BEFORE THE OTAGO REGIONAL COUNCIL

IN THE MATTER	of the Resource Management Act 1991 ("the Act")
AND	
IN THE MATTER	Proposed Plan Change 5A: Lindis Integrated Water Management

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STATEMENT OF SALLY ANN DICEY
EVIDENCE ON BEHALF OF THE LINDIS CATCHMENT GROUP LTD

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INTRODUCTION

QUALIFICATIONS AND EVIDENCE

1. My name is Sally Ann Dicey. I hold a Law Honours degree and a Masters of Regional and Resource Planning from the University of Otago. I have over 10 years professional experience working in planning and resource management in New Zealand.

2. I am self-employed as a resource management planning consultant with Ahika Consulting, an environmental and energy consultancy firm, and work with McKeague Consultancy on rural resource management issues, particularly fresh water management. Through my work with McKeague Consultancy I have been employed by LCG as a planning consultant since July 2015, and prepared LCG's submission and further submission on the Otago Regional Council's Proposed Plan Change 5A (Lindis: Integrated water management) (referred to here as PPC5A).

3. Prior to my current role, I have worked as a policy planner at the Dunedin City Council, as a project co-ordinator for the Upper Taieri Water Resource Management Group, as a Resource Planner with MWH New Zealand Ltd, and as an Environmental Planner for the Royal Forest and Bird Protection Society of New Zealand Inc.

4. My projects have involved planning policy and rule development and analysis, the preparation and assessment of resource consent applications and Assessments of Effects on the Environment, as well as community and stakeholder engagement and consultation.

5. I confirm that I have read and agree to comply with the Environment Court Practice Note 2014 with regard to Expert Witnesses. This evidence is within my area of expertise, except where I state that I am relying on what I have been told by another person. I have not omitted to consider material facts known to me that might alter or detract from the opinions that I express.

SCOPE OF EVIDENCE

6. The scope and structure of my evidence is as follows:
    a. Discussion on issues with PPC5A and LCG's proposed amendments to PPC5A
    b. Whether PPC5A gives effect to relevant planning legislation and documents including

i. Part 2 of the RMA

ii. Section 32 of the RMA

iii. National Policy Statement for Freshwater Management 2014

iv. Regional Policy Statement and Proposed Regional Policy Statement

v. Otago Regional Council: Water Plan for Otago (RPW)

c. Transition package of provisions

PROPOSED PLAN CHANGE 5A

7. PPC5A amends the existing RPW in order to introduce a regime for managing surface water and groundwater in the Lindis Catchment.

8. The specific provisions that LCG oppose are:

i. a primary allocation limit of 1000 L/s

ii. the minimum flow of 750 L/s (October to May) for the surface water of the Lindis River. Where I refer in my evidence to the "minimum flow" or the "summer minimum flow" this means the proposed minimum flow between October to May.

iii. restriction of winter takes from aquifers

iv. mapping the minimum flow catchment boundaries associated with the Lindis River in the B-series of the Water Plan maps

9. LCG also note the failure of PPC5A to include adequate transition provisions to enable an effective and coherent change from the status quo to RMA water permits with a minimum flow regime.

Summary of Issues with PPC5A

10. PPC5A proposes a minimum flow regime that fails to appropriately take into account and enable the economic and social well-being of Lindis irrigators and the community connected to them.

11. PPC5A is unlikely to allow for economic viability or growth for farms reliant on Lindis catchment water for irrigation. Inadequate information on the economic and social impacts of PPC5A has been used to

develop and evaluate this plan change by the ORC, and the result is that the effects of this proposal on economic and social well-being have been underestimated.

12. The ORC, and submitters in support of a summer minimum flow of 750 l/s or greater have either incorrectly assessed economic effects to be minor, or have given no consideration to economic effects, and focused solely on environmental protection, an approach which is inconsistent with the RMA.

13. The ORC have also failed to assess the environmental effects of the different minimum flow regimes accurately, as shown in the evidence of Mr Hickey. As a result the ORC, and submitters in support of the ORC, are seeking a minimum flow that is based on an inaccurate assessment of effects on in-stream values.

14. These failures mean that from a planning perspective PPC5A, or an amended version of PPC5A with a minimum flow of 750 l/s or greater, do not give effect to the following legislation and planning instruments, all of which require economic well-being, through sustainable use, to be taken into account and provided for, and environmental effects to be based on a robust assessment:

    a. Resource Management Act

    b. The National Policy Statement for Freshwater Management

    c. ORC Regional Policy Statement and Proposed Regional Policy Statement

    d. ORC Regional Plan: Water for Otago

15. In my opinion, LCG's proposal gives effect to these instruments, as it enhances, maintains and protects environmental values while also enabling economic viability and social well-being.

LCG's Proposed Amendment to PPC5A

16. In order to meet the requirements set out in relevant legislation and planning documents, LCG's proposes the following:

    i. a primary allocation limit of 1900 L/s

ii. the minimum flow of 450 L/s (October to May) for the surface water of the Lindis River (referred to as the "minimum flow" or "summer minimum" flow in my evidence)

iii. no restriction of winter takes from aquifers

iv. mapping the true catchment boundary of the Lindis River in the B-series of the Water Plan maps

v. including new RPW provisions to allow an appropriate transition period to a minimum flow regime

vi. including new RPW provisions to enable and facilitate shifting of takes to the Clutha River

vii. including new RPW provisions to enable channel management works that maintain and enhance flows to provide for eco-system values

17. The specific changes to the RPW that LCG are seeking are outlined fully at the end of my evidence.

Comments on the ORC's PPC5A

Proposed amendment to Policy 6.4.5

18. Inserting the Lindis Catchment into Policy 6.4.5 means that the minimum flow regime will be applied, at the latest, by 2021. This 5 year period is inadequate as it does not recognise the complex, challenging and expensive process of change, ranging from physical works to the actual process of replacing deemed permits and complying with a minimum flow regime, as highlighted by the evidence of Ms McKeague and Mr Martin. By the time this plan change process is completed, we will be even closer to 2021, and they will be left with little to no time to make this transition.

19. When the scope and scale of change is fully understood, it is clear from a planning perspective, that Lindis irrigators need more time to transition to this regime in a cohesive and effective manner.

20. LCG are proposing that the minimum flow regime should not be imposed until October 2026 (as a condition on water permits), and that

the changes required of them are acknowledged and facilitated by being included in the RPW. In response to this proposal I have developed a number of provisions to provide assistance with how the RPW and PPC5A could be amended to achieve this. This is included at the end of my evidence.

Proposed amendment to Rule 12.1.4 and Maps B4 and B7 - Exclusion of Tarras Creek

21. Excluding the Tarras Creek catchment from the Lindis catchment area creates uncertainty and a lack of clarity about whether farmers situated within the Tarras Creek catchment will be required to obtain water from the Clutha River rather than the Lindis, because they have been artificially excluded from the Lindis Catchment in proposed Maps B4 and B7.

22. In the existing RPW, the assessment of whether an alternative source of water should be used is contained in Policy 6.4.0C and is applied on a case by case basis at the time of replacing a deemed permit or applying for a new consent. The effect of the proposed maps is to pre-empt this case-by-case assessment and replace it with a generic presumption (enshrined in the RPW) that farmers situated within the Tarras Creek catchment are not part of the Lindis Catchment, and so may be required to source water from the Clutha River or an aquifer.

23. The proposed maps also result in the taking of water within the PPC5A Lindis catchment area (as shown on proposed Maps B4 and B7), and using it elsewhere (in the Tarras Creek area) becoming a discretionary activity under Rule 12.1.4.5 (instead of restricted discretionary – accordingly a broader range of considerations can be assessed for a consent application under this rule. From a planning perspective there is no justification for this broader range of considerations to occur.

24. To avoid this uncertainty and confusion, the true geographic map of the Lindis catchment should be used.

Proposed amendment to Schedule 2A - Minimum flow of 750 L/s (1 October to 31 May)

25. As noted in the evidence of Mr Porter and Mr Collier, a minimum flow of greater than 450 l/s, particularly a minimum flow of 750 l/s or greater, will have significant adverse effects on the social and

economic well-being of irrigators and the local community. This has been misrepresented in the section 32 report.

26. In contrast, the evidence of these expert witnesses has shown that a minimum flow of 450 l/s will allow for the economic viability of irrigators – while there will still be adverse economic effects, they will be considerably lessened than with a summer minimum flow of 750 l/s. In addition, as shown in the evidence of Mr Hickey, a summer minimum flow of 450 l/s will maintain and (often significantly) enhance ecological, cultural, amenity and natural character values associated with the Lindis River.

27. Mr Hickey's evidence also shows that a summer minimum flow of 750 l/s will only result in a marginal increase in the enhancement of these values beyond that achieved by a summer minimum flow of 450 l/s.

28. No evidence relating to instream values was presented in support of a summer minimum flow of 1000 l/s or greater at the time of notification. Mr Hickey's evidence notes however that there is very little enhancement in aquatic habitat between a summer minimum flow of 750 l/s and 900 l/s.

Schedule 2A Primary allocation limit of 1000 L/s for surface water in the Lindis

29. Primary allocation limits effectively act as a priority system to water – by prioritising the rights of existing, efficient users of water (existing Policy 6.4.0A), as well as placing a cap on the amount of water allocated to be taken in any catchment, in order to ensure that effects on the life-supporting capacity for aquatic ecosystems and natural character of rivers are no more than minor (existing Policy 6.4.2 'Principal reasons for adopting').

30. Schedule 2D.2 lists the matters to be considered when setting a primary allocation limit for inclusion in Schedule 2A. These matters are:

    a. *"Amount of water currently allocated as primary allocation;*

    b. *Amount of water currently taken as primary allocation;*

    c. *Any other existing taking and using of water;*

    d. *The 7-day mean annual low flow;*

    e. *Proposed minimum flow regime;*

f. *Possible sources of water;*

g. *Acceptable duration and frequency of rationing among consented water users; and*

h. *Social and economic benefits of taking and using water."*

31. These matters place a strong emphasis on existing use, and the effects of a primary allocation limit on existing use.

32. The Section 32 makes no reference to this list of considerations, and simply states that Option 1 (the status quo) uses the "default" primary allocation limit of 930 l/s. This aligns with 50% of MALF. This approach is based on the second part of Policy 6.4.2(a), which provides a method of determining a primary allocation limit for catchments not included in Schedule 2A.

33. Option 2, 3 and 4 for managing surface water in the Lindis (in the s32 Report) all use a primary allocation limit of 1000 l/s. No explanation or scientific analysis of how this was derived is provided, and no reference to the matters listed in Schedule 2D.2 is made.

34. My analysis of the matters in Schedule 2D.2 is:

a. Amount of water currently allocated as primary allocation: existing consented is approximately 4002 l/s.

b. Amount of water currently taken as primary allocation: I understand that current use is approximately 2,300 L/s. As LCG will be moving, where appropriate, to efficient forms of irrigation, this limit can be revised down to 1900 l/s – the sum of an ***efficient use*** of existing consented takes.

c. Other existing uses of water: I am not aware of any other significant or notable uses of water in the Lindis catchment, beyond that taken for domestic or stockwater purposes.

d. Mean annual low flow: my understanding from the evidence of LCG expert witnesses and the section 32 report is that the mean annual low flow for the Lindis is 1810 l/s.

e. Proposed minimum flow regime: LCG are requesting a summer minimum flow of 450 l/s, but are also proposing other measures, including channel management works and changing of intake structures, which will assist with maintaining instream flows. The evidence of Mr Hickey establishes that LCG's

proposal will significantly enhance or maintain the natural and environmental values associated with the Lindis River.

f. Possible sources of water: the ORC have assumed that alternative sources of water are available to irrigators in the Lindis catchment, without carrying out an evaluation of this in the s32 report. Irrigators in the Lindis have advised me that this will be challenging, and later in my evidence I highlight the costs/risk associated with this option.

g. Acceptable duration and frequency of rationing amongst consented users: The report by Aqualinc (attached to the evidence of Mr Hickey) determines the reliability of irrigation supply under a summer minimum flow of 450 l/s or 750 l/s as "poor" and states that reliability has major impact on the economic value of water to farmers. Furthermore, the evidence of Mr Porter establishes the significant impact that will occur as a result of the loss of water available for irrigation.

h. Social and economic benefits of taking and using water: The evidence of Mr Porter and Mr Collier has highlighted the value of irrigation water to those farming in Lindis, and the importance of access to the reliable portion of this water.

35. In addition, it is important to note that under Rule 12.0.1.2 it is a prohibited activity to apply to take water as primary allocation where that take would cause the primary allocation of a catchment to exceed the relevant limit. This rules makes it very important to take care in setting the primary allocation limit – if the limit is set too low, water which might otherwise have had primary allocation status no longer exists, and no application can be made for it be considered as such.

36. On the basis of all these considerations, LCG is proposing a revised primary allocation limit of 1900 l/s. This amount recognises the reliance of existing users on this water, but represents an efficient use of the water currently used for irrigation in the Lindis catchment.

37. This will require irrigators to reduce their actual use from 2300 l/s to 1900 l/s, which is a substantial decrease. It also represents a very significant decrease from the current consented volume of approximately 4000 l/s.

38. A primary allocation limit of 1900 l/s, in combination with a minimum flow of 450 l/s will provide "certainty regarding the availability of water

resources for taking" (explanation to Policy 6.4.2) than the ORC's PPC5A, and will better "provide for socio-economic and cultural wellbeing, while also enabling reliable access to the resource" as the Section 32 report states it should (page 1 Section 2.2).

Schedule 4B.2 – Restrictions for aquifers connected to Lake Dunstan or the main stem of the upper Clutha River/Mata-Au

39. The section 32 report states that winter takes are restricted to protect lake levels for hydro-electricity generation, yet no evidence is provided that abstractions in the Lindis have had a discernible impact on lake levels, or that abstractions from the aquifers are likely to have an impact on lake levels. This is inconsistent with Policy 6.4.0 which requires recognition of the hydrological characteristics of Otago's water resources.

40. The introduction of a primary allocation limit and minimum flow will further reduce the likelihood of any more than minor effect on lake levels or lake out flows.

41. Irrigators in the Lindis have advised that winter takes are important for water harvesting for irrigation storage.

42. Winter harvesting will become even more important as reliability and surety of supply is reduced by the primary allocation limit and minimum flow. The proposed restriction on winter takes from these aquifers limits the ability of winter harvesting of water to occur.

43. LCG's water takes are existing lawful uses. I agree with the section 42A report analysis which highlights the protection of existing lawful uses of water in the RPW. One of the key provisions of the RPW that does this is Policy 5.4.3, which gives priority to avoiding adverse effects on existing lawful uses.

44. The proposed inclusion of restrictions on winter takes in order to protect lakes levels will effectively enshrine Contact's priority in the RPW, without any evidence showing that this is necessary or justified. This is inconsistent with the approach set out in Policy 5.4.3, as it does not allow for any recognition of irrigators' existing lawful uses.

45. It is also inconsistent with Policy 6.3.2, which does not single out one type of user over another, and Policy 6.3.4 which seeks "to maximise the opportunity for diverse consumptive uses of water which is available for taking."

46. Accordingly, this change is unjustified on the basis that:

    a. It is inconsistent with the existing provisions of the RPW (including Policies 5.4.3, 6.3.2, 6.3.3, 6.3.4)

    b. It effectively grants Contact Energy a priority over other water users and enshrines it in the RPW.

    c. It is not backed by any evidence.

    d. It reduces opportunities for irrigators to winter harvest water for storage, which further exacerbates the impacts of the primary allocation limit and the minimum flow on Lindis irrigators.

Alternative sources of water

47. An underlying assumption of the plan change is that irrigators who have an alternative source of water *will* shift their take to that alternative source. This assumption essentially forms part of the recommended management regime.

48. For example, one of the reasons given in the section 32 report for the preferred management regime of PPC5A is the assertion that "the transition towards the use of an alternative water source" will be one of the measures that "will provide irrigators in the lower catchment (that have access to an alternative water source) as well as those in the upper Lindis catchment (that do not have access to an alternative water source) with a more reliable water supply, allowing them to increase their productivity. This creates scope for positive spin-off effects" (p12 of section 32 report).

49. This a huge assumption to make. It does not recognise, in any way, the challenges of shifting to an alternative source of water, and no assessment is provided of the practicality of this concept.

50. Existing Policy 6.4.0C of the RPW provides guidance on an assessment between alternative sources of water when a consent application is considered. PPC5A erroneously assumes that the use of a source other than the Lindis River (or its tributaries) will be the most practicable source without any clear justification for this assumption. By incorporating this assumption into a plan change, PPC5A both circumvents the cases by case assessment that should be carried out under Policy 6.4.OC of the RPW, and fails to carry out the assessment anticipated by this Policy.

51. If Lindis irrigators have proof of use, can demonstrate they will use the water efficiently, can show that alternative sources are not practicable (e.g. due to cost or access issues), and environmental values in the Lindis are maintained and enhanced, under the policies of the RPW they can continue to source water from within the Lindis catchment.

52. No clear evaluation of alternative sources, conveyance from them or access across land is included in the section 32 report, and no cost benefit analysis is carried out in the section 32 report.

53. To evaluate alternative sources (as part of the preferred management regime) a clear understanding (based on a transparent assessment) of the following is required:

    a. The amount of water available to be taken from the Clutha River or an aquifer

    b. The construction and operational cost of shifting and establishing these takes

    c. The cost, time, risks and challenges associated with obtaining a consent taking into account:

        i. The shifted take would be considered as a new take, and the history of use in relation to the existing take would be lost.

        ii. Affected party approval by Contact Energy would be sought by the ORC, and restrictions on the take would therefore be likely.

        iii. Primary allocation status would be lost if the take was shifted to the Clutha River.

        iv. A minimum flow is likely to be introduced on the Clutha River which would further restrict this new take. With no history of use and no primary allocation status, irrigators who have shifted their take to the Clutha River would be very vulnerable and may face a loss of reliability of supply.

    d. The cost and time to obtain easements, including from LINZ, NZTA and DOC as well as other farmers.

    e. The cost of operating from these takes and how much of an increase this is compared to current operational costs.

54. The Section 32 report failed to evaluate these factors.

55. If the Section 32 report had carried out this evaluation, a clear cost benefit analysis of shifting takes to an alternative water source would then refine the following:

    a. Benefits:

        i. if consent is secured, increased reliability of supply, based on investment in more efficient systems.

    b. Costs/risks:

        i. inability to obtain necessary access/easement agreements

        ii. increased consenting costs/complexity, potential for re-litigation of issues with affected parties

        iii. consent is not secured

        iv. consent is secured but primary allocation status is lost / restrictions imposed due to Contact / minimum flow is imposed. This results in a decrease in reliability of supply

        v. significant time and cost associated with access agreements and consent requirements

        vi. significant expenditure required to develop new take infrastructure and convey water from alternative source to farm

        vii. increase in ongoing operational costs

        viii. the high financial costs associated with this option will drive increased land use intensification, which may result in water quality issues.

56. The recommended management regime relies heavily on the assumption that Lindis irrigators can shift their takes to an alternative source, and that this will have positive effects. Yet this reliance is not based on a clear evaluation, as required by s32, and anticipated by existing Policy 6.4.0C of the RPW, on a case by case basis.

Giving Effect to Relevant Legislation and Planning Documents

Part 2 of Resource Management Act

57. Section 66(1)(b) of RMA requires the ORC to prepare and change regional plans in accordance with Part 2 of the RMA. In addition, under Section 30 the ORC is to carry out its functions (including the taking and use of water) for the purpose of giving effect to the RMA.

58. Part 2 of the RMA sets out the purpose and principles of the RMA. Section 5 states that the purpose of the RMA is the sustainable management of natural and physical resources. The key part of this for PPC5A is that resources are to be used *"in a way, or at a rate which enables people and communities to provide for their social, economic, and cultural well-being…while:*

> *(a) sustaining the potential of natural and physical resources (excluding minerals) to meet the reasonably foreseeable needs of future generations; and*
>
> *(b) safeguarding the life-supporting capacity of air, water, soil, and ecosystems; and*
>
> *(c) avoiding, remedying, or mitigating any adverse effects of activities on the environment."*

59. Various approaches have been used to assist in applying this section when competing interests are present. These include a balancing approach – often between competing interests - and an overall broad judgement approach (weighing approach rather than a 'balancing' approach).

60. Whichever approach is taken it is clear that environmental, social, cultural and economic considerations are all relevant considerations under Part 2 and must be considered. I agree with the section 42A report that economic well-being must be able to co-exist with the matters included in subparagraphs (a) to (c) of section 5.

61. However, the ORC's PPC5A is based on incomplete and flawed information, as established in the evidence of Mr Hickey, Mr Porter and Mr Collier. This makes it impossible for those relying on this evidence to carry out a robust weighing or balancing exercise between the various values or interests at stake here.

62. As presented by the ORC (in the section 32 report and supporting documentation), it appears as though the environmental and iwi values will be enhanced and protected, with very limited impact on the

economic or social well-being of irrigators – although social impacts are hardly addressed at all.

63. The expert evidence of LCG has shown that this is not the case. The environmental gains between a 450 L/s minimum flow and a 750 L/s (or 1000 L/s) flow are minimal, and as established by the evidence of Mr Hickey, environmental and iwi values are effectively maintained and enhanced under a minimum flow of 450 L/s. Mr Hickey's evidence also shows that there is a significant environmental gain between the status quo and 450 l/s.

64. In contrast, the evidence of Mr Porter and Mr Collier has shown that there will be adverse economic effects on irrigators from a minimum flow of greater than 450 l/s, and that a minimum flow of 750 l/s or greater will result in significant adverse economic effects.

65. A minimum flow of 750 l/s or greater focuses on eco-system, natural character and cultural values, and largely disregards the economic and social well-being of farmers and the Lindis community. In my opinion, LCG's proposal achieves a balanced approach, and effectively weighs up environmental, iwi, economic and social values and interests so that environmental values are maintained or enhanced and adverse effects on economic and social well-being are minimised. On this basis, from a planning perspective, it is consistent with Part 2 of the RMA.

66. LCG's proposal also recognises and provides for the matters outlined in Section 6 and 7 of the RMA. Mr Hickey's evidence established that a minimum flow of 450 L/s is a significant improvement on the status quo, and will maintain, enhance and protect aquatic ecosystems and the habitat of native species and trout.

67. Mr Hickey's evidence also established that a minimum flow of 450 L/s will also lead to a significant improvement in connectivity. This will result in the enhancement of the natural character, amenity values associated with the Lindis catchment, as well as recognising and providing for iwi values associated with the mauri of the Lindis.

Comments on Section 32 Report

68. Section 32 of the RMA requires a report to be prepared which documents the evaluations undertaken in formulating a plan change.

69. The aim of section 32 is to ensure plans are developed using good practice, based on transparent and robust decision-making. This decision-making should use strong supporting evidence.

70. There has been failure to undertake good practice in the development of PPC5A, and this is reflected in the section 32 report. Recommendations are based on faulty data or assumptions with no supporting evidence. This is highlighted by submitters having to request that basic data underpinning the plan change (e.g. certified flow data) be corrected after PPC5A was notified, as discussed in the evidence of Mr Hickey.

71. The failure to follow good practice has resulted in PPC5A being flawed. This has placed the onus on LCG and other submitters to come up with a proposal based on accurate data and assessments.

Section 32 (1)(b)(ii) – Efficiency and effectiveness of the provisions

72. The section 32 report contains *no assessment* of the efficiency and effectiveness of the provisions in achieving the objectives of the RPW, as required by Section 32(1)(b). The report contains a very brief description of the purpose of primary allocation limits and minimum flows, but does not identify any objectives or contain any assessment of whether the PPC5A provisions achieve these objectives.

73. My discussion of the RPW objectives later in my evidence makes it clear that the PPC5A provisions do not achieve the objectives of the RPW, as they will not provide for the sustainable use of water in the Lindis (Objective 5.3.6), or for the water needs of irrigators in the Lindis Catchment (Objective 6.3.2).

74. In contrast, I consider that the LCG proposal will be effective in meeting all the relevant objectives of the RPW, as it represents an effective balancing of all values, while ensuring environmental bottom lines are not compromised.

Section 32(1)(c) – Level of detail

75. The section 32 report does not contain a level of detail that corresponds to the scale and significance of the environmental, economic, social, and cultural effects that are anticipated from the implementation of the proposal (section 32(1)(c)).

76. The introduction of a primary allocation and minimum flow regime will have a significant economic impact on irrigators, as discussed in the evidence of Mr Porter and Mr Collier.

77. The section 32 report is very brief, and significantly lacking in meaningful and relevant detail, including in the following regard:

    a. No evidence is provided to justify the restriction on winter takes from aquifers.

    b. No detail or justification is provided on how the summer primary allocation limit was established, even though the RPW sets an expectation that this is based on robust studies. The primary allocation limit is one of the key mechanisms to manage surface water in the Lindis, and a detailed justification based on robust science should be provided. It is inappropriate that the s42A report provide a rationale for setting the primary allocation limit, when none was provided in the s32 report.

    c. No social costs/risks are included in any of the cost/benefit analysis, even though PPC5A would be likely to have a considerable adverse effect on the local community, as discussed in the evidence of Mr Collier.

    d. No detail and thus no analysis is included about the feasibility, challenges or costs associated with shifting to alternative water sources or the development of water storage, even though these are assumptions underpinning the preferred option.

    e. No detail and thus no analysis is included about the steps irrigators must take to transition from the status quo to a minimum flow regime, which results in a failure to identify the costs and risks associated with this process.

Section 32 (2)(a) - Cost/Benefit analysis

78. The section 32 report also failed to effectively identify and assess, and where practicable, quantify, the benefits and costs that are likely to result from PPC5A, particularly in relation to economic and social effects, including the opportunities for—

    (i) economic growth that are anticipated to be reduced; and

    (ii) employment that are be reduced

79. As outlined in the evidence of Mr Porter and Mr Collier, the economic assessment by BERL that the section 32 report appears to rely on is flawed. Indeed the BERL report notes that it is not of an environment court standard (p5 section 1.2), and it is questionable as to whether it should be relied on.

80. The evidence of Mr Porter and Mr Collier highlights the significant economic effects that PPC5A will have on LCG and other irrigators in the Lindis catchment area, and that not only will economic growth become difficult, but economic survival by these landowners will be very challenging, and for some, unlikely. This has flow on effects in relation to employment also, as noted in the evidence of Mr Collier.

81. Accordingly, the BERL report and the section 32 report understate the adverse economic effects PPC5A will have on irrigators and the wider community connected to the Lindis catchment area.

82. Key issues with the cost benefit analysis in relation to economic and social effects are:

    a. It understates the adverse economic effects and effects on employment of a minimum flow regime above 450 L/s.

    b. It does not address the social cost/risks of a minimum flow regime.

    c. It understates the significant environmental and cultural gains that will result from a minimum flow of 450 l/s over the status quo.

    d. It provides a very cursory once-over of the economic and social effects of PPC5A resulting in an under-estimation of the adverse economic effects.

83. The section 32 report also fails to include an analysis of the costs and benefit of irrigators shifting water takes to alternative water sources and developing water storage, even though these are assumed to occur as part of the recommended management regime.

84. A detailed discussion of the issues with the section 32's cost benefit analysis follows.

Cost Benefit Analysis of Management of Surface Water

85. Issues with option 1's cost/benefit analysis include:

a. The current primary allocation is identified as 4002 L/s based on the sum of consented takes. This option does not acknowledge that actual use is approximately 2300 L/s, and thus presents an incomplete picture of the effect that a reduced proposed primary allocation limit might have.

b. It incorrectly states that there is no protection for mahika kai, yet these species are still present as shown in evidence of Mr Hickey.

c. It states that there is no protection for recreational values, yet recreational values do exist under the status quo, and have continued to exist throughout the history of water takes from the Lindis.

d. It fails to identify as a benefit that there is considerable certainty for making farm investment decisions, and a more reliable supply of water to enable investment in more efficient irrigation systems.

86. Issues with Option 2's cost/benefit analysis include:

a. Fails to identify the significant gains that result in increased flows from status quo.

b. States that there is no protection for mahika kai, yet these species are present under status quo.

87. Issues with Option 3's cost/benefit analysis include:

a. Overstating the benefits that option 3 will provide for natural values such as trout habitat, particularly when compared to option 2. This is discussed in detail in the evidence of Mr Hickey.

b. Economic effects have been underestimated (and addressed in a superficial manner), as outlined in the evidence of Mr Porter and Mr Collier.

c. No acknowledgement is made of the difficulties farmers will face in making "investments" in land use change, without sufficient surety of supply.

d. No social costs/risk are considered or assessed in relation to this option, even though it is likely to result in considerable social costs, as a result of adverse economic effects.

88. Issues with Option 4's cost/benefit analysis include:

    a. This should not have been included as an option as it is 'fanciful' – nothing is provided to show that it was actually considered or evaluated as an option. An option which covers a summer minimum flow of 1000 l/s or greater is meaningless, as the effects, costs and benefits of such an open ended and undefined option cannot be evaluated clearly or accurately. No information or evidence is referred to in the Section 32 report to allow any evaluation to occur. Yet this is an option that is supported by many submitters. To my knowledge no expert evidence was included with any of these submissions, and these submissions were not based on an actual assessment of this option.

    b. Many of the benefits and costs stated in option 3 are dealt with in a similar manner in relation to option 4, and the comments in relation to Option 3 apply. Economic costs/risks are again dealt with in a superficial manner, with a 5% *or greater* estimated reduction in gross margin and employment.

Section 32 (1)(b)(iii) – Summarise the reasons for deciding on the provisions.

89. While the Section 32 report does contain a summary of the reasons for deciding on the provisions, these are based on flawed evidence, as established by the expert evidence of Mr Hickey, Mr Porter and Mr Collier, or an incomplete and flawed cost benefit analysis. This results in these reasons being flawed also.

Comment on Section 32 – Section 5.4 - The reasons for the recommended management regime

90. The cost benefit analysis for the options for the surface water management regime in the Lindis is incomplete, misleading and inaccurate. This is carried through into the reasons given for the preferred management regime.

91. The reasons given for recommended surface water management regime include an assertion that economic impacts are likely to be small in an average year. I prefer the economic analysis of Mr Porter and Mr Collier, given its grounding in farming types and conditions

specific to the Lindis, and rely on it in for my analysis. Their evidence shows that caution should be applied in accepting this assertion.

92. A number of the reasons can equally be attributed to Option 2 (450 L/s minimum flow), including moves towards more efficient irrigation and maintenance and enhancement of values, particularly as compared to the status quo.

93. The reasons also include the assumption that irrigators will "transition towards the use of an alternative water source", without any acknowledgement of the issues associated with this, as highlighted earlier in my evidence.

Comment on Section 32 – Section 6 – "Detailed analysis of the recommended management regime"

94. This section contains a number of inaccuracies or misrepresents the recommended management regime when compared to other Options. These failings are addressed in the evidence presented by LCG's expert witnesses, and I will not repeat these but note that these failings go to the heart of the section 32 report, and render the report ineffective as a basis for a plan change.

95. The following planning related matters in this section are also worth noting:

    a. An assumption is made that water will be taken from alternative sources, but this aspect of the regime is not evaluated, and no criteria is provided as to which irrigators will be expected to shift their take, and no transitional provisions are considered.

    b. For irrigators who currently use water inefficiently, no recognition is made of the challenge of investing in more efficient forms of irrigation when surety of supply will be vastly reduced due to the minimum flow regime.

    c. It is incorrect to state the sinking lid approach will lead to increased surety of supply for existing primary allocation holders, when low flows during summer already restricts surety of supply, and the minimum flow will only exacerbate this.

National Policy Statement for Freshwater Management 2014 (NPSFM)

96. The NPSFM aims to recognise the national significance of fresh water by promoting the sustainable use of water, through the setting of limits based on a more nationally consistent approach that is scientifically robust.

97. The NPSFM is premised on the basis that water is and will continue to be used as a resource: sustainably; and within environmental limits.

98. This is clear from the preamble, which includes the following statements:

> "…managing land use and development activities that affect fresh water so that growth is achieved with a lower environmental footprint. This national policy statement sets out objectives and policies that direct local government to manage water in an integrated and sustainable way, while providing for economic growth within set water quantity and quality limits." (page 3 Preamble)"
>
> "setting enforceable quality and quantity limits is a key purpose of this national policy statement. This is a fundamental step to achieving environmental outcomes and creating the necessary incentives to use fresh water efficiently, while providing certainty for investment." (p4 Preamble)
>
> "the process for setting limits should be informed by the best available information and scientific and socio-economic knowledge." (page 4 Preamble)

99. Mr Hickey's evidence has established that LCG's proposal will significantly reduce the environmental footprint or impact of abstraction on the Lindis, and that it not only maintains but enhances the eco-system, amenity and natural character of the Lindis. LCG's proposal will also reduce the adverse economic effects of the minimum flow regime, and is based on robust information and knowledge.

100. This is not the case in the proposal put forward in PPC5A. The evidence of Mr Hickey, Mr Porter and Mr Collier have highlighted the issues with scientific and economic evidence which has been relied on by the ORC, and the submitters who either support PPC5A, or who seek an increase in the minimum flow. Rather than seeking a balanced outcome that will result in both effective and appropriate

environmental ***and*** economic gains, these parties appear to have focused solely on environmental gains.

101. The preamble to the NPSFM states:

> "Where changes in community behaviours are required, adjustment timeframes should be decided based on the economic effects that result from the speed of change." (p4)
>
> "where water resources are over-allocated (in terms of quality and quantity) to the point that national and local values are not met, we also need to ensure that over-allocation is reduced over agreed timeframes." (p4)

102. As outlined in the evidence of LCG's expert witnesses, PPC5A (whether as proposed by the ORC, or as proposed to be amended by LCG), will require significant changes for irrigators, and will result in adverse economic effects.

103. This was clearly highlighted to the ORC by irrigators during the consultation process prior to notification of PPC5A, yet the ORC has failed to include a suitable adjustment timeframe in PPC5A.

104. These statements in the preamble further highlight and support the need for an appropriate transition period to be included in PPC5A, as proposed by LCG. An appropriate transition period will enable Lindis irrigators to work through the massive changes required of them in a comprehensive manner.

105. I consider LCG's amended proposal to be consistent with these NPS objectives:

a. Objective B1: To safeguard the life-supporting capacity, ecosystem processes and indigenous species including their associated ecosystems of fresh water, in sustainably managing the taking, using, damming, or diverting of fresh water.

b. Objective B2: To avoid any further over-allocation of fresh water and phase out existing over-allocation.

c. Objective B3: To improve and maximise the efficient allocation and efficient use of water.

106. LCG members have expressed a commitment to increasing efficient allocation and use in the Lindis (and are required to do so under the

provisions of the RPW), and propose a management regime that will achieve the objectives above.

107. The s32 report states that the Water Plan objectives give effect to the NPSFM including by:

- setting minimum flows and allocation limits for surface water bodies;
- establishing maximum allocation limits and aquifer restriction levels for groundwater resources.

108. While RPW objectives allow for limit setting in relation to both quantity and quality this in itself does not equate to giving effect to the NPSFM. It is *how* these limits are set that is at the heart of both the NPSFM and this plan change.

109. To give effect to the NPSFM it is crucial for limits to be developed and set in a manner that is consistent with the NPSFM.

110. The starting point for this is identification of a Freshwater Management Unit (Policy CA1). No mention is made by the ORC in its section 32 report of the identification of a Freshwater Management Unit (FMU), although by default, the Lindis catchment area (as mapped in PPC5A) appears to have been treated as FMU.

111. However, a proper assessment to establish a FMU might have taken into account the social and cultural characteristics of the Lindis catchment area, and the practical issues with managing fresh water (as suggested by the Ministry for the Environment's *"A Draft Guide to identifying Freshwater Management Units Under the national policy statement for Freshwater Management 2014",* 2015). This assessment would have supported the inclusion of the Tarras Creek catchment in the Lindis catchment boundary. Those living in the Tarras Creek catchment are strongly connected to the wider Lindis catchment, as outlined in the evidence of Ms McKeague.

112. Policy CA2 requires Councils to develop objectives for FMUs taking into account a range of values, attributes and other matters in doing so. This includes the consideration of all national values, which are listed in Appendix 1 of the NPSFM. These national values are considered to be of importance to all New Zealanders and are likely to apply to all waterways. Inclusion of these values in the NPSFM does

not imply a priority over any other values, and other values may be identified (A Guide to the NPSFM 2014, MFE, August 2015).

113. Two of the national values listed in the Appendix are:

a) Mahi mara/cultivation – that the freshwater management unit meets irrigation needs for any purpose.

b) Au Putea /economic or commercial development – the freshwater management unit provides economic opportunities to people, businesses and industries.

114. The NPSFM directs that these values must be considered in the development of objectives for FMU. The section 32 report does not explicitly consider the national values listed in Appendix 1 of the NPSFM. The ORC has failed to adequately consider these values in relation to setting quantity limits for the Lindis catchment through PPC5A – as the impacts on irrigation and economic viability as a result of PPC5A have not been properly assessed.

115. To set objectives for FMU's Councils are also required by Policy CA2(f) to consider:

> *"v. any implications for resource users, people and communities arising from the freshwater objectives and associated limits including implications for actions, investments, ongoing management changes and any social, cultural or economic implications"*
>
> *vi. the timeframe required for achieving the freshwater objectives, including the ability of regional councils to set long timeframes for achieving targets"*

116. The primary allocation limit and minimum flow are clearly "associated limits" as referred to in (v) above. The ORC's consideration of the implications of the minimum flow and primary allocation limits (including for actions, investments, ongoing management changes and any social or economic implications) has been ineffective. Submitters who support the ORC's proposal or have requested a higher minimum flow (1000 l/s+) have relied on this ineffective assessment.

117. The ORC has also failed to consider the timeframes that will be required for irrigators to transition to a minimum flow regime, as set out Policy CA2(f)(vi).

118. If we assume the Lindis catchment area to be a FMU, then to implement the NPSFM, PPC5A needs to include objectives that specifically address the matters that are relevant to this FMU. Reliance on the generic objectives of the RPW, with no evaluation of the matters in Policy CA2, does not constitute implementation of the NPSFM.

119. Even if the objectives of the RPW are considered to implement the NPSFM, PPC5A fails to effectively implement the objectives of the RPW (as I discuss in relation to the RPW shortly).

Regional Policy Statement and Proposed Regional Policy Statement

120. Both the RPS and the Proposed RPS include objectives which focus on enabling sustainable and efficient use while also maintaining, enhancing and protecting values associated with waterways, including iwi values, and include policies to achieve these.

121. The ORC's proposal, and submitters who are seeking a higher minimum flow, have given emphasis to environmental protection, without robust consideration of the impact on people and communities reliant on Lindis water. This approach is not supported by the RPS or the proposed RPS, both of which seek to acknowledge and enable sustainable and efficient use of freshwater, within environmental constraints.

122. From a planning perspective LCG's proposal is consistent with both the RPS and the proposed RPS, in that it will enhance and protect the natural, environmental and cultural values associated with the Lindis, while also providing for the needs (although still at some cost) of the farmers and the local community.

RPW

Failure to implement RPW Objectives

123. PPC5A does not implement all of the relevant objectives of the RPW. It implements objectives associated with cultural and environmental values (for example Objectives 5.3.2, 5.3.4, 6.3.1).

124. While PPC5A provisions must implement these objectives, it should not ignore other relevant objectives, including:

"Objective 5.3.6: To provide for the sustainable use and development of Otago's water bodies, and the beds and margins of Otago's lakes and rivers.

Objective 6.3.2: To provide for the water needs of Otago's primary and secondary industries and community domestic water supplies.

Objective 6.3.4: To maximise the opportunity for diverse consumptive uses of water which is available for taking."

125. The ORC and submitters who support PPC5A, or who want the minimum flow increased have relied on or interpreted the report by BERL to reach the incorrect conclusion that there would be little adverse economic effect from a minimum flow of 750 l/s or greater.

126. As a result, the ORC and submitters who support PPC5A, or who want the minimum flow increased, have ended up prioritising one side of this equation – environmental, without real or robust consideration of the needs of irrigators in the Lindis.

Policies of RPW

127. PPC5A must also be considered in light of the existing policies of the RPW, as an understanding of these policies is critical to understanding the process irrigators in the Lindis need to go through in upcoming years. Understanding this highlights the need for the transition package that LCG propose.

RPW and Deemed Permit Replacements

128. Under PPC5A and the existing RPW's policies and rules, as irrigators come to renew their deemed permits under Rule 12.1.4.4 and 12.1.4.8, their application will be assessed on the matters of discretion listed in Rule 12.1.4.8, which link to a number of policies.

129. The policies in Section 6 the RPW form a framework which aims to reduce over-allocation, increase efficiency of use and safeguard the life-supporting capacity and natural character of Otago's water resources.

130. As a starting point, irrigators applying to replace their deemed permit will be assessed based on whether their water take (or what portion of their take) is considered to have primary allocation status. Under PPC5A these water users have considerable uncertainty about what

proportion of their water might be considered to have primary allocation status.

131. Applicants will be required to show that they are using, or will be using water efficiently (Policy 6.4.0A). It is my understanding that LCG are committed to increasing the efficiency of their irrigation systems, including the conveyance and application of water. This is a necessary change, but one that will require a huge investment and considerable time, within a context of reduced availability as a result of a minimum flow regime.

132. Their application will be assessed to see whether they could be taking water from an alternative water source (as is emphasised in the section 32 report). Policy 6.4.0C gives a clear preference to taking water from the nearest practicable source, and keeping water for local use. The 'Principal Reason for Adopting' for this policy makes it clear that in water short areas, the nearest practicable source may be a larger body of water with a more reliable supply.

133. Beyond this statement however, the policy provides very little guidance on how to determine what is the 'nearest practicable source', beyond a generic statement that the economic, social, environmental and cultural effects of taking water from different available water sources will be considered.

134. This leaves Lindis irrigators in considerable uncertainty. Will their application to replace their deemed permit be turned down because decision makers think they should be taking water from the Clutha River or an aquifer? Should they be investing in improving their intake structures from the Lindis, or should they look at investing in conveyance from the Clutha?

135. As discussed earlier in my evidence, shifting a water take to the Clutha is likely to involve a range of challenges.

136. Overall, once the irrigators know what the minimum flow regime is, they will then need a substantial period of time to be able to successfully undertake these changes and adjust to a minimum flow regime. A period of approximately 10 years is being proposed by LCG and is considered reasonable and appropriate, given the complexity and scale of change required, as outlined in the evidence of Ms McKeague.

Wider Otago Context

137. The uncertain and expensive process of replacing deemed permits must also be considered within the wider Otago context. Large numbers of deemed permits, mining rights and water permits need to be replaced by 2021 (my understanding is that this figure is in excess of 1000).

138. Many of these relate to waterways with no minimum flow, which means that the ORC should be directing a lot of resources to set minimum flows and residual flows in waterways across Otago. Given it has taken over 6 years to get this stage of setting a minimum flow for the Lindis, the ORC is likely to be incredibly stretched. This will exacerbate issues with replacing deemed permits in the Lindis catchment.

ORC rejected transition package

139. The need for a transition package of provisions to address these issues and the complex change required by Lindis irrigators was highlighted to the ORC during the consultation associated with the development of PPC5A. Based on the Think Tank discussions held by a number of stakeholders involved in the process (as described in the evidence of Mr Martin), Otago Fish and Game Council (with the agreement of LCG) presented a number of provisions to be included in the RPW – these provisions were aimed at facilitating the transition to a minimum flow regime, and enabling changes and works to improve instream flows.

140. The ORC rejected the need for a tailored transition package of provisions on the basis that the RPW already contains a number of provisions which were sufficient for facilitating the transition. These were:

    a. The granting of short term consents or staged consents, where transitional arrangement or measures can be accommodated through consent condition framework (Rule 12.1.4.8(xx) and Policy 6.4.19).

    b. The granting of consents with variable rates of take to enable flushing flows (Rule 12.1.4.8(ii))

    c. The granting of consents that enable water management within a collective structure (Rule 12.1.4.8(xviii), Policy 6.4.12A).

d. That Chapter 5 includes provisions which allow for consideration of positive effects on values from carrying out activities in the bed of the river.

141. My understanding is that LCG are likely to make use of the matters in (b) and (c) – but these are just one part of the equation.

142. With regard to (a), the granting of short term consents is not helpful and leaves us in the same position as a simple time expansion, but at significantly greater cost and time. The time, money and energy that this will take would be much better focused on the all the changes required to properly replace deemed permits and comply with the minimum flow regime.

143. Staged consents may well be of use in relation to the Lindis catchment, but *in combination* with a longer time period for the implementation of the minimum flow. An implementation date of 2026 makes the end point very clear, and staged consents can support the transition towards this deadline.

144. If stakeholders agree that there are significant positive effects from carrying out channel management works, and any adverse effects can be managed so that they are only minimal, then it makes sense to include a permitted activity rule to allow for such work to happen. There are several such rules in the plan already, and the rule proposed later in my evidence is based on these.

145. The ORC also rejected a longer timeframe for the implementation of the minimum flow regime on the basis that this would create an undesirable precedent, which other catchments would also request. This does not align with what is contemplated in the NPSFM, which allows local factors (relevant to a FMU) to be considered in relation to timeframes.

146. The evidence of Mr Martin and Ms McKeague has highlighted the unique characteristics of the Lindis catchment. Any other catchment would need to mount an argument on its own merits – if they too had compounding reasons for a different approach, there would no reason that a special approach shouldn't be adopted for that catchment too\.

147. Indeed the minimum flow plan change process to introduce minimum flows for Otago catchments is premised on the basis that each catchment is different, and the specific factors associated with that catchment should be taken into account – this must surely include an

acknowledgement of the change in use or systems required to make compliance with the minimum flow achievable. A tailored approach to a catchment, or waterways, as a defined Freshwater Management Unit, is also required by the NPSFM.

Transition Package of Provisions

148. My evidence has highlighted throughout that simply slotting the Lindis catchment into Schedule 2A and applying existing objectives and policies to the situation in the Lindis is inappropriate – it fails to recognise the complexity and breadth of changes that need to be made to replace deemed permits and comply with a minimum flow regime.

149. The ORC's rejection of a transition package during the development of PPC5A is not based on a realistic assessment of the needs of the Lindis catchment, and the limitations of, or gaps in, the existing RPW provisions.

150. On this basis, I have developed a number of new provisions which aim to streamline consenting without compromising values as well as providing a reasonable timeframe so that changes can be made in a cohesive and effective manner. They also lessen the uncertainty associated with making changes (such as shifting takes to the Clutha), in order to facilitate these changes. They are provided as examples of the types of provisions that would assist with a holistic approach to the management of flows in the Lindis.

Proposed Transition Provisions:

151. The following provisions address the transition process, and aim to provide greater certainty and flexibility, while streamlining consenting.

152. Policy 1 proposes a reasonable timeframe before the minimum flow applies (October 2026) to enable:

a. the significant and complex changes to irrigation infrastructure that are required to adjust to a minimum flow regime

b. mitigation measures that will also reduce the impact of abstraction on flow levels, including shifting and splitting up existing points of take

c. the development of an appropriate legal structure for managing irrigation /the replacement of deemed permits.

153. Policies 2 and 3 aim to streamline the process of replacing deemed consents. Policy 2 makes it clear that a residual flow will not be considered for takes on the main stem of the Lindis, on the basis that the values associated with the main steam have been thoroughly examined and debated and will be protected by the minimum flow, and have been recognised and protected through this plan change process. This means that these values do not need to be re-litigated at the time replacement consents are applied for.

154. Policy 3 requires the recognition of the positive effects that will result from changes to infrastructure. This policy will be relevant to the controlled activity rule to replace existing primary allocation takes, in terms of the conditions that are applied.

155. Policy 4 provides for consents to be granted with conditions that protect values associated with the Lindis, improve river management and ensure efficient water use while also allowing sufficient flexibility for Lindis irrigators to develop irrigation infrastructure which is effective for their needs. The proposed river management and changes to intake setup will benefit aquatic eco-system health and natural character.

156. Controlled activity rules are proposed for transfers of primary allocation takes to the Clutha River, or replacement of existing primary allocation surface water allocation on the Lindis River's main stem. This is an enabling, effects based approach that is consistent with the RMA. This approach recognises that these are existing water takes within primary allocation and within the Clutha catchment – it is just shifting water abstraction within the catchment, to a larger body of water.

157. The size of the Clutha River means that the transfer of takes from the Lindis catchment will have minimal effects – if there are any effects then these can be managed entirely through conditions – for example efficiency of use can be addressed through the rate and volume of abstractions, localised effects from the take can be addressed through the location and infrastructure of the in-take structure and system.

158. There is a very low likelihood of any potential effect on instream values and natural character from shifting Lindis takes given the size of the Clutha River. This possibility should be addressed through a minimum flow process.

159. There are many challenges involved with shifting takes to the Clutha, as outlined in my evidence. By making the shifting of takes a controlled activity and enabling retention of primary allocation status, the consenting challenges would be significantly lessened, and the likelihood of irrigators pursuing this option would be increased. This would result in a reduction in abstraction from the Lindis catchment.

New Policy 1:

The minimum flow for the Lindis catchment area will apply to resource consents for the taking of water as follows:

a) *In the case of new takes applied for after 1 May 2016, upon granting of the consent*
b) *In the case of existing resource consents, on 31st of October 2026.*

Explanation

This policy provides for the application of minimum flows in the Lindis catchment to consents as follows:

1. New takes are subject to minimum flow provisions when the consent is granted.

2. The minimum flows will not apply to existing resource consents until 31st of October 2026, on the basis that significant changes to infrastructure is required to enable the minimum flow to be met and to allow mitigation measures, including the location of points of take, to be implemented which will also reduce the impact of abstraction on flow levels.

New Policy 2:

In the Lindis catchment area, as shown on Maps X and X, the need to maintain a residual flow at the point of take will only be considered for takes situated on the tributaries of the Lindis River, in order to provide for the:

(a) aquatic eco-system; and

(b) natural character;

of the source tributary, but no residual flows will be applied to takes situated on the main stem of the Lindis.

Explanation

This policy acknowledges that the values associated with the mainstem of the Lindis are acknowledged and protected through the minimum flow set for the Lindis. The values associated with the tributaries can differ from that of the main stem, and so a residual flow may be necessary to protect these values.

New Policy 3

In considering a consent application to take and use water from the Lindis catchment area the consent authority will recognise the positive environmental effects that will result from the disestablishment of the Tarras, Ardgour or Begg's Race's and:

a) shifting the intakes sites for these takes further downstream;
b) establishing piped and screened take infrastructure; and
c) abstracting at lower instantaneous rate.

New Policy 4: Group Management Water in the Lindis Catchment

When granting a consent to take surface water in the Lindis Catchment Area that will result in all of the taking and use of surface water from the main stem (that is being taken, or is proposed to be taken in the consent application) being managed by a Water Management Group, the consent authority will:

a) Include a condition of consent that only specifies the total volume and abstraction rate for all takes included in the application, rather than the individual rates of abstraction and total volume for each point of take
b) Include a condition of consent specifying the general location for an unspecified number of proposed points of take, but requiring notification of the specific location for any points of take once established, and notification once all points of take are established.
c) Provide for a suitable lapse period after the date of commencement of the consent period.
d) Include a condition requiring metering to be installed.

Transfer of takes from Lindis to Clutha/Aquifer as a Controlled Activity:

New Rule 1: Controlled activity: Consent required but always granted

Unless covered by Rule 12.1.1A.1, the transfer of surface water as primary allocation, applied for prior to 28 February 1998, from the Lindis Catchment to

the Clutha catchment area or any alternative source aquifer where water is available to be taken as primary allocation is a controlled activity.

In granting any resource consent for the taking and use of surface water in terms of this rule, the Otago Regional Council will restrict the exercise of its control to the following:

(a) The effect of the intake structure and system on aquatic eco-system values

(b) The effect of the intake structure and system on natural character

(c) The intake structure and system, including its installation, operation and maintenance;

(d) The location of the point of take;

(e) The efficiency of the proposed use of the water; and

(f) The monitoring of the take.

The Consent Authority is precluded from giving public and limited notification of an application for a resource consent under this rule.

Replacement of existing consents for primary allocation surface water as a Controlled Activity

New Rule 2: *Unless covered by Rule 12.1.1A.1, the taking of surface water as primary allocation, originally applied for prior to 28 February 1998, from the main stem of the Lindis River is a controlled activity.*

In granting any resource consent for the taking and use of surface water in terms of this rule, the Otago Regional Council will restrict the exercise of its control to the following:

(a) The effect of the intake structure and system on aquatic eco-system values

(b) The effect of the intake structure and system on natural character

(c) The intake structure and system, including its installation, operation and maintenance;

(d) The location of the point of take;

(e) The total rate of abstraction and total volume to be abstracted per annum

(f) The efficiency of the proposed use of the water

(g) The monitoring of the take

The Consent Authority is precluded from giving public and limited notification of an application for a resource consent under this rule.

Conditions that may be imposed include:

a) the total volume and abstraction rate for all takes included in the application
b) the general location for an unspecified number of proposed points of take, but requiring notification of the specific location for any points of take once established, and notification once all points of take are established.
c) A longer lapse period to allow sufficient time for planning and development
d) monitoring requirements
e) fish screening of the intake structure

New Rule 3: Controlled activity: Consent required but always granted

Unless covered by Rule 12.1.1A.1, the taking of surface water as primary allocation, originally applied for prior to 28 February 1998, from tributaries of the Lindis River is a controlled activity.

In granting any resource consent for the taking and use of surface water in terms of this rule, the Otago Regional Council will restrict the exercise of its control to the following:

(a) The effect on aquatic eco-system values
(b) The effect on natural character
(c) The intake structure and system, including its installation, operation and maintenance;
(d) The location of the point of take;
(e) The efficiency of the proposed use of the water; and
(f) The monitoring of the take.

The Consent Authority is precluded from giving public and limited notification of an application for a resource consent under this rule.

Proposed Channel Management Provisions:

160. A new issue, objective and permitted activity rule, or as an alternative, a new controlled activity rule are included to allow for channel management works to take place. These provisions recognise that the

build-up of gravels in the bed of the Lindis can exacerbate dryness of the bed or loss of flow, as explained in the evidence of Ms McKeague.

161. The permitted activity rule for channel management works (see Rule 4A) is based on the permitted activity rules in the RPW for similar work. The bed of the Lindis will be dry when any such work begins, which means that the effects can easily be managed so as to be minor. A controlled activity rule (see Rule 4B) is included as an alternative option, so that effects can be managed through consent conditions. If necessary either one of these rules could refer specifically to the Lindis River, or even the particular stretch of the Lindis River.

New Issue 1 (Chapter 8 of RPW)

Natural processes, including the movement and deposition of alluvium and the spread of pest plant species can reduce habitat and adversely impact on eco-system values.

New Objective 1 (Chapter 8 of RPW)

To maintain a wet-bed within waterway which supports eco-system values, including habitat.

Permitted Activity Rule for Channel Management Works (Chapter 13 of RPW)

New Rule 4A: *The disturbance of the bed of any river for the purpose of clearing any material that has accumulated, including alluvium, in order to maintain flows and water levels within the river for the purpose of sustaining or enhancing fish/trout/instream habitat, is a permitted activity, providing:*

(a) The bed disturbance is limited to the extent necessary to reinstate a wet channel; and

(b) The bed disturbance and re-distribution of material does not cause any flooding or erosion; and

(c) The time necessary to carry out and complete the whole of the work within the wetted bed does not exceed 10 hours in duration; or when the bed is not wet at the commencement of work, the whole of the work does not exceed 20 hours in duration

(d) All reasonable steps are taken to minimise the release of sediment to the lake or river during the activity, and there is no conspicuous change in the colour or visual clarity of the water body beyond a distance of 200 metres downstream of the disturbance; and

(d) The activity is not carried out within 20 metres of any structure which has foundations in the river bed, or any ford or pipeline; and

(e) No lawful take of water is adversely affected as a result of the bed disturbance; and

(f) No material is taken directly from the bank or from any defence against water.

(g) No removal or extraction of alluvium occurs except as provided for by Rule 13.5.1.6, all other alluvium disturbed by the activity will be re-distributed as close to the site as possible in a manner that retains the natural character of the bed as far as practicable; and

(f) The site is left tidy following completion of the activity.

OR

Controlled Activity Rule for channel management works

New Rule 4B: Controlled activity: Consent required but always granted

The disturbance of the bed of any river for the purpose of clearing any material that has accumulated, including alluvium, in order to maintain flows and water levels within the river for the purpose of sustaining or enhancing fish/trout/instream habitat, is a controlled activity.

In granting any resource consent for the disturbance of the bed of any river in terms of this rule, the Otago Regional Council will restrict the exercise of its control to the following:

- *(a) The effect on aquatic eco-system values, including positive effects*
- *(b) The effect on natural character;*
- *(c) The effect on any structure, or water take;*
- *(d) Avoiding or minimising the potential for the works to result in flooding or erosion;*
- *(e) The effect of the work on water quality, including water clarity*
- *(f) The monitoring of the take.*

The Consent Authority is precluded from giving public and limited notification of an application for a resource consent under this rule.

Amendments to PPC5A

162. LCG also seek the following amendments to PPC5A:

a. a primary allocation limit of 1900 L/s

b. the minimum flow of 450 L/s (October to May) for the surface water of the Lindis River

c. no restriction of winter takes from aquifers

d. mapping the true catchment boundary of the Lindis River in the B-series of the Water Plan maps

CONCLUSION

163. Legislation and planning documents are not about resource use and economic well-being OR protection of the environment, natural and cultural values. The NPSFM emphasises this by setting out objectives and policies that enable resource use which allows for economic growth *within* scientifically robust environmental limits.

164. None of the planning instruments relevant here require use of resources that results in absolute environmental protection, or optimal environmental conditions. Instead they require use of resources to be sustainable. To understand what is sustainable – including in terms of economic well-being and safeguarding the life-supporting capacity of the Lindis catchment – a sophisticated, thorough assessment needs to be made on the basis of robust information.

165. These are the key points that inform this assessment, from the evidence of LCG's expert witnesses and from a planning perspective:

a. The RPW recognises and protects the existing lawful uses of water;

b. status quo in the Lindis catchment already sustains a range of eco-system values;

c. a minimum flow of 450 l/s will significantly enhance these values;

d. in stream flows in the Lindis will be enhanced through channel management works and changes to intakes – this will further enhance a range of eco-system values;

e. a minimum flow of 750 l/s will result in only minimal improvements beyond a minimum flow of 450 l/s;

f. a minimum flow of 750 l/s will have significant adverse economic effects on irrigators, to the point of threatening the viability of farms in the Lindis.

g. a primary allocation of 1900l/s reflects an efficient use of the water currently abstracted;

h. the RPW supports a primary allocation limit that recognises existing use and the needs of water users.

i. the changes required of irrigators in the Lindis catchment are incredibly complex – this change can be streamlined and facilitated through provisions tailored specifically for the Lindis;

j. there is insufficient evidence of adverse effects on water availability for Contact Energy to justify a restriction of winter takes from aquifers;

k. the NPSFM supports a tailored approach to the Lindis catchment area (as a Freshwater Management Unit), including timeframes that are appropriate to the scale of change required, and an approach that acknowledge the complexity and scale of the changes that are required

166. From a planning perspective these factors support the proposed approach of LCG as being an effective weighing up or balancing of both economic and environmental factors, and achieving sustainable management of the Lindis catchment.

Dated this 18 day of March 2016

Sally Dicey