

ON ALMOST EVERY DIVE NARC RELEASES **ENTANGLED MARINE WILDLIFE**



LOST LOBSTER POTS IN **SKOMER MARINE** NATURE RESERVE



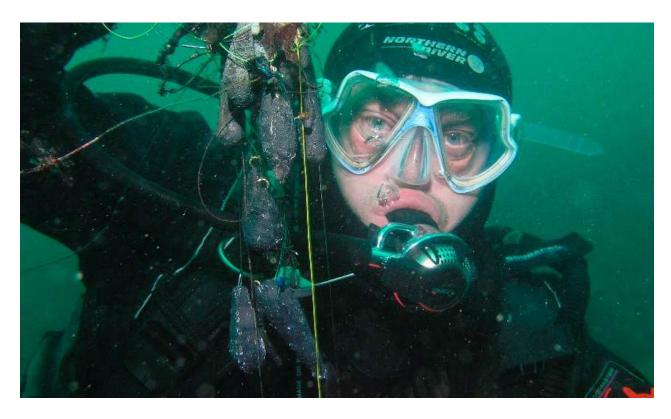
OUR RECORD IS 730 ANGLING WEIGHTS IN 1 DIVE AT STACKPOLE **QUAY**



THE DIVERSITY OF LITTER IS STAGGERING. WE HAVE EVEN FOUND THE KITCHEN SINK!

NEPTUNE'S ARMY OF RUBBISH CLEANERS

ANNUAL REPORT 2016



Winner of "Most Admired Voluntary Organisation in Wales 2009"



Neptune's army of rubbish cleaners (NARC) is an entirely voluntary group, made up of divers and non divers, with a passion for keeping the underwater environment litter free. Since 2005, the group has carried out 100s of underwater clean-up dives and been involved in a number of educational and awareness raising projects, in an effort to highlight the impacts of marine litter.















1. INTRODUCTION

This annual report has been produced to provide a progress update on 2016, provide a background to NARC and highlight our work since 2005. The report covers our underwater clean-up events, our efforts in raising awareness of marine litter, other work, and our collaborative future plans. The finance section is included, primarily for our funders but also to demonstrate what can be achieved with modest funding and volunteer effort.

1.1 ABOUT US

While the impacts of litter washed up or left on our shoreline can easily be seen, the same cannot be said for marine litter that is below the surface of the ocean. NARC is a voluntary group of divers and non divers with a passion for keeping the underwater environment in Pembrokeshire as pristine as it should be. Since its inception in 2005 by local diver Dave Kennard and Keep Wales Tidy, the group has carried out 100s of underwater clean-ups and a number of awareness raising events.

NARC can be found at a number of sites along the coastline throughout the diving season, collecting litter that is often having a negative impact on the habitat and the wildlife it supports. Divers descend in buddy pairs armed with scissors, bags, trays, lifting bags and a great belief in what they are doing. Dives can last almost an hour in which litter is collected, bagged and sent to the surface for retrieval by a support boat.

The diversity of litter found on dives is staggering with mobile phones, shopping trolleys, bicycles, revolving chairs, skate boards, batteries and quite literally the kitchen sink! Litter type is dependant on the diving location and aim e.g. mainly angling litter at popular angling spots, commercial fishing equipment when working with local fishermen and fly tipped litter where there is easy access to estuarine locations.

The impacts upon wildlife are only too apparent with fishing line often cut from spider crabs and lobsters, dog fish released from hooks and lost crab pots ghost fishing. The litter can also be a hazard to divers and other water users. Once retrieved the various items are cleaned, sorted, recorded and recycled where possible.

1.2 THE BENEFITS

The group is doing its best to reduce the amount of litter in the underwater environment. By removing foreign objects from the sea bed NARC helps make the underwater environment a cleaner and safer place for wildlife and other water users. We believe the

Helping to keep the underwater world litter free since 2005







NARC have carried out
100s of clean-up events
within the
Pembrokeshire Marine
Special Area of
Conservation. We have
worked with angling
coaches to develop
tackle tips leaflets
aimed at reducing tackle
loss











following benefit from NARC's actions:

- Marine wildlife less entanglement potential/ decrease in potential ghost fishing from lost commercial fishing gear
- Bathers less sharp and entangling hazards
- Divers less entanglement hazards from lost line, ropes, nets
- Leisure craft users Less chance of entanglement to propellers etc
- Anglers a reduction in seabed litter decreases the chance of further entanglement

It is not only the obvious marine wildlife such as seabirds and seals that benefit from less marine Pink seafans are a warm water soft-coral at the northern limit of their geographical distribution in Pembrokeshire. They grow at less than 5mm per year and can live for over a hundred years. They are specially listed for conservation action in the Wildlife and Countryside Act and the UK Biodiversity Action Plan.

Two of the pictures below show a seafan covered in lost angling line which had been trapped by a discarded soft drink can. The second shows it after fifteen minutes effort to cut it free of lost line.



2. RAISING AWARENESS ABOUT UNDERWATER LITTER

NARC was formed by concerned divers who had become aware of the increasing amount of litter they found underwater and the damage caused to marine habitats and wildlife. Whilst also carrying out underwater clean-up events the group are always looking for more proactive ways to limit the amount of marine litter.

Raising awareness of the issue is an important part of the work.

Since its inception NARC has:

- Produced leaflets which are available from most dive centres in Pembrokeshire
- Keeps a project website updated with data, information and news www.narc-cc.org.uk
- Given educational talks about marine litter to community groups and schools
- Visited Ireland, funded by Keep Wales Tidy, to promote the idea to Irish dive clubs













- Produced 6 awareness raising videos
- Produced two ground breaking site specific leaflets providing visiting anglers with tackle tips on how to minimise tackle loss and underwater maps
- Assisted the Marine Conservation Society with the "hang on to your tackle campaign" sitting on the working group and providing advice on tackle bin placement
- Linked in with wider initiatives e.g. Ghost Fishing, Plastic Oceans, School projects, World Animal Protection
- Is a working group member of Global Ghost Gear Initiative

The group also uses local and national media to help raise awareness of marine litter and has had coverage on the BBC National UK news at ONE, BBC The One Show, HTV Welsh News, Newyddion, BBC Wales Today, BBC XRAY, Channel 4 Born to be Wild, BBC Wildlife Detectives and a number of National radio stations and newspapers.

3. RECOGNITION OF NARC'S WORK

In its first year, NARC won the Beach Improvement category and the Peter Cambridge Trophy for voluntary organisations and schools working to improve their local environment in Keep Wales Tidy's Tidy Wales Awards 2006.

In 2009 NARC were voted the "Most Admired Voluntary Organisation in Wales" by the Welsh Council for Voluntary Action. This is one of the most prestigious awards for the voluntary sector.

In 2010 NARC were finalists in the Keep Wales Tidy Awards in the "Long Term Effort" category and in 2012 were chosen as one of 20 National projects to celebrate 20 years of Environment Wales.

Endorsements of NARC's work from NARC supporters

Sue Burton (Pembrokeshire Special Area of Conservation Officer)

"Not only are the members of N.A.R.C. doing their individual bit to help make the marine environment a cleaner and more natural place to be, for themselves and fellow users (divers/fishermen.), but they are also improving the environment for the wildlife. N.A.R.C s activities help to fulfil some of the required actions from the Pembrokeshire Marine S.A.C Management scheme (under refuse and litter, and raising awareness). It is for this reason that the relevant authorities group for the S.A.C. chose to help fund some of N.A.R.C. s activities in 2007."

























Simon Preddy (KEEP WALES TIDY)

"N.A.R.C. has made an invaluable contribution to the Pride in Our Communities project within Pembrokeshire. They have raised the awareness of the problem of fly-tipping around our waterways and undertaken activities to clean up the mess. The divers have willingly and consistently given their time to help improve our local environment."

JIMMY McVEIGH AN TAISCE (Clean coast Officer)

"As part of the Clean Coasts Project David Kennard of N.A.R.C. came over to Ireland to teach Irish divers, including members of the Irish Underwater Councils about how to conduct underwater clean ups. This was a very successful exchange of knowledge and a number of dive groups have undertaken clean ups since N.A.R.C"s visit. Their presentation was very informative and left the Irish divers with the required skills to conduct clean ups of their own. Their enthusiasm for the protection and preservation of the marine environment is infectious."

Kate Lock (Skomer Marine Conservation Zone)

"N.A.R.C volunteers do a superb job of clearing the sea bed of litter including miles of angling line, bucket loads of lead weights and fishing pots. The litter if not cleared and kills and damages marine life. Monofilament line tangles fish and crabs and also cuts into the soft tissue of sponges and corals like the pink sea fan, (a UK protected species). Public awareness of the damage caused by marine litter is needed and N.A.R.C. plays a key role in promoting the awareness through their work. In the Skomer Marine Conservation Zone we are particularly grateful of the efforts of N.A.R.C. where the quantities of lost tackle below popular angling sites is of concern."

Gill Bell (Marine Conservation Society)

"N.A.R.C. has been very supportive of M.C.S. activities within Wales and in addition to promoting marine conservation, B.A.P. species recording and sustainable fishing through the Good Fish Guide, they have also carried out two underwater clean surveys as part of the M.C.S. Beachwatch 2008 weekend"

Dr Lou Luddington, (Marine Biologist, Marine Conservation Society & NARC Volunteer)

"I find it very distressing seeing litter when I am diving or snorkelling, especially if there is potential for entanglement or damage to marine life. Volunteering with NARC gives me the chance to clear up some of this litter as part of an effective team whilst also raising public awareness of the problem. Part of NARC's role is to highlight this problem and encourage anglers to reduce loss of tackle by using the appropriate lead weights or by switching to biodegradable fishing line and lures. This is a fantastic hands-on project which I am proud to support!"

David Jones, (Pembrokeshire Coastal Forum & NARC Secretary)

"As someone who not only enjoys and appreciates the marine environment in my spare time I'm lucky in that my career involves me in Coastal Zone Management. Marine policy and projects can take a long time to develop, where the outputs and outcomes are often time consuming and difficult. One of the many things I love about volunteering with NARC is that your work is instant, gratifying and really does make a difference. In just one dive you can free entangled wildlife and improve the habitat. I'm really proud of our partnership working, especially with the Pembrokeshire and Welsh Federation of Angling Coaches in producing site specific tackle tips leaflets for anglers."

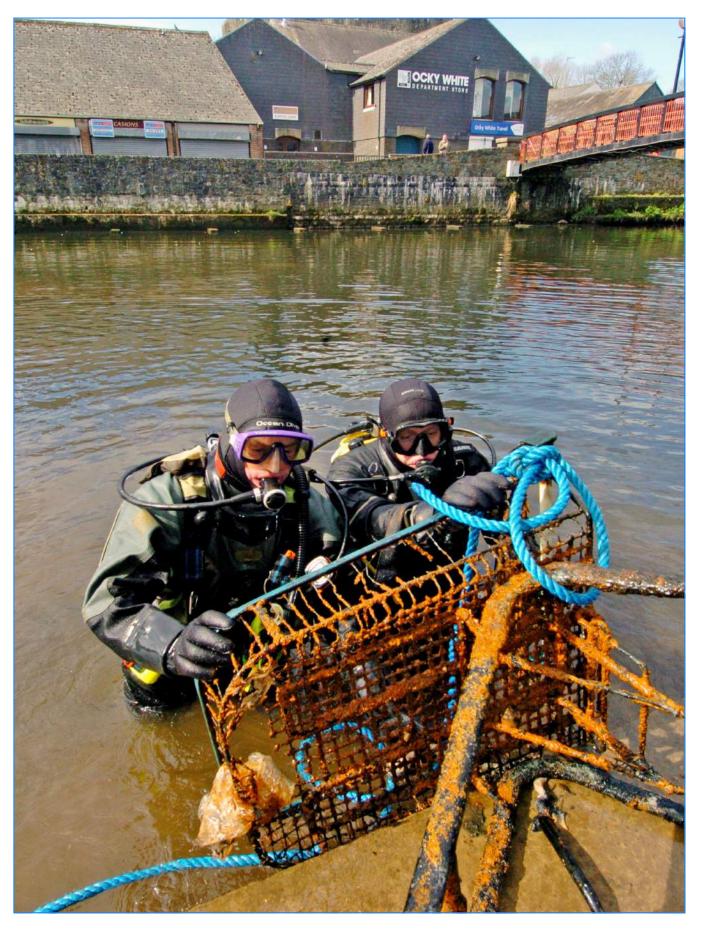


























4. 2016 HIGHLIGHTS

Stackpole Quay May 14th

9 volunteer divers braved the 10 degree water temp to kick off the NARC 2016 cleaning season. It was sunny but the SW wind made for a bumpy journey. After some kit issues 6 divers and 5 metre viz greeted the buddies teams. We released one hooked dog fish and one spider crab. Dive 2 was carried out in the Haven on the wreck of the Loch shiel (Whiskey Wreck) where we removed 5 lost lobster pots and some netting. Divers recorded: Stackpole Quay - 48 weights/60 Hooks/line. Loch shiel - 5 lost lobster pots/ netting. Much of the work locating fishing pots in 2016 was funded by a collaborative project -the Pembrokeshire Sustainable Shellfish Pilot Initiative (see section 4.1).

St Brides Bay May 15th

11 volunteer divers left Dale in beautiful sunshine. Handmarks came first to look for some lost post which we couldn't locate, even after reports from local fishermen. However we did find an anchor which was handed to our local skipper. Marine life included sea slugs, an abundance of fish and octopus. Some lemon cake was shared before dive 2 was carried out at Mill Bay. A lost string of 10 pots was reported to us but we were unable to locate them. However the dive was stunning with lots of marine wildlife. West block house came next and we recovered 3 lost lobster pots. The Collier wreck was the 4th and final dive of the day where 2 pots were bagged and sent to the surface. **Divers recorded: West Block House -** 3 lost lobster pots. **Collier -** 2 lost lobster pots.

Hobbs Point May 29th

14 volunteers gathered for our first dip of the year at Hobbs Point. Unusually for a bank holiday, the sun was shinning bright in the Pembrokeshire sky. 1-2 meter vis allowed the volunteers to gather the usual array of marine litter that is a common theme at this site. After an average of 45 minutes dive time the lifting bags came thick and fast. Much of the litter we find here seems to be fly tipped which is tragic considering the local tip is approximately a mile away. We handed over weights to some local anglers who were interested in our finds. We released an entangled dogfish and lobster. **Divers recorded:**

Hobbs Point - 36 weights /12 lures and a bag of line/7 bottles/2 cans/rope/banded razor clams/flag/chair/2 batteries/scissors rod stand/6 plastic bottles/ oil filter/2 hack saws/mobile phone/marble/rope/wire















Skomer MCZ June 11th

10 volunteers left Dale at 8AM, greeted with a sea state that can only be described as perfect. Leaving port we realised we were missing Wales in the rugby and an historic appearance in the Euros – however there was gear to be found and Dave had baked a fab choc orange cake, so not all bad! After reports of lost pots from Bristol dive club we headed to Castle Bay where 6 divers were greeted with 2-4 m viz. 45 minutes later 5 pots were located and sent to the surface with 3 of them ghost fishing. We released 1 spider crab, 1 squat lobster and some octopus eggs.

Next up 2 divers transferred over to a local fishing boat to dive the Anvil. After 50 mins of searching we came up empty handed – next time! We were then asked to go and assist in a rescue of kayakers in trouble and took 2 wet tourists and their inadequate kayak back to Martins Haven. Dive 3 saw 4 divers enter the water off Gateholm at a new site for NARC where we bagged 1 lost pot, a tyre, 1 weight and 4 hooks. **Divers recorded: Castle Bay** - 5 lobster pots. **Gateholm** - 1 lobster pot/1 tyre/1 weight/4 hooks. **Mid Chanel Rocks** - Line/8 hooks.

June 12th

10 volunteers left Dale and targeting 3 sites in one day. First up was the Dakotion Wreck with 5 lost pots sent to the surface and returned to the owner. Second up was the Behar were 4 divers found one lost pot. The last dive was the Soldiers were 2 divers found 1 pot and it was returned to the owner. **Divers recorded: Dakotion -** 5 lost pots. **Behar -** 1 lost pot. **Soldiers Rock -** 1 lost pot.

















Skomer MCZ June 13th

9 volunteers left Dale for Skomer MCZ to look for pots on the Southside as reported by local fishermen. The swell was causing problems again so we headed over to the North of the island where divers covered two sites. At the Northside of Middleholm we located a boat ladder which was lost on a NARC mission 2 years previously. We also found a childs buggy wheel!? Rye rocks was the focus of the second dive where we unable to locate reported lost pots due to the weather and poor viz. The inner Haven also turned up nothing as bad viz played its part once again. **Divers recorded: MiddleHolm** -1 ladder / 1 pushchair (wheel) **North Wooltack Point** 1 weight / 3 hooks.

Dale June 14th

9 volunteers headed over to Watwick after reports from fishermen. Bad viz and big swells made it impossible to locate the pots. After deciding that safety was paramount we headed back to the shelter of Dale and removed a string of 9 whelk pots for a local fisherman. They were all handed back. **Divers** recorded: Dale 9 whelk pots.

July 6th -10th

NARC were honoured to be invited to Greece by Loutraki Divers to carry out 5 days of underwater clean-up events. NARC inspired the formation of the Greek underwater clean-up group over 3 years ago and because of the link 6 volunteers were happy to pack their dive kit and head for the sunshine. Thanks to the sponsors of Loutraki divers, NARC volunteers were only required to cover their own flight costs and were greeted with what can only be described as amazing hospitality! 25 degree water and bath tub viz greeted our first dive in Aoytakpi Harbour.

The next 5 days we targeted mainly small harbours where sadly, an all too familiar sight was waiting for us. An abundance and array of marine litter that should quite simply, not be in the sea. We released entangled fish and urchins and collected tons of human trash. We left after a great week where we only wished we could have done more. Loutraki Divers are doing a fantastic job and we swapped underwater knowledge as well as friendship. **Divers recorded:** Loutraki Harbour 300 KG of debris .Tolo Harbour 800 KG of debris. Kaito Harbour 1800 KG of debris. Kalamia Beach 200 KG of debris. Andros Wreck 70 KG of debris.













July 16th

Narc first trip to South Hook Jetty didn't go quite to plan as we were asked to leave the area for safety concerns. Next up came the Behar where 4 volunteers found 5 lost lobster pots, rope and two weights. 7 divers located and lifted 11 lost pots where a number of shellfish were released. Dale point saw another 2 lost pots on board before given back to local fishermen. **Divers released** 9 lobsters, 1 brown crab and 5 spider crab. **Divers recorded: South Hook** Jetty float handle / 2 wires cables / tarpauline. **Behar Wreck** 5 lost pots / 2 weights / rope. **Soldier Rock** 11 lost pots. **Dale Point** 2 lost pots.

July 17th

7 divers left Dale where four sites left were covered including the Handmarks, East Hook, Monk Haven and Thorn Island. Nothing was located at the first two sites with a block weight, anchor and 1 lost pot collected from the other two sites. At Thorn Island 1 lobster, 2 brown crab and 5 whelks were **released** from 1 pot. **Divers recorded: Monk Haven** Block weight / 1 anchor. **Thorn Island** 1 lost pot.

Aug 10th

The start of 3 days of diving in collaboration with World Animal Protection kicked off with the obligatory August rain falling as we left Dale. 8 volunteer divers and 5 dive sites to target meant a long day at sea, a lumpy sea, which left a few divers with pale faces. Up first came the Handmarks in St Brides Bay where we met up with a local fisherman who provided the information. 4 divers, 20 odd metres of depth and 3 metres of viz gave us a blank to start with highlighting that even with fishermen alongside us it is a challenge to locate lost pots.

Frenchmans Bay was next up with 4 divers locating 4 lost pots and +30 metres of rope. With a fairly challenging current (some crawling on the bottom required) we managed to send the lost pots to the surface knowing a return trip would be essential to retrieve the remaining pots reported lost. Watwick Bay, Castle Bay and Soliders Point were our other reported marks for the day.

























At Soldiers Bay 3 volunteers recovered 1 lost pot and released 3 lobster and 1 brown crab. Divers recorded: Frenchmans Bay 4 lost pots / 30m rope/1 pot door. Soldiers Point 1 lost pot

Aug 11th

It was great to once again welcome Chris from World Animal Protection, who joined us on the boat complete with anti seasickness pills, required in the stiff Westerly breeze. We left Dale at 9.30 with sun replacing yesterdays rain and 7 volunteer divers with another 4 marks to explore. First up a return to Soldiers Point where 3 divers lifted 10 pots in over an hours worth of effort. 10 lobster and 3 brown crab were released and it was interesting to note that 9 lobsters were undersize. The landing craft saw us locate trawl net and rope. Frenchmans bay saw 6 pots, 2 lobster and 1 brown crab released. Divers released 12 lobsters and 3 brown crab and 1 spider crab. Divers recorded: Soldiers Point 10 lost pots. Landing Craft 2 metres of rope / 2.5 m trawl net bobbin / 1 sack. Frenchmans Bay 6 lost pots.

Aug 12th

6 volunteers were joined by World Animal Protection who funded two days of clean-up diving. First up was Ynys Berry where nothing was found. The second site Dau Fraich where 2 divers found 3 lost pots where we released 1 lobster, 2 brown, crab, 2 spider crab and 1 ballan wrasse. Frenchmans bay saw 6 pots, 2 lobster and 1 brown crab released. Low Point came next where we went back to targeting angling litter with 3 buddy pairs entering the water. Divers released 1 lobster, 3 brown crab, 2 spider crab, 1 ballan wrasse. Divers recorded: Maen Rhoson 2 metres of rope / 2.5 m trawl net bobbin / 1 sack. Frenchmans Bay 6 lost pots. Low Point 74 weights/ 145 hooks / 1 spinner / 2 lures / line / 1 glass bottle 2 cans.

Aug 27th

9 volunteers jumped on board for our last boat dive of the season with an ambitions target of 5 dive sites in one day. The wreck of the Lockshield was the first dive of the day where 4 volunteers found 1 lost pot, trawl and gill net. The second dive where 5 volunteers hit a challenging current meant the planned site was not reached. However 1 ink well pot was found and sent to the surface. Mill Bay saw us leave the water and scramble across rocks to a fleet of trapped pots. 90 minutes of hard work cutting free trapped rope saw 7 pots on board. The Behar was next up where 4 divers recovered weights, line, a fin and 1 pot. The final dive saw 4 divers jump in off Great Castle Head and find 3 lost pots Divers released 1 rockling. Divers recorded: Lockshield 1 lost pot / 1 sq m of gill net / 1 sq m of trawl net / 1 m plastic piping / 1 plastic pot. **St Anns Head** 1 lost pot. **Behar** 2 weights/ 12 hooks / 1 pot / 1 handful of line / 2m of rope. Mill Bay 7 pots. Great Castle Head 3 pots / 1 metre of plastic board.













4.1 OTHER WORK IN 2016

- Continuous updating of our project website <u>www.narc-cc.org.uk</u> which contains information on the group and recorded 300 hits in one day after the BBC National News coverage.
- Distributed copies of the site specific tackle tips leaflets which have underwater maps and site specific advice for Stackpole and Skomer MNR
- Displayed boards and information at a number of events
- Collected footage at a number of clean-up dive events to produce an educational video on Marine Litter and the work of NARC
- Liaised and provided information to the National Trust, the Crown Estate and the BBC to raise awareness of marine litter
- Joined the new international network on ghost fishing, GGGI and became a working group member to exchange knowledge on worldwide solutions
- Made multiple contacts with local fishermen to assist with retrieving lost commercial fishing gear and a collaborative partner in the Pembrokeshire Sustainable Shellfish Pilot Initiative (PSSI) -see section 4.1.
- Dived with World Animal Protection on a worldwide ghost fishing project
- Teamed up with Folly Farm and Ysgol Pen-y-Bryn Special School to raise awareness of marine litter
- National coverage to raise awareness of marine litter

















The Pembrokeshire Sustainable Shellfish Pilot Initiative (PSSPI)

The Pembrokeshire Sustainable Shellfish Pilot Initiative (PSSPI) is testing voluntary measures to try to improve fishing sustainability within the local potting fleet. It aims to encourage fishermen to incorporate one or more trials within their fishing practices. The pilot allows trialling of gear modifications at no cost to fishermen and incorporation of feedback into final outputs that will be shared widely. Gear modifications being trialled include:

Anti-ghost-fishing mechanisms (ghost fishing can occur when fishing gear has been lost) incorporating various "weak links" into pot hook set-ups and panels. The weak links currently include split rings, ghost buster hog rings, nickel-coated steel wire and potato sack wire ties. More ideas may be tested as the pilot progresses.

Escape panels (to protect juveniles by allowing them to escape the pot). 43mm x 82mm escape hatches are being trialled, some with a degradable "weak link" element to also allow the panel to act as an antighost fishing device. Blank panels are being fitted too just as an anti-ghost-fish device with a degradable element for those who want to retain velvets and/or prawns.

Gear tags (to identify pots in the event that they become lost, enabling them to be easily returned to their rightful owner). These are not connected to effort limitation.

NARC have been happy to build on their existing relations with local fishermen to retrieve lost gear, thereby reducing the potential for ghost fishing. PSSI funded dives on May 14/15 June 11/12/14 July 16/17 Aug 27 and part funded dives on Aug 10/11/12. In total 92 lots pots and netting were recovered with 29 lobsters, 19 crab and 2 fish released.

The initiative seeks to secure environmental improvements that will benefit the Pembrokeshire Marine Special Area of Conservation and help to enhance and maintain the living resource found off the Pembrokeshire coast which fishermen depend on to make a living.

















5. PROJECT FINANCES

5.1 Income

Funder	Amount
Balance as April 9th 2016	£2804.16
SHLNG	£400
Pembrokeshire Sustainable Shellfish Initiative (SAC Officer led project)	£4200
Port of Milford Haven	£1700
Folly Farm	£1000
World Animal Protection	£900
Donations	£1000
Total Amount	£12,004.16

5.2 Expenditure

Service	Amount
Boat Hire	£4795
Bank Charges	£30
Publicity and Marketing	£879
Equipment and air fills	£1082.32
Total Amount	£6786.32
Total carry forward for 2016	£5,217.84

Neptune's Army of Rubbish Cleaners Committee

David Kennard, (Chairman) / David Jones, (Secretary/Fund raising) Tony Rees, (Vice-Chair) / Ceri Jones, (Safety and Diving Officer) / Meg Pugh, (Public Relations Officer) / Blaise Bullimore, (Data Officer) / Anghard Rees, (Social Event Officer) / Andy Davies, (Treasurer)

Annual Report by David Jones













6. PLANS FOR 2017

We hope this report shows our existing sponsors the value of NARC's work and how their contributions are actioned throughout the year.

NARC plans to celebrate its 13th year with a continued programme of clean-up events and to continue our collaboration with local fishermen. There will be an update and reprint of the tackle tips leaflets aimed at being proactive in reducing lost tackle using education.

NARC will continue to be an active member of Global Ghost Gear Initiative exploring solutions for what is a global issue.

Clean-up events	Education and awareness	New schemes
10 events booked with more TBC	Reprint angling tackle tips leaflets	Look at options to become a charity
Funded dives to recover lost commercial angling gear	Website updated with data collection	

7. THANKS AND ACKNOWLEDGEMENTS

The group would like to thank all the sponsors and funders for 2016.

Port of Milford Haven / World Animal Protection / Ed / South Hook / Folly Farm / The Pembrokeshire Sustainable Shellfish Pilot Initiative (PSSPI) and the kind donations from the general public.

NARC would also like to thank Andy Truelove, Brian Dilly, Fenn Duke and all the dive clubs who kindly offer their ribs and divers.

Lastly and most importantly many, many thanks to all the NARC volunteers who freely give up their time for this good cause. Thanks to everyone for another fantastic year!



















