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LUGARNO PASSIVE WATERCRAFT LAUNCHING FACILITY

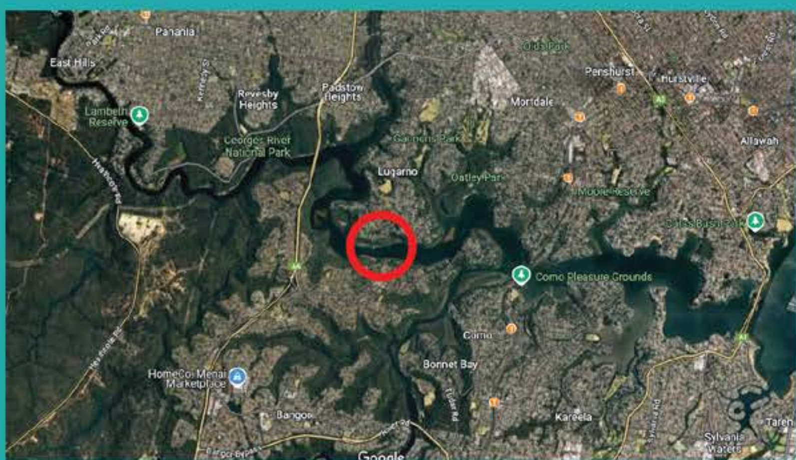
PROJECT BACKGROUND

The Lugarno Passive Watercraft Launching Facility emerged from the Georges River Foreshore Access and Improvement Plan 2021, with the goal of enhancing recreational access to the riverfront. Recognizing the growing popularity of kayaking and other non-motorized watercraft, Georges River Council envisioned a low-impact, inclusive infrastructure solution that would encourage healthy outdoor lifestyles while preserving the area's natural beauty.

Located along a serene stretch of the Georges River foreshore, this purpose-built launching site allows for safe and convenient access to the water by paddlers, families, and recreational users. The project integrates thoughtful design, sustainable material selection, and compliance with rigorous safety standards to create a user-friendly public asset.

LOCATION:
Lugarno, NSW, Australia

CONSTRUCTION COMPLETION:
May 2025



DM COMPOSITES' ROLE

DM Composites was entrusted with the detailed design, supply, and advisory services around the FRP balustrade system that frames the launching facility. Our team worked closely with project managers and design consultants to ensure the structure met strict safety, durability, and environmental standards—while maintaining visual harmony with the natural riverside surroundings.

Key Deliverables:

- Design and supply of Fibre Reinforced Polymer (FRP) balustrade system
- Integration of horizontal SS316 stainless steel wire infills
- FRP post system with engineered grab rail for enhanced user safety

Compliance with NCC (National Construction Code), BCA (Building Code of Australia), and relevant Australian Standards

DESIGN HIGHLIGHTS AND TECHNICAL EXECUTION

BALUSTRADE SYSTEM DESIGN

The balustrade system was engineered to meet two competing demands: structural integrity and aesthetic minimalism. DM Composites proposed a horizontal wire infill system framed by durable FRP posts with a clean, architectural look, finished with a corrosion-resistant stainless steel grabrail.

- FRP Posts: UV-stable and corrosion-resistant, ideal for waterfront environments. Each post was spaced at 1.5m intervals, standing 1000mm above the deck for safety and code compliance.
- Stainless Steel Wire Infill: SS316 marine-grade stainless steel was selected for its high corrosion resistance in saltwater-exposed environments. Wire spacing and deflection criteria were strictly managed to comply with NCC/BCA regulations and ensure child safety.
- Grabrail Integration: A robust stainless steel top rail was included for additional pedestrian support, improving usability for elderly or mobility-challenged visitors.

ENGINEERING CONSIDERATIONS

A core challenge was balancing open visibility with safety compliance. DM Composites provided full technical documentation to address:

- Wire diameter and lay specifications
- Maximum tension and allowable deflection under load
- Anchoring methodology for FRP posts to deck substrate
- Compliance documentation across AS1657, AS/NZS 1170.1, and NCC performance standards

ENVIRONMENTAL AND LONG-TERM PERFORMANCE

Using FRP (Fibre Reinforced Polymer) as a structural element was a strategic decision aligned with sustainability and lifecycle performance objectives:

- Zero corrosion: FRP resists degradation from salt, moisture, and UV exposure—critical in riverside environments.
- Low maintenance: Unlike timber or painted steel, FRP doesn't require recoating, sanding, or chemical treatments.
- Long design life: The system is expected to exceed 50 years of useful life under standard usage and exposure conditions.
- Lightweight handling: Reduced installation weight minimized the need for heavy machinery on-site, preserving the local environment and reducing emissions.

COMMUNITY IMPACT

The completed facility now serves as a critical piece of passive recreation infrastructure for the Lugarno community. Users now benefit from:

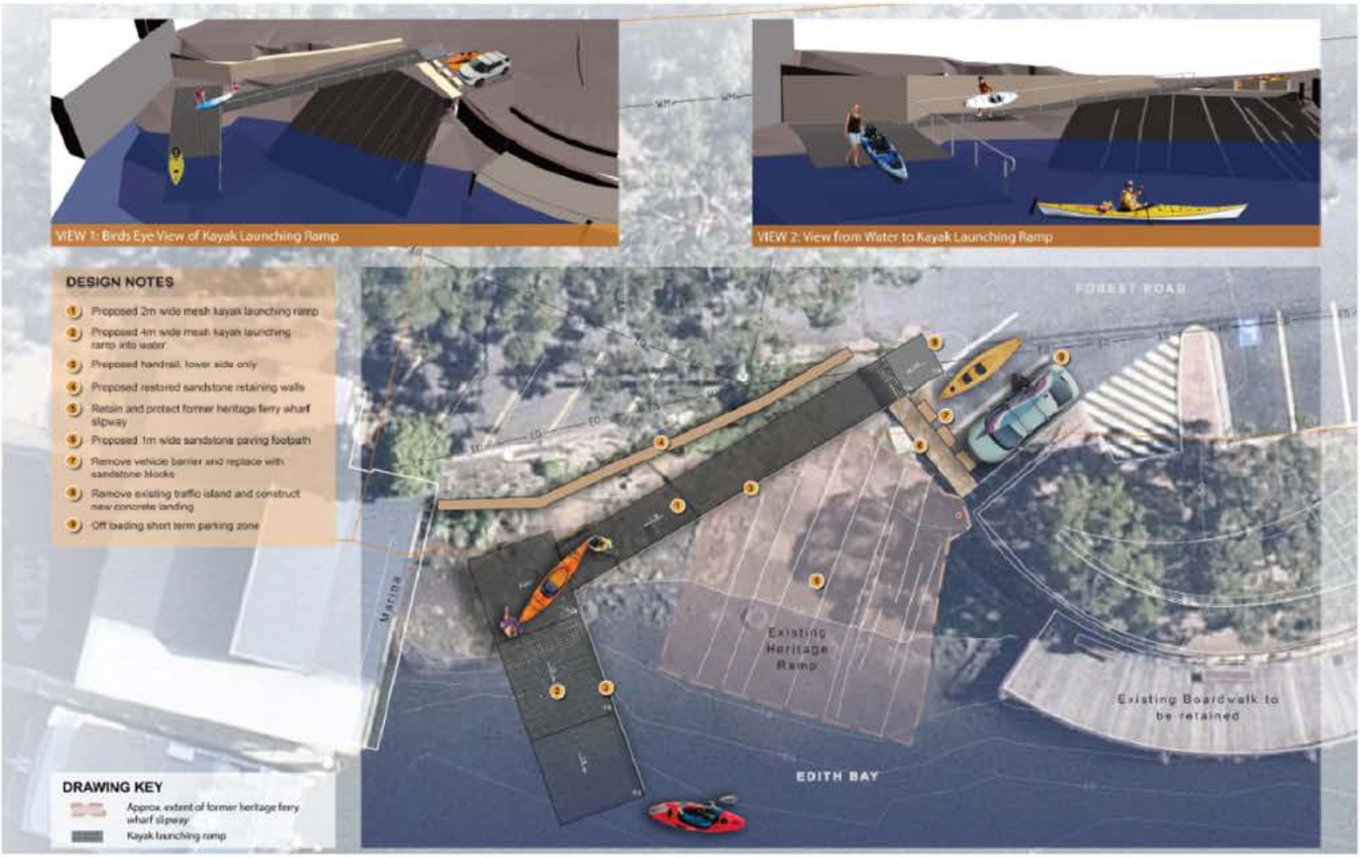
- Safe, barrier-free access to the Georges Rive
- A durable and modern balustrade that does not obstruct the view of the foreshore
- Infrastructure that promotes low-impact water activities and mental wellbeing

DM Composites is proud to have contributed to this community-focused initiative. The design choices made on this project now serve as a reference for future waterfront works involving passive recreation and environmental stewardship.

KEY OUTCOMES

The North Hibbard Jetty serves as a critical community access point for boating, fishing, and recreational activity along the Hastings River. Its restoration represents not just infrastructure recovery, but a symbolic return of public space after natural disaster.

- Successful delivery of a compliant, visually appealing FRP balustrade system
- Full alignment with Council's goals of promoting outdoor activity and environmental integration
- Demonstrated DM Composites' technical capacity to deliver waterfront public infrastructure with modern FRP solutions
- Reinforced community trust in local government infrastructure investment



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