

13 June 2025

Contact: *Nicole Wallwood*
WaterNSW ref: D2025/77624

Megan Ramsdale
Department of Planning, Housing and Infrastructure
Locked Bag 5022
PARRAMATTA NSW 2124

WaterNSW Response to EIS Submissions for Wattle Creek Solar Farm (SSD-63344210)

Dear Ms Ramsdale

WaterNSW appreciates the opportunity to provide advice regarding the Environmental Impact Statement for the Wattle Creek Solar Farm (SSD-63344210).

As the development is located within the Sydney Drinking Water Catchment, sections 6.61(1) and 6.63 of the *State Environmental Planning Policy (Biodiversity and Conservation) 2021* apply.

WaterNSW has reviewed the Environmental Impact Statement (EIS) and associated appendices prepared by Umwelt (Australia) Pty Ltd (dated 18 March 2025) and notes:

- there is widespread presence of sodic and dispersive soils across the project area, with a moderate to very high potential dispersion risk anticipated where higher impact surface disturbance is undertaken. This risk is likely exacerbated by increased runoff from the solar panels, particularly where bare groundcover and erosion develop beneath the solar arrays
- no details of any existing erosion control measures (including Catchment Protection Scheme (CPS) works), and any other constraints such as any existing erosion gullies and the location of sodic and saline soils has been provided. The impact of any proposed changes to existing CPS works or gullies due to the proposal and possible mitigation measures has also not been outlined
- the site contains a number of mapped watercourses including the Wollondilly River, Sandy and Island Creeks and several other unnamed perennial creeks and drainage lines. Two watercourse crossings of the Wollondilly River will be required to enable access across the site. Where required consultation will be undertaken with agencies to determine the optimal watercourse crossings requirements
- the Water Resources Impact Assessment (Appendix 11) does not include details of the baseline water quality within Wollondilly River, Sandy and Island Creeks, however, notes that the Operational Environmental Management Plan for the site will include inspection and monitoring requirements including receiving water quality monitoring
- a septic system would be installed for the operational amenities and function of the O&M facility, however, the specific details have not been provided. The Water Resource Impact Assessment notes that treated effluent suitable for reuse for construction purposes, which are anticipated to include dust suppression and earthworks conditioning, will be stored in sealed tanks or lined basins to avoid potential interaction with groundwater
- Lithium-Ion Batteries (LIBs) are proposed as part of the BESS and may present fire, explosion and toxic gas release hazards. Therefore, given the large scale of the Project, the limited global experience with large capacity grid connected LIB BESSs, and to maintain a conservative approach with respect to the assessment of hazards and risk, further assessment was considered appropriate. WaterNSW considers that any further assessment of the hazards and risks associated with the LIB BESS should

consider the history of large wildfires across the project area, and potential water quality impacts associated with LIB BESS fires given the site's proximity to the Wollondilly River, and

- impacts to groundwater resources, including groundwater dependent ecosystems, are not expected given the groundwater table is unlikely to be intercepted during construction.

WaterNSW requests that the following be prepared in consultation with WaterNSW for long-term sustainable water quality management:

- a final Stormwater Management Plan including:
 - details of how potential water quality impacts will be avoided and/or minimised through project design, and route and site selections for the hardstand areas (including that required during the construction phase)
 - details of the site layout including water quality management measures to treat stormwater runoff from the proposed impervious areas such as the solar arrays, BESS, building roofs, internal access tracks and hardstand areas. The water quality management measures shall be compatible to this development and site constraints
 - updated MUSIC stormwater quality modelling, to be refined as part of detailed design, showing a comparison of pre- and post-development scenarios on water quality parameters of key concern (Total Suspended Solids, Total Phosphorus and Total Nitrogen). The modelling should also be consistent with the EIS documentation, particularly for the effective impervious area for access tracks and BESS infrastructure – and should address specific requirements outlined in **Attachment 1**. WaterNSW will require an electronic copy of the stormwater quality model, and
 - Concept design plans for any stormwater quality treatment measures and required watercourse crossings (both temporary and permanent) including detailed cross sections
- Conceptual Soil and Water Management Plans for the Construction and Operational Phases of the project, with specific measures to address:
 - the high erosion risk based on dispersive subsoils across the site including diversion of runoff around the site, and adequate measures to stabilise drip lines below the solar panels to reduce any erosion risks and subsoil waterlogging from panels
 - vegetation clearing and offsets, and specifically measures to avoid and/or mitigate impacts to riparian zones and wetland vegetation, and
 - design details of any existing erosion control measures (including Catchment Protection Scheme (CPS) works), and any other constraints such as existing erosion gullies and the location of sodic and saline soils. This should also include potential impacts to existing CPS works or gullies due from the proposal and possible mitigation measures, particularly over the Wollondilly River and potential impacts that increased runoff from the solar arrays may have on these
- an Operational Environmental Management Plan (OEMP). The OEMP shall outline and define design details, operation, monitoring, and maintenance of the proposed wastewater system, stormwater treatment measures and erosion and sediment controls throughout the construction and operation phases of the Solar Farm, including the installed panels and BESS. The OEMP should also include measures to manage any bare areas and erosion that develop beneath the solar arrays over time during ongoing operations and should incorporate water quality monitoring of receiving waters.

It is requested that WaterNSW continue to be listed as a stakeholder for further consultation on the project, and that we may be given the opportunity to provide further comment on the response to submissions and any associated draft consent conditions.

If you have any questions, please contact Nicole Wallwood via email at environmental.assessments@waternsw.com.au

Yours sincerely



Per Juri Jung, Catchment Protection Manager

On behalf of GRAHAM BEGG, A/Manager Environment, Sustainability and Catchment Protection

Attachment 1 - Requirements for revised stormwater quality modelling for Detailed Design

- The pre-development and post-development nodes should have equivalent combined area
- Final design (length/depth /grades) and locations for the proposed grassed swales, ponds, and any other proposed stormwater treatment measures required for the development to demonstrate a neutral or beneficial effect (NorBE) on water quality, and shown on any associated Stormwater Management Plans
- Final details on the modelled effective impervious area for the access roads, BESS infrastructure and facilities and laydown areas, with consistency between the model and associated report. It is noted that the effective imperviousness and land use types used in the modelling provided with the EIS did not accurately reflect the proposed development as per *Using MUSIC in Sydney Drinking Water Catchment (WaterNSW, 2023)*. For example, industrial land use was used for the O&M facility and construction compounds with 25% imperviousness which may have been better modelled with only the roof area, with land use "Roof" and 100% impervious. The development areas, land use types and imperviousness applied in any revised modelling must reflect the actual proposed development, and be consistent with above guideline and values in the associated report
- Further, the model should include specific nodes for carpark areas and these additional roof areas for proposed buildings (including test bed facility) and should include suitable stormwater measures to manage runoff from these areas. e.g. rainwater tanks.