



**Embargoed until delivery, 1.30 pm Wednesday 13 April 2016**

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**IN THE MATTER OF RESOURCE CONSENTS: CRC160871,  
CRC160872, CRC160873, CRC160874, CRC160875, CRC160876,  
CRC160940, and RMA150031 related to the expansion of  
Fonterra's milk processing plant at Studholme**

*Oral Submission by Jeanette Fitzsimons*

*on behalf of Coal Action Network Aotearoa*

Coal Action Network Aotearoa (CANANZ) is a nation-wide network committed to a planned phase out of coal for environmental reasons.

We oppose these consents in their entirety for the following reasons:

**1. This plant expansion should not take place.**

The scale of this plant would represent a very large expansion of Fonterra, which is already hitting environmental limits of dairy production within NZ: limits of water use, water pollution, land conversion, and the use of coal. Fonterra is already New Zealand's second

largest coal user. (CANA analysis by adding consumption of their plants)

Fonterra plans to dry 9 million litres/day of milk in this new plant, during the season. That milk is not there now, and Fonterra has offered no evidence that it ever will be. The project relies on new cows, new land conversions and new irrigation systems to supply it. It relies on the milk price increasing by more than 50% (deduced from Fraser evidence) before it will be economic to establish these new farms. The applicant has failed to provide evidence to support this expectation.

This application fails to meet the sustainable management purpose of the Resource Management Act.

Mr Keir states in his evidence:

“Expansion of the Studholme processing plant is necessary due to the increasing volumes of milk being produced in the Central South Island”. (36)

This statement is already inaccurate as milk production is not currently increasing and there are many reports of it shrinking.

Both Mr Keir and Mr Copeland state in their evidence that the price will rise in future sufficiently to create the conditions for 4-5% annual growth in production, but they quote no economists prepared to testify to this, and no analysis of the world milk powder market or the likely production from the EU, China and the US. These growth levels appears to be a rule of thumb Fonterra has adopted regardless of what is actually happening on the farm, yet a casual reading of the newspaper reveals many contrary forecasts.

If these forecasts did eventuate, the environmental impact of so many additional cows in Canterbury would be extremely serious for water, land and atmosphere. We reference here the evidence of Alison Dewes called by the Wise Response group, and our witness Peter Fraser will address them further.

We submit that Fonterra’s growth forecast should be given no weight.

There is further evidence that dairy farming will become more difficult in future as the effects of climate change, which the Act requires the applicant to have particular regard to, increase the frequency and severity of droughts in South Canterbury and North Otago. These are areas where water is already a limiting factor. Increased drought will force a greater water take from rivers and aquifers, which they may not be able to support.

We base this statement on the published science in two recent papers:

1) Salinger and Porteous, *NZ Climate: patterns of drought 1941/2 – 2012/13* in Weather and Climate 34 2-19 This paper shows that increased drought is not speculative and is already underway, with the trend over 70 years already clear.

2) NIWA 2005, updated 2011, *Changes in Drought risk with Climate change* published by Ministry for the Environment. This explores low-medium and med-high drought risk scenarios and predicts for the former a doubling of the current one-in-twenty drought risk by mid-century (ie one in twenty becomes one in ten) and for the med-high scenario much more.

The paper concludes

*“key Eastern regions are more likely to spend about 10% additional time in drought by the middle of the twenty-first century”.*

Fonterra’s model for the future is one of perpetual growth in production but perpetual growth is impossible in a finite system where land, water, and capacity of both atmosphere and waterways to absorb more pollution cannot grow.

Fonterra says it is required by its Act to accept all the milk offered to it, but it is not required to adopt a strategy of pushing constantly for more volume. The strategy outlined on its website of “Volume, Value, Velocity” is already failing as with the drop in prices farmers have worked out that it is more profitable to carry fewer cows and reduce input costs, and all reports show milk volumes are decreasing.

Expert witness Peter Fraser will expand further on the economic implications of this planned expansion.

Mr Copeland (in his Statement of Rebuttal Evidence, at 16) confirms that his analysis on behalf of the applicant of economic costs and benefits in support of its application includes claimed indirect as well as direct economic benefits, and at (17) he confirms that his analysis of economic costs includes indirect economic costs. It is therefore invidious of Mr Copeland to seek to have excluded from consideration the expert evidence of witnesses on behalf of Wise Response and Coal Action Network Aotearoa with regard to the indirect economic costs of the proposal, as he attempts to do at 9, 11 and 21 of his Statement of Rebuttal Evidence.

### **1. The RMA does require us to have regard to the effects of the discharge on climate change**

Fonterra legal counsel Ben Williams said in his evidence last week that the Resource Management Act expressly forbids "*consideration of the wider climate change effects of burning fossil fuels*". He added that "*as a matter of law, the hearing panel is not able to have regard to submissions or evidence relating to these effects*".

However, the exception to this rule is expressed in s 104E:

#### ***Applications relating to discharge of greenhouse gases***

*When considering an application for a discharge permit or coastal permit to do something that would otherwise contravene [section 15](#) or [section 15B](#) relating to the discharge into air of greenhouse gases, a consent authority must not have regard to the effects of such a discharge on climate change, **except to the extent that the use and development of renewable energy enables a reduction in the discharge into air of greenhouse gases, either—***

*(a) in absolute terms; or*

*(b) **relative to the use and development of non-renewable energy.** (my emphasis)*

This is highly relevant to the matter before you. Clearly if the use of renewable energy is possible then the Act intends that weight should be given to this.

Fonterra's application has not stated the total quantity of coal it expects to burn in a year, and so the annual emission of greenhouse gases cannot be precisely calculated. However the plant is similar in size to Darfield, which burns 90,000 tpa of coal. A rough calculation

gives 175,000 tonnes of carbon dioxide from this, plus another 5-10% from the mining of that coal. If biomass could be used in place of coal it should therefore be preferred.

While consent has not been sought, and does not need to be sought, for the methane emissions from the up to a million additional cows that Peter Fraser has calculated would be needed to supply the plant, the total impact on the atmosphere and the climate includes both the carbon dioxide emissions from the coal fired boiler, which could be mitigated by using renewable fuel, and the methane and nitrous oxide emissions from up to a million new cows, which can not easily be mitigated, but can be avoided by not building this unnecessary plant.

The use of 100% biomass would not replace any current coal use so would not reduce existing greenhouse gases. Sub section (a) therefore does not come in to play. However using 100% biomass would reduce emissions in relative terms – ie compared with a new coal fired boiler. This is the intent of sub-section (b).

This exception negates the effect of the 2004 amendment which inserted the prohibition on considering greenhouse gases, so if there is a renewable energy alternative the application should be considered as though that amendment had never occurred.

Therefore, in this instance, it is not only permissible but required for the consenting authority to consider whether a reduction in the discharge into air of greenhouse gases can be achieved through the use of renewable energy. We further submit that this section also requires that those alternatives which maximise the use of renewable energy - in other words, those alternatives which involve the use of 100% renewable energy, or as close to it as are practically achievable - should be given the most weight.

As we discuss elsewhere in this submission, the applicant has not considered alternatives which involve the use of 100% renewable energy in a sufficiently thorough, transparent or replicable way. We therefore submit that the applicant has failed to meet the requirements of Section 104(E) of the Act.

Secondly, Schedule 4 of the RMA, “Information required in application for resource consent” requires an applicant to consider alternative locations and methods if it is likely that the activity will result in any significant adverse on the environment. As stated in the S42a

report of Patricia Harte for Waimate District Council (at 100), and as confirmed by Mr Chrystal, a planning witness for the applicant (at 9.1 in his evidence), the proposal would result in significant adverse landscape and visual effects, and therefore this requirement to consider alternative locations and methods comes into play. The greenhouse gases resulting from coal burn are also a significant adverse effect on the global environment, and brought into play by s104E(b).

The Act therefore requires thorough consideration of alternatives, and particularly alternative methods.

Mr Chrystal outlines alternative sites, which are not CANA's main concern, but limits consideration of alternative methods to changing the size or number of the boilers. However the applicant has failed to fully explore the more important issue of alternative fuels to dry milk.

Thirdly, the applicant is required, under s7(j) to "have particular regard to the benefits to be derived from the use and development of renewable energy". Extraordinarily, Mr Chrystal has said in his evidence (137) that this is of "limited relevance". It is our submission that these three provisions of the Act require a thorough and transparent investigation of the possibility of using 100% biomass fuels. Council officers appear to have reached the same conclusion as they have requested more information on this under s92.

### **1. If this plant is built at all, it should not use coal**

The obvious alternative fuel to dry milk is the various wastes that arise from the forestry and landscaping industries. There is already a small industry providing such material to replace coal in purpose-built boilers in schools, hospitals, universities and food processing industries. Much of the material however is left to rot, or burned, at forestry skid sites and in paddocks where shelter belts are cleared.

Expert witness Christian Jirkovsky will testify that purpose built wood boilers are highly efficient, less polluting than coal for the same expenditure on pollution control equipment, are available in the sizes Fonterra says it needs, and unlike coal or co-fired boilers, can burn virtually any kind of waste biomass cleanly.

Fonterra has put forward two main arguments why it cannot replace coal with wood, but has released no research and given no numbers.

The company's energy manager Linda Thompson claims that there is not enough wood available within a reasonable distance of the site to run these boilers. Ms Thompson refers to a report commissioned from East Harbour Energy which Fonterra has not and will not release. Ms Thompson says that report finds that there is insufficient wood available to replace 100% of the coal. She does not say how much it did find, or what the quality specifications were, and we cannot guess at that as the report is not available to us.

The only other evidence she produces is a reference to a 2014 call for Expressions of Interest to provide fuel for the then-planned conversion of one of the existing 15MW boilers. As a converted coal boiler, it would have required dry chipped wood and this is what Fonterra says they asked for. Fonterra implies that more wood would be available for a purpose built boiler which can efficiently burn wetter wood but does not elaborate on this. They further say that responses indicated that there was enough wood for a 15MW boiler.

Their evidence avoids saying "only" enough for 15MW.

We can therefore assume that enough wood is available to fuel a boiler somewhat more than 15MW but less than 110 MW.

I wrote to Fonterra Energy Manager Linda Thompson asking for the EoI and the responses. She replied that the responses were confidential. I wrote again asking for the EoI they had issued. She replied:

"Unfortunately we cannot provide you with the document you have requested. As previously mentioned, we have included all the relevant information in the evidence that we have provided." (Linda Thompson, pers. comm., 29 March 2016)

Ms Thompson's statement that Fonterra has included all the relevant information is not correct. The relevant information would be to show exactly what they asked for in the EoI, to elicit the response that there was enough for 15MW. It is puzzling that Fonterra will not

release this document.

I strongly suspect that in addition to the much more constrained fuel type they were seeking, they asked only for enough for a 15MW boiler and so that was what they got.

The panel could of course request these various documents from Fonterra if it sees fit.

Late last year I met with several senior managers of Fonterra and separately with chair John Wilson, to discuss Fonterra's coal use and the possibility of using wood. Both said they had done extensive investigation and trials of the wood option but it was not viable. I followed up these meetings shortly afterwards by writing to senior executives and separately to the chair asking for copies of whatever studies or reports they could release on this investigation. None of them replied at all to my request, not even to acknowledge or to refuse.

Fonterra's investigation of the wood fuel alternative under Schedule 4 and under s7(j) is not sufficiently complete or transparent to demonstrate either that they have met the requirements of Schedule 4 or that they have shown "*particular regard to the benefits to be derived from the use and development of renewable energy*", as required by Section 7(j).

We submit that no weight should be put on Fonterra's assertion that there is not enough wood waste available, given their failure to provide applicable supporting evidence for this claim as it pertains to boilers of the intended size and type, and that an accurate assessment of this could only be established with an RFP designed for this particular scale of plant, and for a purpose-built wood boiler.

Fonterra further argues that wood is not viable economically (Thompson and others). Again they offer no evidence. Is this based on the cost of the much higher quality dry chipped wood they were seeking in 2013-14?

It is true that coal is very cheap to the user, having dropped (world-wide) to about a third of its 2011 price since then (Jobs After Coal, 2015, CANA). However it is expensive to the country and the planet. It is time the externality costs of coal were built into its cost structure so the panel could evaluate the true costs of burning coal.

Regardless of any argument about s104(E) it is relevant to point out the impact that extremely low carbon prices are having on relative prices for fuel, and the likelihood that this will change.

Under NZ's current Emissions Trading Scheme the price of carbon is very low. NZ is part of an international carbon trading system and has adopted a target of reducing our 1990 emissions by 11% by 2030. Whatever is not reduced in NZ must be paid for by purchasing international credits.

As there are virtually no plans for domestic reductions it is highly likely that the domestic price of carbon will rise so that more of the cost to the country will be carried by individual emitters. At the very least Minister for Climate Change Paula Bennett has signaled recently that the current two-for-one rule will end soon. This is where companies pay for only one tonne emitted for every two they actually emit. This will both double Fonterra's carbon obligations and also serve to raise the price of carbon across the board.

There can be no doubt that, in the future, and well within the life of this plant, coal will carry a carbon cost that reduces the cost advantage it currently has over renewable energy. In the meantime we do not know what that cost advantage is as Fonterra will not release that information.

Mr Copeland (at 70 in his evidence) has argued that a rise in the price of coal changing the balance between coal and wood is purely a commercial issue for Fonterra, which is best placed to calculate the effects of this. However, if future carbon pricing makes this plant uneconomic, that is not just a commercial matter for Fonterra. The plant would be so big that the economic ramifications for farmers and the South Canterbury community would be considerable, and cause hardship to many.

Our submission is that very little weight be placed on the claim that wood is not economic, as no quantitative evidence has been presented to support that claim.

In Fonterra's blog "The Milk Run" (at <http://www2.fonterra.com/entry/we-understand-and-share-cana-s-position-on-coal>, 4 April 2016) senior executive Robert Spurway says "We understand and share CANA's position on coal". He claims Fonterra is moving towards

reducing its use of coal, yet this plant will increase it very significantly. In making this claim he relies heavily on this proposal to build a boiler capable of using up to 20% waste wood mixed with the coal. This does not, however, require it to use any wood and the boilers may well be fired on 100% coal, which still appears to be the company's preference. Indeed, Ms Thompson states that using *any* wood is dependent on getting approval from the board for the relevant investment.

It would be more correct to say that Fonterra is planning to greatly increase its coal use, though possibly by not quite as much as it might have done if the matter had not recently become of considerable public interest.

I might note here that Fonterra is the second largest user of coal in New Zealand right now, already burning more than the Huntly coal-fired power station (CANA analysis) and these boilers, if they were to go ahead, would increase that. Fonterra has increased its coal use by 38% since 2008. In a world that is increasingly looking away from coal for energy, because of its climate change impacts, Fonterra is flying in the face of international opinion, and undermining New Zealand's reputation.

Moreover, as our witness Mr Jirkowsky will show, a boiler operates most cleanly and efficiently when fueled with the exact fuel it has been designed for. Boilers burning a variable mix of coal and wood are always a compromise, and the 2014 proposal to convert one of the smaller coal fired boilers to run on wood would have been such a compromise, requiring a higher grade of fuel. Wood is burned most efficiently in a purpose-built wood fired boiler which can also burn a much wider range of material.

### **Other matters**

CANA is also concerned that Fonterra's assumptions about the extent of climate change-driven temperature rise and sea level rise during the life of this plant are not consistent with recent science and that they underestimate the risks. My colleague Tim Jones, who submitted this morning, has covered these issues in his personal submission and CANA endorses his analysis.

### **Conclusion**

CANA requests that you decline all consents.

Fonterra has not offered any evidence for its contention that the price of milk solids will increase sufficiently to incentivise a 4-5% annual growth in milk supply in future. Therefore no need for the plant has been demonstrated.

If the plant were built the number of extra cows required in Canterbury to supply it could approach one million, and these would have huge environmental impacts, as shown by Peter Fraser's evidence.

If the plant is built and run on coal the emission of greenhouse gases will be significant. The RMA allows and in fact requires consideration of this in three separate places. S104E; s7(j); and in Schedule 4.

If Fonterra intends to build this plant despite sound economics, it should be fueled 100% by biomass, principally waste wood. Mr Jirkowsky has testified to the efficiency and availability of suitable boilers.

Fonterra has failed to adequately consider alternative methods, as required under the Act, in that Fonterra has not sufficiently investigated the supply of waste wood that could be available in the region and has not demonstrated the validity of its assertion that there is not enough biomass fuel for this plant, or even for one of the two planned boilers

Finally, Fonterra has refused to release any information to support its contention that using wood to replace coal is uneconomic.

These issues are not just commercial decisions for Fonterra. Consent for such a plant is required by the RMA because there are major impacts on the whole community and on the global climate of Fonterra's business decisions. Therefore the community has a right to the information on which Fonterra bases its assertions.