

D.4 Hydrology Memorandum

MEMORANDUM

To European Energy
From Corey Pontifex
Office location Adelaide
Tracker code 83000-5289-5-1
Date 25/02/2026
Subject **Mulwala BESS - Existing Water Assessment and Topographic Review**

1. Introduction

Fyfe has been engaged to review the suitability of the existing flood and water assessment in relation to the proposed relocation of the Battery Energy Storage System (BESS) for the Mulwala Solar Farm (SSD-9039) located north of Mulwala, New South Wales. The purpose of this report is to determine whether the conclusions of the original assessment remain valid for the new site location and to identify any additional considerations that may influence surface water behaviour. The previous and new site locations are shown in blue and purple respectively in Figure 1.



Figure 1 Proposed BESS locations

As part of this review, Fyfe has examined the existing flood, drainage and groundwater information, with particular focus on whether local surface water conditions and flood extents remain applicable to the revised BESS position. In

addition, a high-level topographic review of the surrounding landform has been undertaken to identify any potential for changes in overland flow paths that could affect adjacent properties as a result of the development.

Overall, the new topographic assessments identified the revised location is preferable, as it reduces the likelihood of altering existing flow paths and improves the site's drainage performance in the post-development scenario.

This report summarises the findings of that review and provides commentary on the relevance of the existing assessment to the proposed BESS location.

2. Existing Water Assessment

A review of the existing flood and water assessment has been undertaken to determine its relevance to the proposed relocation of the BESS facility. The key findings are summarised below.

The existing report confirms that flooding from the River Murray is not expected to affect the site, and this conclusion does not change with the proposed BESS relocation. The more notable commentary relates to local drainage within the land parcel. The current ground surface contains several shallow low points across the entire Project Site, with the original BESS located within one of these low points, which results in areas of ponding. The inundation mapping prepared for the existing surface reflects these local conditions and indicates that the revised BESS location is not affected by this type of flooding.

Although the mapping suggests the new BESS site is positioned outside the main low areas and natural flow paths, changes to the ground surface during development can alter how stormwater moves across the land. It will therefore be important to ensure that runoff behaves in a similar way before and after development. In practice, this means confirming that water continues to drain in the same general direction and that no new flow paths are created that could affect neighbouring land. If the BESS remains located away from the primary low points, standard on-site stormwater measures should be sufficient to achieve this.

The groundwater assessment within the original report is comprehensive, drawing on multiple bore records across the region. The findings of that section remain applicable to the BESS.

Overall, the existing assessment is generally applicable to the new BESS location; however, it provides limited detail on how the BESS location impacts existing flow paths and the surrounding land. A more targeted review of surface water behaviour based on a review of the area topography is included in the following section.

3. Topographic Review

The proposed BESS locations were assessed using the available 1 m DEM data from ELVIS – Elevation Data. The original site was initially reviewed to identify any potential local flooding implications. A summary of the DEM review, including indicative flow paths, is presented in Figure 2.

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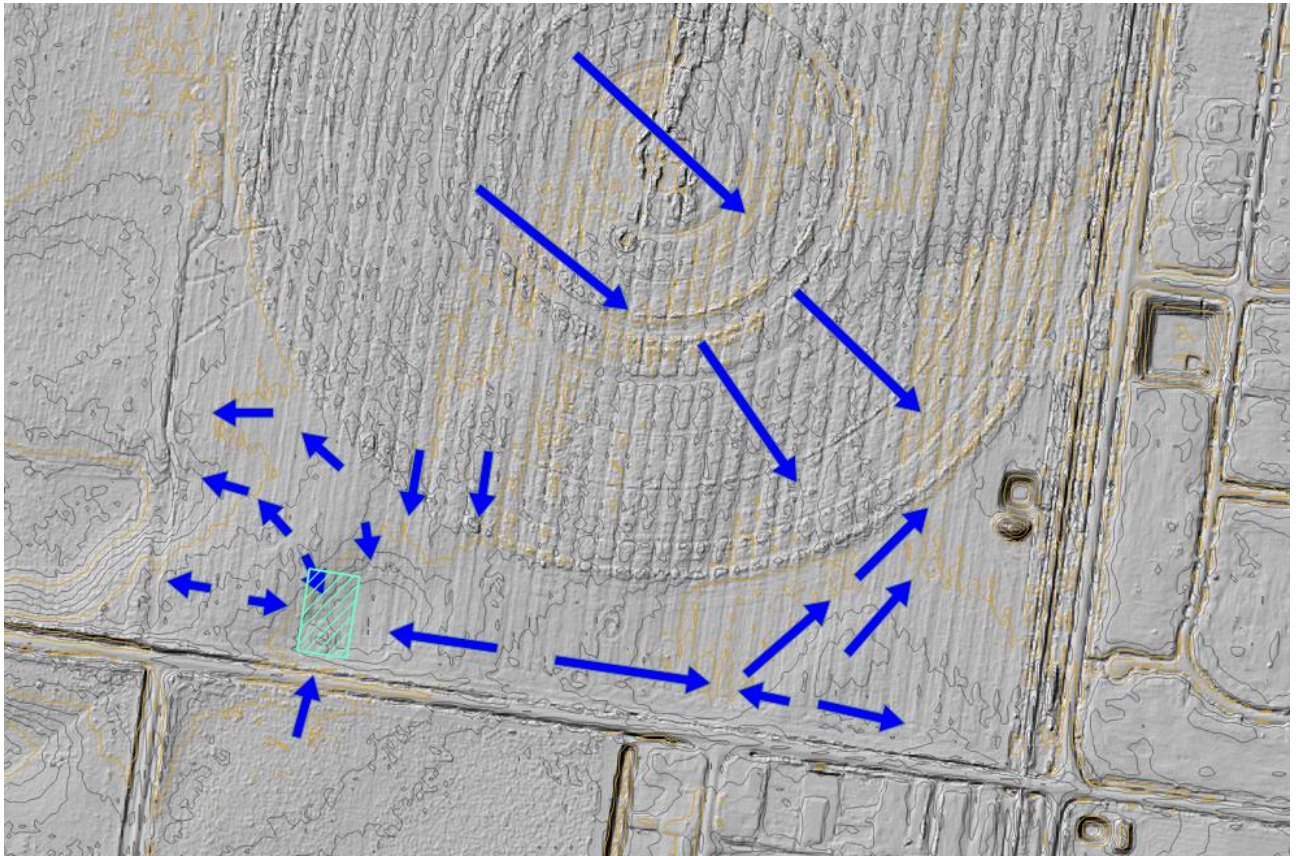


Figure 2 Original BESS Location and Flow Arrows

The DEM review identified that the original BESS location was situated within a localised low point on the site. While this would have resulted in a minor adjustment to the existing flow path across the project area, it is unlikely to have generated any broader regional impacts due to the more significant northern low point identified in the earlier water assessment. Some on-site surface storage, however, would likely have been displaced by the raised BESS pad.

A review of the revised BESS location, including indicative flow arrows, is provided in Figure 3.

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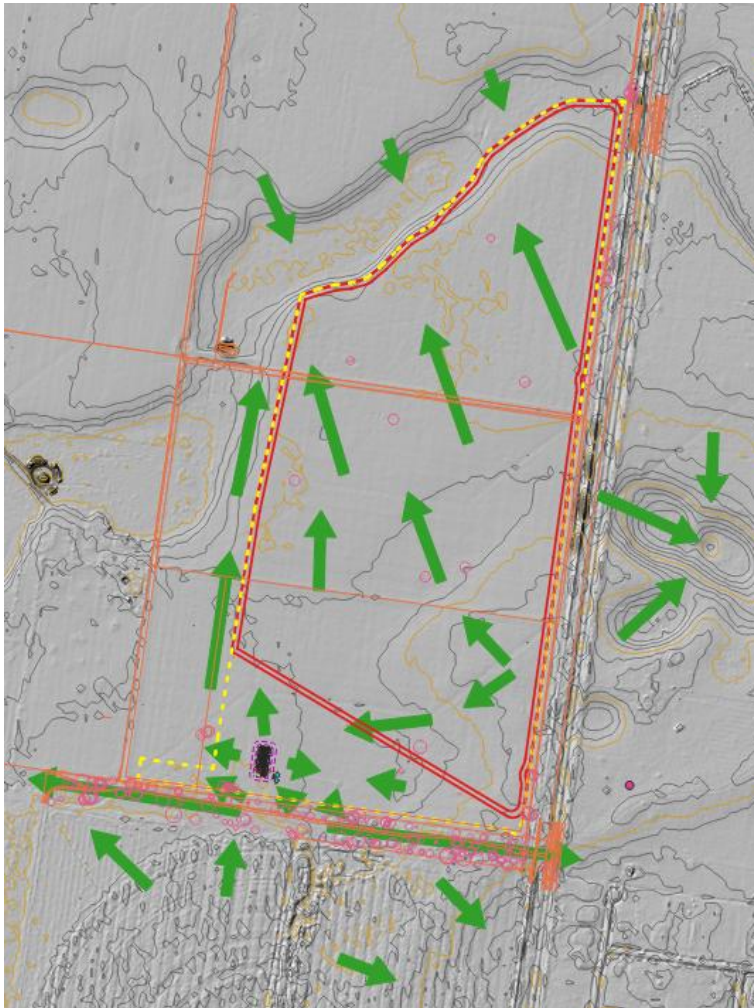


Figure 3 New BESS Location and Flow Arrows

In contrast to the previous location, the revised BESS site is not positioned within any local depressions identified in the DEM. Surface flows are currently conveyed from this area toward the northern low point illustrated in Figure 3. Under post-development conditions, surface water will continue to drain in this direction. To support this, appropriate stormwater infrastructure, such as perimeter swales, should be incorporated to ensure flows are safely conveyed around the BESS.

Overall, the revised location is preferable, as it reduces the likelihood of altering existing flow paths and improves the site's drainage performance in the post-development scenario.

Given the reduced flood risk at the revised location, the original recommendation to install critical infrastructure a minimum of 300 mm above the natural surface level remains applicable and should be adopted for the BESS to provide adequate freeboard relative to surrounding flow paths.