



**FEDERATED  
FARMERS**  
OF NEW ZEALAND

DUNEDIN

Jade Quay, 1 Birch St  
PO Box 5242, Dunedin  
New Zealand

T +64 3 477 7353

F +64 3 479 0470

Submitter 600 / Further Submitter 1132

Proposed Queenstown Lakes District Plan

Rural, Rural Residential and Rural Lifestyle, Gibbston Character Zone, Indigenous Vegetation and Biodiversity, Wilding Exotic Trees

Hearing Evidence on behalf of Federated Farmers of New Zealand

## **I. INTRODUCTION**

1. My name is David Cooper. I am a Senior Policy Advisor for Federated Farmers of New Zealand. I have represented the needs and interests of our farming members across the South Island for the past eight years in a policy role.
2. I commenced my current role, as a Senior Policy Advisor at Federated Farmers in 2012. In this position, I provide advice on local government and RMA planning and policy issues to Federated Farmers provincial committees and members across the South Island in the context of farming related issues. This role involves regular and close interaction with a wide cross section of the farming community, often in the context of discussing how resource management policies and rules affect farming enterprises and the rural community, and assessing the impacts of proposed provisions on the economic viability of primary production and the broader socio-economic impacts on rural communities.

## **II. CODE OF CONDUCT**

3. I confirm that I have read the Environment Court's Code of Conduct for Expert Witnesses, (Environment Court Practice Note 2011, Part 5) and that I agree to comply with it. I confirm that the issues addressed in this statement of evidence are within my area of expertise, except where I state that I am relying on the evidence of another person. I am authorised to give this evidence on behalf of Federated Farmers of New Zealand.

4. I have not omitted to consider material facts known to me that might alter or detract from the opinions expressed. I have specified where my opinion is based on limited or partial information and identified any assumptions I have made in forming my opinions.

### III. SCOPE AND PURPOSE OF EVIDENCE

5. The aim of this evidence is to:
  - explain the economic context facing farmers in the Queenstown Lakes District;
  - assess the likely socio-economic impacts of proposed provisions of the Proposed Queenstown Lakes District Plan on both the primary production sector and the rural communities of the Queenstown Lakes District;
  - assess the robustness of the Section 42A report, the Section 32 report and the Section 32AA report provided as part of this process.

### IV. RURAL ZONE

6. I agree that the summary of issues on page 13 of the Section 42A report for the Rural Chapter of the Proposed District Plan appropriately captures the key issues from a farming perspective.
7. Prior to addressing these issues specifically, I will provide some context to this discussion by briefly outlining some economic information on the profitability of farming within the Otago region and the impacts that local government cost can have on that profitability, and discuss how this drives our support for the proposition that farming should be a permitted activity that is given preference in the Rural Zone.
8. I have focussed on briefly outlining the economic information as it relates to the Sheep and Beef sector as this is the predominant farming land use in the District.
9. Regional trends for farming - Statistics New Zealand's have tracked the number of farm holdings and the total area of farms, since 1990. While these statistics have not been recorded for the Queenstown Lakes District specifically, the information available for the Otago region generally (please see **Appendix 1**) indicates a

significant reduction in both the Number of Farm Holdings (reducing from 4,715 holdings in 1990 to 3,651 holdings in 2014) and the Total Area of Farms (reducing from 2,976,246 hectares in 1990 to 2,290,817 hectares in 2014).

10. In respect to the Number of Farm Holdings, it is naturally expected that there will be some consolidation in farm holdings due to economies of scale. However, these economies of scale can be driven by a need to consolidate due to increasing input costs.
11. Reducing Total Area of Farms (regional statistics) – In respect to the overall land used for primary production across the Otago region as a whole, as outlined in *Appendix 1: Number of Farm Holdings and Total Area of Farms for the Otago Region*, the total area used for farming has reduced from 2,976,246 hectares in 1990 to 2,290,817 hectares in 2014; a reduction of just over 13% in a 24 year period. Statistics New Zealand's 2013 Census data indicated that the number of dwellings in Queenstown Lakes District increased from 10,779 in 2001 to 16,215 in 2013, an increase of over 50%, while the total resident population increased from 17,043 to 28,224, a 65% increase, over the same period.
12. Concerns relating to the consequent urbanization within the District, the potential for reverse sensitivity adversely impacting the economic sustainability of farming activities have largely been reflected in the Proposed District Plan, in that a zoning approach is used in an attempt to discourage inadvertent or incompatible development, and to better provide for land use that may be considered compatible with the rural area. However, the Proposed District Plan will still impose costs on farmers, most significantly opportunity costs. As discussed later in this evidence this is a particular concern given the relatively low Rate of Return (RoR) from farming more recently.
13. Local government cost inflation has been higher than CPI inflation – While there is an absence of data relating to the costs specific to Queenstown Lakes farmers over a specific time period, national figures can be used to indicate the general direction of input cost trends.

14. Beef + Lamb New Zealand's Economic Service, in conjunction with Statistics New Zealand, tracks on-farm cost inflation, including specific inflation for particular farm inputs. This information is then published in annual inflation reports, with the latest available being presented in the Sheep and Beef On-Farm Inflation Report 2014-15.<sup>1</sup> This information specifically tracks the costs of both local and central government for the Sheep and Beef sector, under the title 'Rates' (a slight misnomer as the category accounts for the price of all local and central government rates and fees, not simply rates). The information indicates that these 'local and central government' costs have increased significantly above the cost of inflation since 2004-05. In every year, excluding 2010-11, inflation in this category has exceeded the consumer price index (CPI).<sup>2</sup>
15. Local and Central Government rates and fees also comprise a substantial proportion of farm operating costs for Sheep and Beef farmers, representing approximately 3% of total Sheep and Beef expenditure.<sup>3</sup> While the annual district and regional council rates bill will indeed comprise a majority of the costs of this overall grouping, these figures underline the point that local government costs already form a significant proportion of on-farm operating costs, and that inflation for these costs already runs ahead of CPI inflation.
16. Rate of Return on Farm Capital - There is limited capacity for farms (particularly extensive farms) within the District to incorporate additional costs if these are not at least offset by increased farm productivity or profitability, particularly over a significant period of time. This is because the overall (RoR) on Farm Capital is low, relative to other potential investments.
17. The RoR or gain on investment is the income gain on an investment, plus realised capital gains but excluding unrealised capital gains. While the RoR will differ by farming type and specific farming performance, the benchmark indications used by

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<sup>1</sup> Beef + Lamb NZ, *Sheep and Beef On-Farm Inflation 2014-15*. Available at <http://www.beeflambnz.com/Documents/Information/Sheep%20and%20beef%20on-farm%20inflation%202014-15.pdf>

<sup>2</sup> Ibid.; *Appendix 1: Annual Percentage Changes in Sheep and Beef Farm Input Prices, March Quarter Prices*

<sup>3</sup> Ibid.; *Appendix 2: Percentage Allocation of Sheep and Beef Farm Expenditure, June Year*

the Beef and Lamb sector indicate a relatively low RoR from South Island High Country and South Island Hill Country farming operations over the past three years.

18. Investment in farming 'assets' of these types will have or will be expected to deliver benchmark returns of less than 1% over the previous three years as is shown in **Appendix 2: Performance Indicators Per Farm South Island High Country** and **Appendix 3: Performance Indicators Per Farm South Island Hill Country**. This compares poorly to the expected RoR of other financial vehicles, particularly over time.
19. One implication of this low RoR is, as mentioned, that there is limited capacity for farmers to shoulder additional costs where these do not contribute to additional productivity or lower costs. Another implication is that for future investors, returns from farming may not seem as feasible against other alternative investments, where these offer a higher RoR.
20. Farmers as a demographic are ageing - While farmers are attracted to the industry for a number of reasons beyond the expected financial returns, indications are that farmers as an overall demographic are ageing. Research based on Census data indicates that the average age of farmers in the 2013 census was 47.7 years, up from 46.4 in 2006, and against an average age of the employed population (15 years of age and over) in the 2013 census of 41.<sup>4</sup> This in turn raises questions around the issue of farm succession, and the viability of farm succession.
21. A further point from the Performance Indicators contained in Appendices 2 and 3 is that these 'benchmark' farming systems are currently relatively well capitalised (with equity sitting at 77% and 81% respectively). While specific and individual circumstances will vary, well capitalised farms are generally those which have been farmed for a significant period of years, with newer entrants to the industry more likely to be required to borrow to fund the farm purchase. This would generally be expected either where a farm is purchased by a new entrant to the industry, or where farm

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<sup>4</sup> Based on work by agribusiness scientists John Fairweather and Stephanie Mulet-Marques (F&MM) of Lincoln University, summarized at <http://www.stuff.co.nz/business/farming/agribusiness/71539606/Farmers-are-an-ageing-demographic>

succession has taken place (for instance, a son or daughter purchasing a farm off his or her parents, or capitalising to 'buy out' siblings from the farming operation). The other general alternative is subdivision of the farm, either changing land use or subdividing to provide for a retirement residence for the previous owner (where allowed under district planning provisions).<sup>5</sup>

22. In summary, current farm returns (based on return on equity) are low, and there is already limited ability to shoulder additional costs which are not at least offset by increased productivity. In any respect, with the farmer demographic ageing as a general trend, there is the potential for changing ownership or management over the operative life of the Proposed District Plan. Changing farm ownership brings with it a requirement to assess the economic feasibility (and expected RoR) for investment in the asset, as one of a number of factors (including lifestyle choices and other social considerations).
23. These concerns underline Federated Farmers' overall position that the Proposed District Plan should seek to provide for farming as an activity that underpins, rather than conflicts with, the landscapes that are highly valued in the District. To this end I agree with the context provided in the Section 32 report accompanying the Rural Chapter (page 3):
- a. *District's landscapes and natural environment are highly recognised and valued. The Council's Economic Development Strategy 2015 states: 'The outstanding scenery makes the District a highly sought after location as a place to live and visit.' And, 'The environment is revered nationally and internationally and is considered by residents as the area's single biggest asset.'... A strategic policy approach is essential to manage future growth pressures in a logical and coordinated manner to promote the sustainable management of the valued landscape, nature conservation, productive land*

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<sup>5</sup> See, for example, the ANZ guide to farm succession planning at [http://www.anz.co.nz/resources/9/0/903b5162-1d0a-480d-bcab-1322294f5200/passing\\_baton.pdf?MOD=AJPERES](http://www.anz.co.nz/resources/9/0/903b5162-1d0a-480d-bcab-1322294f5200/passing_baton.pdf?MOD=AJPERES)

*and infrastructure resources within the Rural Zone and Gibbston Character Zone.*<sup>6</sup>

24. As discussed in this evidence, I would go further and add that the farming activity underpinning a proportion of these valued landscapes requires some broad consideration of the resource management costs imposed on traditional land use, with a view to ensuring these costs are minimised and the underlying land use remains economically viable. This economic perspective underpins Federated Farmers' overall support for the proposed Rural Zone purpose, Objective 21.2.1 and subsequent policies (including the proposed amendments) which seek to enable farming and other permitted and established activities overall.

25. Farm buildings - The costs associated with farm buildings in the rural zone are discussed on pages 18 and 19 of the Section 32 report accompanying the Rural Zone Chapter. I agree with the concerns expressed around the costs associated with consenting requirements from a plan user's perspective:

*b. It is considered however, the administration of the rules has resulted in inefficiencies. The costs associated with even small scale, simple resource consents are not trivial. While the protection of the landscape is a significant resource management issue, the administration of the District Plan and associated costs passed onto applicants associated with administration of the District Plan are also relevant considerations of the review and evaluation of the appropriateness under section 32.*

26. These concerns underline the importance of providing for activities supporting the economic viability of farming overall, including the proposal to provide for farm buildings where the location, scale and colour of the buildings will not adversely affect landscape values, as proposed under policy 21.2.1.2, and ensuring the costs associated are reasonable.

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<sup>6</sup> The District's landscapes also feature highly in respect to visitor promotion. See, for instance, <http://www.queenstownnz.co.nz/>

27. However, I question whether the proposed 100 hectare area specified has been appropriately considered in respect to the additional costs this will impose on those landholdings of 100 hectares or less.
28. Pest and weed control as a proportion of farm input costs – A further consideration is the current existing pest control costs shouldered by farmers (and other land users) and the way this contributes to the public good aspects of the District's landscapes. Compared to local and central government costs overall, cost inflation for weed and pest control on sheep and beef farms varies significantly when compared to general CPI inflation (presumably improvements and innovation in terms of both products and more efficient use of these products plays some part), yet weed and pest control costs have comprised between 3% and 3.6% of the annual sheep and beef farm operating costs, as a national average, since 2004-05.<sup>7</sup> Again this is a national average; it may vary within the Queenstown Lakes District.<sup>8</sup> These costs are significant in respect to the provisions within the proposed District Plan which aim to preserve, protect or maintain landscapes, including working farm landscapes, which in turn requires investment in pest plant and animal control.
29. The control of pest animals and plants provides direct benefit to the farming operation, in that this increases available pasture and feed for animals. However, the farmer's efforts also indirectly provide public benefit in that the farming landscapes are subject to largely privately funded pest plant and animal control.
30. If the farming operation is not economically viable over time, then this in turn adversely impacts either pest control capability or requires additional public costs to this end. A further point is that pest plant and animal control already comprise a significant proportion of on-farm operating costs.

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<sup>7</sup> Beef + Lamb NZ, *Sheep and Beef On-Farm Inflation 2014-15. Appendix 1: Annual Percentage Changes in Sheep and Beef Farm Input Prices, March Quarter Prices*. Available at <http://www.beeflambnz.com/Documents/Information/Sheep%20and%20beef%20on-farm%20inflation%202014-15.pdf>

<sup>8</sup> The most recent Ministry for Primary Industries South Island high country sheep and beef model budget was in 2012. This report indicates pest plant and animal control costs were just under 3% of total operating costs.

31. Opportunity costs for farmers in the rural zone - It should be acknowledged that the zoning approach proposed for the rural zone, which enables pastoral farming as a permitted activity overall, does come with significant opportunity costs for farmers. Overall the zoning approach seeks to ensure the costs farmers are facing for pastoral farming are reasonable, and the economic viability of that land use is recognised and provided for in the rural zone, by defining this as an appropriate activity. The other side to this approach is that there are activities that can be carried out under the current operative District Plan which may be deemed 'inappropriate' (or which may occur additional costs) under the Proposed District Plan, particularly through proposed Objective 21.2.9 and its subsequent policies.
32. It should be recognised that, from an economic perspective, this may create significant direct (consenting and other costs) and opportunity costs for farmers, particularly where the Proposed District Plan proposes to limit residential subdivision in the rural zone, or restricts potential new commercial operations which otherwise may have provided income to subsidise farming activities in the rural zone. The impacts of these (particularly opportunity) costs will differ by farm; those situated in proximity to but just outside of the urban or rural residential zones in particular face significant cost. These costs and the equity concerns of these farmers should not be underestimated.
33. However, on balance I agree that these direct costs must be assessed against the benefits of providing for farming as a permitted activity in the rural zone, including the impacts on landscape amenity.
34. Commercial activities – I consider the subsequent focus of the Proposed District Plan should therefore be on providing for commercial activities in the rural zone, where or in a fashion that does not result in reverse sensitivity issues for primary production, and in a manner that allows farmers to supplement, or leverage off, the landscape and other positive amenity values provided by primary production. I agree with the Section 32 analysis that the current objectives and policies:

- c. *...do not specifically recognise the desire for some commercial activities whether passive or recreational to locate within the Rural General Zone.*

35. And also with the acknowledgement that:

- d. *in some cases these activities could enhance the experiences available within the district. The acknowledgement that there is a place in the Rural Zone for some types of commercial activities, subject to intensity and scale is an important resource management issue.*

36. Overall, and on balance, I agree with the Section 42A report's assessment (at page 18) that:

- e. *...in certain circumstances non-farming activities could have environmental, social and cultural benefits, and could be a better use of the land resource than farming. However, if this is the case, proponents can prove this through the plan change or resource consent process. I consider that commercial activities seeking to locate in the Rural Zone should be subject to the scrutiny provided through the resource consent process and framework of the PDP.*

37. This position relies on the overall proposal within the rural zone to provide for low intensity, low scale commercial activities that are complementary to the predominant use of the rural zone. Should the district plan provisions for the rural zone sufficiently provide for smaller scale, complementary commercial activities, this serves to provide an opportunity to supplement incomes from primary production.

38. For proposed commercial opportunities of a scale and nature beyond these, the potential adverse costs of incompatible commercial activities should be assessed and weighed against potential benefits on a case by case basis, given the economic significance of the rural landscape.

39. Reverse Sensitivity – I agree with the Section 32 report accompanying the Rural Chapter in respect to the economic importance of addressing reverse sensitivity (page 15):

- f. *A range of activities are expected to occur in the rural areas that create odour, noise and dust, traffic generation and heavy vehicle traffic. Provided these effects do not constitute a genuine nuisance or health risk, they shall be accepted as anticipated components of rural activities. It is acknowledged the Rural Zone is considered by many a desirable place to live and to also undertake commercial activities. It is important to recognise the importance of farming and established activities to the District and protect the viability of farming.*

40. I consider it important that reverse sensitivity issues are addressed in the plan, as a failure to do so adequately may adversely impact the economic viability of some farming operations. This may occur by either directly or indirectly adversely impacting economic viability by placing additional costs on those farming operations by requiring farmers to suppress the impacts of these common and expected farming practices, creating both direct financial costs and opportunity costs.

41. Contamination of water bodies from dairy grazing stock – The PDP proposes, through General Standard 21.5.7, that stock shall be prohibited from standing in the bed of, or on the margin of a water body. The S42A discusses the reasoning behind this proposed rule on pages 25 and 27, arguing that where dairy grazing stock have access to water bodies, the potential for stock to damage riparian areas and contaminate water bodies is higher than in traditional lower intensity farming.

42. This is not disputed; dairy farming, compared to farming of a lower intensity, has potential to damage riparian areas and, as a rule, brings with it a higher risk of diffuse and point source contamination of water. However, as outlined in the S42A there are existing mechanisms to address these issues. From a water quality perspective, the S42A report notes (at 9.34) that the Otago Regional Council (Submitter 798) has expressed concern that the rule results in overlap with regional rules, specifically Rule 12.C.0.1 of the Otago Regional Plan: Water. I agree that this appears to be the case. The overall purpose of the Regional Plan: Water is to:

- a. *promote the sustainable management of Otago's water resources. To achieve this, the plan has policies and methods (which include rules) to address issues of use, development and protection of Otago's freshwater resources, including the beds and margins of water bodies (emphasis mine).*<sup>9</sup>

43. From a plan user perspective, having the same issue addressed through both a regional and a district planning document can create confusion, particularly if there are changes to the obligations placed upon land users through one planning instrument that are not reflected in another. It is particularly the case in respect to water quality, as the overall planning approach is an 'effects based' one with blanket rules applying to the region generally, in addition to catchment or area specific rules. The S42A and S32 report claims the stock exclusion rule proposed in the PDP is complementary; purely in respect to achieving good water quality outcomes I would consider the proposal to be unnecessary given the issue is addressed through the Regional Plan: Water.

44. Although the S32 report (at page 27) acknowledges that the potential for overlap is a cost, it does not acknowledge the potential costs of confusion for plan users working between different planning instruments. At worst, a plan user unfamiliar with their obligations under the Regional Plan: Water may view the obligations imposed through the district plan as being indicative of their overall obligations in respect to water quality. Lesser concerns include the potential for the Regional Plan: Water to be amended, either requiring an amendment to the District Plan or creating a scenario where land users are working under potentially incongruous rules. Neither is desirable, and this concern is not sufficiently addressed or acknowledged through the S32 report.

45. In respect to the potential to damage riparian areas, the S42A report again acknowledges that the exclusion of dairy grazing stock from water bodies is addressed through Dairy NZ, The Sustainable Dairying: Water Accord (the Accord). The S42A report correctly identifies that this accord excludes dairy grazing situations

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<sup>9</sup> Otago Regional Council website, available at <http://www.orc.govt.nz/Publications-and-Reports/Regional-Policies-and-Plans/Regional-Plan-Water/>

where the land is used under a third party grazing arrangement between the owner of dairy cattle and another landowner for the purpose of temporary grazing. As such, the provisions proposed through the PDP as a response to the potential for dairy cattle to damage riparian areas may be considered to be more complementary to the existing (industry led) mechanism in the Accord, when compared to the situation in respect to water quality.

46. However, I question whether the provisions proposed under General Standard 21.5.7 is the most effective or efficient mechanism for addressing these concerns, particularly if it is accepted that the water quality issue is already sufficiently addressed through the Regional Plan: Water. Future adaptation of the Accord may see the development of guidance between a dairy farmer and a grazer to ensure there are appropriate restrictions placed on stock access to waterways. This will in turn drive behavioural change and ensure those grazing stock address the issue as of right. The S32 analysis does not consider this as a (potentially more efficient) alternative mechanism. Nor do the S32 or 42A report consider the potentially adverse impacts of deterioration of landscape appearance through weed growth or rank grass from a lack of controlled grazing within the 3 m margin of water races and drains as proposed.

47. Further, the Resource Legislation Amendment Bill 2015 is proposing new stock exclusion provisions which may better or more appropriately address the issue.

48. Managing Rural Industrial Activities – I agree with the Section 32 assessment relating to Rural Industry activities. In particular (at page 120) the following acknowledgment of the mutual reliance of farming on rural industry in close proximity, and vice versa:

*g. While the predominant land use within the Rural Zone is farming there is a range of industrial and service activities that are aligned with farming and rural productive activities and have historically located in rural areas. These activities compliment and support farming and rural productive activities and include fencing and agricultural contractors yards, firewood operations,*

*sawmills, factories and fabrication yards. Many of these activities, due to their scale and nature, are not ideally suited to industrial areas located within or adjacent to urban areas and by necessity seek to locate in rural areas. Consequently there are a number of established nodes on rural industrial development throughout the District.*

49. A failure to provide for appropriate rural industry in proximity to the rural areas of the District would create significant additional transport costs (and related issues) for both farmers and rural industry.

50. Landscape – Notwithstanding relief sought in respect to specific provisions proposed, and acknowledging the private opportunity costs facing some farmers in the District subject to landscape designations, I consider the Section 32 report overall sufficiently balances the importance of the landscape to the social and economic wellbeing of the Queenstown District (in particular the role landscapes play in attracting the promoting the District as a tourism destination and subsequent economic benefits) against the impacts on farming. This is primarily because the approach proposed overall is to better provide for farming and associated or compatible activities as a permitted activity in the rural zones.

## **V. RURAL RESIDENTIAL AND RURAL LIFESTYLE**

51. I agree with the issues in respect to rural residential and rural lifestyle zoning and development as outlined in the Section 32 report accompanying this chapter. If anything, I consider the Section 32 report downplays the potential importance of Objective 22.2.5 and Policy 22.2.5.1 in managing the potential for reverse sensitivity issues where these have potential to impact farming activities in proximity to proposed Rural Residential and Rural Lifestyle zones.

## **VI. INDIGENOUS VEGETATION AND BIODIVERSITY**

52. The impacts of farming on the overall stock and specific communities of indigenous vegetation and biodiversity are beyond the scope of my evidence. However, in respect to both the definitions, and related objectives, policies and rules proposed for indigenous vegetation and biodiversity, I would broadly underline the economic costs facing farmers in respect to a lack of clarity, and the opportunity costs in respect to rules which unreasonably restrict the use of pasture where there are isolated instances of indigenous vegetation and biodiversity.
53. I would also like to discuss the economic importance of irrigation to farm productivity and domestic production, and how this may be impacted by provisions relating to indigenous vegetation and biodiversity rules more specifically.
54. The potential costs facing farmers in respect to unclear indigenous vegetation and biodiversity plan provisions was best exemplified in the 2014 Environment Court case Royal Forest And Bird Protection Society Of NZ Incorporated v Dougal Innes [2014] NZEnvCt 72 and [2014] NZEnvC 113. In that case, Mr Innes accumulated significant legal costs defending himself against actions from Forest & Bird taken directly against him. Through the significant court proceedings resulting, it was accepted that a major factor within the case was the uncertainty surrounding the indigenous vegetation and biodiversity provisions within the operative Queenstown Lakes District Plan. This uncertainty remained despite Mr Innes seeking advice and information from a range of experts, including the Queenstown Lakes District Council on more than one occasion.<sup>10</sup> These significant 'shoe leather' costs (those associated with seeking advice) and at an even greater scale legal (court and other related) costs serve to undermine both the economic viability of farming and farmer's trust in the planning process overall.
55. These farmer specific costs are added to significantly in respect to the proposed definitions of vegetation and biodiversity and related provisions, where the rules relating to the protection of indigenous biodiversity relate to specific plants, and not defined communities or large and identifiable areas of indigenous vegetation and

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<sup>10</sup> See, for example, *'We have a rule in the plan that nobody understands'* ; Otago Daily Times, 25 March 2014. Available at: <http://www.odt.co.nz/news/queenstown-lakes/296348/we-have-rule-plan-nobody-understands>

biodiversity. Extensive farming such as that in the Queenstown Lakes District can entail farmers not grazing paddocks for reasonable periods, over which time individual or sporadic examples of indigenous vegetation and biodiversity can be established.

56. Again, it is outside the scope of this evidence to discuss what proportion of individual plants may comprise a community of plants and what may or may not constitute an example of a sustainable 'community' of vegetation and biodiversity, warranting specific protection. However, I consider the 'shoe leather' costs associated with both the requirement for farmers to endeavour to identify and verify smaller communities or individual plants of indigenous vegetation and biodiversity species, and the opportunity costs (foregone grazing and land use costs) have not been appropriately addressed or considered in the Section 32 report. A lack of appropriate discussion and subsequent consideration of these costs means the Section 32 has not appropriately assessed the economic costs associated with the proposed provisions relating to vegetation and biodiversity.

57. These concerns are exacerbated in respect to the potential for irrigation to inadvertently impact on indigenous vegetation and biodiversity. The Section 42A report accompanying the Indigenous Vegetation and Biodiversity Chapter notes, at 6.12, that:

*h. ...irrigation can have a detrimental effect on some indigenous vegetation, such as cushion field communities as they have adapted to growing in dry conditions... Under irrigated conditions, these species out compete the stress-tolerant 'dryland' species, which are killed by being deprived of light and other resources, a process known as competitive exclusion.*

58. However, the accompanying Section 32 report does not appropriately acknowledge the important role of irrigation in respect to the economic sustainability of extensive pastoral farming. Nor does the Section 32 report or the Section 42A report appropriately acknowledge the economic costs likely to arise from uncertainty around the resource management implications of irrigating, where this may be considered to adversely impact isolated examples of indigenous vegetation and biodiversity.

59. There is an absence of information in respect to the importance of, and economic benefits derived from, irrigation specifically in the Queenstown Lakes District. The *Queenstown Lakes Economic Development Strategy* acknowledges at page 38 that water supply and demand is an issue for the District, and that irrigation and a dry summer climate are inherent drivers of water demand. Beyond this, there appears little assessment of the economic benefits derived from irrigation within the District.

60. The best available information on the value of irrigation appears to be a 2014 report *Value of irrigation in New Zealand - An economy-wide assessment* prepared by the NZ Institute of Economic Research Inc and AgFirst Consultants NZ Ltd on behalf of the Ministry for Primary Industries.<sup>11</sup> The report has developed scenarios and modelled these to “obtain a reasonable approximation of the New Zealand economy as if irrigation had never occurred”. Economic modelling of this nature is not an exact science, and is reliant upon a number of assumptions. However, the report underlines the ways that irrigation contributes positively to New Zealand’s economic activity through both direct and indirect ways:

- a. it lifts agricultural production, which boost farm gate returns;
- b. this additional production draws in additional inputs such as agricultural services and transport;
- c. the extra on-farm volumes also lead to more activity in the primary processing sectors.

61. The predominant farming industry in the Queenstown Lakes District is extensive (Hill and High Country) Sheep and Beef farming. This is both less intensive than other potential land uses, and provides marginally lower ‘downstream economic benefit’, ‘value add potential’ or ‘indirect benefit’ when compared to other areas of the primary sector (for example, intensive dairying). As a result the direct economic implications modelled and aggregated within the report are likely to be dissimilar if the same modelling approach was undertaken in respect to the Queenstown District specifically.

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<sup>11</sup> Available at <http://www.mpi.govt.nz/document-vault/5014>

However, the Otago region specific discussion located at page 53 may be considered indicative of the impact within the Queenstown Lakes District specifically.

62. The report estimates that the impact of a lack of irrigation across the Otago region would be by industry, highlighting that for the Sheep and Beef sector, while the areas currently used for farming would still be in sheep and beef, the systems would be much more extensive, with lower stocking rates, selling stores and a longer period to finish lambs. Given this is a regional assessment. with the Queenstown Lakes District climate being relatively drier than the Otago region as a whole, it may be considered that the adverse impacts of an absence of irrigation on growth may be considerably greater for the Queenstown Lakes district specifically (with a resulting reduction in the farm gate returns, processing and demand for agricultural support industries).
63. Clearly, the proposed provisions relating to indigenous vegetation and biodiversity will not result in a complete loss of irrigation to the District. However, the modelling contained within the report underlines the reliance of current production levels, current economic benefits derived from primary production, and as argued more broadly in this evidence, the economic activity underpinning a significant proportion of the valued rural landscapes within the District, on irrigation.
64. If the proposed provisions relating to indigenous vegetation and biodiversity deter irrigation, then the economic impact of this deterrent may be significant, both to the irrigator in direct terms and on the wider economy in indirect terms, and arguably in respect to the remaining economic viability of farming in the District. As demonstrated in the Innes case referenced previously, the potential costs of inadvertently impacting indigenous vegetation and biodiversity are indeed significant.
65. In my opinion, the wider economic costs associated with this risk of uncertainty and the resulting risks of reduced irrigation and subsequent economic costs should have been discussed in greater detail and assessed specifically within the Section 32 report.
66. The risk that activities relating to irrigation may breach proposed provisions relating to isolated indigenous plants must be considered a significant deterrent to irrigation.

Similarly, the risk of breaching provisions that relate to smaller and harder to identify areas of indigenous vegetation and biodiversity, and the potentially significant costs of this risk to land users, will create additional 'shoe leather' costs, including the time and money relating to the need to search out, identify and seek advice over potentially difficult to identify isolated examples of plant species.

67. Further, given the extensive nature of Sheep and Beef farms in the Queenstown Lakes District, there is potential that farm behaviours may change so as to ensure that pastures are grazed more frequently to reduce the risk of isolated examples of indigenous plants (and subsequent loss of pasture) developing. In any respect, the Section 32 report does not sufficiently consider these direct and indirect cost impacts, referring only (at page 34 and page 38) to the economic cost:

*i. ...potential to restrict the cultivation of previously cultivated land to improved pasture, particularly where there is the opportunity to utilise the land for more intensive forms of grazing, where this could be supported by irrigation.*

## **VII. WILDING EXOTIC TREES**

68. I note the significant costs associated with the control of wilding pines in the lower South Island<sup>12</sup> and as outlined in the Section 42A report, in the Wakatipu Basin specifically.<sup>13</sup>

69. At the same time, farmers within the District (particularly those at higher altitudes) use pines for the purpose of shelter, to improve pasture growth and improve water uptake, and reduce the need for feed. Given the wilding nature of these plants, the result can be that their use for shelter belts can impose significant costs on other farmers, the general public and local government. These concerns were to be addressed through

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<sup>12</sup> For example, Otago Daily Times, *Urgent need to control wilding pine growth stressed*; 29 Feb 2016.

Available at <http://www.odt.co.nz/regions/southland/374737/urgent-need-control-wilding-pine-growth-stressed>

<sup>13</sup> Wakatipu Wilding Conifer Strategy 2013-2017, page 11.

proposed Policies 21.2.2.3 and 34.2.1.1 making the planting of wilding species a prohibited activity.

70. However, High Country farmers within the District have indicated that there are few options for growing shelter belts beyond pines, particularly at high altitudes. The issue is one which requires consideration of the positive private benefits of the use of these plants, and consideration of the viability of any alternative plant types (indigenous or non-wilding) for shelter belt planting, against the negative externality imposed (the spread of, and subsequent requirement and costs to control, wilding pines). There does not appear to be an appropriate assessment of the feasibility of these alternative options in the initial Section 32 report accompanying the proposed provisions, or the economic costs associated with the impact of the removal of the ability to make use of these plants for other uses (domestic and commercial firewood particularly).

71. New policies 34.2.1.2 and 34.2.1.3 have subsequently been proposed, outlining proposed rules focussed on appropriately managing the planting of Radiata pine (*Pinus radiata*) to avoid the adverse effects, rather than prohibiting planting altogether. I agree with the Section 32AA report's proposed new policies 34.2.1.2 and 34.2.1.3, and the statements within it that these economic costs (shelter belts, firewood) are better considered and provided for through these proposed new rules than they were in proposed Policies 21.2.2.3 and 34.2.1.1. I agree with the Section 32AA report's conclusion that these provisions are more efficient in that they enable the use of *Pinus radiata* as a resource for uses such as shelter, firewood and forestry, while being able to manage the adverse effects of potential wilding tree spread.

72. Another issue discussed as a driver for changes to provisions proposed in respect to wilding plants is the current variation in rules across the District. I agree that from a plan implementation perspective, it is preferable to have a single list of identified wilding species and apply it consistently across the District. This will improve understanding of the obligations in respect to pine management, and given the wilding nature of the plants and the potential for spread, there is arguably little benefit from provisions which aim to reflect differences between areas across the District.

David Cooper BCom (Economics), MA (Politics)  
Senior Policy Advisor  
Federated Farmers of New Zealand

## Appendix 1: Number of Farm Holdings and Total Area of Farms for the Otago Region.

Source: Statistics New Zealand Infoshare series

		Variable by Regional Council (Annual-Jun)	
		Otago Region	
		Number of Farm Holdings	Total Area of Farms
1990		4,715	2,976,246
1991		4,682	2,990,220
1992		4,649	2,992,581
1993		4,620	2,669,687
1994		3,992	2,556,304
1995		3,895	2,507,382
1996		3,789	2,487,441
1997	..	..	..
1998	..	..	..
1999		5,073	..
2000	..	..	..
2001	..	..	..
2002		4,081	2,378,770
2003		3,849	2,334,638
2004		3,891	2,354,583
2005		3,821	2,463,385
2006		3,907	2,342,067
2007		3,943	2,331,143
2008		3,746	2,347,150
2009		3,609	2,319,689
2010		3,714	2,358,280
2011		3,672	2,389,294
2012		3,681	2,320,563
2013		3,624	2,260,762
2014		3,651	2,290,817

### Table information:

Units:

Number of Farm Holdings: Number, Magnitude = Units

Total Area of Farms: Hectares, Magnitude = Units

### Footnotes:

There was no agricultural survey conducted in 1997 or 1998. Horticulture was excluded from the 1999 agricultural production survey.

Prior to 1994, the population base for the agricultural production survey's was businesses recorded on Statistics New Zealand's Business Directory that engaged in horticulture, cropping, livestock farming or exotic forestry operations.

Between 1994 and 1996, the population base for the agricultural production survey's was those businesses registered for GST and recorded on Statistics New Zealand's Business Frame as being engaged in horticulture, cropping, livestock farming or forestry.

The population base for the 1999 Agricultural Production Survey was all units recorded on AgriQuality New Zealand's national database 'AgriBase' as holding livestock and/or engaging in grain/arable cropping.

Users should note that 2004 deer figures are not directly comparable with 2002 and 2003 figures. Statistics New Zealand estimates an undercount of about 70,000 deer at 30 June 2002, and 50,000 at 30 June 2003.

Source: Statistics New Zealand

## Appendix 2: Performance Indicators Per Farm South Island High Country (Beef + Lamb NZ Analysis)

Financial Indicators – <b>South Island High Country</b>			
Units	2013-2014	2014-15 (Provisional)	2015-2016 (Forecast)
Economic Farm Surplus (\$ per hectare)	9.02	3.67	6.64
Economic Farm Surplus (\$ per stock unit)	7.18	2.87	5.25
Earnings Before Interest, Tax and Rent (per hectare)	31.20	26.55	29.85
Earnings Before Interest, Tax and Rent (per SU)	24.83	20.82	23.58
<b>Rate of Return on Total Farm Capital (%)</b>	<b>0.6</b>	<b>0.2</b>	<b>0.4</b>
<b>Equity At Close (%)</b>	<b>77</b>	<b>77</b>	<b>77</b>

Source: Truncated information from Beef + Lamb NZ Benchmarking analysis, available at <http://portal.beeflambnz.com/tools/benchmarking-tool>

### Appendix 3: Performance Indicators Per Farm South Island Hill Country (Beef + Lamb NZ Analysis)

Financial Indicators – <b>South Island Hill Country</b>			
Units	2013-2014	2014-15 (Provisional)	2015-2016 (Forecast)
Economic Farm Surplus (\$ per hectare)	50.18	34.71	10.72
Economic Farm Surplus (\$ per stock unit)	11.45	7.82	2.54
Earnings Before Interest, Tax and Rent (per hectare)	134.15	121.52	98.67
Earnings Before Interest, Tax and Rent (per SU)	30.61	27.38	23.34
<b>Rate of Return on Total Farm Capital (%)</b>	<b>1.0</b>	<b>0.6</b>	<b>0.2</b>
<b>Equity At Close (%)</b>	<b>81</b>	<b>81</b>	<b>81</b>

Source: Truncated information from Beef + Lamb NZ Benchmarking analysis, available at <http://portal.beeflambnz.com/tools/benchmarking-tool>