



DMMARINE™

**WARNEET NORTH
JETTY REBUILD**

PROJECT BACKGROUND

For generations, the Warneet North Jetty has stood as a symbol of the township’s deep connection to the water. Originally constructed in the 1950s, replaced in 1973, and again in the 1990s, this jetty has served as a cherished destination for fishing, boating, and social gatherings on the Western Port foreshore.

In 2020, Parks Victoria closed both the Warneet North and South Jetties after structural assessments found them unsafe for public use. This closure sparked the “Save Warneet Jetties” campaign, driven by local residents and community groups determined to restore access to one of Victoria’s most historically significant boating locations.

Following several years of planning and consultation, the Warneet North Jetty was rebuilt under the Victorian Government’s \$46 million program for pier and jetty renewals, a statewide initiative to revitalise aging maritime infrastructure.



LOCATION:

Warneet, VIC, Australia

CONSTRUCTION COMPLETION:

OCTOBER 2025

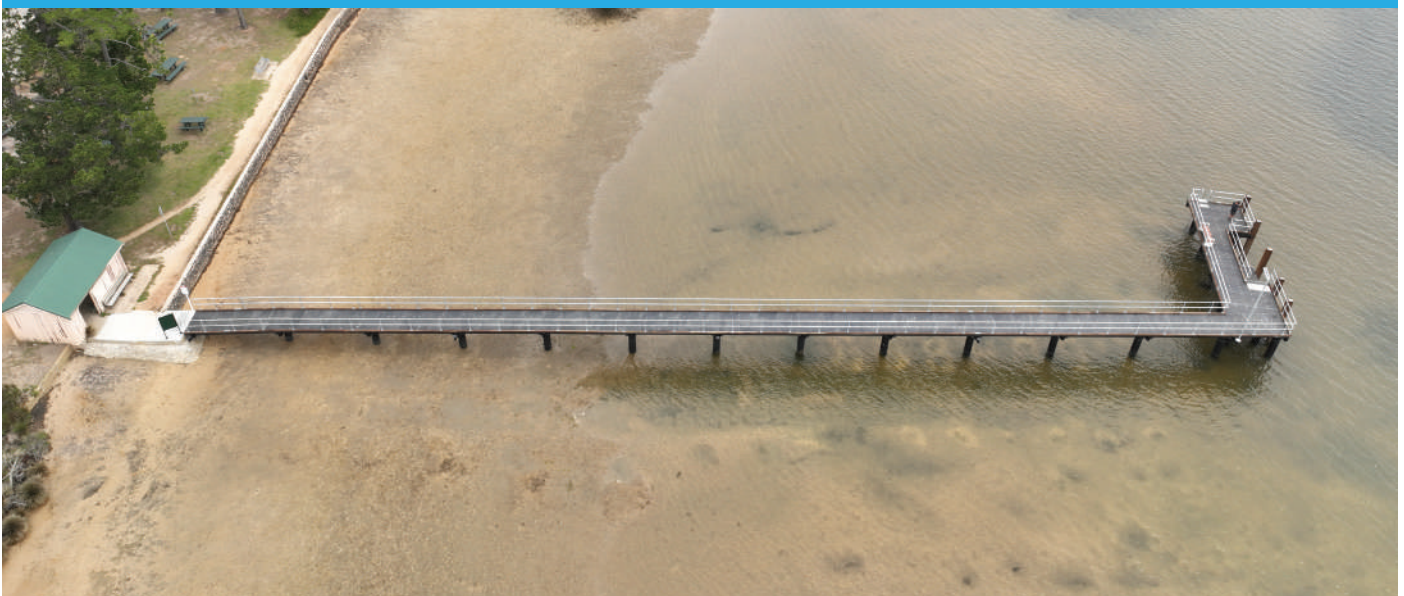


DM COMPOSITES' ROLE

DM Composites was engaged to design, supply, and fabricate a full FRP decking and access system for the new jetty. The scope included:

- Supply of DM MINI™ FRP mini-mesh gratings and FRP stair treads with anti-slip safety nosing.
- Pre-cut and labelled decking panels, fabricated using BIM modelling for exact fit and rapid installation.
- Engineering collaboration to ensure full compliance with AS 2156.2 (Walking Track Structures) and AS 4997 (Maritime Structures).
- Colour selection and surface finishing to blend with the marine environment and ensure long-term UV stability.

The final structure features an L-shaped FRP jetty, approximately 70 metres long by 2 metres wide, with a 14-metre by 3.7-metre landing head extending into the inlet for improved boat access and recreational use.



DESIGN & TECHNICAL SOLUTION

The Warneet North Jetty was engineered as a hybrid structure combining galvanised steel piles and substructure with a fully composite FRP decking system, delivering exceptional durability in the highly corrosive tidal waters of Western Port Bay.

FRP Mini-Mesh Grating

- Thickness: 38 mm with 19 × 19 mm apertures
- Finish: Gritted anti-slip surface for pedestrian safety
- Colour: Charcoal Grey (RAL 7021) for glare reduction and aesthetic integration
- UV-stabilised and fire-retardant resin system (tested to AS/NZS 3837).

FRP Stair Treads

- Factory-installed white gritted nosing for visibility and safety.
- Compatible with the landing access stairs at both low-level platforms.

Precision Engineering

- The jetty was redrawn in 3D BIM to ensure dimensional accuracy and minimise on-site cutting.
- All panels were delivered pre-cut, pre-drilled, and installation-ready.

Substructure

- Supported on new steel piles driven into the seabed, coated to marine specification.
- FRP decking attached via stainless-steel 316 fixings for long-term corrosion resistance.

BEFORE



AFTER





ENVIRONMENTAL & COASTAL CONTEXT

Situated within the Western Port Coastal Reserve, the Warneet site forms part of a wetland of international significance listed under the Ramsar Convention. This meant construction needed to minimise impacts on the surrounding mangrove and intertidal ecosystem.

DM Composites' FRP technology provided a key environmental advantage:

- Non-corrosive and inert — no leaching of metals or coatings into marine habitats
- Lightweight components — reduced use of heavy machinery and minimal seabed disturbance
- Long design life — reducing the need for future interventions or replacement works.

By eliminating the maintenance cycles associated with timber and coated steel, the FRP system contributes to a sustainable and low-carbon infrastructure legacy for Parks Victoria's coastal asset network.

CONSTRUCTION & ACCESS CHALLENGES

1. Marine Weather Conditions

Western Port's tidal range and wind exposure required staged installation between tidal windows. Pre-fabricated FRP panels allowed for rapid installation, reducing site exposure times and crane operations.

2. Site Access Limitations

The jetty location was accessible only via the foreshore trail and temporary barge support. DM Composites' lightweight FRP panels (weighing less than one-third of equivalent steel) enabled safe manual handling and installation in these restricted areas.

3. Corrosion & UV Exposure

Given the jetty's full-time exposure to saltwater and UV radiation, DM Composites selected a high-grade vinyl ester resin system with integrated pigmentation — avoiding the peeling or flaking seen in coated alternatives.

COMMUNITY & RECREATIONAL BENEFITS

The renewed Warneet North Jetty reinstates a treasured public space for fishing, boating, and birdwatching — revitalising the foreshore as both a recreational hub and environmental asset.

It also acts as a key node along the Warneet Coastal Trail, linking the mangrove boardwalk and picnic facilities to nearby Cannons Creek. Local businesses, including the Warneet Boat Club and Warneet General Store, are already reporting increased visitation since reopening.

This project exemplifies how durable, sustainable materials can deliver lasting social and economic value, while respecting the natural character of Victoria's coastal landscapes.





DM MARINE™ WARNEET NORTH JETTY REBUILD CASE STUDY