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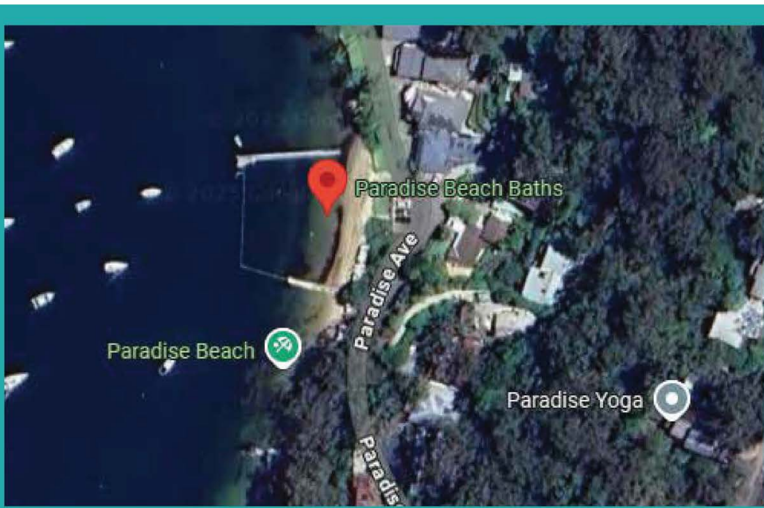
PARADISE BEACH TIDAL POOL RENEWAL CASE STUDY

CASE STUDY

LOCATION:
Paradise Beach Baths,
Avalon Beach (NSW)

CONSTRUCTION START: June 2024

CONSTRUCTION COMPLETION:
November 2024



INTRODUCTION

Located on the Northern Beaches of New South Wales, the tidal pool and surrounding wharf have long been a vital part of the local landscape. With a history dating back to the 1940s, the original structure has reached the end of its life and requires a full rebuild. The newly reconstructed facilities have remained faithful to the original footprint while incorporating modern design elements and upgrades to improve accessibility, safety, and environmental sustainability.

PROJECT OVERVIEW

This ambitious renewal project involved the construction of a modernised wharf, tidal pool, and heritage groyne, with a strong focus on environmental sustainability and community accessibility. The main objectives of the project are to:

- Replace the deteriorating infrastructure while maintaining the site's heritage value.
- Improve safety by raising the wharf, tidal pool walls, and groyne to prevent flooding during high tides.
- Upgrade environmental features such as safety netting and access ladders.
- Minimise the environmental impact on the threatened Posidonia seagrass and surrounding marine life.

The project also prioritised long-term durability and low maintenance, ensuring that the new structure will stand the test of time while preserving the site's historical charm.

KEY FEATURES

The construction incorporates high-strength, environmentally friendly materials, such as HDPE sleeved steel piles, shark netting, and FRP structural profiles supplied by DM Composites. These materials are designed to withstand the harsh coastal environment, reducing the need for frequent repairs and minimising long-term maintenance.

The new wharf features tidal stairs and ladder access, elevated to account for tidal conditions, ensuring safe and easy access even during high tides. The raised structure is designed to provide a more resilient solution, mitigating risks of flooding and other safety hazards associated with the aging infrastructure.

The original groyne, which has been in place for decades, has been upgraded with a widened concrete capping. This improves the structural integrity of the groyne while preserving its historical character.

Special care has been taken to mitigate any impact on the local marine ecosystem, including the protection of the threatened Posidonia seagrass. The design includes a 600mm raise of the wharf deck and pool walls, ensuring that they remain above the waterline during higher tides, thus reducing the risk of the structure being submerged and providing a safer environment for both aquatic life and people.

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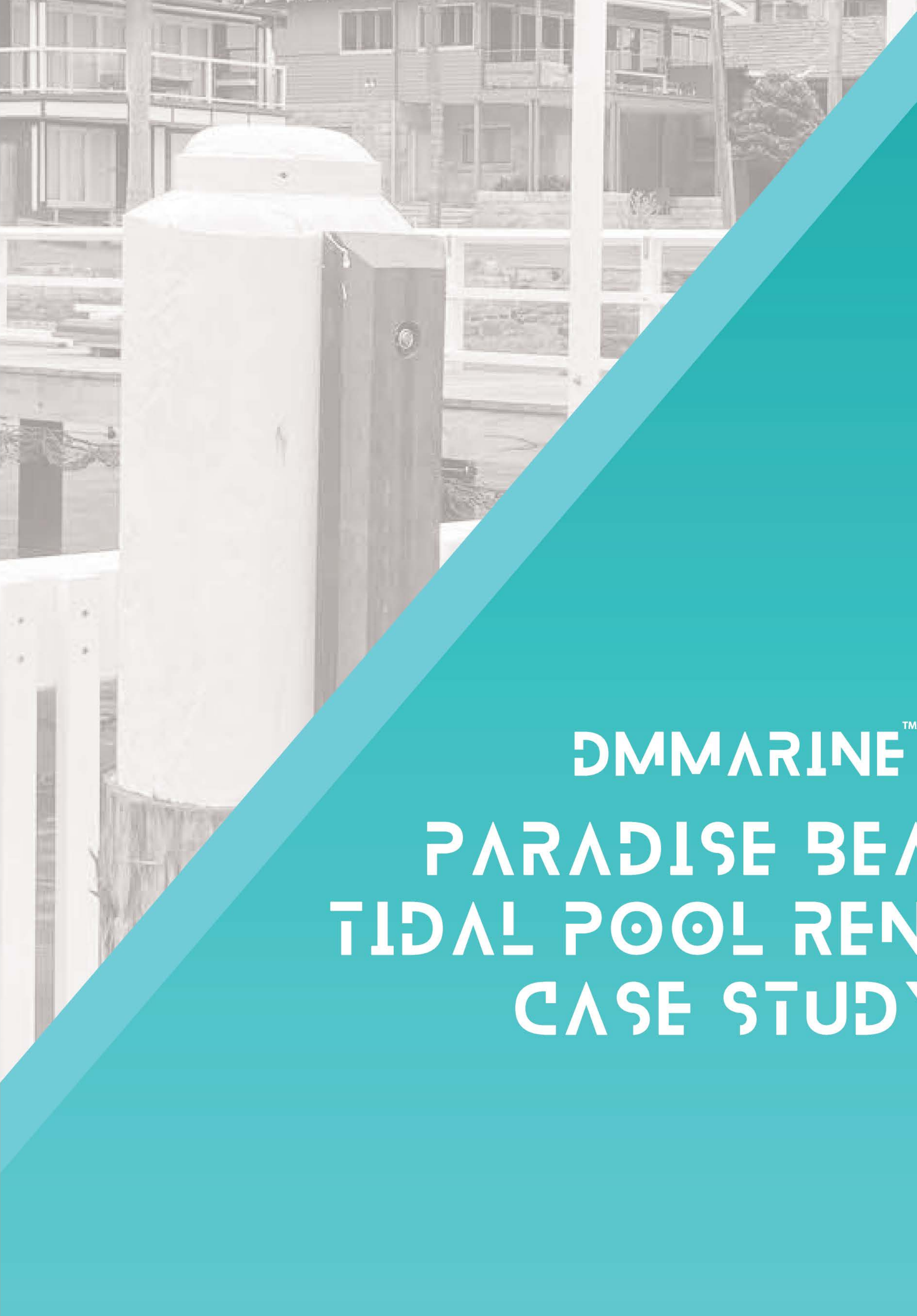
ENVIRONMENTAL MANAGEMENT & SUSTAINABILITY

Environmental impact has been a key consideration throughout the project. The materials chosen for the construction were selected with longevity and sustainability in mind. The use of FRP materials from DM Composites, in particular, provides strength and durability while reducing the maintenance requirements over time. This contributes to the overall sustainability of the project by reducing the frequency of repairs and potential disruption to the marine environment.

OUTCOME

The Paradise Beach Tidal Pool Renewal project has been a remarkable success, blending heritage preservation with modern functionality. Through careful planning, environmentally conscious design, and the use of durable materials, DM Composites has helped breathe new life into this iconic community asset. The project not only addresses the immediate needs of the site but also ensures its long-term sustainability, making it a valuable resource for the Northern Beaches community for years to come.

The local community, including families, tourists, and marine enthusiasts, will continue to enjoy the stunning natural beauty of the area, with better access to the water and more opportunities for recreation. The upgrades also position the site as a more resilient and future-proof facility, ready to withstand the challenges posed by rising tides and environmental changes.



DM COMPOSITES

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