

Before the Independent Hearings Panel

under: the Resource Management Act 1991

in the matter of: Submissions and further submissions in relation to the proposed Otago Regional Policy Statement 2021

submitter: **Fonterra Limited**
Submitter 233

Statement of Evidence of Michael Campbell Copeland (Economics)

Dated: 23 November 2022

Reference: B G Williams (ben.williams@chapmantripp.com)
K I G Jacomb (kirsty.jacomb@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 233) in September 2021 on the Otago Regional Council's proposed Otago Regional Policy Statement 2021 (PORPS) and Fonterra's further submission made in November 2021. I have been authorised by Fonterra to provide evidence on its behalf in relation to the economics issues discussed in those submissions.

SCOPE OF EVIDENCE

- 6 Fonterra is seeking changes to various sections of the PORPS to better safeguard the current and future operations at its Stirling dairy manufacturing site (Stirling site) and its Mosgiel distribution centre (Mosgiel site). The changes Fonterra seeks include a number relating to economic factors, such as greater recognition of planning for community economic and social wellbeing in the purpose section and elsewhere in the PORPS. In addition, Fonterra seeks that the RPS include definitions for reverse sensitivity, regionally significant

industry, rural industry, regionally significant infrastructure and sensitive activity.

- 7 The changes sought by Fonterra and which are detailed in the evidence of Susannah Tait and Suzanne O'Rourke better safeguard the economic benefits from the ongoing and future operation of the Stirling and Mosgiel sites, not just to Fonterra and its farmer shareholders, but also to residents and businesses throughout the Clutha District, Dunedin City and Otago region. Therefore my evidence addresses the economic significance of Fonterra's Stirling and Mosgiel sites to the Clutha District, Dunedin City and the Otago region.
- 8 My evidence covers:
- 8.1 The background to Fonterra's existing and future use of its Stirling and Mosgiel sites;
 - 8.2 A consideration of the relevance of economic effects under the RMA;
 - 8.3 A description of the Clutha District, Dunedin City, and Otago regional economies;
 - 8.4 The economic benefits from the continued operation of Fonterra's existing activities at Fonterra's Stirling and Mosgiel sites; and
 - 8.5 A discussion of some potential economic costs of the continued operation of Fonterra's activities at its Stirling and Mosgiel sites.

BACKGROUND TO FONTERRA'S EXISTING AND FUTURE USE OF ITS STIRLING AND MOSGIEL SITES¹

- 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 exporter 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 and operates 28 manufacturing sites, five brands sites and three logistics/distribution sites within New Zealand.

¹ Material in this section provided by Fonterra.

- 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 each year and owns leading dairy brands in Australasia, Asia, the Middle East and Latin America. In the 2021/22 financial year, Fonterra's global revenue was \$22.953 billion.
- 12 Fonterra's Stirling milk processing site is located at the southern end of the Stirling Township near Balclutha. The Stirling site has been operating for 40 years and employs approximately 110 staff. The Stirling site processes up to 1.8 million litres of milk every day during the dairy season, or around 400 million litres per annum. Over 200 tonnes of cheese is made at the site daily and around 55,000 tonnes per annum. The plant is the largest dry salt cheese factory in Australasia. The plant also produces lactose, whey protein and cream that is transported to Fonterra's Clandeboye site for further processing.
- 13 The main part of the Stirling site, which is located on the north side of Mount Wallace Road, contains a cheese plant, whey processing plant, wastewater treatment plant and associated infrastructure, parking and other facilities. On the corner of St John and Baker Streets, and to the southwest of the main site and to the south of the Main South railway line, is a dairy tanker depot and a fuel station. When operating at full capacity, the plant processes 4% of New Zealand's peak milk production. The cheese produced is exported through Port Chalmers to markets in South East Asia, the Middle East and the People's Republic of China.
- 14 Farmers that supply Fonterra's Stirling site are largely located in the central and northern parts of the Otago region. In 2021/22, the site's payments to local shareholder milk suppliers for milk processed at the site totalled \$360 million. Milk supply in the Stirling site's catchment area grew over the past decade. However, future growth is expected to be lower and primarily via efficiency improvements on farm. 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.² Therefore Fonterra is required to maintain enough processing capacity to ensure it can match the volume of milk supplied to it.
- 15 The Mosgiel site is Fonterra's key southern distribution hub and is located on Stedman Road, Mosgiel. The site accommodates a 45,000 tonne dry storage building and 17,000 tonne cold storage building. These buildings provide for the temporary storage of

² 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.

product before being exported, as well as additional storage to provide extra capacity for the Edendale site in Southland.

- 16 The site is located with strategic rail access to Port Chalmers and allows for substantial reductions in truck movements on roads between the site, Port Otago and Southland in particular with further benefits in reduced fuel use and carbon emissions.

ECONOMICS AND THE RMA

Community Economic Wellbeing

- 17 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.
- 18 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.
- 19 The continued operation of Fonterra's dairy product manufacturing capacity at the Stirling site and distribution functions at the Mosgiel site will enable the residents and businesses of the Clutha District, Dunedin City and the Otago Region to provide for their social and economic wellbeing.

Economic Efficiency

- 20 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 includes the economic concept of efficiency³. Economic efficiency can be defined as:⁴

"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".

³ 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.

⁴ Pass, Christopher and Lowes, Bryan, 1993, *Collins Dictionary of Economics* (2nd edition), Harper Collins, page 148.

- 21 More generally economic efficiency can be considered in terms of:
- 21.1 Maximising the value of outputs divided by the cost of inputs;
 - 21.2 Maximising the value of outputs for a given cost of inputs;
 - 21.3 Minimising the cost of inputs for a given value of outputs;
 - 21.4 Improving the utilisation of existing assets; and
 - 21.5 Minimising waste.
- 22 The continuation of dairy product manufacturing capacity at the Stirling site and distribution functions at the Mosgiel site will provide efficiency benefits to the Clutha District, Dunedin City and Otago region, especially in regard to (i) minimising milk collection and product distribution transport costs, (ii) the continued use of substantial assets with remaining economic life and (iii) enabling economies of scale in production, storage and distribution that can be achieved at the two sites. I discuss these economic benefits later in my evidence.

Value of Investment to the Existing Consent Holder

- 23 Part 6, section 104 (2A) of the RMA requires the consent authority when considering a renewal of an existing consent to "*have regard to the value of the investment of the existing consent holder.*" Although this is not a resource consent hearing, this section of the RMA highlights that consideration of the value and remaining useful life of assets is relevant to having regard to the efficient use of resources.
- 24 The value to Fonterra of its investment in the Stirling and Mosgiel sites can be considered in terms of either the reinstatement value of the facilities at the sites (\$235 million for the Stirling site and \$121 million for the Mosgiel site⁵) or the foregone future earnings of the facilities on the sites if they were forced to close or downsize. By both of these measures, the value of investment to the existing consent holder is significant.

Viewpoint

- 25 An essential first step in carrying out an evaluation of the economic effects of Fonterra's Stirling and Mosgiel sites 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.

⁵ Source: Fonterra.

- 26 The Stirling dairy manufacturing site is located in the Clutha District, which is part of the Otago Region. However, Dunedin City is also part of the local economy which significantly benefits from the continuation of milk processing capacity at Stirling site since Dunedin businesses as well as Clutha based businesses provide goods and services to the plant and its employees. Also the Mosgiel site is located within Dunedin City. Therefore in my evidence I will consider the economic effects in relation to the local Clutha and Dunedin City economies and also in relation to the broader Otago Region.
- 27 There are also private or financial benefits associated with the continuation of Fonterra's operations at the Stirling and Mosgiel sites. 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"⁶.
- 28 However, Fonterra is owned by its farmer shareholders and financial benefits to Fonterra impact on the "economic (and social) wellbeing" of these farmer shareholders including those within the local community – i.e. the Clutha District and wider Otago region. Financial benefits to Fonterra are also 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.

BACKGROUND TO CLUTHA DISTRICT, DUNEDIN CITY AND OTAGO REGION'S ECONOMIES⁷

Population

- 29 Statistics New Zealand's June 2022 population estimate for the Clutha District is 18,650 or 0.4% of New Zealand's population. In 2001 population in the District was estimated to be 17,550, implying an increase of 6.3% over the period 2001 to 2022, as compared to 32.0% for New Zealand as whole. Statistics New Zealand's 'medium' population projection⁸ has the Clutha District's population increasing to 18,700 in 2048 – i.e. an average rate of increase of 0.01% per annum over the period 2022-48, compared to a projected average rate of growth for New Zealand of 0.7% per annum.
- 30 Statistics New Zealand's June 2022 population estimate for Dunedin City is 130,400 or 2.5% of New Zealand's population. In 2001

⁶ 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.

⁷ Data in this section from Statistics New Zealand.

⁸ 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.

population in the City was estimated to be 119,300, implying an increase of 9.3% over the period 2001 to 2022. Statistics New Zealand's 'medium' population projections have Dunedin City's population increasing to 141,600 in 2048 – i.e. a projected average rate of increase of 0.3% per annum over the period 2022-48.

- 31 Statistics New Zealand's June 2022 population estimate for the Otago Region is 246,000 or 4.8% of New Zealand's total population. In 2001 population in the Region was estimated to be 188,300, implying an increase of 30.6% over the period 2001 to 2022. Statistics New Zealand's 'medium' population projections have the region's population increasing at an average rate of 0.5% per annum to 282,600 over the period 2022-48.

Employment

- 32 Employment data highlights the dependence of the Clutha District on the agriculture sector. In February 2022, 2,400 jobs (27.3%) of the Clutha District's 8,800 jobs were in the agriculture, forestry and fishing industry group, with most (an estimated 2,189 jobs⁹) being agricultural jobs. Dairy cattle farming accounted for 750 jobs (8.5% of total employment) and sheep, beef cattle and grain farming 1,000 jobs (11.4% of total employment). There were 2,150 jobs (24.4% of total employment) in the manufacturing sector, including 1,850 jobs (21.0% of total employment) in food manufacturing of which meat and meat products manufacturing accounted for 1,300 jobs (14.8% of total employment) and dairy product manufacturing accounted for 530 jobs (6.0% of total employment).¹⁰ Taken together, dairy cattle farming and dairy product manufacture directly account for 14.5% of total employment in the District. With the inclusion of the flow on, or "multiplier" effects, (see next section of my evidence), the dairy sector accounts for around 22% of total employment in the District.
- 33 Other important employment sectors in the District are construction (670 jobs or 7.6% of the total), education and training (590 jobs or 6.7% of the total), retail trade (590 jobs or 6.7% of the total), health care and social assistance (540 jobs or 6.1% of the total) and public administration and safety (500 jobs or 5.7% of the total). Total employment in the Clutha District grew by 6.0% over the period 2006 to 2022, as compared to employment growth for New Zealand of 26.1%.
- 34 For Dunedin City, the key sectors are healthcare and social assistance (10,300 jobs in 2022 or 17.2% of the total labour force), education and training (8,200 jobs or 13.7% of the total labour force), retail trade (6,400 jobs or 10.7% of the total labour force), construction (5,400 jobs or 9.0% of the total labour force),

⁹ Including agricultural services jobs.

¹⁰ Aside from Fonterra's Stirling dairy manufacturing plant there is also the Danone Nutricia plant located at Clydevale within the Clutha District.

accommodation and food services (4,500 jobs or 7.5% of the total labour force), and manufacturing (3,850 jobs or 6.4% of the total labour force). Total employment in Dunedin City grew by only 5.3% over the period 2006 to 2022. This was largely due to manufacturing sector employment reducing by 36.9% from 6,100 in 2006 to only 3,850 in 2022.

- 35 For the Otago region as a whole, employment data suggest the most significant sectors are tourism with the accommodation and food services industry group¹¹ having 11,700 jobs in 2022 (or 9.9% of the region's workforce), retail trade (12,800 jobs or 10.8% of the region's workforce), healthcare and social assistance (13,700 jobs or 11.5% of the region's workforce), construction (12,200 jobs or 10.3% of the region's workforce), education and training (11,200 jobs or 9.4% of the region's work force), agriculture, forestry and fishing (9,500 jobs or 8.0% of the region's workforce), and manufacturing (9,900 jobs or 8.3% of the region's workforce). Total employment in the Otago region grew by 21.1% over the period 2006 to 2022.
- 36 Fonterra's Stirling site adds important diversity to the local Clutha District economy by providing off-farm employment and incomes. Although it involves the processing of an agricultural commodity, it also makes the District economy less sensitive to international commodity price fluctuations. The Stirling and Mosgiel sites also provide some diversity to the Dunedin City and Otago regional economies by increasing the size of Dunedin City's transport and distribution sector and the Otago region's manufacturing and transport and distribution sectors.

ECONOMIC BENEFITS OF MAINTAINING CURRENT OPERATIONS AT FONTERRA'S STIRLING AND MOSGIEL SITES

- 37 Closure or constraints placed on the processing capacity of Fonterra's dairy manufacturing site at Stirling would have negative economic impacts. It would require milk from the site's local catchment area to be transported further away for processing – either to Fonterra's Cladeboye plant near Timaru, and/or to Fonterra's Edendale plant in Southland. The available processing capacity at the Stirling site results in a reduction in truck and tanker kilometres that would otherwise be required (up to 10,000 truck and tanker kilometres per day). The reduction in truck and trailer distances benefits not just Fonterra and its farmer shareholders but also the wider economy through reductions in road externality costs¹². It also helps spread capacity risk across Fonterra plants in the southern half of the South Island.

¹¹ The accommodation and food services industry group is only a proxy for the tourism sector. It provides goods and services as well to customers who are not tourists, whilst tourists purchase goods and services from other industry groups.

¹² E.g. reductions in congestion, road accidents and greenhouse gas emissions.

- 38 If Fonterra's Mosgiel distribution site was forced to close or have its distribution capacity constrained, alternative storage and distribution arrangements would be required. This would likely lead to additional transport and other associated costs.
- 39 In addition, there are a number of advantages in maintaining production and distribution capacity at the Stirling and Mosgiel sites as compared to relocating capacity to potential new sites and/or the expansion of facilities at other existing Fonterra plants. The key advantages are:
- 39.1 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 sites reduced their operating capacity or ceased operating and these assets had to be sold or relocated to other sites. The replacement value for the facilities at the Stirling site is estimated at \$235million and at the Mosgiel site, \$121 million. During the last 5 years, Fonterra has invested \$70 million in capital upgrades (separate to operating expenditure) with the latest capital expenditure an investment in a biomass boiler which will, when completed, make the Stirling plant the first dairy factory to be totally powered by non-fossil fuels (making it carbon neutral). The installation of the new infrastructure is expected to contribute an additional \$13.5 million to the local economy and support an estimated 10 ongoing jobs – six in the forestry supply chain and four to manage the fuel supply hub;
 - 39.2 The sites are large enough to allow for future expansions to cope with any transfer of milk and/or dairy products from other processing or distribution sites;
 - 39.3 The sites are on main roads with good road network links;
 - 39.4 The Mosgiel site is connected to the rail network for delivery of inward and outward milk products;
 - 39.5 The sites are close to Port Chalmers, enabling local port facilities to be utilized for dairy exports from the Otago and Southland regions;
 - 39.6 The Stirling site is close to Balclutha and Dunedin City and the Mosgiel site is within Dunedin City for skilled staff and support industries;
 - 39.7 The Stirling site has a sufficient supply of good quality water, a reliable electricity supply and is of sufficient size to enable on-site wastewater disposal; and

- 39.8 The sites are some distance from neighbours and effects on them can be mitigated.
- 40 Most of the Stirling plant's operational input supplies other than milk and employee labour come from the Clutha District and its surrounds. Local firms supplying goods and services to the site include engineering firms, fuel and other energy suppliers, building and plumbing firms, cleaning companies, food companies and transport companies.
- 41 For the Mosgiel site, most of the operational input supplies other than dairy products come from Dunedin City. Local Dunedin City firms' services supplied to the site include refrigeration services, electrical services, construction material supplies and construction services, rail and port operations, cleaning services and waste disposal services.
- 42 The Stirling milk processing plant currently employs around 110 permanent full time equivalent (FTE) staff, most of whom reside within the Clutha District. Their estimated wages and salaries are \$10 million per annum.¹³ In addition the Stirling plant spends an estimated \$70 million per annum on other goods and services – 35% (\$24.5 million) with local Clutha District businesses, 35% with other Otago businesses (i.e. a total of 70% or \$49 million) and 30% (\$21 million) with other New Zealand businesses.
- 43 In addition to these direct economic impacts there are indirect impacts arising from:
- 43.1 The effects on suppliers of goods and services provided to the site from within the District and region (i.e. the "forward and backward linkage" effects); and
- 43.2 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 Clutha District.
- 44 District and regional 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 2.0 and taking the low point of 1.5, given the Clutha District's close proximity to Dunedin, implies total impacts (i.e. direct plus indirect impacts) of Fonterra's current operations at its Stirling site of:

¹³ I.e. an average annual salary of \$90,900.

- 44.1 165 additional jobs for local Clutha District residents;
 - 44.2 \$15 million per annum in additional wages and salaries for local Clutha District residents; and
 - 44.3 \$37 million per annum in additional expenditure for local Clutha District businesses.
- 45 At an Otago regional level (using a multiplier of 2.0, since the region is more self-sufficient in the supply of goods and services than the Clutha District) the direct plus indirect impacts of Fonterra's current operations at its Stirling site are:
- 45.1 220 additional jobs for Otago region residents;
 - 45.2 \$20 million per annum in additional wages and salaries for local Otago region residents; and
 - 45.3 \$98 million per annum in additional expenditure for local Otago region businesses.
- 46 These district and regional economic impact estimates are conservative in that they exclude capital expenditure impacts. As with operating expenditure, Fonterra seeks as much as possible to utilise local suppliers of goods and services for capital expenditure.
- 47 The Mosgiel distribution site currently employs around 21.4 FTE staff, most of whom reside within the Dunedin City. Their estimated wages and salaries are \$1.6 million per annum.¹⁴ In addition the Mosgiel site spends an estimated \$1.9 million per annum on other goods and services – 84% (\$1.6 million) with local Otago region businesses, most of which are based in Dunedin City.
- 48 Taking the mid-point of 1.75 for the Dunedin City multiplier, given its greater self-sufficiency in the supply of goods and services as compared to the Clutha District, implies total impacts (i.e. direct plus indirect impacts) of Fonterra's current operations at its Mosgiel site of:
- 48.1 37 additional jobs for local Dunedin City residents;
 - 48.2 \$2.8 million per annum in additional wages and salaries for local Dunedin City residents; and
 - 48.3 \$3.3 million per annum in additional expenditure for local Dunedin City businesses.

¹⁴ I.e. an average annual salary of around \$75,000.

- 49 At an Otago regional level (using a multiplier of 2.0) the direct plus indirect impacts of Fonterra's current operations at its Mosgiel site are:
- 49.1 43 additional jobs for Otago Region residents;
 - 49.2 \$3.2 million per annum in additional wages and salaries for local Otago region residents; and
 - 49.3 \$3.89 million per annum in additional expenditure for local Otago Region businesses.
- 50 Combining Fonterra's two sites, the total direct plus indirect Otago regional impacts are 263 additional jobs, \$23.2 million per annum additional wages and salaries and \$101.8 million per annum additional expenditure.¹⁵
- 51 Consequently, changes to the PORPS which better protect Fonterra's current operations at the Stirling and Mosgiel sites provide economic benefits, not only to Fonterra and its shareholder suppliers, but also other businesses and residents within the Clutha District, Dunedin City and the wider Otago Region.

Economic Benefits from Increased Economic Activity

- 52 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:
- 52.1 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;
 - 52.2 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;
 - 52.3 Reduced unemployment and underemployment¹⁶ of resources: To the extent resources (including labour) would be otherwise unemployed or underemployed, increases in

¹⁵ Relates only to Fonterra's two sites within the Otago Region Note: No account is taken of on-farm employment, incomes and expenditure since without the two sites it is assumed milk production would be unchanged.

¹⁶ 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.

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

52.4 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.

53 It is reasonable to presume that the retention of economic activity (i.e. expenditures, incomes and employment) within the local Clutha District, Dunedin City and Otago regional economies as a consequence of continued operation of the two sites will give rise to one or more of these four welfare enhancing economic benefits for the local community.

Economic Benefits from Significant Industry

54 The data and analysis in the preceding sections of my evidence highlight the economic significance of the agricultural and agricultural processing industry sectors and in particular Fonterra's operations at its Stirling and Mosgiel sites at both a district and regional level. Significant amounts of direct and indirect employment, incomes and expenditure are associated with each of the sites. Recently during the Covid pandemic, the importance of the primary sector and the related primary product processing sector was highlighted as international and domestic tourism faced unprecedented headwinds. In particular the situation underscored the dangers of "New Zealand Inc" and the local district and regional economies being overly reliant on tourism as the sole economic driver. The Stirling and Mosgiel sites are economically significant in both the provision of economic activity within the local district and regional economies and providing much needed economic diversity.

POTENTIAL ECONOMIC COSTS OF CONTINUATION OF CURRENT OPERATIONS AT FONTERRA'S STIRLING AND MOSGIEL SITES

Lost Alternative Land Uses

55 Lost alternative land uses are not external costs of continued use of milk processing capacity and distribution and storage activities at the two sites. The productive value of the land in alternative uses has been internalised into the cost structure of the development. In other words, in purchasing the land Fonterra 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.

Utilities

- 56 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 priced. In the case of Fonterra's milk processing plant at its Stirling site and its distribution centre at Mosgiel no such externality costs arise.
- 57 Fonterra and its farmer suppliers make payments via road user charges and rates for ongoing maintenance and necessary upgrades to the state highway and local district council road networks.
- 58 With respect to water supply, the Clutha River is the source and the water taken is pumped to the Stirling site for treatment. For storm water and wastewater disposal the Stirling site is totally self-sufficient. At the Mosgiel site, Fonterra pays user charges and rates for water and wastewater services provided by the Dunedin City Council.
- 59 Therefore there can be no concerns that other ratepayers of the Clutha District and Dunedin City are providing subsidised services to Fonterra's two sites within the Otago region.

CONCLUSIONS

- 60 Fonterra's Stirling and Mosgiel sites provide a broad range of economic benefits to not only Fonterra's shareholder suppliers but also to the broader Clutha District, Dunedin City and Otago regional economies. The continued operation of the sites, without additional constraints on their efficient operation, is consistent with providing for the social and economic wellbeing of local residents and businesses. It is also consistent with the efficient use and development of natural and physical resources.

Dated: 23 November 2022

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