



## CASE STUDY

# Synthetic Mooring Trial

*Gold Coast, QLD, Australia*



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## Project Overview



### Application

Synthetic Mooring trial as a more cost-effective solution to traditional buoy mooring



### Product

Synthetic Mooring - 20 tonne, cast iron mooring weight, SL-B1500 east cardinal buoy



### Location

Gold Coast, Queensland, Australia



### Date

March 2017 (18 month trial period)



As an alternative to traditional mooring, synthetic mooring provides a lightweight and environmentally sensitive option to standard chain and are ideal for many marine mooring applications.

### Background

Gold Coast Waterway Authority play an important role in managing and protecting the Gold Coast's iconic waterways, and are responsible for 260km of navigable waters plus more than 750 hectares of lakes and dams.

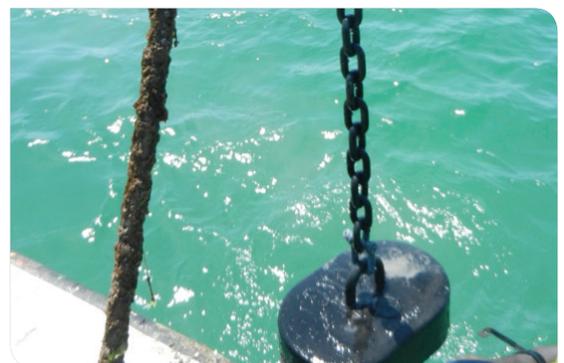
In an effort to improve channel options, new navigation buoys have been established with the key action of enhancing the waterways, by completing the channel with navigation aids.

Due to the large number of aids to navigation within the Gold Coast waters, the Gold Coast Waterway Authority were eager to trial an alternative to traditional chain moorings with the objective to save in the replacement cost of chain plus reduce maintenance and handling costs.

### Project Overview

As an alternative to traditional mooring, synthetic mooring provides a lightweight and environmentally sensitive option to standard chain and are ideal for many marine mooring applications. For this reason, the Gold Coast Waterway Authority made a decision to trial synthetic mooring to see if this option would benefit themselves, as well as already having a positive effect on marine life.

Traditional mooring components were 32mm ground chain with a 280kg concrete block used as a mooring weight, with the trial using 20 tonne, 7 metre synthetic mooring with 250kg cast iron mooring weight for a 18 month period.



## Outcome

After the trial period, the 2 mooring solutions were inspected and the synthetic mooring line was found to be in excellent condition, including the wear points on the thimbles and shackles. The decision to replace a vast majority of buoy moorings with the new synthetic solution was an easy choice, considering the cost of replacing chain due to corrosion and wear every 2-3 years, when compared to synthetic mooring lasting 5-6+ years.

With the added benefits of reduced maintenance costs due to easier and shortened cleaning times, reduced handling costs and the fact the synthetic solution minimises damages to the seabed, the Gold Coast Waterways Authority were excited to reap the benefits of this solution and roll it out in future navigation aid projects.

## Benefits of Synthetic Mooring

Synthetic mooring is made up of heavy duty nylon fibre construction and is covered in industrial rubber that protects the nylon from corrosion. The unique design of the embedded thimbles eliminates fraying of the nylon fibres, whilst the abrasion and cut resistant rubber is UV stabilised and salt water resistant allowing it to be virtually maintenance free for years.

The use of nylon and rubber materials ensures the mooring line is lightweight and very flexible whilst maintaining the break strength of traditional chain. The lightweight solution means handling, installation and servicing is made easier with a reduction in heavy lifting and deployment equipment.

The Sealite synthetic mooring line is a high-performance solution, best suited for marine conditions and environments. With over 50 different types available, the Sealite synthetic mooring solution offers exceptional value in the market and is perfect for use in rivers, lakes, estuaries, harbours, bays and oceans.



## Benefits

- Very flexible, lightweight and suitable with various attachment devices
- Easy to install with galvanised or stainless steel thimble eyelets embedded into the rubber casing
- The mooring line is UV stabilised and salt water resistant allowing it to be maintenance free for years
- Abrasion/cut resistant rubber protects the inner nylon fibres from the elements and keeps out water, mud and creatures
- Friendly to the marine environment
- Multiple lengths to suit any application



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