

BEFORE THE SELWYN DISTRICT COUNCIL

RC225180

In the matter of the Resource Management Act 1991
Sections 88-120, Resource Management Act 1991

Between **Party** KeaX Limited
 Role Applicant

And **Party** Robyn Casey, Clark and Elizabeth Casey and Dave
 and Donna Kewish ("Joint Submitters")
 Role Submitter

EVIDENCE OF CLARK JAMES CASEY

Date 23 February 2023

J M van der Wal
Barrister
40 Walker Street Chambers
Christchurch
Also at 14 Queen Street
Blenheim

Farming Enterprise Background	2
Site Selection	3
Consultation with the community	3
Impacts	5
Effects on Business, Family, Wellbeing	5
Visual Effects	6
Glint and Glare	8
Acoustics	10
Bees	11
Bird damage/weed and seed contamination	12
Farming	10
Economics of Farming	14
Conclusion	16

- 1 My full name is Clark James Casey.
- 2 I provide this evidence on behalf of myself Clark Casey and Elizabeth Casey, Robyn Casey and David and Donna Kewish ("Joint Submitters"), who have made a joint submission and an individual submission in opposition to Application RC225180 ("the application").

FARMING ENTERPRISE BACKGROUND

- 3 I will give you a background into my farming enterprise, and then I will outline the impacts.
- 4 I am the owner and Managing Director of Clairmont Farm, trading as Casey & Sons. I am the third generation of our family to farm here at Brookside.
- 5 I currently reside at 198 Branch Drain Road (180 Grahams Road) with my wife Elizabeth and our 4 young children, James, Matthew, Jack and Hannah.
- 6 I started off by purchasing 25 acres in July 1995 at the age of 21, followed by 50 acres in June 1998 aged 24. Two years later in June 2000 I purchased the Homestead along with a further 70 acres at the age of 26. My final purchase of land at Clairmont was 54 acres in July 2004 at the age of 30. This was all achieved whilst still driving full time for local transport companies and Fonterra, up until 2005 when I decided to retire from Fonterra and instead work full time farming my 199 acres along with a further 133 acres that I lease. With every purchase of land, I had to borrow money and farm each block of land on my own right while driving full time, this certainly made me appreciate what I have. I have lived at Clairmont/Brookside my whole life and have now been farming for 28 years. My work involves growing very top end crops and a lamb fattening operation, this is all done on an intensive farming scheme. All the while having always followed council laws and regulations, along with following my Farm Environment Plan with the utmost respect and care with Environment Canterbury.

SITE SELECTION

- 7 Mr. McMath has said in his statement of a whole host of reasons why this is the only site he could find. I find that very hard to believe with the information provided by our planner regarding this area. In all our statements we will give you a whole host of reasons for it being a very poor choice to put in solar panels, batteries, invertors etc.

CONSULTATION WITH THE COMMUNITY

- 8 It is with the utmost importance and concern, that I will say in this statement that the first knowledge of the solar farm was through Angela Ward after she contacted me. She outlined in little detail about what was happening and asked me to meet with Campbell. Matthew Ward did not come around to see myself or my wife prior to this. We did not want to know more at that stage, nor did we ask to meet Campbell as stated in Mr. McMath's statement 6.9.
- 9 After Angela contacted me, we met with her and Campbell in July 2021 at their request. In the beginning I was being asked to approve their proposed development of a Solar Farm without receiving all the critical information to ensure they will:
- 9.1 Comply with all regulations under a resource consent which had not even been applied for.
- 9.2 Most importantly they will not create an effect on myself and my business which could cause a loss in land value or more importantly from income.
- 10 There was only one more meeting with Campbell (not more over the months or years as stated by Mr. McMath 6.10) where he came with baked goods on his own to visit with myself and my wife Elizabeth on February 10th, 2022. During this meeting Mr. McMath wanted me to provide him with written approval of his proposed solar farm. Thus, helping him to secure the necessary resource consent. A written approval in which I have never given. During this meeting Mr. McMath told us to keep it all quiet, that we weren't to discuss this with anyone. Up until this point, I was still the only neighbour

who had been notified. He told me the reason for this is because we had a 2-story house in which we could see the Solar Farm from our upstairs windows, that no one else was affected. We found this very hard to believe that no other neighbours needed to be notified, it raised red flags for us when we were told this, considering one of our neighbours homes was right on the boundary fence of Stage 1. Brookside is substantially built up for a rural location with many residents neighbouring this site. That was the main reason we did not sign the agreement, because we felt it was unfair to make this decision solely on the behalf of a community that had no idea what was going on in their own backyard. The other reasoning was the impact on our business. When Mr. McMath was questioned about what would happen if we didn't sign the agreement, he told us that the project would still go ahead, it just meant there would be more hoops to jump through.

11 Mr. McMath also asked to have first option to buy our farm if we ever sold. I told him we weren't at that stage yet. There was a brief discussion on whether I would ever be interested in putting in solar panels on my farm if any of the neighbours pulled out. At the time I did not venture into detail with Mr. McMath about that.

12 Also stated in 6.10 of Mr. McMath's statement, I appeared to be enthusiastic. I would say I was more interested at the time of what they were doing. At this stage with no real knowledge of solar farms or how they worked. I did consider the prospect of grazing sheep under the panels, but we only had limited information being given to us which was from Mr. McMath who was only trying to sell the benefits. This was all well before we had any information or had done our own research into the negative effects of the solar farm and before we consulted with our solicitor and trustees.

13 Also stated in 6.10 of Mr. McMath's statement I asked if the existing trees on the boundary with the Prices (neighbour) could be removed. This is entirely true, simply because the trees that are there now will offer very little screening from a solar farm. Also, I quote I told Campbell another reason for this is that whatever you do you must make your boundary site look tidy and smart. I was weary of the Pine trees that are there now, as

they would be left to grow wild and cause me time and money to have to upkeep.

- 14 There was also a conversation with Mr. McMath about what would happen to the panels at the end of the 35-year lease, his answer to that was that the owner of the land would have a lot of solar panels and scrap metal to do with what they wanted. It was our understanding that this was not something he was responsible for.
- 15 Finally, coming to the decision after meetings and phone calls with our solicitor, I called Mr. McMath to tell him that I wouldn't be signing off on the agreement, because I felt it wasn't morally right as the sole authority on behalf of the Brookside community. Mr. McMath's response was that it was fine, the project would go ahead regardless and made comment that he would not remove the trees that we had asked him to remove. I felt immense pressure from Mr. McMath and his associates to sign, I have never in my working career felt as pressured into something as I did at this time. I was starting to feel anxious and annoyed. I was very pleased with the final decision we made, and glad it was over, or so I thought.
- Attached (appendix 1-2) letters from my solicitor and trustee confirming the above details.

IMPACTS

Effects on Business, Family, Wellbeing

- 16 Where do I start? Well firstly, I want to say all the evidence and information given here today by our specialists I truly stand by.
- 17 I need to however give you my honest opinions on such matters that affect Clairmont Farm and the day to day running of this business. This is not under mining the information of our specialists, but a true heart felt picture, this can only really be given by me, who farms the property with many years of experience.

Visual Effects

- 18 I can confirm that Mr. Smith describes well the effects on us and shows a good understanding of visual effects as I would see them. Affecting me, from a personal note, I would add, that I'm extremely concerned with how long trees take to grow in this area of Selwyn due to the unforgiving structure of our Watertown Soils. Basically, very good fertile soil on top to grow good crops etc. but below this is very hard clay pan, which is hard to establish trees due to root penetration etc. this is especially hard in dry conditions. I will further talk on Waterton Soil later in my evidence.
- 19 I have planted many trees along road frontages around our farm boundary hesitantly because keeping in mind the impact birds would have on my crop situation. But unfortunately, there is a council drain that runs around the entire boundary of my road frontage which over the years with council cleaning of the drains, undermines the bank which holds our boundary fence up. We have already replaced three times the boundary fence along road frontage in 61 years. The only way to stop this is to plant trees between the drain and the fence to hold the bank and to stop erosion causing the fence to fall in again. I keep all these trees cut reasonably low to mitigate and reduce bird pollution. I have no other option due to the bank erosion. My point here is that trees I planted 5 years ago, along with fertiliser and irrigation, and maintenance of replacing dead trees, gorse and weed spraying they have only managed to grow up to 2 meters, many are even smaller. See below photo:



20 My concern is that the tree screening they promote is going to take a very long time to grow and to screen from the solar farm. I speak from experience. Also, the trees along the south/southwest border of Price and partly Wards which are there now are inadequate to screen any solar panel. See photos below:





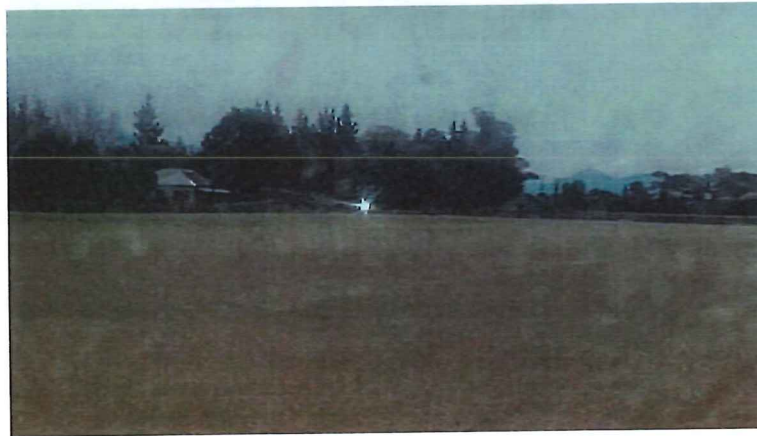
- 21 I have 1.5km of boundary fence along this industrial solar farm with no plantings at all. Also keeping in mind, the trees on most road frontages are inadequate and at least 600m or more have no trees at all.
- 22 The height of panels is 3.02m above ground level, so at many vantage points a 2m high hedge is not going to screen off solar panels or the glint and glare. Ideally hedges and amenity plantings should be given 5 plus years to establish as a visual barrier before solar panels are put in place. I am not only going to be affected by glint and glare from the unsightly glass panels but also the unsightly view of steel piles and frames that hold these panels up!
- 23 This is not only affecting myself, my family and business, but also the Brookside community and more. The developer and S.D.C. in my view are turning not only myself but the community into an industrial area when 94% of the community opposes it. This is simply unfair.

Glint and Glare

- 24 Along with inadequate screening for so long the solar panels pose a real hazard due to glint and glare. I have been told by Paul this will be particularly bad in the mornings when I'm on the west side of my farm (workplace) and in the afternoons on the east side of my workplace. I have some big machinery which I use to operate my business up to 4-4.5 meters

in height, this is again a real concern for workplace health and safety. I'm also concerned with contractors, workers coming onto my workplace having to endure these risks while carrying out their daily work. Many contractors come onto my workplace such as plant protection applicators (see letter, appendix 3), area specialists, truck drivers, Wattie's harvesters, silage, hay, agricultural contractors, this list goes on.

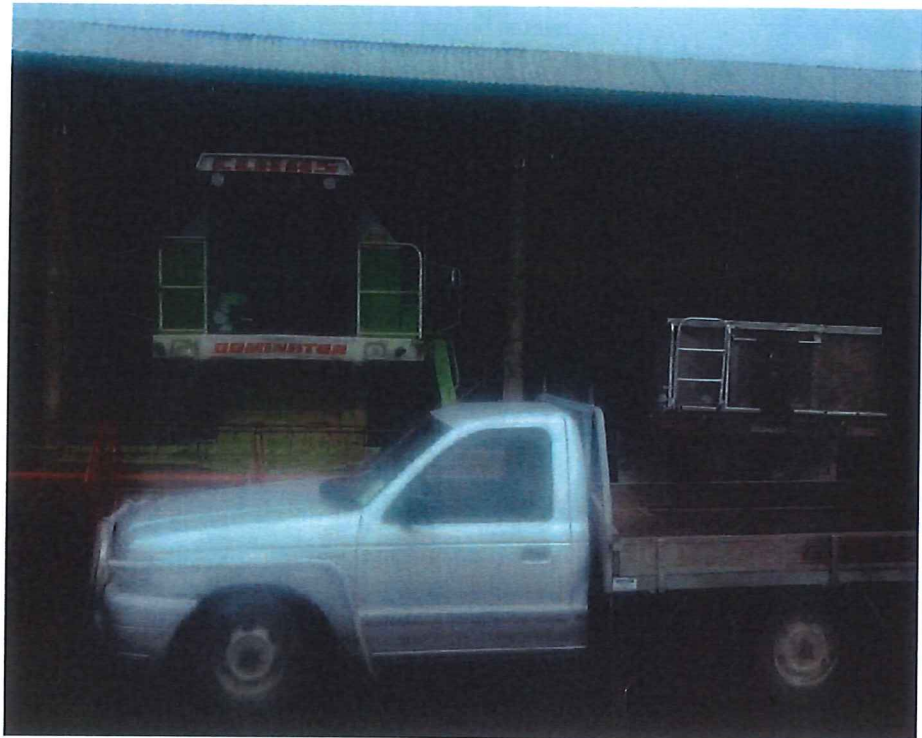
- 25 Visually for a good part of the day in my workspace glint and glare is unfair and unsafe. I have added a photo of the glare from a simple car window screen that I took from the inside of my harvester cab below:



A photo of the height of my harvester compared to the height of a 7-wire boundary fence below:



Lastly a photo of the height of many of the machinery that I use every day compared to an everyday Ute below:



- 26 Mr. McMath stated in his evidence that my dwelling is not affected because it is over 1km away, for the record, my dwelling is only 300m away from the southwest corner of the solar farm.

Acoustics

- 27 Another concern is the sound effect. Again, I agree with our expert on acoustics.
- 28 However, from a personal note, with myself usually working 7 days a week on my farm, this is my workplace which is now all surrounded by this solar farm, I will therefore hear a commercialized sound that will be with me for the rest of my working life. The experts have measured the dB based on where our home is, this hasn't considered the fact that I'm working all over the farm and close to boundary fences, so the impact of sound would be even higher. Sitting on our verandah on a quiet Sunday afternoon (which is

only 300m away from the southwest corner of the industrial solar operation) we will hear a hum, a noise that is not good for our mental health. The report states that the operation noise will be 43dB at our property which would be comparable to a "typical office space or outdoor in a city at night", we live in the country where it is so quiet at night, we can hear even the quietest of sounds, we don't want it to sound like living in the city. We love the peacefulness of the area we live in, our city dwelling friends always comment on just how quiet it is at our house, even during the day. This is so unfair, not only on myself, but my family, friends, contractors and even neighbouring properties. I honestly don't know how I could cope with this in my life. They say the sound is below safety guidelines but as I've mentioned my workplace is immediately next door to this and runs for a few kilometers, I am concerned I will not cope with this. I want to outline the psychological impacts this will have on me and my family. We enjoy the peace and tranquility of a country life. I have read about "rural anxiety" - it will impact my children's sleep and cognitive development. It has been mooted that the solar farm will operate at night. The noise will exceed the WHO guidelines for sleep of 40dB max.

- 29 Generally, most noises in the country setting are normal and expected, i.e. a dog barking or a tractor working, these are expected in the country, and all are usually short lived. This solar operation is a different sound, somewhat abnormal from country life and this will be constant, it is not something that can be switched off. Not good for our cognitive health.

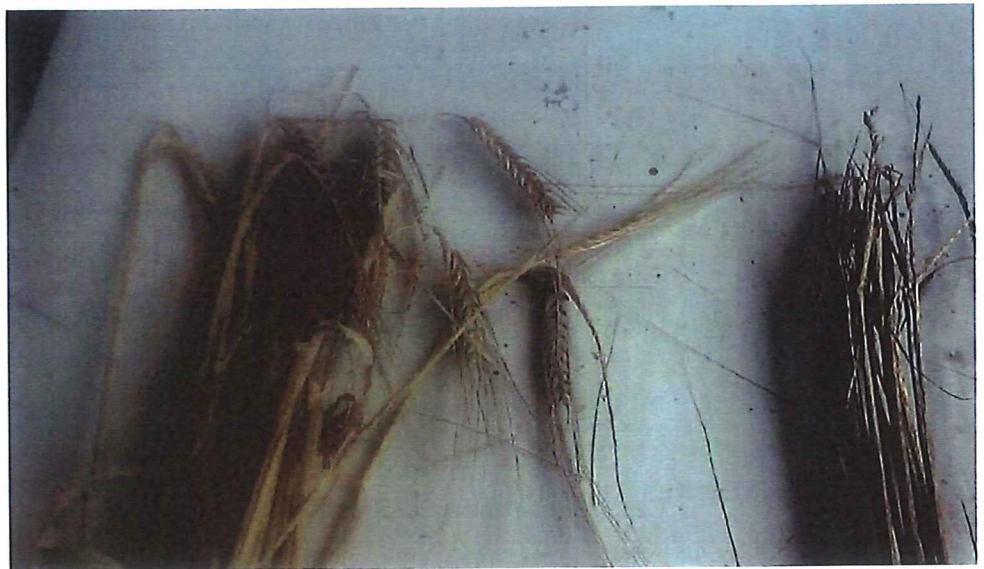
Bees

- 30 I have read the report prepared for KeaX Ltd on electromagnetic radiation. However, what they overlook is the fact that they are generating 160MW of electricity that adds to the magnetic fields at the substation, we estimate they will be 35-60 microteslas of magnetic field which will affect Bee activity and rates of crop pollination. This is a substantial electromagnetic field. Bees are sensitive to as little as 0.025 microteslas and beyond this feeding activity and rates of pollination are reduced. Moseatelli et al 2022. This will cause adverse effects on my farming operation and its profitability.

Bird damage/weed and seed contamination.

31 This is also of major concern. With the added tree screening of the solar farm site this would without a doubt cause a bird problem causing significant damage to my crops. Basically, the birds will roost and nest in the trees planted by KeaX next to a good feed source (being my intensive cropping program).

32 I have had grain agents speaking to me about bird damage in my farming career of how to manage this problem. Many times, I have been told they have seen certain crops wiped out and lost because of bird damage. I have added a photo that I took just 2 weeks ago whilst I was harvesting my barley crop, the photo shows bird damage to the barley on the right of the photo below:



33 Most cropping farms suffer a certain amount of bird damage. With the solar farm going in next door to me along a whole complete side of my farming business I will undoubtedly 100% suffer further bird damage.

34 I have received 2 letters, the first (appendix 4) from the Foundation for Arable Research (FAR) on the effects of bird, weed & seed contamination and the second letter (appendix 5) from South Pacific Seeds (NZ) Ltd regarding bird damage and cross pollination with seed crops.

35 Also stated in these letters are weed and seed contamination that could arise from this solar farm if not managed correctly (appendix 4-5). I have had enough sleepless nights worrying about this. I could lose my business; I hope this is carefully investigated with a positive outcome.

FARMING

36 I am pleased that Mr. McMath and the S.D.C. acknowledge the solar infrastructure will be sitting on highly productive land. Unfortunately, they both seem ignorant to this fact, in my view. Let us remember the soil below them is only being used as an anchor point for the solar farm to stand up. The soil itself is not being used to create the power, it shall sit dormant for 35 years. As Mr. McMath has said himself last week, the soil will be used in a sheep operation running approx. 10 sheep per hectare. It was also mentioned that cropping might take place in the future. Please now let me break this all down for you.

37 Firstly, the meeting on the 10th of February 2022, Mr. McMath was asked by my wife Elizabeth whether they will be using irrigation on the site. He said it was highly unlikely due to the pivots there now not suited to the solar farm set up and that any irrigation could cause an issue with water droplets on the panels. Irrigation mentioned last Thursday by Mr. McMath and documented in his evidence states that Irrigation is still taking place on the land. I would have at least thought that with the complexity of this issue and the importance of this hearing he would have by now substantial facts and information on this matter. This is not to be.

38 On Thursday Mr. McMath stated the 99.92% of the land is still available to be farmed, this is simply not true. This was questioned by the commissioner at the time, has left the area now available for farming at 60%. Later in my breakdown analysis I will use 99.92% of land for sheep grazing as they can graze under panels and 60% in a cropping situation, dry land and irrigated.

39 In Mr. McMath's statement 5.12 the reporting officer has already asked for information about the ability for pasture to survive under the panels

throughout the life of the solar farm, this is backed up by Mr. McMath with only photographs and a statement on Agrivoltaics.

40 Mr. McMath's statement 8.14 he has classed himself as a South Island finishing and breeding farm. I will give Mr. McMath the benefit of the doubt and use these stocking rates in which he has chosen. 10 stock units per hectare in a dryland situation and being generous have gone to 14 stock units per hectare, irrigated. This analysis will be given soon.

41 Re-grassing for lamb finishing is essential on all farms. Myself personally, the longest I would use the same pasture in a paddock would not be more than 18 months. Usually, it is only months. On some finishing farms with no cropping rotation the pastures might last three years by which time the pasture will be starting to run out so every few years would have to be regressed. I drill (sow) only the best grasses for the best results. Winter feeds are essential to be sown every late summer to feed the stock whether breeding or finishing in the winter. In Brookside very little growth takes place in the winter months due to wet conditions, frosts, lack of sun and therefore bringing the soil temperatures down to a level where grass growth is limited. Under these solar panels regressing can not take place maybe in lane ways yes, that also poses its own troubles. The pasture will be run out in a few years leaving only wild grasses and weeds to try and grow.

42 The only correct thing about the above from Mr. McMath was about the growth being green under the panels, however this cannot be classed as pasture, all that is left is unpalatable matter for the sheep to eat causing a whole list of problems for the stock, such as:

42.1 Diarrhea (causing fly strike in summer months)

42.2 Very slow growth rates (stunted carcass weight)

42.3 Higher than burden of parasites and worms in the gut of sheep.

42.4 Poor wool growth

42.5 In breeding stock, sleepy sickness prior to lambing

42.6 Low milk supply to feed lambs.

- 43 Eventually this operation will not be able to finish (fatten) lambs. Meaning selling as store lambs to a proper finisher meaning less income. The only thing that may help but is no answer is to cut his stock numbers. This then causes major troubles for his solar farm as the grass under the panels will shoot away to seed which then is unable to be eaten by sheep, they can't eat this and is unpalatable. Remember topping of this matter under the structures cannot take place. The paddock pictured below, has been grazed by sheep (as you will see in the background). These sheep have eaten the bottom out of the pasture. The grass should have been topped by now, however it has gone to seed, making it unpalatable for the sheep. This is what I believe it will be like under the solar panels, where topping will not be possible, therefore creating problems, poor pasture that would create a risk for fire (see below photo):



- 44 Then Mr. McMath's sheep operation creates the following risks which I believe are true and real. Without a doubt I can see this happening:

44.1 A huge fire risk as this matter eventually dries off and goes to seed.

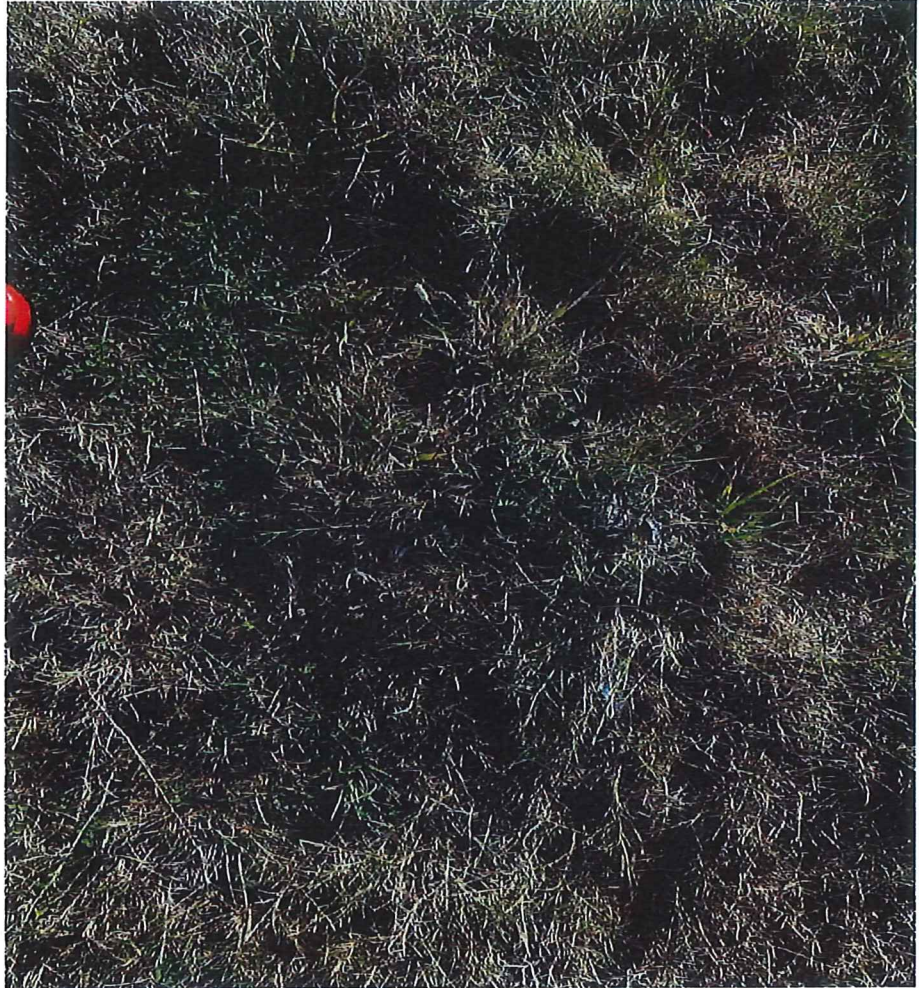
44.2 Poor stock

44.3 Low income

- 45 Mr. McMath has stated in his evidence last Thursday that the Brookside project does not have the need for nitrogen. May I point out to Mr. McMath that nitrogen may be successfully used in his Brookside project, if he stays within the limits and boundaries of the Farm Environment Plan (FEP). Almost every farmer in Canterbury must stick to these limitations by law. These guidelines were set by E-Can to ensure the safety of the environment whilst still achieving a green and clean farming future in New Zealand.
- 46 This Brookside solar project is making another mistake by not looking after the soil with fertilisers, hence leaving soils to become nutrient deficient and useless, growing very low-quality feed for its sheep leading to poor animal health causing unhappy stock and finally leading to the Brookside solar project anything but maintaining Primary Production.
- 47 Unfortunately, I have been down the same road as Mr. McMath's Brookside farming project. In the early 90's the Government encouraged people to plant pine trees, especially to use as a retirement investment. So, in 1995, my first purchase of land of 10 hectares, I planted 3.5 hectares into a pine tree plantation. Three years ago, I finally logged the area and made a pittance. After the logging I shut the gate to let the stumps and slashings break down, this was three years ago. The only positive thing however small it is that at least I had something growing in the soil, unlike solar panels. My point here is that this land or soil has not been utilized or worked for the past 28 years. In this period of 28 years, it has never been re-grassed, the soil never cultivated, no irrigation, no fertilizer, it, like the Brookside solar farm proposes, only had sheep grazing on this 3.5ha block. The photo below shows what it looks like now under this type of farming. This was a mistake.

I believe this is the quality of feed that will exist under the solar panels.





The photo below is representative of quality pasture which will not be found under the solar panels.



48 Wool Quality – Mr. McMath states wool growth may be a great thing under the solar panels. I again have many years' experience with wool, from growing it, to working many hours in the woolsheds of NZ and Australia and working alongside international wool classes. After talking to my former wool agent, who is now the South Island Manager for Wools of NZ, we both agreed on a few negative points of farming sheep under solar panels:

48.1 Sheep will rub on the steel structures, causing discoloration or in this case a silvery appearance that the buyer would likely discount the wool, and may have double scour due to its appearance. Similar to wool with heavy contamination.

48.2 Wool would be more likely have more seed, discoloration and cotty wool from sitting in longer grass (if not managed correctly). Too much shading from under the panels could cause dampness to the wool, again causing the above effects.

ECONOMICS OF FARMING

49 After consulting with a good dairy farmer in Brookside, he gave me his book figures from last year. His gross income was \$13,000.00 per hectare, his net income was \$5,500.00. Remember the site of the solar farm in Brookside is 258ha and is all currently used for dairy farming. The 258ha area equates to \$3,354,000.00 per annum for the country, in exports, and is healthy for our local community. Over the life of the solar farm its \$117,390,000.00 in total taken from Primary Production from Brookside's Highly Productive Land.

50 Now I will turn to Mr. McMath's farming venture in Brookside and see how his sums add up based on the information he gave us last Thursday. I will give Mr. McMath the benefit of the doubt based on two scenarios. 10 stock units per hectare on dryland as he stated on Thursday and I will also give an irrigated version of 14 stock units per hectare which is generous. Keeping in mind the information provided by Mr. McMath on irrigation is very vague.

51 Dryland – 10 stock units per hectare based on fat lamb finishing. Average purchase price from Canterbury Park store sale last week was \$121.99 per

lamb incl. GST (all figures listed include GST). Average weight after finishing 22.5kg (carcass weight) and the meat schedule from last week at 7.95kg = \$205.63 per head. So, Mr. McMath has made a margin of \$83.64 per stock unit. What does that mean for Mr. McMath. Based on 10 stock units per hectare, presuming he has fattened to above weights and after deaths the gross margin of \$509,348.51 per annum. After the initial costs of store lamb and working expenses (this would include having to pay for a worker on minimum wage to manage this), the net income would be \$123,026.05 per annum. (Farm working expenses taken from my last year's books). This is a figure of \$476.88 per hectare of Highly Productive Land compared to Dairying, net profit of \$5,500 per hectare. This leaves a negative margin of -\$5023.12 per hectare. The \$476.88/ha of net income does not even consider the cost of buying in winter supplements such as silage if needed in a hard winter – this is highly likely. This is totally an unviable exercise Mr McMath is doing on Highly Productive Land. This makes me so sad.

52 Even if Mr. McMath had irrigation and raised stock units to 14 stock units per hectare his net income per hectare will go up to \$811.44/ha. Now with the running costs of irrigation, he would be no better off. I think I have proven this is something not to be done. There would also be capital, operational and infrastructure costs for establishing the irrigation. I would class this as a failure in the use of Highly Productive Land. Figures on sheep breeding farms are similar with the disadvantage of having to produce high quality feed to in lamb ewes, as explored this cannot be easily achieved.

53 Cropping – It was stated by Mr. McMath's team last Thursday that cropping could potentially be an option. I have cropped all my life, and I cannot fathom how this could be done around solar panels. Firstly, no crops can be grown under the steel structure. You wouldn't be able to crop in the laneways either because with this Waterton soil it must be ploughed and worked into a soil bed. This would have to be done with smaller equipment, which would in turn raise costs. With no fertilizer, no spray rigs being able to get in between the rows this would also create problems. Harvesters would struggle to maneuver between the panels. With maintenance and repairs to the panels, crops would be driven over etc. Basically, I treat my cropping farm just like a vegetable garden, the soil must be turned, a little

fertiliser and even compost, a little water you have to work with the soil. I think after Mr. McMath's statements this would simply not be an option on his solar farm.

- 54 With honest input I have proven that Mr. McMath's claims of being able to farm on this Highly Productive Land is just a front to say he is producing good production on good land, and he is not, as I've proved. I believe this is only a front to get the solar farm over the line on Highly Productive Land. This is my opinion. It's really sad for me to hear this.

CONCLUSION

- 55 It is with concern of the unprofessional approach by Mr. McMath to obtain consent. Followed up by the poor decision making by Selwyn District Council to allow such an action to take place.
- 56 As mentioned by our planner there are numerous sites that would be better suited for a solar farm. It beggars' belief to even suggest that a solar farm should go ahead here. My reasons are:
- 56.1 This is prime rural land for agricultural purposes. Highly Productive Land for Primary Production.
- 56.2 In such a heavily populated rural setting with dozens of properties owned by people within such a short distance from the site. A simple example of this is in our petition of Brookside residents only, who signed to oppose this plan. This wasn't just one or two signatures but dozens and dozens. I hope the council and all parties involved listen to the rate paying people of Brookside. I've attached a letter (appendix 6) from a concerned resident of Buckleys Road whose property is on the boundary of the solar farm but wasn't included in the submission as an affected party.
- 56.3 There is strong evidence to suggest that it will affect income on neighbouring properties.

- 56.4 There was no public notification for council when all the effects of this action of a solar farm are major – not minor.
- 57 Between the Council and Mr. McMath, nearly all of the people of Brookside are upset and annoyed, the damage is done by your actions, and you will not change the hearts of these people.
- 58 The facts I have given on the sheep and cropping exercise you intend to go ahead with is nothing short of an embarrassment and a failure. It is obvious you have chosen the wrong site.
- 59 The country will not fall over without this solar farm in Brookside. But the way you say you will farm on this Highly Productive Land if this is accepted as a new normal the country would not only fall over but sink. It is not good for NZ Farming or our Brookside community.
- 60 I've attached a letter (appendix 7) I received from a long-established seed company expressing their concerns on this matter.
- 61 I am concerned for my family's well-being firstly, secondly the loss of potential income. All stated and explained above.
- 62 Like my grandfather and father who have worked so hard to farm where we are from and having a Corriedale sheep stud and sending sires all over the world to now, my sending seeds and Wattie's food products all over the world. Having been the top Wattie's Bean grower with a record crop in Canterbury this proves we are on top quality soil. Our specialist Ray Henderson will give a talk on proven effects the solar farm will have on our soils and neighbouring properties.
- 63 All my life I have been accepting of change whether it is laws from the council, farm environment plans (FEP) from Environment Canterbury etc. I am not against solar activities per se; however, I can honestly say that there are far more suitable sites that would have very few neighbouring properties in a more extensive farming area. The people proposing this

solar farm have got it very wrong. Brookside is not suited nor do the people
deserve to have a solar farm in their lives.

Clark Casey

Appendix 1

9th February 2023

10 Duchess Place

Clarke Casey
Brookeside

Maupuia
Wellington 6022

CANTERBURY

Dear Clarke

KeaX (Campbell McMath) Approach for New Solar Farm

I am writing to confirm my very strong opinion on the unprofessional approach by Campbell McBeth representing his need to gain your approval to establish an extensive solar farm next to your valuable farm property in Brookside.

Over a period of three months (February to April 2022) he approach you and place enormous pressure trying to get you to provide written approval of his proposed solar farm scheme thereby aiding him in securing the very necessary Resource Consent as this new scheme would/ should involve a major District Plan change to the current use of the surrounding farm land.

During this period, I was provided with a copy of KeaX letter dated February 2022 and a draft copy of Boffa Miskell's AEE. After reading this submission I provided you with some questions to ask them considering that the information provided was of such a low level that it totally lacked any critical professional engineering reports (sound, heat, visual etc) to support their claims that such a new solar farm would not cause any visual effect to the neighbouring properties let alone the surrounding farmland. Add to this is the obvious risk to devaluing your farm asset.

During this period there was continuous pressure being placed by Campbell demanding that you support his application. The pressure being placed upon you at this time with all the other critical matters you were dealing with was frankly unprofessional.

It is hard to believe that such a low level application would even be considered by your local Council when all the effects of such a change of use of such valuable high quality farm land. The critical independent engineering reports to confirm that there will be no visual/ financial effects by them accepting such an application is hard to fathom.

Yours sincerely



Jim McArley

Appendix 2



17 February 2023

TO WHOM IT MAY CONCERN

I Trevor Kinred Quirk confirm that I am the solicitor for Clark Casey and the Casey & Sons Farming Trust.

During the months of February, March and April 2022 Mr Casey expressed his concerns with the pressure being put on him by Campbell McMath to sign off the Resource Consent Application for the proposed Brookside Solar Farm.

Mr Casey met with me on several occasions concerned with the proposed application and the serious impact it may have had on his own farm. On each occasion he was concerned by Mr McMath's questions on whether he had signed off his consent.

Yours faithfully
LAYBURN HODGINS LIMITED

A handwritten signature in blue ink, appearing to be 'TK Quirk', written over a faint blue circular stamp.

TK QUIRK
Director
Email: trevor@layburn.co.nz

Appendix 3



**McFadden Ag
Limited**

127 Cryers Road
Southbridge

Phone: 021474604

E-mail:
mcfaddenag@xtra.co.nz

20 February 2023

To whom it may concern,

It has been brought to our attention that there is a proposed installation of an extensive solar farm bordering Clark and Liz Casey's farm in Brookside.

We are involved with the application of plant protection products to their crops and have discussed the potential impact a solar farm next door will have on McFadden Ag's work, and the overall production of the farming system.

In my opinion the solar panels will create a significant health and safety hazard due to the glare created by them. The most important factor in the precise application of all plant protection products is visibility and our machines and technology are very carefully selected to ensure visibility is maintained to our required standard at all times. My big concern is that glare from solar panels can blind drivers which can potentially have serious consequences to people, equipment and crops.

Secondly it raises a significant concern around the timing of plant protection products. Timing of application can be everything, and can mean the difference between a crop being a success or a failure. My concern is that if products cannot be applied safely due to visibility issues, at the correct time this can potentially have a significant financial impact on both the Casey's Farming system, and McFadden Ag.

Yours sincerely,

Colin McFadden

Director
McFadden Ag limited



Appendix 4

To the Selwyn District Council.

9 February 2023

Re: Solar panel development at Brookside, near Leeston.

The Foundation for Arable Research (FAR) has been approached for a technical opinion on the proposed development of a utility scale solar power facility at Brookside near Leeston and its potential impacts on neighbouring arable production.

We will not make any comment on the overall cost-benefit of this proposed land use change, but focus on the impact of an increase in native and other tree plantings at the boundaries of the property and the grazing of pasture species surrounding the solar panels.

In our capacity as a research organization, we have accumulated substantial evidence of bird behavior and management, and in particular the impacts of tree plantings at the boundaries of arable crops on bird populations and crop damage. This evidence includes:

- Introduced farmland birds can reach very high densities in New Zealand.
- Habitat characteristics associated with bird presence on farms are boundary habitat (hedgerows and shelterbelts) and the area of woody vegetation present.
- Bird feeding in wheat can lead to crop losses of 6-8t/ha in paddock boundaries close to shelterbelts.
- Removal of shelter belts and hedgerows in key areas where birds cause damage to crops reduces perch sites for birds and potentially encourages them to find other places to feed.

International data on other arable crops such as sunflower, an important crop in the local arable rotation, confirm the significant role of trees in increasing crop seed predation by birds in an agricultural landscape. As introduced farmland birds frequently move at a scale beyond individual farm boundaries to access resources, FAR believe it important to consider the probable detrimental impacts of plantings on or at the boundaries of this solar farm on neighbouring arable enterprises.

In addition, international observations from initiatives to increase vegetation plantings and the planting of pasture species for grazing on solar panel farms also suggest a likely increase in weed ingress into surrounding production systems, with movement of pollen increasing as a result of less managed landscapes. FAR believe that considering appropriate management of the pasture species used for grazing is critical to mitigate potential yield loss from increased weed pressure as a result of this development.

In summary, FAR believe a robust review of the unintended consequences outlined above is necessary as part of the consenting process for the utility scale solar power facility at Brookside.

Yours faithfully,

Andrew Pitman
General Manager Research & Development

To The Selwyn District Council.

28/11/2022

Dear Sirs,

We write to you in support of our very good hybrid seed farmer, Mr Clarke Casey.

The subject is:- Concern about the planned significant planting of trees around perimeter of a new solar panel farm next to Mr Casey's property, and the consequent effect of increased bird attack on high value seed crops.

Mr Casey has significant and legitimate concerns about this large planting trees around the perimeter of the Solar Farm. There are two main areas of concern:-

Firstly:- It is the likely large increase in the bird population, right next to the valuable seed productions Mr Casey farms. As evidenced by FAR (Foundation for Arable Research) trials, high bird populations can eat 39% of brassica seed crops. This is a legitimate concern which could result in the non-viability of a valuable seed growing future for Mr Casey. We believe this is an absolutely unintended consequence of the tree plantings, but one that must be considered please.

Secondly:- and likely more lethal to any neighboring seed growing operation, is an enclosed area of land behind trees that could grow volunteers (ie brassica plants of the same species as the crop being produced). Such a situation would cause out-cross pollination, with the valuable seed crop, rendering the seed unsalable.

South Pacific Seeds and Mr Casey would like reassurance that:-

- 1) The area of land under and around the panels would be kept closely grazed or otherwise managed in such a way that wild and volunteer plants were simply not allowed to flower at any time in Spring and summer.
- 2) There would be some kind of mitigation of, or compensation for, the increased bird damage to Mr Caseys seed crops, from the new bird populations right next to his property.

Personally, I have seen several Solar farms is different parts of the world and I don't recall any that were surrounded by trees. Rather an open, obvious site of a neat and tidy solar farm was apparent. We note the same situation at our

· local new Opuke Hot Pools in Methven where the Solar farm is part of the theme and the attraction.

We hope that these matters can be considered and a solution to Mr Casey's concerns will be implemented.

Kind regards,

John McKay

Managing Director,

South Pacific Seeds (NZ) Ltd.

Appendix 6

Anneka and Michael Dalley – 56 Buckleys Road, Brookside Leeston.

Issues of concern to us and our young family:

Consent process with land use change, agricultural to industrial, contaminants – which has the potential to destroy our business, health, power costs going up, environment, impacting our business and other farming businesses directly with less reliable power, fire risks to our farm, Greenwashing by the Selwyn Council to approve the Solar Farm in the Brookside Community, the mental health and wellbeing of our community.

We hold no ill will towards the two farming families who are involved in leasing and selling their land to KeaX. We have farmed in the district together for over 45 years. We have weathered many storms and personal tragedies together.

It is a financial opportunity for the signing families which enables them to choose other life paths, away from the stresses and strains of dairy farming.

Perhaps upon signing the families weren't made aware of the impacts on the land and the ramifications for the remaining families in Brookside and the Ellesmere district?

In 2021 we were approached by Campbell McMath with his proposal of a Solar Farm in Brookside. We were asked if we would include our 40ha into the new Solar Farm. We said NO as we wanted to carry on farming for ourselves and our children's future. Also we did not want to drive out our gateway and look directly at solar panels. We were also concerned about the school bus driving up the road and the glare from the panels for the driver and children on the bus.

After saying NO we thought nothing of it, until a community meeting was organised to show the scale of the proposed solar farm. This is when we discovered that not all the immediate neighbours would be notified by the council regarding this project.

We also learnt only one family was asked to sign the consent form on behalf of all the families in Brookside.

This is where it is all wrong as the immediate/adjacent neighbours, such as ourselves and many others to this Solar Farm project and the wider community of Brookside were not notified by the council nor their consent sought.

We should be involved, along with the Brookside Community in an active notification process about a land use change from agricultural to industrial.

As farmers we have concerns over the potential release of contaminants onto our farm especially when we have high rainfall events. Our 40 ha property takes the runoff water from the solar farm and this concerns us as our cows graze grass which could have detectable contaminants in our milk which then would enter the food chain system.

With contaminants in our milk, would our milk be picked up by FONTERRA ? Would we have to dump our milk which would have a huge financial impact on us. Our cows spend 9 days on the 40 hectares. That is 18 milkings, 18 milkings of dumped milk.

The contaminants would remain in the cows systems after grazing on that block of land.

If contaminants were found consistently in our milk, FONTERRA could say NO to picking up our milk forever more. That decision would kill our business and our livelihood .

We would be ruined.

As a family we have enough health concerns and we are concerned about the magnitude of the scale of solar farm and cancer risks with electromagnetic field. We live and work right next to the farm. Our children too.

After consulting with a Power Systems Engineer. It is very bleak.

A Power System Engineer trouble shoots any problems with componentry at Substations and on the main feeder lines and well any lines. The various power company's engage with a Power Systems Engineer when problems arise with power. They are specialists in what they do , like a neurosurgeon for power.

It is still bleak.

Our concerns as a family are the costs Orion will pass onto everyone in the Ellesmere community for upgrading the infrastructure at Brookside Substation .Power prices will go up for all rate payers.

The current Brookside substation is unable to take the power capacity that will be generated by the solar farm.

Orion will have to upgrade the infrastructure which is tricky as currently the technology hasn't kept pace with solar farms being tacked onto existing substations up and down the country. The Brookside Substation was never designed to take huge capacities of energy which will be generated through the solar farm. The current componentry is not up to scratch and number 8 barb wire ingenuity will be required to manage the ever growing dynamic situation.

Did the Selwyn Council do their due diligence in seeking knowledge and clarification from a Power Systems Engineer in their decision making process? Was there a feasibility study undertaken to research the impact on the current Brookside substation technology ? And how or if problems arise, how will these will be managed?

Currently, Tasman Power in Marlborough are experiencing complications with the Kea Energy Solar Farm (could be Kea X also) owned by Campbell McMath, situated near the Wairau River . The lines were never built to take such huge quantities of power. The cost of the upgrade of the systems is being passed to the rate payers. Components for the lines is proving tricky.

Did the Selwyn Council approach Tasman Power and run a feasibility study on the many aspects of connecting a solar farm to existing line technology? Are there any concerns? What are the concerns? How can the concerns be managed for the greater good of the local rate payers and to ensure power reliability is key and fire risks are low.

The imbalance of the existing Brookside Substation technology and being ramped up with huge volumes of power creates safety issues at the substation and it will also decrease power reliability to the Ellesmere communities. There will be more power outages.

The cost to Orion to upgrade the Brookside Substation will directly be passed onto all the rate payers in the Ellesmere district.

Has the council done their due diligence in regards to sharing this information to their rate payers with making their decision for the Solar Farm?

We are dairy farmers. We rely on consistent power for our farming business. As do other dairy farmers in the Brookside community and Ellesmere district.

The solar farm will diminish power reliability and will have huge ramifications to our business and our financial security.

Currently if a line goes down due to a pole snapping or if a transformer catches on fire, the line is able to be isolated. Line F looses power. Some houses and businesses will be without power for a short time while power is reinstated.

With the solar farm tacked onto the substation, the solar farm will keep doing its thing but information showing what line that is down is unable to be detected swiftly, or even at all.

All of the lines from the substation will shut down. While Orion is busy scrambling to detect which line is impacted all of the power is out to our community. Numerous households and businesses will needlessly be without power.

We live just down from the power station, 800m. We will be frequently affected by loss of power to our business. This will have huge financial, health and safety and animal welfare ramifications to us and our animals.

Power outages will have huge ramifications to local crop farmers who live just around the road. If there is a prolonged power outage while the grain dryer is on, used constantly last year due to the Canterbury Summer 2022 with an unseasonal rains it will stop the drying process. The grain will cook if power is interrupted in the drying process. The grain is worthless and flour is unable to be made. Eighteen months of hard work and financial investment will be lost for that farming family.

Is this current system of solar farms popping up around the country on excellent agricultural land ok? The solar farm business model requires the rate payer/ home owner to pay more for electricity.

A similar scenario is if we brought land , cows, fenced the land put in troughs, paid the lines company \$50K to upgrade the transformer so we can have power to our dairy shed. We have a product milk, but we can't process it and get it to the customers. We don't have a dairy shed so instead the rate payers and home owners contribute to a fund so we can then build a dairy shed to process the milk. They then pay again when they buy milk in the supermarket which has also gone up in price. Effectively that is what is happening with these multi million dollar solar farms.

They buy, lease land, build infrastructure on the land to create power. Yet, the power can not be processed easily for the consumer to use so the user – home owner etc, pays for the power to be processed and then pays to use the power.

Ethically and morally is this a fair and just business model for the rural and urban communities of NZ? We all need power. Why are we paying twice for the power?

Farming is in our blood. I am a fifth generation farming woman and my husband is a second generation dairy farmer. We have strong ties to the land. Land is mana.

We are all farming families in Brookside and Ellesmere district. Family owned and worked with the hands who own the land. We aren't huge corporate farming businesses that can swallow impacts to the bottom line with ease. Every impact on our farming operation leaves a dent. We can't off set losses by shuffling aspects of our businesses around as the corporate farming businesses do with ease with other income streams. Dairying is our income stream or crop or sheep for other farmers.

We love bees. They pollinate our trees and pastures. Bees come off second best with solar farms. We are mindful there are numerous crop farmers around us you need bees for their livelihood as do we. The solar farm will have an impact on pollination of their crops, yields and food supply to our nation.

Food supply is becoming fragile and the soil that the solar farm resides on is very good productive agricultural land.

By taking out 258 hectares of prime agriculture land the Solar Farm is impacting the food cycle for our communities and the world.

We want families to have the opportunity to farm. By slapping industrial technology on the land that is as destructive to the environment as coal power to generate electricity we don't want this in our back yard. The soil is too precious to have steel seep chemicals into the land, and to impact the bees and birds natural flight paths. The soil is too precious to have contaminants that will be passed onto the grazing animals who reside near by farming properties and on the Solar Farm.

Has the Selwyn Council been part of a Greenwashing campaign to get the Solar Farm approval over the line? Has the Council Greenwashed ratepayers in selling the Solar Farm ideology?

The impacts on the environment are huge and ultimately devastating to animals and humans alike.

Noise is another concern of ours. With a span of 258 hectares the solar farm will hum like a motorway. We don't want to live next to that constant noise, nor do our cows. We live rurally and relish the peace and solitude of Brookside.

The solar farm will devalue the value of the land and homes nearby. It will change the face of the rural environment for ever more.

We love where we live. This industrial venture in our local environment is a huge a concern to us. It will change our local environment forever. This is where we live, work and play.

We are saying no to the Solar Farm for the children of today who live and play on the land in the Brookside community and the children of tomorrow.

We don't want a solar farm in our backyard.

Anneka and Michael



17 February 2023

To whom it may concern

Re: The proposed solar energy farm at Brookside.

Luisetti Seeds is a long-established seed production company based in Rangiora and Ashburton.

We have been growing seed and retailing seed throughout Canterbury, New Zealand, and the world for 90 years.

We wish to oppose the establishment of the proposed solar energy farm at Brookside.

The continual use of productive agricultural land for uses other than agricultural production is not in the best interests of our country as a whole.

The government has recently come to this conclusion and are now looking to protect productive soils for the sole purpose of agricultural production.

The recent flooding in the North Island will soon act as an illustration as to what happens when agricultural land is taken out of production, there will be food shortages and food price inflation.

The protection of productive soils is in the best interests of all New Zealanders, for generations to come.

I do not have particular concern with solar energy farms per se, in fact on an individual farm basis they work very well, but large solar farms such as what is proposed at Brookside should only be allowed on poor and unproductive soils.

Yours sincerely

A handwritten signature in black ink, appearing to read "Edward Luisetti".

Edward Luisetti
Managing Director



LUISETTI SEEDS LIMITED

20 Ashley St, PO Box 77, Rangiora 7440 New Zealand
Phone 03 313 7176 Fax 03 313 7555 Email admin@luisettiseeds.co.nz

GRAIN & SEED MERCHANTS
SINCE 1932

28 February 2023



WELLINGTON

Lambton Centre
Level 4, 117 Lambton Quay
PO Box 715, Wellington 6140
T 0800 327 646

Federated Farmers Stance on Solar Farm:

It has been brought to my attention that some media comments I made in relation to solar farms are being interpreted as support for solar farms, with regard to this current case. To be clear Federated Farmers at this present time DOES NOT have a position around the suitability of solar farms at a Macro scale, or even for individual cases. We have discussed the need that we probably do need to develop a position on this but aside from an initial discussion on the pro's and con's, we have no firm position at this point in time, and very definitely given we have no real knowledge of this case we wouldn't pass judgement on the merits or otherwise of it.

With regard my comments in the media article, the context in which I was making them was in relation to the concerns we have with Carbon farming, in that Solar Farms would be unlikely to pose the same land-use concerns at a macro scale. So I am more relaxed about solar farms in regard to my concerns around carbon forestry at the larger scale.

Notwithstanding I would have concerns on individual basis's for solar farms if they were causing issues for neighbouring properties, and if it was particularly high value arable soil that was being converted.

Regards,



Andrew Hoggard

