Environmental Management Directorate

Quarterly Newsletter

EMD

"Our Island. Our Environment. Our Responsibility."

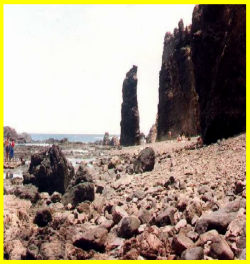
Issue 2 - December 2012

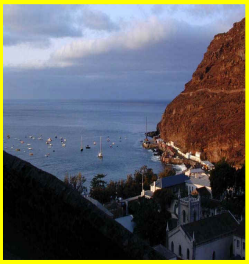
EDITORIAL

Hello and welcome to EMD's second quarterly newsletter. In this issue we welcome Dr Judith Brown, Darwin Project Manager – Judith's arrival marks the start of the exciting Marine Mapping and Biodiversity Project. There's also an interesting article on cat trapping to help to protect seabirds, lots on waste and lots more.
The last quarter has been a busy one and all at EMD are looking forward to the Christmas break.

We wish all our readers a very Merry Christmas and a happy, healthy and prosperous New Year.

Isabel Peters
Manager, Environmental Assessment & Advocacy





DIRECTOR'S COMMENTS

It is hard to believe that it is already the end of 2012. That means that I have been back on island for a year – it has been a great year. St. Helena is in an exciting period of change, and we have effective management of the environment as a core component of that change. The EMD team has been brilliant coping, adapting and creating a professional working environment. We have the NEMP as our blueprint from now onwards, and we look forward to sharing our monitoring and research findings in a state of the environment report next year.

Effective management of the environment involves everyone and we are really pleased to be working with a range of stakeholders locally and internationally. I would like to take this opportunity to wish those who we work with, and others a merry Christmas and happy new year.

Tara Pelembe

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INTRODUCING THE NATURE CONSERVATION DIVISION (NCD)

Over the last six months the Nature Conservation Division has, and still is, undergoing changes. In April, a Service Level Agreement was signed with ARND whereby the Terrestrial Conservation Section (TCS) is now jointly managed between ANRD and EMD until April 2013. There have been significant changes within the team and we welcome the new Terrestrial Conservation Officer, Lourens Malan – who has previously worked on Ascension, Tristan da Cunha and most importantly St Helena, working on endemic plant projects. There have been a number of terrestrial workshops including a recent workshop on 'Guidance for nurseries who want to grow endemic plants'. These workshops will form the basis of new work programmes for both the TCS and wider initiatives. The Marine Section is currently undergoing work programme changes and development to ensure works have clear conservation objectives and methodologies.

There has been a heavy investment in staff training courses including; a wide range of basic work training, customised data management course, developmental courses e.g. staff coaching and academic qualifications including NVQ, A level and HNDs. This month, two members of the Marine Section will attend bird ringing training on Ascension (funded by the Joint Nature Conservation Committee in the UK).

External funding is key to support some of our conservation and wider initiatives. The Nature Conservation Division has successfully gained funding from the Governor's Delegate Fund which will support the construction of a shelter for both conservation workers and tourists up at Diana's Peak. This will provide a welcome amenity during those not so bright spells! Indeed for those who want to know a little bit more during their visit to Diana's peak, the shelter will also provide information on the endemic plants and animals.

There has also been some success at applying for international funding i.e. Darwin Initiative. The funding application has successfully passed through stage 1 (of a 2 stage process). If successful through the next stage, it will support on-the-ground terrestrial conservation and recreational activities within the National Conservation Areas - so fingers crossed!

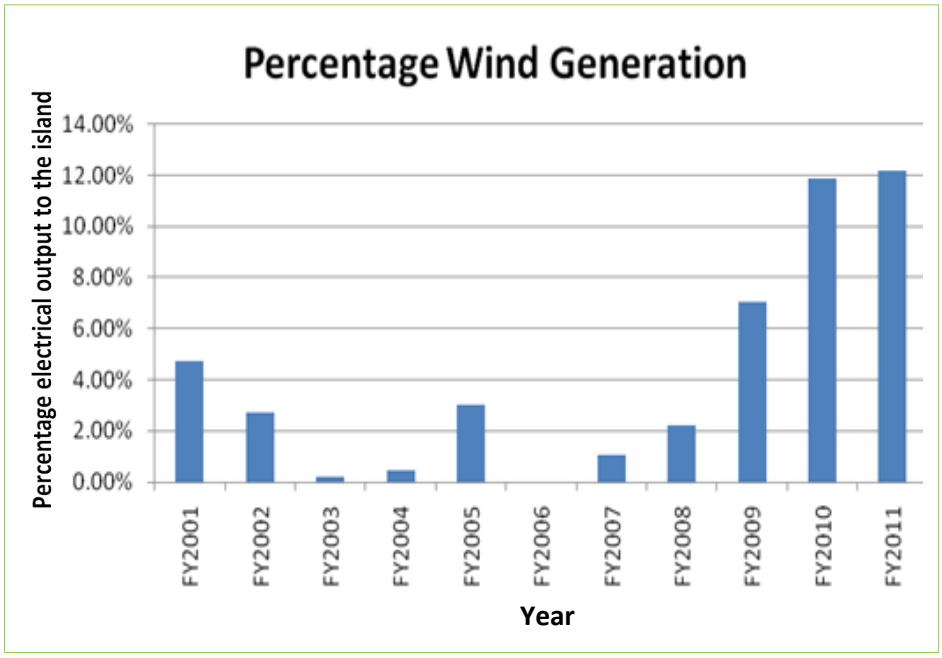
I am particularly excited to announce the creation of a new marine laboratory. This laboratory will be used as a base for marine projects but importantly will have an educational function – it will have open days where schools and the public can see marine staff at work and get to see marine creatures.

For any further information on the above, please contact Dr. Nikki Chapman – Head of the Nature Conservation Division.

RENEWABLE ENERGY ON ST HELENA

Since 2001 when the wind turbines were first installed on the island. The wind turbines electrical output to St Helena's power grid has been inconsistent due to reliability issues. However, over the last few years, the reliability issues of the wind turbines have been worked out. The wind turbines are now working well, producing about 12% of the island's electricity for the year 2011. The highest amount produced by the wind turbines since they were first installed.

The graph opposite shows the percentage electrical output of the wind turbines since they were first installed.



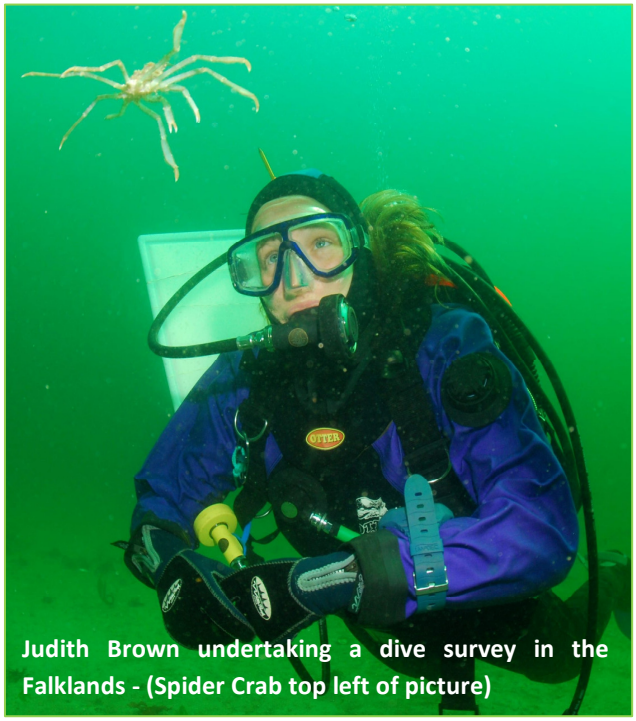
INTRODUCING Dr. JUDITH BROWN

The Nature Conservation Division is pleased to announce the official start of its Marine Mapping and Biodiversity Project with the arrival of Dr. Judith Brown. Currently, there is virtually no information available on the range, extent or distribution of shallow marine species of which a number are endemic to the island, nor the habitats which provide shelter, food and nurseries to both resident and migrating species.

This project aims to collate existing and collect new baseline data of the marine species and shallow marine habitats around St. Helena.

Dr. Nikki Chapman, head of the Nature Conservation Division designed the Darwin Project and is also the Project Lead. Nikki commented:
'Potentially some of these species and habitats are threatened by destructive human activities, for example aggregation, port development and increased marine activities associated with increased tourism. Furthermore, as with many islands, shallow water marine resources are an important source of revenue and subsistence and need to be supported and sustainably managed, the data from this project will help to provide the necessary information.'

Judith joins the project as the Darwin Project Manager after spending six years on the Falklands working on the commercial fish species around the Falkland Islands and South Georgia. She is also a key member of the Shallow Marine Surveys Group who are involved in identifying and surveying the shallow marine life of these Islands. The group has also recently conducted a three week survey of the marine life around Ascension Island, discovering many new records and some new species. Judith said of her new role *'I am delighted to be involved in this project and am very excited about discovering all about the St Helena underwater world and studying its rich marine biodiversity. Comparing the marine life on the exposed and more sheltered sides of the island and investigating the different species associated with different habitats, including artificial reefs, will be fascinating'*. Moving to the island with her husband Steve, they are both looking forward to exploring all that St Helena has to offer both above and below water.



Judith Brown undertaking a dive survey in the Falklands - (Spider Crab top left of picture)

Nature Conservation Division

The project is funded by the Darwin Initiative and JNCC are the UK Project Lead.

STAFF ACHIEVEMENTS

- Congratulations to the following staff on completing a data management course - Graham Leo, William Crowie, Leslie Benjamin, Elizabeth Clingham, Annalea Beard and Leeann Henry.

- Congratulations to Mike Durnford, Climate Change and Pollution Officer, on achieving a Level 4 Diploma with Distinction for an Environmental Aspects and Impacts course. Congratulations to Mike on also achieving a Level 4 Diploma with distinction in Environmental Waste Management through Stonebridge College.

OVERSEAS STAFF TRAINING

From the 25th of November to the 7th of December, two members of staff from the Marine Section will undertake seabird ringing training on Ascension Island. The training is necessary to ensure that all staff are equipped with the skills required to facilitate the continuation and evolution of the Marine Section's seabird work. At the end of the training, staff will be assessed and will attain their appropriate permits and will be internationally recognized as persons with the skills required to safely ring and handle seabirds. This training has been funded by the Joint Nature Conservation Committee (JNCC). The trainer is Mr Colin Wearn from the Army Ornithology Society.

Picture of Colin Wearn Jan 2012

What is ringing and why do it?

Picture of ring on seabird's leg

Basically, special lightweight metal rings with unique numbers are attached to a seabird's leg. The rings are specially made so that they do not affect the bird in any way; the rings design is able to withstand the rigours of the bird's way of life and allows for them to sustain total freedom of movement. The rings can only be put on by persons with the appropriate British Trust for Ornithology (BTO) bird ringing permit as it requires the use of specialist equipment and acquired skills. When ringing, the welfare of the bird is always the first priority of the ringer.

During the ringing process, various body measurements are recorded including its head, wings, legs and weight. The ring number and all the birds' measurements are registered with BTO. Birds have almost scheduled lifestyles i.e. set breeding seasons, set migration patterns etc. As the world changes, so do the birds patterns and lifestyles. By ringing them, it allows us to monitor their movements locally and internationally and notice any changes. In addition, we will also be able to gauge how long seabirds live on St Helena.

Marine Section
Nature Conservation Division

CAT TRAPPING IN MASKED BOOBY COLONY AT LOT'S WIFE

Over the last four years Masked Boobies have been steadily colonising the Lot's Wife area. Monitoring work shows their numbers have been increasing and they are nesting in new areas each season. From time to time cat scat (or droppings) has been noted on the main path to Lot's Wife but with no reported or noted interference of the birds. However, we received a report from a concerned member of the public that a rabbit carcass and a considerable amount of cat scat had been noted within close proximity of a Masked Booby nest containing a young chick. After much thought on the matter it was decided that a few traps could be placed in the area for a short period of time to attempt to catch any feral cats before they could disturb the nesting birds or their chicks.

As a result, during the period from the 18th to the 23rd of September, members of the Marine Section along with the National Trust Wirebird Team placed 3 cat traps at various places along the path to Lot's Wife. The areas were chosen in relation to the location of the initial report and in other areas where cat scat was identified or in ideal cat resting crevices. The traps were checked and rebaited daily by volunteers and members of the Environmental Management Directorate.

On the 21st of September the first feral cat was caught just meters away from our initial sighting report and a nesting Masked Booby. On the 22nd another cat was caught further along the path very near a large group of nesting and roosting birds. The cats' were then taken to the Agriculture and Natural Resources Directorate (ANRD) where they were put to sleep.

We would like to thank Mr Rex Thomas of Sandy Bay for his initial report, the Wirebird team of the National Trust for lending and setting up the traps and their knowledge of cat behaviour in choosing locations. Also a big thank you to the volunteers and members of the Environmental Management Directorate for regularly checking the traps.

Birds colonising the mainland area in this magnitude have not happened for hundreds of years, the more we can do to protect them the better. We therefore appeal to all hikers that visit the Lot's Wife area to report their observations of the birds and to further advise us of any concerns they might have.

Marine Section
Nature Conservation Division

INVASIVE SPECIES POSTER – ALIEN INVADERS vs. ENDANGERED EARTHLINGS

Readers may have seen the Alien invaders vs endangered earthlings posters up around the island. These posters were produced as part of a cross-territory project – Invasive Species in the UKOTs (UK Overseas Territories) databases and awareness which was funded by the Overseas Territories Environment Programme (OTEP) in 2009. The project was led by Dr Mat DaCosta-Cottam, Cayman Islands Department of Environment.

The project had two main aims: Update the GISD with Invasive Alien Species (IAS) data from recent JNCC and Kew Reports; and produce a poster series (one for each UKOT) outlining the worst invaders in each UKOT and the local habitats and species most at threat, from these invaders.

St Helena took part in this project and the 5 worst invasive species against the **habitats/species** most at risk from them were selected. These were:

Indian myna – these birds destroy local fruit and also eats the berries of invasive plants, spreading the seed via their droppings, they also prey on the endemic Wirebird - the only surviving endemic bird on the Island.

Fountain Grass – although this probably only arrived on Island after 1990, it produces millions of seeds and has now spread extensively over **dryland habitat**.

Scale insects – these woolly insects hide underneath young leaves, sucking out sap which plants, like the endemic **Boxwood** need to put nutrients into their growing tissues.

Pheasant tail fern – a garden plant with creeping stems which force their way through upland vegetation including in the **cloud forest.**

Feral cats – are known to kill and eat birds including the endemic **Wirebird** and the **Red-billed tropic bird.**

The poster template was designed by John Binns, International Reptile Conservation Foundation. On island Phil Lambdon co-ordinated the submission of text and photos with input from staff at ANRD and the National Trust.

We have now received the posters which are a bit bigger than A2 in size and they have been disseminated to Directorates, businesses and other organisations.

For further information about invasive and endangered species on the island, please contact Lourens Malan, Terrestrial Conservation Officer on email terrestrial.co@anrd.gov.sh.

WASTE WHEEL 2012

In order to gauge the amount of waste being collected and managed at the landfill site a waste compositional analysis called the 'Waste Wheel' was carried out.
Using a pre-determined methodology the Waste Wheel provides information on the weight, type and percentages of waste streams being disposed of.

Methodology

Research is undertaken for the period of one week every three months to give as accurate calculation as possible, these calculations are compiled as follows;

1) The Refuse Collection Vehicle (RCV) is weighed, using twin axle weigh plates, each time it arrives at the landfill site before depositing its load.

2) Five black bags are removed from the RCV, these bags of waste are weighed individually to give average sack weight and then opened and sorted into fourteen waste streams. These individual streams are then weighed to give percentages of bag contents.

3) The RCV is re-weighed after depositing its load to confirm un-laden weight.

4) All information is recorded and analysed to produce the Waste Wheel results.

The Waste Wheel is designed to provide information for the following;

1) Changes in percentages of waste streams being disposed of.

2) Evidence the success of recycling activities on the island such as; SHAPE recycling of paper, cardboard and textiles.

3) Assess the potential benefits of future recycling initiatives such as; kitchen and green waste treatment for composting.

4) To provide data for the strategic management of waste streams and related infrastructure on St Helena.

The data collected from RCV weighing is used to calculate the overall mass of waste being deposited to landfill from kerbside collections and the estimated operational life of Horse Point landfill site.
It is estimated that 70% of all waste deposited at Horse Point is from kerbside collections.
The predicted current life span of Horse Point landfill site is just 15 years, however with investment, increases in recycling and improved management this could extend to up to 60 years.

The most significant changes in waste percentages by weight between the 2002 results and those of 2012 are as follows;

1) Paper and cardboard percentages have reduced by 2.8%. This reduction may be as a result of the successful recycling of these streams by SHAPE.

2) Polystyrene has increased significantly from 0% to 2.49%, polystyrene food containers from shops and catering outlets being the main contributors to this waste stream.

(Continues on page 7)

SHG 167 being weighed before offloading

A bag of sorted waste ready for weighing

3) The textiles percentage has more than doubled to 7.33% with a high volume of clothing being observed within the waste, some of these items were still wearable and could have been donated to The Salvation Army for recycling.

4) Garden waste has decreased to less than 1% from a previous figure of over 7%.

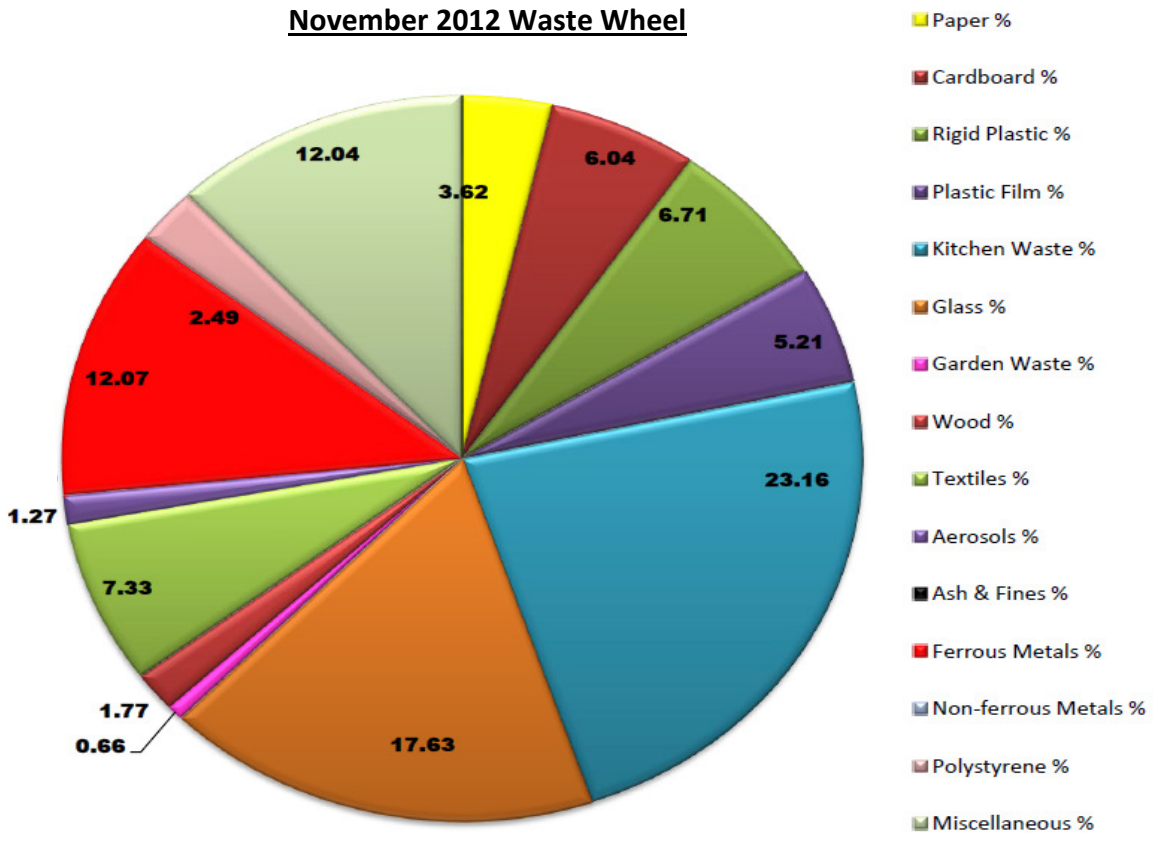
5) Ferrous Metals have increased by 4% and this increase may be as a result of the variety of tinned foods and canned drinks being imported and sold. The recycling of these steams could significantly reduce the volume of waste being collected for landfill.

6) Glass was recorded as a high percentage in 2002 and was reduced to just over 5% earlier in 2012, maybe through the success of local glass recycling but since the July Waste Wheel results it has increased again to over 17%. Glass is a versatile product that can be re-utilised in many ways and its recyclability should be encouraged as an alternative to using other products.

7) Kitchen waste has reduced since 2002 from 35% to 23% and the latest results show a further reduction since July 2012, the initial decrease may be as a result of a lower island population and more recently from an increase in home composting which has been encouraged as beneficial for growing fruit and vegetables. However, this percentage is still the highest of all waste streams recorded and therefore the recycling and treatment of kitchen waste into useful compost should be considered a priority.

Protection of the environment is essential to modern day living. A reduction in the amount of waste and pollution generated is not only beneficial to our local environment, as waste sent to landfill breaks down to produce so-called 'greenhouse' gases that pollute the atmosphere, but also contributes towards global efforts to minimalize the effects predicted through climate change.

Mike Durnford - Climate Change and Pollution Officer



WEST ROCKS IS NOT A RUBBISH DUMP!

It was recently reported to EMD that rubbish and rubble was being dumped at West Rocks. An investigation revealed that this was probably not an isolated incident as when questioned people gave different descriptions of the rubbish that they had seen there. It was also mentioned that if rubbish is left near the water's edge then it gets washed out to sea. This is then polluting our marine environment.

A meeting was held with various government departments and legal advice was sought. It was agreed at the meeting that dumping of waste be it household rubbish or building rubble at West Rocks is illegal. EMD has agreed to take the lead in this matter and a report has been passed on to the police.

There is a wider issue of what is called **'fly tipping'** and littering on the island. EMD will be tackling this problem in partnership with other government directorates and the public. It is proposed that EMD will undertake a pollution/waste monitoring role to protect the environment from these damaging practices. Stronger laws and stiffer penalties will be considered but in the meantime, the public are reminded that there is a litter ordinance and you could be **prosecuted** for littering.

Environmental Risk Management Division

SOLID WASTE MANAGEMENT ON ST HELENA

There are only three options for the management of waste on St Helena. Waste can be reused/recycled, it can be sent offshore or it can be landfilled.

The Solid Waste Management strategy which was launched on the 20th of November builds on previous work to address the problems of waste management. It also incorporates specific measures to reduce the pigeon numbers at the landfill as they create a birdstrike risk for the airport.

The first phase of the Waste Management Strategy involves improvements at Horse Point so that waste is not left out in the open for birds to eat. There will also be a Civic Amenity Area to encourage the reuse of unwanted items by creating an area where people can deposit unwanted items that other people might find useful.

To return to the three options:

1. **Reuse/recycle** – EMD is actively looking at ways to encourage recycling on St Helena. SHAPE recycles paper and card, The Salvation Army takes clothes and household goods for resale but there are many more opportunities for budding recycling entrepreneurs.
2. **Export** – at first this seems like a good option especially for waste that can be recycled overseas. However freight costs make most exports uneconomic and transhipment of waste is often subject to international protocols and permits. This can make it difficult to find someone to receive the waste to process it.
3. **Landfill** – this is where most of the waste goes, into the ground at Horse Point. There will always be a need to landfill waste but there is only limited land available and some waste should not be landfilled as it damages the environment.

It seems likely that in the future all three of these options will feature in the management of solid waste. We do not have all the answers but we are working with other stakeholders to find the most sustainable solutions for our waste.

Environmental Risk Management Division

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