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TRANSCRIPT OF PROCEEDINGS

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INDEPENDENT PLANNING COMMISSION

PUBLIC MEETING

RE: ORANGE GROVE SOLAR FARM

PANEL: **CHRIS WILSON
ANDREW HUTTON
ANNELISE TUOR**

ASSISTING PANEL: **BRAD JAMES**

LOCATION: **SMITHURST THEATRE
GUNNEDAH CIVIC CENTRE
83 CHANDOS STREET
GUNNEDAH, NEW SOUTH WALES**

DATE: **9.02 AM, TUESDAY, 4 JUNE 2019**

MR C. WILSON: Good morning. Before we begin, I would like to acknowledge the traditional owners of the land on which we meet, the Kamilaroi People. I would also like to pay my respects to their elders past and present, to the elders from other communities who may be present today. Welcome to the meeting today. Orange
5 Grove Sun Farm Proprietary Limited, the applicant, is seeking approval for the development of a new 110 megawatt solar farm approximately 12 kilometres north-east of Gunnedah, in the Gunnedah Local Government area. My name is Chris Wilson. I'm the chair of this IPC panel. Joining me are my fellow commissioners, Annelise Tuor and Andrew Hutton. Also in attendance is Brad James from the
10 Commission Secretariat.

Before I continue, I would like to state all appointed commissioners must make an annual declaration of interest, identifying potential conflicts with their appointed role. For the record, we are unaware of any conflicts in relation to our determination
15 of the proposed application. You can find additional information on the way we manage potential conflicts in our policy paper, which is available on the IPC website. In the interests of openness and transparency, today's meeting is being recorded and a full transcript will be produced and made available on the commission's website. A public meeting gives us the opportunity to hear your views on the assessment
20 report prepared by the Department of Planning and Environment, before we determine the application.

The Independent Planning Commission of New South Wales was established by the New South Wales Government on 1 March 2018, as an independent statutory body
25 operating separately to the Department of Planning. The commission plays an important role in strengthening transparency and independence in the decision-making process for major development and land-use planning in New South Wales. The key functions of the commission include determination of state significant development application; conduct of public hearings for development applications and other matters; to provide independent, expert advice on any other planning and
30 development matter, when requested by the Minister.

The commission is an independent consent authority for state significant development applications and provides an additional level of scrutiny where there are
35 more than 25 public objections political donations, objections by the relevant local council. The commission is not involved in the department's assessment of this project, the preparation of its report or any findings within that report. This meeting is one part of our decision-making process. We have also been briefed by the department and have met with the proponent and council. Transcripts of these
40 meetings are available on our website. After today's meeting, we may convene with relevant stakeholders if clarification or additional information is required on matters raised. Records of all meetings will be included in our determination report, which will be published on our website.

45 Site inspection took place yesterday at the project site. The applicant, IPC, and representatives from neighbouring properties attended the site inspection. A

summary of any questions asked and answers given at the site inspection will be available on our website. The commissioners have reviewed the written submissions received by the Department of Planning and Environment, which are published on the department's website. The commission will also accept written comments in relation to the project up until 5 pm on 11 June 2019. Anyone can send written comments to the commission before that time. You can do so by sending your comments to the commission by email or by post.

Following today's meeting, we will endeavour to determine the application as soon as possible. However, there may be delays if we find need for additional information. Before we hear from our first registered speaker, I would like to lay some ground rules that we expect everyone taking part in today's meeting to follow. The meeting is not a debate. We will not take questions from the floor and we will not permit interjections. Our aim is to provide the maximum opportunity for people to speak and be heard by the commission. We ask that speakers today refrain from making offensive, threatening or defamatory statements, as per our guidelines.

Many people find public speaking difficult. Though you may not agree with everything you hear today, each speaker has the right to be treated with respect and heard in silence. Today's focus is public consultation. Our panel is here to listen, not to comment. We may ask questions or seek clarification, but this is usually unnecessary. It will be most beneficial if your presentation is focused on issues of concern to you. It is important that everyone registered to speak receives a fair share of time. I will enforce timekeeping rules. And as chair I reserve the right to allow additional time, if it is appropriate. A warning bell will sound one minute before the speaker's allotted time is up and again when it runs out. Please respect these time limits.

If you would like to project something onto the screen, please give it to Brad James before your presentation. If you have a copy of your presentation, it would be appreciated if you would provide a copy to the secretariat after you speak. Please note any information given to us may be made public. The commission's privacy statement governs our approach to your information. If you would like a copy of our privacy statement, you can obtain that from the secretariat or on our website. Finally, I would ask that everyone present please turn off their mobile phones. Thank you. I will now call on the first speaker, Mr Gibson.

MR J. GIBSON: Good morning, my name is Jason Gibson. I'm a senior development manager for Overland Sun Farming, the proponent of the Orange Grove Sun Farm. I wanted to thank the commission for the opportunity to speak today and present some of the changes that we've made to the project in response to the submissions that were made by the public back under the environmental impact statement. Generally, the Orange Grove Sun Farm is located about 12 kilometres north-east of Gunnedah, out on Orange Grove Road. The project site is encompassed or is located within 817 hectares of land. The project area where the panels are going to be is obviously much smaller, but that's the area that we originally looked at.

Generally, the site characteristics are flat, sloping from east to west, with the lowest point of the land in the south-west corner of the project.

5 The development footprint that we're proposing is 248 hectares in size. It is divided
by Orange Grove Road into two sections. We have the northern area on the north
side, southern area south of the TransGrid 132 kV line – that's the blue line that's
located on the map. The land is generally zoned as R1 and is predominantly used for
grazing and agricultural purposes. And the Namoi River is located approximately
10 two kilometres south of the nearest portion of our project, which is here. Some of
the reasons we were looking at this specific site, there's minimal vegetation removal
required to construct our project. There's minimal biodiversity impact on the layout,
based on the footprint of the project that we have.

15 There's good accessibility to the local electrical grid, where we're not required to
construct long portions of transmission lines to interconnect with the Gunnedah
substation. Generally, we've got very good solar yield, so the project will be able to
produce energy easily. We feel that there's minimal visual impact. There's minimal
heritage impact, based on our assessments. And we have good access to major
20 transportation routes. This is just some general site photos from around the project
that we've kind of taken over the last two years, while we've been developing the
project and working on the footprint. We've been working on the project since about
early 2016, where we started some initial desktop studies. We were assessing the
electrical grid, to see if it could support the project in the capacity that we were
looking at.

25 In 2016, in the early portion as well, we started some landowner engagement, spoke
with local landowners about interest in the project and secured some rights to be able
to potentially construct the project. We then started in 2017 some early field studies.
These were initial assessments to see if the project could actually be located on the
30 properties that we were interested in. Continuing through 2017, we also had some
additional landowner engagement, where we required some additional land. We
spoke to some additional landowners. In November of 2017, we submitted our
serious request to the New South Wales Government. In December of 2017, we
received our serious response. Based on those responses, we completed our site
35 studies. And we formulated our EIS submission, which went in in May of 2018.

The public viewing of the EIS concluded in early July, where the response to
submissions were received. We assessed all of the public consultation, as well as the
40 government responses. And from July until November of 2018, we reassessed the
project and made the changes that are going to be on the following slides, to try to
address some of the concerns that were brought to attention. At the beginning of
November, we submitted a response to submissions. Those were assessed by DP and
E and they issued their development consent recommendation to the IPC panel at the
beginning of April 2019. And in May, we started the proceedings with the IPC
45 Commission.

The next set of slides discuss the revisions that we've made to the project footprint. They're specifically in regards to the comments that were received from the EIS. So this is the layout that was submitted under the EIS. The project is all located on the north side of Orange Grove Road. Based on the changes that we've made to the project, this is the new layout that's proposed. So we have the northern side of the project and the southern side, south of the transmission line, like I said before.

Some of the revisions that we've made. Sorry, the number of points. Just for the Commission, those are the locations that we stopped at yesterday during the In general we reduced the development footprint by approximately five hectares in total size. We reduced the footprint on the north side of Orange Grove Road by approximately 41 hectares. We increased the footprint south of Orange Grove Road by approximately 36 hectares and we reduced boundaries in common with adjacent landowners by approximately half a kilometre. In our revisions from the response to – from the EIS to the response to submissions, we conducted a second hydrology assessment.

There were some concerns about the first order stream being activated in a 100 year flood event. To avoid any potential impacts we removed all infrastructure from within the first order stream and that's the cause for the curved portion on the north side of Orange Grove Road. Point 2 is where we stood yesterday with the markers. This realignment of the PV panels allowed us to retain approximately 18 additional trees on the north side of Orange Grove Road and we have retained the – our vegetation integrity score of the project to be less than 15, so it's low disturbance. It's what's qualified under the new assessment protocols.

The locations that we visited yesterday. We visited R1, receptor 1, Receptor 2, the Namoi Pistol Club and R8 on the far left-hand side. These are the locations that we visited in the approximate distances to the now closest points of infrastructure and that would be the fence line of the project. One of the major revisions that we made is we've committed to an additional 50 metre setback from R1. This increases the setback distance from the house to approximately 200 metres. Additionally, we've made a commitment to establish vegetative screening from Orange Grove Road all the way to the northern boundary between R1 and the development footprint.

Additionally for R1, we've established a 20 metre setback to all properties where boundaries are in common between the proposed project and the landowners of the properties. For R2 we've increased the setback from their residency, which was previously 750 metres. It is now approximately 1.3 kilometres to the nearest point of infrastructure and the 18 trees that were previously going to be removed are now remaining between their house and where the panels are. In addition, R2 doesn't have any boundaries in common with the fence line. That was a concern that was brought up back to their cattle in the past, so now there is no fence line that's going to be directly adjacent to where their cattle might be located.

The nearest point of infrastructure is now going to be 260 metres away from their property. Similarly, with the Namoi Pistol Club, specifically the 900 metre range.

We have increased the distance by approximately another 900 metres from their point of shooting. So previously it was about 1.2 kilometres. Now with the new adjustment the closest point of infrastructure is 1.8 kilometres away. Sorry, my clicker doesn't seem to work. I'm happy to answer any questions that the Commission may have.

MS A. TUOR: Some of the concerns in the submissions that have been raised are about the fence that's proposed, so I was wondering if you could just expand on what's proposed as the security fence.

MR GIBSON: What the fencing would be. We don't have a – I don't believe that we have a specific requirement for a height of a fence. It's not in the draft conditions. For horses it has to be a certain height or a certain structure. Typically our fences are in the ballpark of, I believe, about 1.8 metres. Is that about right? 1.8 metres and it's typically a chain mesh fence of some description. So I would assume it would be of a similar fashion, potentially a gal fence.

MS TUOR: And any requirement for barbed wire or anything like that?

MR GIBSON: No, I don't think there is a requirement for barbed wire. I will get a clarification. I will raise an email so it goes public as well just if that's going to change as well.

MS TUOR: Sure.

MR GIBSON: It has just got to be secure. It has got to be a fence just to help restrict access in and out of the farm, easy access.

MS TUOR: Sure. And my understanding is that the security fence is normally set back from the boundary a certain distance like 20 metres or - - -

MR GIBSON: Yes. There would be a setback. We have to construct the solar farm inside the cadastral boundaries of the project. If there's existing fences around the farm it's not our intent to remove those boundary fences that are currently there. And we obviously need to have space to install the fence and maintain the fence and take care of the weed control that's around it, so there will be a setback. I can't specifically say what they're going to be or I don't know what they're specifically going to be from each lot line, except for the western boundary, which we've committed to a minimum of 50 metres and the northern lot lines we've done the setbacks of 20. That's going to be a minimum of 20 from those lines. The other places it might be closer.

MS TUOR: And in relation to landscaping, are there constraints on having trees presumably to the north of the solar panels or if the Commission were to consider that further landscaping were required, what are the sort of constraints that you need to consider?

MR GIBSON: I think we would have to – yes, we would have to consider shading. That would be one of the concerns, at least from the PV side of it. And then also land use for it. By shrinking the project – by realigning the project and coming out of the first order stream we’ve really consolidated the project down to the minimum
5 size that we possibly can whilst maintaining the same production of energy out of the project. So it’s something that we can have a discussion about, but our concerns would be space availability based on the land that we can use and that we have access to at the moment.

10 MS TUOR: Thank you.

MR GIBSON: Yes.

MR WILSON: That’s all. Thanks. I now call John Hamparsum.

15 MR J. HAMPARSUM: Thank you very much, Commissioners, for hearing my submission. The last time I was here speaking and presenting was in 1978, the poem Breathless. So hopefully I don’t do that. My name is John Hamparsum. I’m an irrigated crop farmer from near Breeza, New South Wales, on the Liverpool Plains. I
20 live approximately 21 kilometres from the proposed Orange Grove Solar Farm. And as a result, I am not directly impacted by the solar farm. I present here today in support of the project for the following reason. I’m a member of the Farmers for Climate Action, which is an inclusive movement of farmers, agricultural leaders and rural Australians working to ensure that farmers, who are on the frontline of climate
25 change, are part of the solution.

Farmers for Climate Action vision is farming forever. In practical terms, it is supporting farmers to build climate, carbon and energy literacy and advocate for climate solutions both on- and off-farm. I’m also here as a farmer that sees very
30 positive outcomes from solar farms in our region. Solar power is good for our environment. The most commonly known fact about solar energy is that it represents a clean, green source of energy. Solar power is a great way to reduce our carbon footprint. There is nothing about solar power that pollutes Mother Nature. Solar power doesn’t release any greenhouse gases. Hence, it’s safe and environmentally
35 friendly.

On our farm, we use a considerable amount of power to pump irrigation water to the surface. The traditional electricity market that we rely upon – it also – it relies heavily on fossil fuels such as coal and natural gas. Not only are they bad for the
40 environment, but they’re also a limited resource. This translates into a volatile market which in energy prices – which energy prices alter throughout the day and considerably add to the cost of farming.

Solar farms in our region will help to gradually replace energy produced from fossil
45 fuels and thereby also reduce our impact on climate change. Solar farms produce power from an infinite resource. The sun will never cease. And it won’t increase its costs. And it gives our region energy security. You only have to travel through the

Hunter Valley and through the Queensland gas fields to see the immediate impact that fossil fuel mining has had on our environment.

5 Then there is the long-term impact of increasing carbon in our atmosphere, which in turn impacts our climate. Farmers are at the frontline of climate change. And I believe we're currently experiencing climate anomalies as a direct result of climate change. For me as a farmer, I encourage as many renewable energy projects as possible to reduce our carbon footprint. And I see the Orange Grove Solar Farm as a very positive step towards a renewable energy future for both this generation and for
10 generations in the future.

Electricity needs to be transported from big power plants to end consumers via extensive networks. Long-distance transmission equals power losses. The more solar farms we have in regional Australia, the less power that is loss in transmission
15 as compared to having large centralised power stations based where the fossil fuel source is, eg, in the Hunter Valley.

Solar power improves grid security. When there are more solar power farms, we are less likely to experience blackouts and brownouts during the daylight hours. Every
20 solar farm functions as a small power plant. This in turn provides us with greater electricity grid security, especially in terms of natural or human-caused disasters. In the near future, power storage solutions will be more available. And we will see even better grid security as a result.

25 Having solar farms in our community boosts our local economy, initially in the original construction build and then the ongoing income stream to the local landholders that have farms on their land. There are also ongoing maintenance costs that will also provide employment in our local community. There are many benefits in having solar farms in our community, with almost no drawbacks. The future of
30 our climate is dependent on our economy moving away from fossil fuels. And in this, the Orange Grove Solar Farm is one step towards our renewable energy future. I support the building of the solar farm and hope that there are many more to come. Thank you.

35 MR WILSON: Thank you. That's okay. Thank you. Mr Hood.

MR G. HOOD: Well, welcome to Gunnedah. And I wish someone could turn the heat up a bit on the sun farm. We could do with a bit. I stand before you today –
40 some of the comments I will make aren't in these notes, so I note that it's being recorded. And I hope I can do it within the allocated time, but if I do go over, it won't be very long. With my presentation, I believe the red soil ridge area to the north-east of here is suitable for development for solar farms. But the facts need to be taken into account. And to date, with this development, there's still more work to be done. My comments today are in relation to the Department of Industry, Land
45 and Water assessment report that has been used as part of the environmental impact statement report and review. This is a project of state significance. The facts need to be correct.

My comments are in relation to flooding, which was most of the concerns of the public submissions. Formerly, I was one of several landholder representatives that oversaw the completion and completion of the Carroll to Boggabri flood plain management plan. Local landholders, together with local and state government officials, completed the floodplain plan in 2006. I've got some of the copy at the foot here. This planning document has been extensively referred to in this project's determination so far, as well as two other recent substantial projects of state significance in Gunnedah Shire. The planning document has also been well used by Gunnedah Shire deliberations on the flood plain from Carroll to Boggabri.

The integrity of this planning document and its subsequent modifications from a draft must be upheld by yourselves and New South Wales Government. With the Orange Grove Solar Farm, there were inaccurate flood plain statements by the consultants in the initial environmental impact statement for the solar farm. I am disappointed in the consultants, HEC, and I'm sure the proponent should be disappointed in them, in some of their work to date. They stated that the proposed solar development was above the historical flood heights of the Namoi Valley and that a first-order stream did not exist, despite contrary information shown in maps and in the Carroll to Boggabri flood plain management plan. Subsequently, in part of the response to submissions, a partial reassessment of the flood plain was conducted by another consultant, GHD, an entity that I would call credible.

GHD quantified that the swale or the first-order stream is actually a breakout or the Namoi River – note that this breakout channel originates east of the proposed solar farm site, which is a height above – which is above the height of the solar farm, a location above Carroll. GHD showed that there would be a breakout flow in a 1984 size flood event, note 1984. The Carroll to Boggabri flood plain management plan compendium data, which I have just here, estimated that a 1984 sized flood event, approximately 211 metres a second of breakout flow, would occur from the Namoi River above Carroll towards the proposed solar farm, the first-order stream. This breakout stream, as shown in the plan, has now been confirmed by GHD, despite it being said in the EIS that it didn't exist.

Note that a 1955 style flood event, which is a one per cent AEP – average expected probability – the estimated volume in the breakout channel or the first-order stream, would increase 425 per cent to 897 metres a second, which I would suggest would probably overtop the first-order stream and cause the proposed solar farm site to flood. GHD should have modelled and presented flood plain modelling of a one per cent AEP and a three times one per cent extreme flood event in this vicinity for this project to be consistent with other Gunnedah Shire state significant developments. For the information of the people in the room, that's the other solar farm and the Whitehaven Vickery Extension Project. That methodology was being used there.

These breakout flows in 1984 and the 1955 flood flows leave the Namoi River several metres higher than the proposed solar farm site. The height of the Namoi River in flood above Carroll is 281 metres AHD. The solar farm site at its lowest point is 272 AHD. So it has grossly incorrect in the environmental impact statement

for HEC consultants to say that the solar farm site is above Namoi River flood heights. To compare a development's flood impact to a measured height downstream is effectively like looking in the rear-vision mirror to see if there's any oncoming traffic. I will say that again. To compare the measured heights
5 downstream of a development is effectively like looking in the rear-vision mirror to see if there's any oncoming traffic, a recipe for disaster.

The Department of Industry and Land and Water and Gunnedah Council should have picked up on this misrepresentation of the flood plain facts. So can this development
10 proceed with these inaccuracies: first, the inaccuracies need to be acknowledged and measured. So there's more work to be done. If there is flooding of the site in a one per cent type flood event, floodwater will flow up to the perimeter of the security fences – a chain-mesh fence – and it may cause afflux back up onto adjoining
15 properties, which I understand are partners in this development, so there may not be a problem there. Redirected floodwater may cause an increase in flow in the first-order stream, as well as down the Orange Grove Road. These may be acceptable impacts.

I note that the project development footprint has been amended to accommodate the
20 first-order stream, now that it is known, confirmed by GHD that there will flow in a 1984 flood event that partially carries the Namoi River I object to this development not on – I didn't agree with it. I objected based on inaccurate work by the consultant HEC. I will withdraw my objection once all information is known, once flooding aspects of a 1955 one per cent flood event are known. At present, they
25 are not. On the back page, I have a map. And this was a map out of the original environmental impact statement. And everything that I've had in my little presentation today is clear as mud to me as a local of Gunnedah for many, many years. And I farmed the flood plain from Carroll to Boggabri. I'm not against this development, but I want the facts before I – and I will withdraw my objection.
30

And I commend the presentation today to the developer. You must be disappointed in your environmental consultant, HEC. For them to say the site doesn't flood is incorrect. And for them to say that the first-order stream doesn't exist is incorrect.
35 You've addressed the second point. You need to clarify the flooding situation in a one per cent flood. You can see the heights are on this map of the flood, where it leaves the river above Carroll. So in your presentation, when you said the Namoi River is at the bottom of the page, there's actually at the top on the right-hand side as well. And that's where the floods come from. And once that's cleared up, I think the red soil ridge, where it got back to this area here, is suitable for this style of
40 development. We've got one that's approved. There's probably two or three more. Thank you. Have you got any questions?

MS TUOR: So I just want to clarify – so my understanding of what you've said is
45 that your principal concern with the proposal as amended and the amended information from GHD is that they didn't model it on the 1955 flood; they've only modelled it on the - - -

MR HOOD: On the – they’ve shown the break-out flow occurs in the 1984-style flood event, which I think is a one in 20 flood. I’m not sure. The – they should’ve modelled a one per cent 1955-style flood event. That’s where most planning documents is done around.

5

MS TUOR: And so the amendments to the proposal to take it away from the first-order stream, as I understand what you’re saying – is that you can’t determine whether it’s actually being taken away from the first-order stream unless you do the modelling for the 1955. Is that essentially what you’re saying?

10

MR HOOD: I think the 1955 – if you model the one per cent flood, 1955 flood, it will probably show flood impacts on the development itself, which is contrary to the statement in the EIS that the site doesn’t flood.

15

MS TUOR: Okay. And then your principal concern about if the flooding were to occur is in relation to the fence potentially collecting debris. Is that the main concern?

20

MR HOOD: Well, the flood impacts – it’s not for me to say. It should be for a qualified consultant, maybe like GHD; say, “The flood height will be this. It could be this.” I don’t know. But we need to know before this development is proposed, because I wouldn’t like to see these guys – this drought will be broken by a flood, undoubtedly. I haven’t got a problem with flooding. I live on a floodplain. But just need to acknowledge the facts.

25

Now, if flooding – if it does build up against the fence – if I go to the other solar farm development – they had a formula of how much impact a chain-mesh fence will have on flood back-up. But every flood is different. It’s got debris, grass, roly-polies. So it’s very hard to say. But if there is afflux or back-up against the fence, it may not be a problem. But you need to know what the height of that water is. If it’s only a couple of inches, no problem. I don’t think it’d be a couple of metres. But it certainly would be – I would expect that there should be some depth.

30

MS TUOR: All right. Thank you.

35

MR HOOD: Thank you.

MR WILSON: Ms Mix.

40

MS P. MIX: I have to say, John, I haven’t stood here as well since school Eisteddfod. Life’s strange cycles. Its familiarity is pretty helpful when reluctantly I’m finding myself addressing solar. I am representing the neighbouring property to the proposed site, known as R1, where the design is concentrated on kilometres of boundary and lies within three kilometres of both the proposed and one approved solar developments.

45

- I'm very appreciative of the panel coming here and opening this platform. And I understand you are here as specialists in your fields to make final decisions and have experienced a broad range of speakers and information. I also appreciate that you may prefer statistics in relation to the proponents to consider. But many don't have
- 5 funding for an army of researchers to form independent opinions on the EIS. I hope some practicality of my concerns, local knowledge and questions at the least contributes to the progression of the introduction of solar as the world's hope towards clean energy.
- 10 I cannot stress my disappointment that prime agricultural land, New South Wales biophysical agricultural land, has been supported for industrial-scale solar farming. Food, biodiversity and water contamination are also part of world resource insecurity. I have already watched neighbours go through this process for Gunnedah Solar, on 203 hectares of agricultural land, and its approval. Also approved is
- 15 IronBark Energy Solar, an ideal of what I expected large-scale solar farms, built on brown-belt land and encouraging community title. Combined, both are 192 megawatts, with possibility of simultaneous development. Now the latter seems delayed.
- 20 I'm not here to question climate change, renewables or discouraging local economy. But I do question why this scale of solar farming is on agricultural land, where we could be one of the world's leaders, as we're roofing solar. Repeatedly the government is asked why, with extensive sun and non-food producing land – is not preferable to floodplains and agricultural land, because of proximity to a gridline. If
- 25 the government could provide more ways for development on brownfield and unproductive areas in comparison with other resources sacrificed for one, the conflict would be avoided.
- My experience of the initial stage of development of this project has shown that
- 30 solar, referred to as socially responsible, is known for permitting uncomfortable behaviour not dissimilar to mining strategies in the consultation process. It is upsetting for those affected and totally unnecessary. And I ask that you please rectify these procedures so that ongoing and new solar farming development have a respectful practice when dealing with potential neighbours. Obviously, it's a
- 35 necessarily fast-moving area. But as an adjoining landholder or even part of the larger community as people, we have many expectations, including being informed, educated about the decision-making process and matters that may affect us and have questions answered.
- 40 Many responses from proponent for the DPE to questions raised by neighbours and the public are based on – they understand the requirements of the condition and will comply with it. So obviously the final stages of development are based on merit. As a property owner, we are relying on the proponent to follow protocol to ensure limited effects, including our health and safety. Therefore, we are also dependent on
- 45 their merit throughout this process, which is disconcerting from a company that announced the development on the local news before any affected neighbours were

notified, then encountering eye-rolling and being told to look it up when attending public information meetings.

5 This may sound irrelevant to you. But this is all about a process for both renewables, government, community and neighbouring landowners. I hope that you understand this consultation period requires that all parties are treated with respect and transparency, as SEARs guidelines require. The alternative to this will be community divide and discouragement rather than for collective and informative information and discourse.

10 I would like to think that our concerns are recognised as having a legitimate interest in the final outcome as much as yours. An EIS full of objectives of “unlikely”, “not likely” should not significantly also frame the uncertainty of how adjoining properties and the future of the proposed development are impacted or concerns
15 legitimate after the abovementioned behaviour. This is clearly not very respectful and has been a major difficulty in interaction with the development proponents.

I am encouraged to see some flexibility and changes in the development, starting with setbacks. I was asked at the public meeting why I was concerned about
20 kilometres of solar on our boundary fence, when they got one in 80 metres from someone’s house, and they could offer screening, which, of course, the owner of our property will unlikely appreciate before their purpose is effective.

If so much attention to viewshed concerns renewable applications and with glint and glare and this application is deemed approvable, can’t it stretch to the government’s
25 support with Landcare examples of renewal by additional screening? This is an existing business entrance, a home, and only a fourth of the boundary the panels face on our property. You would’ve driven past these from the airport in Tamworth to just down the road of the proposed site.

30 These changes suggest the distance is 164 metres from the garden orchard. The water bore, at 133 metres from the boundary, supplying water to our 1902 house and cattle securely, is apparently with acceptable vibration levels for bore integrity. In small print on the design in appendix A, there is another door of uncertainty: that
35 despite promising changes under number 6, setbacks are considered in layout as subject to change during detailed design phase. Is this the developer honouring the proximity concern, so we’re less affected daily? Or is this a clause to renege any mitigation, in the end, at all?

40 On one image, the road is shown within the site boundary of the first panels and another adjacent to the driveway. There may be this, but this would be ours from the garden orchard to the mailbox and the entrance, if this is returned to the original design for a highly sensitive receiver. I consider this a considerable affect not only
45 on lifestyle, but productivity with livestock during development over two kilometres of boundary. I’m not able to comment from lack of information of the substation for storage further down the road. The separation distances from houses given for other solar design just in this area and already approved in Narrabri and Gunnedah are 350

to 500 metres, also regarded as highly sensitive, like us, in their EIS. So why aren't the same standards even applied or even initially considered here.

5 There is so much area available for the project and yet its current and compact design lies very close beside one home and boundary. Either it's time for Kevin McCloud to be involved with solar design solutions and consider proximity to residences with large-scale solar development, or you have appropriate buffer zone restrictions, starting now, that are needed in this type of development, as they are town planning and other industrial sites. The current situation is neither consistent nor acceptable. I
10 am also appreciative of the natural waterway or swale, as Geoff pointed out, to the north has been acknowledged and addressed. It was the only small runoff plan I read in the EIS and I am relieved that it has had more consultant investigation, so that our local knowledge could contribute to the break or peak flow of '94.

15 However, it does not address the other similar water course to the south, although this would clearly be flood prone, based on the flood zone image in figure 2 in the report. This image of the '84 flood does show that area is flooded again by a breakout from the Namoi River. This image of the '98 flood is viewed from Carroll and is also inclusive of the solar development and similar height to the '84 flood.
20 From the proponent's report, there's 1971 and '55 floods being the highest recorded floods, were larger than the '84 flood. And they imply that they did do modelling for those floods, yet these outcomes are not shown in the report. Why is this? The southern water course does run largely through the adjoining land and owners' property, known as R8, and would also be affected by water breakout. This is why I
25 have some contention with flood issues and runoff not taken into consideration.

It's clear that the concerns about the water path were addressed by undertaking the consultant's report, although now they may not have been in the new design. Why
30 isn't flood fencing considered and the subject to runoff onto our adjoining property also not considered, and particularly when 80 per cent of the land is covered by panels for the development is densely on a boundary and near our home. Available research shows that runoff from solar panel farms at these densities can increase peak flow by more than 200 per cent in heavy storms. Where does this additional runoff go to? These photos are taken of the neighbouring solar site and from outside the
35 front of our house, from 29 March and one night of rain, with 232 points.

How do we not know this could become more frequent with changes in climate? I understand resolving energy crisis and climate change takes action, rapid
40 advancement in technology and fields of science; however, during my involvement in this process and developing understanding of what it means to live by large-scale solar, I find that the science provided does not take into consideration local knowledge and first-person experience. Sadly, science misses taking that into account. Fortunately, with persistent efforts and flood experience, neighbours were
45 able to encourage some flood fencing with Gunnedah Solar after appeal, less than three kilometres away, which shows it can be possible that local experience is valued.

In 1969, the US Congress formally recognised that even if each land use project is allowed to produce only a small environmental impact, enough small impacts can accumulate to have a large effect. To consider cumulative effects, the affected environment should be defined broadly to include any potentially significant effects occurring away from the immediate project area. Most EIS I've read seem to limit themselves to the immediate area surrounding the project. With this in mind, as a property within a couple of kilometres inclusion between two large-scale solar farms and knowing the first solar farm in Western Australia was developed in 2012 with 150,000 panels, according to Wiki, what guarantee could you give on the cumulative effects on a generational property that lies in between? I don't think you could – or you could borrow one of the proponent's unlikely – not likely objectives.

The hosting properties will bring in reliable revenue, but what of a property facing cumulative effects, as the term is defined from the seventies to include total of all impacts to a particular resource that have occurred, are occurring and will likely occur as a result of any human action or influence, including the direct and reasonably foreseeable indirect impacts. I know agricultural activities can have impact, but this is not like that. This project allows landowners, who are the hosts, to receive good recompense for the long-term use of land and adjoining landholders that do not can be subject to as much change from the project as those who benefit financially, adjoining landholders also where – what it would mean for existing business practice, particularly in development stage and possibly including relocation when you live centrally within 150 metres.

In 2008, a report by Access Economics Proprietary Limited, albeit for wind farms, but is relatable wrote property values tend to capture people's perceptions of the impacts of rural wind farm, such as noise; visual amenity by diversity; fire risks and social cohesion. Overland office is set back and screening to compensate the visual, noise and vibrations with the new design, ungenerously compared to others by 50 metres of the boundary near our house.

But what can be offered with an unknown cumulative effect of having land in between two large scale solar infrastructures when often the main factor influencing a property's value is the land's productivity, which R1, our property, has proved consistently. In this development procedure there are hundreds of pages on the biodiversity, soil structure, design and other quantitative information in deciding location of each solar farm independently. 22 metres from the solar will lie my ancestor's ruined wagon travelling from Hexham at settlement and also the property's biodiversity and livelihood based on productivity.

Upon consulting the soil scientist who drew the New South Wales Government map of soil, I find that the soil information is not adequate. It is misleading and incorrect. The soil is dispersive and sodic, which contributes to erosion from increased runoff as well as being dominated by Vertisols which have serious foundational issues. If this development was a freeway or rail line every neighbour would have opportunity of recompense, but the possibility of cumulative effects on productivity goes beyond

compensation with biodiversity, even if you and I are not here to witness after 60 years of its impact.

5 This project's EIS concluded that there were no cumulative effects, yet without any great analysis, apart from traffic concerns, which I will ask if the local council enthusiastically supports both solar developments running consecutively, even independently on these small, dusty roads, the surrounding community will have their hands tied behind back. And they who've contributed to local economy before this development will suffer the dust, water runoff was present and an increased
10 danger on the road. The roads nearer to town have already substantially improved in anticipation of the solar farm's approval. How can a small section of road, approximately four ks, not be sealed?

15 This development is not deeply considering the likelihood of two simultaneous solar developments for cumulative residents, land and/or species the cumulative impacts at all. I can see that to develop and predict cumulative effects would currently be a challenge in science and it would require your support and great guidance to issues that complicate analysis. But surely now some large spatial and temporal scales need to be involved. There are obviously a wide variety of processes and interactions that
20 influence cumulative effects and only over an extended time could a land use activity and the landscape's response to activity be assessed or projected.

25 Do you not feel that with what a new energy spokesperson on ABC termed a gold rush for renewables that developing appropriate techniques for assessment of impacts has been lacking and comprehensive data is needed for both assurance of landowners and environment. There is an amount of requirement of responsibility for proponents, but surely routine surveillance for environment and health impacts with cumulative effects are also warranted and should be seriously considered. We are all experiencing a fast-moving area, but a broader approach than project-based
30 assessment with sustainability towards landscape conditions as well as community wellbeing provide a more qualitative approach.

35 America, the UK and Europe have already begun cumulative effects research. Please encourage minimising negative cumulative effects for a holistic promotion and be inclusive of all resource sustainability before development. I hope my time and concerns don't surmount to a tick in a box, but can encourage solar development with an honest consideration of our stress factors; that can reach beyond consultation challenges; proximity; noise; traffic; flooding; dust and runoff, but potential of successive impacts on receptors inclusive of flora and fauna, water and soil within
40 your examination.

45 On top of this, these lands are our home where we and my ancestors have farmed productively since 1872, when Gunnedah had just reached 500 in population without any of these extra stresses. How can these scoping and development guidelines and behaviours overlook cumulative and community impacts and over other valuable resources, which are also included in addressing climate change concerns and resource insecurity by ongoing development on agricultural land and could even lead

to a possible displacement of a loved solastalgic resident under a term of socially responsible.

5 I am banking on you, as others, not to encourage a sucker-punch approach whilst
introducing large-scale solar, but to avoid any contribution within this transition to
other environmental and adjoining land pitfalls when there is so much hope Australia
can take opportunity to lead this renewable and develop further inclusive and
positive actions towards it. Let's not replicate what has been discovered in roofing
10 solar as tens of thousands of unsafe systems are being recalled because price and
immediacy came at a cost to quality and safety.

This point in time, the beginning of a new era of energy production, offers
opportunities as planners and a community to adopt consideration foresight, rather
15 than repeating mistakes and ad hoc approaches which have already led us to
renewables in the first place. We could get it right the first time and this is an
opportunity to reconsider development where progress can be claimed because
resource inclusive progress is what we need. Thank you for your time.

20 MR WILSON: Thank you, Ms Mix. No. Thank you, Ms Mix. Thank you. And
thank you everyone who spoke and everyone who is in attendance. So today's
transcripts will be on our web.

MR B. JAMES: Yes. Transcripts will be made available on our website shortly.

25 MR WILSON: Shortly.

MR JAMES: And comments as well. So I note not everyone got a chance to speak
today or signed up, so if you have any comments, you can send them through to our
30 IPC email address or post them through.

MR WILSON: When by, Brad?

35 MR JAMES: Next Tuesday, so close of business next Tuesday you can make
further comments if you like.

MR WILSON: Any additional comments are more than welcome. Is that it? Thank
you all for coming. We appreciate it.

40 **RECORDING CONCLUDED**

[10.03 am]