BEFORE THE HEARING COMMISSIONERS

IN THE MATTER	of the Resource Management Act 1991 ("**the Act**")
AND	
IN THE MATTER	of the Resource Management Act 1991 and the Environment Canterbury (Temporary Commissioners and Improved Water Management) Act 2010
AND	
IN THE MATTER	of the hearing of submissions on Variation 2 of the Proposed Land and Water Regional Plan

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STATEMENT OF EVIDENCE BY HAMISH MCFARLANE FOR HORTICULTURE NEW ZEALAND

15 MAY 2015

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MCFLYNN POTATOES AND MCFARLANE AGRICULTURE

1. My name is Hamish McFarlane. I am a director shareholder in McFarlane Agriculture and McFlynn Potatoes Ltd.

2. McFarlane Agriculture is an intensive mixed arable stock and horticultural farm based 10 minutes north of Temuka halfway between the east coast and SH1. Crops include Blackcurrants, carrots for process to juice, freezer peas, barley, grass and vegetable seeds plus forage crops for lamb and cattle grazing.

3. McFlynn Potatoes grows potatoes for process to French Fries for McCain Foods, Timaru.

4. During my evidence I will be speaking about areas and farming systems of approximately half a dozen other process vegetable (potatoes and carrots) who supply McCain, Talleys, Heartland Chips, Makikihi Fries, Bluebird and Juice Products New Zealand. As well there are an additional half dozen potato seed growers who carry out growing operations in the Hinds catchment.

5. As a group we feel that with careful and continually improving management the practices outlined below can continue, in partnership with meeting the goal of a healthy, sustainable Hinds catchment.

6. The area used for these vegetable growing operations is currently around 300 – 400 ha of land. This is spread from the coast as far inland as the foothills.

7. Virtually all the land used for vegetables in the catchment is leased from landowners by specialised vegetable growers, who may be based outside the catchment. This situation has arisen because of the heavy commitment required by the grower for management, agronomy and equipment. Most of the time there will be between 10 and 40 ha of crop at any one time on a landowners' farm. This area is based on the amount of suitable ground on a farm that can provide a break between crops of 5 – 8 years. Most of the current landowners tend to be sheep/ beef or some form of cropping with very small if any exposure to dairy platforms. This may change as different sectors become more or less profitable.

8. The lease is almost always an arrangement where a paddock is leased from early spring to late autumn – i.e. the length of time the crop needs to be planted, grown and harvested. The paddock returns to the landowners control post- harvest and is generally sown down pre winter to a stand of wheat or barley. The lease is generally paid for in instalments over the life of the crop based on a per hectare rate agreed between the parties with an additional charge paid for applied irrigation water – often a $/ mm rate per ha.

9. Most of these arrangements are ongoing year to year however there is no contractual requirement for this to be the case. Change of land ownership, farming practices, production contracts, market and economic factors, or simple relationship issues may end any of these lease arrangements from one season to the next. Obviously new relationships may start due to any of these reasons as well.

10. Soil types targeted are ideally a free draining silt loam that is relatively stone free. These soil types reduce the incidence of disease and crop deformity and allow planting and harvesting operations to be carried out quickly and efficiently. Having said this soils used range from light lismores through to heavy Wakanui types. Cultivation will usually start late August, planting in September – October and harvesting from February.

11. Reliable irrigation is critical with crops requiring system capacity of a minimum 3.5mm/ day to an ideal of 5 – 6mm/ day. Often these crops will use up to 10mm/ day in high evapotranspiration periods and a short rotation of small applications is best to avoid stressing very delicate plants. The irrigation season is relatively short however and an average year will see 150 – 350mm of irrigation applied between December and mid-March.

12. Fertiliser requirements for the crops vary remarkably depending on the end use but most crop inputs are based on a nutrient depletion basis – i.e. what the crop will extract or use over the growing season.

13. Both Potatoes and Carrots have a crop calculator programme developed by Plant and Food Research that projects yield based on plant density, water and fertiliser requirements/ inputs/ losses and climatic conditions.

14. The government and horticultural industry have both identified a common wish to expand the value and scope of the horticulture sector due to its export exposure and an exceptional money recycling effect in the domestic economy (due to high income per hectare combined with high costs and reasonably low margins).

15. There is likely to be incremental growth in the sector within the Hinds Catchment over the next 20 – 30 years however it is unlikely to become a major land use compared to the likes of livestock.

16. Having said this, it is a very important tool for farms in a mixed rotation. It is one of the best margin and cash flow crops available to the landowner. It provides diversity of land use and income. It provides secure year on year income. It provides a spring break crop option for a cereal/ grass/ seed rotation. It reduces reliance on the dairy support industry. It allows an area of the farm to be managed externally reducing the load on the farm owner.

17. This diversity of options does not, due to the long break between crops, force large scale landuse change. It does allow options within the farm system. Consequently it can help protect the land value of a wide range of farms that are often have a low level of environmental impact.

18. It is important that the region retains a multi- faceted agricultural industry. The ability for farmers to grow a variety of crops in the future that may not be part of their current system is critical to retain an interesting, diverse and successful region. I believe that the answer to many of the environmental issues we now face lies in *well managed flexible systems that best match land use and type to resources for minimum environmental impact*. This will also prevent the distortion of land markets resulting from regulations that can be cumbersome at best.

19. Key outcomes we seek are:

    (a) The security of existing production areas;

    (b) The ability of landowners to adopt new crops into their rotation;

    (c) The potential for increased areas of horticultural or intensive cropping within the catchment; and

(d) Flexibility of farming systems in conjunction with equitable/ equal allocation of nutrient discharge that will avoid economic and social disparities within catchments and communities.

Hamish McFarlane

15 May 2015