DM COMPOSITES

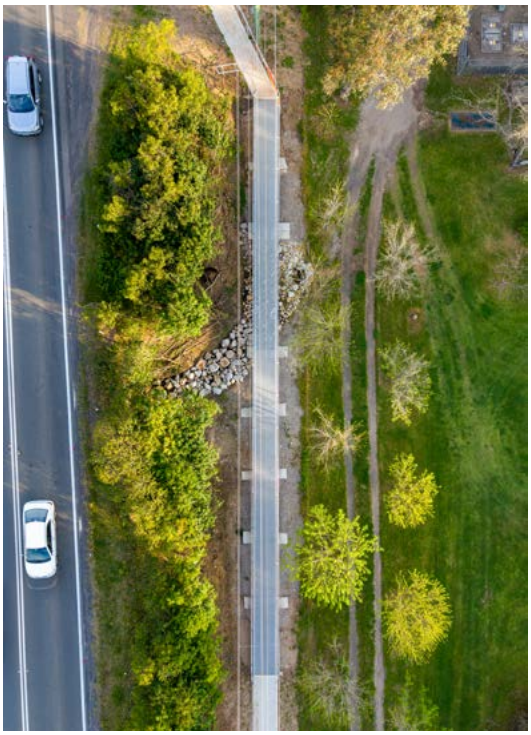
DMWALK™

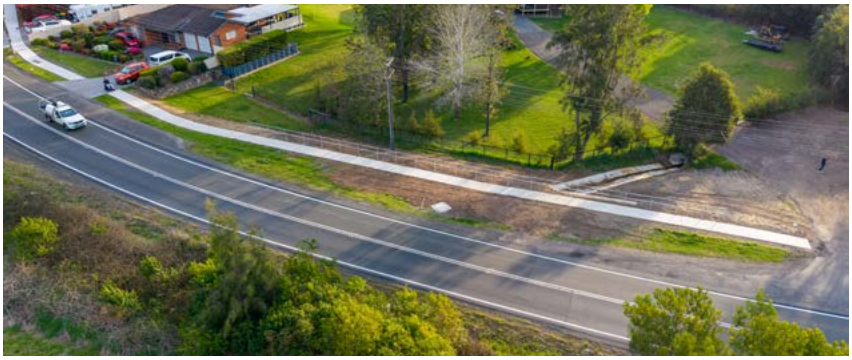
WOLLONDILLY FOOTPATHS FRP ELEVATED BOARDWALK

PROJECT BACKGROUND

As part of the WestInvest community infrastructure program, Wollondilly Shire Council embarked on a multi-site upgrade to expand and formalise pedestrian and cyclist links. One of the highest priority sites was Menangle Street, Picton – a key corridor connecting residential areas with the town centre, schools, and community facilities.

Before the works, footpaths were fragmented, narrow, and non-compliant with accessibility standards. Council's goal was to deliver a modern, continuous shared path that enhances safety, supports active transport, and reduces reliance on vehicles.



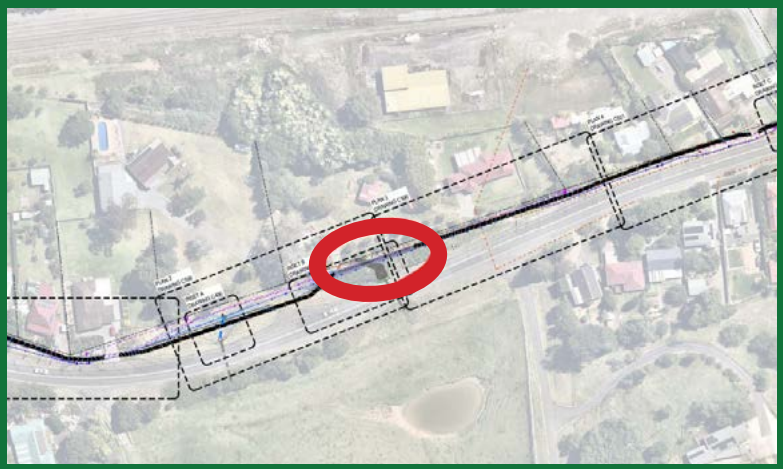


LOCATION:

Menangle St, Picton (NSW)

CONSTRUCTION COMPLETION:

AUGUST 2025



DM COMPOSITES' ROLE

DM Composites' scope encompassed the design and supply of:

Suspended walkway sections: incorporating FRP minimesh decking, supported on galvanised SHS/PFC headstocks with max 4 m centres.

Safety infrastructure: Moddex Bikesafe BS20 side-fixed barrier system with M16 through bolts at steep embankments.

Structural steelwork: hot-dip galvanised, welded in accordance with AS 1554, 300 MPa sections and plates (AS 1204), bolted with Grade 8.8 fixings, and site-welded by certified boilermakers (per project steel notes).

DESIGN & TECHNICAL SOLUTION

Structural System:

The design package addressed:

- AS/NZS 1170 (structural design actions for pedestrian/cycle loading).
- AS 5100 (bridge design elements for suspended walkway).
- AS 1657 (walkways, platforms, and safety barriers).

Suspended Walkway & Decking

- **FRP Mini-Mesh Panels:** UV-stable, anti-slip, 50+ year design life.
- **Support Structure:** Hot-dip galvanised SHS and PFC headstocks at max 4 m centres.
- **Foundations:** 300 mm dia reinforced concrete piers (N12–300 helix reinforcement, 1.8 m embedment).

Balustrade System

- **Type:** Moddex Bikesafe BS20 side-mounted system.
- **Fixings:** M16 through-bolts and rivets into galvanised steel framing.
- **Geometry:** Variable post spacing (1.5–2.2 m) dictated by underground services and stormwater locations.
- **Finish:** Industrial-grade galvanising for coastal exposure, compliant with AS 1657 and Austroads Guide Part 6A.

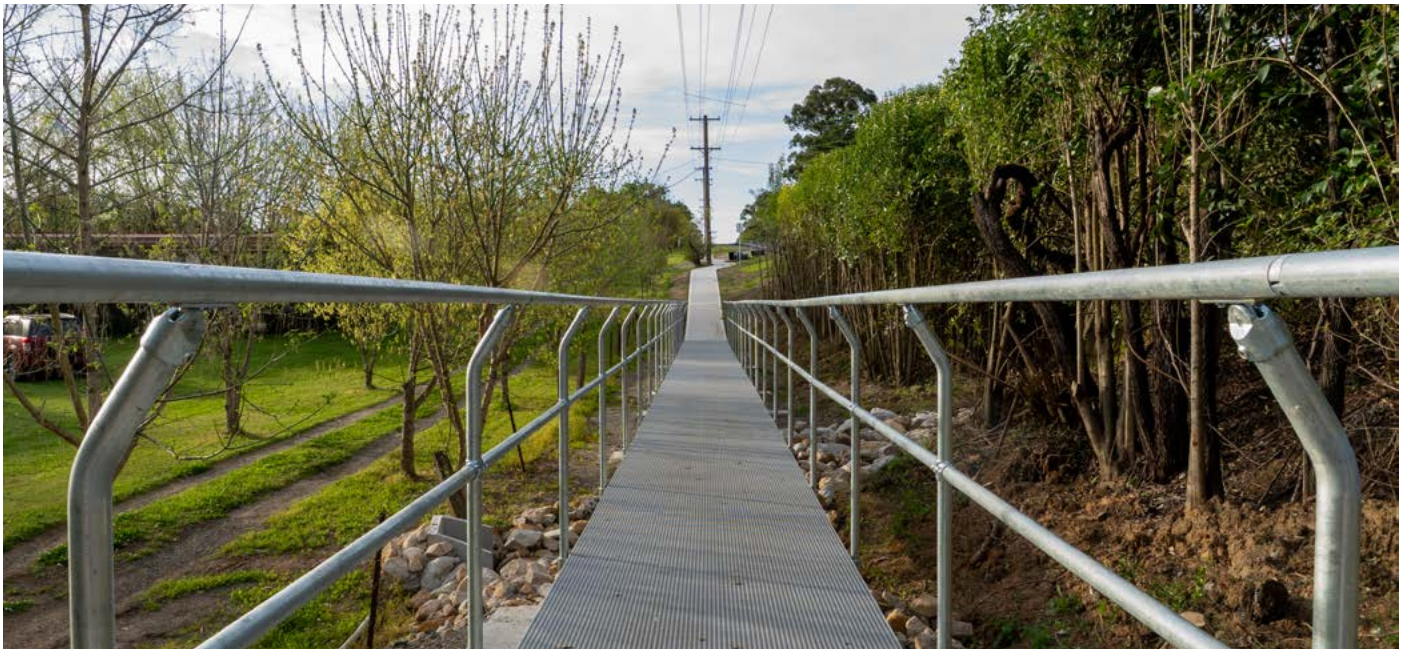
CONSTRUCTION CHALLENGES & SOLUTIONS

Stormwater Integration

The most significant challenge was the interface between the suspended walkway piers and the new stormwater system. Large-diameter culverts and pits limited available space for footings.

To avoid clashes, post and pier spacing had to be adjusted on site, deviating from standard centre-to-centre layouts.

Customised baseplate detailing allowed the balustrade stanchions to align safely with the deck edges while avoiding buried services.



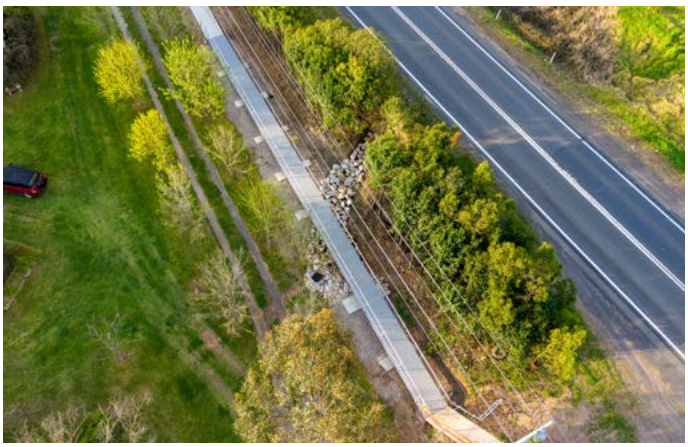
SUSTAINABILITY & BENEFITS

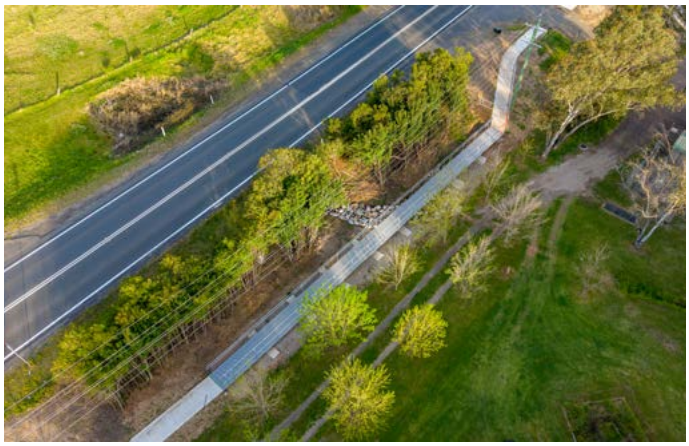
- **FRP Decking:** Corrosion-proof, non-toxic, no painting required, long lifecycle.
- **Hot-Dip Galvanised Steel:** Durable, reducing whole-of-life maintenance costs.
- **Active Transport Link:** Encourages walking and cycling, particularly for students and commuters.
- **Stormwater Resilience:** Improved drainage and scour protection reduces local flooding.

OUTCOMES

- A safe, continuous off-road pathway connecting key community destinations.
- A structurally efficient suspended 35m long FRP walkway that accommodates stormwater and challenging ground conditions.
- A durable balustrade system that provides safety while adapting to site constraints.
- Minimal maintenance burden for Council, with 50+ year design life.





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