Lined Catchment Construction in the Barossa Region

LOCATION: Flaxman Valley

ANNUAL RAINFALL: 700mm

FARM SIZE: 28ha

ENTERPRISES: Vineyard, beef, sheep

In 2026 Leon Deans constructed a 1-ha polyethylene-lined catchment to capture rainfall run-off to flow directly into his existing 10ML dam. **This fact sheet outlines why Leon built the lined catchment, the construction process and associated costings.**

Why build a Lined catchment?

Leon's property relies entirely on rainfall run-off captured in on-farm dams. With no access to mains water, bores or the Barossa Infrastructure Limited Water Supply Scheme, he has been required to cart water to the property during each of the recent dry years (2023–25) to sustain both livestock and vineyard operations.

With climate projections indicating declining rainfall and reduced run-off, Leon recognised the need to improve his long-term water security. After assessing his options, he determined that constructing a lined catchment offered the most reliable and cost-effective strategy.

Lined Catchment Construction

Before construction could begin, Leon was required to seek approval from The Barossa Council and the Northern and Yorke Landscape Board (NYLB). Following consultation, he was advised that a Water Affecting Activity (WAA) permit was required from the Landscape Board. See BIGG fact sheet *Lined catchment construction approval in the Barossa region* for further information.

In autumn 2026, Leon installed a 1-hectare polyethylene-lined catchment on the site of a former vineyard he had removed the previous year. The liner directs run-off into his existing 10 ML dam, significantly increasing the reliability of water capture.



Leon Deans alongside his lined catchment.

Leon undertook the following steps to construct the lined catchment:

- Earthworks to flatten, shape and compact the catchment area so run-off flows directly into the dam.
- Clearing debris such as rocks and vine roots to prevent puncturing the liner.
- Laying 140m × 8m × 1.5mm high-density polyethylene (HDPE) sheets and anchoring them with a 450 mm perimeter trench.

Australian Government Department of Agriculture, Water and the Environment
Future Drought Fund
SA DROUGHT HUB
LANDSCAPE SOUTH AUSTRALIA NORTHERN AND YORKE

This project received funding from the Australian Government's Future Drought Fund