

19th May 2021

Attention: Tracie Smart
Dubbo Regional Council
PO Box 81
DUBBO NSW 2830

RE: D21-211 PROPOSED SOLAR FARM – 47R WELLINGTON ROAD, DUBBO – ADDITIONAL INFORMATION

Dear Tracie,

We refer to the email from Council dated 10th May 2021 requesting additional information in order to further process the above application. In response to Council's request we provide the following:

Landscaping Watering Schedule

Prior to expected wet weather the landscape buffer area will be ripped (where plants will be planted) with a 100 hp tractor at a depth of 300mm to 400mm. This encourages root growth for the plant species in the first few years of growth as it allows the rains to penetrate beneath the topsoil. Topsoil will be then ploughed with a rotary hoe attachment on a 2.5t posi track to ensure the soil is adequately de-compacted for planting. Plants will be spaced at 2m spacings as per the plan provided and 1.5m off the fence (middle of the 5m landscape buffer).

Prior to planting the plants will be submerged in a tub of water to ensure moisture is not drawn out of the plant when planted into the newly prepared topsoil. The plants will also be watered in at completion however pre-soaking (submerging) the plants assists in moisture retention.

A 4-inch 2 stroke auger will be used to dig the hole and the plant is then backfilled with topsoil. When roots are slightly tight and stuck together the roots are roughed up prior to being put in the ground to encourage roots to spread. After planting, a plastic guard with 3 stakes marked out with a template is used to keep the plants safe from rabbits and hares. Mulch is then used (400mm x 400mm x 100mm depth) around each plant to keep moisture in the ground and assist with weed suppression.

A typical watering schedule includes plants being watered on a fortnightly basis, in a manner similar to the photographs provided in Appendix A of this correspondence, for a period of three months following planting. Following this period, the plants would likely be maintained by rain events however as the site would be monitored for maintenance purposes two to three times per month, the landscape buffer is able to be watered as per the initial watering schedule in times of low rainfall.

The watering schedule is documented and updated at each site attendance. Plants which have failed to grow or which have been damaged would be noted on each watering visit and replaced as necessary on the following watering visit, typically within the following fortnight.

As shown in Appendix A, water for landscaping purposes would not be stored on site nor is an irrigation system proposed. Water would be brought in from external sources and utilised as per the Appendix photographs for landscape maintenance.

Battery storage fire risk

Although the particular brand of the BESS equipment has not yet been selected, any BESS proposed for the project will comply with fire detection and suppression aspects noted below.

An IEC62619 test report accompanies this correspondence and the manufacturer guidelines and standard requirements to transport, install and store the batteries used in the DC coupled battery system will be strictly adhered to. Further to this, any person working on the equipment will wear suitable PPE and install any necessary equipment to minimise and mitigate the fire risk.

The batteries are not placed in outdoor conditions, being stored in a secure lockable steel container/cabinet. Battery cells within the container are sealed in an aluminium enclosure. As such the risk of the spread of fire should a fault occur is extremely low, and by nature the LFP technology does not release hydrogen gas and as such the risk of explosion is greatly reduced.

The BESS equipment will satisfy the safety requirements of relevant Australian standards, accompanied by certified test reports where applicable. It will be pre-fabricated and containerised before shipping to prevent damage to the sensitive components inside. The BESS containers will be provided with appropriate spill containment/bunding including provision for fire water runoff.

Each BESS container will have a built-in ventilation and air/liquid cooling system to prevent thermal runaway in battery cells and will also include an automatic fire detection and extinguishing system. Each container will also be designed to isolate any thermal runaway and fire from adjacent BESS containers.

Further to the above, Fire extinguishers will be provided near the site entrance and BESS installations. A rainwater tank with a capacity of 22,500L will also be provided at site and vegetation within 10 metres of all containers will be managed, including grasses.

Battery installations will be kept free of extraneous materials and combustible materials of all kinds. Regular inspections and housekeeping will be undertaken to ensure materials do not accumulate. Manufacturer's recommended safe operating conditions will be strictly followed. Routine inspection of the electrical equipment will be carried out to avoid potential electrical failure which may cause a fire hazard.

Each BESS container will include a built-in fire extinguishing system which will be checked as per the scheduled maintenance requirement and replaced if necessary, as per Australian standards. Adequate training will be provided to the staff and visitors in order for them to report and monitor the fire safety hazards.

Adequate ventilation of the BESS installation area will be provided where required under Australian Standard 5139 Electrical Installations – Safety of battery systems for use with power conversion equipment; the manufacturer's requirements and/or safety data sheets for battery storage.

The BESS will be fitted with automatic fire detection system which would trigger the fire extinguishing system should thermal runaway escalate and cause a fire within the container.

Should a fire ignite within a BESS container, an alarm signal would be sent to the operation and maintenance (O&M) team that constantly monitors the solar farm via real-time signals and security cameras. Therefore, in the unlikely event where a fire cannot be suppressed by the automatic suppression system, the O&M team would notify local fire authorities immediately.

A battery test report and Sungrow Gas Fire Extinguishing System information sheet accompany this correspondence as further information.

Further to Council's request, please also find enclosed amended Location Diagram and Site Plan which move the proposed road access to Lot 3 DP252285 which would align with the new road graded by the landowner as per the landowner's request.

If you have any enquiries in relation to the above please do not hesitate to contact our office on 6921 8333.

Yours faithfully,

MJM CONSULTING ENGINEERS



JENNA AMOS

Planning Manager

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Encl.

Appendix A. Typical watering process and equipment

