DM COMPOSITES

DMWALK™

STEBONHEATH WETLANDS

PROJECT BACKGROUND

The Stebonheath Wetlands is an active public environment used by local residents, school groups, and Park Run participants, requiring all works to be delivered with minimal disruption to the community.

The project presented several constraints that directly influenced methodology and sequencing:

- Continuous public access requirements
- Proximity to St Columba College
- Weekly Park Run events
- Water harvesting operations within the wetlands
- Restricted access through vegetated and soft ground areas

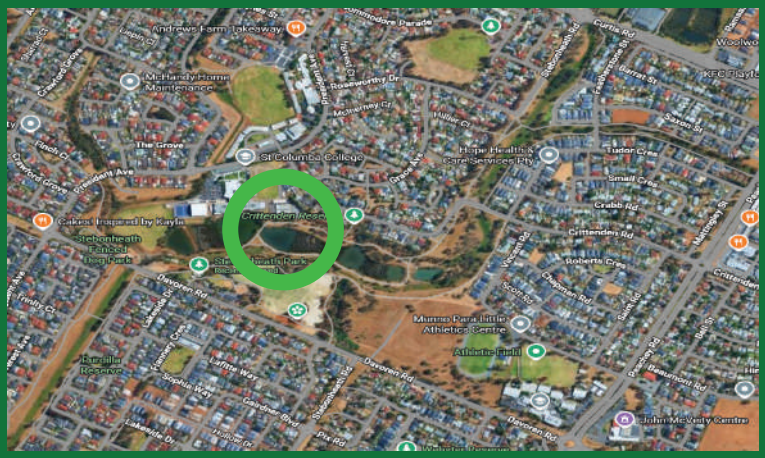
These constraints required a staged, low-impact delivery approach, with careful coordination of access, timing, and material handling.

LOCATION:

Stebonheath Wetlands,
Andrews Farm (SA)

CONSTRUCTION COMPLETION:

February 2026



DM COMPOSITES' ROLE

DM Composites was engaged to deliver the renewal of multiple boardwalks and viewing platforms within the Stebonheath Wetlands precinct, replacing deteriorated timber decking with durable FRP systems while retaining and upgrading the existing structural framework.

The works included three boardwalks and two viewing platforms, requiring a coordinated approach across multiple assets within an environmentally sensitive public space.

The project also incorporated Level 2 bridge inspections, handrail refurbishment, and structural assessments, ensuring long-term asset performance and compliance with Council requirements.

DM Composites delivered a fully integrated solution covering design, supply, and installation, including:

- Removal of existing timber decking across multiple assets
- Structural assessment and replacement of defective joists and members
- Supply and installation of FRP decking systems
- Fabrication and installation of FRP infill panels at abutments
- Removal, refurbishment, and reinstatement of steel handrails
- Coordination of Level 2 bridge inspections during works

Each structure was assessed individually and delivered using an asset-specific methodology, rather than a one-size- fits-all approach, ensuring efficient execution and structural compliance across varying conditions.

DESIGN & TECHNICAL SOLUTION

The upgrade replaced traditional timber decking with slip-resistant FRP panels, significantly improving durability and reducing long-term maintenance requirements.

Key Structural Features:

- **Installation of FRP decking systems to replace deteriorated timber boards**
- **Integration with existing steel and timber substructures**
- **Use of stainless steel fixings and connection systems**
- **Replacement of defective joists with FRP equivalents where required**
- **Installation of custom FRP infill panels to close abutment gaps**

The solution was designed to meet structural performance, slip resistance, and durability requirements, while maintaining compatibility with the existing infrastructure.

AS 1657 – Fixed Platforms, Walkways, Stairways & Ladders

CONSTRUCTION METHODOLOGY AND SEQUENCING

The delivery followed a structured, staged methodology aligned with site constraints and stakeholder requirements:

1). Preliminaries and Site Establishment

Implementation of traffic and pedestrian management controls, site compound setup, and installation of ground protection systems to prevent environmental impact.

2) Asset-by-Asset Delivery Approach

Each boardwalk and viewing platform was treated as an individual work zone, with sequencing planned to minimise disruption and maintain access.

3) Controlled Demolition and Deck Removal

Existing timber decking removed in sections, allowing inspection of underlying structural elements.

4) Structural Assessment and Rectification

Joists, beams, and connections inspected, with defective elements replaced or reinforced as required.

5) FRP Installation

Installation of pre-cut FRP decking panels using stainless steel fixings, ensuring efficient installation and reduced manual handling.

6) Handrail Refurbishment and Reinstatement

Steel handrails removed, grit blasted, recoated, and reinstalled to extend service life.

7) Inspection and Certification

Level 2 bridge inspections conducted during works, with Council engineers witnessing key hold points.

This staged approach allowed works to be delivered efficiently while maintaining safety and access across the site.

ENVIRONMENTAL AND ACCESS CONSTRAINTS

The methodology was specifically developed to address the challenges of working within a wetland environment:

- Use of temporary access matting to protect natural ground conditions
- Installation of erosion and sediment controls across all work areas
- No storage of fuels or chemicals within sensitive zones
- Programming works outside water harvesting periods
- Coordination with Council for vegetation clearance where required

This ensured compliance with environmental requirements while maintaining productivity on site.

QUALITY ASSURANCE AND SAFETY

A structured QA and safety framework was implemented across all stages of the project:

- **Inspection and Test Plans (ITPs) with defined hold points**
- **Slip resistance testing in accordance with AS 4586**
- **Fastener and installation verification**
- **Coating thickness checks for refurbished steel elements**
- **Level 2 inspection reporting for all structures**

All works were delivered under a **site-specific safety management plan**, including SWMS for high-risk activities such as working near water and manual handling of materials.

BEFORE

AFTER

PROJECT OUTCOMES

The project delivered a fully upgraded boardwalk network with:

- Improved durability through FRP decking systems
- Reduced maintenance requirements compared to timber
- Enhanced safety through slip-resistant surfaces
- Extended service life of existing structures
- Minimal disruption to public use during construction

The staged methodology and detailed planning ensured successful delivery within a constrained and sensitive environment.

WHY COUNCIL SELECTED DM COMPOSITES

DM Composites was selected based on its ability to deliver a specialist FRP solution backed by a detailed, asset-specific methodology.

As demonstrated in the methodology document, the approach was not generic. It was built on:

- Detailed laser scan data and component-level planning
- Proven experience in environmentally sensitive sites
- Integrated capability across design, supply, and installation
- Strong QA, inspection, and compliance processes
- Ability to coordinate complex stakeholder and access requirements

This ensured Council received a durable, low-maintenance outcome delivered with minimal risk and disruption.

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