The Seahorse Trust

Summer/Winter 2019

Marine Conservation Zone Special NEWSLETTER

STUDLAND BAY

MARINE CONSERVATION ZONE

YOU HAVE DONE IT!

You, the amazing supporters and sponsors of The Seahorse Trust have achieved an amazing break-through in the protection of our coastlines and seahorses; you made Studland Bay into a Marine Conservation Zone.

The journey to make this site protected started in 2008 when we set out to study this site after a sighting came in from a local diver, of a pregnant male seahorse.

The Seahorse Trust set up and runs the Studland Seahorse Project involving thousands of volunteer hours, searching for and recording seahorses on the site. It gave us the chance to have that final piece of proof that seahorses were breeding here in the UK (and so were indigenous) as proposed by trust founder Neil many years before in 1994 when he set up the National (now World) Seahorse Database.

On the site we found pairs of seahorses and juveniles and monitored males getting pregnant and giving birth many times in a season; the final piece in the jigsaw.

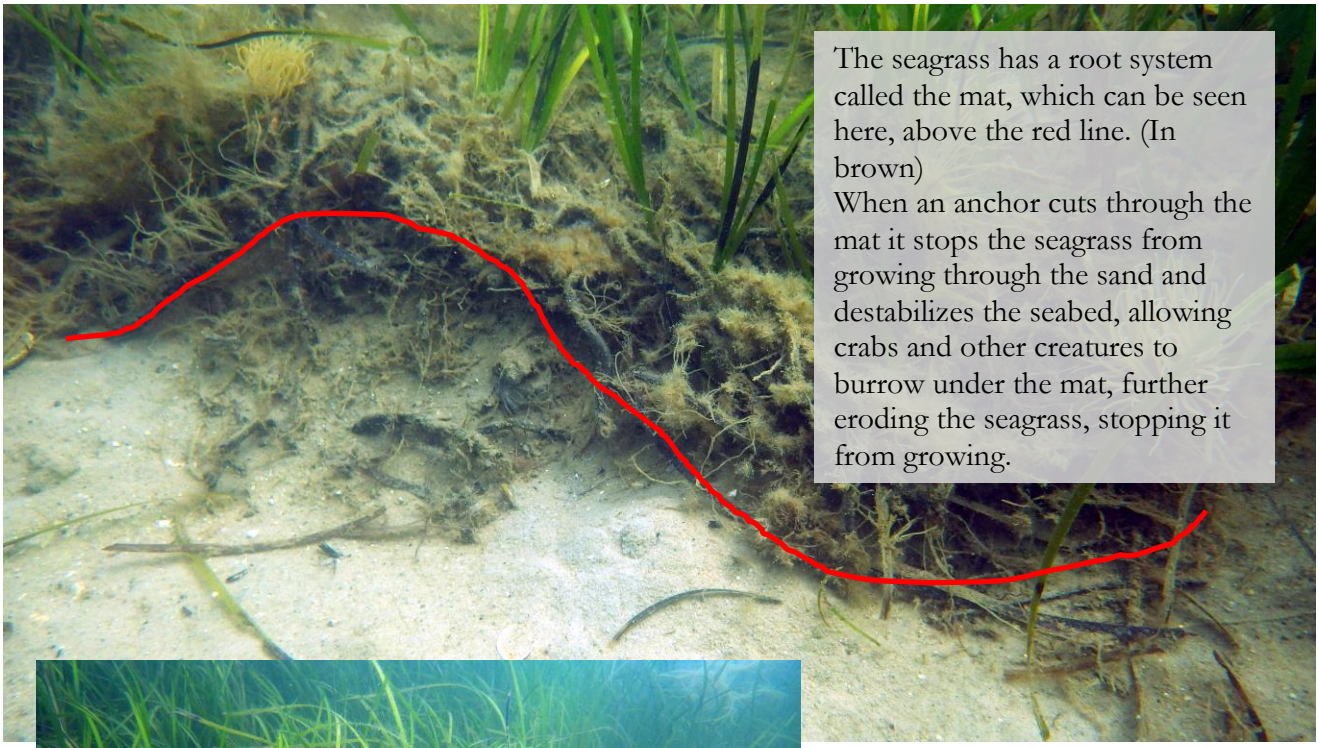
Sadly elation turned to sadness very quickly as we realised the extensive seagrass meadow where the seahorses live was in trouble and in turn seahorse numbers were dropping rapidly.

We needed to identify why this was happening and to rescue this site and so we set out to make it a Marine Conservation Zone; little did we realise how long it would take to preserve this site for future generations.

Left: A pregnant male Spiny Seahorse (Hippocampus guttulatus) at Studland Bay (Picture copyright © The Seahorse Trust

What caused the problem: too many anchors?

In joint studies with Dr. Ken Collins from Southampton University and many others we soon came to realise that the part of Studland Bay that was being most affected; South Beach, was being overused and more specifically it had too many anchors being put into it each year. We estimated that there were 120,000 anchoring incidences in an area roughly the size of 6 football pitches; no wonder the seagrass is degrading and as Dr. Collins proved it is fragmenting. This led to the eco-system collapsing, leaving the seahorses nothing to feed on and so they left. Each year we monitored the site, the numbers just kept dropping from 40 known individuals down to none.



The seagrass has a root system called the mat, which can be seen here, above the red line. (In brown)
When an anchor cuts through the mat it stops the seagrass from growing through the sand and destabilizes the seabed, allowing crabs and other creatures to burrow under the mat, further eroding the seagrass, stopping it from growing.

Healthy Seagrass as it should look without the cut through the root and with small shoots starting to grow in the sand in front of it.

An anchor as it is being lifted covered in seagrass from Studland Bay. This happens at least 120,000 times a year in an area the size of 6 football pitches

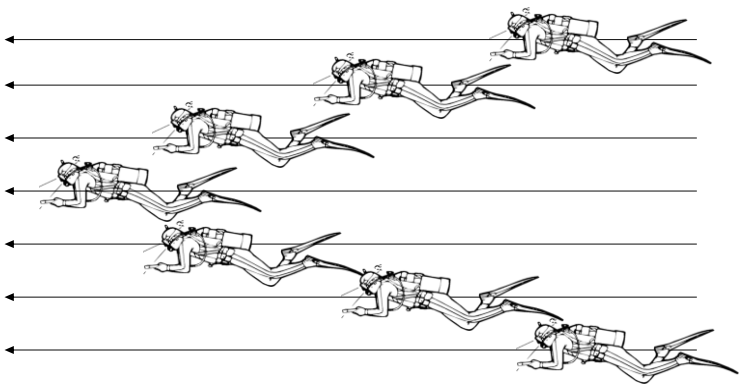
The long road to a Marine Conservation Zone

No matter who we told, nobody seemed to be listening

Working very closely with all our partners including Dr. Ken Collins of Southampton University we attended many meetings to try and solve the problems at Studland but try as might, it appeared as though there was no solution to the problems affecting the bay, other than making it a Marine Conservation Zone. We submitted the bay for inclusion into the first tranche of MCZ's back in 2010 (for the 2013 Tranche 1 MCZ's) which was turned down because they felt the economics of the boats was more important than the environment (We proved this was a false concept). So we submitted the bay again for Tranche 2 and again it was turned down on the same grounds. Not to be beaten because this environment is so important we submitted the bay again for the Third Tranche in 2017 (the final one) and finally this year in 2019 we were successful and the site was finally awarded its Marine Conservation Zone status as it should have been many years ago before so much damage was done.
But now the hard work starts in getting the seagrass back into a favourable condition, so that seahorses can return and the whole seagrass eco-system can be restored.

To prove that this site was vital for Spiny Seahorses (*Hippocampus guttulatus*) we had a lot of time in, on and under the water monitoring the seahorses and the seagrass and we had to devise new techniques to study them, below are two of the main tools we used.

Durrant Transect (for large areas using multiple divers)



One of our long term volunteers Dr. Eva Durrant noticed that whenever the lead diver moved through the seagrass it swept the seagrass away and often exposed seahorses and other creatures. So we designed this new form of transect to specifically look for seahorses and named it after Eva. It is now used around the world and is called the Durrant Transect.

Head Profiling

Invented and developed by trust founder Neil, Head Profiling is a crucial tool in identifying individual seahorses. By taking a photograph of either side of the head (see above) without flash or lights, it is possible to identify individuals from one dive session to the next, even from one year to the next.

When using the profile pictures we look for clusters of spots or unique markings on each individual seahorse, this then becomes their 'fingerprint', so we can spot them again.

What we discovered/confirmed

- We proved the theory put forward by The Seahorse Trust founder, Neil back in 1994 that seahorses are a truly native British and Irish fish and are indigenous to our waters and we have not just one but two species here. The Spiny Seahorse (*Hippocampus guttulatus*) that lives in seagrass and the Short Snouted Seahorse (*Hippocampus hippocampus*) that lives everywhere else.
- Neil and The Seahorse Trust managed to get seahorses fully protected in 2008 after 6 years of lobbying, thanks to the major input of divers, fishermen and beach walkers who reported their seahorse sightings to the National Seahorse Database, which has now become the World Seahorse Database and covers 33 countries so far.[We are trying to raise £5,000 to put this database online, so it can be accessed by others to conserve seahorses]
- This database was used to back up the data about seahorses at Studland Bay which helped the case in getting the site protected as a MCZ.
- Seahorses migrate into deeper water when the first storms of the autumn start, those that get left behind often get washed up on shore and die.
- They come back inshore in the warmer months of the year and this can be as early as the end of February in warm years.
- If seahorses are in sheltered areas like Poole Harbour or Torbay they will not migrate as this takes a lot of energy to do and it makes sense to stay in one area.
- Male seahorses get pregnant a number of times throughout the warmer months and one male we know of, got pregnant and gave birth 5 times.
- We have seen Spiny Seahorses return back to Studland for 2 years in a row but we have never seen them with the same partner in the second year.
- Sadly the myth of them mating for life is just that, a myth but they are pair faithful for the season!!

Short Snouted Seahorse
Hippocampus hippocampus

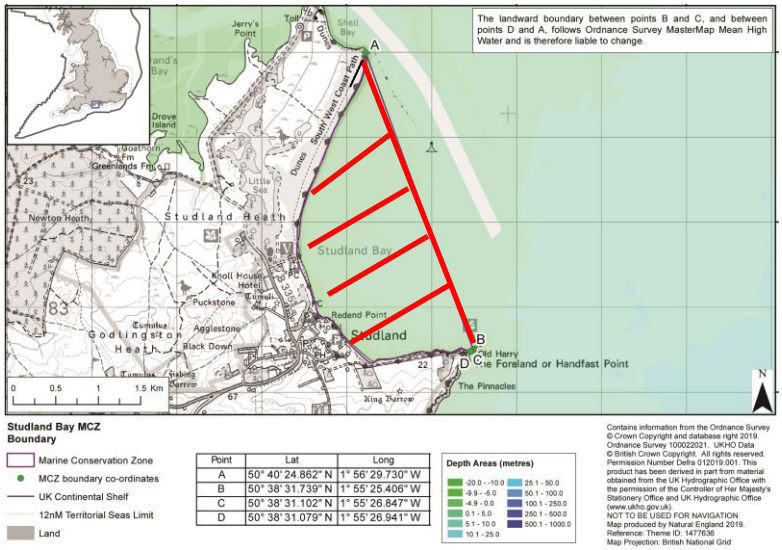
Spiny Seahorse
Hippocampus guttulatus

The Studland Bay Marine Conservation Zone would not have been possible if it were not for YOU and your incredible support and those 253,000 people who signed the petition to get the site protected. This petition was supported by so many, including most of the Wildlife Trusts (sadly not Dorset Wildlife Trust), our patrons and their supporters, the Blue Reef and Sealife aquarium groups; in fact the list is endless because it was truly a world event. Thanks go to you all, especially the amazing team that works on surveying the site, which includes John, Kim, Paul, Beccy, Jonny, Eva and so many others that came along to help out (we are still conducting surveys and will keep doing this for the next 10 to 20 years at least)

I do need to mention two people in particular that made this happen, the first is East Devon MP and Seahorse Trust patron, Sir Hugo Swire, who not only has supported our work for some time now but also organised a meeting with the second person I want to mention and that is Michael Gove, who was the Minister for the Environment. Trust volunteer Theresa, Hugo and I went and met Michael Gove and others a couple of times in Westminster and we explained the problems of seahorses in general and Studland in particular and Michael Gove completely understood what we were saying. His final words to us after we had overstayed our meeting by 40 minutes (at his request) was, 'I really get seahorses, we have to do something about them' and he did. A massive thank you to Hugo and Michael Gove for their amazing input into this and for finally making the MCZ happen; Michael was true to his word.

So what happens now?

Getting the site protected is the first step; we now need to set up with the authorities a management group to oversee the restoration of the site. This should include all parties involved, including and very importantly the boating community. We have asked the authorities to make this a priority and so we hope the first set of meetings will be this winter.

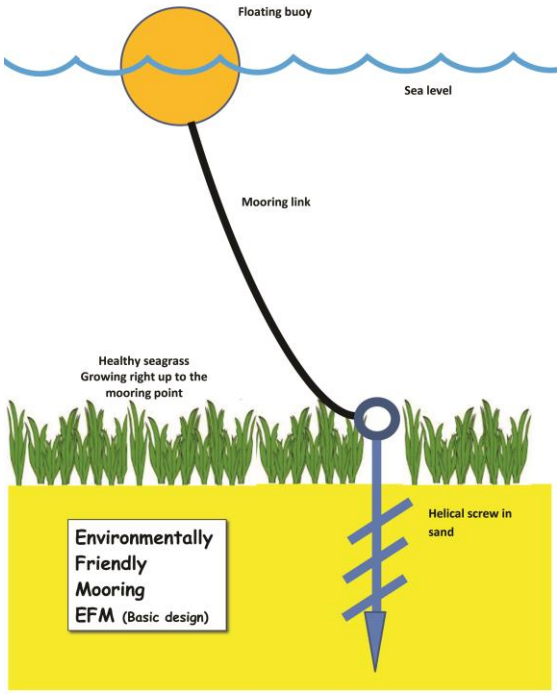


As can be seen by the map to the left the whole of Studland Bay is designated as a MCZ from the end of Old Harry Rocks right up to Shell Bay in the entrance to Poole Harbour.

The Natural England advice to the process stated that it should be returned to favourable conditions and the Spiny Seahorses were a key feature of the site and so in partnership with Dr. Collins of

Southampton University, our incredible volunteers and others we aim to push the protection measures that will be needed to restore the site, but still to allow access by the boating community and this can only be done by installing Environmentally Friendly Moorings (EFM's)

These work by putting a big helical screw into the seabed (see right) and then using a very strong elasticated link to a floating buoy on the surface. This stops the traditional mooring chain from dragging on the seabed stripping away all life there. We then propose to stop boats from anchoring and just use these EFM's so that the seagrass can recover and importantly so boats can still use the site.



Thank you to everyone who has taken part, helped and supported us in all this time and we look forward to working with you for the next 10 to 20 years in getting this site back to favourable conditions

We could not have done this without the support of these amazing sponsors (and so many others). THANK YOU

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