



**A Report for South West Regional Development Agency on Scylla Reef; dive tourism activity, the economic impact and her development as a reef.**

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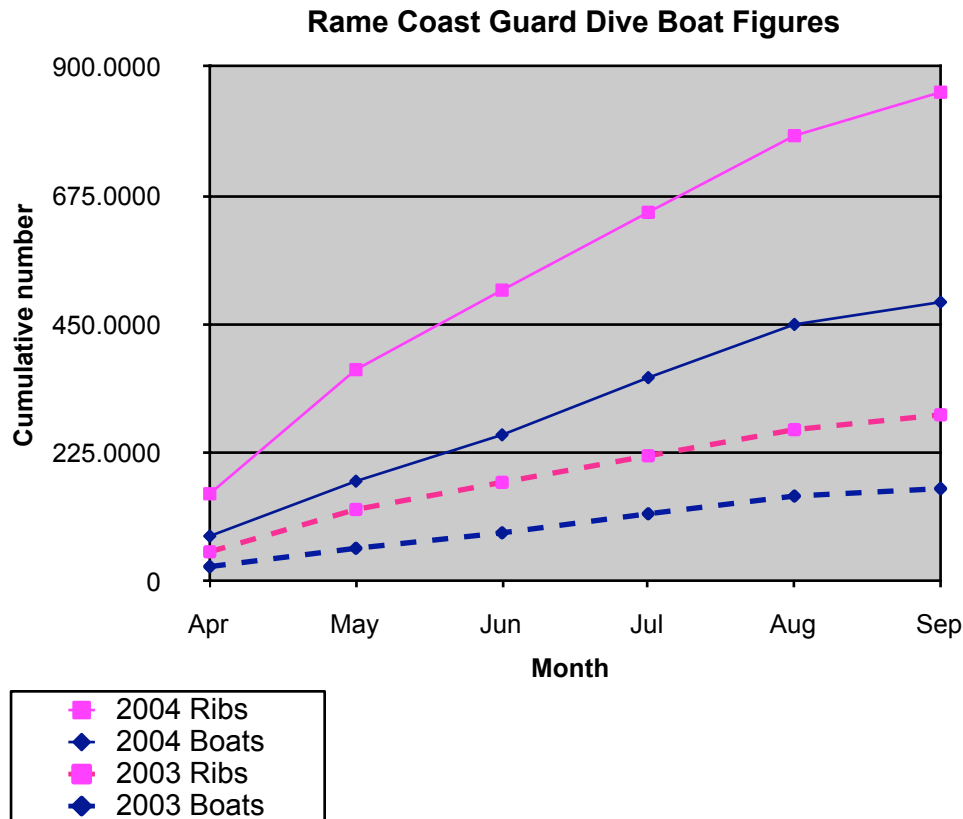
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## 1.0 SCYLLA REEF – DIVE BOAT STATISTICS

The following graph shows the number of dive boats passing the Rame Coastwatch Station during hours for which the station is manned. Boats logged are those travelling from the east **only** (Plymouth waters) into Whitsand Bay, Cornwall. Actual figures will be much higher as early morning dives; night dives and traffic from the west are not recorded.



The figures confirm the increase in diving activity in the area. RIBS are showing a 300% increase and Dive Boats 293% increase on 2003. This is what a few of those organisations and companies in the area have to say:

### Whitsand Bay Divers, Seaton - A New Dive Company

*"The Scylla has been a fantastic boom to local business, we set up with the intention to be the closest dive centre to the first artificial reef in the UK, and have succeeded.*

*Although we have not been blessed with the best weather this summer (the worst weather on record since 1912!) we have seen an amazing uptake by divers and we are really anxious to see this project bring new life to this beautiful area of Cornwall."*

Damian Lambkin, Managing Director

### Professional Association of Dive Instructors (PADI)

*"Scylla has made a tremendous impact, not only in the local area, but worldwide from PADI members who are naturally interested in the marine environment".*

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Deborah Sutton, Marketing & Media Project Manager

## **British Sub-Aqua Club (BSAC)**

*“Since the sinking of the Scylla, BSAC divers from all over the country and some from overseas have traveled to dive her. She has become an extremely popular dive site in the south west. Reports from branches state that it is an interesting dive with lots of marine life already settling on her. The BSAC would like to thank the NMA for this project and hope that other reefs can be made in the future”.*

Mark Allen, South West Coach

## **Looe Divers, south east Cornwall – long established Dive Company**

*“Scylla has increased my dive business turnover by 50%, enabling me to invest £80k in new equipment this year. The divers we take out are new to the area and staying locally for a couple of days, sometimes longer. They are impressed with the marine life on the James Eagan Layne and plan to return to see how life on Scylla develops”.*

Managing Director, Jon Bass

## **South East Cornwall Tourism Association**

*“Scylla and the NMA team have done a lot to put south east Cornwall on the map. South east Cornwall is traditionally a family holiday destination. Scylla has created new opportunities and markets, which, in the long term will create sustainable economic development. In 2005 we will be in a stronger position to capitalize, however, we need to ensure that the local authority makes vital investment in the infrastructure and carries out necessary repairs e.g. to slipways”.*

Frank Wertmeister, Chairman

## **Mount Batten Centre - Plymouth’s leading sailing and water sports centre**

*“The Mount Batten Centre has seen a vast increase in room occupancy rates since the ship was sunk. Talking to the divers it is apparent that they will continue to return as they have discovered that as well as the Scylla, there are many other exciting sites in the Sound. They also enjoy the onshore facilities that Plymouth offers”.*

Sue Pudduck, Chief Executive Officer

## **Caradon District Council**

*“The Scylla project has been an excellent example of a new niche tourism market being developed that fully supports the local rural economy of SE Cornwall. Caradon District Council has been happy to work in partnership with the National Marine Aquarium, the local tourism industry and the local communities to deliver real sustainable benefits that boost tourism throughout the year. The Council also recognizes the urgency of improving access to the water and slipways that will enable the area to benefit to its full potential”.*

Kaja Curry, Tourism Development Manager

## **2.0 IMPACT ON THE LOCAL ECONOMY**

### **2.1 Introduction**

As part of the work to secure HMS Scylla, the South West Economy Centre (SWEC) assessed the socio-economic impact of her placement on the seabed. Their report estimated that Scylla would add between £0.17m (pessimistic scenario) and £0.67m (optimistic scenario) to GDP p.a. and would create between 7 and 30 FTE jobs within the south west. (1) Another report estimated economic benefits per diver of between £80.00 and £250.00.

In order to put a figure on the income generated to date we can make some very broad assumptions based on the above reports:

1. An average of 6 divers per boat. This would achieve 5,340 additional divers.
2. An average spend of £165.00 per diver. This equates to an additional £881,100 in the 1<sup>st</sup> 6-month period.

These figures should be read with caution as:

- 6 divers per vessel is a crude estimate, the figure may be higher or lower than this. (Plymouth charter boat businesses reported full boats over the summer).
- A figure of £165.00 spend per diver is the median value estimated by the South West Economy Centre.
- The increased dive boat movements may include a proportion of movements displaced from other dive sites in the area.
- Dive boat movements from key locations west of Whitsand Bay are not included e.g. Looe, Seaton, Downderry.
- Not all dive boats from the east are counted e.g. night dives, early morning dives.
- The figures relate to a 6-month period, diving on Scylla Reef will take place year round.

For these reasons, the actual income level is likely to be much higher than the £881,100 predicted, and significantly higher than the SWEC 'optimistic' forecast.

The lessons learnt from other artificial reef developments around the world, suggest that the full economic benefits are only realised if the community works together. (2)

From the start, it was clear to the NMA and local partners that the creation of the artificial reef was just the 1<sup>st</sup> step in ensuring Scylla's success and as a result the Scylla Working Group was established.

### **2.2 Scylla Working Group – capitalising on, and sharing the benefits**

This had a broad membership consisting of representatives from Caradon District Council (CDC), Plymouth City Council, town and parish councils, harbour commissions, tourism associations, dive centres and local attractions. The group identified the needs of the dive-tourist, carried out an audit of the existing provision and then identified key actions. These are summarised in Table 1.

<b>Dive Tourist Needs</b>	<b>Existing Provision</b>	<b>Key Actions</b>
Access to Information	No single source of information	NMA & CDC to develop website
Dive-Friendly Accommodation	Poor awareness amongst accommodation providers	Develop dive-friendly accommodation mark
Boat hire / charter	Existing services fragmented and poorly co-ordinated	Encourage co-operative approach to promotions and bookings
Dive services	Existing facilities fragmented and acting in competition to each other	Encourage cooperative approach to promotions
Slipways & shore-side facilities	Access to water within 10 miles of wreck poor in Cornwall but good in Plymouth	Seek funding to improve

**Table 1: Needs of Dive-Tourists: their needs and audit**

The Working Group objectives were developed to reflect the audit, and to fulfil the wider educational and scientific remit of the National Marine Aquarium.

The NMA project aims were to increase the economic benefits in the local area; to encourage community involvement and partnership; to develop the scientific and educational possibilities, to work closely with others to achieve a fisheries no-take zone at the Scylla Reef site; to use the Scylla to raise awareness of the south west, and to create a new experience for divers.

With the results of the Working Party audit and the NMA objectives in mind, the following activity was undertaken:

### **2.3 Completed Objectives:**

#### *2.3.1 Promotion & Information:*

The NMA mounted a publicity campaign in order to raise awareness amongst the public by participating in tourism events, activity and dive shows around the country, circulating leaflets and flyers, advertising in the diving press and through the development of a website. Other organisations such as CDC developed a website as an offshoot of their popular tourist site and held information in their tourist centres.

We produced a Scylla Reef Guide for divers with 3-D illustration of the ship, diving tips and fish identification guide.

We also worked very closely with the dive organisations and communicated directly to divers through their own club websites and publications.

## **2.4 Ongoing Projects:**

### *2.41 Development of a Niche Market*

Local tourism associations were the lead bodies for developing a 'dive-friendly accommodation mark'. The accommodation providers who offer the added services that divers require such as secure off-road parking for boat trailers, rinsing and drying facilities for diving equipment were identified as participants for a new scheme.

### *2.42 Business Cluster Development*

With the predominance of micro-businesses in the area, the local tourism trade associations have taken the lead in developing clusters so that together they can offer a single package of accommodation, dive boats and air tank refills for the divers.

### *2.43 Access and Infrastructure*

Access to the water on the area's slipways was identified as poor in places, so CDC took the lead to secure funding to improve slipways, pontoons, car parking and toilets in strategic locations.

### *2.44 Friends of Scylla*

The NMA have established a 'Friends of Scylla' membership scheme for local businesses and individuals. The scheme aims to raise funds to offset the costs of maintaining diver information on Scylla Reef.

### *2.45 Education & Scientific Research*

The NMA has an ambitious programme of educational and scientific activities. Future plans include a live web-link to Scylla enabling visitors to the NMA to interact with divers at the wreck, and a passenger submarine.

This broad range of activities reflects the far-reaching impacts that the creation of an artificial reef can have in an area.

## **2.5 Results to Date**

### *2.51 Media*

Scylla received high levels of media interest throughout the final preparation and on the placement day itself. Articles were broadcast all around the world and interest continued to be high for a week or so afterwards. The NMA website, which contained links to diving and tourism organisations, received over 800,000 hits on the scuttle weekend.

### *2.52 Divers*

Less than six months after the creation of the artificial reef, benefits are already accruing. To date, dive boat movements in Whitsand Bay have already surpassed previous records with 1345 recorded, 890 more boats than 2003.

### *2.53 Businesses*

South East Cornwall has seen the number of dive centres increase from one to two. In Plymouth, a major dive-training centre that had been in the hands of the receivers has secured a new owner. There have been two new dive schools set up and another



relocating to larger premises in order to include a dive shop. Feedback from dive operators in Plymouth suggests a dramatic increase in advance bookings and as a result, an extension to the diving season.

#### *2.54 Income*

The value of dive-tourism in the area is difficult to quantify (outlined in 2.1), although all the economic indicators show significant growth in income. Data on dive boat activity during October 2003– March 2004 was not collected; so accurate reporting on the same period in 2004/5 will be difficult.

#### *2.55 Dive Community Support*

Friends of Scylla attracted a good level of interest with 11 business partners committed in 6 months - an encouraging level of support that can be built on.

#### *2.56 Environmental*

The colonisation rate of the Reef has been promising. Marine life has moved in fast. (See section 3.0). Consultations are in progress to designate the area a 'Marine Sanctuary Zone', which will provide further environmental benefits if agreed.

#### *2.57 Infrastructure*

Improvements to the infrastructure have taken much longer to progress, with some businesses expressing disappointment over the time taken to deliver these larger-scale projects. Private enterprises express frustration over the bureaucracy that surrounds the grant applications. On a positive note, the Working Group has enabled an open communication between the businesses and the public bodies concerned.

## **2.6 Conclusions**

It is clear that the dive-tourism sector is complex, involving many small businesses each contributing an element of the experience. As a result, it is difficult to capture data and further work is required to identify the full impact of dive-tourism to the area.

The project has also highlighted the strength of working in partnership with others in order to enable a co-ordinated and cost effective approach. This is particularly important in rural areas, where populations and resources are spread thinly across a wide area and no single body has the capacity to deliver all the activities in isolation.

The involvement of all stakeholders from the early stages has ensured broad support for the initiative and the development of a single vision for the area. The challenge is to ensure that the partners continue to work together to build on the area as a dive-tourism destination.

## **3.0 MARINE COLONISATION AND RESEARCH**

### **3.1 Ongoing Surveys and Data Collection**

Before Scylla was scuttled we undertook a baseline survey to establish the conditions in Whitsand Bay. Samples of marine life were taken from an existing wreck; the James Eagan Layne, which has been in the Bay for almost 60 years and is only 800m east of Scylla's resting place. We used this data as a control so that we can compare future samples collected from Scylla Reef.

Sampling consists of collecting sediment from strategic positions on a regular basis. In conjunction with Plymouth University, the NMA collects the sediment, which is sent to the Centre for Environment, Fisheries and Aquaculture Science (CEFAS) for analysis. CEFAS carry out particle size analysis to determine if Scylla Reef has affected the sediment characteristics.

CEFAS also test the marine life samples (anemones and dead men's fingers) for traces of tributyl tin, a component of anti-fouling paint.

We are awaiting our first set of results from CEFAS. The rapid colonisation and many diverse species sighted on Scylla Reef strongly suggest a successful and thriving environment.

We have set up a diver recording scheme with a marine life ID guide and recording sheets for divers for collecting further data on the colonization. We are operating this in partnership with Seasearch (of the Marine Conservation Society) and MarLIN.

Scylla was the stimulus to English Nature and Cornwall County Council starting negotiations and consultation on a marine protected area at the eastern end of Whitsand Bay with the aim of achieving a Marine Sanctuary Zone.

### **3.2 Colonisation**

Six months on and Scylla has truly become a Reef. Her barren surfaces have been transformed into a teeming community, where millions of tiny creatures are busily engaged in their fascinating lives.

Small filamentous algae and small kelps can be found on the upper parts of the Reef.

The planktonic larvae of Toothpaste Worms settled almost immediately and have now grown calcareous tubes over 10cm long.

Sea fans have developed in large clumps hanging below the hull, where shoals of Bib shelter. The two to three centimetre Oaten Pipe Hydroids developed profusely, giving an attractive cover to parts of the decks, however a large number of sea slugs soon arrived and devoured the majority of them.

Sea squirts have grown well on the summer's ration of plankton,

Queen Scallops are present in large numbers of over parts of the Reef. The larvae of these will settle on any suitable surface, but it may be that the large numbers on Scylla are due to a lack of suitable predators such as Common Starfish.

Pollack, Bib and Ballan Wrasse are regulars around the Reef, while one Conger and several John Dory have been found down within the chambers and passages.

Early visitors have included a number of jellyfish, including a Blue Lion's Mane Jellyfish. A passing basking shark inspected a group of divers' boat, and other surprise visitors include a few Guillemots seen hunting fish around the hull.

While there are now numerous small anemones over the Reef, there are as yet no Plumose Anemones or soft corals. It may be that these animals descend from plankton early in the year and will not alight on Scylla until next spring.

### **3.3 Marine Sanctuary Zone**

A Marine Sanctuary Zone, where no fishing would be allowed, is expected to provide the following benefits:

- Protect marine wildlife for future generations to enjoy
- Provide social and economic benefits to the area through improved diving, angling and tourism opportunities
- Contribute to local sustainable fisheries management and the protection/enhancement of local fish and shellfish stocks
- Provide opportunities for increased local awareness of the marine environment, scientific research and education
- Allow the seabed to return to a more natural state, and act as a reference point to compare with fished areas of the seabed.
- Reduce conflicts between the different sectors using the area
- Protect underwater archaeology/cultural heritage

### **3.4 The Future**

The colonisation rate will depend in part, on the winter storms, sand-scour and the seasonal movements of marine life. Even when the Reef appears to have been established for years and fully colonised, swift and dramatic changes in the community may still occur.

A Marine Sanctuary Zone could have the biggest impact on Scylla and her colonization rate.

## **4.0 References**

(1) South West Economy Centre, 2003. *An Assessment of the Socio-Economic Impact of the Sinking of HMS Scylla*. National Marine Aquarium, Plymouth and South West Regional Development Agency, Plymouth, England.

(2) Enermark, T, 1999. *The Tourism Aspects of Artificial Reefs: The Nine Fundamental Lessons*. [WWW] <http://www.artificialreef.bc.ca> (09.01.2004)