



Annual Report 2012  
Zoological Society of Ireland





## LETTER FROM THE PRESIDENT

Dear Member,

The Council of the Zoological Society of Ireland presents the 18th Annual Report, together with the consolidated audited statements, for the year ended 31st December 2012.

For the second year running, the consolidated accounts include the activities and results of both Dublin Zoo and Fota Wildlife Park under one cover for the year ended 2012.

Despite a year remembered for its poor weather, it was another excellent year for the Zoo, with the magical figure of one million visitors achieved by November. Fota Wildlife Park also recorded high visitation numbers.

Numerous awards and accolades were achieved in very different categories including the prestigious award for 'Best Public Relations Campaign' at the All Ireland Marketing Awards, a Certificate of Excellence from Trip Advisor, Best Family Day Out from the Maternity and Infant Awards, named best unusual wedding venue and an international award for the Family Farm through Agri Aware. Following the Agri Aware award, we

were delighted to welcome the EU Commissioner for Agriculture, Mr. Dacian Ciolos, to visit the Family Farm at Dublin Zoo.

The 2012 Moondance TV series 'The Zoo' proved very popular with ever increasing numbers viewing it. The emotional involvement and commitment of the team with the animals was very evident in the programme. Comments on Twitter and Facebook gave some indication as to its huge following.

The members of the Council acknowledge with thanks the contribution made by the team at Dublin Zoo and Fota Wildlife Park, the Volunteers, the Director of Dublin Zoo Leo Oosterweghel, and Sean McKeown, Director of Fota Wildlife Park, for the part they all played in another very successful year.

As President of the Society I would like to thank all the members of the Council for their commitment to Dublin Zoo, and to those who sit as Governors on the Fota Board as well, a special thanks for their time and expertise.

Margaret Sinanan  
President



## NOTICE OF ANNUAL GENERAL MEETING

Notice is hereby given that an Annual General Meeting of the Zoological Society of Ireland will be held at 6pm on Thursday, 19 September 2013 in Haughton House at Dublin Zoo, Phoenix Park, Dublin 8, for the following purposes:-

### Agenda

1. Adoption of minutes of the Annual General Meeting of the Zoological Society of Ireland held on Thursday 20th September 2012
2. Declaration of Council President
3. Receiving the Annual Report of Council
4. Receiving the Annual Report of the Honorary Treasurer and the Consolidated Audited Financial Statements of the Zoological Society of Ireland
5. Appointment of auditors
6. Declarations of elections to Council

### Notice of Election

Pursuant of Article 41 of the Articles of Association of the Society, notice is given that the following persons have been duly nominated to fill vacancies on the Council:

Paul Burke Kennedy  
Christopher Kane  
Thomas Dunphy  
Conor Quinn

Under the Articles of Association of the Society, the following members are retiring from the Council at the forthcoming AGM:

Paul Burke Kennedy  
Christopher Kane  
Thomas Dunphy

Tony Kearney  
Company Secretary  
Zoological Society of Ireland  
Registered Office: Phoenix Park, Dublin 8





## DUBLIN ZOO: DIRECTOR'S REPORT

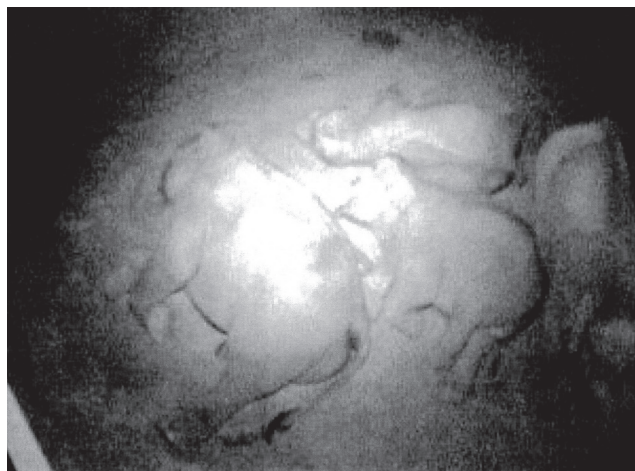
Dublin Zoo continued to be Ireland's favourite family attraction and set another all-time record of 1,029,417 visitors. The year 2012 was the third year of continuous growth in visitor numbers. Over the same period, the disposable income dropped significantly and it is truly remarkable that Dublin Zoo managed to grow the business.

Copious and positive PR throughout the year certainly helped ensuring Dublin Zoo stayed front of mind with the general public; the fly-on-the-wall television programme "The Zoo" on National Television, being a major contributor. Well-planned and timed campaigns by and the forward thinking of the Zoo's Marketing Department also contributed to the success.

Sharing visitor comments and criticism with the entire Zoo team and continuously asking the question "can we do this better?" has created a very welcoming culture, as the many favourable visitor comments on Facebook demonstrate.

### Highlights

The completion of a 270M<sup>2</sup> house for a bull Asian elephant was a major achievement. The state-of-the-art facility has a large area of deep sand which allows an elephant to sleep comfortably. Feeding holes in the walls allow feeding throughout the night. The house also completes the Kaziranga Forest Trail, a wonderful habitat for the Zoo's small breeding herd of Asian elephants.



The arrival of “Upali”, a magnificent breeding bull from Chester Zoo, will ensure the continuation of elephant breeding at Dublin Zoo.



The house for a bull was the final project financed by a Government grant and was project managed by the Office of Public Works to a very high standard.

Future capital works will be financed from the annual surplus which Dublin Zoo generates.



*(Top) Bull Asian elephant Upali meeting the females for the first time  
(Bottom) Upali exploring the Kaziranga Forest Trail*

A four-year old Dublin Zoo-bred bull elephant “Budi” was moved to Antwerp Zoo from where he will be shipped to Denver Zoo in the USA with some other European zoo-bred bulls. When “Budi” is old enough, he will hopefully inject all important European genes into the American zoo elephant population.

Transport from Dublin Zoo to Antwerp Zoo in Belgium was practically stress-free for the elephant after many months of training to enter his transport box.



With the death due to advanced age of the only remaining African lion in the Dublin Zoo collection, the opportunity arose to become part of an international breeding programme for the highly-endangered Asian lion.

*(Above) Budi, the Dublin Zoo bred bull Asian elephant, in the transport box*



An entirely new habitat was created for these cats near the entrance to the Zoo. Named “The Asian Forest”, the endangered Sumatran tiger was included in this new development. The Dublin Zoo Horticultural Team worked very hard to create a zoo habitat that resembles the wild as much as possible.

Two young female Asian lions were imported from Mulhouse Zoo in France.

A male Asian lion will be imported at the beginning of 2013 and an attempt will be made to breed this species.

The pair of Abyssinian ground hornbills laid two eggs, which were artificially incubated and successfully hand-reared, which is a very challenging undertaking. The Dublin Zoo animal care team gained some very valuable experience and hopes are high that the breeding will continue in the future.







*Abyssinian ground hornbill chick*

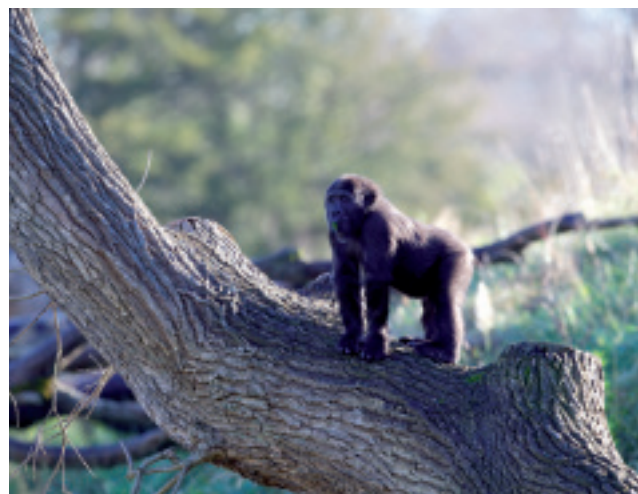
A two and a half year old female western lowland gorilla was imported from Stuttgart Zoo in Germany. This little female was hand-raised and attempts to integrate her into a troop of gorillas in Germany were unfortunately unsuccessful.

The Dublin Zoo troop has a very gentle silverback and a previous attempt a few years ago to integrate a hand-raised female was highly successful.

When Dublin Zoo was approached by the studbook keeper, the animal care team did not hesitate a moment and “Kafi” was transferred to Dublin. At the time of writing, “Kafi” (opposite) is well integrated into the troop. The determination and expertise of the Dublin Zoo team played a crucial role in this success story.



Two Dublin Zoo-bred male western lowland gorillas were transferred to Longleat Safari Park where they were reunited with their brother “Kesho”. Longleat Safari Park is in the process of forming a “bachelor group” of gorillas.



This move will allow Dublin Zoo to concentrate on breeding gorillas.



A male Amur tiger was imported from Amneville Zoo in France and successfully introduced to the two resident females. There is no breeding recommendation for this species at present.





*Gorillas Kafi and Kituba enjoy climbing in the rainforest*



Eastern bongo “Kimba” gave birth to a healthy calf. As “Kimba” was hand-raised at Dublin Zoo some years ago, there were concerns about her ability to care for the calf. “Kimba”, however, proved to be an exemplary mother.



*(Top) Eastern bongo calf Nanyuki  
(Bottom) Mother Kimba with her calf Nanyuki*

As part of the international breeding programme, a three year-old Dublin Zoo-bred southern white rhinoceros “Azuki” was swapped with “Nyala”, a female of similar age, from South Lakes Wild Animal Park in the U.K.



A healthy male California sea lion was born to mother Seanna and is growing up.



A male Brazilian tapir was born and was looked after exceptionally well by his first-time mother.

*(Top) California sea lion pup with mother Seanna  
(Bottom) Brazilian tapir calf with mother Rio*



The meerkats at the Meerkat Restaurant produced a nest of young pups that are growing up without problems.



Red panda twins were also born; they proved to be two females and received much media attention.



*(Top) Meerkat pups  
(Bottom) Red panda cubs*

The year ended with the approval from the European Aquaria and Zoo Association species committee for okapi that Dublin Zoo is allowed to keep this species in the future. The design process on the proposed “Okapi Forest” has commenced.

There were some losses too, a female ostrich died due to an unfortunate accident, a sixteen year old male snow leopard died of a cancerous tumour, and five pygmy marmosets died in a short period of time. Despite numerous tests, the cause of death is still unknown. A twenty-seven-year-old female common zebra and a twenty-year-old giraffe died due to medical complications. Very disappointing was the loss of a young Dublin Zoo-bred female Rothschild giraffe during a veterinary procedure, after she had suffered a broken leg.

## Health and Safety

Major threats to the security of Dublin Zoo occurred on the afternoon/night of the 7th July during a concert by the “Swedish House Mafia” in the Phoenix Park where the Dublin Zoo is located.

Drunken revellers took over the Phoenix Park, intimidating Zoo visitors and later in the night there were attempts to break into the Zoo. Full and excellent co-operation was received from the Gardaí that night.

## EDUCATION

In 2012, the Education Department at Dublin Zoo offered a greater choice of interesting modules to meet the needs of a wider audience; this included pre-school learning, primary, secondary, FETAC (Further Education and Training), third level and Senior Citizens.

However, students and their teachers still remained the most prominent demographic with an excess of 31,000 students partaking in a variety of educational programmes during 2012, resulting in an increase of 9% on 2011.

The education programmes have been designed to give students a greater appreciation of wildlife and are linked directly with the Irish education school syllabus.

The early years are a very important stage in a child's life and Dublin Zoo is in a unique position to nurture an interest in nature. Dublin Zoo worked with Early Childhood Ireland on a new and exciting programme called Farmtasic Food which was developed to help young children understand the connection between food they eat and farming.

The outreach programme to primary schools which took place during 2012 promoted the educational facilities and resources available for teachers and students at Dublin Zoo. Since starting as a pilot programme in 2010, the outreach initiative grew by 20%, reaching 11,500 students in 2012.

Summer camps which took place during July and August became increasingly popular. Each day of the week-long camps had a different focus, varying from close-up animal encounters, educational workshops and hands-on science



experiments. Topical elements were introduced to the summer camps such as the Zoolympics whereby children participated in games such as jumping and sprinting while also learning fun facts about animals.

Educational events and programmes in 2012 included: Sketching and Painting Workshop (Adults), Autumn Talks (Adults), Active Retirement Programme, Photography Workshop (Adults), Celebrating the Harvest (adults & children), Heritage Week (adults & children), Zoo Camps & Workshops (children), Parent & Toddler Morning, Zoo Kids Club, Birdwatching Morning and Discovery Book Club.

*(Top) Zoo Keeper Bernie McDonnell and school group  
(Bottom) Students doing outdoor class work in the Family Farm garden*



## MARKETING

2012 was an extremely busy year in the Zoo which allowed for some great marketing and PR opportunities. Extensive PR was gained through the opening of the Asian Forests, the arrival of bull elephant “Upali” and new births which included an Eastern bongo calf, a tapir calf, two red panda cubs, a Rothschild giraffe, two meerkat pups, two snowy owls and a sea lion pup, some of which even appeared on the front page of print media and on RTE and TV3 TV news. There was also a visit from superstar Jennifer Lopez who enjoyed a day out at the Zoo, which gained worldwide media coverage.

More media exposure included Operations Manager Gerry Creighton appearing on the Late Late Show on RTE, and Director Leo Oosterweghel being interviewed for a feature piece on Newstalk Radio and on the Matt Cooper Show on Today FM. RTE TV show Nationwide did a one-hour special on Dublin Zoo past and present.

Dublin Zoo won a prestigious award for ‘Best Public Relations Campaign’ at the All Ireland Marketing Awards. By year-end, Dublin Zoo had received an astonishing €7,804,478 worth of media coverage.



Dublin Zoo received an estimated €7,804,478 worth of media coverage during 2012



TV show 'The Zoo' aired for 10 weeks on RTÉ One in March and reached its highest audience ratings yet with a

share of 29% and over 395,000 viewers. RTE moved the programme to an even better slot, reflecting the popularity and success of the show. In addition, 'The Zoo Christmas Special' was watched by an audience of 429,000 viewers, putting it in the top 10 most watched programmes over the entire Christmas TV schedule.

Social media played a key role in marketing the Zoo in 2012 with a particular focus on Facebook and Twitter. By the end of 2012, Dublin Zoo had 58,431 fans, which was an increase of 20,136 on the previous year. There was also presence online via promotions on [www.fundays.ie](http://www.fundays.ie), [www.schooldays.ie](http://www.schooldays.ie) and [www.eumom.ie](http://www.eumom.ie) which are key targets for family audiences.



New consumer and annual pass leaflets were designed which featured a montage of animals at the Zoo, while entry tickets were also re-designed to feature 12 of the most popular animals.



In April, FM 104 did a complimentary live broadcast at Dublin Zoo for a full day, from 6am until 7pm, which included keeper interviews and competitions promoting the Zoo.

In May, Dublin Zoo partnered with the Sunday World to produce a magazine called 'Zoo World'. The 32-page magazine, which included animal facts, keeper interviews and conservation information, was produced for free by the Sunday World and distributed with the paper. The Sunday World promoted this magazine by advertising it on TV and radio.





Visitor research was conducted in June to obtain key profile information on Dublin Zoo visitors and to get feedback on their visitor experience. The survey was filled out by 2400 fans on Facebook and over 400 visitors on site.

To tie in with the Olympics 2012, Dublin Zoo hosted the 'Zoolympics' in August which was a fun and informative range of challenges for young visitors. A number of events were held to drive footfall off-peak which included Freddy Fyffes' celebration of gorilla "Kituba's" 1st birthday, McVities Penguin Weekend, Halloween Spooktacular and Santa's Grotto.

Corporate events during 2012 included IBM, HSBC and ISPC. Dublin Zoo received the award of Best Family Day Out at the Maternity & Infant Awards, received a Certificate of Excellence from Trip Advisor and was named best unusual wedding venue.



In September, Dublin Zoo teamed up with Age Action Ireland to celebrate Over-50s Day which admitted anyone aged 50 or over into the Zoo for free. This marketing initiative tied in with the 50th birthday of chimpanzees "Wendy" and "Betty", who participated in the 'tea-parties' in the 1960s. Visitors travelled from all over Ireland to attend the day in the Zoo. There was lots of media interest, including RTE News.

Strategic promotions played a key role in increasing footfall during the shoulder and off-peaks months. One of the most successful promotions was with An Post, whereby Dublin Zoo was advertised in all post offices and on post boxes. Other promotions included Fyffes, Nutella, McDonalds, Kellogg's, Bus Eireann, Golden Pages, Tesco, Supervalu, Superquinn, The Irish Independent, The Evening Herald, The Star and The Sun.



## CONSERVATION

Dublin Zoo continued supporting international breeding programmes and with a modest budget increase, provided funding for many in-situ (in the wild) conservation activities.

### **EAZA – breeding programmes and conservation campaigns**

Dublin Zoo is a member of BIAZA (British and Irish Association of Zoos and Aquariums), EAZA (European Association of Zoos and Aquaria) and WAZA (World Association of Zoos and Aquariums).

#### **EAZA – breeding programmes**

As part of Dublin Zoo's membership of EAZA, Dublin Zoo has 28 species involved in EEPs (European Zoo Breeding Programmes) and a further 12 included in ESBs (European studbooks). By running these EEPs and ESBs, EAZA can monitor the demographics and genetics of animal populations in almost 300 zoos in approximately 30 countries.

The success of many of these programmes has meant that most animals in zoos were born in zoos and some of these zoo-bred animals have been part of reintroduction programmes into the wild e.g. golden lion tamarin, scimitar-horned oryx. These zoo populations have also yielded a lot of valuable information on diet, reproduction and behaviour through zoo-based research.

Dublin Zoo currently co-ordinates two EEPs – one for the Moluccan cockatoo (*Cacatua moluccensis*) and the other for the citron-crested cockatoo (*Cacatua sulphurea citreocristata*).

#### **EAZA Ape Campaign (2011 - 2012)**

Since 2000, EAZA has developed various conservation campaigns for which EAZA zoos raise funding and public awareness. In 2011, the EAZA Ape Campaign was instigated to make a significant and lasting contribution to the continued survival of apes (chimpanzees, bonobos, gorillas, orangutans and gibbons) and their habitats.

All ape species except humans are threatened with extinction and if there is no action now, these magnificent animals could disappear from the wild forever. Therefore, Dublin Zoo is participating in the European-wide EAZA Ape Campaign to raise awareness and funds for ape conservation. To date, over €26,000 has been raised by Dublin Zoo.

### **Global Conservation Activities**

Dublin Zoo helps fund a number of in-situ (in the wild) conservation programmes. While breeding populations in zoos is beneficial, it is paramount that wild populations and their habitats be understood and conserved.

#### **Mbeli Bai Study, Republic of Congo – western lowland gorillas**

In 2012, Dublin Zoo continued supporting the Mbeli Bai Study in the Republic of Congo. This project has been collecting valuable long-term data on western lowland gorillas in Mbeli Bai in the Nouabalé-Ndoki National Park. To date, there have been observations of over 440 western gorillas over 17.5 years, collecting data on their social behaviour and group dynamics in the bai (forest clearing).

Western lowland gorillas are listed as Critically Endangered, as their numbers are likely to fall by over 80% between 1980 and 2046. Their ecology and population dynamics are still not fully understood and this project seeks to address this situation. In 2012, a new research project commenced looking at parasite load in faecal samples collected from the gorillas in the area.

The Mbeli Bai Study is also involved in environmental education and local capacity building. Their presence in the area has also meant that no illegal environmental activities have occurred in almost 20 years.

#### **PASA (Pan African Sanctuary Alliance) - African primates**

Dublin Zoo donated money to PASA (Pan African Sanctuary Alliance) in 2012. PASA currently houses thousands of great apes and monkeys in 22 member sanctuaries in 12 countries across Africa. The money donated will be used to provide training and materials for conservation education, community engagement and veterinary care at the sanctuaries. PASA also provides training and seed funding to local communities to develop alternatives to trade in bushmeat and primate pets.

#### **Golden Lion Tamarin Association**

Golden lion tamarins are Endangered in the wild. Since 2000, Dublin Zoo has contributed funds to the Golden Lion Tamarin Association via the Lion Tamarins of Brazil Fund. Over the years, the money has been used for various conservation initiatives such as tracking family groups using radio-collars, conducting studies on diet and habitat use, translocating isolated groups into larger reserves and habitat restoration.



In 2012, golden lion tamarins and a puma were discovered using a habitat corridor which only began restoration in 2009. This was a very positive discovery as although the area still does not hold mature trees, it is already being successful in linking two fragments of the Atlantic Forest habitat.

#### **West African Primate Conservation Action (WAPCA)**

The white-naped mangabey is listed as Endangered in the wild. Dublin Zoo has been supporting in situ conservation of this monkey since 2001 via WAPCA. WAPCA was established with the aim of conserving the endangered primate species found in the upper Guinean rainforest of Western Africa and protecting their habitats.

WAPCA regularly conducts research projects in forests to identify areas that need concentrated conservation effort.

For example, WAPCA is currently working to create the first trans-border community-managed wildlife corridor between Ghana and Côte d'Ivoire. WAPCA also helps rural communities to develop sustainable rainforest practices to eliminate damaging activities such as mining, logging and bushmeat trade.

Throughout 2012, conservation education and awareness campaigns were held in eight rural communities in Ghana. WAPCA continues to work with the Endangered Primate Centre in Accra, Ghana, which houses confiscated white-crowned mangabeys and a critically endangered pair of Roloway monkeys.

### **Selamatkan Yaki - Sulawesi crested macaques**

In 2012, Dublin Zoo provided funding to Selamatkan Yaki for the second time. Selamatkan Yaki is an organisation on Sulawesi involved with the conservation, research and education on the Critically Endangered Sulawesi crested macaque.

In 2012, this organisation continued its work on a species action plan, conducted a research project on local attitudes, resource use and consumption behaviour and continued with its environmental education programme.

### **Snow Leopard Trust**

The Snow Leopard Trust is the leading authority on the study and protection of snow leopards, which are classified as Endangered by the IUCN. Dublin Zoo continued supporting this organisation in 2012 and the funding went towards five on-going, sustainable and community-driven projects; a long-term ecological study in Mongolia along with implementing snow

leopard enterprises, livestock vaccination and husbandry programme in Pakistan, and in India, conservation education programmes and livestock insurance programmes.

### **Elephant Family – Asian Elephants in India**

Dublin Zoo continued supporting in situ conservation of Asian elephants through Elephant Family in 2012. Asian elephants are classified as Endangered by the IUCN. With Elephant Family and its Indian partner, the Wildlife Trust of India, Dublin Zoo has been supporting the development of wildlife corridors in Assam, where one-third of India's wild elephants are found.

Since 2009, four wildlife corridors have been focused on - one of the corridors has been secured, there has been improved connectivity in another, and plans are being made for securing the other two.

### **Lowveld Rhino Trust – African rhinoceros**

The southern white rhino (*Ceratotherium simum simum*) is listed as Near Threatened because of the rise in poaching of rhinos to supply the illegal trade in rhino horn. It is estimated that there are approximately 20,000 southern white rhino in the wild, while the northern white rhino population currently numbers four.

In 2012, Dublin Zoo continued supporting the Lowveld Rhino Trust in Zimbabwe. The Lowveld conservancies are home to approximately 50% of Zimbabwe's white rhinos and 80% of the country's black rhinos. Funding from Dublin Zoo has been used to pay for the ongoing rhino monitoring work of teams of trackers. The trackers can identify each rhino based on horn profiles, ear notches



and footprints, in combination with a long-running database that compiles all sightings data.

The Lowveld Rhino Trust is also involved with translocating rhinos to safer areas, treating wounded rhinos and helping authorities apprehend poachers.

### **Bongo Surveillance Project – Mountain bongos**

The eastern or mountain bongo (*Tragelaphus eurycerus isaaci*) is Critically Endangered, with possibly less than 100 individuals left in the wild. For the previous three years, Dublin Zoo has been supporting the Bongo Surveillance Project (BSP). This project is involved with monitoring the remaining wild populations of bongos, gaining a greater understanding of their ecology and working with local communities to ensure their survival.

In 2012, the BSP team of trackers removed hundreds of snares and traps and towards the end of the year, there was a noticeable increase in bongos and other wildlife in some of the forests. Their presence in the field also acted as a deterrent against other illegal activities such as timber extraction and charcoal production.

The 11 camera traps set up have enhanced the ongoing research. The bongo wildlife clubs now involve 14 local schools and 14,000 local people have been involved with the community outreach programmes.

### **Okapi Conservation Project**

An emergency fund was set up by the Okapi Conservation Project in the Democratic Republic of Congo after a devastating attack on the headquarters by Simba rebels in 2012. Dublin Zoo donated to this fund to support efforts on rebuilding the Station and keeping programmes operating that aid the local communities.

### **Rothschild's Giraffe Project – Giraffe Conservation Foundation**

In 2012, Dublin Zoo began supporting the Rothschild's Giraffe Project. Rothschild's giraffes are classified as Endangered. This project was established to provide the first-ever scientific survey of Rothschild's giraffe behaviour, ecology and social structure. The project works collaboratively with the Kenya Wildlife Service and others to develop a suitable conservation strategy for the Rothschild's giraffe in East Africa.

### **IUCN Flamingo Specialist Group**

The IUCN Flamingo Specialist Group role is to actively promote flamingo research, conservation and education worldwide. In 2012, Dublin Zoo contributed funds towards the Flamingo Specialist Group Small Grants Fund which assists on-the-ground flamingo conservation projects.

### **Citron-crested cockatoo research in Indonesia**

The citron-crested cockatoo is Critically Endangered and found only on Sumba Island in Indonesia. The main threats are illegal trade and loss of habitat. However, in addition to this, the reproductive output of citron-crested cockatoos is abnormally low.

In 2011, Dublin Zoo teamed up with ZGAP (Zoologische Gesellschaft für Arten-und Populationsschutz; a German conservation organisation) and Burung Indonesia (Birdlife Indonesia) to investigate the factors influencing this low reproduction rate. It is hoped that if these factors are identified, provisions can be made to increase productivity and thus increase numbers in the wild. This research project will finish in 2014.

### **Sphenisco - Humboldt Penguins**

Humboldt penguin numbers are declining and they are classified as Vulnerable. Dublin Zoo supports in situ conservation of this species through Sphenisco which works with Chilean and Peruvian scientists and activists. They are involved with research, monitoring and protection of breeding islands, campaigning for the creation of marine protection areas and environmental education.

### **Thailand Hornbill Project**

Great hornbills (*Buceros bicornis*) are listed as Near Threatened but its numbers are decreasing across its range due to logging, forest clearance and hunting. Each year, Dublin Zoo sponsors a family of great hornbills in Thailand as part of the Thailand Hornbill Project.



This project is run by the Hornbill Research Foundation in Mahidol University in Bangkok. The money donated goes towards subsidising local villagers who protect the birds and collect scientific data in the Budo-Sungai Padi National Park. This national park supports six species of hornbills, four of which are Endangered.

### **Satellite tagging of Waldrapp ibis**

The waldrapp ibis is one of the most endangered birds in the world. Morocco holds 95% of the wild population which is concentrated around the Souss-Massa National Park in Morocco and surrounding areas. A National Species Plan was drawn up for this species and it identified as a priority the satellite tagging and colour ringing of some birds to discover more on this species' seasonal movements and area use outside of the national park.

Dublin Zoo provided funding for satellite tagging of an adult bird “Aylal” in 2011 and for the subsequent processing of the data. Fortunately, the tag is still emitting data and the bird’s movements can be followed on a blog accessed from the Dublin Zoo website.

### **Frozen Ark**

Throughout 2012, Dublin Zoo continued collecting samples for the Frozen Ark Project. This is an international project aimed at the long-term storage of genetic material from endangered animals. During routine veterinary procedures, blood containing genetic material is collected and stored at -80oC in Dublin Zoo and with our Frozen Ark partner institution, University College Dublin.

### **Conservation Breeding Specialist Group (CBSG)**

In 2012, Dublin Zoo continued sponsoring the Conservation Breeding Specialist Group. The CBSG falls under the IUCN (International Union for the Conservation of Nature) Species Survival Commission. The CBSG began as a link between zoos and the IUCN and its mission is to increase the effectiveness of conservation efforts worldwide by promoting global partnerships and developing inter-disciplinary methodologies.

Bull Asian elephant Upali







*Eastern bongo calf Nanyuki*

## Irish Conservation Activities

All around the world, species are in danger of becoming extinct and Ireland is no exception. To help address this, Dublin Zoo also supports conservation initiatives on this island.

### Irish Grey Partridge Conservation Council - Red Grouse Conservation

The red grouse (*Lagopus lagopus hibernicus*) is a red-listed species in Ireland, meaning that it has a high conservation concern because its numbers have decreased drastically. In the past, Dublin Zoo and Fota Wildlife Park funded genetic research into the Irish population to help form a solid scientific approach to conservation efforts. Dublin Zoo regularly provides a meeting space for the National Red Grouse Action Committee which is working on an All-Ireland Species Action Plan for red grouse.



Red grouse in the wild

### Louth Nature Trust - Little Tern Conservation

Dublin Zoo provides financial support for the little tern colony at Baltray, Co. Louth. This project is run by the Louth Nature Trust and began in 2007. The colony almost became extinct for little terns but work by the Louth Nature Trust has meant that this colony has survived. In 2012, at least twelve chicks fledged. Baltray was the only site to produce chicks in Ireland in 2012 as rain and easterly gales ruined efforts in other sites.

### BirdWatch Ireland – Barn Owl Conservation


Barn owl populations in Ireland have decreased by 50% in the past 25 years. In 2012, Dublin Zoo began supporting a BirdWatch Ireland project on barn owl conservation. This project will address three key areas - monitoring natural breeding sites, monitoring nest-boxes and raising awareness.

### Irish Wildlife Trust - National Smooth Newt Survey

Dublin Zoo and Fota Wildlife Park have provided funding for the National Smooth Newt Survey run by the Irish Wildlife Trust since it began in 2010. The smooth newt is Ireland's only species of newt and a native amphibian. This species has not been surveyed since the mid-90s and this survey seeks to gather current data on distribution and habitat use. The survey also aims to raise awareness of this species and to build capacity among the public for wildlife surveying.

To date, smooth newts have been detected in every county bar Tipperary and Louth but further fieldwork may yield positive sightings there too. Alpine newts (non-native) were discovered in Galway in 2012 but their origins are unknown. A possible case of ranavirus in





Kildare was a worrying discovery, as this disease could cause massive mortality in native amphibian populations. The National Smooth Newt Survey has asked surveyors to be vigilant for non-native amphibians and disease.

### **Irish Peatland Conservation Council - Peatland Conservation**

In 2012, Dublin Zoo supported peatland conservation through the Irish Peatland Conservation Council (IPCC) by making a donation and providing Dublin Zoo family passes for fund-raising. The IPCC mission is to conserve a representative sample of the peatlands of Ireland for future generations to enjoy.

### **Native Species Weekend at Dublin Zoo**

In 2012, Dublin Zoo, in partnership with a variety of wildlife experts and organisations, held its sixth Native Species Weekend on the 19th and 20th May. The aim of this weekend is to acknowledge the richness of our native flora and fauna and highlight how everyone can play a role in conserving it. In 2012, 13 organisations helped host the event, providing Dublin Zoo visitors with a great opportunity to learn about local wildlife. Don Conroy was also present showing a new generation how to draw wildlife.

### **Native Bats in Dublin Zoo**

Eurobats, a bat interest group comprised of Government officials from around Europe, had their annual meeting in Dublin in May. Dublin Zoo and Bat Conservation Ireland hosted over 50 delegates from Eurobats on the night of the 16th May for a bat walk around the Zoo. The night was a great success with many bats spotted. Five species were positively identified including the rare Nathusius

pipistrelle and and Leisler's bats, which are declining across Europe.

In 2012, additional bat boxes for summer roosting were erected around the Zoo.

### **Native Birds in Dublin Zoo**

In 2012, additional nest boxes were erected around Dublin Zoo for native birds, bringing the total number of nest boxes in the Zoo to over fifty. These nest-boxes will be monitored throughout the breeding season and data collected will be sent to the British Trust of Ornithology which records breeding successes of birds across Ireland and Britain.

### **Rothamsted light-trap network – monitoring moths in Dublin Zoo**

Dublin Zoo has been running a Rothamsted light-trap since 2008. To date, 85 species of moths have been recorded in Dublin Zoo using this trap. This trap monitors moths in the area and the information collected is inputted into a larger database of moths for Ireland and the U.K. The Rothamsted light-trap network has been running since 1968 and has produced one of the longest-running data-sets on insect population in the world.

### **Bioblitz**

Bioblitz is a biodiversity survey run by that National Biodiversity Centre in several sites across the country each year. The Phoenix Park was one of the sites in 2012 and was surveyed on the 19th May. As part of this exercise, surveyors were also granted access to Dublin Zoo to document wildlife.

## Research

Dublin Zoo focuses on research which has a direct benefit to the animals in the Zoo (e.g. improves husbandry), to the species in general (e.g. has a conservation value) or to the operations of Dublin Zoo (e.g. visitor studies). Research is conducted in various guises, from Dublin Zoo team studies, Dublin Zoo volunteer studies, third level student projects, to multi-zoo studies. Dublin Zoo is also engaged in horticultural research through its own horticultural team.

### Animal research by the Zoo team

The animal care team is ideally placed to conduct research projects as it understands the needs of animals in its care. In 2012, a wide variety of topics were researched by the Dublin Zoo team:

- Keeper Louise McDermott continued her observations on the breeding behaviour of the Dublin Zoo flock of Chilean flamingos. Louise has been studying the flock since 2003 and her findings have revealed interesting factors influencing the success of breeding in the colony.
- Keepers Louise McDermott and Peter Philips continued collecting data for their research into factors affecting flamingo feet.
- Keeper Yvonne McCann examined the breeding behaviour of the waldrapp ibis colony. Yvonne has been studying the waldrapp ibis breeding season since 2009.
- Keeper Pamela O'Brien conducted a study entitled "The Behaviour of a pair of Great Indian Hornbills *Buceros bicornis* on the run-up to their breeding

season".

- Keeper Bridget Hayes conducted a study entitled: "A study on the behaviour of White-naped Mangabey, *Cercocebus atys lunulatus*, offspring during feeding".
- Dublin Zoo volunteers continued taking observational data on the behaviour of the gorilla group in their new habitat. This data will be compared to behavioural data taken when they were in their previous habitat.

### Horticulture research by the Zoo team

Dublin Zoo is the collection holder for the genus *Libertia* for Ireland and Britain and as such holds the most species. S. Butler (Curator of Horticulture) has identified some naming and identification issues with this genus and is working with the Royal Horticultural Society in England in investigating this further.

The horticulture team is also investigating methods of how to maintain mud-free grass areas in the bongo habitat. Regular use of certain areas of their habitat cause the ground to become poached, meaning water cannot drain through and this results in very wet, muddy areas. This research could have positive ramifications for other zoo habitats if successful.

## Student research

### “Visitor effects on gorillas in Dublin Zoo”

*Julia Lubbock (MSc), Newcastle University.*

Observational data was taken of the human-gorilla relationship and then compared to a similar study conducted several years ago. The study showed that the level of visitor-avoidance behaviour has greatly decreased in the new habitat. This suggests that the gorillas have greater control over their interactions with visitors in their new habitat and this has beneficial welfare implications.

## Multi-zoo research

Many research projects require data collection from more than one zoo and where possible, Dublin Zoo is happy to assist. In 2012, Dublin Zoo contributed to the following:

- Survey to Evaluate Breeding in Mixed Species Bird Aviaries – a PhD study through Liverpool JMU and Chester Zoo.
- There were several studies through the Royal Veterinary College, London, investigating different feet issues in zoo elephants and developing standardised systems to measure different parameters.
- Analysis of post-mortem reports for the European population of Sulawesi crested black macaques, investigating well-being in zoos - a MSc project with the University of Plymouth.
- Evaluation of best feeding practice for orang utans – a Master’s study through the University of Liverpool.
- Nutrition, feeding and body condition of elephants in Ireland and Britain – a Master’s study through the University of Liverpool.

- Causes of mortality in chimpanzees in zoological collections in Britain and Ireland – a veterinary study with the Royal Veterinary College, London.
- Multi-zoo questionnaire on general health of red pandas – conducted by a zookeeper in Perth Zoo.
- Snow Leopard Trust research – Dublin Zoo took measurements of snow leopard scat here and this information is being used to investigate the relationship between snow leopard age and scat size. This information will be very helpful in the field when sampling areas for snow leopards.

## Spreading the word...

It is important that zoo knowledge and research is shared among zoo professionals so that zoos worldwide can work together in advancing the care they provide for animals. Therefore, Dublin Zoo not only sends team members to attend conferences and workshops but Dublin Zoo also hosts conferences and workshops. The Dublin Zoo team members are given the opportunity to present their knowledge and also learn from other professionals and, where possible, research findings are also published in zoo publications and journals.

### January

- G. Creighton (Operations Manager) presented a talk entitled “Fighting Back – A History of the Sumatran Tiger” to the Maynooth Zoological Society at the National University of Maynooth, Co Kildare.
- A Red Grouse plenary meeting was held in the Haughton House by the Irish Grey Partridge Conservation Trust.





*Brazilian tapir calf MJ*

## February

- G. Creighton (Operations Manager) presented a talk entitled “Reaching your Target – protective contact training in Asian elephants” to zoology students in Trinity College Dublin.
- U. Smyth (Education Officer) attended a presentation: “Caught in the Web”- Mapping older people’s pathways to public services at The Older & Bolder Conference held in the Westin Hotel, Dublin.

## March

- B. Walsh (Keeper) attended the Annual ABWAK (Association of British and Irish Wild Animal Keepers) Conference held in Bristol Zoo, UK. He presented a talk entitled “The Benefits of Attending ICZ Conferences”.
- Transition Year Teachers Conference - “Connecting the Head, Heart and Hands – an integrated approach to global education” was presented in Athlone Springs Hotel in Co Westmeath and was attended by C. Doyle (Educator).
- The Irish Garden Plant Society was given a presentation by S. Butler (Curator of Horticulture) at Glasnevin Botanical Gardens.
- G. de Jong (Keeper) gave a talk in Guinness’ Storehouse to Diageo agents heading to Africa on African venomous snakes and invertebrates and how to behave if they come across them.

## April

- BSAVA (British Small Animal Veterinary Association) World Congress 2012 held in Birmingham, UK was attended by A. Greene (Vet. Nurse/Keeper).
- A presentation entitled “What We Do in the Dead

Zoo” in the Natural History Museum, Dublin, was attended by U. Smyth (Education Officer).

- The Plant Network meeting held at Kilmaccuragh Arboretum, Wicklow, was attended by S. Butler (Curator of Horticulture). Some attendees then visited the Zoo the following week.
- Irish Science Teachers’ Association (ISTA) Conference (50th Annual Conference) was attended by C. Doyle (Educator) in Trinity College Dublin.
- A research and conservation committee meeting was held in Belfast Zoo and was attended by the Directors of Dublin Zoo, Belfast Zoo and Fota Wildlife Park as well as by members of the Zoo Council and S. Molloy (Registrar).

## May

- The ECO-Unesco Young Environmentalist Awards Showcase & Awards Ceremony 2012 in the Mansion House, Dublin, was attended by U. Smyth (Education Officer).
- The annual EAZA Zoo Horticulture Group Conference at Howletts and Port Lympne Wild Animal Parks in the UK was attended by S. Butler (Curator of Horticulture).
- The Glasnevin Botanic Gardens hosted an “Irish Wild Flowers” exhibition which was attended by U. Smyth (Education Officer)
- Native Species Weekend was hosted by the Zoo on the Great Lawn.

## June

- G. Creighton (Operations Manager) visited numerous zoos in China and presented a number of talks and workshops covering all aspects of Asian elephant management:

- Nanjing Hongshan Forest Zoo – GC attended a two-day symposium and workshop for elephant keepers. He presented two talks, “Giant Footsteps” and “A Different View”.
- Shanghai Zoo – GC participated in a one-day workshop covering all aspects of elephant husbandry.
- Kunming Zoo – GC presented “Giant Footsteps” and “A Different View”.
- Suzhou Zoo – GC presented a talk on the importance of foot care in Asian elephants.
- Yunnan Wildlife Park – GC presented a talk to wildlife rangers who protect wild Asian elephants.
- G. Creighton (Operations Manager) also attended the Annual AZA Conference 2012 held in Phoenix, Arizona, USA. He presented two talks entitled “Giant Footsteps” and “A Different View” and talked about Dublin Zoo’s Asian elephant management programme.
- Dublin Zoo’s horticultural team hosted a meeting for the Professional Gardeners’ Guild. 15 delegates attended from all over Ireland and special attention was paid to our seed saving, our CDA weedkilling system, and our air spade soil decompaction tool.

## July

- A. Greene (Vet Nurse/Keeper) went to Stuttgart Zoo in Germany to work with a hand-reared gorilla “Kafi” before she was transferred to Dublin. A report on this trip was written up by A. Greene.
- Dublin Zoo’s horticultural team gave a guided tour to a group of retired RTE staff, looking at recent developments.

## September

- B. Walsh (Keeper) attended the ICZ Annual Conference

2012 held in Singapore. He presented two talks at this conference; one entitled “Crate training an Asian bull elephant calf for transport using protective contact” and the second entitled “The Gorilla Habitat at Dublin Zoo”.

- The EAZA conference 2012 held in Innsbruck was attended by L. Oosterweghel (Zoo Director), H. Clarke (Team Leader) and S. O’Brien (Keeper/Registrar).

## October:

- The Eco Centre Award Celebrations were hosted by Fota Wildlife Park, Cork, and attended by U. Smyth (Education Officer).
- U. Smyth (Education Officer) attended a Discover Primary Science & Maths Network Meeting in the National Sealife Centre, Bray, Co. Wicklow.
- All-Ireland Mammal Symposium (AIMS) 2012 was held in the Botanic Gardens in Glasnevin and was attended by S. O’Brien (Keeper/Registrar) and C. Doyle (Educator).
- A research and conservation committee meeting was held in Fota Wildlife Park, Cork, and was attended by the Directors of Dublin Zoo, Belfast Zoo and Fota Wildlife Park as well as by members of the Zoo Council and S. O’Brien (Keeper/Registrar).

## November

- There was a WAPCA presentation by Jeanne Marie Pittman (Country Co-ordinator of West African Primate Conservation Action) in Haughton House and it was attended by the Dublin Zoo team and volunteers.
- The Annual Bird Working Group Meeting was held in WWP Martin Mere in the UK and was attended by E. O’Brien (Team Leader) and L. McDermott (Keeper).



- A BIAZA Records Keeping meeting in Knowsley Safari Park in the UK was attended by S. O'Brien (Keeper/Registrar).
- "Keeping it Simple", a talk and demonstration, was presented by A. Greene (Vet Nurse/Keeper) and P. O'Brien (GA1) for approximately 70 people from Special Olympics in Haughton House as part of Powering Kindness Week.

### December

- "My visit to the Golden Lion Tamarin Association in Brazil" was presented by Orlagh Reddington (Educator) in Haughton House to the Dublin Zoo team and volunteers.

### Papers published

Philips, P. and McDermott, L. (2012) **Using biometric measurements to predict the gender of Chilean flamingos, *Phoenicopterus chilensis*, at Dublin Zoo.**

International Zoo Yearbook, 46: 189-194

The following two papers were published from research which was funded by Dublin Zoo and Fota Wildlife Park:

McMahon, B.J., Johannsson, M.P., Piernney, S.B., Buckley, K. and Höglund, J. (2012) **Genetic variation among endangered Irish red grouse (*Lagopus lagopus hibernicus*) populations: implications for conservation and management.** Conservation Genetics, 13 (3): 639-647.

Johansson, Magnus P., McMahon, Barry J., Höglund, Jacob, Segelbacher, Gernot (2012) **Amplification success of multilocus genotypes from feathers found in the field compared with feathers obtained from shot birds.** Ibis, 154 (1): 15-20.



*Meerkat pup*

## CENSUS OF ANIMALS IN DUBLIN ZOO DURING 2012

### Summary of Census of Animals in Dublin Zoo on 1st January 2013

Taxon	Total Species	Total Specimens
Mammals	43	199
Birds	24	185
Reptiles	17	65
Amphibians	2	4
<b>Total vertebrates</b>	<b>86</b>	<b>453</b>
Invertebrates	6	63*

\*Approximate numbers

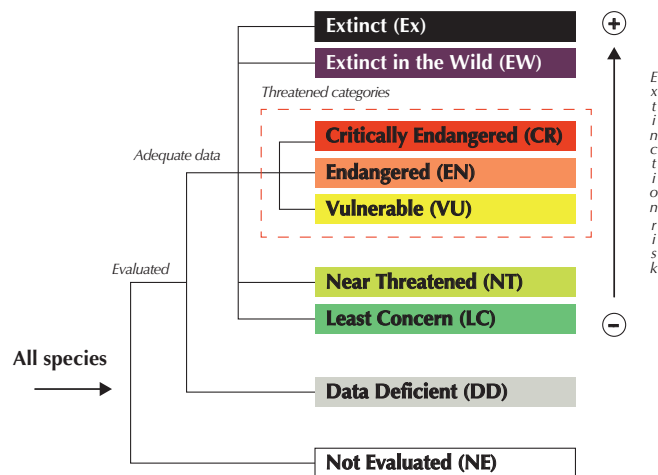
### Summary of Births and Hatchings of Animals in Dublin Zoo during 2012

Taxon	Total Species	Total Specimens
Mammals	16	45
Birds	7	29
Reptiles	0	0
Amphibians	0	0
<b>Total vertebrates</b>	<b>23</b>	<b>74</b>
Invertebrates	3	X

X: Numbers not recorded

### Summary of Animal Species on the IUCN Red List of Threatened Species in Dublin Zoo during 2012

IUCN status	Number of species/ subspecies
Extinct in the wild – EW	1
Critically endangered – CR	8
Endangered – EN	13
Vulnerable – VU	13
Near threatened – NT	11
Least Concern - LC	37
Not Evaluated - NE	19



Source: IUCN (2011) IUCN Red List of Threatened Species. Version 2011.2.

Available at: <http://www.iucnredlist.org>.

Downloaded on 01/03/2012.



## Key to Census Tables Overleaf



Part of a European Endangered Species  
Breeding Programme (EEP)

ESB

Recorded in a European studbook

- Column 1:** The number of animals in the collection at 1st January 2012.
- Column 2:** The number of animals received in 2012 through presentation, exchange, deposit or purchase.
- Column 3:** The number of animals born or hatched during 2012.
- Column 4:** The number of animals dying within 30 days of birth or hatching, in 2012.
- Column 5:** The number of animals dying having survived more than 30 days, in 2012.
- Column 6:** The number of animals leaving the collection through presentation, exchange, deposit, sale, theft etc. during 2012.
- Column 7:** The number of animals in the collection at 1st January 2012.

The first figure indicates the male numbers; the second female numbers and the third unsexed numbers e.g. 1.2.4 reads 1 male, 2 females and 4 unsexed specimens.

Male	Female	Unknown
♂	♀	?




This census does not include animals which have been sent on deposit to other collections, nor does it include several species, which generally breed well in the gardens, i.e. Coot, Moorhen, Grey Heron etc.

	IUCN Status	SPECIES		Total at 01.01.12	Arrivals	Births	Dead within 30 Days	Dead	Departed	Total at 01.01.13
		<b>VERTEBRATES</b>	<b>VERTEBRATA</b>							
		<b>CLASS: MAMMALS</b>	<b>MAMMALIA</b>							
		<b>BATS</b>	<b>CHIROPTERA</b>							
	CR	Rodrigues flying fox	<i>Pteropus rodricensis</i>	3.14.0				1.2.0		2.14.0
		<b>PRIMATES</b>	<b>PRIMATES</b>							
	NT	Ring-tailed lemur	<i>Lemur catta</i>	5.4.0						5.4.0
	EN	Red ruffed lemur	<i>Varecia rubra</i>	3.3.0					2.0.0	1.3.0
	VU	Goeldi's monkey	<i>Callimico goeldii</i>	1.1.0	0.1.0	0.0.1	0.0.1	0.1.0	0.0.0	1.1.0
	LC	Eastern pygmy marmosets	<i>Callithrix pygmaea niveiventris</i>	3.5.0		1.1.4		3.2.4		1.3.0
	EN	Golden lion tamarin	<i>Leontopithecus rosalia</i>	1.1.0				0.1.0		1.0.0
		Spider monkey	<i>Ateles sp.</i>	1.2.0						1.2.0
	LC	Bolivian squirrel monkey	<i>Saimiri boliviensis boliviensis</i>	8.0.0				1.0.0		7.0.0
	LC	White-faced saki	<i>Pithecia pithecia</i>	1.1.0						1.1.0
	EN	White-crowned mangabey	<i>Cercocebus atys lunulatus</i>	2.6.0		0.0.1	0.0.1			2.6.0
	CR	Sulawesi crested macaque	<i>Macaca nigra</i>	4.8.1		0.0.2	0.0.1	0.1.0		4.8.1
	EN	Siamang	<i>Symphalangus syndactylus</i>	2.0.0	0.1.0				1.1.0	1.1.0
	CR	Western lowland gorilla	<i>Gorilla gorilla gorilla</i>	4.3.0	0.1.0				2.0.0	2.4.0
	EN	Chimpanzee	<i>Pan troglodytes</i>	2.2.0						2.2.0
	EN	Western chimpanzee	<i>Pan troglodytes verus</i>	0.1.0	0.2.0					0.3.0
	EN	Bornean orangutan	<i>Pongo pygmaeus pygmaeus</i>	1.3.0						1.3.0
		<b>XENARTHANS</b>	<b>XENARTHRA</b>							
	LC	Linne's two-toed sloth	<i>Choloepus didactylus</i>	1.1.0						1.1.0
		<b>RODENTS</b>	<b>RODENTIA</b>							
	NT	Patagonian mara	<i>Dolichotis patagonum</i>	5.1.0				2.0.0		3.1.0
		<b>INSECTIVORES</b>	<b>INSECTIVORA</b>							
	LC	Pygmy hedgehog	<i>Atelerix albiventris</i>	1.0.0						1.0.0
		<b>CARNIVORES</b>	<b>CARNIVORA</b>							
	LC	Arctic fox	<i>Vulpes lagopus</i>	0.1.0				1.0.0		0.0.0
	LC	Grey wolf	<i>Canis lupus</i>	4.4.0						4.4.0
	EN	African hunting dog	<i>Lycaon pictus</i>	6.1.0				0.1.0	4.0.0	2.0.0
	VU	Red panda	<i>Ailurus fulgens fulgens</i>	2.2.0		0.2.0			1.1.0	1.3.0
	VU	Oriental small-clawed otter	<i>Aonyx cinerea</i>	1.1.0				1.0.0		0.1.0
	LC	Slender-tailed meerkat	<i>Suricata suricatta</i>	1.3.0		1.5.0		0.2.0		2.6.0
	CR	Asiatic lion	<i>Panthera leo persica</i>	0.0.0	0.2.0					0.2.0
	VU	Lion	<i>Panthera leo</i>	0.1.0				0.1.0		0.0.0
	EN	Amur tiger	<i>Panthera tigris altaica</i>	0.2.0	1.0.0					1.2.0
	CR	Sumatran tiger	<i>Panthera tigris sumatrae</i>	1.1.0						1.1.0
	EN	Snow leopard	<i>Uncia uncia</i>	2.1.0				1.0.0		1.1.0
	LC	California sealion	<i>Zalophus californianus</i>	0.3.0	1.0.0	1.0.0				2.3.0
		<b>ELEPHANTS</b>	<b>PROBOSCIDA</b>							
	EN	Asiatic elephant	<i>Elephas maximus</i>	1.4.0	1.0.0				1.0.0	1.4.0
		<b>ODD-TOED UNGULATES</b>	<b>PERISSODACTYLA</b>							
	LC	Common/Grant's zebra	<i>Equus burchelli boehmi</i>	1.2.0				0.1.0		1.1.0
	VU	South American tapir	<i>Tapirus terrestris</i>	1.1.0		1.0.0				2.1.0
	NT	Southern white rhinoceros	<i>Ceratotherium simum simum</i>	3.4.0	0.1.0					3.4.0

	IUCN Status	SPECIES		Total at 01.01.12	Arrivals	Births	Dead within 30 Days	Dead	Departed	Total at 01.01.13
 ESB		<b>EVEN-TOED UNGULATES</b>	<b>ARTIODACTYLA</b>							
	LC	Red river hog	<i>Potamochoerus porcus pictus</i>	3.6.0						3.6.0
	VU	Hippopotamus	<i>Hippopotamus amphibius</i>	1.2.0						1.2.0
	LC	Giraffe	<i>Giraffa camelopardalis</i>	2.3.0				0.1.0		2.2.0
	EN	Baringo/Rothschild giraffe	<i>Giraffa camelopardalis rothschildi</i>	1.3.0		0.1.0		0.1.0		1.3.0
	NT	Blackbuck	<i>Antilope cervicapra</i>	1.1.0	0.4.0					1.5.0
	CR	Eastern bongo	<i>Tragelaphus eurycerus isaaci</i>	1.2.0		0.1.0			1.0.0	0.3.0
	EW	Scimitar-horned oryx	<i>Oryx dammah</i>	1.3.0		1.0.0	1.0.0			1.3.0
		<b>DOMESTIC</b>								
		Rabbit	<i>Oryctolagus cuniculus domestic</i>	1.0.0						1.0.0
		British Giant rabbit	<i>Oryctolagus cuniculus british_giant</i>		0.2.0			0.2.0		0.0.0
		Tamworth pig	<i>Sus scrofa scrofa tamworth</i>	1.1.0		5.5.0	0.1.0	1.0.0	4.4.0	1.1.0
		Friesian cow	<i>Bos taurus taurus british_friesian</i>	0.1.0		1.0.0			1.0.0	0.1.0
		Simmental cow	<i>Bos taurus taurus simmental</i>	0.1.0	0.1.0	0.1.0			0.2.0	0.1.0
		Small East African goat	<i>Capra hircus hircus small_east_african</i>	2.4.0	1.0.0	6.1.0			8.1.0	1.4.0
		Suffolk sheep	<i>Ovis aries aries suffolk</i>	0.2.0					0.2.0	0.0.0
		Texel sheep	<i>Ovis aries aries texel</i>	1.3.0	0.2.0	1.1.1	1.0.0	0.1.1	1.3.0	1.1.0
		Dog Labrador	<i>Canis lupus familiaris labrador_retriever</i>	0.1.0						0.1.0
 ESB		<b>CLASS: BIRDS</b>	<b>AVES</b>							
		<b>OSTRICHES</b>	<b>STRUTHIONIFORMES</b>							
	LC	Ostrich	<i>Struthio camelus</i>	1.1.0	0.1.0					1.2.0
	NE	Southern ostrich	<i>Struthio camelus australis</i>	0.2.0				0.1.0		0.1.0
		<b>PENGUINS</b>	<b>SPHENISCIFORMES</b>							
	VU	Humboldt penguin	<i>Spheniscus humboldti</i>	6.6.0		0.0.8	0.0.2	0.0.4		6.6.2
		<b>HERONS/STORKS</b>	<b>CICONIIFORMES</b>							
	LC	Little egret	<i>Egretta garzetta</i>	2.0.0						2.0.0
	CR	Waldrapp ibis	<i>Geronticus eremita</i>	8.9.2		0.0.1	0.0.1			8.9.2
		<b>FLAMINGOS</b>	<b>PHOENICOPTERIDAE</b>							
	NT	Chilean flamingo	<i>Phoenicopterus chilensis</i>	41.33.0		0.0.12	0.0.8	2.0.0	0.0.3	39.33.4
		<b>GALLINACEOUS BIRDS</b>	<b>GALLIFORMES</b>							
	LC	Common peafowl	<i>Pavo cristatus</i>	2.3.0		0.2.0	0.1.0	0.1.0		2.3.0
	NT	Crested wood partridge	<i>Rollulus rouloul</i>	6.4.0		0.0.1	0.0.1		0.1.0	6.3.0
	LC	Red junglefowl	<i>Gallus gallus</i>	1.0.0						1.0.0
		<b>PIGEONS/DOVES</b>	<b>COLUMBIFORMES</b>							
	NT	Nicobar pigeon	<i>Caloenas nicobarica nicobarica</i>	1.1.0						1.1.0
	EN	Mauritius Pink pigeon	<i>Columba mayeri</i>	1.1.0						1.1.0
	LC	Green imperial pigeon	<i>Ducula aenea aenea</i>	0.1.0						0.1.0
	LC	Pied imperial pigeon	<i>Ducula bicolor</i>	2.0.4						2.0.4
	VU	Victoria crowned pigeon	<i>Goura victoria</i>	4.1.0		1.0.0			1.0.0	4.1.0
 ESB		<b>PIGEONS/DOVES</b>	<b>COLUMBIFORMES</b>							
	NT	Nicobar pigeon	<i>Caloenas nicobarica nicobarica</i>	1.1.0						1.1.0
	EN	Mauritius Pink pigeon	<i>Columba mayeri</i>	0.1.0	1.0.0					1.1.0
	LC	Green imperial pigeon	<i>Ducula aenea aenea</i>	0.1.0						0.1.0
	LC	Pied imperial pigeon	<i>Ducula bicolor</i>	1.1.4		0.0.1	0.0.1			1.1.4
ESB	VU	Victoria crowned pigeon	<i>Goura victoria</i>	3.1.0		1.0.0				4.1.0



	IUCN Status	SPECIES		Total at 01.01.12	Arrivals	Births	Dead within 30 Days	Dead	Departed	Total at 01.01.13
		<b>PARROTS</b>	<b>PSITTACIFORMES</b>							
ESB	VU	Yellow-backed chattering lory	<i>Lorius garrulus flavopalliatu</i> s	1.1.0						1.1.0
	LC	Scarlet macaw	<i>Ara macao</i>	1.0.0						1.0.0
	VU	Military macaw	<i>Ara militaris</i>	1.1.0						1.1.0
ESB	VU	Mexican military macaw	<i>Ara militaris mexicana</i>	5.2.0						5.2.0
		<b>TURACOS/CKOOS</b>	<b>CUCULIFORMES</b>							
ESB	LC	Red-crested turaco	<i>Tauraco erythrolophus</i>	1.1.0	0.1.0			0.1.0		1.1.0
		<b>OWLS</b>	<b>STRIGIFORMES</b>							
	LC	Snowy owl	<i>Bubo scandiacus</i>	0.1.0	0.0.3			0.0.1		0.1.2
		<b>HORNBILL ETC.</b>	<b>CORACIIFORMES</b>							
	NT	Great hornbill	<i>Buceros bicornis</i>	1.1.0						1.1.0
ESB	LC	Abyssinian ground hornbill	<i>Bucorvus abyssinicus</i>	1.1.0		1.1.2	0.0.2		0.1.0	2.1.0
		<b>PERCHING BIRDS</b>	<b>PASSERIFORMES</b>							
	LC	Black-throated laughing thrush	<i>Dryonastes chinensis</i>	0.1.0						0.1.0
	LC	Superb starling	<i>Spreo superbus</i>	0.1.0				0.1.0		0.0.0
		<b>DUCKS</b>	<b>ANSERIFORMES</b>							
	LC	Mandarin duck	<i>Aix galericulata</i>	1.1.0						1.1.0
	LC	Wood duck	<i>Aix sponsa</i>	2.1.0						2.0.0
		<b>DOMESTIC FOWL</b>								
		Australorp chicken	<i>Gallus gallus domestic australorp</i>	1.2.0	0.1.0			0.1.0		1.2.0
		Sussex chicken (light)	<i>Gallus gallus domestic sussex light</i>	0.0.0	1.1.0					1.1.0
		Brahma bantem	<i>Gallus gallus domestic brahma</i>	2.1.0	0.1.0			0.1.0	1.0.0	1.1.0
		Call duck	<i>Anas platyrhynchos domestic call</i>	2.0.0						2.0.0
		Indian runner duck	<i>Anas platyrhynchos domestic indian_runner</i>	1.1.0						1.1.0
		Domestic turkey	<i>Meleagris gallopavo domestic</i>	0.0.0	1.0.0					1.0.0
		<b>CLASS: REPTILES</b>	<b>REPTILIA</b>							
		<b>CHELONES</b>	<b>TESTUDINES</b>							
	CR	Annam leaf turtle	<i>Mauremys annamensis</i>	0.0.3						0.0.3
	NE	Central America wood turtle	<i>Rhinoclemmys pulcherrima manni</i>	0.2.0						0.2.0
	LC	Yellow-bellied slider	<i>Trachemys scripta scripta</i>	0.0.2	0.1.0					0.1.2
	LC	Red-eared slider	<i>Trachemys scripta elegans</i>	0.0.18						0.0.18
	NE	Red-footed tortoise	<i>Chelonoidis carbonaria</i>	1.4.0						1.4.0
	NE	Leopard tortoise	<i>Stigmochelys pardalis</i>	1.2.2					1.2.2	0.0.0
	LC	Star tortoise	<i>Geochelone elegans</i>	3.3.0	0.1.0					3.4.0
	VU	African spurred tortoise	<i>Geochelone sulcata</i>	3.1.0	0.1.0				0.1.0	3.1.0
	NE	Western hingeback tortoise	<i>Kinixys belliana nogueyi</i>	2.1.0					2.1.0	0.0.0
ESB	VU	African pancake tortoise	<i>Malacochersus tornieri</i>	1.2.0					1.2.0	0.0.0
		<b>CROCODILES</b>	<b>CROCODILIA</b>							
	LC	Nile crocodile	<i>Crocodylus niloticus</i>	0.2.0						0.2.0
		<b>LIZARDS</b>	<b>SAURIA</b>							
	LC	Veiled chameleon	<i>Chamaeleo calyptratus</i>	1.2.0				0.2.0		1.0.0
	LC	Green anole	<i>Anolis carolinensis</i>	0.1.0					0.1.0	0.0.0
	NE	Plated lizard	<i>Gerrhosaurus major major</i>	0.1.0					0.1.0	0.0.0
	NE	Gecko (unk sp.)	<i>Gekkonidae</i>	0.1.0					0.1.0	0.0.0
	NE	Turnip-tailed gecko	<i>Thecadactylus rapicaudus</i>	0.0.1					0.0.1	0.0.0

	IUCN Status	SPECIES		Total at 01.01.12	Arrivals	Births	Dead within 30 Days	Dead	Departed	Total at 01.01.13
	NE	Leopard gecko	<i>Eublepharis macularius</i>	0.0.2						0.0.2
	NE	Tokay gecko	<i>Gekko gecko</i>	1.2.0				0.2.0		1.0.0
	NT	Gila Monsters	<i>Heloderma suspectum</i>	2.2.0				2.2.0		0.0.0
	NT	Green iguana	<i>Iguana iguana</i>	1.0.0						1.0.0
	LC	Water monitor	<i>Varanus salvator salvator</i>	0.1.0				0.1.0		0.0.0
		<b>SNAKES</b>	<b>SERPENTES</b>							
	NT	Burmese rock python	<i>Python molurus bivittatus</i>	2.0.0						2.0.0
	LC	Royal python	<i>Python regius</i>	0.0.4						0.0.4
	NE	King ratsnake	<i>Elaphe carinata</i>	0.1.3					0.0.1	0.1.2
	NE	Cornsnake	<i>Elaphe guttata guttata</i>	0.0.3						0.0.3
	LC	Rough green snake	<i>Opheodrys aestivus</i>	0.0.1					0.0.1	0.0.0
	NE	Mangrove snake	<i>Boiga dendrophila</i>	0.0.0	0.0.1			0.0.1		0.0.0
	LC	Common gartersnake	<i>Thamnophis sirtalis</i>	1.0.0						1.0.0
		<b>CLASS: AMPHIBIANS</b>	<b>AMPHIBIA</b>							
		<b>FROGS/TOADS</b>	<b>ANURA</b>							
		Fire-bellied toad	<i>Bombina sp.</i>	0.0.5				0.0.2		0.0.3
	LC	Asiatic black-spined toad	<i>Bufo melanostictus</i>	0.0.1						0.0.1
		<b>INVERTEBRATES</b>	<b>INVERTEBRATA</b>							
		<b>CLASS: GASTROPODS</b>	<b>GASTROPODA</b>							
		<b>SNAILS</b>	<b>STYLOMMATOPHORA</b>							
	NE	Giant African snail	<i>Achatina fulica</i>	0.0.1						0.0.1
		<b>CLASS: ARACHNIDS</b>	<b>ARACHNIDA</b>							
		<b>SPIDERS</b>	<b>ARANEAE</b>							
	NE	Chilean rose tarantula	<i>Grammostola rosea</i>	0.2.0						0.2.0
		<b>CLASS: INSECTS</b>	<b>INSECTA</b>							
		<b>STICK INSECTS</b>	<b>PHASMATOPTERA</b>							
	NE	Indian green stick insects	<i>Carausius morosus</i>	0.80*.0		100*		150*		30*
	NE	Caribbean giant stick insect	<i>Diapherodes gigantea</i>	0.0.6				0.0.3		0.0.3
	NE	Giant walking stick (Malaysian)	<i>Phoebaticus magnus</i>	0.0.15				0.0.1		0.0.14
	NE	Macleays spectre	<i>Extatosoma tiaratum</i>	0.0.14*		x		x		0.0.12
	NE	Black beauty stick insect	<i>Peruphasma schultzei</i>	0.0.17		x		x		0.0.18

\* approximate numbers  
x numbers not recorded

## FOTA WILDLIFE PARK: DIRECTOR'S REPORT

Fota Wildlife Park had another successful year despite the inclement weather conditions experienced during the summer with the wildlife park experiencing more than twice the normal rainfall during the period from the beginning of June to the end of August. However, the poor attendances experienced during the summer months were offset considerably by the warm sunny spring weather particularly in March.

The primary changes to both visitor numbers and revenue during the 2012 season are as follows;

- Total attendance for 2012 was 377,481 a 3.2% (12,665) decrease on the total for the year 2011
- Sales of Park Memberships were down 19% on 2011 and 2% for Conservation Memberships. This decrease in memberships may be partly attributed to the new photo identification system introduced to prevent misuse of membership cards.
- Gift Shop sales down 9% on 2011 which was not unexpected given the weak economy and the decrease of discretionary spend amongst visiting families.
- The Wildlife Park produced a surplus of 463,005 for the year 2012, only slightly down on 2011 figure despite the weaker economic environment. This was achieved by savings in operating costs particularly in the areas of waste reduction and energy usage.

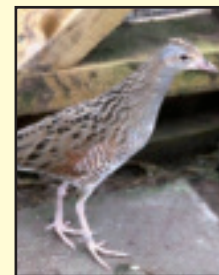
### Park Developments:

One of the most impressive changes to take place in the Park during the year was the enlargement of the penguin enclosure and replacement



of the adjoining bridge to facilitate an improvement of the flow rate of saline water through the penguin pond. A new indoor house was built to accommodate the expanding troop of Meerkats at the main entrance. It was designed to provide the public with an opportunity to observe the Meerkats in their indoor house and has been well received. The old Red-Ruffed lemur island was also revamped to hold two young male Siamang gibbons that were evicted from the main Siamang group by the dominant male 'Clyde'. An additional two new species were introduced to the Park during 2012, both of whom will form an important platform for the future role and development of Fota Wildlife Park. A pair of critically endangered Visayan warty pig, (*Sus cebifrons*) now reside in the Park thanks to the arrival of a female from Rotterdam Zoo and a male from Parken Zoo in Sweden. Both pigs are on breeding loan to Fota and form part of the worldwide captive breeding programme to ensure the survival of this species. The Visayan warty pig is endemic to two of the Visayan Islands in the central Philippines. Habitat loss, food shortages and hunting are the main factors which have contributed to the Visayan warty pig's decline in the wild. This has led to it being listed as a critically endangered species by the IUCN. Due to the small numbers of remaining Visayan warty pigs in the wild, little is known of their behaviors or characteristics outside of captivity. The Warty pigs are in temporary display facilities near the spider monkeys but will move to the Asian Sanctuary as soon as their new enclosure is completed.

The Corncrake (*Crex crex*) is another new species to reside in the wildlife park during 2012, with





the arrival of 18 birds of German origin stock. Corncrake breeding pens were constructed in the new lands in a quiet location to minimise the risk of disturbance from the public. Two pairs are due to be sent to the NPWS at Borra Co Offaly with the aim of establishing an additional breeding unit in that location. Fota's captive corncrake group have originated from the wild and they will not be used for any release programme. However, they will be utilised for husbandry training and capacity building both at Fota and by the NPWS. It is hoped that in 2014 the NPWS will collect eggs from Irish corncrakes to initiate a breeding programme for this critically endangered native species. During the summer of 2012 work was initiated to "mink-proof" the boundary fence to the Wildlife Park with the assistance of TUS work placements through South East Cork Area Development (SECAD)

## Animals Husbandry:

The White-tailed sea eagle pair successfully bred again in 2012 with a single female chick surviving from two clutches. Unfortunately the breeding male eagle was found dead on 12th April possibly as a result of being killed by the female who had started to exhibit some aggression toward him. The female chick which hatched in 2011 was sent to Israel Nature & Parks Authority and was released into the wild near the Golan Heights at the end of January 2012. Reports to-date suggest that it has adjusted well to life in the wild.

There were considerable changes in the Rothschild giraffe herd during the year. A new unrelated young male was imported from Burgers Zoo (Arnhem) in the Netherlands after the importation ban on giraffes from Europe was lifted due to the easing of Bluetongue

restrictions. Our oldest female giraffe 'Nollaig' died from heart failure at the age of 23 years. Three female Rothschild giraffes were born during the year one of which was born in full view of 2500 visitors out in the African Plains paddock. This proved to be of great interest to the public with photos and videos of the birth appearing on social media within minutes. This brings the total number of giraffes at Fota to 11 (4.11) at the end of the 2012.

Another notable birth was our first Black and White ruffed lemur, a species that is critically endangered in the wild in Madagascar. Fota Wildlife Park has also supported important in-situ research on the ecology and threats to the continued survival of this species. Additional primate births include a female Siamang gibbon, a female Agile gibbon, a female Columbian spider monkey, three Lion-tailed macaques, a Black howler monkey and a White-faced saki monkey.

The following herbivores were also born during the year, 3 European bison, 4 Scimitar-horned oryx, 6 Red Lechwe and an Eastern grey kangaroo.

The most notable hatching in the bird population were 3 Blue and Gold macaws one of which died three days after hatching, one Ostrich, seven Snow geese, 4 Cereopsis geese, one bar-headed goose, numerous Carolina and Mandarin ducks.

The following mammals and birds were added to the collection, a male Brazilian tapir from the Isle of Man Zoo, 5



Cheetahs from La Palmyre Zoo in France, a female red panda from Dublin Zoo, ten Humboldt penguins from Belfast Zoo and 4 Pelican from Ludgar Bremher in Germany.

## **Research and Field Conservation Projects Support Conservation Research**

During the year, Fota Wildlife Park continued its long term collaboration with the School of Biological, Earth and Environmental Sciences (BEES), University College Cork, in the fields of animal behaviour, environmental enrichment, population biology and ecology. The following list of research projects completed by students under the supervision of Dr. Ruth Ramsey.

### **Fourth Year Undergraduate Projects:**

- Leon Harris- Bison behaviour, with a comparison of past studies on the Fota herd
- Aileen Russell- Giraffe behaviour over the winter months and effects of enrichment
- Anna Bracken: Siamang behaviour and reducing stereotypic behaviour
- Rebecca Newman: Lion-tailed macaque behaviour and effects of enrichment on juvenile activity

### **Post Graduate Project:**

Ashley Markewinski is carrying out a MSc project on the behaviour and enrichment of cheetah, giraffes and red pandas at Fota with some comparative research on the red pandas at Dublin Zoo and Belfast Zoo.

### **Post Doctorate Projects:**

Dr Amy Haigh started (Oct. 1st 2012) her EMBARK partnership post doctorate project with Fota Wildlife

Park on 'Population dynamics, habitat use, philopatry and feeding behaviour of the red squirrel in Fota'. This research project is supervised by Dr. Fidelma Butler of UCC and is co-funded by the Irish Research Council for Science, Engineering and Technology with Fota Wildlife Park being the Enterprise Partner under their postgraduate scholarship scheme.

## **Field Conservation Projects**

Fota Wildlife Park continued to make funding available to conservation programmes that have a direct conservation benefit to both indigenous and exotic species. The largest conservation project which we have been involved in within the last 2 years, has been efforts to save the critically endangered Madagascar Pochard. In May 2012, a population census determined the existence of 21 birds, a decrease of 2 on the previous year. However, the captive population continues to grow and 22 Madagascar Pochard ducklings have been reared during the last year which brings the total captive population to 42 birds and the new breeding season has just got underway. Our commitment to the Madagascar Pochard conservation and breeding project continues with the provision of €20,000 to the running costs of the Madagascar Pochard Captive Breeding Centre. This project is run in conjunction with the Durrell Wildlife Conservation Trust and the Wildfowl and Wetlands Trust.

In June 2012, Fota Wildlife Park signed a MOU with Flora & Fauna International to fund the training, equipment and salaries of two Community Patrol Teams to protect the critically Endangered Western Black Crested Gibbon and Tonkin snub-nosed monkey (CPT) in Mun Cang Chai and Quan Ba Districts respectively in Vietnam. Work on these two protected areas has already

commenced where the main dangers to the future of these primates include hunting as well as habitat degradation and loss.

Other conservation organisations and projects funded in 2012 included the CBSC Conservation Breeding Specialist Group of IUCN, The EAZA South East Asia Campaign, the IUCN Antelope SSC /EAZA Saola Rehabilitation Centre in Vietnam, an IUCN/CBSG workshop on the conservation of terrestrial species in Djibouti, the World Parrot Trust for Parrot conservation, the expansion of the newt survey to more counties in Ireland by the Irish Wildlife Trust, Cork Otter Survey to produce educational posters and the Cork Bat Group to monitor bats in County Cork

## Education

Fota's education department had a successful year in 2012 with in excess of 12,400 students attending its formal education programmes. A team building module was initially piloted to secondary schools in the Cork area in April of 2012 and to-date the response has been positive. This has led to additional schools from the Leinster area participating in this module in recent months.

In 2012, the education team collaborated with staff from a number of departments within the park with the objective of improving its environmental sustainability practices in its day to day operations. The success of this programme led to Fota Wildlife Park being awarded the An Taisce Eco-Centre Award in November of last year. Further improvements in the areas of waste generation as well as energy and water consumption are planned for this year.

Both Lynda Mc Sweeney and Caroline Patrick attended a series of biodiversity training workshops hosted by the National Biodiversity Data Centre in Waterford.

A wide range of topics were discussed including Invertebrate ecology, the importance of indigenous species as well as mammal trapping and identification. Practical field workshops formed an integral part of each of the courses on-offer and were found to be highly beneficial to those in attendance.

The education department hosted a series of "educational weekends" throughout the 2012 season including the following;

- Going Green..... Staying Green weekend
- This event highlighted the importance of environmental protection and its relevance to both Fota Wildlife Park and its associated visitors.
- Responsible Pet Ownership Weekend
- Native Species Weekend
- Carnivore Weekend in association with UCC

## Meetings

In 2012 the Director, Sean Mc Keown, with Tony O'Dwyer (Operations Manager) and John McLaughlin (Asst. Head Warden), attended the EAZA annual conference in Innsbruck, Austria. Sean Mc Keown and Stephen Ryan attend the BIAZA ACE Conference in West Midlands Safari park in November 2012.

## Zoo Licence Inspection

The Zoo Licence Inspection by the Dept. of Environment, Heritage & Local Government took place in September 2012 and it recommended the continued licensing of Fota Wildlife Park as an approved zoological facility. However, a single recommendation was added to the licence whereby the park has been requested to establish and prioritise the development of an approved Veterinary facility as soon as possible.



## Fota 2012 Animal Inventory

TAXONOMIC	COMMON NAME	01/01/2012	Births	Arrivals	Deaths	Departures	31/12/2012
<i>Struthio camelus</i>	Common ostrich	3.5.0	0.1.0	0.0.0	0.1.0	0.1.0	<b>3.4.0</b>
<i>Dromaius novaehollandiae</i>	Emu	1.1.0	0.0.0	0.0.0	0.0.0	0.0.0	<b>1.1.0</b>
<i>Numida meleagris</i>	Helmeted guineafowl	4.4.26	0.0.0	0.0.0	1.0.2	0.0.0	<b>3.4.24</b>
<i>Guttera pucherani</i>	Kenya crested guineafowl	0.0.4	0.0.0	0.0.0	0.0.3	0.0.0	<b>0.0.1</b>
<i>Pavo cristatus</i>	Common peafowl	4.9.0	0.0.0	0.0.0	0.0.0	0.0.0	<b>4.9.0</b>
<i>Anser anser</i>	Greylag goose	9.7.15	0.0.0	0.0.0	0.0.1	0.0.0	<b>9.7.14</b>
<i>Anser caerulescens</i>	Snow goose	1.7.3	0.0.7	0.0.0	0.0.1	0.0.0	<b>1.7.9</b>
<i>Anser canagicus</i>	Emperor goose	0.1.0	0.0.0	0.2.2	0.0.0	0.0.0	<b>0.3.2</b>
<i>Anser cygnoides</i>	Swan goose	2.5.0	0.0.0	0.0.0	0.1.0	0.0.0	<b>2.4.0</b>
<i>Anser indicus</i>	Bar-headed goose	8.7.8	0.0.1	0.0.0	0.0.0	0.0.0	<b>8.7.9</b>
<i>Branta leucopsis</i>	Barnacle goose	15.8.9	0.0.0	0.0.0	1.1.0	0.0.0	<b>14.7.9</b>
<i>Branta sandvicensis</i>	Ne-ne	2.0.0	0.0.0	1.1.1	0.0.0	0.0.0	<b>3.1.1</b>
<i>Cereopsis novaehollandiae</i>	Cereopsis goose	2.3.1	0.0.4	0.0.0	0.0.4	0.0.0	<b>2.3.1</b>
<i>Coscoroba coscoroba</i>	Coscoroba swan	1.5.0	0.0.0	0.0.0	0.0.0	0.0.0	<b>1.5.0</b>
<i>Cygnus atratus</i>	Black swan	2.2.1	0.0.0	0.0.0	0.0.0	1.1.0	<b>1.1.1</b>
<i>Aix galericulata</i>	Mandarin duck	4.2.0	0.0.13	0.0.0	0.0.0	0.0.0	<b>4.2.13</b>
<i>Aix sponsa</i>	North American wood duck	6.3.0	0.0.6	0.0.0	0.0.0	0.0.0	<b>6.3.6</b>
<i>Aythya fuligula</i>	Tufted duck	4.2.11	0.0.0	0.0.0	0.0.0	0.0.0	<b>4.2.11</b>
<i>Aythya nyroca</i>	Common white-eye	2.1.2	0.0.0	0.0.0	0.0.0	0.0.0	<b>2.1.2</b>
<i>Netta rufina</i>	Red-crested pochard	7.8.2	0.0.0	0.0.0	0.1.0	0.0.0	<b>7.7.2</b>
<i>Somateria mollissima</i>	Eider	3.0.0	0.0.0	1.2.0	1.0.0	0.0.0	<b>3.2.0</b>
<i>Tadorna ferruginea</i>	Ruddy shelduck	1.0.8	0.0.0	0.0.0	0.0.0	0.0.0	<b>1.0.8</b>
<i>Spheniscus humboldti</i>	Humboldt penguin	11.9.4	0.0.0	5.5.0	2.0.0	0.0.0	<b>14.14.4</b>
<i>Phoenicopterus chilensis</i>	Chilean flamingo	1.3.2	0.0.0	0.0.0	0.0.0	0.0.0	<b>1.3.2</b>
<i>Pelecanus onocrotalus</i>	Eastern white pelican	1.0.0	0.0.0	2.2.0	0.0.0	0.0.0	<b>3.2.0</b>
<i>Accipiter gentilis</i>	Northern goshawk	0.1.0	0.0.0	0.0.0	0.0.0	0.0.0	<b>0.1.0</b>
<i>Haliaeetus albicilla</i>	White-tailed sea eagle	1.1.0	0.1.0	0.0.0	1.0.0	0.0.0	<b>0.2.0</b>
<i>Crex crex</i>	Corncrake	0.0.0	0.0.0	10.8.0	1.1.0	0.0.0	<b>9.7.0</b>
<i>Ara ararauna</i>	Blue-and-yellow macaw	1.1.0	0.0.3	0.0.0	0.0.1	0.0.0	<b>1.1.2</b>
<i>Ara chloroptera</i>	Green-winged macaw	1.0.0	0.0.0	0.0.0	0.0.0	0.0.0	<b>1.0.0</b>
<i>Ara macao</i>	Scarlet macaw	1.1.0	0.0.0	0.0.0	0.0.0	0.0.0	<b>1.1.0</b>
<b>Total Birds</b>	<b>31 Species</b>	<b>98.96.96</b>	<b>0.2.34</b>	<b>19.20.3</b>	<b>7.5.12</b>	<b>1.2.0</b>	<b>109.111.121</b>
<b>Total</b>		<b>290</b>	<b>36</b>	<b>42</b>	<b>24</b>	<b>3</b>	<b>341</b>

TAXONOMIC	COMMON NAME	01/01/2012	Births	Arrivals	Deaths	Departures	31/12/2012
<i>Macropus giganteus</i>	Eastern grey kangaroo	3.9.0	0.0.1	0.0.0	1.0.1	0.0.0	<b>2.9.0</b>
<i>Macropus rufogriseus</i>	Red-necked wallaby	0.0.43	0.0.0	0.0.1	0.0.5	0.0.0	<b>0.0.38</b>
<i>Lemur catta</i>	Ring-tailed lemur	4.8.0	0.0.0	0.0.0	0.0.0	0.0.0	<b>4.8.0</b>
<i>Varecia rubra</i>	Red ruffed lemur	1.1.0	0.0.0	0.0.0	0.0.0	0.0.0	<b>1.1.0</b>
<i>Varecia variegata</i>	Black-and-white ruffed lemur	1.1.0	1.0.0	0.0.0	0.0.0	0.0.0	<b>2.1.0</b>
<i>Pithecia pithecia</i>	White-faced saki	3.4.0	0.0.1	0.0.0	0.0.0	0.0.0	<b>3.4.1</b>
<i>Alouatta caraya</i>	Black howler	1.1.1	0.0.1	0.0.0	0.0.0	0.0.0	<b>1.1.2</b>
<i>Ateles fusciceps</i>	Black-headed spider monkey	1.4.0	0.0.1	0.0.0	0.0.0	0.0.0	<b>1.4.1</b>
<i>Lophocebus albigena</i>	Grey-cheeked mangabey	2.5.0	0.0.1	0.0.0	0.0.1	0.0.0	<b>2.5.0</b>
<i>Macaca silenus</i>	Lion-tailed macaque	6.13.0	1.1.0	0.0.0	0.2.0	0.0.0	<b>7.12.0</b>
<i>Colobus guereza</i>	Eastern black-and-white colobus	5.0.0	0.0.0	0.0.0	0.0.0	0.0.0	<b>5.0.0</b>
<i>Hylobates agilis</i>	Agile gibbon	1.2.0	0.0.1	0.0.0	0.0.0	0.0.0	<b>1.2.1</b>
<i>Hylobates lar</i>	Lar gibbon	1.3.0	0.0.0	0.0.0	0.0.0	0.0.0	<b>1.3.0</b>
<i>Symphalangus syndactylus</i>	Siamang	3.2.0	0.0.1	0.0.0	0.0.0	0.0.0	<b>3.2.1</b>
<i>Cynomys ludovicianus</i>	Black-tailed prairie dog	2.4.0	0.0.0	0.0.0	0.0.0	0.0.0	<b>2.4.0</b>
<i>Dolichotis patagonum</i>	Patagonian mara	0.0.37	0.0.0	0.0.0	0.0.5	0.0.0	<b>0.0.32</b>
<i>Hydrochaeris hydrochaeris</i>	Capybara	0.2.0	0.0.0	1.0.0	0.1.0	0.0.0	<b>1.1.0</b>
<i>Acinonyx jubatus</i>	Cheetah	4.4.0	0.0.0	3.2.0	1.1.0	1.0.0	<b>5.5.0</b>
<i>Suricata suricatta</i>	Slender-tailed meerkat	4.5.0	0.0.11	0.0.0	0.1.1	0.0.0	<b>4.4.10</b>
<i>Phoca vitulina</i>	Harbour seal	1.1.0	0.0.0	0.0.0	0.0.0	0.0.0	<b>1.1.0</b>
<i>Ailurus fulgens</i>	Red panda	1.0.0	0.0.0	0.1.0	0.0.0	0.0.0	<b>1.1.0</b>
<i>Equus burchellii</i>	Common zebra	3.3.2	0.0.0	0.0.0	0.1.0	0.0.0	<b>3.2.2</b>
<i>Tapirus terrestris</i>	South American tapir	0.1.0	0.0.0	1.0.0	0.0.0	0.0.0	<b>1.1.0</b>
<i>Sus cebifrons</i>	Visayan warty pig	0.0.0	0.0.0	1.1.0	0.0.0	0.0.0	<b>1.1.0</b>
<i>Giraffa camelopardalis</i>	Giraffe	3.5.0	0.3.0	1.0.0	0.1.0	0.0.0	<b>4.7.0</b>
<i>Bison bonasus</i>	European wisent	7.8.0	2.1.0	0.0.0	0.1.0	0.0.0	<b>9.8.0</b>
<i>Oryx dammah</i>	Scimitar-horned oryx	1.11.0	3.1.1	1.0.0	4.3.0	0.0.0	<b>1.9.1</b>
<i>Kobus leche</i>	Southern lechwe	3.8.5	2.2.2	0.0.0	1.2.1	0.0.0	<b>4.8.6</b>
<b>Total Mammals</b>	<b>28 Species</b>	61.105.88	9.8.21	<b>8.4.1</b>	<b>7.13.14</b>	<b>1.0.0</b>	<b>70.104.95</b>
		<b>254</b>	<b>38</b>	<b>13</b>	<b>34</b>	<b>1</b>	<b>269</b>
<b>BIRDS + MAMMALS GRAND TOTAL</b>	<b>59 SPECIES</b>	<b>159.201.184</b>	<b>9.10.55</b>	<b>27.24.4</b>	<b>14.18.26</b>	<b>2.2.0</b>	<b>179.215.216</b>
		<b>544</b>	<b>74</b>	<b>55</b>	<b>58</b>	<b>4</b>	<b>610</b>



## **THE ZOOLOGICAL SOCIETY OF IRELAND**

**(A company limited by guarantee and  
not having a share capital)**

**Reports and Consolidated  
Financial Statements  
for the year ended  
31 December 2012**

Registered number: 207824



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# THE ZOOLOGICAL SOCIETY OF IRELAND

## MEMBERS OF COUNCIL AND OTHER INFORMATION

### Members of Council:

President	Margaret Sinanan
Immediate past president	Derek McCleane
Ordinary Council members	Dorothy Kilroy Dr. Dermot MacDonald MB, FRCPI, FRCOG Thomas Dunphy FCA Christopher Kane, FCIS Paul Burke Kennedy Richard Collins Martin O’Grady

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### Other information:

Past presidents	Michael O’Grady FCIPD Seán Cromien BA, MRIA, FNCI, F (Mgt), IMI, FZSI Joseph McCullough BE, C Eng, FZSI Michael MacNulty MBA (Harvard)
Vice president	Thomas Dunphy FCA
Honorary secretary	Dorothy Kilroy
Honorary treasurer	Thomas Dunphy FCA
Secretary and registered office	Tony Kearney FCCA, ACIS The Zoological Gardens, Phoenix Park, Dublin 8

(A company limited by guarantee and not having a share capital)

## MEMBERS OF COUNCIL AND OTHER INFORMATION *(Continued)*

### **Auditors**

Deloitte & Touche  
Chartered Accountants and Statutory Audit Firm  
Deloitte & Touche House  
Earlsfort Terrace  
Dublin 2

### **Bankers**

Ulster Bank Limited, 33 College Green, Dublin 2

Bank of Ireland, 2 College Green, Dublin 2

AIB, 37 Upper O'Connell Street, Dublin 1

Rabo Bank, Charlemont Place, Dublin 2

AIB, 66 South Mall, Cork

### **Solicitors**

Mason Hayes & Curran,  
South Bank House, Barrow Street, Dublin 4

Ronan Daly Jermyn & Company, 12 South Mall, Cork

Kilroy Solicitors, 66 Leeson Street Lower, Dublin 2

### **Charity Number**

CHY2964

### **Company Number**

207824



## THE ZOOLOGICAL SOCIETY OF IRELAND

### COUNCIL'S REPORT

The Council presents its annual report together with the audited consolidated financial statements for the year ended 31 December 2012.

#### Consolidation

These accounts form the Consolidated Accounts of the Zoological Society of Ireland which includes the results of both Dublin Zoo and Fota Wildlife Park for the year ended 31 December 2012.

#### Principal Activities, Business Review And Future Developments

The principal activities of The Zoological Society of Ireland ("the Society") are:

- a. The operation of a Zoo in the Phoenix Park, Dublin.
- b. To maintain the Fota Wildlife Park.
- c. To promote the conservation of wildlife generally worldwide by advancing the study of environmental sciences and knowledge of zoology through science and scientific education.

The attendance for the year ended 31 December 2012 at Dublin Zoo was 1,029,417. This is the highest number of visitors in the history of Dublin Zoo despite the severe economic downturn. Fota Wildlife Park also experienced a great year in terms of visitor numbers with 377,481 visitors during the year ended 31 December 2012.

#### Principal Risks and Uncertainties

The Council considers that the principal risk and uncertainties to the Society relate to weather conditions affecting visitor numbers, uncertainty impacting on the Society relating to an outbreak of animal disease and the economic environment.

#### Results for the year

The results for the year are set out on page 58 of the financial statements.

#### Council

The present members of Council are listed on page 48.

On 20 September 2012, at the Society's AGM, Ms. Dorothy Kilroy retired and was re-appointed to the Council.

#### Legal Status

The Society is limited by guarantee and has no share capital.

#### Subsidiaries

The information required by Section 158(4) of the Companies Act, 1963 is provided in Note 7 to the financial statements.

## **Governance**

The Society is governed by a Council of directors, who under the Society's Articles of Association, are not entitled to remuneration for their services. The directors bring their varied experience in their respective fields to bear on guiding the Society. The Council meets eleven times per annum which was the case during 2012.

In addition to the Council, the Society operates through a number of committees.

## **Books of Account**

The Council members believe that they have complied with the requirements of Section 202 of the Companies Act, 1990 with regard to books of account by employing personnel with appropriate expertise and by providing adequate resources to the financial function. The books of account are maintained at the Society's registered office in The Zoological Gardens, Phoenix Park, Dublin 8.

## **Post Balance Sheet Events**

No significant events have taken place since the year end that would result in adjustment to the financial statements or inclusion of a note thereto.

## **Health and Safety Policy**

The Society has prepared a health and safety policy which is being complied with and satisfactorily operated.

## **Political Donations**

The Society did not make any political donations during the year, which require disclosure in accordance with the Electoral Act, 1997.

## **Auditors**

The auditors, Deloitte & Touche, Chartered Accountants, continue in office in accordance with Section 160(2) of the Companies Act, 1963.

On behalf of the Council

Margaret Sinanan  
**President**

Thomas Dunphy  
**Honorary Treasurer**

20 June 2013

### STATEMENT OF COUNCIL'S RESPONSIBILITIES

Irish company law requires the members of Council to prepare financial statements for each financial year which give a true and fair view of the state of affairs of the group and the Society and of the surplus or deficit of the group. In preparing these financial statements, the members of Council are required to:

- select suitable accounting policies for the group and Society's financial statements and apply them consistently;
- make judgements and estimates that are reasonable and prudent; and
- prepare the financial statements on the going concern basis unless it is inappropriate to presume that the group and the Society will continue in business.

The members of Council are responsible for keeping proper books of account that disclose with reasonable accuracy at any time the financial position of the group

and of the Society and enable them to ensure that the financial statements are prepared in accordance with accounting standards generally accepted in Ireland and comply with Irish statute comprising the Companies Acts, 1963 to 2012. They are also responsible for taking such steps for safeguarding the assets of the group and the Society and hence for taking reasonable steps for the prevention and detection of fraud and other irregularities.

The members of Council are also responsible for preparing a Council's report that complies with the requirements of the Companies Acts, 1963 to 2012.

On behalf of the Council

Margaret Sinanan  
**President**

Thomas Dunphy  
**Honorary Treasurer**

20 June 2013



### **INDEPENDENT AUDITOR'S REPORT TO THE MEMBERS OF THE ZOOLOGICAL SOCIETY OF IRELAND**

We have audited the financial statements of The Zoological Society of Ireland for the year ended 31 December 2012, which comprise the Statement of Accounting Policies, the Consolidated Income and Expenditure Account, the Consolidated Statement of Total Recognised Gains and Losses, the Consolidated Balance Sheet, the Company Balance Sheet, the Consolidated Cash Flow Statement and the related notes 1 to 19. The financial reporting framework that has been applied in their preparation is applicable Irish law and accounting standards issued by the Financial Reporting Council and promulgated by the Institute of Chartered Accountants in Ireland (Generally Accepted Accounting Practice in Ireland).

This report is made solely to the company's members, as a body, in accordance with Section 193 of the Companies Act, 1990. Our audit work has been undertaken so that we might state to the company's members those matters we are required to state to them in an auditor's report and for no other purpose. To the fullest extent permitted by law, we do not accept or assume responsibility to anyone other than the company and the company's members as a body, for our audit work, for this report, or for the opinions we have formed.

### **Respective responsibilities of Members of Council and auditors**

As explained more fully in the Statement of Council's Responsibilities, the members of Council are responsible for the preparation of the financial statements giving a true and fair view. Our responsibility is to audit and express an opinion on the financial statements in accordance with Irish law and International Standards on Auditing (UK and Ireland). Those standards require us to comply with the Auditing Practices Board's Ethical Standards for Auditors.

### **Scope of the audit of the financial statements**

An audit involves obtaining evidence about the amounts and disclosures in the financial statements sufficient to give reasonable assurance that the financial statements are free from material misstatement, whether caused by fraud or error. This includes an assessment of: whether the accounting policies are appropriate to the group's and parent company's circumstances and have been consistently applied and adequately disclosed; the reasonableness of significant accounting estimates made by the council; and the overall presentation of the financial statements. In addition, we read all the financial and non-financial information in the Reports and Consolidated Financial Statements for the year ended 31 December 2012 to identify material inconsistencies with the audited financial statements. If we become aware of any apparent material misstatements or inconsistencies we consider the implications for our report.

## INDEPENDENT AUDITORS' REPORT

### Opinion

In our opinion the financial statements:

- give a true and fair view, in accordance with Generally Accepted Accounting Practice in Ireland, of the state of the group's and of the parent company's affairs as at 31 December 2012 and of the group's surplus for the year then ended; and
- have been properly prepared in accordance with the Companies Acts, 1963 to 2012.

### Matters on which we are required to report by the Companies Acts, 1963 to 2012

- We have obtained all the information and explanations which we consider necessary for the purposes of our audit.
- In our opinion proper books of account have been kept by the parent company.
- The parent company's financial statements are in agreement with the books of account.
- In our opinion the information given in the directors' report is consistent with the financial statements.

### Matters on which we are required to report by exception

We have nothing to report in respect of the provisions in the Companies Acts, 1963 to 2012 which require us to report to you if, in our opinion the disclosures of directors' remuneration and transactions specified by law are not made.

Thomas Cassin  
For and on behalf of Deloitte & Touche  
Chartered Accountants and Statutory Audit Firm  
Dublin

20 June 2013

STATEMENT OF ACCOUNTING POLICIES

The significant accounting policies adopted by the Society are:

Basis of Accounting

The financial statements are prepared under the historical cost convention in accordance with accounting standards generally accepted in Ireland and Irish statute comprising the Companies Acts 1963 to 2012. Accounting standards generally accepted in Ireland in preparing financial statements giving a true and fair view are those issued by the Financial Reporting Council and published by the Institute of Chartered Accountants in Ireland.

Basis of Consolidation

The consolidated financial statements incorporate the financial statements of the company and its subsidiary undertakings for the year ended 31 December 2012.

Income

Income comprises annual pass and membership subscriptions relating to the current period. Where subscriptions are received in advance, they are included in deferred income in creditors and released to the income and expenditure account in the relevant period.

Life membership subscriptions are amortised to the income and expenditure account based on the estimated useful life of membership which is considered ten years.

Other income comprises the value of sales, excluding VAT, to third parties and is recognised once the related goods or services are provided to customers.

Tangible Fixed Assets And Depreciation

Tangible fixed assets are stated at cost less accumulated depreciation and any provision for impairment.

The charge for depreciation is calculated to write down the cost of tangible fixed assets to their estimated residual values by equal annual instalments over their expected useful lives as follows:

Plant, machinery and equipment	20%
Computer equipment and software	33⅓%
Motor vehicles	20%
Buildings and habitats	10%

Land and assets under construction are not depreciated.

Financial Assets

Financial assets are stated at cost less provision for impairment.

Government Support

The land in the Phoenix Park occupied by the Zoo (“the Society”) is used under a licence from the State, the Society being a tenant at will. No value is reflected in these financial statements in respect of this licence or this land.

## THE ZOOLOGICAL SOCIETY OF IRELAND

### STATEMENT OF ACCOUNTING POLICIES

*(Continued)*

#### **Government Support** *(Continued)*

The Government Capital Investment Programme in the Society is provided and accounted for by the Office of Public Works (OPW) and any related assets are therefore excluded in these financial statements. The accounts of the Society reflect only its disbursements for the OPW under this programme. The facilities provided under this Programme are used by the Society under licence from the State.

Other Government grants in respect of capital expenditure are credited to a deferred grant account and are amortised to the income and expenditure account by equal annual instalments over the expected useful lives of the related assets.

#### **Leases**

Expenditure on operating leases is charged to the income and expenditure account on a basis representative of the benefit derived from the asset, normally on a straight line basis over the lease period.

#### **Animals**

No value is placed on the animals belonging to the Society.

#### **Stocks**

Stocks, other than animals, are stated at the lower of cost and net realisable value.

#### **Foreign Currencies**

Transactions in foreign currencies are recorded at the rate ruling at the date of the transactions or at a contracted rate. The resulting monetary assets and liabilities are translated at the balance sheet rate or the contracted rate and the exchange differences are dealt with in the income and expenditure account.



## **Pensions**

The group operates both defined benefit and defined contribution schemes.

### **Defined contribution scheme**

Pension contributions in respect of defined contribution schemes are charged to income and expenditure as they become payable in accordance with the rules of the scheme. The assets are held separately from those of the group in an independently administered fund. Differences between the amounts charged in the profit and loss account and payments made to pension funds are treated as assets or liabilities.

### **Defined benefit scheme**

The pension costs in respect of defined benefit schemes are charged to the income and expenditure account on a systematic basis, based on the actuary's calculations. Amounts charged are calculated using the following rates:

Current service cost – discount rate at the start of the year  
Interest cost – discount rate at the start of the year  
Expected return on assets – Expected rate of return at the start of the year.

Past service costs are recognised in the income and expenditure account on a straight line basis over the period in which increases in benefit vest.

Differences between the amounts charged in the income and expenditure account and payments made to pension funds are treated as assets or liabilities.

Assets in the scheme are measured at their fair value at the balance sheet date. Defined benefit liabilities are measured on an actuarial basis using the projected unit method. The assets and liabilities of the scheme are subject to a full actuarial valuation by an external professionally qualified actuary triennially and are reviewed annually by the actuary and updated to reflect current conditions.

The excess or shortfall in the value of the assets in the scheme over or below the present value of the scheme liabilities is recognised as an asset or liability when the amounts can be recovered through reduced contributions or refunds from the scheme.

Actuarial gains and losses arise on the valuation of the scheme's assets and liabilities and are released to the statement of total recognised gains and losses.

## **Taxation**

The group is regarded by the Revenue Commissioners as established for charitable purposes and, accordingly, is exempt from corporation tax.

## THE ZOOLOGICAL SOCIETY OF IRELAND

### CONSOLIDATED INCOME AND EXPENDITURE ACCOUNT FOR THE YEAR ENDED 31 DECEMBER 2012

	Notes	2012 €'000	2011 €'000
<b>Income</b>	1	<b>15,734</b>	15,266
<b>Expenditure</b>			
Operating costs		(12,998)	(12,678)
Administration expenses		(687)	(658)
<b>Total Expenditure</b>		<b>(13,685)</b>	(13,336)
<b>Operating Surplus</b>	3	<b>2,049</b>	1,930
Interest income	4	98	144
Amortisation of government grants	12	25	25
<b>Surplus for the Year</b>	14	<b>2,172</b>	2,099

Results in the current and previous year arose solely from continuing operations.

The financial statements were approved by the Council on 20 June 2013 and signed on its behalf by:

Margaret Sinanan  
**President**

Thomas Dunphy  
**Honorary Treasurer**

*(A company limited by guarantee and not having a share capital)*

## CONSOLIDATED STATEMENT OF TOTAL RECOGNISED GAINS AND LOSSES FOR THE YEAR ENDED 31 DECEMBER 2012

	Notes	2012 €'000	2011 €'000
<b>Surplus for the Year</b>		<b>2,172</b>	2,099
Actuarial loss recognised on defined benefit scheme	13	<u>(455)</u>	<u>(292)</u>
<b>Total recognised gains and losses relating to the year</b>		<u><b>1,717</b></u>	<u><b>1,807</b></u>

## THE ZOOLOGICAL SOCIETY OF IRELAND

CONSOLIDATED BALANCE SHEET AS AT 31 DECEMBER 2012		2012	2011
<b>Fixed Assets</b>	Notes	<b>€'000</b>	<b>€'000</b>
Tangible assets	6	<u>11,971</u>	<u>11,858</u>
<b>Current Assets</b>			
Stocks	8	270	360
Debtors	9	474	814
Cash at bank and in hand			
– OPW grant	10	54	932
– Other		<u>7,488</u>	<u>5,132</u>
		<u>8,286</u>	<u>7,238</u>
<b>Creditors:</b> (Amounts falling due within one year)	10	<u>(3,303)</u>	<u>(3,903)</u>
<b>Net Current Assets</b>		<u>4,983</u>	<u>3,335</u>
<b>Total Assets Less Current Liabilities</b>		<b>16,954</b>	<b>15,193</b>
<b>Creditors:</b> (Amounts falling due after more than one year)	11	(500)	(579)
<b>Other Deferred Grants</b>	12	<u>(301)</u>	<u>(326)</u>
<b>Net Assets Excluding Pension Liability</b>		<b>16,153</b>	<b>14,288</b>
Pension liability	13	<u>(230)</u>	<u>(83)</u>
<b>Net Assets Including Pension Liability</b>		<u><b>15,923</b></u>	<u><b>14,205</b></u>
Accumulated surplus	14	<b>9,191</b>	9,504
Development reserve	14	<b>5,000</b>	3,000
Emergency reserve	14	<u>1,732</u>	<u>1,701</u>

The financial statements were approved by the Council  
on 20 June 2013 and signed on its behalf by:

Margaret Sinanan

**President**

Thomas Dunphy

**Honorary Treasurer**

**15,923**

**14,205**



(A company limited by guarantee and not having a share capital)

## COMPANY BALANCE SHEET AS AT 31 DECEMBER 2012

		2012	2011
<b>Fixed Assets</b>	Notes	<b>€'000</b>	€'000
Tangible assets	6	<b>6,374</b>	6,135
Financial assets	7	<b>500</b>	500
		<b>6,874</b>	6,635
<b>Current Assets</b>			
Stocks	8	<b>106</b>	154
Debtors	9	<b>328</b>	326
Cash at bank and in hand			
– OPW grant	10	<b>54</b>	932
– Other		<b>5,324</b>	3,676
		<b>5,812</b>	5,088
<b>Creditors:</b> (Amounts falling due within one year)	10	<b>(2,353)</b>	(2,808)
<b>Net Current Assets</b>		<b>3,459</b>	2,280
<b>Net Assets</b>		<b>10,333</b>	8,915
<b>Represented by:</b>			
Accumulated surplus	14	<b>3,601</b>	4,214
Development reserve	14	<b>5,000</b>	3,000
Emergency reserve	14	<b>1,732</b>	1,701
		<b>10,333</b>	8,915

The financial statements were approved by the Council  
on 20 June 2013 and signed on its behalf by:

Margaret Sinanan  
**President**

Thomas Dunphy  
**Honorary Treasurer**

## THE ZOOLOGICAL SOCIETY OF IRELAND

### CONSOLIDATED CASH FLOW STATEMENT FOR THE YEAR ENDED 31 DECEMBER 2012

	Notes	2012 €'000	2011 €'000
<b>Net Cash Inflow From Operating Activities</b>	16	<u>3,839</u>	<u>2,428</u>
<b>Returns on Investments and Servicing of Finance</b>			
Interest received		<u>89</u>	<u>133</u>
<b>Capital Expenditure and Financial Investment</b>			
Payments to acquire tangible fixed assets		(1,494)	(3,333)
Development funds received from OPW		400	100
OPW development expenditure		(1,278)	(1,995)
Proceeds on disposal of fixed asset		<u>1</u>	<u>8</u>
<b>Net Cash Outflow from Capital Expenditure and Financial Investment</b>		<u>(2,371)</u>	<u>(5,220)</u>
<b>Decrease in Cash and Cash Equivalents</b>	17	<u>(1,557)</u>	<u>(2,659)</u>

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 DECEMBER 2012

<b>1. Income</b>	<b>2012</b>	<b>2011</b>
Income arises from the following activities undertaken wholly within Ireland.	<b>€'000</b>	<b>€'000</b>
Gate receipt income	<b>9,896</b>	9,525
Annual pass and membership income	<b>2,317</b>	2,240
Shop income	<b>2,208</b>	2,274
Other income	<b>1,313</b>	1,227
	<b>15,734</b>	15,266
<b>2. Employee Information</b>		
Staff numbers and costs	<b>2012</b>	<b>2011</b>
<b>Average number of employees:</b>		
Management	<b>10</b>	10
Administration	<b>15</b>	15
General staff		
- full time	<b>94</b>	96
- part time	<b>14</b>	14
Shop	<b>10</b>	10
	<b>143</b>	145
The aggregate payroll costs of these persons were as follows		
Wages and salaries	<b>4,885</b>	4,889
Social welfare costs	<b>499</b>	518
Defined benefit pension costs (Note 13)	<b>28</b>	25
Defined contribution pension costs	<b>137</b>	107
	<b>5,549</b>	5,539

## THE ZOOLOGICAL SOCIETY OF IRELAND

### NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 DECEMBER 2012 *(Continued)*

#### 3. Operating Surplus

The operating surplus is stated after charging/(crediting):

	2012	2011
	€'000	€'000
Remuneration of Members of Council		
- Fees	-	-
- Other emoluments	-	-
Auditor's remuneration in respect of the entity	18	18
Auditor's remuneration in respect of the group accounts (including the entity)	25	30
Depreciation	1,378	1,145
Operating lease charges	13	14
Loss/(gain) on disposal of fixed asset	3	(3)
	<u>          </u>	<u>          </u>

Under the Society's Articles of Association, Members of Council are not entitled to remuneration. Auditor's remuneration is disclosed net of VAT. VAT is not reclaimable by the Society.

#### 4. Interest Income

Deposit interest	89	133
Other finance income on defined benefit pension scheme (Note 13)	9	11
	<u>          </u>	<u>          </u>
	98	144
	<u>          </u>	<u>          </u>

#### 5. TAXATION

No liability to taxation arose during the year as the Society is exempt from corporation tax.



## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 DECEMBER 2012 *(Continued)*

### 6. Tangible Fixed Assets

Group	Land €'000	Plant Machinery & Equipment €'000	Computer Equipment & Software €'000	Motor Vehicles €'000	Buildings & Habitats €'000	Total €'000
<b>Cost:</b>						
At 1 January 2012	191	3,549	1,207	392	12,941	18,280
Additions	-	250	131	23	1090	1,494
Disposals	-	-	-	(11)	-	(11)
	<u>          </u>	<u>          </u>	<u>          </u>	<u>          </u>	<u>          </u>	<u>          </u>
<b>At 31 December 2012</b>	<b><u>191</u></b>	<b><u>3,799</u></b>	<b><u>1,338</u></b>	<b><u>404</u></b>	<b><u>14,031</u></b>	<b><u>19,763</u></b>
<b>Depreciation:</b>						
At 1 January 2012	-	2,712	994	254	2,461	6,421
Charge for year	-	266	168	53	891	1,378
Disposals	-	-	-	(7)	-	(7)
	<u>          </u>	<u>          </u>	<u>          </u>	<u>          </u>	<u>          </u>	<u>          </u>
<b>At 31 December 2012</b>	<b><u>-</u></b>	<b><u>2,978</u></b>	<b><u>1,162</u></b>	<b><u>300</u></b>	<b><u>3,352</u></b>	<b><u>7,792</u></b>
<b>Net Book Value:</b>						
<b>At 31 December 2012</b>	<b><u>191</u></b>	<b><u>821</u></b>	<b><u>176</u></b>	<b><u>104</u></b>	<b><u>10,679</u></b>	<b><u>11,971</u></b>
At 31 December 2011	<u>191</u>	<u>836</u>	<u>213</u>	<u>138</u>	<u>10,480</u>	<u>11,858</u>

## THE ZOOLOGICAL SOCIETY OF IRELAND

### NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 DECEMBER 2012 *(Continued)*

#### 6. Tangible Fixed Assets *(Continued)*

Company	Land €'000	Plant Machinery & Equipment €'000	Computer Equipment & Software €'000	Motor Vehicles €'000	Habitats €'000	Total €'000
<b>Cost:</b>						
At 1 January 2012	191	1,910	1,207	227	6,131	9,666
Additions	-	185	131	-	928	1,244
<b>At 31 December 2012</b>	<b>-</b>	<b>2,095</b>	<b>1,338</b>	<b>227</b>	<b>7,059</b>	<b>10,910</b>
<b>Depreciation:</b>						
At 1 January 2012	-	1,630	994	170	737	3,531
Charge for year	-	138	168	34	665	1,005
<b>At 31 December 2012</b>	<b>-</b>	<b>1,768</b>	<b>1,162</b>	<b>204</b>	<b>1,402</b>	<b>4,536</b>
<b>Net Book Value:</b>						
<b>At 31 December 2012</b>	<b>191</b>	<b>327</b>	<b>176</b>	<b>23</b>	<b>5,657</b>	<b>6,374</b>
At 31 December 2011	<b>191</b>	<b>280</b>	<b>213</b>	<b>57</b>	<b>5,394</b>	<b>6,135</b>

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 DECEMBER 2012 *(Continued)*

### 7. Financial Assets

#### Company

The Society's financial asset comprises its investment in Fota Wildlife Park Limited ("Fota"), a company limited by guarantee. Fota is accounted for as a subsidiary undertaking as the Society is a member of Fota Wildlife Park Limited and has the power to appoint a majority of the Governors of the Fota Board.

Details in respect of Fota are set out below:

Name and registered office	Country of Incorporation	Principal activity
Fota Wildlife Park Limited	Ireland	Operation of a wildlife park

### 8. Stocks

	Group		Company	
	2012	2011	2012	2011
	€'000	€'000	€'000	€'000
Shops	242	330	78	124
Consumables	28	30	28	30
	<u>270</u>	<u>360</u>	<u>106</u>	<u>154</u>

The replacement cost of stocks does not differ materially from the amounts shown above.

THE ZOOLOGICAL SOCIETY OF IRELAND

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS  
FOR THE YEAR ENDED 31 DECEMBER 2012 *(Continued)*

9. Debtors: (Amounts falling due within one year)

	Group		Company	
	2012	2011	2012	2011
	€'000	€'000	€'000	€'000
Trade debtors	190	287	127	133
Prepayments and other debtors	256	254	201	193
VAT	28	273	-	-
	<u>474</u>	<u>814</u>	<u>328</u>	<u>326</u>



## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 DECEMBER 2012 *(Continued)*

### 10. Creditors: (Amounts falling due within one year)

	Group		Company	
	2012	2011	2012	2011
	€'000	€'000	€'000	€'000
Bank loan (Note 11)	250	250	-	-
Trade creditors	994	1,037	606	529
Accruals and deferred income	1,676	1,464	1,398	1,166
PAYE/PRSI	276	174	242	135
VAT	53	46	53	46
	<u>3,249</u>	<u>2,971</u>	<u>2,299</u>	<u>1,876</u>
OPW grant (a)	54	932	54	932
	<u>3,303</u>	<u>3,903</u>	<u>2,353</u>	<u>2,808</u>

During 2012, the OPW issued a grant of €400,000 (2011: €100,000) to the Society. These funds are to be used solely for purposes of development projects authorised by the OPW. All expenditure on such projects is approved by the OPW prior to payment. At 31 December 2012, €54,000 (2011: €932,000) remained unspent from the grant received and has been included in creditors and cash.

	2012	2011
	€'000	€'000
At beginning of year	932	2,827
Received during the year	400	100
Expended during the year	<u>(1,278)</u>	<u>(1,995)</u>
At end of year	<u>54</u>	<u>932</u>

THE ZOOLOGICAL SOCIETY OF IRELAND

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS  
FOR THE YEAR ENDED 31 DECEMBER 2012 *(Continued)*

11. Creditors (Amounts falling due after more than one year)

Group	Group	
	2012 €'000	2011 €'000
Bank loan	500	579
Loan maturity analysis:	2012 €'000	2011 €'000
In one year or less, or on demand	250	250
Between one and two years	500	500
Between two and five years	-	79
After more than five years	-	-
	750	829

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 DECEMBER 2012 *(Continued)*

### 12. Other Deferred Grants

Group	Group	
	2012 €'000	2011 €'000
Government grants		
Received and receivable:		
At beginning and end of year	<u>635</u>	<u>635</u>
Amortisation:		
At beginning of year	309	284
Amortised to income and expenditure	<u>25</u>	<u>25</u>
At end of year	<u>334</u>	<u>309</u>
Net book amount	<u>301</u>	<u>326</u>

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 DECEMBER 2012 *(Continued)*

### 13. Pension Liability

#### Defined benefit pension scheme

The group operates a defined benefit pension scheme. Pension costs for the defined benefit pension scheme members are assessed in accordance with the advice of independent qualified actuaries using the projected unit method. The most recent actuarial valuation of the group's pension scheme was carried out as at 1 April 2010. The most recent actuarial valuation referred to above has been updated to 31 December 2012 by an independently qualified actuary. The best estimate of pension contributions for the year ended 31 December 2013 is €180,000. The financial assumptions used to calculate the value of the defined benefit pension scheme's liabilities under FRS 17 are:

	2012	2011	2010
	%	%	%
Rate of general increase in salaries	3.00	3.00	3.00
Rate of increase in pensions in payment	0.00	0.00	0.00
Discount rate of scheme liabilities	3.20	4.90	5.50
Inflation	2.00	2.00	2.00

Amounts recognised in the income and expenditure account in respect of the defined benefit pension scheme is as follows:

	2012	2011
	€'000	€'000
Current service cost	28	25
Expected return on pension scheme assets	(108)	(111)
Interest on pension scheme liabilities	99	100
	19	14



## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 DECEMBER 2012 *(Continued)*

### 13. Pension Liability *(Continued)*

The amount included in the balance sheet arising from the group's obligations in respect of its defined benefit retirement scheme is as follows:

	2012 €'000	2011 €'000
Total market value of assets	2,476	1,983
Present value of the scheme's liabilities	<u>(2,706)</u>	<u>(2,066)</u>
Net liability recognised in the balance sheet	<u><u>(230)</u></u>	<u><u>(83)</u></u>

Movements in the deficit in the scheme during the year arose as follows:

	2012 €'000	2011 €'000
At 1 January	(83)	(172)
Current services cost	(28)	(25)
Contributions	327	395
Other financial income	9	11
Actuarial loss	<u>(455)</u>	<u>(292)</u>
At 31 December	<u><u>(230)</u></u>	<u><u>(83)</u></u>

## THE ZOOLOGICAL SOCIETY OF IRELAND

### NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 DECEMBER 2012 *(Continued)*

#### 13. Pension Liability *(Continued)*

Movement in Scheme Assets and Liabilities

	<b>Pension Assets €'000</b>	<b>Pension Liabilities €'000</b>	<b>Pension Deficit €'000</b>
At 1 January 2012	1,983	(2,066)	(83)
Current service cost	-	(28)	(28)
Interest on scheme liabilities	-	(99)	(99)
Expected return on scheme assets	267	-	267
Contributions by plan participants	327	-	327
Benefits paid	(101)	101	-
Actuarial loss	<u>-</u>	<u>(614)</u>	<u>(614)</u>
<b>At 31 December 2012</b>	<b><u>2,476</u></b>	<b><u>(2,706)</u></b>	<b><u>(230)</u></b>

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 DECEMBER 2012 *(Continued)*

### 13. Pension Liability *(Continued)*

#### Defined benefit scheme *(Continued)*

##### Basis of expected rate of return on scheme assets

As at 31 December 2012 based on the yield on the Merrill Lynch Eurozone bond index we have assumed an expected long-term return on bonds equal to 3.3%. The expected long-term return on equities is equal to the bond return plus an assumed equity premium of 4.0% per annum. This gives an assumed equity return of 7.3% per annum. The assumed return on property is assumed to be 2% below the rate of return on equities. The return on cash ("other") is assumed to be 2.7% per annum. The analysis of the scheme's assets and the expected rate of return at the balance sheet date were as follows:

	Expected return at 31 December 2012 %	Fair value at 31 December 2012 €'000	Expected return at 31 December 2011 %	Fair value at 31 December 2011 €'000
Equities	7.30	1,181	7.70	849
Bonds	3.30	984	3.70	746
Property	5.30	52	5.70	40
Other	2.70	259	2.00	348
		<hr/>		<hr/>
Total market value of assets		2,476		1,983
		<hr/>		<hr/>

## THE ZOOLOGICAL SOCIETY OF IRELAND

### NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 DECEMBER 2012 *(Continued)*

#### 13. Pension Liability *(Continued)*

Analysis of amount recognised in the statement of total recognised gains and losses:	2012 €'000	2011 €'000
Gain/(loss) on assets	159	(130)
Experience gain on liabilities	33	16
Loss on change in assumptions	(647)	(178)
	<hr/>	<hr/>
Actuarial loss to be recognised in statement of total realised gains and losses	(455)	(292)
	<hr/>	<hr/>

The experience gains and losses are as follows:	2012	2011	2010
Difference between the expected and actual return on scheme assets			
- amount (€'000)	159	(130)	9
- percentage of scheme's assets	6.4%	(6.6%)	0.5%
Experience gains and losses on scheme's liabilities			
- amount (€'000)	33	16	(34)
- percentage of the present value of the scheme's liabilities	1.2%	0.8%	(1.8%)
Change in actuarial assumptions to value liabilities			
- amount (€'000)	(647)	(178)	(82)
- percentage of the present value of the scheme's liabilities	(23.9%)	(8.6%)	(4.4%)
Total amount included in statement of total recognised gains and losses			
- amount (€'000)	(455)	(292)	(107)
- percentage of the present value of the scheme's liabilities	(16.8%)	(14.1%)	(5.8%)



## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 DECEMBER 2012 *(Continued)*

### 13. Pension Liability *(Continued)*

#### Mortality

No mortality table used pre-retirement (all members assumed to survive to NRA).

Post-retirement tables used are 62% PNML 00 (Males) and 70% PNFL 00 (females) plus allowance for future mortality improvements.

#### Expected Lifetime

The expected lifetime of a participant who is aged 65 and the expected lifetime (from the age 65) of a participant who will be aged 65 in the 25 years are shown in years below based on the above mortality tables

Age	Males	Females
65	21.5	23.0
65 in 25 years	<u>24.5</u>	<u>25.4</u>

## THE ZOOLOGICAL SOCIETY OF IRELAND

### NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 DECEMBER 2012 *(Continued)*

14. Reserves	Accumulated surplus €'000	Development reserve €'000	Emergency reserve €'000	Total €'000
<b>Group</b>				
At beginning of year	9,505	3,000	1,701	14,206
Surplus for year	2,172	-	-	2,172
Actuarial loss recognised on defined benefit pension scheme	(455)	-	-	(455)
Transfer	(2,031)	2,000	31	-
<b>At end of year</b>	<b>9,191</b>	<b>5,000</b>	<b>1,732</b>	<b>15,923</b>
<b>Company</b>				
	Accumulated surplus €'000	Development reserve €'000	Emergency reserve €'000	Total €'000
At beginning of year	4,214	3,000	1,701	8,915
Surplus for year	1,418	-	-	1,418
Transfer	(2031)	2,000	31	-
<b>At end of year</b>	<b>3,601</b>	<b>5,000</b>	<b>1,732</b>	<b>10,333</b>

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 DECEMBER 2012 *(Continued)*

### 15. Transfer to Development and Emergency Reserves

The Members of Council have decided to transfer €31,000 (2011: €201,000) from the accumulated surplus to the emergency reserve. The Members of Council have also decided to transfer €2,000,000 from the accumulated surplus to the development reserve. The Members of Council continue to monitor the strategic development of Dublin Zoo and have set aside funds to finance future capital investment projects.

### 16. Reconciliation of Surplus Before Interest to

Net Cash Inflow from Operating Activities	2012 €'000	2011 €'000
Operating surplus	2,049	1,930
Depreciation of tangible fixed assets	1,378	1,145
(Loss)/gain on disposal of fixed asset	3	(3)
Effect of defined benefit pension scheme	(299)	(370)
Decrease/(Increase) in stocks	90	(84)
Decrease/(Increase) in debtors	340	(246)
Increase in non OPW creditors	278	56
Net Cash Inflow from Operating Activities	3,839	2,428

### 17. Analysis of Movement in Net Funds

	At beginning of year €'000	Cashflow €'000	At end of year €'000
Cash at bank and in hand	6,064	1,478	7,542
Bank loan	(829)	79	(750)
Net funds	5,235	1,557	6,792

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS  
FOR THE YEAR ENDED 31 DECEMBER 2012** *(Continued)*

**18. Commitments and Contingencies**

At 31 December 2012, the Society had authorised capital expenditure amounting to €686,178 (2011: €750,000) but this had not yet been contracted.

**19. Approval of Financial Statements**

The consolidated financial statements were approved by the Council on 20 June 2013.













*Herd of Asian elephants at Dublin Zoo*

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