

Before the Independent Hearings Panel
at Timaru

under: the Resource Management Act 1991

in the matter of: Submissions and further submissions in relation to
Timaru Proposed District Plan – Hearing B

and: **Fonterra Limited**
Submitter 165

Statement of evidence of Ross Adam Burdett (Site)

Dated: 5 July 2024

REFERENCE: B G Williams (ben.williams@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 ROSS ADAM BURDETT

INTRODUCTION

- 1 My full name is Ross Adam Burdett.
- 2 I am a Site Operations Manager for Fonterra Limited (*Fonterra*). As Site Operations Manager, my role is to ensure that the day to day running of the Fonterra manufacturing site based at Clandeboye (*Clandeboye Site*) is in accordance with all policies and procedures set down both internally and externally.
- 3 I have been the Site Operations Manager at the Clandeboye Site since February 2022 (two years, five months).
- 4 Prior to this I was the General Manager of Westland Dairy Company Limited (trading as Westland Milk Products) for four years.
- 5 In preparing my evidence I have reviewed the evidence prepared by **Ms Suzanne O'Rourke** and **Ms Susannah Tait**.
- 6 I have also undertaken a more limited review of the submission and further submissions made by Fonterra in relation to the Timaru Proposed District Plan. I am across what Fonterra is seeking at a general level in its submission, but I defer to others in terms of specific relief sought.
- 7 I am authorised to provide this evidence on behalf of Fonterra's Clandeboye Site.

SCOPE OF EVIDENCE

- 8 In my evidence I will:
 - 8.1 provide an overview of Fonterra's operations at the Clandeboye Site; and
 - 8.2 provide a high level outline the current resource consents held by Fonterra authorising activities at the Clandeboye Site.

OPERATIONS AT FONTERRA'S CLANDEBOYE SITE

- 9 The Clandeboye Site is one of Fonterra's largest manufacturing sites and Fonterra's key asset within the Timaru District. It is located seven kilometres to the northeast of the Temuka Township. In addition, Fonterra owns 630 hectares near the Clandeboye Site where treated wastewater is discharged to land via irrigation, known as the 'Boyd' and 'Orton' farms.
- 10 An image showing Fonterra's landholdings at the Clandeboye Site is contained in **Figure 1** below.



Figure 1: Fonterra's landholdings at and around the Clandeboye Site

- 11 The site has been operating since 1904 and currently employs 1219 individuals (over 900 being full time employees) with wages and salaries forecasted to be approximately \$118 million for FY24.
- 12 The Clandeboye Site provides a diverse range of career options, including in driving, production, leadership, maintenance, administration, distribution, and laboratory technical roles. The site offers dairy processing apprenticeships to school leavers where successful candidates go straight into an operator role, spending time in the various departments to gain a general understanding of dairy processing before qualifying. Mechanical and electrical apprenticeships are also available.
- 13 Playing an active role in the community, the Clandeboye Site utilises the Fonterra Hapori programme to support Venture Timaru and local schools. In recent years, the site has made a number of financial donations to community activities and events, including a total donation of \$75,000 to the Timaru Fraser Park redevelopment, \$4,000 for the Lake Opuha Regeneration and Biodiversity Enhancement project, \$4,000 for the Kimble to Fairlie extension of the Tekapo to Timaru bike trail and \$10,000 to the Opihi College wetland project. The site is involved with local organisations such as the Te Ara Rock Art Trust where Fonterra staff volunteer to assist with planting for the ecological restoration of Taniwha Gully in planting days throughout the year. The site's emergency response team also helps farm owners in times of need.

- 14 The Clandeboye Site is a significant employer in the Timaru District and wider Canterbury Region and a valuable contributor to the greater South Canterbury community.

Milk processed at the Clandeboye Site

- 15 The Clandeboye Site processes approximately 40% of Fonterra's South Island milk (equating to almost 10% of Fonterra's New Zealand milk) into cheddar, mozzarella, whey protein concentrate, butter (unsalted and lactic), whole milk powder, skim milk powder, anhydrous milk fat, milk protein concentrate and lactose.
- 16 The site's fleet of 70 tankers collects milk from Fonterra supplier farms within the Central South Island, specifically Christchurch, the McKenzie Basin and as far south as Ranfurly. The milk is then distributed between (mainly) Fonterra's Clandeboye and Darfield manufacturing sites. In the 2023/24 milking season, 383 million kilograms of milk solids were collected from over 895 farms within the Central South Island. The tanker fleet will increase to 72 for the 2024/25 milking season to account for the addition of 16 new supplier farms supplying milk to the Clandeboye Site.
- 17 When operating at full capacity, the Clandeboye Site processes up to 13.8 million litres of milk per day. Peak processing at the site occurs between September and January, with the site closed for approximately six weeks over winter (June and part of July). The site processed 2.3 billion litres in the 2023/2024 season,¹ with a value of approximately \$1.8 billion.² The site's tanker fleet, which delivers milk to other sites in addition to Clandeboye, collected approximately \$3 billion of milk for the 2023/24 season.
- 18 If the Clandeboye Site was unable to continue to operate during peak processing season, the only alternative would be transporting milk by truck and ferry to Fonterra's lower North Island manufacturing sites to the extent capacity allowed. Fonterra's other mid to lower South Island manufacturing sites (at Darfield, Studholme and Edendale) are at capacity during peak processing season and are therefore unable to receive additional milk. The Clandeboye Site reached full capacity during peak processing in the 2023/24 season and this solution was implemented.
- 19 To move all of the milk currently processed at the Clandeboye Site would logistically not be possible as there are not sufficient truck numbers to do so. Fonterra would therefore be at real risk of not being able to meet statutory obligations to process all supplied raw milk. An overview of Fonterra's statutory obligations to collect, pay for and process raw milk was

¹ The total of milk processed at the Clandeboye Site for the 2023/2024 milking season being 2,324,943,563 litres.

² The value of the total milk processed at the Clandeboye Site for the 2023/2024 season being \$1,813,296,935.

provided by **Ms O'Rourke** in her Statement of Evidence for Hearing A dated 22 April 2024.³

Products produced at the Clandeboye Site

- 20 The Clandeboye Site has 11 manufacturing plants being three milk powder plants, two cream plants, one protein plant, three cheese plants and two lactose plants. An overview of the site's milk flow and product mix is contained in **Figure 2** below.

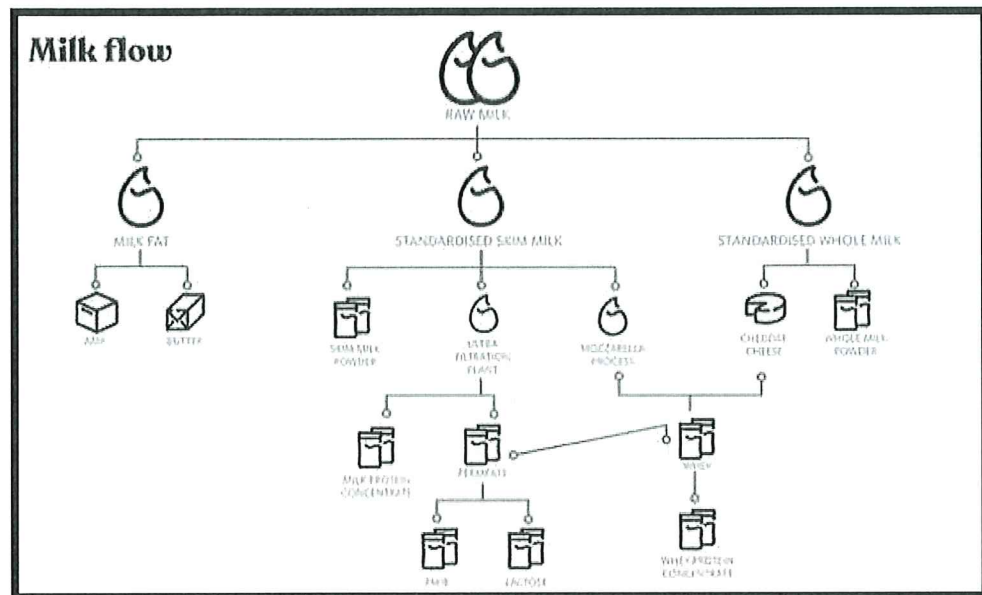


Figure 2: The Clandeboye Site's milk flow and product mix diagram

- 21 The current value of the fixed assets at the Clandeboye Site is approximately \$854 million with the reinstatement value of the facilities at the Clandeboye Site being approximately \$1 billion.
- 22 The site's longest standing manufacturing plant is its cheddar plant. At peak, this plant processes up to 1.8 million litres of milk and produces the equivalent of 200,000 one-kilogram blocks of cheddar cheese per day.
- 23 The site is the largest producer of unsalted butter in the world capable of producing 260 tonnes daily. It is also home to one of the biggest dryers in the world, capable of producing 28 metric tonnes of whole milk powder every year.
- 24 In 2018, Fonterra invested \$240 million into the expansion of the Mozzarella 3 line which doubled Fonterra's capacity to produce individual quick-frozen mozzarella (*IQF mozzarella*) and made the site the largest producer of natural mozzarella cheese in the southern hemisphere. The use of innovative technology behind IQF mozzarella reduced the production time of natural mozzarella from three months to just six hours. It is the

³ Statement of Evidence of Suzanne Patricia O'Rourke for Hearing A - Overarching Matters, Part 1 - Introduction, General Provisions, General Definitions and High-Level Strategic Directions dated 22 April 2024 at [30]-[33].

only process of its kind to significantly reduce production time while remaining 100% natural.

- 25 The Clandeboye Site has a unique asset configuration which allows for functional protein products to be manufactured. This includes the use of novel technology to improve certain functional aspects of whey protein concentrate and milk protein concentrate. This is a key part of Fonterra's innovation program and adds significant value back to Fonterra's shareholders. Fonterra has commitments to key customers to provide these specialty protein products which would not be able to be met if the Clandeboye Site was unable to operate.

Distribution of products from the Clandeboye Site

- 26 The Clandeboye Site fills more than 10,000 containers of dairy product every year, with the on-site distribution centre packing over 70 containers per day. The Clandeboye Site has on-site storage capacity of 19,000 metric tonnes of cool storage and 31,000 metric tonnes of dry storage. In addition to on-site storage, the site also utilises Fonterra's storage facilities at the Timaru Port and third-party storage facilities at Temuka where product can be held ahead of distribution.
- 27 Approximately 98% of the products processed at the Clandeboye Site are exported from the Timaru Port to more than 50 countries including the United States, China, Algeria, Bahrain, Africa, the Middle East, Indonesia, and Australia. The remaining 2% of products are exported from Lyttleton Port or distributed to domestic markets (via truck to Christchurch based customers).
- 28 The Clandeboye Site's operation relies heavily on the roading and rail network within the district. Temuka is a key rail hub for the unloading and loading of products which are transported to and from the site via trucks.

Future plans for the Clandeboye Site

- 29 As part of its commitment to meet its carbon emissions reduction target of 50% by 2030, Fonterra is currently transitioning seven of its manufacturing sites that still use coal to renewable energy. This includes the Clandeboye Site. It is proposed to convert the site's existing boilers two and three to wood biomass boilers. This conversion is expected to take place in mid-2025.

RESOURCE CONSENTS HELD BY FONTERRA FOR THE CLANDEBOYE SITE

- 30 Fonterra holds a number of resource consents authorising activities at the Clandeboye Site issued by the Canterbury Regional Council (known as *Environment Canterbury*) and the Timaru District Council.

Environment Canterbury resource consents

- 31 Consents issued by Environment Canterbury provide for activities including the take, use and discharge of water and also discharges to air, the coastal marine area, and land.

- 32 The current consents held with Environment Canterbury for the activities at the Clandeboye Site are set out in **Table 1** below.

Table 1: Resource consents issued by Environment Canterbury authorising activities at the Clandeboye Site

Environment Canterbury		
Consent	Activity	Expires
Water take consents		
CRC240930	Take groundwater from five bores for the Clandeboye Site.	2 December 2032
CRC156541	Take groundwater for milk drier.	23 July 2039
Discharge to air consents		
CRC186093	Discharge to air associated with the operation of a dairy factory.	30 June 2039
CRC191296	Discharge to air associated with proliq storage facility.	4 October 2038
CRC156403	Discharge to air associated with irrigation of dairy factory wastewater.	21 November 2036
CRC156421	Discharge to air from a lactose processing plant.	25 September 2036
CRC156534	Discharge to air from waste-oil fired heaters.	23 August 2045
CRC156538	Discharge to air from resource recovery facility	1 September 2031
CRC173212	Discharge to air associated with discharge of DAF sludge	2 August 2033
Watercourse diversion consents		
CRC156415	Divert water in drain Canal Road.	31 October 2031
CRC156418	Divert water in Rhodes Stream at Rolleston Road.	31 October 2031

CRC156931 (certificate of compliance)	Divert water in watercourse at Donohue and Parke Roads.	N/A
Discharge to land consents		
CRC156500	Discharge treated human effluent to land.	11 December 2029
CRC156516	Discharge processed whey to land.	13 March 2031
CRC156518	Discharge septic tank effluent to land.	10 October 2032
CRC156524	Discharge stormwater to water.	10 November 2040
CRC156527	Discharge stormwater to water.	10 November 2040
CRC156803	Discharge stormwater to land.	14 July 2039
CRC171879	Discharge stormwater to land.	10 November 2040
CRC173211	Discharge DAF sludge to land.	2 August 2033
CRC210648	Discharge wastewater to land.	21 November 2036
Land use consents		
CRC156531	Use and storage of diesel fuel.	10 November 2040
Ocean outfall consents		
CRC156546	Discharge water to land during maintenance on ocean outfall.	14 July 2039
CRC156551	Maintenance on ocean outfall pipeline under the bed of a watercourse.	14 July 2039
CRC156562	Maintenance on ocean outfall pipeline within a Hazard Zone.	14 July 2039
CRC156568	Discharge to air from ocean outfall.	14 July 2039
CRC156571	Occupation of coastal marine area by ocean outfall.	14 July 2039

CRC156576	Disturbance of foreshore and seabed by ocean outfall.	14 July 2039
CRC156579	Placement of structures on foreshore and seabed for maintenance of ocean outfall.	14 July 2039
CRC156924 (certificate of compliance)	Occupation of foreshore and seabed by ocean outfall.	N/A
CRC156927 (certificate of compliance)	Maintenance of ocean outfall within coastal marine area	N/A
CRC156933 (certificate of compliance)	Take and use coastal water during maintenance of ocean outfall.	N/A
CRC156935 (certificate of compliance)	Occupation of coastal marine area with the placement of structures associated with ocean outfall.	N/A
CRC156938 (certificate of compliance)	Emission of noise associated with ocean outfall maintenance.	N/A
CRC212024	Discharge wastewater to coastal marine area via ocean outfall.	14 July 2039

Clandeboyne Site's water take regime

- 33 Fonterra abstracts groundwater from eight bores to supply the manufacturing needs of the Clandeboyne Site. This is authorised by two water take and use consents (CRC240930 and CRC156541). Five bores are located on-site, with the balance of the bores located on Fonterra's Boyd farm. This water is used to maintain world class food safety and quality standards and for cooling of the products.
- 34 A bespoke Water Improvement Plan (*WIP*) was approved for the site in 2023. The *WIP* assesses water availability, water use and wastewater quality in a long-term integrated manner. In terms of water use, the *WIP* proposes operational improvements to ensure that water is being used in the most efficient manner.
- 35 Fonterra also holds a number of other water take and use consents (along with other consents) to support the farming operations on the Boyd and Orton farms.

Clandeboyne Site's wastewater discharge(s)

- 36 The activities at the Clandeboyne Site generate four primary streams of wastewater, being dairy processing wastewater, condensate, reverse osmosis (RO) permeate and truck and equipment wash-water. A number of resource consents authorise the discharge of these wastewater streams to either the coastal environment and/or to land (refer to **Table 1** above).
- 37 As part of Fonterra's commitment to lead in the area of wastewater design to ensure resilient assets, approximately \$15 million is being invested at the Clandeboyne Site into a unique wastewater treatment process which uses an anoxic biological reactor specifically designed to reduce nitrates prior to discharge. This process, researched and trialled by Fonterra, is an innovative approach to nutrient removal as well as delivering significant cost savings.
- 38 The majority of the site's wastewater is discharged to the ocean via an outfall structure located five kilometres east of the site, peaking at approximately 30,000 cubic metres over a 24 hour period. This structure was commissioned in 2007 with the intention of easing pressure on Boyd and Orton farms, particularly in relation to soil condition and nutrient losses to groundwater. Only dairy processing wastewater, condensate and RO permeates are authorised to be discharged to the ocean via this structure.
- 39 With respect to discharges to land, there are two primary components:
- 39.1 The discharge of dissolved air flotation (DAF) sludge: The DAF sludge is discharged onto Orton and Boyd farms via direct injection. Direction injection enables the placement of a readily available nutrient stream at the root of the plant whilst also reducing the propensity for some odours that may accompany those wastewaters with a higher solids content.
- 39.2 The discharge truck and equipment wash-water, 'out of spec' stormwater and some dairy processing water: These wastewater types are discharged to Orton farm via spray irrigation, with contingency third-party farms authorised to receive irrigation within Fonterra's consent (the site only irrigated to Orton farm in the 2023/24 season). Compared to the DAF sludge, these wastewaters are greater in volume and have a lower solids component and are therefore better applied to land via irrigation. Fonterra's wastewater irrigation consents restrict nutrient loadings and contain other operational requirements to control environmental effects resulting from the discharges to land. At peak, the site irrigates approximately 13,000 cubic metres over a 24 hour period.
- 40 Grazing of cattle along with cut-and-carry operations occur on Boyd and Orton farms, which helps to maintain pasture quality.

Timaru District Council resource consents

- 41 Fonterra has several resource consents issued by the Timaru District Council relating to development and use of land. The current consents held with the Timaru District Council for the activities at the Clandeboye Site are set out in **Table 2** below.
- 42 As discussed by **Ms O'Rourke** other parts of the site are likely to have been authorised under other authorisations/rights that pre-date the Resource Management Act 1991.

Table 2: Resource consents issued by the Timaru District Council authorising activities at the Clandeboye Site

Timaru District Council		
Consent	Activity	Expires
RC 102.2017.194	Construct lactose processing plant	N/A
RC 102.2007.28912	Relocate diesel refuelling facility.	N/A
RC.102.2016.206	Redevelop site and construct mozzarella cheese plant.	N/A
RC 102.2017.67	Decommission diesel refuelling facility.	N/A
RC 102.2018.148.1	Establish additional hazardous substance storage.	N/A
RC 102.2018.207.1	Establish proliq storage facility.	N/A
RC 102.2019.92.1	Establish silo	N/A
RC 102.2019.218.1	Install storage tanks	N/A
RC 102.2022.15.1	Construct and operate Dissolved Inorganic Nitrogen Plant	N/A
RC 1486 v1	Discharge of dairy waste onto rural land.	N/A
RC 2531 v1	Discharge dairy waste over land bounded by	N/A

	Badham, Looker, and Rolleston Roads.	
RC 3145 v1	Noise emission associated with operating dairy factory.	N/A
RC 5176 v1	Construct and operate ocean outfall.	N/A
RC 5412 v1	Use and store hazardous substances.	N/A
RC 6872 v1	Install storage tank	N/A
RC 6906 v1	Construct and operate milk powder storage facility	N/A
RC 7236 v1	Replace hazardous substances tanks	N/A
RC 7494 v1	Use of former school buildings for offices, training rooms, meeting rooms and a gymnasium.	N/A

Resource consent compliance

- 43 The Clandeboye Site has a positive history of compliance with its resource consent requirements across both local authorities. The site has not received any formal complaints in recent years in relation to its authorised activities.
- 44 The Clandeboye Site holds annual community meetings which provide an opportunity for members of the community to raise any concerns they may have with the site's operations. The most recent community meeting was held on 23 May 2024 which was attended by 10 individuals. No concerns were raised by the attendees.

CONCLUSION

- 45 Given the nature and scale of the activities that occur at Fonterra's Clandeboye Site, and the essential nature of the site for the surrounding primary production, it is important that any maintenance, repairs and minor upgrades to the site are not unnecessarily restricted by planning provisions. Fonterra considers that the most efficient and effective way of achieving this is via its proposed Special Purpose Zone: Clandeboye Dairy Manufacturing Zone.



Ross Burdett

5 July 2024