

## Environmentally Friendly Moorings

### Moreton Bay and Seagrass

Seagrass meadows form one of the most important marine habitats globally and occur in shallow coastal waters including Moreton Bay. This ecosystem provides habitat for juvenile fish and crustaceans that form the basis of commercial and recreational fisheries as well as marine biodiversity.

In Moreton Bay there exists seven species of seagrass that form important habitat areas for a number of marine species and an important food source for dugongs and green turtles.

Seagrass beds face a number of threats, including sediment runoff, algal blooms, and damage from block and tackle moorings.

### Environmentally Friendly Mooring Trial 2009-2011

Block and tackle moorings rip out seagrass as the chain drags on the sea floor, creating 'crop circles' in a classic halo shape, as the tide moves in and out and chains drag round and round on the seagrass meadows. These crop circles can be seen very clearly in aerial imagery. The amount of disturbance varies with the length of the mooring chain and may be between 200m<sup>2</sup> to 5000 m<sup>2</sup> per vessel in Moreton Bay.

Environmentally friendly moorings cause less damage to the seagrass bed, by ensuring there is minimal contact with the sea floor, while still being able to safely secure vessels in the environmental conditions of Moreton Bay.

Between 2009-2011, Healthy Land and Water (formerly SEQ Catchments) was involved with an environmentally friendly mooring trial which assessed the effectiveness of different types of environmentally friendly mooring designs in several locations throughout Moreton Bay, whilst also raising awareness on the benefits of these moorings compared to block and tackle boat mooring designs.

The trial was successful in showing a significant recovery of seagrass species surrounding these moorings and identified minor design changes to make moorings adaptable to local conditions.

### Mooring Replacement Program 2012 - 2015

Following the successful Environmentally Friendly Mooring trial, Healthy Land and Water with funding from the Queensland and Australian Governments has worked with project partners Fisheries Queensland, Maritime Safety Queensland (MSQ), Moreton Bay Marine Park, the Queensland Recreational Boating Council, and the Quandamooka Yoolooburrabee Aboriginal Corporation to develop a mooring replacement program to assist owners of moorings in priority seagrass beds to greatly reduce their impacts to the marine environment. Over 130 moorings have now been replaced within Moreton Bay.



Photo: Moreton Bay's seagrass beds are vital for maintaining a healthy dugong population.

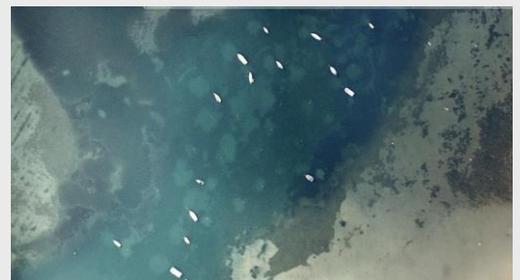


Photo: Aerial photo showing mooring damage to seagrass beds.



Photo: Analysis has been conducted of seagrass density and mooring locations.

## The Mooring Systems

Unlike block and tackle moorings, the mooring systems used in the replacement program utilise a single mooring post which is screwed into the sea floor as an anchor point, providing an enhanced level of security. Attached to the mooring post are engineered tackle designs which incorporate a high level of shock absorption while also removing impacts to the seafloor. The mooring designs used are known as the Seagrass Friendly Mooring and the Eco-Mooring and have been used in other areas throughout Australia and overseas.

Both of these mooring products are installed by qualified contractors and come with minimum 12-month product warranties.

These mooring designs have been selected as they have been found to be the most reliable environmentally friendly mooring systems tested through trials conducted in Moreton Bay.

## How does the replacement program work?

Block and tackle mooring owners located in priorities areas are eligible to receive full replacement of their current mooring system with either a Seagrass Friendly Mooring or an Eco-Mooring if their current mooring is determined to be in a priority location for the recovery of seagrass and marine habitat.

Following expression of interest from mooring owners and an assessment by the program steering committee, Healthy Land and Water will form an agreement with each mooring owner to contract the mooring providers to install the new moorings on behalf of the owners as well as liaising with the relevant State Government agencies to facilitate the replacement.

Once installed, the mooring is then the sole responsibility and property of the mooring holder.



Photo: An example of one of the mooring systems used, the Seagrass Friendly Mooring

Healthy Land and Water thanks the following for their support and involvement with developing this Fact Sheet:



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