

National Seahorse Centre (NSC)

Run by

The Seahorse Trust

Registered charity number 1086027

The
Seahorse
Trust



WORKING IN PARTNERSHIP WITH NATURE

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Introduction

Seahorses are an enigmatic creature, a fish of myths and legends, misunderstood and in many ways surprising, just when you think you have started to understand them, something new, unusual and exciting comes out of the blue to cast doubt over ever knowing them in the first place

The Seahorse Trust was set up to learn about these amazing little 'Horses of the sea' and to work in partnership with others to preserve and conserve them for generations to come

Natural history documentaries show the over whelming interest by the general public in the natural world, this is also reflected in the large number of visits to wildlife parks, zoos and public aquariums each year, not just here in the UK but abroad as well.

Public aquariums have a huge appeal here in the UK and alongside zoos they are the single biggest visitor attraction for the public, and for any town or city, it is a huge draw and an important catalyst to bring in new visitors and to help to focus regeneration, often bringing in other similar projects and businesses with links to, or an interest in the work of the zoo or aquarium.

We are proposing to find a building in a prominent coastal or strategic city location to build and establish a specialist public aquarium, The Seahorse Aquarium that features mainly seahorses, but also with local marine and freshwater fish, tropical fish and tropical coral fish.

The aquarium will be the headquarters of The Seahorse Trust and by incorporating a gift shop, visitor attraction and other possible facilities it will help generate an income for the trust; coupled with existing income streams.

The emphasis of the aquarium is to be a world leader in Seahorse research and conservation and act as a resource centre and hub for others researching and studying seahorses around the world

Background to the project

The Seahorse Trust was established in 2000 to continue the work of trust founder, Neil Garrick-Maidment who has worked with seahorses for 33 years. The founding of the trust was to continue the work started all those years ago and to make the work and research not for profit, ensuring its long term future.

In 1994 Neil and his wife Maxine setup and successfully ran the Seahorse Nature Aquarium, which was located on the Quay in Exeter. This was the only Aquarium of its kind in the world at the time, dedicated solely to the display, research and conservation of seahorses.

Although small, the aquarium housed the largest collection in the world of 22 species of seahorses and this unique collection attracted visitors from all over the world with many, making Exeter their location of choice because the aquarium was based there.

From a standing start in 1994 the aquarium attracted 12,000 visitors in its first year, rising to 42,000 visitors by the end of year three.

This small aquarium attracted the attention of the National Marine Aquarium which was then still to be built in Plymouth and after negotiations, Neil and Maxine closed their centre in Exeter to join forces with the design, husbandry and front of house team and to become part of the National Marine Aquarium in Plymouth, giving the NMA a ready-made research project, world standing in this sort of research.

After a number of years due to financial problems at the NMA Maxine was made redundant and unable to afford to travel to Plymouth each day, Neil followed shortly after and it was at this point they set up The Seahorse Trust which like the Seahorse Nature Aquarium was the next logical step for Neil, Maxine and their research.

The Seahorse Trust has been running for 14 years and is recognised around the world for its research, conservation and lobbying work.

It has been decided by the trustees that the trust needs a public face, a centre for research and a hub and resource centre for all their projects, research work and fund raising.

With their track record and expertise The Seahorse Trust are ideal to set up and run this project and are embarking on a search to find suitable premises and funding to establish this world leading research, conservation resource centre.

Location

The Seahorse Trust has undertaken to open The National Seahorse Centre (NSC) in an unspecified location in Devon. It is to be the only centre in the world dedicated wholly to the study and research into Seahorses and their environment and the marine and terrestrial environments.

The NSC will become the headquarters of The Seahorse Trust (SHT) from where it will run its many projects such as the British Seahorse Survey, Malta, Spanish and Cambodian Seahorse Surveys, captive breeding and behavioural projects for example.

It will combine and bring together projects around the world under one roof and co-ordinate related projects from around the world as a partner in the Seahorse Alliance or in partnership with the many organisations it already works with and aims to work with in the future.

In keeping with its world-wide status, the centre; The National Seahorse Centre will put wherever it is located on the map, as the leading facility in the world for this sort of research and study and it will attract students, researchers and visitors from all over the world and generate a great deal of media attention for the aquarium and the location hosting the aquarium

As a hub for conservation work it is intended that the centre will also cater for other wildlife watchers and conservationists, so if it is in the right location bird watchers will be encouraged to use it as a centre to record bird sightings and to get sightings from. Likewise if it falls on a coastal footpath we will be an information point for coastal wildlife and for people undertaking walks along the coast.

This project will be ideally suited in a location that is set to regenerate an area that has been neglected or underused. With this in mind we can help the regeneration process and in partnership with others on the site we can combine to help generate much needed funding.

A suitable location for The Seahorse Aquarium would be close to or on the edge of the sea or an estuary in an area with a high local population and large catchment and /or a tourist population.

The building

The National Seahorse Centre is to be, not only a hub for marine and environmental research but also a green centre. We will be operating in as environmentally effective way as possible which will not only help the environment but also be aesthetically pleasing. At this stage we do not know if we will be using a purpose built building or converting an existing one but the use of green technology will be important in either case.



**Suggested designs ideas for
(new build)
The National Seahorse Centre**



If possible we will have as many environmental and green aspects to the building as possible and we aim to be as carbon neutral as is feasible.

The NSC will provide a modern visitor attraction open all year around (and into the evenings during the summer) that is expected to attract 20,000 visitors in its first year rising to over 35,000 by year three. A great number of these visitors will be new to any area where the aquarium is located which will aid the local community.

Below are some of the green aspect we would like to include

Green roof

We will be having a living roof to help keep the centre thermally insulated and to double as an environment in its own right. The roof will be covered in a grass and plant mix that will be chosen to copy the local environment. Not only will creatures and bugs live in the roof but on it as well. The flowers that will bloom on the roof will encourage many insects and be visually pleasing to the eye.

Solar panel

We plan to have Solar panelling on the roof using the latest generation of panels that can work even if the sun is not out. The solar panels will be blended into the roof to be as sympathetic as possible.

Wind Turbines

It is hoped we can get planning permission for Wind Turbines to complement the solar panels at certain times of the year. Coastal locations have a constant supply of wind and with the most modern wind turbines even a slight breeze will generate some electricity.

Recycling

As part of our environmental policy the trust recycles its paper and waste and will endeavour to be as paper free as possible, making a greater use of electronic archiving. The building is to be clad in seasoned FSC timber with a green roof or an environmentally friendly equivalent.

Sustainable transport

Wherever the aquarium is located we aim to become part of the sustainable transport structure and will promote visits to the aquarium via bus, boats, walking or cycling, with this in mind it is our intention to install bike racks near to the entrance of the aquarium and we will consult with sustrans <http://www.sustrans.org.uk> as soon as we have a location to aid in the sustainable transport

Exhibits and facilities at the AQUARIUM

As a specialist centre we do not aim to compete with large aquariums in the UK and around the world but we intend to be a hub, a focus for others. With this in mind we aim to have a footprint of approximately 2,000 square feet (min). This will give us ample room to incorporate, the public aquarium, research room and a shop, as well as staff facilities such as offices, staff room and toilets.

The NSC will be a hub of research and education, interest and enjoyment. It will show what Seahorses and other fish are as a species, what makes them tick how they live and what sort of environment they live in.

Our idea is to show a variety of seahorse and other fish species from around the world and to set up new and continue to run existing projects looking into seahorse behaviour, captive breeding and ecological studies, linking with our field projects and with those of other projects from around the world.

The research with seahorses and others species will bring interest from around the world and will bring students and researchers from around the world to work in the aquarium; giving wherever it is based in turn a worldwide reputation for this type of research.

To do this we will have a variety of exhibitions for the public, some connected to the research work the trust is doing. Unlike other public aquariums we will not be following a storyline such as the water cycle or a regional or geographical zone but we will be telling the story of Seahorses and the environment they live in and some of the species they are associated with and using this to explore other issues such as evolution and adaption, extinction and conservation.

When the visitor enters the aquarium they will be confronted with their first Seahorse tank (possibly *H.abdominalis* for impact), it is intended the first tank will be at least 6 x 2 x 2 and will give a high visual impact and set the scene for the whole aquarium.

Wandering through the aquarium visitors will be greeted with a variety of tanks with Seahorses in and a number of tanks with other marine species, including local species.

Each tank would have a theme to it to show the habitat the species is found in and the interpretation graphics on the tanks will reflect this but there will also be some specialist parts to the aquarium including the Parallel Evolution exhibit.

Listed below is a selection of some of the species and exhibits we aim to show, conserve and research. As the NSC is developed these may change and differ.

Seahorses:

- | | | |
|--------------|-----------------|---------------|
| H.guttulatus | H.hippocampus | H.zosteriae |
| H.reidi | H.comes | H. kuda |
| H.barbouri | H.barbouriensis | H.abdominalis |
| H.breviceps | H.subelongatus | |



Convergent Evolution

In the natural world Convergent Evolution occurs in various niches and areas and the Seahorses have their comparison in Chameleons, both species have evolved into their environments in very similar ways even though one lives on land and one in the sea.

This exhibit will show the different adaptations both species have evolved such as tail, moving eyes, brood pouch and colour change.

Marine species: (Tropical)

Lion fish (<i>Pterois volitans</i>)	Yellow Sail fin Tangs
Blue Damsels	Mandarins
Hermit crabs	Moray Eels
Various shrimp	

Marine species: (Local)

Mullet	Wrasse
Gobies	Prawns
Various crustaceans	Rock Pool species

Nursery tanks:

New fry (bio orbs)	Juveniles
Sub adults	
Plankton display as food for seahorses	
Algal culture	live artemia

Threats to Seahorses:

Dried Seahorses to illustrate the medicine and curio trade and an educational video.

Seahorse Conservation:

Captive breeding
Mixed tanks with selected species
British Seahorse Survey Malta Project
European projects Cambodia project
All our projects will be featured

Interpretation at the National Seahorse Centre

What are Seahorses:

Fish	Fins
Eyes	Tail
Snout	Skeleton
Skin	Colour change
Gills	Breeding

Models at the centre:

Cross section of the head showing gills and snout	
Full Seahorses	Seahorse giving birth
Working tail	

Tank labelling:

Species labels	Sponsorship labels
Adoption labels	Nursery tanks

Touch objects:	Model Seahorses	Dried Seahorses
Brass rubbing plates:	Complete Seahorses	
	Part of the bodies (Exhibit: collect them all and join the Seahorse up)	
Interactive computer:	2 x terminals with all the information on it at differing levels; basic, intermediate, Scientist.	
Video:	Video about Seahorses	Video about Studland
	Video about TCM	Various seahorse videos
Back ground sound	Will be of oceans and/or whales	
Threats to Seahorses:	Traditional Medicine Trade	Curio Trade
	Pet Trade	Habitat loss
	Pollution	
Seahorse Conservation:	Captive breeding	Malta Project
	Spanish project	Europe project

We aim to include in the aquarium a 30 seater theatre which when it is not being used for teaching or lectures will run a looped video about seahorses, seahorse conservation or seahorses and the traditional medicine trade.

The theatre will be useful not only when we are open during the day to the public but also for evening events and we can also hire it and the aquarium out for non-seahorses trust events to generate more income for the trust.

By having a variety of facilities at the aquarium it will allow us to enter into an exchange scheme with other projects around the world bringing students to and sending them from our hub.

Research in the NSC

Unlike other research facilities, the public will be encouraged to see “behind the scenes” via a glass partition between the public and research areas. It is necessary to keep the areas separate due to the need to keep the research area “clean”.

As part of our open policy The Seahorse Trust has undertaken to make its information gathered available to others doing similar work. We hope this will progress the conservation of Seahorses more quickly as time is running out.

Research understanding will be enhanced by the use of volunteers taken from the local community and other areas.

It is important to work at grass roots level as well as far afield and so the use of local volunteers is crucial to the success of the project as they have a greater understanding of the problems in the local area.

The NSC is to be divided into several areas including research, office a classroom/cinema and shop to be included. The classroom is vital to the work of the Trust as we will be encouraging visits by local schools and groups to teach, using the Seahorses as a flagship species about the problems facing Seahorses but also the marine environment as well.

By connecting with Universities, colleges and local schools we aim to offer opportunities to students to work in a fully working research aquarium, helping to enhance their experience, giving them a full more experience for their future careers.

As research and conservation is the main aim of the trust and will be for the aquarium we will have a research room with space for filming and observations. This can be used by students, researchers and film companies alike

We hope to have at least 10 tanks in the research room and it will be on show through a window to the public, making our work open and transparent.

By being a hub we will have trust staff and volunteers on projects around the world and their staff and volunteers will come to us

Education

Probably the most important part of our work at The Seahorse Trust is education, whether it is a simple board about the species in a tank to a much more in depth article in a magazine or just talking to a member of the public. Unless we can get our message across about the plight of seahorses and the marine environment we will not achieve our aim of Seahorse and Marine conservation.

The education department in the aquarium will be using a wide range of techniques to get the message across whether it is taking a group of children on a “rock pool ramble” or a one to one conversation from one of our volunteers to a member of the public or the playing of a video about our work. We also hope to employ techniques such as interactive computers that will allow those who prefer technology to find their own answers. The website will be available to visitors to the NSC and online visitors alike, linking our work to a greater worldwide community.

By using interpretative graphics, videos and other multi-media equipment, the visitor will come to understand the work of the trust and the plight of the seahorse and the oceans and how we can all make a difference by working together.

No matter which method we use the important thing is that our information is correct, fun and informative.

Education is not just about telling others about conservation issues it is also about teaching researchers from other projects and from our own projects overseas about how to research, conserve and educate and we hope to have many overseas students spend time with us, so they can then go back home and carry on educating.

It is hoped to build a classroom at the aquarium to act as a focus for the work we are doing. By having this purpose built room it means we can invite school parties and other groups to the centre and their particular needs can be catered for,. The classroom will also double as a function room for our many activities.

A full time educator will be employed at the Trust who will be assisted by a team of volunteers from the local community. By working together we will get our message across and make a difference.

Other facilities at the NSC will include a full Library resource, (linked in with other organisations, a 30 seater cinema for talks and facilities for students and film makers for filming

Employment

The NSC will employ 3 (4 in year 3) full time people and will be a focal point for the local community; we will be attracting schools and colleges from all over Devon and the South West for workshops, work experience and lessons and propose to have open evenings in the winter providing an attraction for talks and lectures to local people from around the area.

In year two we aim to explore the idea of modern apprentices but we do not want to do this until we can ensure they have the opportunity to benefit greatly from the experience. With this in mind we will look to form a partnership with a local college, University or conservation centre so they can benefit from further education.

Like all local attractions the employment opportunities generated by the existence of the NSC will be wide spread into the local community. Although it is difficult to quantify how many this will produce we are sure that the NSC will be a catalyst for further regeneration (as experienced by so many other areas, due to the presence of a new attraction) leading to employment opportunities directly from the NSC and as a result of it.

Volunteers

Volunteers are vital to any community and charitable based organisation and The Seahorse Trust is no different. Throughout our work we have employed hundreds volunteers for diving, fund raising and many other activities in this country and abroad and we aim to continue and enhance these opportunities when we build the NSC.

Our volunteers will be recruited from all walks of life and of all ages and a variety of skills and backgrounds.

Their roles will be diverse and could include working with the public, giving tours and talks, working in the shop, working with the Seahorses on research, cleaning, feeding, fund raising and taking part in events to name a few.

Partners

It is proposed that the work we undertake from the NSC will be a partnership between The Seahorse Trust and many others around the world with a shared interest; we hope to provide facilities to allow others to study seahorses with us and to become the main hub for seahorse research in the world.

This hub approach is built into the ethos of the trust with its motto 'Working in partnership with nature' and is why we set up the Seahorse Alliance to bring others together.

Some of the organisations the trust already works with:

- The Seahorse Alliance
- Save our Seahorses (Ireland)
- Save our Seahorses (Malaysia)
- Marine Conservation Cambodia (MCC)
- National Marine Aquarium (Plymouth)
- Phnom Penh University
- Malta University
- Kenna Eco Divers
- PDSA in Malta
- Bubble Dive Centre in Malta
- Earth, sea and Sky (Zakynthos)
- Seahorses survey organisations in Malta, Portugal, France, Australia and Italy.
- Malta Nature Trust
- Plymouth University
- Southampton University
- Exeter University
- The Sea Life Group
- Projects Abroad

.....and many others

Funding the NSC

Funding the NSC will depend on location and the building opportunities and it is difficult at this stage to say how much will be needed as we do not know if it will be a fitting out and existing building or a new build situation.

In either case will look to a number of sources for funding to build and for the running costs of the aquarium.

Below is a short list of potential funding opportunities and ongoing continuous sources of income

- Admission fee
- Gift Aid
- Grants
- Corporate sponsorship
- Sponsored tanks
- Adopted seahorses in the tanks
- Adoptions
- Memberships
- Donations
- Shop
- Online shop
- Events
- Renting out space for non-connected events

Business plan

At this stage there are so many unknowns to put together a cash flow forecast but because there is a background and expertise to this sort of project some educated guesses can be made based on experience.

What cannot be included at this stage are the costs of the building and the fitting cost for that building as we do not know location and building availability.

We do intend to seek grants and donations to build, equip and facilitate the building and so no expenditure in the cash flow has been included for this.

This document should be read in accompaniment with the NSC Cash Flow excel sheet.

The 5 year cash flow below is to include the income and expenditure of The Seahorse Trust and the aquarium as one entity

Being not for profit will mean that surplus monies will be spent on staff, development and projects

	<u>Income</u>	<u>Expenditure</u>	<u>Balance</u>	<u>Running bank bal.</u>
Year 1	£156,573.38	£115,880.00	£40,693.38	£38,313.38
Year 2	£173,650.38	£132,510.00	£41,140.38	£79,453.75
Year 3	£167,034.79	£135,280.00	£31,754.79	£111,208.54
Year 4	£191,237.91	£161,480.00	£29,757.91	£140,966.45
Year 5	£212,977.76	£161,480.00	£51,497.76	£192,464.21

Visitor numbers over a 5 year basis

For the sake of this cash flow we have deliberately kept the forecast for visitor numbers to the minimum number; this way we cannot overstate intended numbers.

By deliberately keeping numbers low based on experience we can show that even small numbers will make this project financially successful

	<u>Adults</u>	<u>Children</u>	<u>TOTAL</u>
Year 1	13,600	8,350	21,950
Year 2	16,160	8,350	24,510
Year 3	17,776	9,185	26,961
Year 4	19,430	10,089	29,519
Year 5	21,390	11,215	32,605
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TOTAL	88,356	47,189	135,545

