



## GEOFABRICS CASE STUDY



# PROTECTING MILITARY BUNKERS FROM EROSION WITH CONCRETE CANVAS

## PRODUCTS USED

### CONCRETE CANVAS® GEOSYNTHETIC CEMENTITIOUS COMPOSITE MAT (GCCM)

- A flexible concrete impregnated fabric that hardens when hydrated to form a thin, durable, waterproof and fire resistant concrete layer
- Rapid installation as it can be laid at a rate of 200m<sup>2</sup>/hour by a three-person team where typical installation speeds are up to 10 times faster than conventional concrete solutions
- Easy to use with portable rolls available, reducing the need for equipment
- Lower project costs due to speed and ease of installation
- Eco-friendly solution with a low mass, lower carbon technology which uses up to 95% less material than conventional concrete



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## PROJECT DESCRIPTION

Extreme weather conditions in Northern Territory posed a threat to ammunition bunkers for the Australian Defence Force. The region experiences high winds and heavy rainfall, exposing the bunkers to potential erosion. Maintaining the structural integrity of these bunkers is important as they provide protection for the storage units containing explosive ammunition.

Geofabrics assisted with providing a durable solution that will protect the bunkers from erosion and the challenging Australian climate for years to come.

## OUR SOLUTION

Concrete Canvas was recommended for its high strength, durability, and cost-effectiveness in erosion protection. Following approved installation guidelines, a total of 19,000m<sup>2</sup> Concrete Canvas was installed across multiple ammunition bunkers to effectively safeguard it from erosion.

During the installation process, the local contractor meticulously followed the design methodology by ensuring all edges were terminated and overlapped correctly. Concrete Canvas representatives were present on site to provide technical support and installation assistance to the contractor, which provided the client with a level of confidence and assurance in the product.

There are other alternatives to Concrete Canvas available on the market which offer lower strength and cost, but they do not meet the minimum requirements for GCCM (Geosynthetic Cementitious Composite Mat) Standard ASTM D836. Specifying a GCCM as a "Type I, II, or III" in line with ASTM D8364, ensures the designer is referring to GCCM test data that is appropriate and representative of in field GCCM performance and its intended application.

Concrete Canvas products are regularly independently tested to standard ASTM D8364. This ensures the product delivered to site will provide the minimum performance requirements as an erosion control solution, mitigating long term project risk and failure.

**GEOFABRICS®**  
Sustainable solutions



**19,000m<sup>2</sup>  
Concrete  
Canvas**  
installed

Meets  
**GCCM  
Standard**  
ASTM D836



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