers' and instead sought residual flows that ensured the ratio of natural flows was preserved in each branch of Luggate Creek and that resultant flow regimes would mimic natural flows.⁷⁵ Despite the parties striving to develop a consent condition to implement that approach,⁷⁶ we were not persuaded of its appropriateness and we consider that the imposition of 'hard number' residual flows is necessary to provide regulatory certainty and ongoing enforceability.

[079] We now consider what the magnitude of the residual flow below each point of abstraction should be.

4.6.1 CWL residual flows

[080] Ideally, CWL would have determined the necessary residual flow required to ensure that the CWL take did not cause the SH6 minimum flows to be breached, taking into account the tributary inflows and downstream water take consents. That was not addressed in the application which simply noted that the consent for the Criffel Weir requires a residual flow of at least 50 L/s while the Weir is thought to 'leak' around 100 L/s.⁷⁷ Mr Hickey subsequently advised⁷⁸ that he expected flows "*more like 120 l/s to 140 l/s would be pass [sic] the intake to deliver a minimum flow of 180 l/s at SH6*" but he nevertheless considered that "*a residual flow of 90 l/s are [sic] likely to provide for the ecological values in the North Branch of Luggate Creek below the Criffel take*".

[081] Submitters Kā Rūnaka sought a residual flow below the Weir of 90 L/s. In September 2019 CWL agreed to that level of residual flow and in the absence of any evidence to the contrary we find that to be appropriate.

4.6.2 Luggate Irrigation residual flows

[082] LIC has abstraction points on the lower Alice Burn (lower South Branch of Luggate Creek) and the lower North Branch of Luggate Creek.

[083] LIC initially proposed "visual surface flow" residuals. Subsequently Ben Trotter,⁷⁹ Mike Kelly⁸⁰ and Kate Scott⁸¹ all advised that LIC was now offering a residual flow of 100 L/s below the intake weir on the lower North Branch of Luggate Creek. This was supported by Kā Rūnaka.⁸² On the evidence we find that residual flow to be acceptable. Mr Trotter considered that a staff gauge could be installed in a stable section of creek bed below the LIC race intake that would give a reasonable visual check on the residual flow. We asked if that was being offered as a consent condition and he confirmed that it was, along with the development of a rating curve to calibrate the staff gauge.

⁷⁵ EIC Maria Bartlett, paragraphs 50, 59, 60 and 62.

⁷⁶ We tasked the parties with developing condition wording that was clear, certain and enforceable but we were not convinced that the resultant wording they developed met those criteria.

⁷⁷ AEE, page 10.

⁷⁸ EIC Matt Hickey, paragraphs 80 and 84.

⁷⁹ EIC Ben Trotter, paragraph 16.

⁸⁰ EIC Mike Kelly, paragraph 54.

⁸¹ EIC Kate Scott, paragraph 154.

⁸² EIC Maria Bartlett, paragraph 59.

- [084] LIC proposed a visually connected residual flow in the lower Alice Burn (immediately downstream of the intake weir) to its confluence with the lower North Branch of Luggate Creek. The length of waterway affected is around 400m and on the evidence we find the “visual connection” proposal to be acceptable.
- [085] OFG sought a range of conditions in relation to the Alice Burn race to ensure that the race was not dewatered and would therefore continue to provide a habitat for juvenile trout. Such conditions were not requested in the original OFG submission but were sought by Mr Paragreen in his evidence. He requested that the race not be converted to a pipe and that a minimum water depth of 15cm be maintained in the race at all times. Mr Paragreen also requested that any maintenance work within the race be restricted to 1 January to 31 March (inclusive) of each calendar year, with OFG being notified prior to the work occurring. Given the evidence we heard on the health of the brown trout fishery in the lower part of the catchment, we find this level of intervention in the management of the irrigation infrastructure unnecessary, particularly when the residual flows promoted by OFG have been adopted or exceeded by the applicant (with the exception of the Alice Burn Tributary take). The imposition of what is essentially a further residual flow in the race is not warranted in these circumstances. We note that juvenile trout will be able to pass through the race before being diverted back to Luggate Creek at the proposed fish screen just upstream of the flow metering location.
- [086] LMS proposed a residual flow of 46 L/s below their by-wash on the upper Alice Burn mainstem.⁸³ That proposal appeared to be generally acceptable to the parties and we see no reason not to impose it.
- [087] No residual flow was proposed for the LMS take on the tributary of the upper Alice Burn. That was opposed by OFG on the basis of natural character and aquatic values.⁸⁴ We note the evidence of Dr Allibone that no fish are present below the upper Alice Burn take⁸⁵ and so we see no need for a residual flow for the small contributing tributary. In saying that we also note the evidence of Dr Dean Olsen⁸⁶ for ORC who advised “... when viewed from the access track, there did not appear to be surface flow a few hundred metres downstream of the vehicle track due to the boulder nature of the bed of this tributary at this point.” On that basis there would seem to be limited natural character requiring preservation in that particular ephemeral waterbody.
- [088] We find the LMS proposed residual flows to be appropriate.

4.7 Minimum flow

- [089] Matter of discretion 12.1.4.8(viii) addresses the minimum flow to be applied to a take of water, if consent is granted.
- [090] As we have noted, for the primary allocation the RPWO sets a minimum flow at the SH6 Bridge in Luggate township of 180 L/s in summer⁸⁷ and 500 L/s in winter.⁸⁸ As outlined previously, the first and second supplementary allocations proposed by the applicant’s would have higher minimum flows of 788 L/s and 1038 L/s respectively.
- [091] Mr Hickey advised that the existing minimum flow of 180 L/s at SH6 provides in excess of 80% of the habitat that would otherwise be available at the natural MALF for longfin eels (juveniles and adults), ~70% of the habitat at the natural MALF for koaro and 80% of the habitat at the natural MALF for juvenile brown trout (<100mm) using habitat curves published in Jowett and Richardson 2008.⁸⁹ A flow of 500 L/s was identified as providing optimum spawning habitat for brown trout and this is the existing winter minimum

⁸³ EIC Mike Kelly, paragraph 53.

⁸⁴ EIC Nigel Paragreen, paragraph 98.

⁸⁵ EIC Dr Allibone, paragraph 41.

⁸⁶ Summary Evidence of Dean Antony Olsen on behalf of Otago Regional Council, 23 October 2019, paragraph 6.

⁸⁷ 1 November to 30 April.

⁸⁸ 1 May to 30 October.

⁸⁹ EIC Matt Hickey, paragraph 25.

flow for Luggate Creek.⁹⁰ Dr Allibone noted that the 180 L/s minimum flow will provide habitat for a healthy longfin eel population that would be similar to the population that would have been present prior to fish passage being lost.⁹¹

[092] Accordingly, we observe that the RPWO Schedule 2A minimum flows appear to be appropriate, while noting that we have no ability to depart from them in any case. In saying that, we acknowledge the view of Kā Rūnaka that the minimum flow does not recognise the spiritual and cultural significance of the Luggate Creek catchment to Kāi Tahu.⁹²

[093] Kā Rūnaka would prefer a minimum flow of 300 L/s to provide for tuna that they desire to introduce (or reintroduce) to Luggate Creek. Dr Allibone advised that while the 300 L/s flow requested by Kā Rūnaka can provide more tuna habitat it would not be available year-round because habitat is more limited at both higher and lower flows. He also considered that other stream management actions could be taken to improve the stream's tuna carrying capacity that are not flow related and yet provide year-round habitat improvements. Furthermore, the trout population in lower Luggate Creek would be a significant limiting factor on tuna abundance as they compete for food and space. If the tuna stocking was conducted mainly with elvers then large tuna would not become present for 20-30 years and would not be abundant until sometime after those 20-30 years.⁹³

[094] Importantly, Kā Rūnaka acknowledged that the implementation of a minimum flow higher than the one currently set in Schedule 2A of the RPWO would be addressed through ORC's Progressive Implementation Plan (and associated regional plan changes).⁹⁴ In that regard we are not persuaded by some of the evidence of Kā Rūnaka witness Mr Whyte (citing Court decisions in the Waitaki catchment) where he seemed to suggest that we could depart from the RPWO Schedule 2A summer time minimum flow and impose a higher value of 300 L/s.⁹⁵ That would set an undesirable precedent and have a significant impact on the integrity of the RPWO. We do note however that Mr Whyte finally concluded⁹⁶ that "... any change to the minimum flow is best dealt with as part of a comprehensive review under the PIP [ORC's Progressive Implementation Plan]".

4.7.1 Rationing at times of low flow

[095] The CWL and LI abstractions need to be managed so that they do not cause the RPWO minimum flows to be breached. This requires the imposition of restrictions on the takes or what the RPWO calls a "rationing regime".

[096] The RPWO discusses rationing in several places⁹⁷ but does not specify a preferred regime. Importantly though, Policy 6.4.12B states that the ORC may instigate its own water rationing regime. Coupled with matter of discretion 12.1.4.8(viii) we understand that to mean that we may impose a regime considered appropriate by us.

[097] Neither applicant offered a detailed rationing regime in their original applications or in their September 2019 revised applications. For the applicants Mr Hickey considered that the details of a flow sharing agreement (trigger flows, cuts in abstraction, etc) should not be stipulated rigidly as consent conditions. He believed that as much flexibility as possible should be maintained to allow adaptive decisions to be made depending on the circumstances of a particular season.⁹⁸ With respect we are not persuaded by Mr Hickey on this matter as regulatory certainty is required regarding a rationing regime to ensure the requirements of the NPSFM and other instruments are met.

⁹⁰ Ibid, paragraph 26.

⁹¹ EIC Richard Allibone, paragraph 37.

⁹² EIC Maria Bartlett, paragraph 58.

⁹³ Rebuttal Evidence, Dr Allibone, paragraph 14,

⁹⁴ EIC Maria Bartlett, paragraph 61.

⁹⁵ EIC Paul Whyte, paragraph 38.

⁹⁶ EIC Paul Whyte, paragraph 43.

⁹⁷ Including Policies 6.4.12, 6.4.12A, 6.4.12B, 6.4.12C and 6.4.13.

⁹⁸ EIC Matt Hickey, paragraph 78.

- [098] The s42A authors initially recommended conditions establishing a water management group that would then enter into a low flow rationing agreement, mirroring the applicants' approach. We found that to be unsatisfactory and uncertain and asked the authors to recommend a specific rationing regime.
- [099] In that regard we understand that there are three main types of rationing regimes commonly used around the country which we now briefly explain.
- [100] The first is 1:1 flow sharing where the amount of water above the minimum flow is shared between the abstractors and the river. In 1:1 flow sharing for every 2 L/s of flow above the minimum flow 1 L/s is available for abstraction and 1 L/s is left in the river. This retains some variability in river flows (avoiding excessive flatlining at the minimum flow) but provides the lowest reliability of supply as the river flow must be at the minimum flow plus two times the allocation limit for consent holders to have access to their full allocations.
- [101] The second is a pro-rata regime which is based on the amount of the total allocation available above the minimum flow on a given day. For example, if the flow at SH6 equalled the minimum flow plus 80% of the total allocation then each abstractor could take 80% of their authorised abstraction. This regime benefits abstractors as they can take all of the available water above the minimum flow, however it is difficult to implement, requiring variable take infrastructure and day to day management.
- [102] The third is a stepped reduction regime. As the river flows approaches the minimum flow abstractors are required to reduce their takes by a fixed percentage. This is a simple and easy to understand regime.
- [103] In their answers to our questions the s42A authors did not recommend a specific rationing regime, but they proposed amendments to their recommended conditions such that a 'Low Flow Rationing Agreement' would need to be in place and certified as suitable by the ORC prior to the consents being exercised. We reluctantly accept that approach solely on the basis of ORC certification (noting that was agreed to by the applicants) providing regulatory certainty, but record that rationing should only apply to irrigation water. The relatively small abstractions for animal drinking water and water for domestic needs⁹⁹ should be allowed to continue to be taken regardless of the minimum flow as matters of animal and human welfare.

4.8 Fish screens

- [104] Matter of discretion 12.1.4.8(xii) addresses any need to prevent fish entering the intakes.
- [105] An issue arises as to whether or not the intakes should have fish screens. Dr Allibone opined that screens were not required for the upper Alice Burn (no fish present) or the Criffel Weir take (the rainbow trout have only nuisance value). He advised that a screen would be required for the lower LIC take to minimise entrainment of juvenile brown trout.¹⁰⁰ We accept his expert opinion.
- [106] Mike Kelly further clarified that LIC has two intakes with one in the lower Alice Burn and one in the lower North Branch of Luggate Creek. The intakes are channelled into one water race around 400m downstream of each point of take. A fish screen is to be installed in the water race approximately 10m upstream of the flow measuring flume at an existing by-wash point in the water race which would allow any fish in the race to have an escape route back to Luggate Creek.
- [107] Mr Paragreen, a lay witness for OFG, suggested some amendments to the fish screen conditions previously agreed between ORC and the applicants.¹⁰¹ Dr Olsen for ORC recommended that an intake velocity of 0.06m/s should be imposed if no self-cleaning mechanism is in place.

⁹⁹ This does not apply to the LMS domestic scheme intended to serve the 250 lot development, although we record the agreement of LIC that domestic supply pursuant to this scheme is to take priority over irrigation water. We expect this to be addressed in the Low Flow Rationing Agreement.

¹⁰⁰ EIC Dr Richard Allibone, paragraph 41.

¹⁰¹ EIC Nigel Paragreen, paragraph 129.

[108] Our preference is for a fish screening condition that is easy to understand and that any screen is easy to install, maintain and monitor. In light of the actual fishery values of Luggate Creek we are not persuaded that the additional complexities sought by Mr Paragreen and Dr Olsen are necessary. We also note the evidence of Mike Kelly that there is no power supply to the fish screen location.¹⁰² Ben Trotter (LIC Director) advised that he will have to visit the site every day during the irrigation season to manually operate the intakes in order to deliver the necessary residual flows and so he would also be able to manually clear the fish screen of any accumulated detritus. We find that to be a reasonable and practical approach that can be included in consent conditions. We consider that a screen cleaning interval of no more than seven days should be imposed.

[109] Finally, we observe Dr Olsen's advice that fish screens are required at an intake unless a dispensation is obtained from the Director-General of Conservation. As Department officials did not attend the hearing, we could not ask them about that. We therefore simply note that to be a matter for the applicants to pursue.

4.9 Issues raised by submitters

4.9.1 Maori values and interests

[110] As we have noted the applications are restricted discretionary activities under Rule 12.1.4.8. There is no matter of discretion that explicitly addresses Kāi Tahu values and interests, as was acknowledged by Kā Rūnaka.¹⁰³ Having said that we acknowledge and accept, as explained in the evidence of Dr Michael Stevens, that Kāi Tahu had a historic presence in the Luggate Creek catchment, and have a contemporary interest there, that was intimately bound up with mahika kai, especially weka and tuna.

[111] Kā Rūnaka (representing the three Papatipu Rūnaka comprising Te Rūnanga o Ōtākou and Kāti Huirapa Rūnaka ki Puketeraki and Te Rūnanga o Moeraki) submitted on both applications and lodged extensive evidence in support of those submissions. From the evidence of the Kā Rūnaka witnesses we have distilled the following matters raised that fall within the matters of discretion of Rule 12.1.4.8:

- primary allocations;
- supplementary allocations;
- residual flows;
- fish screening; and
- consent duration.

[112] We have addressed the first four of those matters earlier in this Decision and we discuss consent duration in section 6 of this Decision.

[113] Water allocation framework matters raised by Kā Rūnaka will necessarily need to be dealt with under ORC's regional plan review process, including the allocation and minimum flow limits currently set in Schedule 2A of the RPWO and how the overall planning framework deals with Kāi Tahu rights, interests and values.

[114] Other matters of concern to Kā Rūnaka fall outside the scope of our consideration of these resource consent applications, including the physical introduction (or reintroduction) of tuna (longfin eels) into Luggate Creek¹⁰⁴ and surveying the Creek for non-migratory galaxiids, particularly above the weir on the North Branch of the catchment. So far as our consideration of effects of the takes on long fin eels, we record that counsel for the applicants¹⁰⁵ and ORC (in support of the reporting officers) acknowledged that

¹⁰² Proposed Condition for Fish Screen in the LIC Water race, tabled at the hearing.

¹⁰³ EIC Maria Bartlett, paragraph 72.

¹⁰⁴ Noting, as we did earlier, Dr Allibone's evidence that the 180 L/s minimum flow is suitable for tuna.

¹⁰⁵ Applicants legal submissions from paragraph 23 and legal submissions in support of reporting officers at paragraph 8© attached to s42A report.

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the existing environment only includes long fin eels as they exist now and not as they may exist in the future as a result of any translocation project that might be undertaken with the cooperation of the consent holders in the future.

4.9.2 Conservation and trout angling interests

[115] Submissions were lodged on the LI applications by DOC and OFG. As we noted earlier, DOC withdrew their right to be heard but we nevertheless had regard to the matters raised in their original submission. OFG provided expert evidence on the ecological implications of flow regimes on trout populations in Luggate Creek and we had regard to that evidence in earlier sections of this Decision.

4.10 National environment standards and other regulations

[116] The NES for Sources of Human Drinking Water (NESDW) is potentially relevant, however we were not made aware of any adverse effects on registered drinking water supplies.

[117] The Resource Management (Measurement and Reporting of Water Takes) Regulations 2010 apply to the proposed surface water takes and the applicant has proposed, and the s42A authors have recommended, conditions regarding metering and the submission of abstraction records to ensure compliance with the NES.

[118] No other relevant national environmental standards or regulations were brought to our attention and we are not aware of any.

4.11 National policy statements

[119] The New Zealand Coastal Policy Statement 2010 (NZCPS) is not relevant.

[120] The NPS for Freshwater Management 2014 Updated August 2017 to incorporate amendments from the National Policy Statement for Freshwater Amendment Order 2017 (NPSFM) is relevant. The NPSFM was assessed by the applicants,¹⁰⁶ the s42A authors¹⁰⁷ and to a lesser extent by submitters Kā Rūnaka¹⁰⁸ and OFG.¹⁰⁹ The NPS was also addressed in the applicants opening legal submissions. Relevant provisions are Objectives AA1, B1, B2, B3 and B5. These provisions focus on safeguarding aquatic ecosystems, phasing out over-allocation, improving and maximising the efficient use of water and enabling communities to provide for their economic well-being while managing freshwater within limits.

[121] In our view the adherence to the RPWO minimum flow at SH6 and the imposition of residual flows below the intakes will largely achieve Objective B1, while the reduced primary allocation (538 L/s compared to the 1024 L/s or 785 L/s set by the RPWO) and assuming the use of modern and efficient irrigation systems will largely achieve Objectives B2, B3 and B5. Collectively that also largely achieves Objective AA1.

4.12 Regional Policy Statement

[122] The Otago Regional Policy Statement is in a state of flux. We understand there is the Regional Policy Statement for Otago 1998: partially operative as of 14 January 2019 (with revoked provisions) and the Partially Operative Otago Regional Policy Statement 2019. Provisions relating to freshwater values are subject to appeal and so must be afforded less weight.

[123] The RPS was assessed by applicant,¹¹⁰ the s42A author¹¹¹ and to a lesser extent by submitter Kā Rūnaka.¹¹² In general, and unsurprisingly, the relevant provisions focus on recognising and providing for Kāi Tahu values; maintaining or enhancing the range and extent of habitats provided by fresh water and

¹⁰⁶ EIC of Kate Scott.

¹⁰⁷ Ibid, section 10.4.

¹⁰⁸ EIC Paul Whyte, paragraphs 17 and 18.

¹⁰⁹ EIC Nigel Paragreen

¹¹⁰ EIC of Kate Scott.

¹¹¹ Ibid, section 10.2.

¹¹² EIC Paul Whyte, paragraphs 14 to 16.

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the natural functioning of rivers; ensuring the efficient allocation and use of water; encouraging collective coordination and rationing of the take and use of water when river flows or aquifer levels are lowering so as to avoid breaching any minimum flow restrictions; and encouraging water harvesting and storage so as to reduce demand on water bodies during periods of low flows.

[124] We have had regard to all of those matters earlier in this Decision. We note that the s42A authors consider that the applications were consistent with the RPS provisions.

4.13 Regional plans

[125] The relevant plan is the Regional Plan: Water for Otago updated to July 2018 (RPWO) which we have had regard to as set out in sections 4.1 to 4.9 of this Decision. The chapter of most relevance is Chapter 6 Water Quantity.¹¹³ As noted by Ms Scott, the introduction to Chapter 6 outlines that the water allocation and minimum flow provisions are intended to provide for the maintenance of aquatic ecosystems and natural character values while providing for sustainable use.¹¹⁴

[126] The applicant¹¹⁵ and the s42A authors¹¹⁶ addressed the provisions of the RPWO as did submitters Kā Rūnaka¹¹⁷ and OFG.¹¹⁸ We note that in the recent *Lindis* decision the Court found the RPWO to be “out of date” because it did not give effect to the NPSFM or the RPS.¹¹⁹ We have nevertheless had regard to the applicants’ and s42A authors’ assessments and note that we have also referred to relevant parts of RPWO Chapter 6 in section 4 of this Decision. We record here that *Lindis* was dealing with a plan change to the RPWO, whereas we are determining a resource consent application made and to be determined pursuant to the RPWO operative provisions.

4.14 Iwi and hapū management plans

[127] The Kai Tahu ki Otago Natural Resource Management Plan 2005 is relevant as is the earlier Ngāi Tahu Freshwater Policy Statement 1999. We have had regard to provisions of those documents that were brought to our attention, particularly in terms of consent duration. In that regard Policy 25 of the 2005 document opposes 35-year durations and Policy 27 favours short-term durations for inefficient irrigation systems.

4.15 Other matters

[128] OFG referred to the Sports Fish and Game Bird Management Plan 2015-2025.¹²⁰ Relevant provisions refer to restoring habitats for sports fish. We are satisfied that the minimum flow and residual flows discussed earlier in this Decision will achieve that outcome.

[129] The applicants have all offered, on an *Augier* basis, to surrender any water that was applied for but remains unused ten years after commencement of the consents. We acknowledge the merits of that offer and agree to the imposition of such a condition, noting that if it was not ‘offered’ we would not otherwise be able to impose it. For that reason, we do not consider it appropriate to amend the period to seven years as recommended by the s42A authors.

[130] The applicants all sought that any new permits commence after the expiry of the existing deemed permits. The s42A authors recommended that any new permits commence immediately. We prefer the applicant’s approach as otherwise, absent the surrender of the deemed permits which we cannot require, there is the risk of having the deemed permits and the new permits running in parallel which would be undesirable.

¹¹³ Also relevant are Chapter 4 (Kai Tahu ki Otago Water Perspective and Chapter 5 Natural and Human Use Values of Lakes and Rivers).

¹¹⁴ EIC Kate Scott, paragraph 126.

¹¹⁵ EIC of Kate Scott.

¹¹⁶ *Ibid*, section 10.1.

¹¹⁷ EIC Paul Whyte, paragraphs 19 to 21.

¹¹⁸ Lay evidence of Nigel Paragreen.

¹¹⁹ *Lindis* at [117].

¹²⁰ EIC Nigel Paragreen, paragraph 118.

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[131] No other relevant matters were brought to our attention and we are not aware of any.

5 Part 2 matters

[132] The Court of Appeal in *RJ Davidson Family Trust v Marlborough District Council* clarified the application of Part 2 of the RMA when considering resource consent applications. In short, in *Davidson*, the Court of Appeal determined that:

- Notwithstanding *King Salmon*, RMA decision-makers should usually consider Part 2 when making decisions on resource consents (that is the implication of the words "*subject to Part 2*" in section 104);
- However, where the relevant plan provisions have clearly given effect to Part 2, there may be no need to do so as it "*would not add anything to the evaluative exercise*". It would be inconsistent with the scheme of the RMA to override those plan provisions through recourse to Part 2. In other words, "*genuine consideration and application of relevant plan considerations may leave little room for Part 2 to influence the outcome*".

[133] We note that in the recent *Lindis* decision the Court concluded it was desirable to assess Part 2 matters because of inconsistencies in the RPWO. We take the same approach here.

[134] The imposition of minimum and residual flow conditions will preserve the natural character of Luggate Creek (s6(a)) while maintaining amenity values (s7(c)), the quality of the environment (s7(f)) and the habit of trout (s7(h)). Reducing the primary allocation to 538 L/s (slightly above the RPWO Schedule 2A allocation but significantly less than the 1024 L/s or 785 L/s set by RPWO policies) has particular regard to the finite characteristic of the Luggate Creek water resource. We have sought to recognise and provide for the relationship of Maori and their culture and traditions with Luggate Creek to the extent that the matters of discretion in Rule 12.1.4.8 allow (ss6(e), 7(a) and 8). By allocating irrigation water based on Aqualinc 2017 and a 90-percentile seasonal demand we have had particular regard to the efficient use of Luggate Creek water and the development of irrigable land (s7(b)).

[135] We find that a consideration of Part 2 matters does not weigh against a grant of consent provided appropriate consent conditions are imposed.

6 Consent Duration

[136] Matter of discretion 12.1.4.8(xx) addresses the duration of the resource consents.

[137] The applicant sought a consent duration of 35 years with a commencement date of 2 October 2021, which would result in an expiry date of 2 October 2056. The s42A report authors recommended durations of 10 years.

[138] Policy 6.4.19 of the RPWO addresses consent duration for consents to take and use water. It does not recommend actual durations but instead contains seven criteria for us to consider. In this case the proposed purposes of the abstractions are enduring, being irrigation, stock water and domestic use (criteria (a)). There is a Schedule 2A catchment minimum flow (criteria (b)). Climatic variability is certain to occur but we had no detailed evidence of its relevance here (criteria (c)). Potential adverse effects (such as inadequate residual flows or downstream minimum flow) can be addressed through robust review conditions (criteria (d)). The applicant has not proposed adaptive management (criteria (e)), although review conditions will allow allocation and residual flow matters to be addressed in the future should the need arise. The applicants have invested heavily in irrigation infrastructure and will need to continue to invest in it to decommission inefficient open race conveyance systems and border dyke and flood irrigation systems (criteria (f)). The CWL shareholders do not currently utilise industry best practice with regard to either stock water or irrigation, but they no longer seek consent for stock water and they have undertaken to improve their irrigation infrastructure (criteria (g)).

[139] In overall terms we agree with Ms Scott that a consideration of the RPWO Policy 6.4.19 criteria weighs against a short-term consent and favours a longer duration. We also note that the applicants have offered comprehensive s128 review conditions that enable the allocation of water to be revisited in the future.

- [140] Section 104(2) requires us to have regard to the applicants' existing investment, which in this case relates to the water take and conveyance structures and the irrigation systems. We understand that investment to be significant at several million dollars, particularly for the LI applicants.
- [141] Both applicants consider that the s42A authors have ignored the financial implications of their short duration recommendation and have dealt with duration purely as an administrative exercise. Dr Bell for CWL advised that a short-term consent would not support an adequate rate of return on investment for the period of time to enable CWL to undertake infrastructure efficiency upgrade works.¹²¹ We accept her evidence on that matter. Mr Collier advised that the CWL scheme efficiency upgrades relate to areas that are already irrigated¹²² and Mr Simpson costed those CWL upgrades at around \$1.2M.¹²³
- [142] Similarly, Colin Harvey for LI advised that reducing their primary allocation required irrigation efficiency upgrades¹²⁴ and the necessary capital for that could not be planned for if consents were only granted for 10 years.¹²⁵ Ben Trotter advised that after debt servicing there is \$300/ha available for drawings and reinvestment and in his case the costs associated with obtaining a resource consent for a 10 year duration are about \$100/ha and that eats into capital that would otherwise be utilised for on farm improvements.¹²⁶
- [143] We acknowledge these financial realities and find that in the absence of demonstrable adverse effects from the proposed takes those realities weigh in favour of a longer consent duration.
- [144] We also observe Ms Scott's verbal evidence that in ten years' time Luggate Creek would more than likely still be a trout spawning stream and while there may be a longer hydrological record available, it is difficult to conceive of a dramatic shift in aquatic ecology that might lead to a different consenting outcome at that point in time. We accept that evidence, notwithstanding Kā Rūnaka's desire to reintroduce tuna to the catchment.
- [145] Turning now to the submitters who appeared at the hearing, Kā Rūnaka sought a short-term consent that would allow for a new regional planning framework to be established before a longer-term consent would then be applied for by the applicants. They supported the ten-year duration recommended by the s42A authors.¹²⁷
- [146] DOC and OFG both sought ten-year durations in their original submissions. That relief was maintained by Mr Paragreen for OFG, primarily because he believed that s128 reviews could not effectively address future over-allocation issues.¹²⁸ We are not persuaded by that evidence and favour the applicants' view that the s128 review process is not more limiting than the process for fresh resource consents.¹²⁹ Importantly, the RMA notification provisions apply to s128 reviews and so parties can be involved in a review process to the same extent that they can for a consent renewal process.
- [147] In overall terms and on balance we favour a duration longer than that recommended by the s42A authors but consider that 35 years as sought by the applicants is too long. The issue then becomes choosing a longer-term duration that has some logical basis. In that regard we note that the consent for the Criffel Weir expires on 12 April 2045. There is merit in aligning the expiry of the weir consent with the CWL water take consent, given the fact that both activities must address residual and minimum flow requirements. There is also considerable merit in aligning the expiry dates of the CWL and LI consents.

¹²¹ EIC Mandy Bell, paragraphs 21 and 22.

¹²² EIC George Collier, paragraph 36.

¹²³ EIC Rodger Simpson, paragraph 15.

¹²⁴ Which achieve only a marginal improvement in productivity because irrigation infrastructure is already in place.

¹²⁵ EIC Colin Harvey, paragraphs 15 and 19.

¹²⁶ EIC Ben Trotter, paragraph 10.

¹²⁷ EIC Maria Bartlett, paragraph 17.

¹²⁸ EIC Nigel Paragreen, paragraph 94.

¹²⁹ Opening submissions paragraph 77.

Accordingly, we find that an expiry date of 12 April 2045 for the CWL and LI consents is appropriate and note that, if the consents commence on 2 October 2021, that equates to a duration of around 24 years.

- [148] Having made that finding we also note the applicants' opening submissions advised that a minimum consent duration of 25 years would be required to justify the infrastructure upgrades to achieve the efficiency required.¹³⁰ Mr Page clarified that related to upgrading currently inefficient irrigation systems.
- [149] In setting a longer duration than was recommended by the s42A authors and sought by submitters we are not persuaded that the allocation volumes, residual flows and minimum flows will necessarily be locked in for that period, given the explicit wording of a s128 review condition we can impose coupled with the wording of s128(1)(b) of the RMA. In that regard, we are not persuaded that a future reduction in consented allocations would amount to an 'unlawful derogation' of the consents¹³¹ or that the consents would no longer continue to be viable.¹³² We understand that derogation relates to taking water already consented to someone else and reduced allocations in the future would simply mean that less land could be irrigated, but irrigation (and we presume animal drinking water and domestic use) could still occur.
- [150] Nor are we persuaded that the fact of a s128 review process being 'contestable' weighs against a longer-term consent. As Mr Page pointed out in Reply, a s128 review process is no more or less contestable than a resource consent renewal process.
- [151] With regard to s113(1)(b) of the RMA, the primary reasons for deciding on a shorter duration than that sought by the applicants are the expiry date for the consent for the Criffel Weir combined with the applicants' evidence relating to the minimum consent duration required to justify irrigation system infrastructure upgrades.

7 Consent Conditions

- [152] We were provided with various iterations of recommended consent conditions by the s42A authors and the applicants. We note the initial s42A authors' recommendations mirrored those of the applicants, although significant improvements were recommended in the written answers to our pre-circulated questions.
- [153] The applicants recently requested separate consent documents for each of the three applicant parties so that is what we have done. We have rationalised and improved the wording of some of the conditions recommended to us. In particular we have specified the amount of water allocated to particular uses in tabular form. The reason why we have done that was neatly encapsulated in the evidence of Maria Bartlett¹³³ for Kā Rūnaka where she stated:

I believe that rates and volumes for different uses should be separately specified in consent conditions, including allocation for stockwater and potable supply where this does not satisfy the requirements of S14(3)(b). In my opinion, it will be important to understand the rate at which water can continue to be taken for domestic and stockwater purposes in periods when the river is down to the minimum flow level.

- [154] The conditions imposed are set out in the appendices to this Decision.
- [155] It is conceivable that the conditions contain errors including those of a numerical (in terms of allocation figures), grammatical or cross-referencing nature. Accordingly, should the applicants or the ORC identify any minor mistakes or defects in the attached conditions, then we are prepared to issue an amended schedule of conditions under section 133A of the RMA correcting any such matters. Consequently, any

¹³⁰ Opening submissions, paragraph 52.

¹³¹ As suggested by counsel for Kā Rūnaka and verbally by the s42A authors.

¹³² Section 131(1)(a) RMA.

¹³³ EIC Maria Bartlett, paragraph 78.

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minor mistakes or defects in the conditions should be brought to our attention prior to the end of the 20-working day period specified in section 133A of the RMA.

8 Determinations

[156] Our determinations on the applications are set out below. Our reasons are detailed in the body of this Decision, but in summary they include:

- a) A marked reduction in the primary allocations sought compared to the status-quo abstractions;
- b) The reduced primary allocations sought collectively exceed the RPWO Schedule 2A primary allocation by only 8%;
- c) The use of supplementary allocations to enable early season irrigation and 'water harvesting' to storage subject to higher minimum flows;
- d) The commitment of the applicants to replace inefficient irrigation infrastructure, including border dyke and flood irrigation and open race conveyance systems;
- e) The adherence to a minimum flow at SH6 which on the available evidence appears to be 'environmentally' suitable;
- f) The imposition of residual flows where appropriate below the various intakes;
- g) The placement of a fish screen on the lower Luggate Creek race system as is appropriate having regard to the available evidence on fishery values;
- h) The takes being contingent on the ORC certifying a rationing regime for times of low flow; and
- i) Robust s128 review conditions that enable the allocations, residual flows and minimum flows to be amended in the future.

8.1 Criffel Water Limited

[157] We **grant** the Criffel Water Limited application to abstract water from Luggate Creek for the purpose of irrigation by way of primary and secondary allocations subject to, amongst other things, adherence to residual flows and the SH6 minimum flow of 180 L/s.

8.2 Luggate Irrigation Company

[158] We **grant** the Luggate Irrigation Company application to abstract water from Luggate Creek for the purposes of irrigation, animal drinking water and communal domestic needs by way of primary and secondary allocations subject to, amongst other things, adherence to residual flows and the SH6 minimum flow of 180 L/s.

8.3 Lake McKay Station

[159] We **grant** the Lake McKay Station application to abstract water from Luggate Creek for the purposes of irrigation and animal drinking water by way of primary and secondary allocations subject to, amongst other things, adherence to residual flows and the SH6 minimum flow of 180 L/s.

Signed by the commissioners:



Jayne Macdonald

Criffel Water Limited (CWL)

Luggate Irrigation (LI) comprising Lake McKay Station Ltd (LMS) & Luggate Irrigation Company Ltd (LIC)



Allan Cubitt



Rob van Voorthuysen (Chair)

Dated: 27 November 2019