

Willogoleche 2 Wind Farm



Water and Hydrology Factsheet

The proposed Willogoleche 2 Wind Farm is located about 5 km from Hallett, South Australia, on the traditional lands of the Ngadjuri people.

This factsheet explains how water, rainfall and flooding were assessed for the project and what the studies found.



UNDERSTANDING THE LOCAL AREA

The project is located on a ridgeline in the upper parts of the Murray River and Broughton River catchments. There are no major rivers or waterways running through the wind farm site.

The Hallett area receives an average of 422 mm of rainfall each year, with most rain falling during winter, particularly in August. Summer is generally the driest time of year.



WHY WAS A WATER AND FLOODING ASSESSMENT COMPLETED?

Specialist consultants, carried out studies to understand:

- How rainfall moves across the site.
- Where water naturally flows during storms.
- Potential flood depths and flow velocities.
- Whether project infrastructure could affect local drainage patterns.
- How climate change may influence future flooding.

Separate assessments were completed for:

- The wind farm area.
- The proposed Battery Energy Storage System (BESS).



HOW WAS THE ASSESSMENT DONE?

The assessment used detailed computer modelling based on:

- Historical rainfall information.
- Local landform and topography data.
- Existing drainage features and catchment conditions.
- Industry-standard flood and hydrology modelling methods.

The studies also considered:

- A 1% Annual Exceedance Probability (AEP) storm event (sometimes referred to as a 1-in-100-year flood).
- Future climate change scenarios for 2030 and 2100.
- A Probable Maximum Flood (PMF) scenario, representing an extreme worst-case flood event.



WHAT DID THE STUDIES FIND?



Wind farm area

The assessment found that:

- Water generally flows through existing low points and natural drainage paths.
- Most flooding on the site occurs along local overland flow paths that move water towards the site boundaries.
- The deepest water and fastest flows are generally confined to narrow drainage channels and flow paths.



Roads and crossings

Some proposed roads and infrastructure will cross natural flow paths. Further design work will be completed to determine the final size and location of culverts and drainage structures to ensure water can continue to flow safely across the site.



Battery Energy Storage System (BESS)

The assessment found that the proposed BESS would have minimal impact on local flooding conditions. Any modelled changes to flood depths are expected to be small and limited to areas close to the site.



Extreme rainfall events

The PMF assessment was used to understand how the site may behave during an extremely rare and severe flood event. Flood mitigation measures will be designed for the 1% AEP event, including consideration of future climate change impacts.



How will water and flooding be managed?

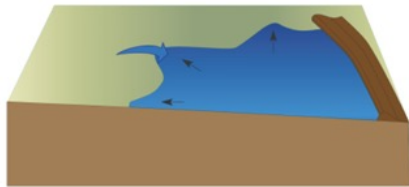
Detailed mitigation measures will be finalised during the project's detailed design stage.

Potential measures may include:

- Swales and bunds to slow or direct runoff.
- Detention or retention basins where required.
- Appropriately sized culverts at road crossings.
- Sediment controls such as silt fences and sediment basins.
- Minimum design levels for sensitive infrastructure.

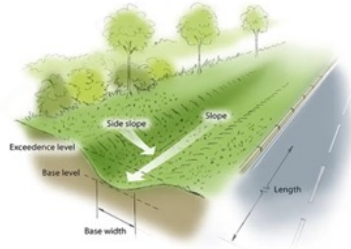
These measures are intended to manage both water quantity and water quality during construction and operation.

TYPES OF DRAINAGE



Bund Example

(Source: Department of the Environment, Tourism, Science and Innovation (QLD))



Swale Example

(Source: Envision Landscaping)



Road Culvert Example

(Source: Humes)

KEY TAKEAWAY

The studies found that flooding across the site is generally associated with existing natural drainage paths. With appropriate design and drainage controls, the proposed wind farm and battery storage facility are expected to manage rainfall and flood risks while maintaining natural water flow patterns.

Source: Surface Water Impact Assessments prepared by Water Technology for the Wind Farm and BESS (Final, 16 December 2025). This factsheet provides a summary of technical findings for community information and should be read alongside the project's EIR/SEO documentation.

