A partnership to care for the Clyde: its environment, its people and its visitors

Clyde Breakers

FIRTH OF CLYDE FORUM NEWSLETTER

Firth of Clyde FORUM

Winter 2012 Issue 14

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Front cover photograph: Portencross Castle © Friends of Portencross Castle

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Firth of Clyde Forum News

Welcome to the Winter 2012 edition of Clyde Breakers!

It has been a busy year for us with several projects underway, all due to complete by March 2013 at the latest. For an update on these you can read the article on the opposite page. All of these projects are at the forefront of regional marine planning in Scotland and will contribute to the development of a statutory regional marine plan for the Firth of Clyde at some point in the future.

Along with local project management the Forum has had continued engagement with Marine Scotland and other organisations on a number of national initiatives. We attended the 5th Marine Protected Areas stakeholder workshop in June (for more information on the MPA process, see the article on page 6), the National Marine Litter Strategy workshop in August and ongoing Marine Strategy Forum meetings. We have also been invited onto the Scottish marine invasive non-native species (INNS) working group and involved in the LIFE+ bid which is co-ordinated across the whole of the UK to secure funding for marine INNS research.

More news on the personnel front as Fiona Mills will be taking maternity leave from December, however, Sarah Brown will be working full-time to cover the post.

The Forum website has been updated, so for the latest news, events and updates, please visit us at www.clydeforum.com. In the meantime we hope you enjoy the wide range of articles featured in this edition of Clyde Breakers.

Best wishes,

Isabel Glasgow,
Firth of Clyde Forum Chair

Fiona Mills
Sarah Brown
Firth of Clyde Forum Project Managers

Isabel Glasgow, Carol Anderson (contractor), Alison Grant (contractor), Krysia Campbell (SNH) and John Esslemont (Ayrshire Joint Planning Unit) at Seascape site visit to Loch Striven © F Mills

Project Update

2012 has been a busy year for the Forum with several projects from the Marine Spatial Plan action plan being progressed.

Invasive Species Workshop © Sarah Brown

Biosecurity Plan – Invasive Species

Bringing the Biosecurity Action Plan to life has been an exciting challenge. Over the summer we published the 'Firth of Clyde Marine Invasive Non-Native Species Identification Guide', a long title for a short booklet.

In August, before the end of the summer sailing season when boats are hauled out, the waterproof guides were supplied to all marinas and key stakeholders in the Clyde and two free workshops were run to raise awareness of what the species look like in real life. More than 40 people attended the workshops and we hope to run similar events in the Spring.

The next steps will be to hold a cross sectoral meeting to gather information about actions on biosecurity within different industry areas in the Clyde and to print waterproof posters which will raise further awareness of the threat posed by invasive species in the marine and freshwater environments.

Landscape/Seascape Assessment

The aim of this project is to assist Local Authorities with coastlines in the Firth of Clyde in the development plan process, to inform SNH staff and other agencies in developing policy and responding to casework and to inform future regional marine planning. This project was awarded to the contractor Alison Grant supported by Carol Anderson. Following an inception meeting in May with the project group, Alison has been out in the field and writing up the assessments. There have also been 2 site visits for the project group, 1 land based and 1 sea based, to help inform the novel approaches to seascape assessment that Alison is developing. Thanks go to the University Marine Biological Station Millport for the use of their boat. The report is due to be finished in November and will consist of 3 levels – a Clyde level, a 'seascape' level based on areas linked by sea areas, and a coastal character area level. There will also be Geographic Information System (GIS) output that will be publicly available as part of the Firth of Clyde regional data held on Marine Scotland's National Marine Plan interactive (NMPi).

Recreational Access

Thanks to the fantastic support of our new volunteer Laurin McDowell, we have been able to progress with this work much faster than anticipated. Laurin has been gathering information about the recreational access points all around the Clyde and her interactive map will soon be available showing more than 600 places where people regularly use the coast for recreation. The information will have many uses including helping Local Authorities to plan where their investment will have most impact. We also hope members of the public will find it useful to plan their activities on the Clyde.

Marine Litter

The Forum held a meeting in July with community beach cleaning groups from around the Firth of Clyde as well as GRAB and the Marine Conservation Society to discuss data collection and to input thoughts and ideas to development of the Firth of Clyde Marine Litter Strategy. Thanks to all those who attended and for their positive contributions.

Development of the National Marine Litter Strategy is ongoing and a workshop was held by Marine Scotland in August with various stakeholders to discuss the proposed vision, objectives and actions. Keep an eye out for a consultation on this some time over the next few months. Once the National Strategy is further developed, the Forum can begin development of our Regional Strategy to link in with it.

In the meantime the Forum also organised a workshop in October for Local Authorities and Duty bodies such as landowners to help develop 'shoreline litter management guidelines'. This took the form of some best practice presentations and then workshops to help inform the guidelines using the experience of the attendees. Thanks to all those who made the effort to attend for your very valued input and to Clyde Muirshiel Regional Park for providing meeting facilities. The guidelines are available on the Forum website www.clydeforum.com

Who's who in the Clyde

For the last few months we have been collating a database of contacts relevant to the Firth of Clyde with the aim of creating a 'Who's Who' in the Clyde web based resource. We have written to all of the community groups, marine businesses and clubs to ensure the data is as comprehensive as possible. If you have not received a letter from us and would like to be included on the list, please get in touch.

Correction to website information for Community of Arran Seabed Trust (COAST)

Apologies for the incorrect website address included in our last Clyde Breakers newsletter. Please note the following website address www.arrancoast.com.

Basking shark tagging project

Basking shark feeding © Paul Naylor/SNH

Scottish Natural Heritage and the University of Exeter have joined forces in an exciting new tagging project which will help to solve some of the mysteries about basking shark behaviour. Sharks have been satellite-tagged in hotspots off Scotland's west coast and, for the first time in Scotland, basking shark movements are being displayed online in near real-time.

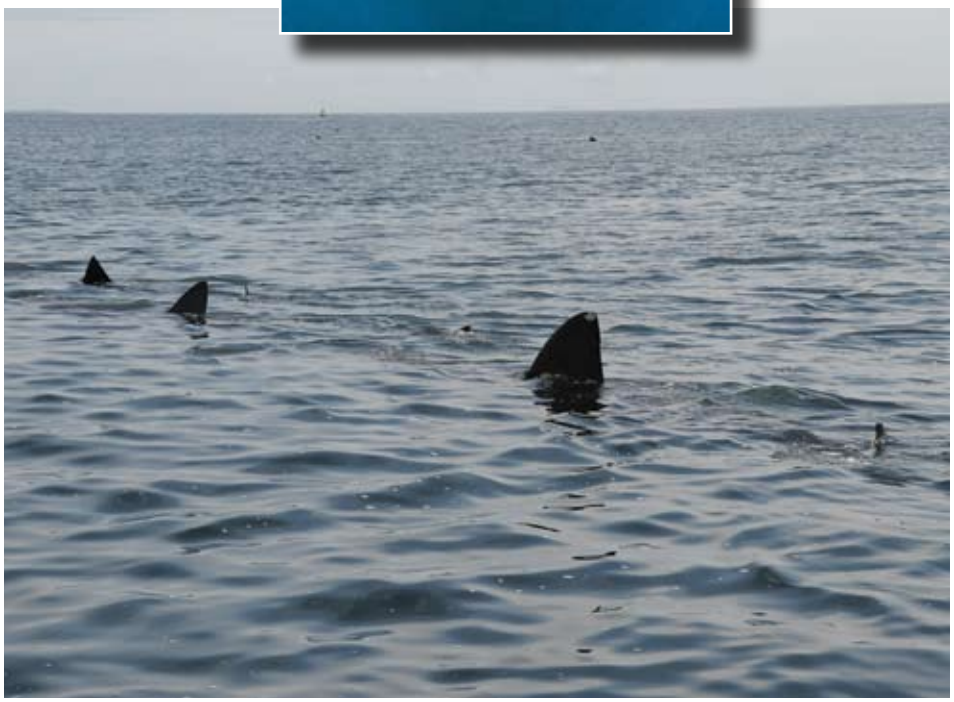
The project focuses on the seas around Coll, Tiree and Canna, where basking sharks are regular summer visitors in high numbers. Whilst sightings of basking sharks in the Clyde are also frequent, surveys (corrected for levels of effort) have indicated that the Clyde sea has not shown as high numbers of basking sharks as there have been historically. The study will reveal a lot more in general about these fascinating creatures and the results will support ongoing work to identify potential Marine Protected Areas in Scottish waters.

"We want to know how long the sharks remain feeding in these areas and where they go when they leave our waters in the autumn," said Dr Suz Henderson of SNH. "We also hope to discover more about how the sharks use Scottish waters. For example, we know they come to feed on the rich plankton soup in the area during summer months but their behaviour suggests they may also gather here to find a mate or even breed".

Whilst the ongoing transmission of data is very useful, the actual recovery of the tags will reveal even more information. The tags are designed to float and they can get washed up on the beach - the public are being asked to help the project by returning any detached tags they come across. Black and dark grey in colour, they are torpedo or submarine shaped and both have a short antenna. They are 15 or 18cm in length and around 5 or 6cm wide (see photo). So keep your eyes peeled when you're out and about on the west coast!

Results so far indicate that one tagged shark has travelled around the west coast of Ireland and further south, past Portugal and another has headed south to Jura and Islay. The remaining tagged sharks have stayed in the general area where they were tagged until transmissions from the tags went quiet, indicating the sharks have not surfaced.

Article courtesy of Scottish Natural Heritage



Nose to tail following; courtship-like behaviour © SNH

Satellite tags © University of Exeter

To see where the tagged basking sharks have been, visit www.wildlifetracking.org/?project_id=753

To report a basking shark sighting, contact the Marine Conservation Society on www.mcs-scotland.org

If you find a tag, please contact the SNH Oban office on 0300 244 9360 or baskingsharks@snh.gov.uk, and you could claim a reward!

Visit the SNH website at www.snh.gov.uk

Gannets nesting on cliffs. Inset: Slow Worm, both © Sarah Brown

Scaling the cliffs of Ailsa Craig in search of gannet eggs with Scottish Natural Heritage

In **June this year I was lucky enough to be able to join the SNH annual visit to Ailsa Craig in order to ensure the island, designated as a Special Protection Area (SPA) and a Site of Special Scientific Interest (SSSI), was in good condition and to collect gannet eggs for chemical analysis. Ailsa Craig is nationally important for its geological interest as a plug of micro granite formed around 60 million years ago, for its large colony of breeding seabirds and for its rare invertebrates.**

The rock is similar to granite in composition but is much finer grained and hence is called 'micro granite'. It has also been possible to determine the direction of ice flow during the last ice age around 10,000 years ago from the exposed rock surfaces on the island. The distinctive granite has been used for over 150 years to make curling stones – modern stones use the blue granite for the running edge and the green granite for the body of the stone.

The rocky shore and cliffs support a large colony of breeding seabirds including razorbill, guillemot, kittiwake, herring gull and lesser black-backed gull. More recently, following the eradication of rats on the island, puffins have also returned to breed. The gannet colony is of particular importance as Ailsa Craig supports over 10% of the British gannet population. Gannet eggs have been monitored by the Predatory Bird Monitoring Scheme since the early 1970s. Eggs are analysed by SNH for persistent organic pollutants (POPs) and inorganic elements, including toxic metals such as mercury. Gannets are considered a sentinel or indicator species for the marine environment.

Insects on the island include the rare blowfly which is dependent on carrion from the bird colonies and a ground beetle on the scree slopes to the east of the island.

The day we visited the island the weather was kind with only a few clouds around, but the wind was from the north and so as we approached the pier on the north eastern side of the island the waves were too high for us to land. We therefore did a circuit of the island to view the breeding seabirds on the cliffs and slopes and to watch them head out to the wider firth to feed. There were quite a few seals around which were very interested in what we were up to! The main objective of the day was to collect gannet eggs from the nests under consent from SNH. Climbers from the Climbmts group had been contracted to reach the nests and in order to get them onto the island we had to pull in close to the rocks on the calmer south side of the island so that they could jump on and scramble up to the nearest nests!

Luckily, just before we had to head back, the captain decided that he could now approach the pier on the north east of the island and we were able to spend about an hour exploring the relics from the mining industry and looking at the slow worms which were curled up under sheets of abandoned corrugated iron.

If you would like to visit Ailsa Craig, round the island tours are available on the MFV Glorious (tel: 01465 713219) or Kintyre Express (tel: 01294 270160) from Girvan during the summer period, you can also get here from Campbeltown by Mull of Kintyre Seatours fast rib (Tel: 07785 542811). This information was taken from the RSPB website.

Fiona Mills, Firth of Clyde Forum Project Manager

Sunfish sighting in the Clyde!

It was a beautiful July day; on the Research Vessel Aora a group of excited students are scanning the sea. Off the Arran Coast a strange flapping stick-like object is sighted at the surface of the water, an image crosses my mind and then gradual recognition – it could be a SUNFISH!

Sunfish at surface of water © Phillip Cowie

We approach the object very carefully and are all treated to an amazing sight. It is indeed a basking, ocean sun-fish (*Mola mola*), a rare sight in the Clyde and one of only a handful of sightings in the last 100 years. These bony fish look bizarre; they have large, round and flattened bodies. The Latin word mola, meaning millstone, refers to this shape. They have highly elongated dorsal and anal fins which they use to swim (they have no true tail) - the dorsal fin was what we saw flapping. Their blunt heads possess a small, beak-like mouth which they use to eat their main prey – jellyfish. Although they can attain a size up to 3.3 metres in length and weigh up to 2.5 tons (making them the world's largest bony fish), this specimen was small, approximately 70 cm in diameter and potentially weighing around 60 kg. There are different ideas as to why they appear on the surface basking in this strange manner. One theory is that they are attempting to warm up after deep dives into colder water in pursuit of jellyfish and other prey. Just like us sunbathing after a dip in the chilly waters of the Clyde! Sunfish are summer visitors to our waters; the winter sea temperatures are too cold for them to be resident year-round. They are normally encountered in fairly open water and little is known about the ecology of these fascinating, vulnerable fish. All in all, a fantastic educational day for the students, staff and crew showing what a fascinating place the Clyde is for studying marine biology and for the tourists who visit our shores!

Dr Phillip Cowie, University of London Marine Biological Station, Millport.

Identifying potential Marine Protected Areas in the Firth of Clyde

Map showing potential areas for Nature Conservation MPAs in the Firth of Clyde

In December a report will be laid before the Scottish Parliament, providing an update on progress towards developing Scotland's contribution towards an ecologically coherent network of Marine Protected Areas (MPAs) in the North East Atlantic. Since the Scottish Marine Act was adopted in 2010, Marine Scotland has been leading a project to provide advice to Scottish Ministers on the selection of Nature Conservation MPAs and the development of the Scottish MPA network.

Scottish Natural Heritage (SNH) and the Joint Nature Conservation Committee (JNCC) have been working with Marine Scotland on the project to provide scientific advice. This has involved collecting existing data and information, carrying out new surveys and developing sound foundations based on evidence, so that guidelines on selecting MPAs in Scotland can be properly applied.

A key part of the process has been working with community, industry, recreational and other interest groups. As part of the project Marine Scotland, JNCC and SNH have hosted five national MPA workshops, focussing on data, the initial MPA search locations and the shape of the evolving network. Alongside the workshop series meetings have also been held with a variety of groups. Around the Clyde these have included the Clyde Fishermen's Association (CFA), the Community of Arran Seabed Trust (COAST), Scottish Sea Angling Conservation Network (SSACN) and the Royal Yachting Association Scotland (RYAS) which represents a range of recreational interests.

We asked three of these groups for their thoughts on the process to date, as well as a word from Marine Scotland.

The fishermen's angle

The Clyde Fishermen's Association (CFA) is fully aware of the duties faced by Scottish Ministers in the introduction of Marine Protected Areas in Scottish waters. In this regard the CFA have engaged at an early stage with the process, voluntarily providing fishermen's information to government advisors SNH and JNCC.

The fishing industry in Scotland have concerns that all areas suggested for designation follow a rigorous process of scientific evaluation and must look to SNH & JNCC to collect that scientific evidence. Where evidence of a pressure on species and features exists, the fishing industry will also engage in the process of introducing management measures suitable for the protection of such species and features. The CFA has been at the forefront of environmental protection for decades: measures such as voluntary fishing closures on areas containing fragile species have been introduced in many locations. Fisheries management measures, such as the Weekend Ban and a restriction on the size of vessel allowed to fish in the Clyde, were sought and implemented by the CFA more than 25 years ago.

We have concerns about the level of evidence behind some of the MPA proposals. The fishing industry is criticized for the production of poor scientific evidence, often described as being hearsay. The environmental evidence for protection must meet the same standards required of the fishing industry. Of great concern to our industry is the possibility of introducing measures which will have unintended consequences. The poorly planned restriction of fishing in one area could lead to displacement of effort to an area which will suffer under increased pressure. The protection process must take account of all such consequences.

Where there is evidence of species and features in need of protection, one example being maerl beds which are sensitive to any contact with fishing gear, both mobile and static, the CFA will readily engage in their protection. The protection of the environment is of great importance to the fishing industry: the assurance of healthy fish and shellfish stocks is our future.

Clyde Fishermen's Association

Flame shell bed with tube worms © Ben James/SNH MPA feature identified for Loch Fyne and Loch Goil potential MPA

The view from the COAST

The waters and fisheries of the Clyde are an important but long neglected resource for Clyde and central belt communities as well as having a high intrinsic environmental value. The Scottish Government under the 2008 EU Marine Strategy Framework Directive (MSFD) is committed to delivering a network of well managed sites by the end of 2016 and achieving Good Environmental Status by 2020. It has a lot of work to do. At the moment most of the waters in the Clyde are failing to meet Good Ecological Status (GES) under the 2000 Water Framework Directive (WFD) and Marine Scotland's latest review of Clyde fisheries paints a picture of a highly disturbed ecosystem which, in our opinion, is unlikely to achieve GES by 2020. The MPA designation process offers a glimmer of hope for the Clyde. COAST has therefore submitted a community proposal for an angler, yachting and creeler friendly MPA around the South of Arran and has been working closely with SNH and Marine Scotland to advance the proposal. COAST has set out an outline management plan for the proposed MPA which, if adopted, would prevent damaging scallop dredging and prawn trawling within the proposed area. The area has long been recognised by fishermen and scientists as being of significant functional importance to the Clyde, particularly as a spawning ground and juvenile nursery area. The proposal is now, we hope, about to be submitted to Richard Lochhead prior to a further 12 week public consultation on its designation. During the MPA selection process COAST has engaged with the CFA and a wide variety of other stakeholders at a series of MPA workshops facilitated by SNH, Marine Scotland and the JNCC as well as holding its own consultations on Arran and publicising its proposal widely. COAST felt that at the MPA workshops creelers, anglers and coastal communities were not well represented and that only communities already involved in marine conservation had the resources to attend. This and the complex process by which proposed MPAs are being assessed means there are very few third party proposals from communities around Scotland. This makes it even more important for the government to support the communities who have put forward proposals. The most common comment we have received on the South Arran MPA proposal is why don't we extend it all the way around Arran, or indeed the whole of the Clyde coast line. There is clearly a lot of public support for the South Arran MPA and MPAs in Scottish waters.

Community of Arran Seabed Trust

(continued on page 8)

Fireworks anemone © Sue Scott/SNH MPA feature identified for Loch Fyne and Loch Goil potential MPA

Nature Focus (continued – Identifying potential Marine Protected Areas in the Firth of Clyde)

Black Guillemot © Lorne Gill

MPA feature identified for Clyde Sea Sill potential MPA

A word from Marine Scotland

The Marine Act has given Scotland's marine environment unprecedented levels of protection and since the Act was introduced in March 2010, we have been working hard to ensure that's the case. Part of that work is the development of a network of Marine Protected Areas (MPA) for rare, representative and precious species and habitats in Scotland's seas, which will form a significant part of the UK contribution. A well managed MPA network can play a crucial role in the conservation of both biodiversity and geodiversity, offering long-term support for the services our seas provide to society – as well as supporting sustainable coastal communities.

The identification of MPAs is a science-led process involving stakeholder engagement, led by Marine Scotland in partnership with Scottish Natural Heritage, Joint Nature Conservation Committee, Historic Scotland and Scottish Environment Protection Agency. Stakeholder input has been critical and has been sought through a wide range of meetings and correspondence to develop the recommendations for locations and conservation objectives, as well as highlighting potential management measures. A series of comprehensive workshops provided a further opportunity for stakeholders to influence the design of the network - including proposed alternatives - with fishing, recreational and conservation interests all involved. Third party proposals were invited from stakeholders, many of which already overlap with existing search locations and others, such as South Arran, are being taken forward for assessment.

The Clyde supports rich and varied wildlife and industry. The Inner Clyde Estuary is already a Special Protection Area and Ailsa Craig SPA is designated for its gannet population. There are also a number of remarkable Sites of Special Scientific Interest around the coast, and on the islands of Arran, Bute and Great Cumbrae.

The Clyde is also the single most important area for recreational boating around Scotland. In February 2010 'Sailing Tourism in Scotland' identified that the Clyde area contained 43% of all available berthing/mooring in Scotland, provided almost 1,300 jobs in marine-related businesses and accounted for over £44 million annual expenditure out of a national total of £101 million. We value the importance of marine eco-tourism and recreation and are keen to keep this area productive for future generations to enjoy.

The areas proposed in the Firth of Clyde have been identified for the conservation of diverse species and habitats, from horse mussel and flameshell beds to black guillemot. These locations reflect the importance of this region for sea lochs and the habitats and species they contain and, if designated, we would aim for their sustainable conservation.

Currently there are three potential areas for Nature Conservation MPAs within the Clyde (see map on page 6). To support the selection of these areas and build on existing data for the Clyde, SNH have undertaken a range of surveys this year including a Loch Fyne dive survey, Clyde Sea sill habitat survey and recently completed a verification study of additional data held for the south coast of Arran.

SNH's and JNCC's advice on the selection of Nature Conservation MPAs will be published in December, at the same time as the Parliamentary Report on progress in developing the MPA network. However, this is not the end of the process. SNH, JNCC and Marine Scotland will continue working with marine interest groups over the coming months and in the lead-up to the formal consultation in summer 2013. A Sustainability Appraisal, a combination of a socio-economic impact assessment and a Strategic Environmental Assessment, will accompany the public consultation, and this will serve to inform consultees. policy makers and Scottish Ministers of the social, environmental and economic effects of designating MPAs, and will address topics such as displacement of activity.
For further information on the process and engagement visit the Marine Scotland website (www.scotland.gov.uk/Topics/marine/marine-environment/mpanetwork). Details of surveys and other research reports are available on the SNH website (www.snh.gov.uk/protecting-scotlands-nature/protected-areas/national-designations/marine-protected-areas).

The recreational boating line

The Royal Yachting Association Scotland represents the interests of recreational boaters in Scotland. We were pleased to engage with the MPA selection process from the very beginning. The possibility of seeing marine wildlife is an added bonus for sailors, so protecting and enhancing the marine environment is welcome, provided sailing is not unnecessarily constrained.

The RYA and British Marine Federation's Green Blue programme has shown sailors how to minimise any adverse impact on wildlife and has recommended biosecurity measures against the transfer of invasive non-native species. We welcomed the constructive views that most recreational activities are compatible with nature conservation, that restrictions would only be implemented if there was clear scientific evidence of an activity causing damage and that voluntary codes of practice and advisory notices were preferred to formal restrictions. In that regard, the experience from the Loch Creran Special Area of Conservation, where anchoring and mooring take place without damaging the important serpulid reefs and horse mussel beds, has been very useful.

A review of the MPA search locations identified anchoring as being a possible problem for some habitats. However, a comparison of the location of anchorages in marine Special Areas of Conservation, with the location of vulnerable habitats, suggested that damage from anchoring was generally unlikely. If vulnerable habitats are identified close to anchorages, then advice about their avoidance can be issued through pilot books and sailing directions, as monitoring and enforcement are likely to be impossibly expensive.

Royal Yachting Association

Exercise Joint Warrior in the Firth of Clyde

Observant readers will have noticed a higher than average naval presence in the Firth of Clyde this autumn as Exercise Joint Warrior took place from 1 to 11 October. The exercise involved 24 ships, two submarines, 40 aircraft and over 4,500 military personnel from ten countries, including the US, France, Canada, Germany and Estonia.

The two-week long exercise is one of the most complicated in the world, combining aerial, above-water and underwater military training. Incorporating everything from naval gunfire support to aerial combat, attacks by small, fast watercraft and humanitarian assistance operations, Joint Warrior throws a number of different challenges at every participating unit. "The exercise is designed to test the collective skill, knowledge and equipment of the participants in a range of different environments" said Captain Phillip Titterton, of the Joint Tactical Exercise Planning Staff (JTEPS) who co-ordinate Joint Warrior. "By training in this fashion, we are able to prepare for a whole range of potential and ultimately realistic tactical scenarios, from out-and-out warfare to rescuing hostages captured by pirates."

Held twice a year, Joint Warrior aims to provide the capabilities needed to create a military force capable of being deployed to worldwide incidents such as last year's war in Libya. It also helps improve the working relationship between the British Armed Forces, NATO and coalition counterparts by allowing them to work together in a simulated and controlled operational environment.

Captain Nelson Castro, the Commander of the United States Navy's Destroyer Squadron 26, said: "Many of the Allied units involved in Joint Warrior exercises will be the same units our ships will see on deployment. This familiarity allows for the development of trust as you know almost exactly how the Allied unit will respond during combat operations."

Around 150 British personnel, many of them reservists, descended on HMNB Clyde for Joint Warrior to set up a Joint Warfare Operations Centre to co-ordinate and manage the massive exercise. Six British warships are involved: frigates HMS Kent and St Albans (from Portsmouth), and minehunters Penzance and Bangor (based at Faslane), Cattistock and Hurworth (also from Portsmouth).

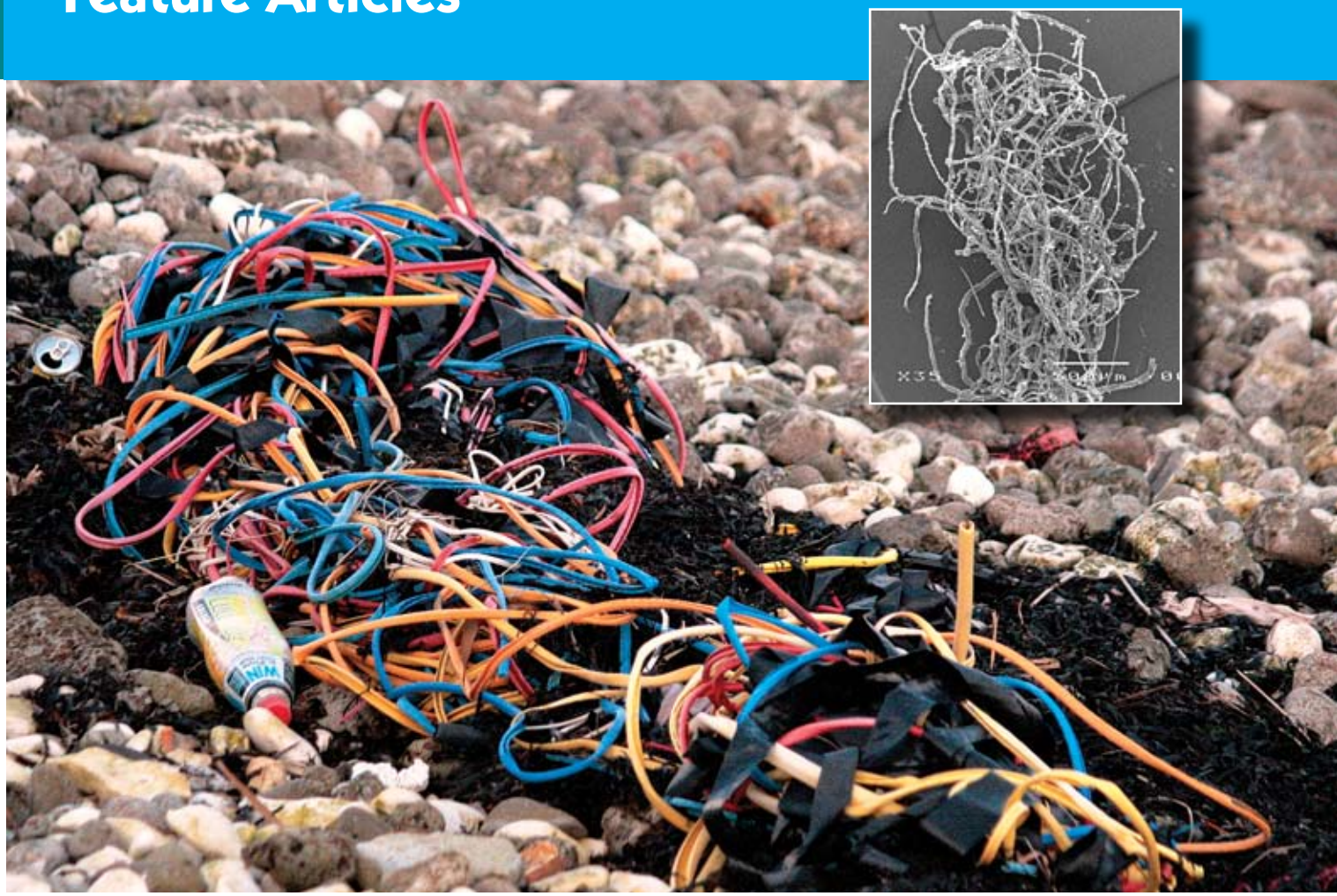
As for air forces, 40 fixed wing jets were in the skies: British Hawks, Tornados and Typhoons, plus a detachment of Swedish Gripens, and eight maritime patrol aircraft from Canada and France operating from RAF Leuchars.

Land force conducted military training across Scotland, using MOD ranges, commercial ranges, Highland Agency and private land areas, allowing 16 Air Assault Brigade, 3 Commando Brigade and 3 UK Division to train alongside troops from the US, Sweden and Holland.

Exercise Joint Warrior allows the Armed Forces to practice the wide variety of skills needed by today's military. Skills such as counter piracy, narcotics and insurgency operations, mine countermeasures, electronic warfare training and tactical intelligence surveillance and reconnaissance are all included. The scenario for the exercise involves multiple sovereign nations, disputed territory, smuggling, piracy and terrorist activity. As it plays out the scenario develops from a period of military and political tension to simulated war fighting and state on state hostilities – all providing realistic training for the participants. The exercise means that at times civilian GPS transmissions do not work in a limited area in North West Scotland.

The relevant authorities, including aviation and maritime communities were consulted and a risk assessment done to minimise the impact and put robust procedures in place for any unforeseen eventuality.

Article and photographs supplied courtesy of Lt Cdr Clive Hayward



Cables in the strandline © Natalie Welden. Insert: Microscopic filaments of plastic recovered from Nephrops © Natalie Welden

The Problem with Plastic

Plastics were developed in response to shortage, firstly ivory in the late 19th century, then materials such as silk and various metals, during the Second World War. Found to be adaptable and durable, plastic steadily replaced traditional materials, and is now a major component of most of our consumer goods. This prevalence is visible in the composition of our litter, with 10.3 million tonnes of plastic going to landfill in 2011 in Europe alone.

With such a large amount of plastic being disposed of annually, it is unsurprising that a proportion of it makes its way into the environment. As a result, it is now difficult to walk along our rivers and beaches without coming across some form of plastic litter. This debris is known to have a range of financial and environmental impacts. On beaches, plastic discourages visitors, leading to reduced revenue from tourism. In the water, it can cause damage to vessels by fouling props and intakes. Its impacts upon the environment are varied; threats to marine fauna include smothering, entanglement and ingestion.

Here in the Clyde Sea there are a range of species known to suffer the effects of plastic pollution including a number of fish species, fulmar and other sea birds, and even the shy porpoises and minke whales. Work carried out at the University Marine Biological Station Millport, Isle of Cumbrae, has also identified microplastic contamination in a range of invertebrate species. Microplastics come about due to the fact that plastic does not biodegrade but breaks up into smaller and smaller particles. This plastic comes from a range of possible sources, including litter from sewage outfalls and landfill carried down rivers; both recreational and commercial maritime activities; and that carried in from the Irish Sea.

A study underway at UMBSM is attempting to discover patterns in the distribution of plastic pollution throughout the Clyde Sea. This is being done using sediment and water samples taken from beaches and collected from the marine station's research vessels at points across the Clyde. These samples are then subjected to a wide variety of analytical methods, for example FT-IR spectrometry, used to identify highly degraded plastics.

It is hoped that the results will identify not only regions of high plastic contamination, but help to isolate sources of plastic pollution. This would enable measures to be put in place to reduce plastic inputs, and allow beach cleans and other plastic recovery schemes to be employed where they will be most effective. From a monitoring standpoint, links between invertebrates containing plastic and high sediment contamination may reveal useful bioindicators.

The identification of point pollution sources and targeted clean-ups will have a positive impact on the level of plastic in the environment. However, the easiest way of reducing marine plastic debris remains the reduction, re-use, and recycling of plastics both at home and work.

Article and photographs courtesy of Natalie Welden, PhD student at University Marine Biological Station, Millport

Visit the Firth of Clyde Forum website to see the recently published 'Coastal Litter Management Guidelines for Duty Bodies' at www.clydeforum.com

Ballan wrasse the 'cleaner fish'. Inset: juvenile Ballan wrasse

Scottish Salmon Company drives Industry Innovation in Environmental Excellence

By Rebecca Dean

Historically, the salmon farming industry has faced a number of environmental challenges, but as the saying goes, what tests us, makes us stronger.

Today, Scottish salmon farming is a highly innovative industry, subject to extensive regulation and run by passionate people. Given the stewardship of Scotland's waters and loch systems up and down the west coast, we take our responsibilities extremely seriously and are constantly looking to improve what we do, from our 'Single Generation, Single Loch, Synchronised Fallow' system through to setting new standards for containment monitoring and related training.

One of our latest initiatives is the development of a natural biological means to control and minimize the impact of sea lice, a naturally occurring parasite which affects both wild and farmed salmon.

With Viking Fish Farms at Ardtoe Marine Laboratory, we have been growing Ballan wrasse, the 'cleaner fish', on a commercial scale, with the first batch now successfully transferred to a marine site in the Western Isles.

Achieving a sustainable and welfare-friendly method of commercial wrasse production to support healthy farmed fish is an industry first and the result of four years of research and development.

We recognise the significant potential for wrasse to play a part in the management of sea lice populations within our marine production facilities. However, the capture and use of wild wrasse is not sustainable and farmed wrasse has the advantage of being certified as disease free.

One additional benefit afforded by the work undertaken with Viking Fish Farms is the opportunity to build on the knowledge provided by the wrasse farming technology. This will assist in improving the cost basis for this method of sea lice control and therefore extend its use and uptake for sea lice management across our operations and within our Industry as a whole.

The original research was launched in 2008 and later co-opted into the Ecofish project, a wrasse research initiative financed through the European Regional Development Fund/Northern Periphery Program, as well as with governmental grants and private funding.

With marine operations of our own stretching from Lewis and Harris to the Clyde Estuary we would hope to have the opportunity to extend the programme in due course. However, because successful sea lice management is an important issue, the findings from the initiative will be shared widely across the industry.

Finally, we have also been aware of the positive impact the initiative has on our staff and colleagues. A lot of time and effort that has been put into this project through training, the preparation of equipment as well as monitoring and recording systems and there is a very tangible sense of satisfaction across the company. Being part of something which will assist fish health long term and which supports environmental excellence is important to everyone who works for The Scottish Salmon Company.

Rebecca Dean is the Environmental Manager at The Scottish Salmon Company, a Scottish based and operated company with over 50 sites on the Hebrides and West Coast of Scotland, from the Isle of Lewis in the north to Arran in the south, and over 380 staff.

The BIG LAUNCH – Harland Way and Harland Way Wharf, Govan.

It was a glorious summer's day when dignitaries, fair people, and the residents of Govan Riverside, all gathered to enjoy a big party, horse rides, bouncy castles, fair rides, jelly and sandwiches and a fantasia of fair music. Captain Ron Bailey, Glasgow Harbour Master was there in his regalia, to present a very shy Riverside Youth Club member, Addie, with a certificate commemorating their chosen name for the river walkway and the quayside - Harland Way and Harland Way Wharf . Harland Way Wharf will now feature in the River Clyde charts, where it will also be noted that there is a 30metre pontoon available to use by visiting craft.

The BIG LAUNCH marked the end of a period of creative work with the residential community of Govan Riverside. Community artist Matt Baker was appointed by Glasgow Housing Association in 2010 to create a stronger identity and greater awareness of the space within the area and its relationship to the rest of Govan and Glasgow City. He spent the first year developing community contacts and working with local people, engaging them in the significant historical past of Govan and the area's relationship with the River Clyde and with Partick, directly opposite on the north side of the River Clyde. Part of this work included engaging the local people on a raid by traditional craft, on the Riverside Museum, at Pointhouse quayside.

The Big Launch naming presentation

During this period the riverside walkway, first opened by Prince Philip, was substantially upgraded with new surfaces, seating and landscaping largely paid for by Glasgow Housing Association with a contribution and assistance from Glasgow City Council and Clyde Waterfront. Matt Baker ultimately focused on creating works along the waterfront, safe to say not disturbing the commemorative opening plaque, and through the residential area to the community hall on Carstairs Street. The final works are engravings which tell a story, on reconditioned granite quayside stones. Matt worked in collaboration with TS Beall, who also produced wooden sculptures again reflecting past into present throughout the area.

Engravings tell a story on original quayside stones

Although this work is now complete, Matt Baker has retained his association with the Govan community and has helped them create an active group to develop ideas for the redevelopment of Water Row. Central Govan Action Plan and award winning Town Centre initiative continues to be delivered with major investment in community facilities, schools and historical buildings through a partnership approach. People long associated with the area are returning to live in the many new homes completed over the last few years. The community are also welcoming visitors to Govan Old Parish Church, as a place of national historical and religious significance, and Fairfields Govan shipyard offices. The community are always happy to engage people in their significant and memorable tales.

Here are links to resources that may be of further interest.
www.govanold.org.uk; www.fairfieldgovan.co.uk;
www.clydewaterfrontheritage.com; www.mattbaker.org.uk
www.waterrow.org.uk; www.glsgow.gov.uk/pontoons

Article and photographs courtesy of Ethel May Abel, Glasgow City Council

Volunteers recording intertidal site

Student volunteers recording coastal site

SCOTLAND'S COASTAL HERITAGE AT RISK (SCH@RP) – an exciting new project in the Firth of Clyde Forum area

The SCAPE Trust is actively recruiting citizen archaeologists in the Firth of Clyde Forum area to join their new project to improve information about the condition of archaeological and historical sites on the coast. Surveys have shown that there are hundreds of coastal sites threatened by erosion, ranging from the vanishing remains of former industry and settlement to local landmarks such as Portencross Castle and harbour and the Salt Pan Houses at Prestwick to iconic national treasures such as Skara Brae in Orkney.

Erosion is a natural process, but parts of Scotland's coast are experiencing increasingly rapid change and it is difficult to keep up with what is being destroyed or revealed.

Joanna Hambly, a project officer with the project, said: "Local people know their own coastline, so they are in the best position to notice changes to it. We want to hear from people about recent changes to archaeological and historic sites. Previous surveys regarded some sites as a high priority for action, but these may now have been destroyed.

You don't need any special skills or experience to become a citizen archaeologist and volunteer with the project. In return for your time and input, the project will provide you with the training and support you need to confidently carry out coastal surveys. An interactive map and smart phone app have been specially developed for the project, which will make accessing current information about coastal heritage and submitting new information very straightforward. We also want to hear about new sites that have been revealed due to erosion. Sites that are of particular interest to us in the Clyde area include the remains of crannogs in the Inner Clyde, the remains of industry on the Ayrshire coast and fish traps on the Isle of Bute".

In the second stage of the project, practical action will be undertaken at 12 coastal sites identified during the community surveys. Tom Dawson of the SCAPE Trust said that community groups have been vital in the past in taking a local lead in fieldwork and interpretation projects. "We want people to tell us what sites are important to them, and what they think should be done at them. This could be straightforward archaeological recording, but we are also very interested in other types of projects, for example, involving artists, film makers or writers. We will team local groups around Scotland with professionals to help them complete their projects at eroding sites."

If you enjoy being at the coast and would like to find out more about your local heritage, have a look at our new website www.scharp.co.uk where you can find out what's been recorded in your area along with much more information about the project and how to get involved. We'd also love to hear from community groups who are looking for a challenge to help us with the surveys. You can contact us at info@scharp.co.uk.

Scotland's Coastal Heritage at Risk is a 3 year national project which will run until 2015. It is generously funded and supported by the Heritage Lottery Fund; Historic Scotland; the Crown Estate and the University of St Andrews. The SCAPE Trust is a charity which works with the public to carry out research into Scotland's eroding coastal archaeology.

Article and volunteer photographs supplied by Elinor Graham, SCH@RP

Portencross Castle © Friends of Portencross Castle

It's the Crinan Canal for me!

It was late April when my husband, Colin, and I left our winter mooring in Rhu Marina and headed north. We had planned to take the long route, around the end of the Kintyre Peninsula, but the fresh and chilly northerly breeze soon talked us out of that and instead of turning south we pointed towards the mouth of the Crinan Canal at Ardrishaig.

We locked in just as the canal was closing for the evening but the staff took time to explain how the system operates and to offer their new escort service to see us through the 14 lock gates, we declined as our two friends, Jane and Roger, had already agreed to accompany us on their bikes to help with the heavy lock gates.

John Rennie had the original idea for the canal after James Watt surveyed the area in 1771 however, thanks to politics, money and environmental factors, Thomas Telford didn't finish building the Canal until 1809. The Canal is host to a number of amazing engineering feats, not least the simple but effective automatic spillway which maintains the water levels using just a bucket and a lever!

Top: Leaving the Crinan Canal
Below: Puffer race finish
Bottom: Puffer runner
All photos © Sarah Brown

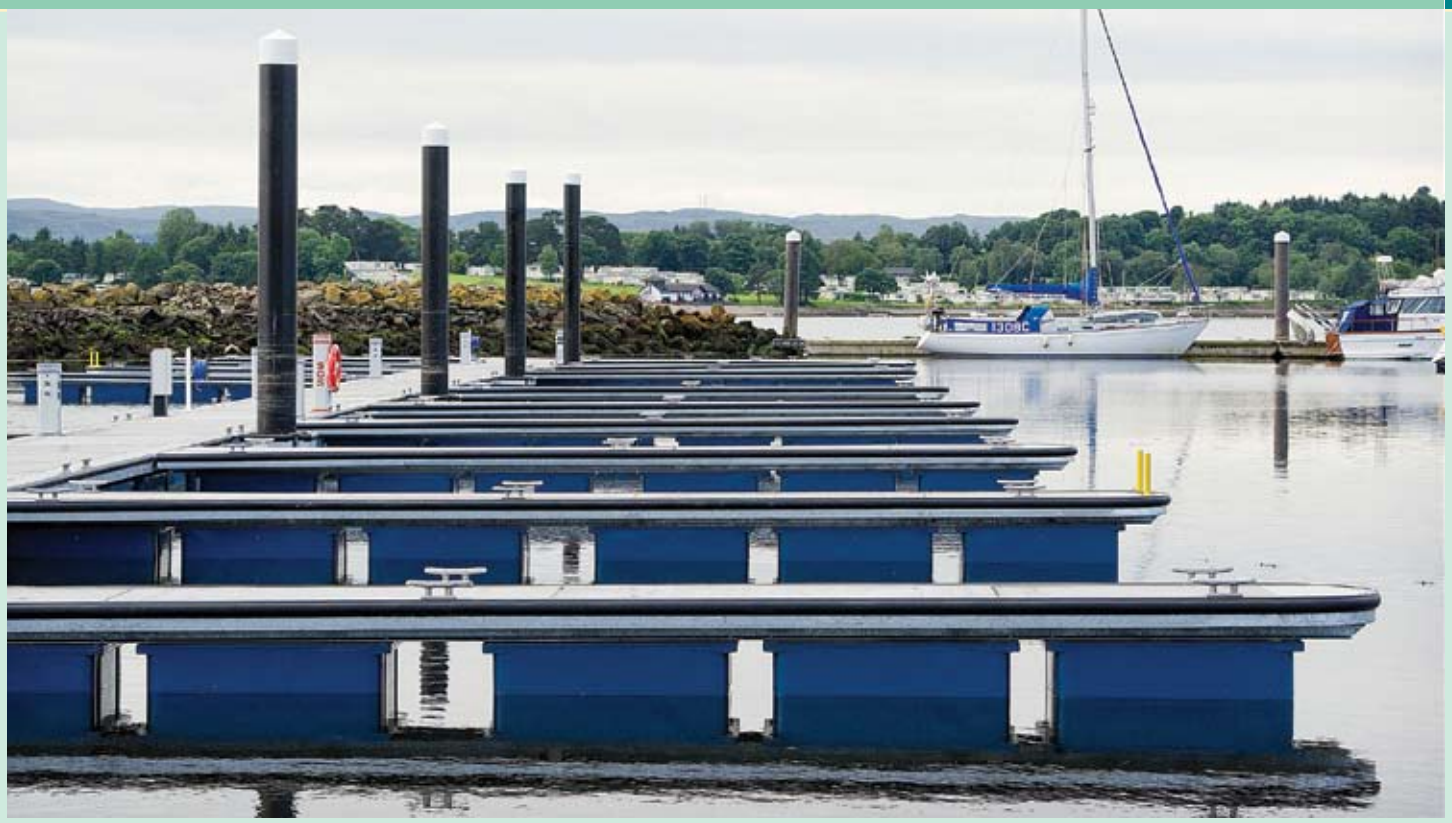
At 9 miles in length it took us all day to complete the passage to Crinan Basin. With me on the helm I had the 'easy' job of steering the boat into and out of the locks while Colin, Jane and Roger, stayed on shore to work the locks.

The Canal can be a challenging place and while they sweated out the miles on the bikes it was a long day for me juggling ropes, other boats and powerful currents as we rose and fell in the locks. All went well and we were soon tied up at Crinan for a well-earned rest and a nice meal at the Crinan Hotel.

After a good evening we slept late the next morning and were somewhat surprised to wake up to the sound of loud hailers. We quickly discovered we had moored up right at the finishing line of the annual 'Puffer Run'. While we had been sleeping 175 runners aged 16 to 50+ had run the length of the canal it had taken us 8 hours to cover the previous day!

Scottish Canals, who operate the 5 canals in Scotland, are planning to upgrade the facilities in Crinan in the near future and these will make a welcome addition to the delightful harbour at the north end of the Canal. For more information on the Canal go to www.scottishcanals.co.uk.

Sarah Brown, Firth of Clyde Forum Project Manager



Rhu marina

Rhu Marina now shipshape

On 3rd January 2012 at around 8am the barometer at Glasgow Airport finally stopped falling and read 964mb. The storm system responsible for the exceptionally low pressure reading brought with it sustained winds of 60mph and gusts of up to 90mph and a trail of destruction across much of Central Scotland.

Across the Clyde, boat owners and marina operators alike felt the full force of the storm and worked hard to minimise damage to boats and equipment whilst staying safe in horrendous conditions. Rhu Marina was no different and after the storm had passed it was clear that damage had been sustained by some of the older infrastructure in the marina.

The Crown Estate has now completed the £800,000 programme of repair and refurbishment works at Rhu, bringing total investment at the facility to over £2.3 million in the last two years. Concrete decked pontoons and walkways have replaced the previous wooden versions, the electrical and water services have received a complete overhaul and a new fuel berth is proving to be an important facility for the marina customers and the wider Clyde boating community.

Visiting Rhu to mark the completion of the work, Chief Executive Alison Nimmo said: "This latest investment provides new state-of-the-art facilities for local customers and the wider boating community. It is part of our ongoing commitment to help the Scottish marine leisure sector grow, delivering benefit to the Scottish economy and to coastal communities around Scotland."

Varis Engineering, based at Forres in Moray, and Rollins Marine Services supplied the new marina equipment with installation carried out by GSS Marine Services, based at Rhu.

Simon Haigh, Managing Director of Quay Marinas, said: "Thanks to The Crown Estate's investment, boats can now be berthed within the more sheltered areas of the marina during winter and the upgraded equipment will provide a more modern and robust pontoon system."

New pontoons

According to Tourism Intelligence Scotland, within the total leisure marine economic contribution of some £300 million, sailing tourism alone generated just over £100 million a year for the Scottish economy in 2011 and this figure is expected to rise to £145 million by 2021.

Mike Balmforth, President of British Marine Federation Scotland, added: "It is crucial that boating facilities around the Scottish coastline are improved and developed in order to ensure the marine tourism sector continues to grow."

In addition to the investment at Rhu, The Crown Estate provides grant funding for small community projects across Scotland via the Marine Stewardship Fund. The recently published 2012 annual review highlights a number of access projects supported over the last year e.g. £15,000 for a pontoon project at Shieldaig, £13,808 for visitor moorings at Plockton and £2,500 towards new pontoons at Lochaline. Details of how to apply for funds and a downloadable version of the 2012 annual review can be found at www.thecrownestate.co.uk/marine/marine-stewardship-fund.

Article and photographs courtesy of Paul Bancks, The Crown Estate

A day in the life...

...of a Shellfish Sampling Officer

Mussell strings - Loch Fyne

Inset: Sampling equipment

The tide and time waits for no one. Not even an Argyll & Bute Council Shellfish Sampling Officer!

A team of three officers are responsible for collecting samples of bivalve molluscs from nearly 3000 miles of coastline, seven islands and 46 classified shellfish production areas within the Argyll & Bute Council area.

The purpose of the sampling is to verify that the levels of naturally occurring marine biotoxins and contaminants do not exceed safety limits and that the microbiological quality of the molluscs does not constitute a hazard to human health.

One officer, William Macquarrie, is responsible for the eleven sites located within the Firth of Clyde Forum Area.

Regardless of the sites to be sampled an average day for Willie involves an early start. You may see him on the shore raking cockles in Kildalloig Bay at six o'clock in the morning, out on a small boat collecting mussels from Loch Fyne or Loch Striven or along the shore collecting Oysters.

Additionally the sampling programme requires monthly trips out on razor fishing vessels in Kilbrannan Sound. This can involve over six hours out at sea collecting hand dived razors. Luckily these trips are only carried out when the weather is calm enough for the fishermen to dive but it can still be a cold wet day on the deck of a fishing vessel.

All of the shellfish samples which Willie collects are time sensitive. Samples are required to arrive at the laboratory in Weymouth within 48hours of collection meaning that we rely heavily on the postal service. Samples of sea water which are analysed for phytoplankton are also collected from several of the sites. These are delivered by Willie to SAMS in Dunstaffanage near Oban. This means that Willie can cover a large area of Argyll and Bute in a single day.

As you would expect there are numerous hazards associated with working beside and on the water but there are always the unexpected things which make the job that little bit more interesting. For instance you never expect to be attacked by a territorial pheasant who has taken a dislike to Willie and his van stopping to sample on his patch!

For more information on Shellfish Classification or Sampling, please contact:

Fraser Anderson
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Argyll & Bute Council, Municipal Buildings
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Firth of Clyde FORUM

Tell Us What You Think...

Clyde Breakers is your newsletter; tell us what you think of this issue and what you would like to see in the future. If you would like to receive an electronic version of Clyde Breakers rather than a printed copy, please send your email address to us. Many thanks to those of you who contributed to this edition.

If you would like to become involved in the Forum and its work, contact us at the address below.

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The Firth of Clyde Forum has a broad membership base with representatives from industry, local authorities, community groups and charities. The opinions expressed by members within this issue are not necessarily the opinions of the Forum or its Core Group.

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marine scotland

Scottish Natural Heritage
All of nature for all of Scotland

GLASGOW and the CLYDE VALLEY strategic development planning authority

CLYDEPORT