T R A N S C R I P T

LEGISLATIVE ASSEMBLY ENVIRONMENT AND PLANNING COMMITTEE

Inquiry into Tackling Climate Change in Victorian Communities

Traralgon—Wednesday, 23 October 2019

MEMBERS

Mr Darren Cheeseman—Chair
Mr David Morris—Deputy Chair
Mr Will Fowles
Ms Danielle Green
Mr Paul Hamer
Mr Tim McCurdy
Mr Tim Smith

WITNESSES

Ms Lorraine Bull, President, and

Mr Ian Onley, Member, Latrobe Valley Sustainability Group.

The CHAIR: Thank you, Lorraine. Were you here earlier when I read out some of the statement?

Ms BULL: Yes, I was.

The CHAIR: And I think I have seen you, sir, here as well. I am happy to read it out again if you would like, but otherwise we can get straight into your evidence. Over to you.

Ms BULL: Thank you very much. It is really good to have the opportunity to expand on our submission. I was not quite expecting it and I have really enjoyed all the submissions so far today. I would like to introduce my fellow committee member, Ian Onley, who will talk about agriculture. He is a farmer and a biodynamic farmer, so he has particular interests and has had for a very long time.

In going through my submission there are a few things that I would like to expand on. One is our interest in air pollution in the valley. We have been involved with the EPA AirWatch, with the citizen science dust studies, and we have been quite heavily involved in the Latrobe Valley Air Monitoring Network, which was an EPA project set up after the mine fire commission produced their report to improve the air quality of the area. That has been able to result in 15 additional extra stations throughout Latrobe Valley, so as well as monitoring our pollution it gives people better feedback around temperature so that they know to stay inside to look after their health during heat events.

We are very keen to see the SEA Electric vehicle project go ahead. That will reduce emissions from vehicles and provide a diversified economy within the Latrobe Valley. It is planned to provide 500 jobs to produce electric vans and small delivery vehicles; it is not addressing personal cars and personal transport. But we see that as one way to diversify the economy here.

We have also been involved with looking at the circular economy concept, including the proposal to recycle lead-acid batteries. Again, that is another economic decision as much as a climate change issue in that we need to look after our own waste. Normally when you talk about waste and recycling, you are talking about plastics and glass, but in this instance it is batteries. There are, I think, 500 000 batteries which will be recycled. Again, it is diversifying our economy.

I mentioned energy-efficient housing. I should have said buildings, because energy-efficient buildings are about more than just housing. It should include commercial buildings and industry as well. When you are talking energy efficiency, you are looking at insulation, shading, draught sealing, the appliances that we use, but particularly it is looking at solar panels on all roofs where it is possible. That means that each of the buildings can become their own little power plant and that reduces any stress on the grid. It also opens the opportunity for embedded networks and virtual power plants to do demand management. If we are integrating electric vehicles into the system, there will be the opportunity in the future for vehicle-to-grid so that instead of having your own personal battery, you can use your car as the battery. You can charge it up, whether it is at work or at home, and then you can use that power at night.

I would just like to comment on the mine rehabilitation strategy. The studies are ongoing and there is to be a report released very shortly on how we rehabilitate our mines. I know there were comments from the council in that they thought that a pit lake might not be a good idea. The technical studies are showing that a pit lake is probably the best solution, and Latrobe Valley Sustainability Group has been asked to make a submission to the water strategy; DELWP has requested that we make a submission on behalf of the community. It is quite a problem for the Latrobe region because there is declining rainfall happening due to climate change and we have got to look at where the water will come from for a mine rehabilitation. We need to look at urban use, industry use, agricultural use, environmental use and consider the health of the lakes as well. Probably we are going to get some impact from sea level rise in the lakes as well, so it is a huge problem and we cannot continue to be

pumping water out of the aquifers for the rest of time. So it is important that at least there is a partial pit lake. Does that make sense?

The CHAIR: It does. Mr Onley, would you like to add to those comments?

Mr ONLEY: Yes, thank you. I have prepared some additional information here. I will not read through the whole lot—if I can pass it around. There is a lot of detail in those, but I will skim over that. I am going to be talking about regenerative agriculture mostly.

Firstly, thank you for the opportunity. My name is Ian Onley. I am a biodynamic farmer and member of the Latrobe Valley Sustainability Group. I am a member of the Biodynamic Agriculture Association of Australia and produce Demeter-certified pastured eggs under the Bio-Dynamic Research Institute's standards, which comply with and exceed Australian standards for organic and biodynamic produce. I am experienced with egg, dairy, beef and vegetable production. Our membership covers the largest acreage of any regenerative farming method, with over 600 farms, some covering thousands of acres. Many members of our association are not certified but compete in the same markets as conventional farms.

I grew up on a dairy farm, became a boilermaker and welder and returned to work on the same dairy farm at 26, 10 years later. My farm is situated on Merriman Creek, near Gormandale. That creek had always been a reliable stream and was never known to stop running until 2006. In 2019 it stopped again for about three months, leaving the valley without its traditional water supply and with the platypus and fish in drying pools. Around the year 2000 I had to cease vegetable production because of water scarcity and turned to egg production. The changes have been noticeable for about 20 years and are getting worse.

I want to talk about the ability of regenerative agriculture to sequester carbon into land and help reclaim water in that land. Storing carbon in the soil is good for my land and good for my hip pocket and draws down carbon from the atmosphere. Most conventional farms have organic metal levels in the top 100-millimetre soil profile of about 2 per cent or less and decreasing. Biodynamic farms typically have levels of 9 per cent in the same profile and about 2 per cent at around the 400-millimetre profile. It is a considerable difference. That organic matter is generated by photosynthesis from the sun and atmosphere. There are mechanical means of sequestering carbon, but the fuel usage often makes the gains small, if any. There is enormous potential to draw down carbon into agricultural soils and make them more productive if we reduce the levels of water-soluble fertilisers and weedicides that we are using on farms now, but it is going to require a change in the way we do agriculture.

The land's ability to hold moisture is increased by having more humus in the soil and this can have a cooling effect on the local environment, which will in most cases encourage water vapour to coalesce in clouds and fall as more rainfall. Stock will be less stressed and deliver better quality product. Farmers will be less stressed and less likely to commit suicide. Cows grazed on pasture with more nutrition create less methane. There would be less greenhouse gas emissions from applications of urea and the fuel needed to do so; more water held in the land, cooling and keeping streams running more consistently; and less nutrient run-off into waterways, reducing algal blooms and fish kills.

I am not saying that Government has to actively force these things to happen, but it would happen naturally if a more rational, scientific and less blinkered approach was adopted within DELWP and other agricultural agencies, such as Dairy Australia and those organisations. The handout that I have passed around has details of how we can do that.

Mr FOWLES: I have just had a skim through that. I am interested in a couple of things. I might do electric vehicles first. The research tells us that consumers, whether they are private cars or whether it is any other transport use, will always make their decisions based on convenience and affordability. How convenient and affordable are electric vehicle applications in a farming context, do you think?

Mr ONLEY: You mean, as in tractors and that sort of thing?

Mr FOWLES: Any of the usages, whether it is utes, quad bikes, tractors—I do not know.

Mr ONLEY: Regional areas in general, we lack the charging facilities. If there was some sort of program to help that happen, then I think the uptake of electric vehicles would increase with the availability. At the moment you cannot really buy a big range of vehicles. You are a bit limited. But at the SEA factory that is going to be built in Morwell, they are talking about a 2-tonne ute being available in two years.

Mr FOWLES: I used to work for Better Place, the electric vehicle start-up that, sadly, fell over. I recall that the science was that they were not particularly good load-bearing technologies—that you sort of tended to rely more on diesel for those big trucks and B-doubles and whatever. Do you see that being a limitation to the take-up of electric vehicles in the ag space?

Mr ONLEY: No, I do not. We do have electric tractors now. You cannot buy them in Australia yet but overseas you can. There is huge potential for that obviously, yes. You can charge your tractors. You can buy a four-wheel motorbike at the moment—an electric one—and you can charge them with your solar panels on your farm. I really want to see that going ahead, yes.

Mr FOWLES: Yes, indeed. Another question: I am interested in this experience you had trying to install the solar system. Can you just walk us through what the limitations were, because I think one of the areas we will be addressing is making it easier for people to do that, so I am interested to know your lived experience and where the difficulties were there.

Mr ONLEY: I currently have about 4.5 kilowatts on my house and that feeds into the grid. On the same line I have another meter for my shed. We wanted to put a 10-kilowatt system on it but they were going to limit it to a 2.5-kilowatt inverter. We were going to have two 5-kilowatt inverters even though they would not let power go back into the grid, so they could not put power into the grid. They can be set so that they cannot let power go back in—they can take power out of the grid but they cannot let it go back.

Mr FOWLES: So it was presumably coupled with the battery then.

Mr ONLEY: Yes.

Mr FOWLES: Yes.

Mr ONLEY: But AusNet would not let us. They were going to restrict the system to a 2.5-kilowatt inverter.

Mr FOWLES: So if you have got a battery, why is it even on the grid?

Mr ONLEY: I will still be connected to the grid.

Mr FOWLES: Why?

Mr ONLEY: For reliability.

Mr FOWLES: So it still needs to be connected inbound but it gets bound up in effect with the grid infrastructure, and AusNet then applies these rules—silly rules, it would appear.

Mr ONLEY: Well, it is because the power cannot go back in anyway, so it cannot upset their system, but they still put these restrictions on. So we suggested a bridging mechanism, which is allowable as far as I can see, and the person who is organising this installation, but there has been—

Mr FOWLES: I am not an electrical engineer but does the technology not exist such that you draw down on your battery until such time as there is nothing left and then can't you just draw off the grid, and they are kind of separate applications?

Mr ONLEY: Yes. That is as it happens, yes, and then you draw it out of the grid. But they were going to limit the size of the inverter we would have. Although we had 10 kilowatts of panels, we would only be able to use 2.5 kilowatts of power.

Mr FOWLES: That seems entirely arbitrary.

Mr ONLEY: It is ridiculous really, but it has stalled the project.

Mr HAMER: What was their reason?

Mr ONLEY: They did not give one. Protection of their asset in case something goes wrong, I presume.

The CHAIR: There might be an opportunity for the Committee to seek some evidence from AusNet and others on that.

Can I just ask: your submission talks a lot about biodynamic farming and that it is good farming practice and that there are a lot of opportunities, yet we do not hear a lot of evidence around the place that there are a lot of other farmers taking up those opportunities. What potential public policy changes might be made by the Victorian Parliament to encourage biodynamic farming? What are some of the barriers?

Mr ONLEY: I think if there was a shift in the way that DELWP—

They have almost an addiction to promoting water-soluble fertilisers, and they do not seem to see any other ways of conducting agriculture; they are literally blinkered. I do not think it is necessary to put in place any regulations. I think that there just needs to be a change in the culture within DELWP to investigate other methods of farming.

The CHAIR: Does DELWP still have extension officers?

Mr ONLEY: Yes, they do have some.

The CHAIR: Right, and are any of those extension officers operating in a climate change kind of context—that is, supporting and assisting farmers in good farming practice that might lead to, a, that farm being more climate resilient but also having less of an impact on the generation of greenhouse gases and other things?

Mr ONLEY: No. Dairy Australia are pretty much still hard and fast that they need to be using urea to get production, but really, they do not. It is just a mental addiction to the idea that they need to do it.

Mr FOWLES: Do you know if DELWP have run any field studies on this? Have they actually conducted any of the research into biodynamic alternatives to water-soluble fertilisers?

Mr ONLEY: Doug Small did a comparison back in the 80s. He compared five biodynamic farms with five conventional farms, and he found that there was very little difference in the economic bottom line, but in every other area—in soil health, in stock health, health of the farmer, water usage in irrigated areas—we were all way better off with biodynamic farms.

Mr FOWLES: Is there any federal best practice? Or is the CSIRO or anyone else to your knowledge doing any research on this?

Mr ONLEY: I do not think so. I do not think the CSIRO has ever done anything. I would like to point out that biodynamics is only one method of regenerative farming, but it is a particularly efficient and holistic one.

Mr FOWLES: What are the other methods?

Mr ONLEY: Some farmers are using deep-rooted native pastures, but they do not particularly suit this area. We are on a higher rainfall with higher production so there is continual grazing, whereas with your native pastures you can only graze them once or twice a year, so those sort of methods suit the drier areas.

The CHAIR: There is agroforestry that introduces soil carbon just through leaf litter, and there are lots of ways to potentially get there, aren't there?

Mr ONLEY: Yes, there are. I suppose the point I am making is that the biodynamics are a particularly profitable way and are particularly efficient at building that soil carbon while still managing the land for food production.

Mr HAMER: Can I just ask a bit about the process that you use to regenerate the land and that biodynamic technique? Can you just explain that a bit more? What are some of the activities that you would do regularly?

Mr ONLEY: We use a particular preparation that has bacteria in it that are really efficient at converting organic matter into humus, and that is applied a couple of times a year, and rotational grazing. When you are not using water-soluble fertilisers you get a deeper root system and a larger root system. So you are putting organic matter into the ground and that can be converted to humus when you have the right soil ecology and the right levels of moisture and aeration in the soil. That aeration and structure in the soil helps to absorb moisture and hold moisture in there, and then the water can slowly run through to the streams. When it gets to the stream it is nice and clean—it is not loaded with nutrient and causing algal blooms and things like that. So we create an environment in the soil that is conducive to a good ecological system for converting organic matter to humus, whereas when you are using a lot of water-soluble fertilisers and pesticides you are cutting off, or you are curtailing, nature's ability to put carbon into the soil. That is what has really been happening and why our organic matter levels in soil on conventional farms are so low now.

The CHAIR: Well, I am out of questions.

Ms BULL: I do have a few more things to say, if you do not mind?

The CHAIR: Sure. Yes, absolutely.

Ms BULL: We are sort of looking into the future. Latrobe Valley Sustainability Group thinks that Latrobe Valley can be designated as a renewable energy zone. Most of the renewable energy zones are up in the way outback of South Australia, Queensland and Victoria. That is because there is an attempt to cluster together development of solar and wind at the end of a grid. In Latrobe Valley we have got excellent access to the grid, so it makes sense to put new solar and wind developments around the grid. We were speaking about the Star of the South in previous presentations. Part of the reasoning for having that is that it has direct access into the grid here. Whilst our solar or radiation is not as good as up in Mildura, panels will work better at lower temperatures—they have a lot more hot days up there. So it makes sense to try and make use of our current grid structure to put renewable energy developments along this area.

We would like to see a gas moratorium still retained because developing more fossil fuels will not help with climate change being a result of fossil fuel emissions into the atmosphere. We would like to see a Victoria-wide transition authority to coordinate this huge transition. It is not just Latrobe Valley that is transitioning; it is the whole of the Victorian and Australian economy that is changing to renewable energy. So there needs to be a lot more Government guidance to meet our Paris commitments and the scientific recommendations that we must reduce emissions by 2030. We would like to see Latrobe Valley Authority funded to continue until all of the power stations have closed down, because there is a need for worker transition, for it to be a smooth transition and for retraining to occur until the final closure has happened. And it should be retained because there is the possibility of early closure as the emission standards tighten. At the moment there is no emission standard for carbon dioxide, for instance. It is only on NOx and SOx-type emissions.

Ian has talked about the agriculture, but we also see bioenergy as being a new source of energy, so there is the opportunity to develop that in this area as well. We support the development of locally grown food, which will assist with climate change, food security, fresh produce with no packaging and reduced transport emissions. We would like to see rail upgrades because public transport and good transport from this area will be essential. As mentioned, there is burgeoning population growth happening through Gippsland, particularly at the western end of it.

We think Government should lead the way with fleet purchases of electric vehicles so that in time that will create a second-hand market to allow people who cannot afford a new vehicle to actually purchase second-hand electric vehicles. The Government should also have some incentive to enable people to purchase electric vehicles which can be charged at home. This would also help with our fuel security. As we experienced with the bombing over in the Middle East of one of the refineries, there was a bit of a panic about if we were going to have enough fuel supply. Currently Australia only holds around 20 days, which in my mind is very risky. So if we were able to have more electric vehicles which we can charge from our renewable energy supply, it enhances our security.

One other thing which has not been mentioned is water usage. Rainfall is expected to decrease and population will increase, so there needs to be, I think, some more permanent water use guidance. Recycled water should be included as this is common overseas, and we could possibly include greywater for toilet flushing in housing developments. So there are various tactics that need to be built into the climate change policy to address our water use. I think that is it. Thank you very much.

The CHAIR: Terrific, thank you for your submission. I found it very informative. Any questions?

Mr HAMER: No further questions from me.

The CHAIR: No further? Thank you.

Committee adjourned.