

I absolutely and explicitly object to the Culcairn Solar Farm SSD 10288.

Firstly we would like to know, if something goes wrong and our family suffers from any of the following impacts, Who is responsible?

Is it the company, the landowner, the NSW Government or the Independent Planning Panel?

## Introduction

Since hearing about the proposed development from Primary Landowner (Landowner 2) in April 2018 our family suffered trauma and intimidation. We held a lease on a large portion of the proposed project land due to expire 31 Jan 2020. Landowner 2 initially advised a development size of 400 hectares and they would lease land to a solar company.

From the outset our family was extremely concerned about the loss of prime agricultural land, the opinions of surrounding neighbours, towns and community and the ramifying impact on us all in the hands of a large multinational company with a financial agenda.

The company showed interest and pursued some of our land. We felt it important to understand the development, were taken by the proponent to a Solar Farm in Griffith, did research, consulted with legal representatives, community people and neighbours. **ALL** discussions pointed to significant concerns with a strong majority believing that land in this area was too agriculturally valuable for solar development.

Our measured decision, regardless of massive financial benefit, was that this development had far too many impacts, would create significant conflict in our community and above all, with drought and water issues happening in our country that the loss of prime agricultural land with strong capacity to provide hay and grain when others are failing was not justified. Our family stands by our principles and could not accept the simple benefit of huge financial return from a development so damaging to those around us.

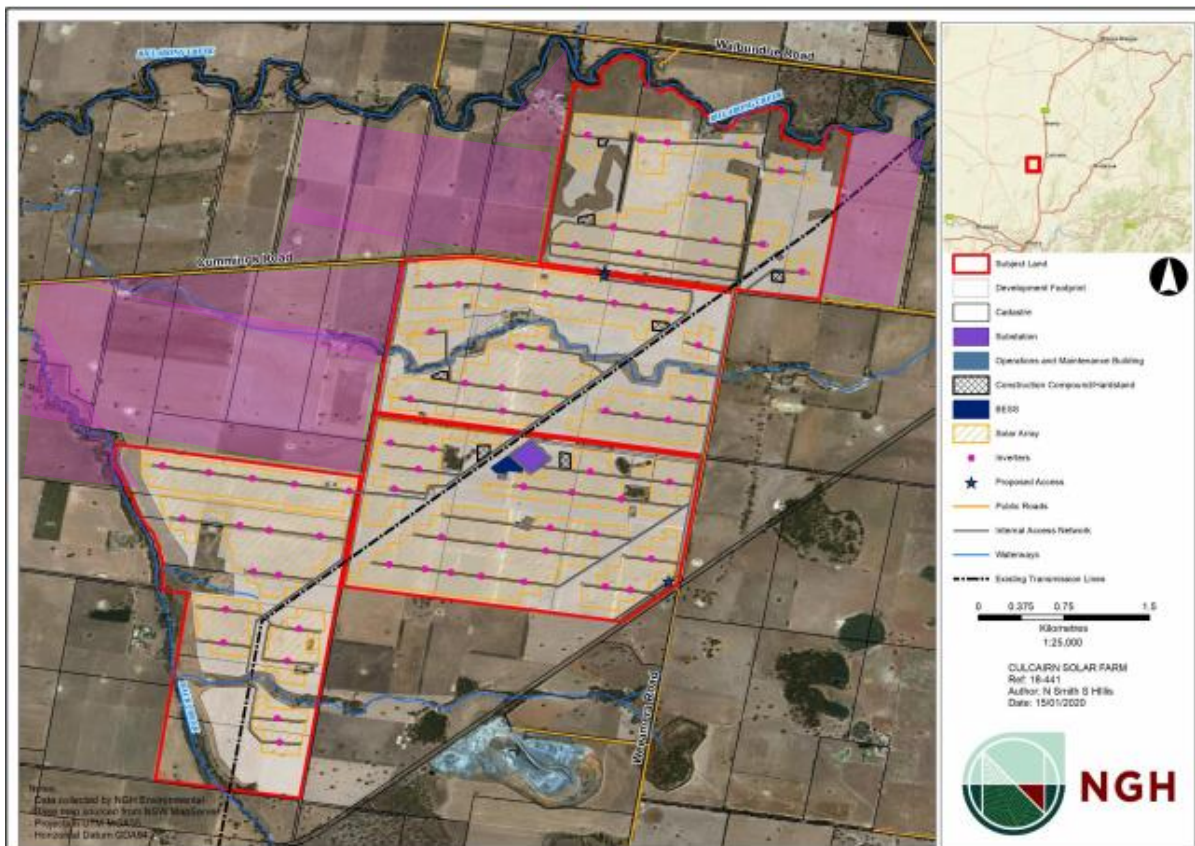
The company pressed on pursuing 2 other landowners whom we feel would have objected to the development if not offered significant returns.

As lessees of the project land it was threatened that our lease could be cancelled if we did not adhere to the needs of the landowner in pursuing this development. Since then we have incurred legal costs, lost time in our lives and relationships have been destroyed.

## Size/Location

Since the initial advice the development the size has grown to a monstrous 1317 hectares. The size is seriously ridiculous in this area considering the number of family homes, agriculture and location of nearby townships. This size development should be placed on arid land in isolated locations. The size cannot be justified, there was no need to increase from one landowner as the primary landowner had a large parcel on their own except, all around would have otherwise objected. The developer tries to justify the size to be viable for the substation installation but I question why other developments requiring a substation are much smaller.

Our property will have approximately **7 kilometers** of frontage on multiple sides east and west being L shaped by the solar development in two places as shown below.



Our farm neighbouring this development is extremely productive, on the Billabong Creek and has successfully supported 5 generations of our family since 1909.

- Our family home with children will immediately neighbour the development R24 with views in multiple directions and insignificant screening
- Our parents family home R29 is immediately next to the development on the Billabong Creek with broken views through tree line
- We have purchased a third home currently rented R32 intended for our son (or otherwise if we ourselves or our parents cannot cope with the development) upon completion of the tenants home in another location – Tenants were previous owners who sold due to the solar issue
- There are many neighbouring homes with families and children including new homes who have worked hard to achieve their goals and will incur loss if the project proceeds
- 1,100,000 solar panels will have huge impact to rural aesthetics over a massive area and is not acceptable by neighbours
- Too close to towns – only 3.3kms to Culcairn (North East) and 4.7 kms to Walla Walla (south west)
- Immediately adjacent the longest creek in the world – The Billabong Creek (and contributory waterways)
- Close to ecologically valuable Gum Swamp
- Prime cropping land
- Close to hazards of gas pipeline, Culcairn tip and on bushfire prone mapped land

The success of this area has allowed our family business to grow and expand with many costly infrastructure projects undertaken over the past 20 years including through funding of the NSW Government Farm Innovation Fund.

## Contradictions


The many following contradictions with planning policy must be taken into consideration:

- NSW Solar Guidelines
  - 4.2 Key Site Constraints
    - **Agriculture** – important agricultural lands, including Biophysical Strategic Agricultural Land (BSAL), irrigated cropping land, and land and soil capability classes 1, 2 and 3.  
Greater Hume Councils report confirms that this land IS high quality agricultural land and will be mapped as Important Agricultural Land under the Riverina Murray Important Agricultural Land Mapping project and therefore **is an area of constraint**.
    - **Visibility** - there **IS** an elevated home
    - **Biodiversity** – site contains environmental Billabong Creek & Back Creek and waterway all with riparian areas. Threatened and vulnerable species on site.
    - **Residences** – numerous homes in the area, many new homes, many families
    - **Natural Hazards** – Billabong Creek Floods, Land mapped as bushfire prone
- Very strongly contradicts the [NSW Renewable Energy Action Plan](#) aim 2 to Build community support for renewable energy – this development has caused significant fracture in the community and serious conflict.

### Solar 'fractures' communities in Greater Hume Shire before approval process even begins

Ellen Ebsary Local News

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NEXT STEP: Neoen, developer of the Numurkah Solar Farm (pictured), is seeking to build a much larger 400-megawatt project at Culcairn. Submissions on the project close on Thursday. Pictures: MARK JESSER

Large-scale solar is already the most divisive issue facing the Greater Hume Shire in recent memory, before any projects come across the government's desk for approval.


Neighbours once connected by a boundary are now firmly on either side of the fence.

"It's a very emotive topic and has fractured the local community," Culcairn




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COMMERCIAL

- Contradicts [Rural SEPP](#) with direction to protect agricultural production value of rural land.
- Contradicts [ministerial direction](#) to protect rural land
  - Item 1.2 Rural Zones objective is to protect the agricultural production value of rural land.
  - Item 1.5 Rural Lands objectives is:
    - (a) protect the agricultural production value of rural land,
    - (b) facilitate the orderly and economic use and development of rural lands for rural and related purposes
- Contradicts [Greater Hume LEP](#) item 1.2 – 2 – b particular aim to (b) to protect and retain productive agricultural land and;  
Greater Hume LEP RU1 Zone objective **to maintain the rural landscape character of the land**.
- Contradicts [NSW Right to Farm Policy](#) principles that the NSW Government recognises the value of agriculture for growing food and fibre for domestic and international markets and is concerned about the potential loss or impaired use of agricultural land.
- Contradicts multiple areas of the [Riverina Murray Regional Plan](#) acknowledging the regions agricultural wealth and need for protection.
- The Development is not being conducted in the designated AEMO Renewable Energy Zone
- EP&A Act. *to encourage*:

- The proper management, development and conservation of natural and artificial resources, including agricultural land, natural areas, forests, minerals, water, cities, towns and villages for the purpose of promoting the social and economic welfare of the community and a better environment.
- The promotion and coordination of the orderly and economic use and development of land.
- The protection, provision and coordination of communication and utility services.
- The protection of the environment, including the protection and conservation of native animals and plants, including threatened species, populations and ecological communities, and their habitats.
- Ecologically sustainable development.

## Agriculture

I am exceptionally concerned that the scale and intensity of the development will impact the agricultural capacity of our land and the immediate area. Our property will have approximately 7 kilometres directly interfacing extremely productive areas of our property. 800 Hectares previously leased on the proposed development area has been now lost to our production.

Our farmland along the Billabong Creek has been successful under cropping and grazing rotations for 5 generations. The area is known to have consistent and reliable climatic conditions for cereal cropping.

Our lease of the project land has achieved excellent results in the past 3 years. The impact of drought and reduced production in our state has intensified demand for hay, grain and straw provided by this area. Significant tonnages have been sent to drought and fire affected towns. The project land saw record results for our business in 2015 producing 10 tonne to the hectare oaten hay crops.

The current climate of drought reflects an increased importance to protect strong agricultural land.

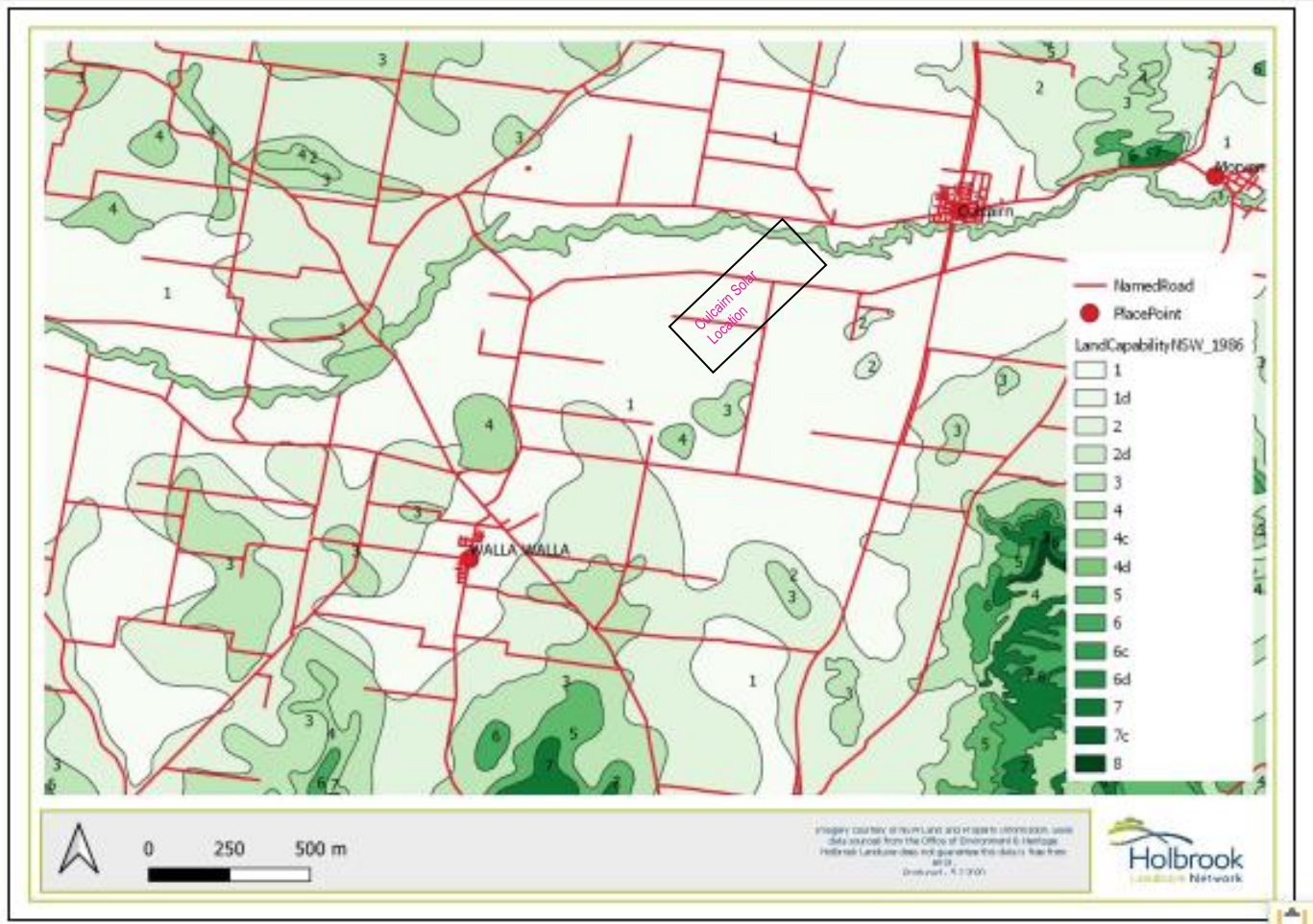
Only 6% of Australia and 11% of NSW is suitable for cropping production. Cumulative impacts of drought, fires and water availability affect food and fodder security. Reliance on imported food brings significant issues such as market volatility and biosecurity concerns. Last year Australia imported wheat for the first time in 10 years. Livestock operators struggle sourcing fodder and pricing is high due to demand.

Solar can be located elsewhere. Farming can not.

We sourced independent advice from an agricultural consultant regarding the land capability of the project area. Land capability assessment is complex and depends on the particular dataset/s used. The EIS suggests land capability is Class 4 under the Land and Soil Capability Assessment Scheme drawing incorrect conclusions. **It is considered that this measure of land capability assessment is inaccurate** and does not acknowledge other measures of agricultural land capability. We refute the class 4 soil classification defined by [OEHLand and Soil Capability Assessment Scheme](#), this land would be class 2 – 3 confirmed by our agronomist. There is no slope, it is continually cultivated, there is no salinity issue, no erosion and the land has minimal limitations. NSW DPI are aware of inaccuracies of soil mapping in the Greater Hume area as this contributed to problems with the initial draft of the Important Agricultural Land Mapping Project. It is concerning that solar companies are using this inaccurate information to their benefit. A full independent agronomic assessment of land in this area should be sought by the NSW DPI through a company not receiving a financial benefit from a solar company.

More appropriately, this land is mapped as Class 1 under the Rural Land Capability mapping classification that is the highest quality land. This method of classification comprises a more thorough assessment of the land based on assessment of the biophysical characteristics categorising the land in terms of its general limitations with regard to the types of land uses appropriate to that particular area.





Greater Hume council reports confirmed the land is mapped as high quality agricultural land and will be mapped as Important Agricultural Land. Having regard to the capability mapping information available on the land, and our experience, it is contended that the land is high quality agricultural land and is an area of constraint under the NSW Large Scale Solar Guidelines.

Current farming techniques effectively manage the health of the land. We strongly disbelieve resting the land will be beneficial. The EIS states that there will be benefits including returning soil organisms, soil carbon, soil moisture and soil structure to the areas previously cropped and grazed and allowing the regeneration of groundcovers and other grasses to return. The likelihood of this to occur is strongly questioned, particularly in that there is no information or assessment made to consider the impact of solar facilities on the site and how growing conditions may alter on the land given that the intention is to undertake strategic grazing.

Grazing will be difficult given constraints of having sheep contained within the development area and around panels. There are likely to be difficulties around resowing, topdressing and general improvements to soil and pasture conditions while it is used as a solar development.

Our family does not believe grazing could near equate to 80% capacity and estimations based on the Dubbo site results reveal agricultural gross production would be near 10% of that currently returned from cropping with grazing between rotations. Numurkah and Dubbo have different agricultural potential to this location and we note that footage shows minimal ground cover with feeding of hay which would have to be purchased as could not be made on the solar property. We view the sheep grazing as marketing to reflect a retention of agriculture to NSW Department of Planning. The trials are based on short timeframes raising questions.



The World Health Organisation lists ELF-EMF as a possible carcinogen, will sheep get cancer? Has this been researched?

Land value is a good indicator of the production value of farming property.

[Australian Farmland Values Report](#) confirms Greater Hume has the highest farmland value in the southern NSW region. The [Border Mail article](#) 1 Feb confirms local rural land values have increased significantly with some areas of the Greater Hume Shire seeing increases of more than 90 per cent. David Smith of Greater Hume Shire confirms "our farm land was still producing reasonably well when other areas were really, really bad," He confirms that Greater Hume farmland in this area is highly sought after as is relatively reliable rainfall area, close to major markets, has two major highways, a rail line and close to major saleyards

Agent Reg Coulston said "Some top Billabong Creek country is making \$5000 an acre, when five to ten years ago it would have been worth two." We contend these prices and associated increases reflect this land to be prime agricultural land and the issue of drought has increased recent demand in this location.

## Economics

Through our business our family has a strong understanding of the multiplying economic benefit of agriculture to our community.

We question the economic impact assessment and know that the agricultural production figures are significantly underestimated. Most recent season gross production figures are estimated at around \$1650 per hectare and therefore the data in the economic analysis is undervalued reflecting only around two thirds of this value. We have been advised that the economic multiplier should be 2.178 which is different to the figure used.

It is considered that the assessment ignores some of the flow on effects from agricultural production.

We understand that there will be economic stimulus during the short term construction period of 18 months that will benefit local communities however we must ensure this does not outweigh the loss to the agricultural industry over the extremely long term of 30 years plus a potential further 30 years which we strongly believe is being significantly underestimated. This will contribute to a Boom and Bust scenario.

Greater Hume Employment figures advise that agriculture employs 1121 people within the shire. From our basic calculation, given that the development land is estimated at 1.0536% of the area of agricultural land in the Shire, we could estimate employment at 11.8 people being employed through production on this land. We contend that the economic analysis does not adequately consider the full flow on effect right through the food production chain between the farm and supermarket nor the associated expenses of the annual agricultural cycle.

It is difficult to estimate the true cost to agriculture as this is dependant on so many factors but from our knowledge we do feel there is a strong underestimation. Commodities and fertiliser require freight, freight needs employees, trucks need tyres, fuel, mechanics. This is just one example, yet there are so many including grain delivery, livestock services, financial services, agricultural plant and machinery requirements, farm infrastructure and so much more. Food production relies on so many other industries to create their product and significant employment occurs between the farm gate and the supermarket. The products of hay and grain provide so much more than the farmers direct income. Our towns are full of agricultural suppliers and our region has significant services to agriculture who will be affected.

We question whether the economic analysis adequately identifies agricultural loss from this development.

In any case it is not appropriate to displace employees in one industry for the cause of another. Agricultural workers will not necessarily want to change employment to work in a solar development.

We attribute the low unemployment rate in Greater Hume of 3.1% to the strong agricultural workload in this area. The low unemployment of regional areas should not be considered as a means to displace agricultural workers here. Local contractors in this area are already busy. We feel solar jobs may be predominantly regional or wider afield being large contracting companies with teams of specialised contractors from other solar developments. Local contractors should consider the potential long term risks to their business if focus is on short term gain.

[It is extremely interesting to note that the large company Downer is exiting solar construction due to significant issues.](#)

## Production Impacts

This project has resulted in a loss of lease diminishing our production jeopardising employees.

The loss of land on the northern side of Cummings Road along the Billabong Creek has potential to impact our business through loss of hay work in our contracting business.

Lost production results in a flow on effect of hay shortfalls to meet the needs of our hay clients. Drought, fire and water shortages greatly impact fodder demand and hay shortages as evidenced last year will again arise in the coming months and years placing increased pressure on those already suffering.

Large quantities of hay from this property have been sent to support drought affected areas of Northern NSW due to their lack of rainfall and production.

The following impacts are of great concern and will be a course of action if we are affected.

### Stock Movement

We have land both east and west of the project. Construction will cause difficulties moving sheep along Cummings Road between properties and through Cummings road vehicle crossing.

### Heat Impact

There is variable [research](#) on the heat affect of solar developments with the EIS stating some is contradictory. All confirm there are changes.

Fthenakis and Yu research confirms there is still a heat impact 700 metres away from the development.

Research referred to by the developer is based on extremely small facilities. This development will be 400 times the size of one of the researched areas. This research says consideration of the spatial scale and geographic position is required and that further study is warranted.

The clean energy presentation suggests that temperatures are slightly warmer adjacent a solar farm.



We operate cropping land immediately adjacent to the land proposed to hold 1,100,000 solar panels with **7 kilometers** of frontage. The development will **surround our property in an L shape**. There is potential of **heat impacts on multiple sides**. We question if heat in this scenario will be exacerbated.

A drier than usual September/October and warm windy temperatures can heat stress crops affecting yield. **ANY additional heat impact** on already heat stressed crops could be catastrophic to our production.

We would like to be clear, we do not appreciate our business being used as a guinea pig.

Setback should be 700m if further mitigation is not provided.

Why are there only limited empirical studies on the heat effect in utility scale solar plants. Is this because solar developers do not want the truth known? Full studies should be completed by now with many solar developments in our country.

The Clean Energy Council and other reports talk of dense vegetation buffers to mitigate heat. The proponent has advised that vegetation buffers will not be applied as a heat mitigation measure. In any case trees would need to be substantial in nature, mature, dense, and many rows. The Clean Energy Council presentation shows pictures on the potential mitigation page however tubestock trees could not be considered appropriate as take many years to grow and could not meet such mitigation. **The Landscape plan proposed has minimal trees**. The company is saying ground vegetation will be eaten by sheep so would also not mitigate heat.



sPower 340MW Solar Farm approved for Virginia, North America

In an email to the proponent **to which we never received a response** we asked whether they would consider contracting an independent research company to undertake temperature monitoring on our property and if heat impacts were evident that compensation would be made to us for the loss of the value of our crops.

Our view is that the only possible mitigation to overcome heat issues would be to fully surround the development with a bank of earth to the height of the infrastructure and cover this bank of earth (similar to a dam bank or around an oval) with trees and vegetation. This would ensure heat would only travel in an upwards direction even with windy conditions and would insulate the surrounding area. Obviously suitable drainage would be required at the foot of the bank. We have suggested this to the company, but again they provide no response.

Given the lack of proven research on the temperature impacts on solar farms and surrounding land, and with the massive scale of this development it is considered that the heat impact is a significant land use conflict.

We ask that the Precautionary Principle be applied to many aspects of this development. This principle is described in Principle 15 of the Rio Declaration on Environment And Development (to which Australia is a signatory) and states as follows:

“Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation.”



## Dust Impact

There is researched evidence that dust on plants can affect plant health and photosynthesis and therefore the health of crops growing adjacent to the development may be affected should suitable dust mitigation measures not be taken.

Over a period of 18 months the proponent suggested the amount that 62ml of water would be required which equates to only 4 trucks per day.

We would question whether this would be adequate for dust minimisation considering that the EIS says prior to excavating the cable trench the topsoil would be stripped. In addition the significantly increased vehicle movements and construction activities will disturb the soil and create significant dust over and above that in normal circumstances.

As members of the Rural Fire Service my family is strongly aware of the slow filling capacity of the nearby standpipe and question whether this will adequately cope with the amount of water required. We note that Hurricane Hill Quarry response regarding the provision is only that they could possibly assist in some capacity however is dependent on rainfall.

We also question that should suitable rainfall to allow for runoff continue to be an issue whether water restriction may also impede dust mitigation and should the amount of water required exceed the 4 trucks per day will Greater Hume still be able to promise such an allowance.

A further consequence should dust not be suitably managed is that dust impedes herbicide efficacy and therefore crop production could be significantly affected by increased weed growth. This may allow further encroachment of resistant weeds.

## Livestock

Many of the paddocks adjacent to the development including those L shaped will contain livestock on either grazing crops or sown pasture. [Research](#) indicates that metabolic impacts from construction noise can have an affect on productivity.

Cattle fertility may be affected by stress levels from construction noise and activity and disturbance may cause animals to injure themselves on fencing if startled or scared.

Research indicates that hearing discomfort occurs in livestock at 90-100 decibels which we understand is under the noise specifications of some piling equipment. We note that the noise modelling advises that the piling rig is 87 decibels however would query whether this is correct as have been told that this equipment is extremely loud requiring double ear protection by workers on the site. Some piling rig specifications and documents refer to piling equipment with a noise level of 107 – 117 decibels. We therefore ask that this be checked by a noise expert to confirm if correct.

We also note that the noise calculations in the EIS only refer to the use of 1 piling rig. Unfortunately, our cow, calves, sheep and lambs cannot wear suitable ear protection. Physical ear damage can be applicable to livestock with sound levels over 110 decibels.

We will have lambing and calving activities in the paddocks adjacent to the development and these animals need a calm environment to ensure mismothering does not occur due to being frightened or disturbed. Should disturbance occur and stock leave their offspring we may see losses of calves and lambs.

Why should our business be put at risk due to the loss of a calm environment as the livestock require.

We are also aware of the high pitched noise of inverters which the company downplays, when we visited [Colleambally](#) this noise was a high pitched whistling sound. Research advises that high pitched sounds may impact livestock.



The proponent advised that glare is not a concern but recent photos from the Bomen Solar development clearly shows significant glare and reflection, we believe this is further attempt by the solar industry to mislead the public and department.

We are exceptionally concerned that any glare will have impact on our agricultural activities such as spraying, spreading, sowing, harvesting and all paddock activities in view that on most occasions we are driving back and forth and possibly in the direction of panels. Glare could be dangerous causing accidents and also eyesight damage is a concern. We believe a 12 month visual assessment considering these issues should be undertaken by an independent party.



### Weeds

We understand that the neighbouring property has previously had a silver leaf nightshade problem that has been difficult to control. We are concerned that construction activities and the many hundreds of vehicles travelling from the site may spread this noxious weed and others throughout the community.

It has been suggested that due to soil changes under the panels woody weeds will encroach on poor soil and create an increased weed burden that will require regular management.

It is our concern that management of weeds will be difficult in view of the solar panel infrastructure on such a large site. This could result in increased weed burden in the area and a severe issue for neighbouring landowners.

The weed [panicum effusum](#) commonly known as hairy panic is a significant issue in our area and will pose difficulty with potential for build up around solar infrastructure and fencing. We would like to know how the company intends to manage this issue? High security fencing will be installed causing hairy panic to accumulate on the outside of fencing. Will this be cleared by the company? Current agricultural fencing allows for dispersal of hairy panic however chain mesh security fencing will cause build up. Build up of hairy panic is considered a possible further fire risk especially if around electrical infrastructure.

### **Consultation**

In the initial stage we believe that secondary landowners were sought as otherwise every single landowner surrounding the primary property would have objected – if secondary landowners did not receive huge financial offers for their land we believe they would have opposed.

Our consultation with neighbours and community provided a strong understanding that a large majority, particularly agricultural members of the community, were very strongly opposed on the basis that there is an understanding of the agricultural wealth and reliability in this area.

We dispute the proponent adheres to their values and principals. The proponent has steamrolled into this community, told us what they are doing, and do not care about impacts to neighbouring landowners and businesses.

We have met with the company who in all instances have neglected to provide solutions, genuine answers or mitigation strategies. The company has not been conducive to the needs of neighbouring landowners. They have created volatility. They use ambiguous marketing text. Their actions have angered neighbours affected by the development.

NSW Farmers became involved after we made contact to voice our concerns and held a formal [meeting on 2 October 2019](#) at which time the following formal motions were put forward due to the great concern of our members:

1. *That the NSW Farmers lobby the NSW Government and relevant authorities for clarification in relation to categorization of agricultural land use in NSW.*
2. *That the NSW Farmers lobby all levels of Government for state significant solar infrastructure development to be placed on land with limited agricultural potential.*
3. *That the Association lobby for research of the triple bottom line impact of Large Scale Solar infrastructure.*

Approximately 150 concerned members of the community attended this meeting.

The proponent only engaged with NSW Farmers after this meeting and then a forum was held in response.

Information in the EIS about the Community information day is misleading.

The people they call anti solar protesters were concerned neighbours seeking answers. They are not anti solar and some have homes off the grid. We attended the day to obtain answers. No person was pushed and such comments are inflammatory.

Misleading statements were made by the proponent and when corrected by neighbours the landowners interjected causing argument.

The organisers had the room closed into a very small area causing conflict.

Minimal answers were provided at the community information day. Response to many questions was "we can talk about that in a neighbour agreement". No further mention of neighbour agreements has ever occurred.

Contact with our parents at R29 was requested due to lack of consultation but has NEVER occurred. They completed a feedback form. Garth was provided phone details. The proponent talks of undertaking 130 interviews with residents of Walla Walla and Culcairn but HAVE NOT ONCE driven down the R29 property driveway, written a letter, or phoned these life long residents of the area, it is disgusting.

ALL feedback should be heard by the proponent including opposing comment. Their strategy to avoid conflict has avoided opposing community. It is easy to imply that a majority support the development **when you avoid those that object** such as the neighbouring landowners. The change of strategy is a calculated marketing tactic. Further community information sessions should have been held.

Due to minimal response we sent an email in July 2019 with a list of questions. **To date we have received no response** after multiple requests.

Community engagement has been selective. Some community members were invited to visit Numurkah. This email was not sent to objecting neighbours. Consultation has been targeted to gain support not alleviate concerns.

Our meeting on 14 October 2019 with the proponents representatives was worthless. No resolutions achieved. The proponent neglected to supply promised information :

- The meeting was supposed to be about Photo Montages – the company representative advised he did not bring them and would email the next day – didn't happen
- asked for maps of the proposed layout – not supplied
- as we were offered \$15,000 construction disruption payment we requested a full list of the proposed disruptions in writing – was never provided
- again said they would answer my previous list of questions dated July – no response



We question the following EIS and marketing information:

- disruption payment \$200 - \$300000 - Few neighbours offered \$15000 worded to sound like large payments – why?
- Sheep production – comparison to cropping land in this area is not appropriate
- All quotes in marketing material are from people that appear to have received a financial benefit, of course they are going to be in favour
- Solar farms have low visual profile - we reject this
- Wildlife connectivity is not “very limited” in this area
- Use unusual wording like “ a minimum number of tree lines” what is the number???
- Information is copied and pasted from one development to another and websites not kept up to date

These issues make neighbouring landowners, that actually care about the area, extremely angry and absolutely defy the [NSW Renewable Energy Action Plan](#) aim 2 to Build community support for renewable energy.

## Conflict in our Community

This development has caused serious conflict in our community with a high level of concern in the area surrounding the development.

It feels like a bomb has gone off in our community and we are in the centre at no choice of our own.

Community Benefit funds should not be used to leverage acceptance of a development. A representative from the company advised us at our kitchen table that some members of the community described the community benefit fund as a bribe. Neighbours to the development feel that their loss is being hedged against benefits to the community. Community funds should only be promoted after approval to avoid buying acceptance.

Neighbours of the development see the Community Benefit Funds as inappropriate and these funds should be spent on mitigation or to alleviate losses to those affected, not buy the community.

The conflict has extended into schools with our son told not to talk about solar even though he will be greatly affected. Some workplaces have stopped talk about the development.

We are unable to visit our local stock and station agent where we spend significant funds due to conflict and comments.

Community fracture will increase if the project proceeds due to community funding at the expense of neighbours impact.

The company highlights high levels of concern from neighbours as opposed to other business and community stakeholders however is not focussing on a resolution in this direction.

Neighbours feel that the town community groups are being played against the neighbours.

## Visual Impact

Our family loves our home, we have an amazing waterway in front of our house and we enjoy the peaceful rural outlook and views. It is our gift for the hard work we endure.

We strongly believe this development will destroy that peace and turn our amazing rural outlook into a massive industrial monstrosity. Solar does not have a low visual profile and is extremely visually confronting as we saw when visiting Griffith and Colleambally Solar.

The panoramic photos distort the view and do not provide a clear visual aspect, roads look distorted and it is difficult to see the location of tree lines. We were told optic effects were used.

There is no photo montage towards the north east of our residence is R24 where we will drive past every day.

Addressing the unnamed Council Road as a woodland is inappropriate, there are some trees with broken sections to our east however views through these areas will be seen.

We will see the development from our kitchen bench and from the back of our house and there is a long strip towards the south west behind our house that has no tree line at all.

Only minimal screening of one row of tubestock trees has been allocated. Tubestock trees will take 10-15 years to grow to if they survive. Mitigation will not meet its strategy. There is nothing to shield us from the view. This is not satisfactory.

Tubestock trees at the Griffith site had minimal growth and looked nearly dead surrounded by weeds. Contrary to the EIS they have NOT spoken to us about vegetation types and the vegetation is inadequate and insufficient.

They have said an agricultural fence and an unsealed track will break up the view of the development site, the fence is wire and the track is flat dirt on the ground, this is a stupid statement.

Our view is that the only suitable mitigation would again be an earth bank surrounding the development to the full height of the panels and infrastructure covered in trees. Drainage would be required.

Our family members will have to work in the vicinity of the panels which will be visually confronting.

There is minimal natural screening along Cummings Road which will not sufficiently shield the development from traffic or when exiting our property at R29. We are concerned that people will look at the development when driving past and we will be at greater risk from collision on our road every day. Full tree lines of mature trees to obscure the development should be placed along Cummings road to avoid an accident occurring.

Greater Hume Shire is supposed to be the place that we "Live a Greater Life" however how can this be looking at an industrial eyesore.

The visual impact will cause severe mental health issues.

This company should have to redesign the full layout and design.

## Fire

The EIS states the nearest Rural Fire Service is 12kms from the development however the Culcairn South West Brigade is immediately adjacent the development. They have not consulted with the local brigade

Meetings have been held by the local brigade confirming that workplace health and safety issues will prevent RFS Brigade members from entering the solar development sites due to WHS issues of entrapment, electrocution and toxic exposure. RFS members are not HAZMAT trained or equipped and therefore will not enter. Other brigades in the area have also confirmed the same stance and this has been discussed with the District Manager of the Albury Local Fire Command.

HAZMAT responders are NSW Fire and Rescue in Culcairn, Henty and Holbrook with others in the distant regional centres of Albury and Wagga Wagga. Distance will affect response times should an incident occur.

The location and size of the development being 7 kilometers in length increases the risk. The location of the development along the creek will cause access issues.

This development is proposed on **Bushfire Prone Land**. It borders numerous treed riparian areas, the heavily treed local lands travelling stock reserve, it has a gas pipeline running through the property with the gas pumping station on the opposite side of the creek. It is near the Culcairn tip and is extremely close to the townships of Culcairn and Walla Walla. Surrounding areas will be significantly covered in stubble in the bushfire danger periods adding fuel to the fire.

The company has said that farm dams will be kept for fire control however they are currently predominantly dry.

Neighbours will be at increased risk if RFS members can only combat fires when they are outside of the development footprint. Aerial response takes time.

As previously mentioned hairy panic build up will cause a fire risk.

**We request that assessment of fire impact form part of approval process** not just be a condition of consent requiring fire management or emergency rescue plan afterwards. If fire management cannot be implemented effectively or cause increased risk to lives then the development should be refused.

Our community was tragically affected by the recent fires at Jingellic and therefore consideration of risks to volunteers is an extremely high level of concern. We do not need to put our RFS members at additional risk. Our area also saw significant loss in the Walla Gerogery fires and if a fire of a similar nature entered this massive solar development the ramifications could be catastrophic.

The Gum Swamp would be considered an extreme risk only 3kms from the solar development.

## Environment/Biodiversity

The area is a haven for wildlife particularly in the riparian areas of waterways, Billabong Creek, Back Creek and the unnamed water way that extends from the development site to our property in front of our home at R24.

I am extremely passionate about our area, with [significant frog](#) and bird life in our waterway and we enjoy the most amazing sound of frogs at the right times of year.

The unnamed waterway leading from the development flows to a lagoon that brings migratory birds such as brolgas, cormorants, herons, spoonbills, pelicans, black swans etc. The proponent tries to suggest that wildlife is limited however we understand that there is significant wildlife in the area, flora and fauna.

We are concerned about the habitat of such wildlife including vulnerable and threatened species and it is concerning that vegetation that supports such species is earmarked for removal. It is not clear how offsets being sought would benefit local populations and the relocation of hollow logs to another area does not support the immediate environment. The removal of 99 paddock trees is exceptionally concerning.

In our very first meeting with the proponent, we advised that we were strongly against any development in the area near the waterway however we have again not been heard and the development footprint has been pushed immediately along and around this area that will result in great disturbance from construction noise and activities.

We note that this waterway has critically endangered woodland and feel that this should be further explored and protected.

Our family has undertaken numerous riparian projects with Landcare to protect this area and the Billabong Creek. We strongly believe that this development will have a detrimental impact on the ecology and habitat of the area and query whether soil runoff into the waterways may have dire ramifications and potential chemical leaching into the future.

In addition to the many birds and frogs we have on our property enjoyed visits from flame robins, believe we have seen a bush stone curlew, often see wedgetail eagles, many different types of owls, have had goannas, lizards, snakes, possums, squirrel gliders, hares, echidnas, wombats, bats, black wallabies, kangaroos and probably more.

We would query whether the short amount of time spent in assessing this ecologically valuable area is adequate and neighbours that spoke to people undertaking the assessments were perplexed at some questions they asked about wildlife leading to wonder of their expertise.



Although we do not have strong environmental knowledge we would question whether all appropriate studies were conducted at the appropriate times of the year. It is of concern that being an extremely dry year, with little water catchment, it would be difficult to properly assess many of the species that may be evident when dams and waterways are full. We believe this may have an impact on the accuracy of the studies.



## Waterways/Drainage/Flooding

We note that within the EIS document there are contradictions in relation to flood impacts noting that flooding will be minor however then that major floods have been recorded. The document notes that the worst flood occurred in 1931 but our records confirm 2010 exceeded this flood level.

It is said that the development is outside critical flow areas but we are aware that the infrastructure on the development site is susceptible and close to flood areas as the creek changes course during flooding, only local landowners would be aware of flood course and nobody has asked.

Our family is extremely concerned about flood impacts in view of numerous previous flood events and any changes to flood patterns that may occur due to the development.

Significant flooding does occur on the project site even out into the paddocks as shown in the picture below in 2010. In flood the course of the water can be significantly changed dependant on the conditions at the time.

We have noted that consultation must be undertaken with SES under the requirements of the Infrastructure SEPP for development of land on areas susceptible to flooding, has this occurred? The Culcairn SES Facebook site confirms significant flooding information in our area and levels.

Our property at Roseview can be significantly flood impacted and immediately neighbours the development site with grain and hay sheds very near solar panels and infrastructure. Changes to flood impact could cause damage to our products in storage..

The changes to the water course during flooding cuts sheds at Roseview away from the house bringing significant debris and completely wipes out fencing with debris build up. We do not want solar or associated debris scattered through our property.

Flooding in 2010 caused \$162,200 worth of damage with massive loss of 215 sheep and only centimetres away from flooding the home at Roseview. The EIS advised that a decrease in peak discharge would be accompanied by increased flood depth in the order of 5 cm. A maximum increase in flood height of 13 cm could occur in the southern section of the development site during the probable maximum flood (PMF). Does this mean that we could potentially have an increased risk from a higher level of floodwater?

I strongly believe that the flood issues are being understated by the company and concerned that changes may cause increased flood effects to our property

We are unsure whether this development will have any impact on the Billabong Creek Water Sharing plan being implemented and associated flows.

The EIS mentions erosion and sediment laden runoff. This could impact surface water quality in local waterways during rainfall events - Will this affect runoff into our dams and lagoon, will stock drinking water be affected, will frogs/birds in the waterways be affected

Is contamination from chemicals in panels, bess, and infrastructure possible with waterways in such close proximity, we are extremely concerned about those risks.



## Roads/Traffic

Our family is exceptionally concerned about increased noise, dust and road pressures from 300 passenger vehicle movements and 100 heavy vehicle movements during peak construction and compounding pressure if both Walla Walla and Culcairn Solar farm were to proceed.

Our family will be significantly disrupted for the 16 to 18 month construction period and expect that we will not be delayed on our road. As we all do, it would be expected that all vehicles crossing between the South and North of Cummings road would give way to ANY vehicles travelling on Cummings Road.

Cummings road is already in significant need of repair and could not cope with increased traffic. I would like to know how the developer intends to stop light vehicle traffic from utilising Cummings road as a primary source of entry to the development. If this does not occur then additional financial and safety risks to our road will be evident.

We have in excess of 6 school bus trips travelling on our road every day and there will be increased risk from additional traffic along with kids waiting for buses and crossing the road with a large number of vehicle movements.

As mentioned earlier we are concerned that our regular movement of stock through the Cummings road crossing will cause difficulties.

The slip lane on the Olympic highway turning from the south into Cummings road is exceptionally sharp and increased traffic volume will create increased risk at this location.



We move extremely large machinery (headers, balers, tractors, seeders, field bins, mowers, many oversized taking up whole road) and increased vehicle movements of the number suggested will cause safety issues eg cars that are not familiar with farm machinery don't slow down.

If trucks come from north down Hume Highway will they use of the single lane Culcairn Holbrook Road increasing danger to a black spot road. How could this be stopped?

The massive number extra vehicles on roads will increase the road repair financial impact to Council – will ratepayers fund this, will other projects not occur due to road damage caused by this development

Cumulative impact on Weeamera Road is massive with the Walla Development, I do not know how this developer can justify travel past the home of residents at R14 who will be so significantly affected I don't know how they will continue to live in that location. They will not be able to breathe from the dust, the noise will be intolerable and I feel sorry for them with their young children. It is disgusting.

There will be increased collision risk at the intersection on the Olympic/Benambram Road.

How are they going to stop the 300 extra cars from using the Cummings Road to turn into Weeamera Road intersection.

Will exiting the Roseview property be dangerous with solar panels and no screening directly in front of the vehicle, will glare cause difficulties driving south down the Roseview track and create a visual hazard?

Our family will be at significantly increased risk on our roads that will endure massive numbers of vehicle movements and fear for my families life.

## Noise

How can the developer only use noise measurements for 1 inverter when there will be 75 or 1 pile driver when no doubt there will be many, the calculations should reflect the cumulative noise impact especially considering the impact in inclement weather or windy conditions. These calculations need to be adjusted to reflect the true value.

We are concerned the noise of pile driving equipment has been underestimated with some specifications at 107-112 decibels. We have been told that solar construction workers need double ear protection.

Will our farm workers be adversely affected by noise when they are working in the paddocks nearby and will neighbouring landowners be advised of noise activity when in proximity, how will we be advised of risk.

I am sensitive to high pitched noises. [The noise of inverters are high pitched](#) and annoying, how is this considered with inclement weather (eg railway line is louder when inclement). There will be so many of these around my house with a whole line of them behind our house to the south.

The local community enjoys a quiet peaceful lifestyle and should not have to endure night time noise of electrical infrastructure or battery equipment that should be placed in isolated locations.

## Hazards

It is greatly concerning that this area with many neighbours including families with children is being subjected to a hazardous situation containing [Battery Energy Storage Systems](#) that should be located in an isolated and less inhabited area. The PHA advises that emergency plans will be conducted in consultation with the RFS but they are not HAZMAT qualified so this is not appropriate.

We note that in the non agency consultation appendix C2 that a requirement to locate the development near the gas pipeline requires a Safety Management Study including electrical hazard and interference studies and I question why this has not been included as part of the EIS. Other requirements are also indicated by APA. The preliminary hazard assessment does not refer to the property being bushfire prone land or being in the vicinity of a gas pipeline and pumping station. This should be assessed by experts and form part of the approval process not just be another condition of approval. If it is not safe it should not be approved in this location.



I am exceptionally concerned that should a fire occur from the BESS that the toxic fumes can be lethal. Mishaps occur and should we have a significant fire incident we do not want to be at increased risk. Will there be a disaster evacuation plan for our community.

I am greatly concerned that in event of flood, natural disaster, fire or a severely wet year leaching of chemicals could enter waterways.

## Social Impacts

The serious lack of genuine answers from the proponent causes severe anxiety of the unknown to nearby neighbours consisting of families and children. We have seen the Erin Brokovich movie. There may be potential health impacts of such a huge large scale electrical facility, so many batteries, so many panels, ELF EMF EHF, chemical leaching.

The stress and mental anguish in relation to the significantly changed landscape will result in a health affect to our community. Some may not want to go outdoors or undertake a healthy lifestyle eg walking or working around the farm as they currently do, this will most likely impact health. People may chose to stay indoors as they do not want to see the industrial eyesore or deal with the construction noise.

Construction impacts will cause a loss of tranquillity and peaceful environmental aspects (bird & frog sounds) that will cause mental health impacts.

There will be increased anxiety of flood and bushfire impacts which is significantly concerning due to the recent impact of nearby fires on our local community that has endured loss of a brigade member.

The destruction of friendships has already occurred. Further fracture will be evident if this development proceeds. Local people may chose not to associate in their usual circles especially if community groups or business accept financial benefit at the loss of neighbours. This fracture has massive mental health implications.

The fracture of business relationships could affect livelihoods causing a financial impact.

There may be a loss of agricultural opportunities for young people with a bright future.

The stress of this development is affecting children due to the stress of parents. This will have a massive impact on students in an important year of study such as year 12.

This development could split families. I think it would kill me to stay and watch the destruction but know my husband could not leave this fifth generation property. How would this affect our children.

Post traumatic stress could be the result of the conflict and stress.

I find it exceptionally hard to consider that my beautiful friends from the city that come and stay with us annually for the country life may no longer wish to visit.

## Electricity

I find it seriously annoying that the EIS states on page 11 that the project is not required to meet supply demand. Why then would we forsake large amounts of prime agricultural land for this development?

These developments need to be directed to the renewable energy zones as determined by the AEMO and as long as we approve development in places outside these areas it does not push Government to create infrastructure to where it needs to be.

The proposed NSW Government Transmission Infrastructure Strategy to construct transmission lines from Wagga Wagga to South Australia will open up to appropriate areas that avoid massive large scale developments on prime agricultural land. Haste is not the answer, sensible measured decisions are required .

We have been told that Cockatoos prolific in our area have caused damage to solar infrastructure and potentially create electrical shortages. Will we have increased fire risk from this?

The proliferation of solar developments in other areas of Australia will contribute to a larger cumulative effect of loss of agricultural production caused by drought, water issues and fires.

It is concerning that [grid instability media](#) advised that some solar developments in our area are having their output halved and that connections are being delayed up to 7 years due to the grid. This area is only being targeted due to the transmission lines, if there are problems why are we putting the community through this torture. We are continually being told that not all developments will be able to connect so why therefore is it appropriate to put families through such stress, there should be a better system for development, don't accept a development application unless there is a definite connection available.

It is disgusting that our country is considering renewable energy projects in our desert to provide electricity to Asia however for ourselves we consider it acceptable to forsake prime agricultural land. Surely this kills the transmission loss argument.

I am significantly concerned that improvements to technology will see these massive solar projects become defunct in the future causing major issues. How far away is hydrogen and nuclear?

## Sustainability/Waste

There is great concern that the concept of renewable energy is defeated by the end result of a huge solar [toxic waste issue](#). When all these developments come to the end of their life in 2-3 decades will there be a wasteland of solar panels as [research](#) suggests. Will these products really all be recycled, we heard that solar panel seals will deteriorate and toxic leaching of dangerous chemicals could have devastating results.

The infrastructure required for this development contains products that require mining and production and therefore we question that these developments are truly renewable.

We want assurance that no waste will blow onto our property and wonder if consideration has been given to waste requirements at the local tip.

If there is a catastrophic event or natural disaster that causes severe damage to infrastructure I would like to know what plans are in place to ensure immediate restoration occurs to avoid chemical leaching or the travel of debris. Again our family does not want to end up bearing the burden of this development, suffering from health issues or dealing with toxic waste causing environment degradation particularly around our waterways and the Billabong Creek.

Lithium battery recycling needs to be exported – we ask how is this achieved without hazardous impacts??

## Climate Change

The company uses the argument that solar contributes to carbon reduction and hence alleviates climate issues. It should be strongly considered however that Agriculture is the industry most significantly affected by climate and therefore to ensure food production into the future serious protection of strong agricultural areas is imperative.

Production deficits result in a need to import food bringing bio security risks and market volatility issues.

The livestock industry relies on feed from cropping in times of drought and therefore increased protection is required for land with cropping capacity.

The do nothing argument in the EIS is not valid, nobody is saying do nothing, just locate development appropriately on arid less productive land

Difficulties of drought in poor farming areas should be seen as an opportunity for solar development providing a benefit whereas in contrast the removal of farming land in strong agricultural areas creates a loss. There are so many areas in Australia that cannot farm.

## Other

We have not been able to establish whether any of our services will be affected by this development. We have concerns that the electrical nature of the development may cause interference to NBN, UHF, Mobile Phone and Television. Some of these services are required for safety purposes within our business and there must be no interruption.

Our family was advised that in order to purchase the property for solar development that a change of use of the land to industrial is required purchase under Financial Investment Review Board requirements. If the proponent is continually advising that agriculture will be retained through the grazing of sheep how can this occur?

Land Values - Will our land value reduce due to less desirability/saleability. We do not believe the information provided by the company and have concern that loss of land value will impact borrowing capacity and altered risk ratios may push up interest rate pricing. This may have a financial impact on our business and subsequently affect stress and mental health.

This company is a multi national company and we should be supporting the Australian economy rather than foreign based companies.

## Remediation

There is no financial guarantee given towards remediation of the land. I understand that NSW Planning has an enforcement department however if the company becomes insolvent and the landowner themselves cannot fund remediation we are the ones left with a massive waste land around us. This is not acceptable and financial assurance should be provided by either the company undertaking the development or the landowner.

The company is advising that remediation will only occur down to 500mm deep. How can they leave waste in the ground for future users. Remediation should return the land exactly the way it was before the development. Tree removal will not allow full remediation so this should not occur. Land could be acidic and salty due to removal of paddock trees. Solar panels will deteriorate the soil under panels therefore soil restoration should occur.

## Vermin

Kangaroos will accumulate on our side of the security fenced areas especially as we are on the side of the Gum Swamp and there is a corridor through that area. High fences will inhibit movement and corner these animals. This could create an increased loss of crop production .

Fox and rabbit vermin will have a harbour, especially along the creek, they will burrow under fencing and be difficult to control.

Locust and mice plagues will be more difficult to control.

## Insurance

This development is worth over \$600m. Our public liability insurance is only \$20m. We will not be able to insure to cover an event caused by ourselves therefore this development poses as a risk to the financial security of our business. Negligence is difficult to define. If a fire accidentally travels from our property to the solar development from a machinery fire or through lack of a fire break then we will be at risk. We should not be at increased risk at all and should be fully indemnified for loss at their choice to place a development of significant value in a rural area with fire risk.



## Cumulative impacts

There are four large scale solar developments in the pipeline in Greater Hume Shire. The Walla Walla Development will be in very close proximity to the Culcairn Solar Development. The cumulative impact of ALL of the above issues needs to be considered particularly the massive loss of agricultural land and associated agricultural business such as our hay contracting business. Road impact will be substantial on the Olympic Highway and Benambra Road.

