

Before the Independent Hearings Panel
at Rolleston

under: the Resource Management Act 1991

in the matter of: Submissions and further submissions in relation to the
proposed Selwyn District Plan

and: Strategic Directions Proposal

and: **Fonterra Ltd**
Submitter DPR-0370

Statement of Evidence of Michael Campbell Copeland (Economics)

Dated: 23 July 2021

Reference: B G Williams (ben.williams@chapmantripp.com)
R E Robilliard (rachel.robilliard@chapmantripp.com)

chapmantripp.com
T +64 3 353 4130
F +64 3 365 4587

PO Box 2510
Christchurch 8140
New Zealand

Auckland
Wellington
Christchurch



STATEMENT OF EVIDENCE OF MICHAEL CAMPBELL COPELAND

INTRODUCTION

- 1 My name is Michael Campbell Copeland.
- 2 I hold a Bachelor of Science degree in mathematics and a Master of Commerce degree in economics.
- 3 I am a consulting economist and managing director of Brown, Copeland and Company Limited, a firm of consulting economists which has undertaken a wide range of studies for public and private sector clients in New Zealand and overseas. I have over 40 years' experience in the application of economics to various areas of business, including resource management matters. During the period 1990 to 1994, I was also a member of the Commerce Commission and during the period 2002 to 2008, I was a lay member of the High Court under the Commerce Act. Prior to establishing Brown, Copeland and Company Limited in 1982, I spent six years at the New Zealand Institute of Economic Research and three years at the Confederation of British Industry. A summary of my curriculum vitae is **attached** as **Appendix 1**.
- 4 Although this is a council hearing, I confirm I have read the Expert Witness Code of Conduct set out in the Environment Court's Practice Note 2014. I have complied with the Code of Conduct in preparing this evidence and I agree to comply with it while giving oral evidence before the hearing committee. Except where I state that I am relying on the evidence of another person, this written evidence is within my area of expertise. I have not omitted to consider material facts known to me that might alter or detract from the opinions expressed in this evidence.
- 5 I am familiar with the submission made by Fonterra Limited (Fonterra) (submitter number DPR-0370) in December 2020 and the economics issues discussed in that submission. I have been authorised by Fonterra to provide evidence on its behalf.

SCOPE OF EVIDENCE

- 6 Fonterra is seeking changes to a number of the objectives in the Strategic Directions section of the Selwyn District Council's proposed District Plan to better safeguard the current operation and any future expansion of its dairy manufacturing plants in its Darfield Dairy Processing Zone. These changes relate to the following objectives:
 - 6.1 SD-IR-O2 Effects of Important Infrastructure;
 - 6.2 SD-UFD-O1 Compact and Sustainable Township Network; and
 - 6.3 SD-UFD-O3 Integration of Land Use and Infrastructure.

- 7 The changes sought by Fonterra and which are detailed in the evidence of Dean Chrystal and Harriet Van Genne-Knape better safeguard the economic benefits from the ongoing operation and expansion of activities on the Darfield Dairy Processing Zone, not just to Fonterra and its farmer shareholders, but also to residents and businesses throughout the Selwyn District and Canterbury region. Therefore my evidence addresses the economic significance of Fonterra's Darfield milk processing site to the Selwyn District and the Canterbury region.
- 8 My evidence covers the following:
- 8.1 The background to Fonterra's existing and future use of its Darfield milk processing site;
 - 8.2 A consideration of the relevance of economic effects under the RMA;
 - 8.3 A description of the Selwyn District, and Canterbury regional economies;
 - 8.4 The economic benefits from the continued operation of Fonterra's existing milk processing activities at Fonterra's Darfield site; and
 - 8.5 A discussion of some potential economic costs of the continued operation of milk processing activities at Fonterra's Darfield site.

BACKGROUND TO FONTERRA'S EXISTING AND FUTURE USE OF ITS DARFIELD MILK PROCESSING SITE¹

- 9 Fonterra is a global leader in dairy nutrition and the preferred supplier of dairy ingredients to many of the world's leading food companies. Fonterra is a farmer owned co-operative, and the largest processor of milk in the world. It is one of the world's largest investors in dairy research and innovation drawing on generations of dairy expertise to produce (per annum) more than two million tonnes of dairy ingredients, including value added dairy ingredients, specialty ingredients and consumer products for 140 markets.
- 10 Annually, Fonterra collects more than 18 billion litres of milk from New Zealand farms and exports more than 2.4 million tonnes of dairy products. Fonterra owns 25 milk processing sites within New Zealand.
- 11 Fonterra is New Zealand's largest company, and a significant employer, with more than 11,000 New Zealand based staff and more than 8,000 employees based overseas. Globally, Fonterra processes more than 22 billion litres of milk and owns leading dairy

¹ Material in this section provided by Fonterra.

brands in Australasia, Asia, the Middle East and Latin America. In the 2019/20 financial year, Fonterra's global revenue was over \$22 billion.

- 12 Fonterra's Darfield milk processing plant is located on an 1,110 hectare site (including associated wastewater irrigation farms) on State Highway 73, just north of the township of Darfield. It was opened in 2012 when the first milk powder dryer was commissioned and a second milk powder dryer was commissioned in August 2013. When operating at full capacity, the plant processes 8.4% of New Zealand's peak milk production. It is one of four milk processing operations in the Canterbury region² and was developed in response to increasing milk volumes and a shortage of processing capacity in the region. Currently the plant produces 256,000 tonnes of regular and instant whole milk powder per annum, and 22,000 tonnes of cream cheese with 7.2 million litres/day of milk processed at the peak of the season. The milk powder produced is exported through the Port of Lyttelton to markets in South East Asia, the Middle East and the People's Republic of China. The Darfield plant is estimated by Fonterra to account for approximately 15% by value of New Zealand's dairy exports.
- 13 Fonterra's Darfield plant's farmer suppliers are largely located in the Central and North Canterbury region. Unlike in the North Island's more mature dairy areas, milk supply growth in South Island dairy areas has averaged around 4-5% per annum in the past decade. Also, under section 73 of the Dairy Industry Restructuring Act (DIRA), Fonterra is required to accept all new applications to become Fonterra shareholder farmers and all applications to increase the volume of milk supplied by shareholding farmers.³ Therefore Fonterra is required to maintain enough processing capacity to ensure it can match the volume of milk supplied to it.

ECONOMICS AND THE RMA

Community Economic Wellbeing

- 14 Economic considerations are intertwined with the concept of the sustainable management of natural and physical resources, which is embodied in the RMA. In particular, Part 2 section 5(2) refers to enabling "*people and communities to provide for their ... economic ... well being*" as a part of the meaning of "*sustainable management*", the promotion of which is the purpose of the RMA.

² The others are at Culverden, Clandeboye and Studholme. Fonterra's plant at Kaikoura closed in April 2016.

³ In some exceptional circumstances, Fonterra can refuse to accept additional volumes of milk for processing. These circumstances relate to minimum volumes of milk solids and where transport costs for a new applicant exceed those of its highest transport cost existing supplier.

- 15 As well as indicating the relevance of economic effects in considerations under the RMA, this section also refers to "*people and communities*" (*emphasis added*), which highlights that in assessing the impacts of a proposal it is the impacts on the community and not just the applicant or particular individuals or organisations, that must be taken into account. This is underpinned by the definition of "*environment*" which also extends to include people and communities.
- 16 The continued operation and possible expansion⁴ of Fonterra's dairy product manufacturing capacity at the Darfield site will enable the residents and businesses of the Selwyn District, Christchurch City and the Canterbury region to provide for their social and economic wellbeing.

Economic Efficiency

- 17 Part 2 section 7(b) of the RMA notes that in achieving the purpose of the Act, all persons "*shall have particular regard to ... the efficient use and development of natural and physical resources*" which include the economic concept of efficiency⁵. Economic efficiency can be defined as:
- "the effectiveness of resource allocation in the economy as a whole such that outputs of goods and services fully reflect consumer preferences for these goods and services as well as individual goods and services being produced at minimum cost through appropriate mixes of factor inputs"* ⁶.
- 18 More generally economic efficiency can be considered in terms of:
- 18.1 Maximising the value of outputs divided by the cost of inputs;
 - 18.2 Maximising the value of outputs for a given cost of inputs;
 - 18.3 Minimising the cost of inputs for a given value of outputs;
 - 18.4 Improving the utilisation of existing assets; and
 - 18.5 Minimising waste.
- 19 The continuation and expansion of dairy product manufacturing capacity at the Darfield site will provide efficiency benefits to the

⁴Although significant growth in milk production within the Darfield's catchment is not expected, additional processing capacity on the site is possible if milk is transferred from other sites.

⁵ See, for example, in *Marlborough Ridge Ltd v Marlborough District Council* [1998] NZRMA 73, the Court noted that all aspects of efficiency are "*economic*" by definition because economics is about the use of resources generally.

⁶ Pass, Christopher and Lowes, Bryan, 1993, *Collins Dictionary of Economics* (2nd edition), Harper Collins, page 148.

Selwyn District and Canterbury region, especially in regard to (i) minimising milk collection transport costs, (ii) the continued use of substantial assets with remaining economic life and (iii) enabling economies of scale in production that can be achieved at the site. I discuss these economic benefits later in my evidence.

Viewpoint

- 20 An essential first step in carrying out an evaluation of the positive and negative economic effects of Fonterra's Darfield dairy products manufacturing site is to define the appropriate viewpoint that is to be adopted. This helps to define which economic effects are relevant to the analysis. Typically a district (or city) and wider regional viewpoint is adopted and sometimes even a nationwide viewpoint might be considered appropriate.
- 21 The Darfield dairy manufacturing site is located in the Selwyn District, which is part of the Canterbury region. However Christchurch City is also part of the local economy which significantly benefits from the continuation of milk processing capacity at the site since firstly, many of the staff reside in Christchurch (as well as Selwyn), and secondly, Christchurch businesses as well as Selwyn based businesses provide goods and services to the plant. Also there will be increased employment and expenditure in the local Selwyn and Christchurch economies during any expansion of the plant at the site. Therefore in this report the economic effects are considered in relation to the local Selwyn District economy and also in relation to the broader Canterbury region (incorporating Christchurch City effects).
- 22 There are also private or financial benefits associated with the continuation and any expansion of Fonterra's operations at the Darfield site. Generally these benefits are not relevant under the RMA and the main focus of this evidence is therefore on the wider economic effects on parties other than Fonterra and its customers. Economists refer to such effects as "externalities"⁷.
- 23 However, Fonterra is owned by its farmer shareholders and financial benefits to Fonterra impact on the "economic (and social) well being" of these farmer shareholders including those within the local community – i.e. the Selwyn District and wider Canterbury region. Also financial benefits to Fonterra are relevant with respect to the "efficient use and development of natural and physical resources" and New Zealand's export competitiveness, given the importance of dairy product exports to the New Zealand economy.

⁷ Defined as the side effects of the production or use of a good or service, which affects third parties, other than just the buyer and seller.

BACKGROUND TO SELWYN DISTRICT AND CANTERBURY REGION'S ECONOMIES⁸

Population

- 24 Statistics New Zealand's June 2020 population estimate for the Selwyn District is 69,700 or 1.4% of New Zealand's population. This is 5.1% higher than in 2019. New Zealand's population in 2020 was 2.1% higher than in 2019. In 2001 population in the District was estimated to be 28,000, implying an increase of 148.9% over the period 2001 to 2020, as compared to only 31.0% for New Zealand as whole. Statistics New Zealand's 'medium' population projections⁹ have the Selwyn District's population increasing to 99,500 in 2048 – i.e. an average rate of increase of 1.5% per annum over the period 2020-48, compared to an average rate of growth for New Zealand of 0.7% per annum.
- 25 Statistics New Zealand's June 2020 population estimate for the Canterbury region is 645,900 or 12.7% of New Zealand's total population. It is the second largest region in New Zealand in terms of population. In 2001 population in the Region was estimated to be 496,700, implying an increase of 30.0% over the period 2001 to 2020. Statistics New Zealand's 'medium' population projections have the region's population increasing at an average rate of 0.7% per annum to 780,500 over the period 2020-48.

Employment

- 26 Employment data highlights the dependence of the Selwyn District on the agriculture sector. In February 2020, 3,150 jobs (16.5%) of the Selwyn District's 19,100 jobs were in the agriculture, forestry and fishing industry group, with most (an estimated 3,046 jobs) being agricultural jobs. Dairy cattle farming accounted for 1,100 jobs (5.8% of total employment) and sheep, beef cattle and grain farming 620 jobs (3.2% of total employment). There were 2,800 jobs (14.7% of total employment) in the manufacturing sector, including 1,650 jobs (8.6% of total employment) in food manufacturing of which dairy product manufacturing accounted for 1,050 jobs (5.5% of total employment). Taken together, dairy cattle farming and dairy product manufacture directly account for 11.3% of total employment in the District. With the inclusion of the flow on, or "multiplier" effects, (see next section of this report), the dairy sector accounts for around 17% of total employment in the District.
- 27 Other important employment sectors in the District are education and training (2,150 jobs or 11.2% of the total), construction (1,700 jobs

⁸ Data in this section from Statistics New Zealand.

⁹ Statistics New Zealand prepare three sets of projections – high, medium and low – according to natural population change (i.e. the net effect of birth and death rate assumptions) and net migration assumptions. These projections do not explicitly incorporate assumptions about different rates of economic development.

or 8.9% of the total), public administration and safety (1,650 jobs or 8.6% of the total), professional, scientific and technical services (1,450 jobs or 7.6% of the total), retail trade (1,400 jobs or 7.3% of the total), wholesale trade (740 jobs or 3.9% of the total), transport, postal and warehousing (720 jobs or 3.8% of the total) and health care and social assistance (620 jobs or 3.2% of the total).

- 28 Statistics New Zealand estimates total employment in the Canterbury region in February 2020 at 307,500 which represents 13.3% of the total persons employed in New Zealand.¹⁰ The agriculture, forestry and fishing industry group employed 16,200 persons (5.3% of the region's total jobs) of which most (14,906) were engaged in agriculture.¹¹ Other significant sectors are manufacturing employing 36,300 or 11.8% of total jobs (of which the most significant subsectors are food products manufacturing (13,400 jobs), machinery and equipment manufacturing (5,300 jobs), fabricated metal products manufacturing (3,650 jobs) and transport equipment manufacturing (2,900 jobs), health care and social assistance (34,900 jobs or 11.3% of total jobs), retail trade (31,300 jobs or 10.2% of total jobs), construction (29,300 jobs or 9.5% of total jobs), education and training (24,300 jobs or 7.9% of total jobs), professional, scientific and technical services (23,900 jobs or 7.8% of total jobs) and accommodation and food services (21,500 jobs or 7.0% of total jobs).
- 29 Besides the tourism related aspects of sectors such as retail trade, education and training and accommodation and food services, the key drivers of the Canterbury economy remain largely agriculture and manufacturing.
- 30 There are important linkages between the performance of the Canterbury regional economy (which is heavily dependent upon agriculture and agricultural product processing) and the Christchurch City economy. Apart from tourism which accounts for some but not all¹² of the jobs created in the retail trade and accommodation and food services sectors, the key economic drivers for Christchurch City are manufacturing and services provided to the agriculture and agricultural product processing activity within the wider Canterbury region.

¹⁰Statistics NZ, NZ Stat, Business Demography Statistics; Geographic Units by Industry and Statistical Area.

¹¹ Including agriculture's proportionate share of agriculture, forestry and fishing support services.

¹² Employment in tourism is difficult to identify from official statistics since the relevant sectors such as retail trade and accommodation and food services for which data is collected meet the needs of domestic and international visitors, business travellers and local residents and businesses.

ECONOMIC BENEFITS OF MAINTAINING CURRENT OPERATIONS OF FONTERRA'S DARFIELD MILK PROCESSING PLANT

- 31 Before Fonterra developed the Darfield milk processing plant, milk from the Selwyn District and the surrounding North and Mid-Canterbury catchment areas was processed at Fonterra's Clandeboyne plant near Timaru, and when this plant had capacity constraints, at Fonterra's Edendale plant in Southland. The opening of the Darfield plant not only led to a significant reduction in truck and tanker kilometres (up to 30,000 truck and tanker kilometres per day, which benefits not just Fonterra and its farmer shareholders but also the wider economy through reductions in road externality costs¹³) but also spread capacity risk across two large Fonterra plants within Canterbury and the three largest Fonterra plants in the South Island.
- 32 In addition, there are a number of advantages in maintaining production capacity at the Darfield site as compared to relocating production capacity to potential new sites and/or the expansion of other existing plants. The key advantages are:
 - 32.1 The continued optimum use of existing relatively new "sunk" assets, which otherwise would be largely "stranded" – i.e. the continued use of plant, machinery and buildings with significant remaining economic life but which would have little if any residual value if the plant reduced its operating capacity or ceased operating and these assets had to be sold or relocated to other sites;
 - 32.2 The site is large enough to allow for future expansions to cope with any transfer of milk from other processing sites;
 - 32.3 The site is on a main road with good road network links;
 - 32.4 The site is connected to the rail network for delivery of inputs and export of milk products;
 - 32.5 The site is close to Lyttelton Port, which has the capacity to attract large ships;
 - 32.6 The site is close to Darfield and Christchurch City for skilled staff and support industries;
 - 32.7 The site has a sufficient supply of good quality water, a reliable electricity supply and is of sufficient size to enable on-site wastewater disposal. It now has a reverse osmosis water treatment plant enabling a reduced water take; and

¹³ E.g. reductions in congestion, road accidents and greenhouse gas emissions.

- 32.8 The site is some distance from neighbours and effects on them can be mitigated.
- 33 Most of the plant's operational input supplies other than milk and employee labour come from the Selwyn District and its surrounds. Local Selwyn District firms supply services such as security services, laundry services, gardening services, canteen outsourcing, electrical maintenance services and mechanical maintenance services.
- 34 The Darfield milk processing plant currently employs 280 permanent full time equivalent (FTE) staff [update], as well as a significant number of contractors and temporary staff. It is estimated that at least 50% of the staff directly employed at the plant reside permanently within the Selwyn District, whilst a number of contractor staff will also be local residents. For the 140 staff residing in the Selwyn District, their estimated wages and salaries are \$11.4 million per annum.¹⁴
- 35 In addition to these direct economic impacts there are indirect impacts arising from:
- 35.1 The effects on suppliers of goods and services provided to the site from within the District (i.e. the "forward and backward linkage" effects); and
- 35.2 The supply of goods and services to employees at the site and to those engaged in supplying goods and services to the site (i.e. the "induced" effects). For example, there will be additional jobs and incomes for employees of supermarkets, restaurants and bars as a consequence of the additional expenditure by employees living within the Selwyn District.
- 36 District multipliers can be estimated to gauge the size of these indirect effects. The size of the multipliers is a function of the extent to which a district economy is self-sufficient in the provision of a full range of goods and services and the district's proximity to alternative sources of supply. District multipliers typically fall in the range of 1.5 to 2.0¹⁵ and taking the low point of 1.5, given the Selwyn District's close proximity to Christchurch, implies total

¹⁴ I.e. based on an average annual salary of \$81,150. Note: wage and salary figures supplied in 2017 have been updated from first quarter 2017 to second quarter 2021 using a CPI factor of 1.082 (Source: Reserve Bank Inflation Calculator). This is a conservative adjustment as it makes no allowance for wage and salary increases over and above the rate of inflation.

¹⁵ Work undertaken for the Christchurch City Council and the Canterbury Regional Council by Mr. Geoffrey Butcher estimated employment and household income (i.e. wages and salaries) multipliers for the Canterbury region of around 2.5. (See Appendix 8 of evidence of Mr. Geoffrey Butcher (dated 27 August 2010) for the Christchurch City Council and for the Canterbury Regional Council Regional Council, in the matter of appeals pursuant to Clause 14 of the First Schedule to the RMA in relation to Proposed Change 1 to the Canterbury Regional Policy Statement.)

impacts (i.e. direct plus indirect impacts) of Fonterra's current operations at its Darfield site of:

36.1 210 additional jobs for local Selwyn District residents; and

36.2 \$17.0 million per annum in additional wages and salaries for local Selwyn District residents.

- 37 In addition to the additional revenues, employment and incomes generated by the Darfield plant itself, condensate and process water from the plant is used to irrigate a neighbouring farm owned by Fonterra (492 hectares irrigated) and two other initially third party farms but now also owned by Fonterra (the first 174 hectares irrigated and the second 121 hectares irrigated). The 492 hectare farm is used for supplementary feed production, with the other farms used for dairy support and irrigated sheep farming respectively. The irrigation using condensate and process water from the Fonterra plant is estimated to improve farmer returns by \$290-\$570 per hectare for dairy support and \$750 per hectare for irrigated sheep farming¹⁶. This implies additional earnings from the irrigation using the plant's condensate and process water of \$0.36 million to \$0.50 million per annum across the three farms.¹⁷
- 38 Further there are important economic linkages between Christchurch City's economy and farming and agricultural product processing in the rural hinterland of the Canterbury region. The Darfield milk processing plant, its dairy farm suppliers, its local suppliers of goods and services and their employees purchase goods and services from Christchurch City businesses providing employment and incomes for Christchurch City residents.
- 39 Conservative¹⁸ estimates for the direct and indirect effects of Fonterra's Darfield plant's existing operations for the Canterbury region (principally in the Selwyn District and Christchurch City) are the creation of 560 jobs and incomes of \$45.5 million per annum.
- 40 Consequently, changes to the Strategic Directions section of the proposed District Plan which better protect Fonterra's Darfield milk processing plant's current and future operations provide economic benefits, not only to Fonterra and its shareholder suppliers, but also

¹⁶ Ford S.J. (2011); Farmer Returns from the Irrigation of Condensate Water; a report prepared for Fonterra. (the Ford report)

¹⁷ The original data from the Ford report is updated by using an inflation factor of 1.147 (Source Reserve Bank Inflation Calculator; change in CPI from second quarter 2011 to second quarter 2021). This is a conservative adjustment as it makes no allowance for productivity improvements.

¹⁸ Relates only to Fonterra's fulltime workforce of 280 staff and assumes a regional multiplier of 2.0. Note: No account is taken of on-farm employment and incomes since without the Darfield plant it is assumed milk production would be unchanged.

other businesses and residents within the Selwyn District, Christchurch City and the wider Canterbury region.

Economic Benefits from Increased Economic Activity

- 41 As indicators of levels of economic activity, economic impacts in terms of retained or increased expenditure, incomes and employment within the local and regional economies are not in themselves measures of improvements in economic welfare or economic wellbeing. However, there are economic welfare enhancing benefits associated with retaining or increasing levels of economic activity. These relate to one or more of:
- 41.1 Increased economies of scale: Businesses and public sector agencies are able to provide increased amounts of outputs with lower unit costs, hence increasing profitability or lowering prices;
 - 41.2 Increased competition: Increases in the demand for goods and services allow a greater number of providers of goods and services to enter markets and there are efficiency benefits from increased levels of competition;
 - 41.3 Reduced unemployment and underemployment¹⁹ of resources: To the extent resources (including labour) would be otherwise unemployed or underemployed, increases in economic activity can bring efficiency benefits when there is a reduction in unemployment and underemployment. The extent of such gains is of course a function of the extent of underutilized resources at the time and the match of resource requirements of a project and those resources unemployed or underemployed; and
 - 41.4 Increased quality of central government provided services: Sometimes the quality of services provided by central government such as education and health care are a function of population levels and the quality of such services in a community can be increased if increased economic activity maintains or enhances population levels.
- 42 It is reasonable to presume that the retention of economic activity (i.e. expenditures, incomes and employment) within the local Selwyn District economy as a consequence of continued operation of milk processing capacity at Fonterra's Darfield site will give rise to one or more of these four welfare enhancing economic benefits for the local community.

¹⁹ Underemployment differs from unemployment in that resources are employed but not at their maximum worth; e.g. in the case of labour, it can be employed at a higher skill and/or productivity level, reflected in higher wage rates.

POTENTIAL ECONOMIC COSTS OF CONTINUATION OF MILK PROCESSING CAPACITY AT FONTERRA'S DARFIELD SITE

Lost Agricultural Production

- 43 Lost agricultural production is not an external cost of continued use of milk processing capacity at the Darfield site. The productive value of the land in alternative uses (such as agricultural and other use) has been internalised into the cost structure of the development – in other words Fonterra in purchasing the land has paid a price reflective of future net returns from alternative uses for the land. Such costs are not costs to be borne by the wider community.
- 44 In any case the increase in the land's rateable value is indicative of the land being used more efficiently than if it continued only in its previous use of rural land.
- 45 Furthermore the plant and roads on the site currently require less than 2% of the site (13 hectares²⁰ out of the 680 hectare site, excluding the associated wastewater irrigation farms), and the remainder of the site continues to be used for agricultural purposes with an improved supply of irrigation water from the plant's treated wastewater system. Also there is an additional 212 hectares of third party irrigation, increasing production from these properties which were not previously irrigated.

Reductions in Tourism

- 46 Whilst tourism is not as significant a driver of the District economy as other industries (e.g. agriculture), the District is the home to several ski-fields (Broken River, Mt Cheeseman, Craigieburn, Mt Olympus, Porters Ski Area and Temple Basin) and the Arthurs Pass National Park and offers a wide range of outdoor activities for visitors to the District to enjoy.
- 47 The plant does not impact on outdoor pursuits in the District such as skiing, tramping, mountain climbing or fishing. In fact the presence of a major manufacturing plant within the District is likely to lead to some increase in visitor numbers to the District and benefits in terms of additional visitor spending on locally provided accommodation and hospitality.

Utilities

- 48 Externality costs can arise when utilities provided by central or local government (e.g. roads, water supply, storm water and flood control systems and wastewater disposal) are not appropriately

²⁰ The Stage 2 expansion only involved an additional 0.5 hectares of site coverage.

priced. In the case of Fonterra's milk processing plant at Darfield no such externality costs arise.

- 49 Fonterra has met the costs of improvements onto State Highway 73 and the level crossing providing access to the site from the existing road network. Fonterra and its farmer suppliers also make payments via road user charges and rates for ongoing maintenance and necessary upgrades to the state highway and local district council road networks.
- 50 With respect to water supply, on-site bores are used for the plant. For storm water and wastewater disposal the plant is totally self-sufficient.
- 51 Therefore the plant does not use the Selwyn District Council provided services and there can be no concerns that other ratepayers of the District are providing subsidised services to the plant.

Dated: 23 July 2021

Michael Copeland

Appendix A

CURRICULUM VITAE OF MICHAEL CAMPBELL COPELAND

DATE OF BIRTH	3 October 1950
NATIONALITY	New Zealand
EDUCATIONAL QUALIFICATIONS	Bachelor of Science (Mathematics) 1971 Master of Commerce (Economics) 1972

PRESENT POSITIONS

(Since 1982)	Economic Consultant, Brown, Copeland & Co Ltd
(Since 2017)	Trustee, Trade Aid, Kapiti

PREVIOUS EXPERIENCE

1978-82	NZ Institute of Economic Research Contracts Manager/Senior Economist
1975-78	Confederation of British Industry Industrial Economist
1972-75	NZ Institute of Economic Research Research Economist
1990-94	Member, Commerce Commission
2001-06	West Coast Regional Council Trustee, West Coast Development Trust
2002-08	Lay Member of the High Court under the Commerce Act 1986
2003-11	Director, Wellington Rugby Union
2010-13	Director, Southern Pastures
2010-17	Director, Healthcare New Zealand Holdings Limited

GEOGRAPHICAL EXPERIENCE

- New Zealand
- Australia
- Asia (Cambodia, India, Indonesia, Kazakhstan, Malaysia, Nepal, Pakistan, People's Republic of China, Philippines, Tajikistan, Sri Lanka, Uzbekistan, Viet Nam)
- South Pacific (Cook Islands, Fiji, Kiribati, Tokelau, Tonga, Tuvalu, Vanuatu, Western Samoa)
- United Kingdom

AREAS OF PRIMARY EXPERTISE

- Agriculture and Resource Use Economics (including Resource Management Act)
- Commercial Law and Economics (including Commerce Act)
- Development Programme Management
- Energy Economics
- Industry Economics
- Transport Economics