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I. INTRODUCTION

1. In respect to the economic impacts of minimum flows, Federated Farmers has reviewed the March 2015 report to Otago Regional Council, '*Economic impacts of minimum flow regimes on the Lindis River*' (the BERL report). We compare the conclusions of this report against the evidence of George Collier and Grant Porter on behalf of the Lindis Catchment Group Ltd.

2. Our purpose in reviewing the initial economic impacts assessment from BERL and comparing this with the evidence put forward on behalf of the Lindis Catchment Group Ltd is to ascertain whether the BERL report:

   a. sufficiently accounts for the economic impacts of the proposed minimum flow for the Lindis River on the affected farmers, and District and Regional economies, including an assessment of the relevant costs and benefits, and;
   b. sufficiently accounts for the marginal economic impacts between the proposed minimum flow of 750 l/s, against the minimum flow sought by the Lindis Catchment Group Ltd (450 l/s) and that of the majority of submitters seeking a higher minimum flow (1,000 l/s), and;
   c. provides a sufficient basis to inform decision making on the economic implications of adopting the proposed minimum flow, or the alternative minimum flows sought, and;
   d. provides a robust, clearly articulated analysis that is proportionate to the socioeconomic significance of the minimum flow process to the residents of the Lindis catchment, District and Region, and;
   e. plays a part in appropriately informing the requirements under S32 of the RMA to demonstrate that the proposed minimum is the most appropriate

approach to achieving the objectives of the relevant regional planning documents and the RMA more generally.

3. As we expand upon further in this statement, we do not consider the BERL report is sufficiently broad nor robust enough to meet these requirements. In particular we do not consider the report sufficiently justifies the overall conclusion that while the imposition of minimum flows would have some negative bearing on economic activity in the catchment, District and Region, the magnitude of the impact would be relatively small in an average year. [1]

4. Federated Farmers also considers that the more robust evidence of George Collier and Grant Porter on behalf of the Lindis Catchment Group Ltd, in combination, raises further and significant doubts over the conclusions reached by the BERL report.

5. Federated Farmers does not consider the assessment of the economic impacts of setting a proposed minimum flow at 750 ls sufficiently considers the impacts on the affected farmers, or the district and regional economies. Subsequently, Federated Farmers does not consider the assessment of economic impacts sufficient to inform decision making on what constitutes an appropriate minimum flow for the Lindis River.

II. ECONOMIC IMPACTS ASSESSMENT OF MINIMUM FLOWS

6. <u>'Economic impacts of minimum flow regimes on the Lindis River' (the BERL report)</u> – Our first concern is, as acknowledged at section 1.2 of the BERL report which discusses the limitations of the analysis, the analysis informing the report's conclusions is not based on detailed surveys of actual land use, production levels, and economic impacts of actual present production in the relevant areas of the catchment. The consequence is that the production characteristics of pastoral farm types within the catchment have been assumed, based on those farming operations deemed to be most similar from existing pastoral farm models for the critical section *2.2 Current pastoral production estimates with irrigation*.

7. Given the specific and unique nature of pastoral land use drawing irrigation from the Lindis River, reliance on existing pastoral farm models rather than surveys of actual land use and production levels creates room for significant error in the estimation of economic impacts. In particular, the use of coefficients derived from *the Beef&Lamb NZ Class 5, North Island Beef farming – intensive finishing* as a means of estimating

[1] BERL report, page 2 of the Executive Summary

the impacts on the area's high reliance on Beef farming leaves room for significant error in the subsequent economic estimates. This is a gap identified in the evidence of Mr Collier.

8. The more significant gap in the assessment of the economic impact estimates of the minimum flows contained within the BERL report relate to the report's sole focus on those land areas exclusively dependent on the Lindis catchment for their irrigation needs. The consequence is that those land areas which are able to draw from the Clutha River or aquifer are excluded from the analysis. It is instead assumed that these areas will draw from the Clutha River or aquifer, with no testing of this assumption or the feasibility of doing so. It is instead assumed that these areas would be able to continue regardless of any minimum flows in the Lindis catchment.

9. The result is that the economic impacts assessment considers only the economic impacts of the proposed minimum flow on the "Lindis-dependent area" which excludes large areas of land that are able to be irrigated from the Lindis river. The BERL report refers to these areas as Command area 13.362 and Command area 13.451, both of which can be irrigated by either water from the Lindis catchment or from the Clutha River.

10. The BERL report's exclusion of these areas makes a number of assumptions. The first is that sufficient water remains available from the Clutha for these areas to draw upon. In the specific Lindis context this may be accurate; however if the default assumption of every minimum flow process across the Otago region is that any water lost to minimum flows will simply be drawn from the Clutha River, the reasonableness of this assumption should be at least tested. The second important assumption, indeed exclusion, from the economic impact assessment is that it is financially viable for land users in Command area 13.362 and Command area 13.451 to invest in the required irrigation infrastructure and regulatory compliance costs to draw water from the Clutha for irrigation purposes. If it is not financially viable based on reasonable farm production returns, then it is not a reasonable option. If it is financially viable, but the marginal costs of using water from the Clutha significantly exceed the marginal costs of drawing water from the Lindis, then these marginal costs should be accounted for in respect to the economic impacts of the various minimum flows considered.

11. Related to this assumption, the BERL report assumes that an inability to irrigate from the Lindis will not necessitate significant land use change in Command area 13.362 and Command area 13.451. If the current and expected future land uses in

these areas are predicated upon the use of water from the Lindis, and there is no feasible option to draw from the Clutha, then those land uses are simply unfeasible, creating significant additional economic impacts. The BERL report provides no attempt to inform decision makers in respect to these very relevant areas.

12. Additionally, Federated Farmers is concerned with the BERL report's specific reference to the impact in an average year in the conclusion to the report. The report concludes that "*the imposition of minimum flows would have some negative bearing on economic activity in the catchment, District and Region, but that the magnitude of the impact would be relatively small* <u>*in an average year*</u> (emphasis ours).[2] The report discusses the frequency with which the naturalised flows of the Lindis catchment diminish or dry up to the extent that water takes are already subject to substantial fluctuations and natural restrictions. However, the report does not appropriately discuss how irrigators respond to these naturally occurring dry periods and the subsequent lack of irrigation. If, for instance, irrigators are able to buffer themselves against the financial impacts of the naturally occurring drier periods by relying on the better years, then the increasing frequency of drier years as a result of the proposed minimum flow may result in a shift to the extent that this financial buffering is not feasible for a prolonged period. In other words, the minimum flow in addition to the naturally occurring dry periods may be a financial tipping point. This possibility, and the related assumption that an assessment of the economic impacts in 'an average year' is not discussed or tested sufficiently, yet provides the foundation for the report's recommendations.

13. The BERL report also argues the impact of further drier years can be addressed through greater water storage infrastructure, but the financial viability of the storage options considered is not sufficiently tested in the report. Nor does the BERL report consider the feasible timeframes for the construction and adoption of infrastructure associated with water storage or alternative irrigation sources, which is a material concern raised by Sally Dicey on behalf of the Lindis Catchment Group Limited. The requirement to make these investments before 2021 will have a material impact on the economic feasibility of these options, yet this is not discussed in the BERL report.

14. In respect to the downstream economic benefits of various production, Federated Farmers questions why there has been no acknowledgement of the specific reliance

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on primary production. A BERL report, *Otago Economic Overview* 2012 outlines that primary production *directly* accounts for:

a. 31.3% of FTEs in the District

b. 30.9% of the District's GDP

c. 28.28% of the District's business units

15. Focussing specifically on FTEs, Central Otago is comparatively more reliant on primary production (at 31.3%) than both the Otago region (11.7%) and New Zealand as a whole (7.7%). In addition to this *direct* contribution, a significant proportion of the other economic activity within the Central Otago District will indirectly stem from primary production activity; particularly construction activities, retail trade and services, and business services.

16. This relatively greater reliance on primary production in the District will mean that there may well be a greater reliance on the primary sector for many of the businesses and jobs, particularly in the District but also in respect to the wider region. Federated Farmers does not believe this relative reliance has been appropriately considered in the BERL report's assessment of the downstream economic impacts of the proposed minimum flow. [3]

17. In short, Federated Farmers does not consider the BERL report is sufficiently robust to justify the report's overall conclusion that the magnitude of economic impact as a result of the proposed minimum flow will 'be relatively small in an average year'. In addition, we do not consider the BERL report sufficiently robust for the purposes of informing the Lindis River minimum flow process.

18. <u>Evidence of George Collier on behalf of the Lindis Catchment Group Ltd</u> – Federated Farmers considers the evidence provided by George Collier better explains the likely economic impact of the proposed minimum flow for the land uses drawing water for irrigation from the Lindis River, and the impact on the District and Regional economies. Federated Farmers notes that the evidence provided by Mr Collier seeks to fill a number of the gaps Federated Farmers has identified in the BERL report, assessing the economic impacts in a manner that is more specific to the Lindis catchment, the Central Otago District and the Otago region. In particular we

[3] BERL Economics, "Otago Economic Overview 2012", May 2013

note the significant differences between both the multipliers used to estimate the economic impacts of the various minimum flows considered, and the significantly different outcomes estimated by Mr Collier when compared to the conclusions reached in the BERL report.

19. We support Mr Collier's inclusion of land currently irrigated from the Lindis catchment, which may also be irrigated from the Clutha, in respect to Mr Collier's assessment of the economic impacts of proposed minimum flows. Overall, we support Mr Collier's more robust assessment of these factors and consider the approach calls into question the accuracy of the conclusions reached by the BERL report.

20. Evidence of Grant Porter on behalf of the Lindis Catchment Group Ltd – Mr Collier's evidence relies to an extent upon the evidence of Mr Porter, who evaluates the financial impacts and viability of water restrictions imposed on farmers using the Lindis River for irrigation water. Mr Porter's evidence indicates that a minimum flow of 450l/s or 750l/s would have serious and detrimental effects on a typical farming business reliant of the Lindis river water for irrigation.

21. Mr Porter's evidence indicates that there would be resultant reductions in farm income of between 21% and 41% if a minimum flow of 450l/s or 750l/s was imposed, turning existing profitable farms into farms that incur losses which would ultimately render these farms financially unviable over time. Federated Farmers considers the lack of analysis into whether farms subject to the proposed minimum flow are economically viable in the long term to be a significant gap in the BERL report's assessment. We consider this a fundamental question to answer, given the economic impacts will be felt by those landowners, the District and the wider region, and we support Mr Porter including this consideration in order to address this shortcoming in the BERL report.

22. Federated Farmers considers that, in combination, the evidence put forward by Mr Collier and Mr Porter at the very least raises significant questions in respect to the robustness and appropriateness of the BERL report's conclusions on the economic impacts of the proposed minimum flows for the Lindis River. At most the combined evidence of Mr Collier and Mr Porter explains the overall economic impact of the proposed minimum flows will be of tremendous significance to the catchment, District and to a lesser extent the Otago region.