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

Statement of
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Response to Commissioner Questions
ON BEHALF OF THE LINDIS CATCHMENT GROUP LTD
Presented to hearing panel on 6 April 2016

I want to attempt to clarify and explain some points that have arisen from questions by Commissioners in a bracket of issues? These issues are:

1. How can the new irrigation scheme be assisted in development/implementation?
2. What is the logic for the LCG 1900l/s primary allocation as an efficient use of water?
3. Why are the maps separating part of the geographical catchment from the Lindis river a problem?

By expanded explanation of the evidence already placed before you I will seek to answer these questions in what I hope will be a helpful and logical explanatory sequence.

The future scheme vision.

a) The losses of water from open races is significant within the existing LIC scheme. These losses are not just evaporative losses over a very substantial race system but also losses due to leakage. The races traverse some fragile scarps and this additionally exposes the races to movement and leakage, to the point of risk of land instability driven failure.
b) The LCG does not see this race system loss as likely to be lawfully able to be continued under current water use rules and societal expectations in a water short zone.
c) Additionally the races merely convey water that for efficient application as irrigation will require pressurising. Efficient water application systems require pressurised water.

d) Pressurising water requires pumping.
e) Placing these factors together suggests that considerable water loss reduction, pumping systems resilience and farm management choices is best achieved by local pumping by nearby riverside pumping.
f) Distributed localised riverside pumping allows environmental gains from in-river conveyance of water between the present intake location to the lower catchment zones of water use.
g) While localised pumping facilities, intakes and/or pipe conveyance facilities may be agreed to be shared by two or more users, this is not required. That allows mutual cost benefits to be derived and/or differing re-development timetables to be accommodated.
h) This vision is of a new irrigation system that is not a connected and community owned infrastructure scheme in the traditional sense of an irrigation scheme. The vision is probably best described as a **notional irrigation scheme**.
i) In this notional irrigation scheme it is anticipated to be a coordinated system of individually owned abstraction systems that are managed collectively for rostering and rationing to meet the requirements of primary allocation limits, supplementary allocation limits and minimum flow compliance. These factors are anticipated to be under an ORC approved management Group. That group is planned to be the LCG.
j) The distributed water intakes of the notional scheme would necessarily have to be placed to withstand flood pressures, assure water access at the driest of times, and have conveyance access for pipes, power and service.
k) These requirements mean that the intakes will be in the alluvium strongly connected to the river surface water but buffered from scour and silting, and thus be using the storativity of the ribbon aquifer and not making noticeable effect on river flows.
l) As a **notional scheme** rather than a convention connected scheme its development is highly unlikely to qualify for any scheme assessment and design grant funding from the Crown.
m) The former Tarras Water Limited proposal was a connected scheme, did receive some Crown grant funding for assessment and design, but did not proceed.

Water options in the Tarras Ardgour zone: deleting plan maps

n) The failure of the TWL scheme did cause a number of farmers to undertake partnership developments. Those developments have in all practical effect closed off the opportunity for a connected scheme proposition in the Tarras/ Ardgour areas and left a number of properties stranded from Clutha water.
o) It must be noted that those properties accessing water from the Clutha typically have rights to the Lindis which is part of their overall water strategy. Clutha water at higher elevations is very costly.
p) Lindis water is therefore needed in the Tarras Ardgour area and is seen by the LCG as a coherent part of what should be the Lindis Water Management Unit without subdivision by the mapped zones proposed in PPC5A.

Analysis deriving efficient primary allocation

q) Reduction of over allocation is a requirement of the NPFW.
r) Over allocation has been described in a variety of ways over the life of the RMA. The key point is that over allocation is an allocation outcome that causes excessive damage to the values of the resource, dependent community and catchment environs.
s) The fundamental avoidance of over allocation is by the application of minimum flow regimes. Control in this way is supported by the LCG, but with some dynamic options rather than just the adoption of a single flow figure.
t) The primary and supplementary allocations are mechanisms to provide flow sharing between abstractive uses and riverine environmental values as flows rise.
u) The selection of a primary allocation, along with the minimum flow regime, determines the reliability of the abstractive availability.
v) Raising the minimum flow removes reliable water from abstractive use. Lowering the primary allocation increases the availability of reliable water to those holding primary allocation, but reduces the reliability of the available water for those moved to supplementary allocation.
w) In my evidence I have identified that to be effective, regulatory plans must be able to be practically implemented. Therein lies the challenge to understand the context of the plan operation, to see the consequences of the plan operation, and then to identify the practicability of the plan.
x) The LCG has expressed its support for a minimum flow of 450l/s, recommended that the LIC irrigation scheme be closed and that a distributed notional scheme replace it, and that a primary allocation of 1900l/s be applied.
y) The first two steps of these three directly and very positively and generously deal to the over allocation issues to maximum practicable extent for dependent irrigators and other abstractive water users. This also recognises that efficient water use must be pursued in water uses.
z) However in replacement of deemed permits and in the renewal of RMA consents Council will need to apportion the primary allocation.
aa) The portion of the notional scheme replacing the existing LIC scheme will be dependant on gaining replacement consent for its deemed permits, as will all other deemed permit dependant irrigation.
bb) In the case of the LIC members the new consents will in time need to be “unit titled” or divided to the owners of the new intake structures and systems – probity required surety for banking arrangements to finance development.
cc) This subdivision will require an apportioning of permissible flow rate, volumes and primary allocation as may be granted in the replacement consents.
dd) The LCG has therefore addressed the problem of how to apportion primary allocation in a fair and equitable way.

ee) Those who have invested in new efficient irrigation systems will be disadvantaged if they cannot hold entitlements similar to their investment decision rights.

ff) Those who have not yet been able to invest in efficient irrigation systems should not be penalised for their future investments just because they are not first out of the blocks for making change.

gg) Any actual or perceived injustice in apportioning the primary allocation must be avoided if the plan is to be effective.

hh) Given these implementation difficulties, and in anticipation of a Catchment coordinated suite of applications for replacement of deemed permits the LCG has determined that the primary allocation is not less than 1900l/s

ii) The 1900l/s is itself derived as being the present actual take of the current primary allocation *less* the portion of that take that is lost in water conveyance.

jj) That means the recommended minimum level for the new primary allocation will reduce the existing primary allocation by both (a) the amount of the lawful abstraction rights above the current actual abstraction facility capability, and (b) the current conveyance loss.

kk) This derivation of a workable primary allocation will not provide increase in reliable water for any user, nor a decrease for any user.

ll) Will drive incentive for efficiency in conveyance.

mm) Will not retain a primary allocation amount that could conceivably be increased in utilisation into the future.

nn) Will cause a deprivation to all users of the water previously available to all users beyond the primary and prior to accessibility to the supplementary allocation blocks of water.

Conjoined policy to help attainment of plan objectives.

oo) Helpful conjoined policy would be anything that provides assistance, incentive, or time/cost support to implement change.

pp) Ideally public policy giving such outcomes should not be captured by select individuals but give collective community benefits both to those who have to make change and to those who benefit from change.

qq) In this case the wider public and environmental and Iwi benefit accrue from an earlier delivery of plan outcomes and those who have to make change are the water uses in aggregate.

rr) A primary conjoined policy that would be of enormous benefit would be hydrological and engineering research as to where and how to best place distributed water intakes, as described in points j) and k) above, within the lower catchment. This would provide a knowledge incentive as well as community cost incentive and a time reduction (if delivered promptly)

ss) Another conjoined policy would be a legal and engineering analysis as to support the derivation of a possible closure policy and programme schedule for closure and decommissioning of the existing LIC scheme. Knowing risks, how to accomplish and costs to accomplish would, with suggestion rr) above create an environment of knowledge to change. Together they would move

theoretical ideas to concrete conceptualisation. The impetus of this would be enormous and very helpful to getting earliest practicable consent application lodgement.

tt) These research project results need to be able to be relied upon by all parties, especially the Regional Council and the irrigators. Thus they are best undertaken under an agreed brief and jointly overseen by key interest parties.