



DMWALK™

# SOMERSBY FALLS WATERFALL FRP STAIRS UPGRADE



## PROJECT BACKGROUND

DM Composites delivered an integrated FRP access system for the Somersby Falls walking track upgrade in NSW, supporting improved public safety and long-term durability within a highly sensitive natural environment.

The project involved multiple intervention zones along a steep waterfall trail, requiring tailored structural solutions to suit varying terrain conditions, existing rock formations, and retained infrastructure. The scope required a fully engineered, modular solution to support construction within a remote and environmentally sensitive national park setting, where traditional materials and construction methods are heavily constrained.

The works were divided into five distinct sections, each with unique constraints and structural requirements.

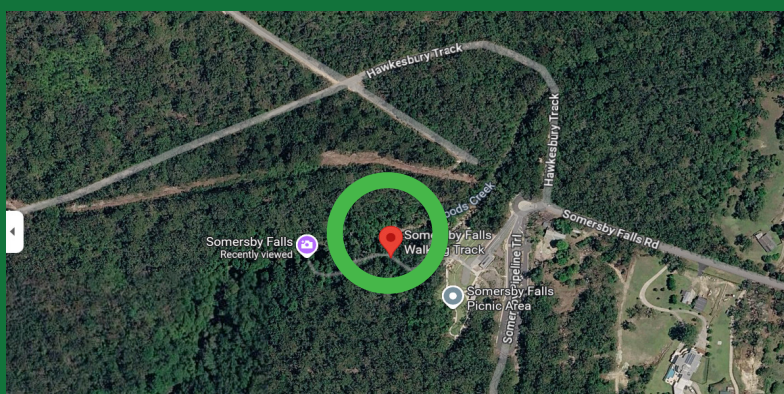


### LOCATION:

Somersby Falls (NSW)

### CONSTRUCTION COMPLETION:

June 2026





## SCOPE OF WORKS

- Design and supply of FRP platforms and stair systems
- Structural design and certification of FRP systems in accordance with AS 2156 and AS 1170 series
- Heights up to 11 m in cantilevered sections.
- Integration with existing rock shelves and concrete stair elements
- Supply of stainless steel fixings for durability in wet environments
- Coordination of hybrid systems combining FRP, hardwood, and steel elements
- Modular design to suit remote installation and limited site access

### Key features included:

- FRP platforms and stairs across multiple zones
- 316 stainless steel balustrade
- Custom interfaces to existing rock and legacy structures



## KEY CHALLENGES

### 1. Environmentally Sensitive Site

All works had to be delivered without disturbing existing exposed rock and bedrock, which was a strict requirement across all sections.

### 2. Complex Terrain & Geometry

The alignment followed:

- Irregular rock shelves
- Steep gradients and level changes
- Existing stair networks requiring partial retention

This required fully customised FRP layouts, including cut-to-fit panels and non-standard framing

### 3. Limited Access

Material delivery was constrained to:

- Manual handling
- Heli-lift operations where required

This directly influenced system design, panel sizing, and connection detailing.

### 4. Hybrid Structural Requirements

The project required coordination between:

- FRP structural elements
- Hardwood framing (as specified)
- Steel and galvanised balustrade systems

Ensuring compatibility across these materials was critical.

### 5. Cultural Heritage

The project was delivered within Brisbane Water National Park and subject to a formal Review of Environmental Factors (REF), including Aboriginal cultural heritage due diligence assessments.

While no known Aboriginal objects were identified within the works footprints, the site is located within a culturally sensitive landscape (cliff lines, watercourses and natural rock formations).

As a result:

- All works were required to remain within the existing disturbed track footprint
- No disturbance to exposed rock or bedrock was permitted
- Construction methodologies were required to minimise ground impact and excavation
- Strict protocols applied, including heritage inductions and unexpected finds procedures



## DM COMPOSITES SOLUTION

DM Composites developed a modular FRP system tailored to the site constraints:

- Lightweight FRP components to enable transport into remote areas through heli-lift operations
- Pre-fabricated panel systems to reduce on-site works
- Custom-cut interfaces to seamlessly align with existing rock formations
- Slip-resistant FRP stair treads and decking suited to wet waterfall conditions
- Stainless steel fixing systems to ensure long-term corrosion resistance

Across key sections:

- **Sections 1 & 3:** FRP platforms integrated with hardwood structures
- **Section 2:** Replacement of balustrade with galvanised steel system
- **Sections 4 & 5:** Full FRP structural systems spanning over existing rock and stairs





## OUTCOME

- Delivered a durable, low-maintenance access system in a high-moisture environment
- Improved public safety and accessibility along the waterfall trail
- Successfully integrated new infrastructure without disturbing natural rock formations
- Provided a solution aligned with long-term asset performance expectations for parks infrastructure

## WHY FRP WAS CRITICAL

This project highlights the value of FRP in challenging environments:

- Corrosion-resistant in constantly wet conditions
- Lightweight, enabling installation in inaccessible areas
- High strength-to-weight ratio, reducing substructure requirements
- Low maintenance, ideal for remote public infrastructure





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