

The Blue Meadows Approach



Blue Meadows

Blue Meadows, a project run by the Ocean Conservation Trust, is a holistic approach to seagrass conservation in the UK. Working solely with subtidal *Zostera marina*, we are working to protect and restore this vital habitat, whilst taking a people-focused approach to its conservation.

Working to restore what we have lost and protect what we have

Our current sites:



Our aims:

- 1 Protect 10% of UK seagrass meadows (roughly 700 hectares)
- 2 Restore 50 hectares of seagrass annually
- 3 Connect communities with their local seagrass meadows and empower them to take action for its protection

Our impact to date:



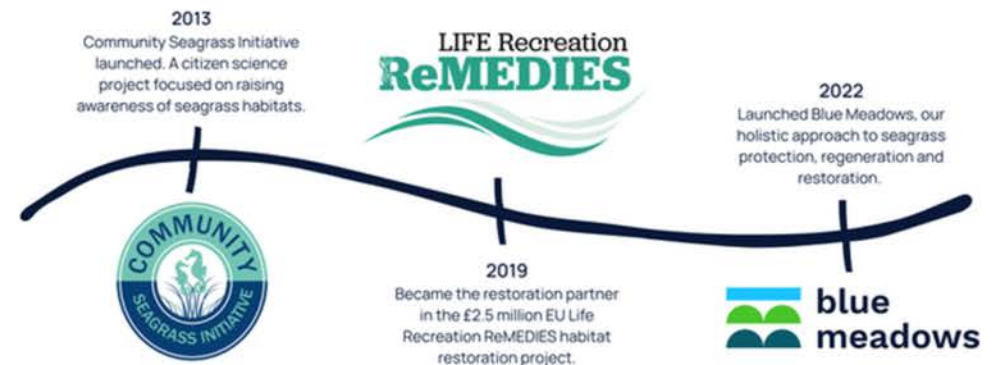
215 hectares of seagrass protected (in Falmouth, Plymouth, Torbay, Studland and Poole)



12 hectares of seagrass planted (1 hectare in the Solent, 3 hectares in Torbay, 8 hectares in Plymouth)

(correct as of March 2025)

How did we get here?



Restoration

Blue Meadows is working to restore subtidal Common eelgrass (*Zostera marina*). Every summer, our dedicated team of divers hand collect over 1 million seeds to use throughout the year.

After collection, the seeds are brought back to the National Seagrass Nursery (Galmpton, Torbay) for processing. This involves allowing the plant material to break down, which will then settle to the bottom of the tanks, leaving the seeds floating on top - allowing for easy collecting.

This process mimics the natural processes of seed dispersal. Seeds will then be stored in our custom seed storage unit at the NMA, at around 4oc, creating unfavourable conditions for the seeds and preventing germination. This process is vital in ensuring we have seagrass seeds all year round, especially when *Zostera marina* only produces seed for one month a year!

Through much trial and error, we are currently using two main restoration methods:



Seed Mat Technology (SMT)

Our seed mats involve a coconut husk mat placed within a recycled crate, filled with horticultural sand. 100 seeds are then hand-planted systematically within the crate. These crates are then cared for by our cultivation team, who will aim to grow the plants until they are strong enough to survive in the wild (3-4 months).

In the wild/natural conditions, *Zostera marina* seeds have low germination success with less than 15% of seeds usually germinating. In our specialised growing facility, we have managed to raise the odds of seeds germinating to a fantastic 70%!



HMS OCToPUS

Our Seed Mat Technology comes with many different challenges, including the time and materials needed to grow plants to the desired size, and the short planting window in which they can be out of water. These factors currently limit our project, so we developed the HMS OCToPUS (Hydro Marine Seeder Ocean Conservation Trust 'o' Pressurised Underwater Seeder).

The HMS OCToPUS allows us to directly inject seeds into the seabed. The seeder is filled with a mixture of seeds and growing material. Each seeder releases 9 seeds per activation, to perfect depth, which can result in up to a hectare of seagrass being planted in one day!



Protection

Blue Meadows is working to protect against the physical impact of anchoring boats and traditional swing moorings to the seabed.

To do this, we have been installing Sensitive Habitat Marker Buoys at each of our Blue Meadows sites. These marker buoys are placed outside of the known seagrass area, with the aim of increasing visibility of seagrass and encouraging boat users to anchor outside of these areas. Dependent on the site, there may be different information on the buoys, including: VNAZ (Voluntary No Anchor Zone), a speed limit, and sensitive habitat.

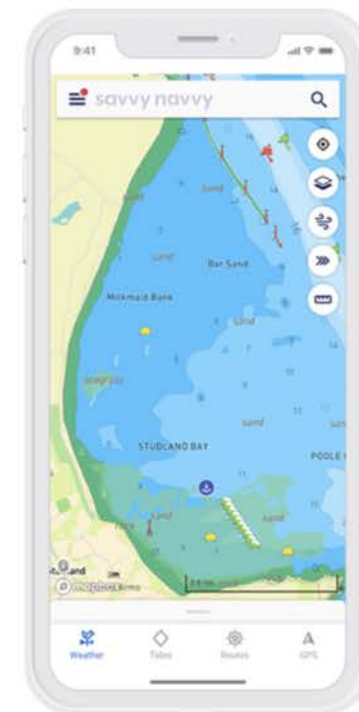
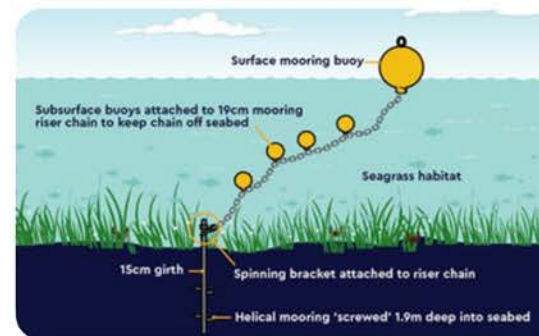
We understand that buoys are not enough to make seagrass visible, which is why we are also teaming up with different organisations to put seagrass on navigational charts.

To start this movement, we are working with [Savvy Navvy](#) (think Google Maps for boat users) who have mapped all Blue Meadows protection measures as well as the location of UK seagrass meadows. The team at Savvy Navvy are currently working on mapping European seagrass meadows too – great for people taking their boat on holiday!



We have also developed Advanced Mooring Systems, through the ReMEDIES Project.

These moorings have been designed to have floats along the chain to prevent it from dragging along the seabed. This serves two purposes: a) it significantly reduces the area of seabed that is damaged by the chain, and b) it facilitates natural regeneration of the seabed.



As of the beginning of 2025, we have 17 moorings within Cawsands Bay and 13 within Torbay.

The 17 in Cawsands are privately owned moorings, taken on by local sailors. Since their installation, monitoring efforts have shown that there has been over a 200% increase in seagrass density around the base of the moorings.

Within Torbay, the three moorings in Fishcombe Cove, Brixham, and ten in Broadsands, are able to be used by anyone who would like to enjoy the local area. Local monitoring efforts show slight regeneration in extent and health of the seagrass meadow, however anchoring in the area is still a substantial threat.

Community engagement

A key aspect of protecting the marine environment is community engagement. For many people, seagrass is an invisible species, so a big part of our work is making seagrass more visible. After all, how can we expect people to care about a habitat if they don't know what it is, why it's great and what threatens it?

Raising awareness within the general population is an important part of our engagement, encouraging people to build connections with seagrass that will empower them to take action for the protection of seagrass.

Alongside general awareness raising, we also take a targeted approach to certain audiences. For example, in sites where anchoring damage is an issue, talking to boat users and encouraging behaviour changes.

Monitoring and research

Monitoring is vital to any successful restoration project, to ensure that objectives are met in the most efficient way possible.

Within our seagrass growing facilities, our seagrass plants are monitored on a weekly basis. Variables such as number of plants per crate and leaf length are great indicators as to whether the plants will survive in the wild. After replanting (through Seed Mat Technology or HMS OCToPUS), we use a mixture of monitoring methods. This includes dive surveys, where our divers will use quadrats to measure the regrowth of plants. We also use technology to survey seagrass, including Remote Operated Vehicles (ROVs) and drop-down cameras.

Blue Meadows are working with lots of different researchers to constantly enhance our project. One example of this is collecting eDNA (environmental DNA) samples at local seagrass meadows to see what biodiversity is present within our Blue Meadows sites. We also partner with universities all across the UK, supporting students from undergraduate to PhD level, researching a huge variety of topics!



Funding

We have created our Mini Meadows Ocean Fund, a sustainable, transparent donation model that directly supports the restoration and protection of seagrass meadows. Designed to be scalable, it allows individuals and businesses to contribute meaningfully to the long term protection of healthy seagrass habitats.

Each Mini Meadow represents 10m² of healthy seagrass, funded by a single donation that supports its restoration and protection for five years. Every contribution helps to deliver on the ground action, from deploying Habitat Marker Buoys and collecting seagrass to engaging local communities. In return, donors receive updates, a personalized certificate and toolkit. Each MiniMeadow contributes real ecological impact—supporting habitats for over 1,000 marine creatures, capturing approximately 9.6kg of carbon and 4.2kg of nitrogen, boosting oxygen production, and reducing coastal erosion.





Find out more about Blue Meadows
www.bluemeadows.org

