

The Whitley Wildlife Conservation Trust,  
Paignton Zoo Environmental Park,  
Living Coasts & Newquay Zoo



# Annual Review & Accounts

## 2011-12



# Executive Director's report

In the face of weather which, for much of the year, appeared to be testing whether our Arks could float literally, as well as metaphorically; and against a background of unrelenting economic doom and gloom, 2012 was a roaring success for the Trust and its zoos! The organisation operated in the black and started to recoup some of the financial losses incurred over the previous two years. It did this by rigorous cost control which, very regrettably, had to include some compulsory redundancies. An Indian Summer helped, though couldn't completely recover the carnage from the Spring when every bank holiday, public holiday and weekend between April and June was washed out. Visitor numbers at Newquay and Paignton remained pretty close to the year before but, gratifyingly, Living Coasts achieved more than a 10% increase over the previous year which may attest to its new role as an all-weather attraction.

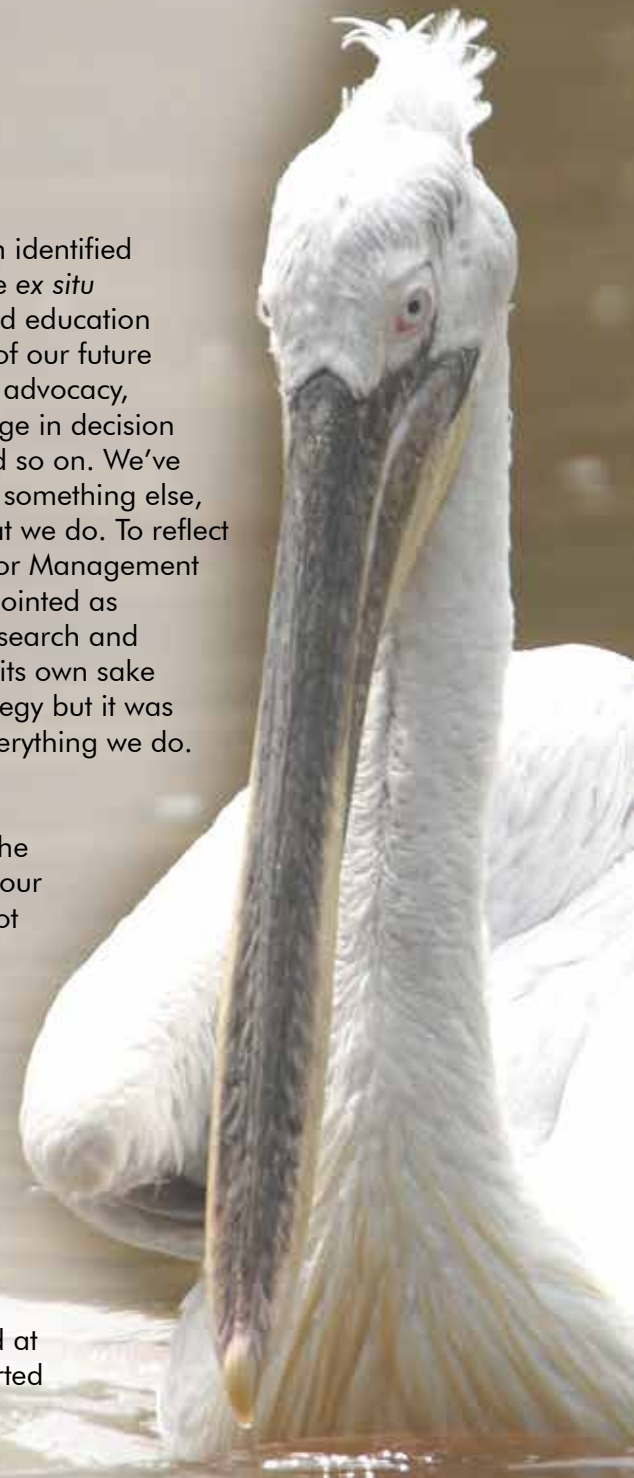
Once again, and unsurprisingly, capital works were very limited. Nevertheless a generous donation from the Binks Trust allowed us to construct an otter exhibit at Living Coasts, an aviary for African birds at Newquay Zoo and a coati exhibit at Paignton Zoo. All of these significantly improved the visitor attraction qualities of the sites.

This annual report covers all the Trust's activities during the year and overall it has been another successful year for our animal collections and our *in situ* and educational activities around the world. A particular success has been the programme for Sulawesi black macaques, or Selamantan Yaki, which has found new sources of funding and moved to a whole new level of conservation support for this charismatic animal which we keep at both Newquay and Paignton and run the European breeding programme (EEP). Notable too was that two members of staff, Andy Bowkett and Kathy Baker were awarded PhDs for their work on small antelope ecology and animal behaviour respectively.

Perhaps most significantly for the long term future of the organisation was the preparation and approval of a new strategic plan to cover the Trust and its zoos. There have been physical masterplans for the zoos for many years but we've never before had a plan that sits above the mere physical and goes to the heart of the philosophy of why we have a wildlife trust and what it is

supposed to do. To our relief the plan identified that the things that we already do like *ex situ* conservation, *in situ* conservation, and education were indeed three of the four pillars of our future direction. The fourth was a new role, advocacy, or trying to influence behaviour change in decision makers, Government, businesses and so on. We've always done it, but usually as part of something else, so it is now formalised as part of what we do. To reflect that, changes were made to the Senior Management Team and Dr Amy Plowman was appointed as the new Director of Conservation, Research and Advocacy. Interestingly, research, for its own sake did not appear as a pillar of the strategy but it was very clear that it underpins almost everything we do. 'Evidence-driven' is our new mantra!

The strategic plan was approved by the Board late in the year but, tragically, our Chairman, Dr David Stradling, did not live to see it happen as he died in July after a long illness. He joined the Board of Trustees in 1981 and became Chairman in 2001. He had seen the Trust and its zoos through good times and bad and was a great supporter and advocate for the organisation who will be very much missed. By the end of the year, our Vice-Chairman, Keith Mitchell, was 'holding the fort' until a new Chair could be appointed at the next AGM. A search had also started for new Trustees to join the Board.



# Introducing the Whitley Wildlife Conservation Trust

## Our vision

A world rich in wildlife and wild places.

## Our mission

The WWCT is an education, scientific and conservation charity dedicated to protecting our global wildlife heritage and inspiring in people a respect for animals, plants and the environment.

## Our strategic aims

- Education and engagement of the public on the conservation of the natural world
- *In situ* conservation of species and habitats
- *Ex situ* conservation of threatened species
- Conservation advocacy: shaping behaviour-change for the benefit of biodiversity

## Whitley Wildlife Conservation Trust

The Whitley Wildlife Conservation Trust is the charity founded in Herbert Whitley's name after his death in the 1950s. It continues his ideals of conservation and education through high quality visitor attractions, scientific study and field projects at home and abroad.

The Trust is the umbrella organisation for the three zoos, two Local Nature Reserves and one National Nature Reserve, Slapton Ley.

## Paignton Zoo Environmental Park

Paignton Zoo was founded in 1923 by an eccentric millionaire and pioneering conservationist, Herbert Whitley.

Over the years Paignton Zoo has grown to become one of the leading British zoos and a popular family day out. It has a well-earned reputation for science and research and supports conservation projects in the UK and abroad.

Paignton Zoo's unique system of habitat zones makes the most of its well-wooded valley home. The collection is diverse, ranging from large mammals to tiny amphibians and from flocks of exotic birds to rare and unusual grasses. Paignton Zoo is also a botanic garden, with rare and special plants helping to set the scene in and around the animal enclosures.

## Living Coasts

Living Coasts, Torquay's Coastal Zoo and Aquarium is dedicated to protecting marine and coastal wildlife. It holds an excellent collection of rare and unusual marine and coastal species including penguins, auks and puffins. It is home to a lively group of South American fur seals and the aquarium contains stingrays, mudskippers, seahorses and octopuses.

Naturalistic habitats are used to give its animals the best environment in which to live and breed. Visitors are encouraged to look at protecting not only species but also the habitats in which they live.

## Newquay Zoo

Opened in 1969, the Zoo has become one of the country's most well-respected zoos, with ground breaking and innovative conservation programmes. Winning many major environmental and sustainability awards and set in 13 acres of lush tropical gardens, it has proved itself to be one of the best attractions in the South West.

Specialising in breeding many endangered species, Newquay Zoo is at the forefront of conservation and education, leading the way in exciting innovative enclosure design, enrichment projects and overseas conservation.



# Education and Engagement

“Changing Hearts, Minds and Ultimately Behaviours” was the theme of this year’s International Zoo Educators Conference, fitting perfectly with WWCT’s new strategic priorities of Education and Engagement and Advocacy. As it was hosted in the UK this year, at Chester Zoo, a number of our Education Officers were able to attend to further explore the issue of behaviour change.

Back at the zoo sites, Newquay won the BIAZA “Best use of plants in a zoo setting” award for its World War Zoo Gardens project, incorporating education, engagement and sustainability features, while Paignton created its fun new Coati exhibit, highlighting the conservation benefits of environmentally responsible practice.



The focus at Living Coasts was conservation, breeding and enrichment, linking with advocacy around the work of the zoos. Presentations on site enabled visitors to engage with enrichment activities, encouraging further dialogue about breeding and conservation.

Our three zoo education teams are working increasingly closely and look forward to capitalising on the support that they can offer each other in the future, to increase our education provision, public engagement and action on conservation.

## **Paignton Zoo**

In total, 46,290 students made education-based visits to Paignton Zoo this year, only a little down on last year. We are particularly pleased that numbers have held up, given that transport costs are becoming prohibitively expensive. Many zoos and aquariums, including all three of the WWCT Zoo sites, have reported cancellations due to increased coach costs.

We held a number of popular events, including club activities, sleepovers and our summer Wild Weeks, arranging schools’ participation in the Zoo’s BioBlitz and attending a variety of external events including Exeter University’s Big Bang alongside Living Coasts.

South Devon College and the Zoo developed a new partnership, co-delivering a Diploma in Countryside and Environment, based on the Zoo site. To assist delivery, South Devon College have refurbished the Discovery Centre to create a new lab-style classroom with interactive whiteboard. To complement this, we have designed and produced a brand new set of Discovery Centre interactive exhibits which transform the classroom to a new-look Discovery Centre over weekend and holiday periods across the spring and summer.

Staff changes included a fond farewell to Sue Lowe, Deputy Head of Education, who had worked at the Zoo for over twenty years. Sue originally joined us when Devon County Education Authority funded the Devon Zoology Centre, based at the Zoo, and was instrumental in co-ordinating conservation education in schools within the Omo Forest Reserve, in Nigeria.



## **Newquay Zoo**

Healthy education figures were experienced during 2011/12 with 6,327 students and 1,434 accompanying parents and teachers visiting. This is an increase of almost 6% on last year, which is a great result and bucks the trend being felt by many zoo education teams, including our own at Paignton and Living Coasts.

Congratulations to Kathy Baker, who received her PhD in psychology, studying primate personality! Kathy organised the BIAZA Research July 2012 enrichment conference held at Cornwall College, Newquay.

Newquay Zoo also co-hosted the BIAZA Presenters conference with Cornwall College. This annual conference is designed to give zoo and aquarium presenters ideas on how best to communicate messages to the public. All talks had a Cornish theme and Mark Norris gave a presentation focusing on how personal history has been used in the World War Zoo session at Newquay Zoo.

## **Living Coasts**

Formal education at Living Coasts for 2012 was 20% below its five year average, which could be linked to a number of internal or external factors. However, our education packages continue to be well received and we have added summer school and sleepovers to our provision. Both were well attended and had excellent feedback. We also offered a joint secondary school package with Kents Cavern, packed with fun curriculum links to make the most of their day.

The events programme was full of animal and conservation linked activities. Highlights were our Easter events – babies including chicks, rabbits and tadpoles; Love your Zoo week – all about life as a keeper, with Meet the Keeper proving very popular; and the Wildlife and Art Weekend – a huge success with a sell-out night for Monty Hall's talk.

Analysis of talk attendance and feedback shows that 40% of all visitors attend at least one talk, with up to 80% of these rating them good or excellent – the most popular being penguins and seals, with our new otters close behind.

# In situ conservation

WWCT and its zoos continued to support conservation projects in our seven regional programmes around the world: South West UK, Sulawesi, Vietnam, Western Zimbabwe, Highland East Africa, Coastal East Africa and South Western Nigeria. Together with donations to other projects (EAZA campaign for South East Asia, BirdLife Preventing Extinctions Programme and Project Penguin) our total direct and indirect funding for *in situ* conservation was over £179,000.

## South West UK Regional Programme

The extremely wet weather in 2012 made conditions difficult for many of our UK projects. We were unable to carry out the planned supplementation of strapwort at Slapton Ley National Nature Reserve as the water levels in the Ley never dropped low enough to plant out the 800 plants grown by the Gardens Department at Paignton Zoo.

In Cornwall, where we have been working with partners to reintroduce the cirl bunting, breeding rates were very low but some birds did manage to rear young and monitoring of the population showed that it was still doing well enough not to need releases of additional birds in 2013.

On the bright side, we did receive some good news from our expert colleagues at Sheffield University about the project to reintroduce the large blue butterfly to Loworthy fields at Slapton. Using chemotaxonomy (the identification of species based on body chemicals) they were able to confirm that the right species of ant, *Myrmica sabuleti*, is present at the site. Large blue butterfly caterpillars trick the ants into believing they are ant larvae and when carried by the ants into their nest proceed to eat the ant larvae. The caterpillars die if they are “adopted” by other closely related ant species so the presence of the right species is essential for the success of this project.



## **Sulawesi (Indonesia) Regional Programme**

Harry Hilser took over as Regional Programme Manager in Sulawesi in January 2012 and immediately began to build on the excellent work carried out by Helen Sampson in 2011. Most importantly he has been extremely successful in obtaining extra funding having achieved a total income from grants and donations in excess of £60,000. This has enabled the development of several projects to tackle various threats to the Sulawesi crested black macaque, or yaki in the local language, and a big expansion of the Selamatkan Yaki (save the yaki) project. The biggest project is to work with the Indonesian national parks authority and local communities to rejuvenate the yaki's last major stronghold, the Tangkoko Nature Reserve. This will involve better education and enforcement to reduce illegal activities (hunting, logging etc.) in the reserve, managing the impact of tourists visiting to see yaki and reducing conflict (including crop raiding) between yaki and local people. Other major projects include conservation awareness-raising in the communities elsewhere in Sulawesi where we have previously found the highest rates of hunting and eating yaki and a school's environmental education programme. The next year will be extremely busy for Selamatkan Yaki and Harry has assembled a dedicated team of local staff and overseas volunteers to help with this important work.



## **Highland East Africa Programme**

Our long term research project into the distribution and genetics of forest antelope in the Udzungwa Mountains, Tanzania, came to an end and resulted in Overseas Conservation Officer Andrew Bowkett receiving his PhD from the University of Exeter. In addition to validating molecular techniques for monitoring these very shy and secretive animals, the research showed that Harvey's duikers from western outlying forests constitute the most genetically distinct populations of that species in the area. These populations and also those of Abbott's duiker, a species already known to be of grave conservation concern, were found in forest fragments that are not effectively protected by the current network of forest reserves outside of the Udzungwa Mountains National Park and therefore require greater conservation attention. The results also indicated that connectivity and dispersal of antelope between forests fragments is possible across open areas, and that rivers are likely to be greater barriers to dispersal. This information is important for the forest and reserve management authorities to take appropriate action to maintain healthy antelope populations in as many forests as possible.

# Ex situ conservation

## Paignton Zoo

2012 was another productive and interesting year for the living collections. From the visitor perspective the highlights were probably the rearing of four Asiatic lion cubs by Indu, her first success after several false starts. Two Hartmann's zebra foals were the first for a decade and two Rothschild's giraffe calves were welcome additions to the growing herd of this rare species. The opening of the new coati exhibit in the centre of the Zoo, following a very generous donation from the Binks Trust, allowed us to add both ring-tailed and white-nosed coaties to the collection. For now they will remain as a batchelor group but it is possible that a breeding group of one or the other species will be created in the future. A batchelor group of squirrel monkeys were transferred from Newquay to Paignton and now reside on an island in the main lake.

In the bird department the first ever fully second generation (i.e. both parents were also hatched in zoos) wrinkled hornbill emerged from a nest box, and difficult species such as hooded pitta, toco toucan, and yellow-backed chattering lory continued to build on the firm base laid in earlier years. No less than nine chestnut-backed thrushes were sent to the USA as part of a plan to establish a population of this stunning forest thrush in US zoos. Notable breedings in the Amphibian Ark included UK first breedings for two species of endangered and beautiful Mantella frogs, from Madagascar.

Very interesting additions to the reptile collection included the only Madagascar spider tortoises held in any UK zoo plus a small group of young radiated tortoises, again from Madagascar. Linking strongly with the Zoo's past history a false gharial, or Tomistoma, was added to the collection in the Crocodile Swamp. A magnificent specimen of this beautiful crocodile resided for many years in the old reptile house

before the redevelopment of the 1990s. In due course we hope to establish a breeding group at the Zoo.

Also in Crocodile Swamp the first Titan Arum lily to flower in a UK zoo put on a fine display to visitors in August. In the plant collection a large collection of Asian bamboos was donated by a grower in Cullompton and the Zoo's cycad collection was finally sorted and identified and found to contain a number of threatened species; it is hoped that this collection will be on display to visitors in the future.





## Newquay Zoo

The addition of a breeding group of squirrel monkeys, donated from Apeneul Primate Park in the Netherlands, was very popular with visitors as were the pair of yellow mongooses which were added to the meerkat group. The two species co-exist very nicely. The Carpathian lynx bred successfully for the first time and the kittens proved to be a great attraction. We were particularly pleased with the first successful birth of a narrow-striped mongoose at Newquay, although she had to be hand-reared. Black wildebeest, Prince Alfred's deer, fishing cat and crowned lemur were other important mammal births during the year and many transfers to and from other zoos took place as part of breeding programmes.

Blacksmith plover, superb starling, snowy-headed robin chat and red-headed finch are all new to the bird collection for the recently finished African waterside aviary. The arrival of a female Madagascar partridge, at long last, allowed us to form a pair and breed this species for the first time. A number of other species also bred in the collection for the first time – crested wood partridge, Luzon bleeding heart dove, chestnut-backed thrush, yellow-crowned bishop, and green-winged pytilia.

Avicultural skills have been developed strongly over the last few years and more and more challenging species are starting to breed regularly. Among the lower vertebrates no less than six species of amphibians reproduced during the year and the unusual Laotian newt was added to the collection.



## Living Coasts

2012 saw the changeover of the sea duck enclosure to an otter exhibit. The penguin beach was changed to accommodate the sea ducks by adding a pebble area, a sunken boat to provide fresh water and some sedge for shelter. Two female otters, mother and daughter, were brought in from Edinburgh Zoo for the start of the summer season.

The keeper department ran 82 penguin feeds and keeper experiences over the year, the dive team ran 19 dive experiences.

A common octopus was added to the collection along with a number of native rock pool species. The new exhibit added to the underwater viewing area was a life sized animatronic shark, with interpretation linked to the Shark Trust.

The landscape of exhibits at Living Coasts was originally prepared with plants and landscapes replicating what the visitors would find in the local coastal landscape of Torbay. A much greater emphasis is now required on the quality and detail of environment replication for the mainly exotic species, not only to increase the visitor experience and understanding but also to provide a low stress but stimulating environment for the captive animal display species. A new planting plan has been written and will take place over the next three years.

During 2012 the site was also enhanced by art. Living Coasts' artist in residence, Scott Gleed, a local sculptor, spent time on site sculpting, holding workshops, and displaying his work. We also held a display of marine wildlife photography by Kate Westaway.

Breeding results for the year were in line with normal. Only one Macaroni penguin was reared but the Inca terns (29) and avocets (22) had bumper years. The ruffs hatched 4 chicks but, once again, failed to rear them so the husbandry of this secretive nester will have to be re-thought in the future. In the aquarium success with blue-spotted sting rays (4) and ribbon-tailed rays (2) continued and we will continue to supply other aquaria with these attractive fishes.

The last black-tailed godwit in the collection died. 20 Inca terns were sent to other collections. A female spectacled eider was exchanged for a male from a private keeper to create another potential breeding pair. We lost a number of chromides in the aquarium and the scat were surplus to Blue Planet Aquarium in Cheshire.



# Conservation Advocacy

Although the WWCT and its zoos have been doing Conservation Advocacy for many years it was only in 2012 that we tried to define what we believe this is and formally adopted it as one of the organisation's goals. By conservation advocacy we mean the fostering of human behaviour or policy change to benefit the conservation of wildlife and nature. In addition to education and engagement of visitors to the zoos and nature reserves and outreach activities at schools, colleges and other organisations, we aim to achieve this through using our highly visual local presence and trading influence with our commercial suppliers and local business and government forums. Through our partners in BIAZA, EAZA, WAZA and BGCI we will also endeavour to influence national and international policy.

## *Low impact land use /agriculture*

In 2009 Paignton Zoo Environmental Park installed VertiCrop, the first full scale vertical hydroponics production unit in Europe. This technology enables crop production using much less land area, less water, less energy and fewer chemical inputs and if adopted seriously within urban environments could significantly reduce the pressure created on wild habitats by the need to provide food for the ever increasing human population. The work of Paignton Zoo Environmental Park and particularly Kevin Frediani, Curator of Plants and Gardens, in promoting vertical farming has been recognised in many forums and was endorsed by the Earth Charter in 2012. The Earth Charter is a United Nations initiative and has been endorsed by more governments globally than almost any other document. Under the Charter's innovative programme Pictures of Success the VertiCrop exhibit was chosen to be the principal image to highlight to the world the need to conserve wild habitats to benefit all life on earth through encouraging a new sustainable base to global agriculture

(<http://picturesofsuccess.org/5/5c-promote-recovery-endangered-species-ecosystems>).



### *Responsible purchasing - palm oil*

Palm oil is used in thousands of food products, cosmetics, soaps, household cleaners and increasingly for biofuel. Demand for palm oil is increasing at a phenomenal rate. Palm oil production is now one of the biggest global threats to wildlife, particularly in Malaysia and Indonesia where deforestation in order to create oil palm plantations has occurred at an alarming rate in recent years. Efforts are being made by the industry and governments concerned to reduce the impacts of palm oil production but these are not happening fast enough. We believe that there is no current guarantee that any palm oil on the market has not contributed to the destruction of rainforest and threatened the survival of species living there, such as orang utans. Therefore our commercial arm South West Zoo Enterprises Ltd, which runs the catering and retail operations at the zoos, has taken a strong stance and has attempted to become palm oil free. We insist on palm oil-free guarantees from all suppliers of products to the shops and restaurants. In addition to raising awareness of the issue within the commercial arena this has resulted in close working relationships with many local businesses who have worked with us to develop palm oil free ranges of sweets, fudge, ice cream and pasties. Many of these companies have had a lot of success selling these specialist products to other like-minded organisations and so the message continues to reach a wider audience. In addition to our own efforts to change visitor and supplier behaviour on palm oil the zoos also joined with other zoos in the European Association of Zoos and Aquaria to put pressure on the European Parliament to pass legislation about the labelling of products containing palm oil. From December 2014 all products containing palm oil will have to state this specifically on the label allowing consumers to make informed choices about their impact on wildlife.

### *Resource Efficiency and Environmental management*

All three zoo sites successfully retained their ISO14001 accreditation for Environmental Management Systems (EMS) and continued to set an example to visitors and other organisations in responsible resource management and energy use. In particular our Environmental Officer supported the Devon Wildlife Trust in developing their EMS for ISO14001 accreditation and authored a section on sustainable procurement for the new BIAZA Sustainability Handbook. The potential of the zoos to be advocates for environmental management was recognised by a large grant from ATASS Respect for the installation of a PV and solar thermal system, including funding for research into the effects of climate change on amphibians. Paignton Zoo is also supporting research and development into new sustainable technologies. These include collaborating with the developers of a prototype anaerobic digester for converting dung and other organic waste into energy through providing unlimited quantities of feedstock. We are also evaluating the potential for smart sensors within animal housing to improve thermoregulation opportunities of the zoos captive animals to enhance animal welfare and save energy.



# Finance report

The financial performance of the group in 2011/12 was much improved, particularly given the difficult trading conditions and the worst spell of weather from April through to July for over a hundred years. Total visitor numbers across the group were virtually identical to the previous year at 720,802 however costs were reduced and as a result the group returned to surplus.

Whitley Wildlife Conservation Trust (WWCT) increased the funds available to its charitable activities with a surplus for the year of £91,009. The Field Conservation and Research department achieved an income of £47,173 and the Trust received a donation of £50,000 from the Binks Trust which it used to construct new exhibits at its three zoos. The Trust continued to provide financial support to several research projects in Africa and elsewhere and assisted the Field Studies Council by contributing to the running of Slapton Ley National Nature Reserve. The Net Assets of the Trust on 31st October 2012 stood at £10,705,086.

South West Environmental Parks Ltd (SWEPL) continued to operate Paignton and Newquay Zoos. It provided financial support to Living Coasts totalling £246,000 and to conservation projects in Africa and elsewhere of £89,305.

Paignton Zoo's visitor numbers fell from 454,474 in 2010/11 to 451,473 in 2011/12. Visitors to Newquay were also down from 165,839 to 157,914. The fall in visitors is attributed to the economic conditions together with the spell of poor weather in April to July. Despite this, income was up by nearly £500,000 and costs were reduced by £100,000. As a result, after two years of losses SWEPL showed a surplus for the year of £342,664.

Visitors to Living Coasts bucked the general trend, rising 9.3% to 111,415 following the opening of a new otter exhibit. Gate income was up by 20% as a result but the Company still required a substantial donation from SWEPL. Further cost reductions are planned in 2012/13 however the expectation is that Living Coasts will continue to require support for the foreseeable future.

South West Zoo Enterprises Limited, the group's trading company, again performed well given the difficult economic conditions and the number of visitors. Turnover of just over £3.42 million was very slightly down on last year; however the company increased its donation to SWEPL to £546,853.

After a couple of difficult years the performance of the group in 2011/12 reflects the work that has been done to reduce the cost base. Whilst the operating environment will continue to prove challenging the group is well positioned to continue its charitable activities.



