I would like to make a submission to the MARYVALE SOLAR DUBBO - SSD-8777 - MOD 2 - .

I object to the planned capacity increase in this industrial solar project.

The currently approved project is already near the Wellington Solar Farm, Wellington North Solar Farm and Wellington South BESS. I believe that the cumulative effect on nearby residents will be detrimental to those resident's well-being and their enjoyment of their homes and properties and potentially impact the operation of their farming businesses.

It appears to be common practice for proponents to "work" the planning system by actively seeking approval for smaller projects with less impact and follow this up with modifications. Indeed, this is the SECOND modification that the proponent has applied for. These modifications have been seen as 'small steps' individually, however the end project will be markedly bigger than the initial approved project, leaving local residents faced with a much bigger solar complex.

This latest modification is the increased size of panels being placed singly, with decreased row spacing, to prevent increasing the overall footprint. However, this modification will increase the number of piles by 66.67%, each inserted up to 4 metres into the ground.

Soil erosion will likely increase with the increased piles, as admitted in the modification documents "there will be additional erosion risks given the … change to configuration of the panels". There is the likely long-term damage to the soil from compaction and potentially leaching of toxic chemicals into the soil that could ruin its ability to be productive farmland in the future.

With less ground surface visible in the modification plans, it is obvious that the term "farm" no longer even vaguely applies. This will be an industrial sea of solar panels and will have increased negative visual impact.

Whilst the project estimates an approximately 30year life followed by decommissioning, the growth in the number of piles will increase the underground infrastructure substantially, increasing the decommissioning task. Without decommissioning guarantees in place prior to construction, this will cause potential increased costs to return this land to its previous state, possibly negating its value as agricultural land. Full guarantees for the decommissioning costs need to be in place prior to approval.

The approved project includes a BESS. Batteries use lead, lithium and cobalt, all of which are hazardous materials. This is of much concern to residents and the community as ordinary fire suppression measures cannot extinguish a lithium chemical reaction fire. A fire that occurred in the 350MW/450MWh BESS during testing on 30 July 2021 in Geelong, Victoria shows how dangerous it can be for nearby residents. When one of the 13 tonne battery packs caught fire, it burned for three days and resulted in the evacuation of residents because of the toxic fumes generated.

It is concerning that there are no firm plans to remove the BESS or substation from the site in the case of decommissioning the solar panels. "The BESS may remain in place together with the substation in the event that the solar array is decommissioned and removed from the site" which is unsatisfactory to returning the land to its previous state and leaves much infrastructure in place that will either cost the host or the council to remove themselves, or if left in place will eventually degrade and potentially poison the land. The previous land

use was AGRICULTURE not INDUSTRY! The modification proposal should include guarantees for removal of both the BESS and substation in the case of decommissioning, prior to construction.

Solar panels are NOT environmentally friendly – made with a toxic mix of gallium arsenide, tellurium, silver, crystalline silicon, lead, cadmium, and heavy earth materials. Solar panels deteriorate, resulting in lost efficiency, total failure or even fire. They get damaged by hail, wind and fire and potentially leach their toxic chemicals into the soil and water courses. The site could potentially contaminate waterways via run off, which could be poisoned by these toxic chemicals. Major damage does happen – such as with the Beryl Solar plant in 2020 with impacts from heavy rain, a lightning strike, inverter damage and other failures. The contamination risks to the land and through the water courses will not be tolerated by the local community. The modification should not be approved with a complete Toxic Waste Management Plan prior to construction.

PV solar systems are also prone to fires from panel and electrical equipment failures causing risk to nearby farms, native bush and the community, as accessing the fires on/near a solar site is difficult and limited for safety reasons. Gunnedah Rural Fire Service has confirmed that firefighters can only fight fires in a solar plant from the perimeter due to dangerous high voltages and the possibility of toxic gases. In August 2022 a small grass fire near Beryl solar plant required a dozen emergency vehicles and three water-bombing helicopters to protect the solar plant and nearby farm. A small fire of this size could be put out easily and quickly by minimal fire crew, yet this small fire took four hours and multiple crew to bring the situation under control. The modification proposal should contain a full hazardous toxic fire risk recognition backed by NSW Fire & Rescue research, with evacuation and compensation plans and acknowledgement/ medical assessment of potentially harmful EMR health risks & heat island effect, commensurate with this large-scale project.

Of note there were two new precedents set by the Oxley Road Solar Determination in December 2022. 1. New modern slavery condition, requiring proof prior to construction that NO slave labour supply chain components be used in solar, wind or BESS constructions. 2. Water Monitoring Condition, that toxic contamination risks be acknowledged with ongoing expert testing and reporting and a contamination response procedure be created. (see https://apps.planningportal.nsw.gov.au/prweb/PRRestService/DocMgmt/v1/PublicDocuments/DATA-WORKATTACH-FILE%20PEC-DPE-EP-WORK%20PPSSTH-149!20221124T045856.774%20GMT )
These conditions should also apply to this solar modification.

With the recent cost of living crisis and dangers to our food security, negative impacts to our agricultural land involved in or nearby to these industrial solar plants, is in no way beneficial to the people or government of NSW.

Annette Piper