



Demonstrated Capabilities

- Detailed design and drafting.
- Earthworks and drainage design (site geotechnical investigations).
- Safety in design.
- Project management.

Narrakine Expansion Detailed Design

Client CBH Group

Project Location

Narrakine, near Williams, Western Australia

Scope

Engenium was engaged to complete a bulk earthworks and drainage design for the Narrakine grain receival, storage and transfer facility. The scope involved providing engineering for the Narrakine site expansion including deliverables such as earthworks and drainage models, drawings, design reporting and other documentation.

Business Objective

CBH Group were looking to expand the storage capacity at the grain receival, storage and transfer facility site at Narrakine. The client required a detailed design for an additional 90,000t of storage that also met their budget constraints.

Challenges to Overcome

The site was located on a steep slope which made minimising earthworks quantities a challenge. Also, groundwater was an issue during construction however this was resolved by using diversion drains. There were some design challenges encountered throughout the project, including balancing cut and fill on a site with difficult topography and ground conditions - such as areas of rock and ground water flowing under pavement.

Smarts

Overcoming these design challenges included interfacing with the existing infrastructure and designing drains that reduced fill, aligned with the culverts and were deep enough to intercept groundwater affecting pavement areas. The designed depths of drains was limited due to underground rock in several areas. The challenge caused by the postponed completion date of the geotechnical investigation report was overcome by using preliminary information from the draft report received at an earlier date to reduce overall project schedule delay.

Project Outcome

All variations and amendments were completed to client satisfaction. Benefits included value engineering which resulted in cost savings for the client.

Want To Know More?

For more information please contact our Perth office on +61 (0)8 6460 0300, email info@engenium.com.au, or visit our website engenium.com.au.

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