DMWALK™

SEIB & EUMUNDI PEDESTRIAN BRIDGE AND FRP BOARDWALK

PROJECT BACKGROUND

The town of Eumundi in the Sunshine Coast hinterland had long called for safer pedestrian infrastructure along the busy Eumundi-Noosa Road. For decades, locals and visitors shared a narrow road bridge with vehicular traffic, facing daily safety risks with less than a metre of shoulder for walking or cycling.

After repeated community lobbying and as part of a broader road safety upgrade, the $6 million Seib Road Pathway Project was initiated. This landmark development comprises a new pedestrian bridge and a nearly 300-metre-long FRP (Fibre Reinforced Polymer) boardwalk, delivering a safe, accessible, and sustainable pathway across the North Maroochy River.

LOCATION:
Eumundi, QLD, Australia

CONSTRUCTION COMPLETION:
July 2025

DM COMPOSITES' ROLE

DM Composites was responsible for the full design, supply, and erection of:

- A single-span steel truss pedestrian bridge, pre-assembled offsite and craned into position
- An extensive FRP boardwalk system, including substructure, decking, and collapsible handrail technology

DESIGN HIGHLIGHTS AND TECHNICAL EXECUTION

1. Pedestrian Bridge (Steel Truss Design)

- **Span:** 38 metres over the North Maroochy River
- **Weight:** 30.2 tonnes – prefabricated and lifted as a single component during a 7-hour overnight operation
- **Protective Coating:** Factory-applied multi-layer paint system, designed to last decades before requiring maintenance
- **Offsite Assembly:** Minimised environmental impact and disruption to the local community

2. FRP Boardwalk System

- **Length:** ~300 metres, forming part of the local active transport network
- **Components Supplied:**
  - Pultruded FRP beams and bearers for the substructure
  - Molded mini-mesh FRP decking with anti-slip grit finish
  - FRP handrails with a collapsible design to mitigate flood impact
- **Resilience Features**
  - Collapsible handrail system engineered to absorb flood forces, with a controlled shear-off mechanism for extreme events
  - UV-stable and corrosion-resistant materials to endure harsh Sunshine Coast conditions

The Seib Road Pedestrian Bridge is a striking single-span steel truss structure with clean architectural lines and an understated elegance that blends into the natural hinterland setting.

Shape & Design Features:

- A parallel chord truss design featuring slender diagonal and vertical members, creating a visually light yet structurally robust appearance.
- Painted in a soft, neutral tone to harmonise with the lush surroundings and resist UV degradation.
- Total span of 38 metres, crossing the North Maroochy River without mid-stream supports, minimising hydraulic and environmental impact.
- Integrated handrails with sleek FRP infill panels, ensuring safety without obstructing views of the river.

The bridge was fabricated in three sections and fully assembled offsite. In a meticulously coordinated operation, the 30.2-tonne structure was lifted into place as a single component during a seven-hour overnight road closure. This minimised traffic disruption and showcased DM Composites' logistical precision.

The large single span also eliminates the need for piers in the waterway, improving flood resilience and reducing maintenance burdens.

The boardwalk system stretches nearly 300 metres, curving gracefully along the southern side of the Eumundi-Noosa Road to connect seamlessly with the new bridge and existing footpath network.

Technical & Aesthetic Highlights:

- Pultruded FRP substructure: Lightweight yet strong FRP beams and bearers designed for wetland environments.
- Mini-mesh FRP decking: Light grey moulded panels with an anti-slip grit finish, offering exceptional pedestrian safety in wet or moss-prone conditions.
- Collapsible handrail system: A DM Composites innovation engineered to fold under extreme flood loading, mitigating damage from high water levels and debris impact.

Environmental Integration:

- The boardwalk's low-profile design and neutral tones blend seamlessly with the natural riverside environment, preserving Eumundi's charm while providing robust flood protection.

SUSTAINABILITY ACHIEVEMENTS

FRP Advantages:

- Zero corrosion in marine and wetland environments
- No leaching of harmful chemicals (as with treated timber)
- Expected design life of over 50 years with minimal maintenance

Environmental Benefits:

- Reduced CO_2 emissions due to lightweight FRP transportation and handling
- Minimal site disturbance, protecting local vegetation and aquatic habitats

KEY PROJECT HIGHLIGHTS

- Bridge Lift Operation: The iconic 30-tonne truss bridge lifted into place overnight with pinpoint precision.
- Safer Connectivity: 300m of FRP boardwalk integrates seamlessly into Eumundi's existing footpath network.
- Full Compliance: DM Composites delivered to AS 1428 (Access & Mobility), AS 2156 (Walking Tracks), and AS 5100 (Bridge Design).

COMMUNITY IMPACT

The project transformed pedestrian mobility in Eumundi, delivering:

- safe crossing for schoolchildren, commuters, and tourists
- Improved right-turn facilities and asphalt upgrades to local roads
- A visually appealing structure that complements the natural hinterland setting

CHALLENGES AND SOLUTIONS

FLOOD RESILIENCE

Located in a flood-prone river zone, the boardwalk was designed to minimise hydraulic resistance. The absence of in-stream piles for the bridge reduces waterway obstruction and upstream flood risk.

COMMUNITY IMPACT

Prefabrication and overnight installation minimised road closures and local disruption, with extensive coordination to achieve a seamless lift operation.

ENVIRONMENTAL STEWARDSHIP

All cutting and sealing of FRP materials was completed offsite, preventing microplastics release into waterways. Installation crews adhered to strict erosion and sediment control measures throughout the works.

BRIDGE ASSEMBLY




BRIDGE PAINTING

BRIDGE ERECTION






DM COMPOSITES

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