

ZSL | LET'S WORK
FOR WILDLIFE

ANNUAL REPORT AND ACCOUNTS 2016-17



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The President and Director General of the Zoological Society of London introduce our review of 1 January 2016 to 30 April 2017.

As President of ZSL (Zoological Society of London), I am pleased to present our 2016-17 Annual Report. This marks the second year of my Presidency, and it is an honour to be a part of an organisation that conducts such diverse and fundamental work.

Humanity sits on the precipice of great change, much of it self-inflicted, and our scientists are world leaders in the race to both understand and lessen its impact on wildlife. Our 2016 Stamford Raffles Lecture focused on the effects of climate change on biodiversity; we co-published a significant report on the impact of climate change on species movement; and our researchers journeyed to the Chagos Archipelago to study coral reefs after the 2016 bleaching event. The *Living Planet Report 2016*, published jointly by ZSL and WWF, predicted that vertebrate populations will decline to just 33% by 2020, based on population sizes in 1970, emphasising the downward trend ZSL is working so hard to reverse.

However, if we are to engage the public and inspire the conservationists of tomorrow, we must focus on the successes, as well as defining the challenges. For this very reason we co-organised the first Conservation Optimism Summit, alongside the University of Oxford and the Durrell Wildlife Conservation Trust, where we heard about triumphs such as the return of the iconic scimitar-horned oryx to the Sahara, and the Philippines fishing communities removing waste fishing nets from their beaches for recycling into carpet tiles.

In other good news, IUCN (International Union for Conservation of Nature) and CITES (Convention on International Trade in Endangered Species of Wild Fauna and Flora) conferences both ruled to close domestic ivory markets. The Great British Oceans campaign, led by ZSL, saw the UK Government deliver on its promise to designate a marine reserve in the waters of UK Overseas Territory the Pitcairn Islands and announce plans for three more reserves in the South Atlantic by 2020.

ZSL conservationists continue to work closely with the Government in Nepal, in 2016 assisting in the extension of the Parsa Wildlife Reserve, home to Bengal tigers and greater one-horned rhinos. We were also delighted to be part of the discovery of a new species, the Skywalker hoolock gibbon in south-west China, and, in French Polynesia, led a reintroduction of *Partula* snails previously declared Extinct in the Wild for almost three decades.

At our Zoos, we welcomed many newborn animals, including twin Sumatran tiger cubs and Fea's tree frogs at London, and an Asian elephant calf and four West African dwarf crocodiles at Whipsnade.

ZSL is tireless in its mission to create a world where animals are valued and their conservation assured, and I would like to thank our staff, volunteers, supporters, and members – their endless dedication makes that mission possible.

This period has been a fantastic one for ZSL. We continue to adapt to a changing world and this Annual Report reflects key highlights of the vast amount of work that ZSL is doing in communities worldwide. We are at the forefront of science and conservation, and I am proud to lead this Society.

At our Zoos, we launched new, landmark exhibits. At ZSL London Zoo I had the pleasure of inviting ZSL's Patron, Her Majesty The Queen, and His Royal Highness The Duke of Edinburgh to open *Land of the Lions*, an award-winning exhibit designed to transport visitors to Sasan Gir in India and celebrate our Asiatic lion conservation work in the region. In spring 2017, we opened two world-class exhibits at Whipsnade: the state-of-the-art Centre for Elephant Care, giving our herd of Asian elephants an enriching and comfortable indoor space amid 20 acres of paddocks, also opened by The Queen and The Duke of Edinburgh; and a new enclosure for an all-female group of African hunting dogs. Zoo visitor numbers have reflected these feats, with a combined total of more than 2.6 million over the past 16 months.

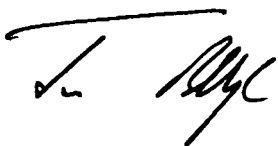
ZSL's conservation programmes continued to play a crucial part in the preservation of wildlife, at home and abroad. We are delighted to be part of a collaborative initiative with the Government of Chad and the Environment Agency of Abu Dhabi, which, together with an array of partners led by the Sahara Conservation Fund, has released the first scimitar-horned oryx – the only African mammal classed as Extinct in the Wild – back into their former wild habitat in Chad.

Closer to home, we launched the #OneLess campaign to free London of single-use plastic water bottles by 2020, reducing the amount of plastic ending up in our oceans, and we trained more than 200 citizen scientists for our Thames surveys on water quality, European eels, juvenile fish and invasive species.

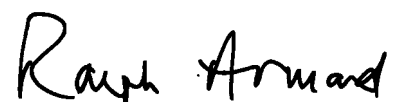
Our scientists boosted the fight to understand and treat chytrid fungus, a disease that has devastated amphibian populations globally, by proving the effectiveness of fungicide on improving the health of wild mountain chicken frogs. Meanwhile, our UK Cetacean Strandings Investigation Programme held a symposium and a postmortem examination of a stranded dolphin that was streamed live on YouTube. The subject garnered significant media attention, educating audiences on the work of our veterinarians and bringing the toxic legacy of polychlorinated biphenyls to greater public attention than ever before.

Finally, as we begin to look forward to 2018 at ZSL, I must take this opportunity to announce my own retirement. It has been a privilege to serve as Director General and, after more than 13 years at the helm of this incredible Society, I will be handing over the reins at the end of 2017.

ZSL is nothing without its people and I would like to thank everyone for making the work ZSL does possible. I look forward to seeing what's next for this remarkable organisation.



Professor Sir John Beddington CMG, FRS
President, Zoological Society of London

Ralph Armond
Director General, Zoological Society of London

WELCOME

Our impacts at a glance

At ZSL, we're working for wildlife around the world. From investigating the health threats facing animals to engaging with global businesses, inspiring conservationists and working with world leaders, we are committed to ensuring a future for threatened species. Here are just some examples of what we achieved in 2016-17.



1

critical care unit was opened in the ZSL London Zoo veterinary hospital, with a new oxygen generator for respiratory cases. Read more on how we are improving wildlife health on [page 18](#).

12

angelsharks were released unharmed from charter fishing boats after accidental capture in the Canary Islands, with the help of our best-practice guide. Read more about how we are saving threatened species on [page 16](#).

4,820

indigenous trees were planted by communities around Lake Ossa, Cameroon, restoring habitat for animals such as the Vulnerable African manatee. Find out more about how we are promoting conservation for communities on [page 20](#).

668

new species were assessed for the *Living Planet Index* 2016. See [page 12](#).

648

poaching camps were dismantled through the SMART (Spatial Monitoring and Reporting Tool) approach. See [page 14](#).



Almost **10 million**

people were reached through the global communications of our Conservation Optimism Summit. Find out more about how we are encouraging lifelong learning on [page 24](#).

2.6 million

people visited ZSL Zoos between January 2016 and April 2017 – a yearly rise of 3%. Find out more about the work of our Zoos on [page 26](#).

670,000

fewer single-use plastic water bottles were sold in London thanks to the #OneLess campaign, which encourages Londoners to switch to reusable bottles and keep litter out of the ocean. Find out more about how we are engaging with business on [page 22](#).



Vision, mission and aims

As an organisation, we're driven by a number of principles and aims for the worldwide conservation of animals and their habitats – here, we outline the core aims that shape our work.

The Trustees present their Annual Report and Accounts of the charity for 1 January 2016 to 30 April 2017. The financial statements have been prepared in accordance with the accounting policies set out in note 1 of the accounts and comply with the charity's Charters and Byelaws, the Charities Act 2011 and Accounting and Reporting by Charities: Statement of Recommended Practice applicable to charities preparing their accounts in accordance with the Financial Reporting Standard applicable in the UK and Republic of Ireland (FRS102) published on 16 July 2014.

Guiding principles **IN CARRYING OUT ITS MISSION, ZSL HAS ADOPTED THE FOLLOWING GUIDING PRINCIPLES:**

Respecting and valuing animals and the natural world

Our belief is that a diverse and healthy natural world is valuable in its own right and is essential for ensuring secure and healthy lives for people. This motivates ZSL's vision and mission, and our other core values follow from this.

Inspiring conservation action

We seek to motivate others to take conservation action in their daily lives.

Achieving excellence in our field

Building on our heritage, our Royal Patronage since 1830 and our reputation as a learned society, we aim to be an authoritative source of information and good practice for the scientific study, conservation and husbandry of animals; and to make efficient and effective use of available resources to achieve the highest possible standards in everything we do in the operation of a successful and innovative conservation organisation.

Acting ethically, responsibly and sustainably

We aim to operate in fair and justifiable ways that do not conflict with our mission and objectives, and which respect the environment.

Valuing everyone we work with

We support and value teamwork and collaboration, strive for fair and equitable treatment of everyone with whom we work and come into contact, and aim to act with respect and courtesy in all our dealings.

ZSL'S AIMS

ZSL's core aims, as set out in its Charter, are:

'The advancement of zoology by, among other things, the conducting of scientific research, the promoting of conservation of biological diversity and the welfare of animals, the care for and breeding of endangered and other species, the fostering of public interest, the improvement and dissemination of zoological knowledge and participation in conservation worldwide.'

In shaping our aims for the year and planning our activities, ZSL's Trustees have considered the Charity Commission's guidance on public benefit and fee charging. Initiatives include educational visits at heavily discounted prices, free visits as part of the junior citizen initiative and Special Children's Days at discounted prices. We also fund and run a world-renowned zoological library, with open access at no charge.

ZSL'S MISSION STATEMENT

OUR MISSION: To promote and achieve the global conservation of animals and their habitats, through our innovative and inspiring science, education and conservation programmes in our Zoos and around the world.

OUR VISION: A world where animals are valued and their conservation assured.



Strategic aims

ZSL is pursuing its mission through five key strategic aims:

1 To undertake and promote relevant high-quality zoological and conservation research, to help us achieve our conservation objectives and to inform and influence conservation policy

ZSL is achieving this strategic aim by:

- Encouraging and rewarding excellence in the performance and communication of science, conservation and animal husbandry
- Using our unique convening role as a leading learned society to foster and achieve international excellence in science relevant to our core conservation priorities
- Managing and developing a relevant and useful body of zoological knowledge
- Attracting and engaging a diverse range of people and organisations in the science of zoology and conservation, from students to leaders in their fields
- Raising the profile of conservation issues and priorities, and ensuring they are well represented at policy level and in the media
- Providing policymakers, conservationists and the general public with the information needed to make informed decisions on conservation issues.

2 To encourage and motivate all our stakeholders to support and engage in conservation

ZSL is achieving this strategic aim by:

- Enabling and inspiring all ZSL's staff, students and volunteers to become ambassadors for our conservation mission
- Ensuring that all visitors have an enjoyable, inspiring and educational experience
- Communicating science-based conservation messages
- Improving and developing our contributions to the education and conservation awareness of groups of all ages, and to education providers
- Raising and maintaining our profile among target audiences
- Using our research and field activities to inspire and educate people about conservation, enhancing the value delivered to ZSL members.



3 To implement and achieve effective and appropriate *in-situ* and *ex-situ* conservation programmes for priority species and habitats

ZSL is achieving this strategic aim by:

- Ensuring that conservation efforts are informed by the best science
- Developing and applying objective criteria for setting priorities for our conservation activities
- Measuring conservation efforts and evaluating their outcomes to enable more effective management
- Developing our own and others' capabilities, expertise and resources in order to build capacity in zoology and conservation
- Predicting, prioritising and responding effectively to new conservation issues
- Engaging and working with communities in support of conservation and sustainable livelihoods
- Working with other organisations and across disciplines to achieve our common conservation objectives
- Working with government and industry in support of conservation.

4 To lead and deliver exemplary Zoos to advance ZSL's mission

ZSL is achieving this strategic aim by:

- Inspiring our visitors through world-class animal exhibits that are linked to science and conservation
- Evaluating all our activities to inform a visitor charter committed to excellence in customer satisfaction
- Implementing and surpassing globally recognised standards in our Zoos
- Ensuring and promoting best practice in the welfare of zoo animals and delivering conservation breeding
- Integrating and maximising the conservation and research contribution of the Zoos to ZSL
- Maximising the unique learning and enabling opportunities that our Zoos offer across all sectors of the Society
- Using our Zoos to increase the financial contribution ZSL makes to science, conservation and education.

5 To further ZSL's mission by maximising opportunities to generate funds

ZSL is achieving this strategic aim by:

- Making continued investment in our sites and infrastructure
- Developing our business acumen
- Developing innovative opportunities to generate revenue
- Building up and extending our supporter base
- Raising our charitable profile to increase funding to ZSL
- Using ZSL assets and resources to generate funds within the framework of a registered charity.



Working around the world

A United Kingdom

Native oyster beds are considered the most threatened marine habitat in Europe due to overharvesting, disease and invasive species. In 2016, ZSL worked in partnership with the Essex Native Oyster Restoration Initiative to translocate 50,000 native oysters in the Blackwater, Roach Crouch and Colne Marine Conservation Zone, Essex, to create a new sanctuary for the species.



B Benin

The W-Arly-Pendjari complex, which spans Burkina Faso, Niger and Benin, is one of the last relatively intact West African savannah systems and a stronghold for savannah elephants, lions and cheetahs. Over the past year, ZSL and partners have been working to enhance protection and surveillance capacity; training surveillance teams in human intelligence gathering, agent management and use of information, as well as deploying a real-time camera alert system.

G Costa Rica

Costa Rica's population of Endangered Baird's tapirs face danger from growing road networks dividing up their forest habitat. Our EDGE (Evolutionarily Distinct and Globally Endangered) of Existence programme works with a local conservationist to support their work with Costa Rica's Ministry of Transport and Public Works to develop an action plan, including new road signs, with the long-term goal of encouraging the introduction of dedicated 'tapir bridges'.





Indicates the number of ZSL projects in countries around the world. In total, we have over 250 projects in more than 70 countries worldwide

Across every continent and ocean, animals face unprecedented threats. ZSL is a world leader in wildlife conservation, science and education. Here is just a snapshot of some of the projects we undertook in 2016-17.

C Chagos Archipelago

This remote marine habitat has been relatively unscathed by human activities, allowing scientists to study the effects of climate change in comparative isolation. In early 2017, ZSL mobilised two expeditions to the British Indian Ocean Territory marine reserve – which we and other organisations helped create – to assess the damage of the 2015-2016 bleaching event to the coral reefs and to collect data on red-footed boobies and tagged manta rays, sharks and tuna.

D China

An entirely new species of gibbon was discovered living in the forests of the Gaoligong mountains in south-west China. The Skywalker hoolock gibbon, *Hoolock tianxing*, of which there are believed to be only 200 in existence, was identified by a research team led by Sun Yat-sen University, alongside ZSL scientists. We are now working with the IUCN to establish its threat level.



E Nepal

To secure the future for Endangered Bengal tigers across their strongholds in Nepal, we conducted a three-month survey of tiger and prey populations in Parsa Wildlife Reserve. This revealed that tiger numbers have almost doubled since we began work in 2014. We have strengthened security capacity, improved community engagement and habitat management, and implemented SMART patrol software, and were awarded the highest commendation by the Nepalese Government in recognition of our work.



F New Zealand

In April 2017, ZSL celebrated the translocation of 40 wild-bred juvenile hihi birds to Rotokare Scenic Reserve, New Zealand, marking the return of the species to the mainland after an absence of 130 years. By 1890, the hihi population was restricted to a single offshore island, but ZSL has been working for more than 30 years to help build a successful, sustainable reintroduction framework for this beautiful bird.



Monitoring our planet

From mapping rare species to monitoring animal populations on a global scale, ZSL plays a vital role in assessing the status of the world's wildlife.

Understanding how, and why, animal populations and their habitats are changing is the first step towards protecting them. In 2016, ZSL co-produced the sixth *Living Planet Report* with WWF – the most comprehensive survey of the health of the world's biodiversity.

It revealed that global populations of fish, birds, mammals, amphibians and reptiles declined by 58% on average between 1970 and 2012, and predicted that these populations are set to fall even further – by 67% – by 2020.

Threats from climate change

Assessing the impact of climate change remains a key priority for our scientists. A landmark study, published in the journal *Science* by 40 institutions including ZSL, called for governments to heed the effects of climate-driven species movement. As environments change, many plants and animals are relocating to new habitats, and these mass movements are likely to have far-reaching implications for human society, including health risks and economic threats.

Our researchers are also working with the IUCN Climate Change Unit to refine how we assess the vulnerability of species to changing climates. Our first assessment of climate change vulnerability for 1,500 reptile species indicated that 22% are at risk.

Filling knowledge gaps

In regions with little wildlife data, ZSL is working to fill the gaps. To this end, ZSL's invertebrate specialists joined the field team in Hustai National Park, Mongolia, for the annual Steppe Forward field course for trainee conservationists – a crucial contribution to the area's capacity for wildlife monitoring and management. Expert training in invertebrate monitoring was followed by surveys in the park – both firsts for the area. A regional invertebrate database was also created, which will be key to understanding the significance of invertebrate pest species in the park.

As part of our Fish Net programme to tackle the extinction crisis facing many freshwater fish, ZSL zookeepers are monitoring several species of Critically Endangered killifish in Greece and Turkey. The team is tracking population

levels, water quality and local biodiversity to better understand the preferences and breeding habits of these fish. In Greece we also undertook translocations of 72 killifish in four sites, and in 2018 will begin a three-year monitoring phase to measure their success.

Conserving life on the EDGE

Our EDGE of Existence programme, the world's only conservation initiative focusing on the most Evolutionarily Distinct and Globally Endangered species, introduced the first EDGE Reptiles list, as well as updating its lists of top-priority mammals, amphibians, birds and corals in 2016 and early 2017. Meanwhile, 33 early-career conservationists from 18 countries undertook EDGE Fellowships to conserve key EDGE species. Most of these species are so little known that careful monitoring is an essential step for their conservation. New monitoring programmes were launched for species including the Round Island keel-scaled boa, the West African slender-snouted crocodile (the first ever EDGE reptile field projects) and the top-priority EDGE mammal, the long-beaked echidna.

Monitoring the Thames Estuary

Closer to home, we conduct several monitoring projects in the Thames Estuary, supported by volunteer citizen scientists. The resulting data on water quality, European eels (pictured below), juvenile fish, invasive species and marine mammals are shared with the Environment Agency, Thames Water, the Port of London Authority and Greenspace Information for Greater London (GiGL), helping to inform the management of London's environment. Thanks to this work, an additional 3km of river habitat has been safeguarded for the Critically Endangered European eel. Our research also contributed to the IUCN's decision to promote anguillid eels as flagship species for aquatic conservation.



Invertebrates including the armoured bush-cricket were surveyed during the Steppe Forward field course in Mongolia

3,706

species were assessed for the 2016 *Living Planet Report*



81%

The decline in freshwater fish numbers between 1970-2012, according to the report. ZSL is working to reverse this; for example, by translocating rare killifish in Greece

**THAMES
CITIZEN
SCIENCE:**

276

citizen scientists were trained in survey techniques such as eel and smelt monitoring and pollution mapping

367

wildlife sightings were submitted to the Thames Marine Mammal Map by the general public

335

citizen scientists participated in our marine mammal surveys

311

Mongolian and international students have been trained in conservation biology and wildlife management techniques by our Steppe Forward programme since 2003



Developing conservation technology

The challenges facing today’s conservationists require innovation and adaptation. ZSL is at the forefront of developing effective, high-tech solutions.

In recent years we have seen a spike in illegal wildlife trade around the world. African grey parrots, for example, one of the world’s most trafficked bird species, have seen a population decline of 95-99% over the past 30 years alone – and their story isn’t an uncommon one. Wildlife trade is pushing species towards extinction, and technological advances are vital if government authorities are to stand up to organised, well-financed poaching gangs and trafficking networks.

Fighting wildlife crime

Illegal, unreported and unregulated (IUU) fishing puts sustainable fisheries, marine ecosystems, food security and coastal communities around the world at risk. In early 2017, ZSL trialled new underwater acoustic sensors for detecting IUU activity in the Peros Banhos atoll of the Chagos Archipelago (pictured right). The next stage of the project will involve integrating the sensors with ZSL’s existing Instant Detect satellite communications hub, to provide real-time alerts for marine law enforcement authorities.

We also continued to expand our use of SMART (Spatial Monitoring And Reporting Tool), a software system designed to help those patrolling and managing protected areas to monitor and report on wildlife, habitats and illegal activities. In 2016, we rolled SMART out across more important sites, including Bardia National Park, which holds Nepal’s second largest population of tigers; the W-Arly-Pendjari conservation complex (WAP), the last intact savannah system in West Africa; and Cameroon’s Dja Biosphere Reserve and Deng Deng National Park. We are also working with ZSL London Zoo’s inaugural Zoohackathon winner, *WildTrack*, to develop an app that will allow communities to report poaching and other wildlife crime in their area



anonymously through SMART. Find out more about this on page 20.

We have been working to develop the next generation of Instant Detect, an alarm system that uses cameras, ground sensors and satellites to provide immediate alerts to rangers and law enforcement teams working in wildlife reserves. Based on feedback from users and technical partners, and our own field tests in Kenya’s

Tsavo National Park working with the Kenya Wildlife Service, we are evolving Instant Detect 2.0 to include additional targeted sensors, improved range and longer battery life. We have also teamed up with Innovate UK’s Digital Catapult and Things Connected support programmes to test a long-range radio mast at ZSL London Zoo that could enhance the Instant Detect technology in future.

Improving understanding

Technology presents a huge opportunity for improving our understanding of animals and how to conserve them, particularly those species that we know little about. ZSL researchers have pioneered a new approach to camera traps that allows us to measure animal movement in precise detail. We hope the technique – tested on data from a survey of mammals in Panama – will allow us to create movement estimates for a wide range of species, shedding new light on how loss of prey and habitat can affect them.

In an attempt to better conserve animals that we know little about, ZSL researchers have developed a new machine learning technique that determines the risk of extinction for species that are classed as Data Deficient in the official IUCN (International Union for Conservation of Nature) species database. Using this technique, researchers found that 19% of Data Deficient reptiles are likely to be threatened with extinction.





923

camera traps



to capture automated images of wildlife were deployed across more than 1 million square hectares worldwide

Thinking SMART

- SMART was rolled out in seven new sites in Cameroon, Kenya, Nepal and India
- SMART has been implemented across 32 sites and 5.5 million square hectares by ZSL in Africa and Asia
- We trained more than 1,000 conservationists and rangers in how to use SMART
- With the help of SMART monitoring:

648

poaching camps were dismantled

8,722

animal snares and traps were removed

629

poachers were arrested

Saving threatened species

At ZSL we're all about animals. From the smallest coral polyp in the ocean to the largest elephant on the savannah, we use our expertise to protect animals and their habitats all around the world.

We are proud to support the reintroduction of the once Extinct in the Wild scimitar-horned oryx to Chad, alongside the Chad Government, the Environment Agency of Abu Dhabi and project leader the Sahara Conservation Fund. The herd has shown early success with the birth of five calves in the wild – the first in more than 30 years. The project hopes to establish a self-sustaining population of 500 wild oryx by 2021.

Alongside the French Polynesian Government and zoo partners, ZSL celebrated encouraging initial reintroduction results for 11 species and subspecies of *Partula* tree snails to French Polynesia, almost 30 years after most were listed as Extinct in the Wild. The reintroductions, totalling 1,571 snails from ZSL London Zoo, were conducted following health screenings by our veterinary department.

Protecting pangolins

ZSL helped secure international commitments to protect pangolins (pictured right) at the IUCN World Conservation Congress and CITES CoP17, including stepping up targeted conservation actions and a total ban on international commercial trade.

On the ground, we are working to save pangolins in Thailand, and in Cameroon we have set up the MENTOR-POP Fellowship Programme, which supports early-career pangolin conservationists in partnership with the US Fish and Wildlife Service. The nine Fellows have undertaken a national survey of pangolin seizures and are raising local awareness that pangolins are now protected. Our Cameroon team is also working directly with law enforcement agencies to target pangolin traffickers.

Endangered big cats

The most comprehensive cheetah study to date, led by ZSL, called for up-listing of the species from Vulnerable to Endangered on the IUCN Red List. The cheetah is one

of the world's most wide-ranging carnivores, and the study found that 77% of its remaining habitat falls outside protected areas. ZSL is working with relevant governments to create a comprehensive, range-wide conservation plan for the species, and welcomed the crackdown on illegal trade agreed at the 17th conference of the parties to the CITES Convention.

Protecting tigers is a major focus for ZSL, and in 2016 we supported the extension of Nepal's Parsa Wildlife Reserve, constructing three new guard posts, equipping 39 existing posts with solar power and setting up four Rapid Response anti-poaching units. In the United

Administration of Lazovsky Zapovednik and

Zov Tigra National Parks in Russia, our survey data contributed to the creation of a 'green bridge' or ecological tunnel in the area of Razdolnoye-Khasan motorway, where cars have previously killed several tigers and leopards.

Marine protection

For the Marine Reserves Coalition, 2016 proved to be its most successful year to date; the UK Government fulfilled its 2015 pledge to designate a marine reserve around the Pitcairn Islands, a South Pacific UK Overseas

Territory (UKOT), and announced plans for three new marine protected areas in South Atlantic UKOTs by 2020.

ZSL organised two scientific expeditions to the Chagos Archipelago in the British Indian Ocean Territory Marine Protected Area, where preliminary coral reef examination showed that the 2015-2016 bleaching event killed almost all coral to a depth of 15 metres. Fortunately, deeper corals survived, and the existence of juvenile colonies on dead adult skeletons is encouraging. This resilient set of reefs has bounced back before in just five to six years, but doing so depends on there being no further coral bleaching events – and there is no guarantee of that.

Another major milestone was the December launch of the Angelshark Action Plan for the Canary Islands, which set out a 10-year roadmap to overcome major threats to the conservation of this Critically Endangered species in the region.



40

wild-bred hihi were translocated to Rotokare Scenic Reserve in New Zealand, marking a return of the species to the mainland

161

million hectares of UK overseas territories have been designated marine protected areas with ZSL support – over 6.5 times the size of Great Britain

47

conservation breeding and translocation programmes worldwide have been supported by ZSL, involving 24 species and 11 countries

38

pangolins were rescued from poachers and released back into the wild

1,571

Partula snails were bred at ZSL London Zoo and reintroduced to French Polynesia

15

ZSL-sponsored resolutions were passed at the IUCN World Conservation Congress



Improving wildlife health

The groundbreaking research of our scientists is helping to solve wildlife issues and identify emerging threats to species at home and abroad.

Concerns that vaccinating badgers against bovine tuberculosis (TB) could increase transmission rates of the disease in cattle have been challenged by new research that shows no discernible behavioural impacts following vaccination. The study, led by ZSL, offers hope of a practical alternative to the UK Government’s controversial cull policy. The behaviour of 54 GPS-collared badgers was studied across four sites in Cornwall, and scientists found that the 15 that had received the TB vaccine exhibited the same ranging behaviour as unvaccinated badgers. Badger vaccination is less risky, more humane and cheaper than culling, and we hope that the findings will allow for greater exploration of its use to control TB in cattle.

Mitigating amphibian disease

For more than 20 years, ZSL has been at the forefront of research on amphibian chytridiomycosis, a disease that has devastated amphibian populations globally. Over the past year, research on the Critically Endangered mountain chicken frog, endemic to the Caribbean islands of Montserrat and Dominica, has produced significant results. Our findings on the treatment of frogs *in situ* demonstrated how the established antifungal drug itraconazole can be used to treat amphibians in the wild during periods of particular risk from chytrid outbreaks. Further research went on to show that reinfection risks during reintroduction are at their lowest during the wet season.

Threats from chemical pollutants

New research led by ZSL has revealed the extent to which banned industrial chemicals pose a threat to top marine predators, highlighting the critical need for policymakers to act quickly to tackle the lingering toxic legacy of polychlorinated biphenyls (PCBs). Banned because of their impact on human and environmental health, our pan-European study – using samples from more than 1,000 cetaceans from 1990 to 2012 – showed that PCBs persist at

excessively high concentrations in the blubber of several marine alpha predator species, including killer whales, bottlenose dolphins and striped dolphins. High PCB concentrations in European cetaceans are associated with ongoing population declines, particularly in killer whales in the Northeast Atlantic region and several dolphin species in the Mediterranean Sea.

Vets overseas

As a leader in wildlife medicine, ZSL is proud to share its knowledge worldwide. Our veterinary team continued to work closely with vulture conservation breeding centres in Nepal and India, and presented at a national workshop on vulture conservation in Bangladesh about the need for a national ban on ketoprofen livestock medication – which has now been achieved. ZSL’s veterinary nurses worked with the Jivdaya Charitable Trust in Ahmedabad, India, to treat birds injured during the kite festival, and in Russia our wildlife vets’ expertise has contributed to the rehabilitation and return to the wild of several orphaned or injured Amur tiger cubs.

As well as caring for the Zoos’ 844 species, the veterinary department contributed lectures and practical sessions to our three MSc courses, two of which run in partnership with the Royal Veterinary College (RVC), on topics including preventive medicine and pathology. They also taught on the RVC Elephant Management course held in Chiang Mai, Thailand.



UNDERSTANDING MARINE STRANDINGS

As part of its work to research and monitor cetacean strandings, the UK Cetacean Strandings Investigation Programme (CSIP), led by ZSL, studied 706 beached harbour porpoises in the UK in 2016. It found 345 had died of physical trauma, 242 from infectious disease and 42 from starvation. The cause of 25 of these deaths was unknown, while the rest were live strandings.

Significantly higher amounts of polychlorinated biphenyl (PCB) chemicals were found in animals that died of infectious disease and starvation. When Lulu, a member of the UK’s only pod of killer whales, became entangled in abandoned fishing tackle, the postmortem found that she had 100 times over the safe amount of PCBs in her system. In the past 21 years, she had never been seen with a calf.

ZSL scientists have been collaring and releasing wild badgers to find out more about the TB risk they pose to cattle

140

wildlife health professionals were taught by ZSL from January 2016 to April 2017, including MSc Wild Animal Health vets, Royal Veterinary College students, vet nurse work experience trainees, MSc Wild Animal Biology students, overseas vets and a pathology intern

GARDEN WILDLIFE HEALTH:

Garden Wildlife Health (GWH) is a long-term citizen science project – launched in 2013 by ZSL and a number of conservation organisations – that aims to monitor the health of garden wildlife.

220

animals were examined by the Garden Wildlife Health project team in 2016

1,750

disease incidents were reported to the Garden Wildlife Health project in 2016

489

undergrads and postgrads have been trained in different aspects of Wildlife Health since the project began

Conservation for communities

Community-based conservation efforts can often be the most effective, as they harness the passion and knowledge of local people – ensuring the long-term success of ZSL projects.

Engaging communities is vital to ZSL's work. It helps us to set up and train conservation teams to fight poaching or restore vital habitats, safeguard human-wildlife coexistence, and ensure that future generations are engaged with, and committed to protecting, the natural world around them.

Empowering fishing communities

Net-Works, our community-based supply chain for recycling discarded plastic fishing nets, continued to demonstrate its effectiveness as a long-term, sustainable conservation activity. Through Net-Works, fishing communities are incentivised to collect used nets for recycling into yarn for carpet tiles. More than 150 tonnes of discarded netting has been collected since the project began in 2012. In 2016, ZSL focused on developing community-managed village savings and loan associations to manage the local Net-Works supply chain and empower people to protect both their livelihoods and the natural resources they depend on. Global carpet manufacturer Interface, our project partner, was awarded the US Secretary of State's Award for Corporate Excellence in Sustainable Oceans Management.

ZSL leads the Our Sea Our Life project in Mozambique, which aims to manage sustainable local fisheries within six vulnerable coastal communities. The 500ha of locally managed marine areas (LMMAs), agreed by communities in 2016, include no-take temporary reserves for octopuses as well as permanent no-take zones where fishing is banned. These allow both rapidly reproducing species, such as octopuses, and species that are slower to reach maturity and breed, such as groupers, to recover from the impact of fishing. Meanwhile fishers continue to make a profit thanks to the well-managed temporary reserves, which encourages them to comply with fishing restrictions.

In Cameroon, ZSL has been working with fishers around the Lake Ossa Wildlife Reserve to protect the sensitive freshwater habitats of African manatees. In 2016, communities agreed on a code of conduct to regulate fishing in Lake Ossa, and set aside 200ha of no-take zones in important manatee hotspots and fish breeding sites.

Protecting local wildlife

Empowering communities to contribute to conservation initiatives is a key principle of our work. In Nepal, we have supported around 80 community-based anti-poaching units as part of our tiger protection work. Similarly, our Tiger Protection and Patrol Units in Indonesia all include local villagers, and in Thailand we work with communities to monitor and respond to conflicts with elephants.

In Cameroon we have established community surveillance networks in villages around the Dja Biosphere Reserve and, working with the UCL ExCiteS (Extreme Citizen Science) team, we are helping communities set up systems for the monitoring and reporting of illegal activities using PDA devices. At Lake Ossa we have established a co-management system for the reserve with the nine local communities and the wildlife authorities.

Currently, however, there is no immediate way for communities living around protected areas to report poaching and other wildlife crimes, or human-wildlife conflicts. To fill this gap, we are working with *WildTrack*, winner of the first Zoohackathon in 2016, in which ZSL partnered with the US Embassy and zoos worldwide to run a contest seeking new tech-based conservation solutions. We are now helping the *WildTrack* team to develop its concept: an SMS reporting system that will enable anyone, anywhere, to anonymously report a suspected wildlife crime via text message. This could potentially be integrated into SMART monitoring software (see page 14), allowing rangers to respond immediately to reports of wildlife crime or conflict. Trafficking incidents could also be fed into the broader systems that governments use to analyse and disrupt the illegal wildlife trade worldwide.



Empowering communities to contribute to conservation initiatives is a key principle of our work



ZSL is working with fishing communities around Lake Ossa in Cameroon to safeguard the region's rich biodiversity, including these African skimmers

70,000

people benefited directly or indirectly from our environmental work across the Philippines, Mozambique and Cameroon

2,838

people have joined community saving schemes facilitated by ZSL in the Philippines, Cameroon and Mozambique, which allow poor households to manage their funds and diversify their livelihoods

48

associations have put savings into environmental funds for projects such as community-managed marine protected areas

4,820

native trees have been planted by communities to improve degraded habitat around Cameroon's Lake Ossa

TONNES

of fishing nets were removed from coastal habitats between 2016 and 2017, thanks to Net-Works



Engaging with business

At ZSL we work to establish long-term relationships with global and local businesses, which allows us to influence business practices for the good of wildlife and safeguard biodiversity.

At the 2016 IUCN World Conservation Congress, members voted overwhelmingly to support ZSL-sponsored resolutions. Among these were calls for IUCN protected areas to be 'no-go' for damaging industrial activities and for the protection of 30% of the oceans by 2030 (tripling the current target of 10% by 2020). Now, ZSL is working with conservation, academic and business partners to consider the impacts and implementation of these resolutions.

Marine protection

In June 2016, ZSL and partners launched the #OneLess campaign. The aim is to reduce the amount of plastic ending up in our oceans by encouraging the public to use refillable water bottles. Selfridges and ZSL

have already stopped the sale of single-use plastic water bottles, and Sotheby's and Estée Lauder have pledged to encourage the use of reusable water bottles across their businesses. We are currently helping others to 'go #OneLess', including businesses, visitor attractions and schools.

ZSL is a key partner in the ConnectRight Thames Group, chaired by Thames Water and set up to tackle the problem of misconnected sewers polluting local rivers. Our teams of citizen scientists are important contributors, trained to use our *Outfall Safari* app to proactively detect polluting outfalls, rank their impact on the river and

gather evidence on the scale of the misconnection problem. *Outfall Safari* was presented at the 2016 DEFRA (Department for Environment, Food and Rural Affairs) Urban River Pollution Workshop and the 2017 Annual River Restoration Conference. Thames Water is reassessing its business practices in response to the scale of the reported problems.

Encouraging sustainable business

Our largest ever field conservation project, KELOLA Sendang, entered its Implementation Phase in 2016. The project is in South Sumatra Province, home to the Critically Endangered Sumatran tiger, and is a multi-stakeholder initiative led by the local government and aims to achieve economic, community and biodiversity prosperity through sustainable land management. The 1.6 million hectares designated to the project contains three protected areas, 206 villages and 42 oil palm, forestry and mining concessions. ZSL has been working with these businesses and communities to encourage sustainable land use, implement SPOTT (our Sustainable Palm Oil Transparency Toolkit) and create habitat connectivity for wildlife.

A SPOTT report – *Hidden Land, Hidden Risks?* – revealed that many of the world's largest palm oil producers are failing to publicly disclose their total land holdings, leaving these areas vulnerable to risks such as habitat loss. Preparations to expand SPOTT to cover other commodities are under way, starting with transparency assessments of timber, pulp and paper companies. In 2016 we published our *Toolkit for Wildlife Protection in Timber Concessions*, offering guidance to timber companies on how to minimise the impacts of their operations on wildlife. We are working with two training centres in Cameroon to incorporate the toolkit into their teaching curricula.

Collaborative financing

In March 2016, we began a three-year testing phase of the Rhino Impact Investment (RII) Project. An initiative of NGO coalition United for Wildlife, RII is executed by ZSL alongside nine leading conservation, financial and legal sector partners. Piloting a new, flexible financing mechanism, the RII allows private investors to inject valuable funding for the benefit of conservation, based on the demonstrated achievement of results.



We are tackling the blight of plastic waste in the ocean by campaigning to prevent bottles from entering the waste stream

84%

of SPOTT assessments on palm oil companies have seen transparency scores for environmental, sustainability and social and governance reporting improve, some by more than 33%



334

4

serious pollution events were reported to Thames Water and the Environment Agency

plastic water bottles, from 10 countries, were collected during a 20-minute survey of 100m of beach on an uninhabited island in the Chagos Archipelago

696

sewer outfalls were assessed in the Thames, of which 23.4% showed pollution signs and 3.5% were seriously polluted

Encouraging lifelong learning

From school children and business owners to world leaders, ZSL is committed to connecting people with, and educating them about, nature.

At ZSL we aim to inspire, from families visiting the Zoos, to budding veterinarians; we want to ensure a future for wildlife by creating a team of advocates around the world.

We engage with the public from an early age, holding special events aimed at young students from primary school through to undergraduates. Over 200,000 children came to our Zoos on school visits in 2016. More than 70,000 of these participated in our formal learning sessions on topics ranging from Colour, Pattern and Camouflage to Zoo Genetics and Breeding. We taught a further 1,000 children in their own classrooms through our Digital Outreach sessions.



In 2016, more than 870,000 people attended a live demonstration or talk at ZSL London Zoo, and over 522,000 attended a talk at ZSL Whipsnade Zoo, with the passionate Live team sharing news from our global conservation efforts. To celebrate the launch of *Land of the Lions* we introduced a new interactive lion rescue talk at London to engage visitors with the work of our vets in India, featuring a detailed, 'breathing' model lion. The entire exhibit, modelled to replicate the habitat in Sasan Gir, India, is designed to educate visitors about the little-known Asiatic lion.

Our Special Children's Day events at both Zoos welcomed more than 5,000 individuals with special needs, and their families, to enjoy tailored activities and events.

Sharing conservation knowledge

We conducted several training courses in the field, including a veterinary course held at India's Sariska Tiger Reserve. A key aim of ZSL's Wildlife Health Bridge initiative

is to develop conservation skills in developing countries, and the course attracted 26 wildlife vets from six countries.

In the UK, we hosted the inaugural Conservation Optimism Summit alongside the Interdisciplinary Centre for Conservation Science at the University of Oxford and the Durrell Wildlife Conservation Trust. The meeting was one of 25 around the world and focused attention on how conservation can succeed – despite depressing statistics and headlines – and how to inspire people to get involved.

ZSL's regular symposia brought together international experts to discuss pressing topics in conservation science, while more than 1,500 people attended our free monthly science and conservation talks in 2016. One of the highlights was 'Saving pangolins: Earth's most trafficked wild animals', with speakers from ZSL, IUCN and TRAFFIC.

The 2016 Stamford Raffles Lecture, our foremost science event of the year, was delivered by Jane Hill of the University of York, who described how species distributions shift due to climate change – a topic picked up in a recent ZSL report (see pages 12-13).

We continue to publish scientific journals and books on the latest research in zoology and conservation science – *Animal Conservation*, the *Journal of Zoology*, *International Zoo Yearbook* and *Remote Sensing in Ecology and Conservation* – which can be found online or in the ZSL Library and Archives. Our magazine, *Wild About*, provided 110,000 ZSL members with in-depth stories about animals and the conservation and research work we do to ensure the survival of species. The Library also loaned books and images to the Wellcome Collection's Making Nature exhibition, which attracted more than 130,000 visitors.

Empowering tomorrow's conservationists

As part of our collaboration with United for Wildlife, ZSL leads an online learning project that aims to educate the next generation of conservation leaders. Building on the free, introductory online conservation courses launched in 2015, we developed three new courses in 2016, on species prioritisation, illegal wildlife trade and marine conservation. Each consists of lessons, mini-assessments and quizzes, as well as a community forum for users to discuss topical issues, course content and their own conservation experiences.



Children enjoyed educational visits to ZSL London Zoo, while *Land of the Lions* (below left) provided new learning opportunities

75

MSc students and 60 PhD students were taught by ZSL, and 193 scientific papers were published by ZSL staff in 2016

8,500

learners from 196 countries have registered for United for Wildlife online courses by ZSL

14

Soapbox Science events promoting the work of 168 female scientists (including ZSL's) were held in 2016, reaching more than 55,000 people

138,431

downloads have been made of ZSL's *Instant Wild* app for identifying wildlife caught on camera around the world

346

young people attended one of our 73 specially organised events, such as the ZSL Zoo Academy and Animal Careers Conference, in 2016



Our Zoos

ZSL's two world-class Zoos lead the way in animal care and innovation, allowing us to engage with a diverse, passionate and well-informed audience.

ZSL London and Whipsnade Zoos contribute to our conservation, research and education through *in-situ* research and exemplary care, and support our overseas research and conservation.

As part of our mission to save threatened species, ZSL Zoos are involved in a number of international breeding programmes and celebrated the birth of several animals. At ZSL Whipsnade Zoo, our new crocodile exhibit was the scene for the hatching of four Vulnerable West African dwarf crocodiles, while Whipsnade also saw the birth of an Endangered Grevy's zebra. At ZSL London Zoo we welcomed the births of Malcolm, an Endangered aye-aye – the first ever born at ZSL London Zoo; a Critically Endangered Sulawesi crested macaque; twin Critically Endangered Sumatran tigers, Achilles and Karis; and the arrival of Bhanu, an adult male Endangered Asiatic lion from Winnipeg Zoo, Canada.

the field to protect these iconic animals, ZSL is working with the Gujarat Forest Department, Sakkarbaug Zoo and the Wildlife Institute of India to share information and assess and improve existing animal care techniques.

The Queen and The Duke returned in April 2017, this time to ZSL Whipsnade Zoo, to open a new home for our herd of nine Asian elephants. The Centre for Elephant Care, set within seven grass paddocks, provides an additional 700m² of indoor space for the elephant herd, including young calf Elizabeth – born in June 2016 and named in honour of Her Majesty's 90th birthday. The Centre contains a host of features such as one-metre-deep soft sand flooring and automated feeding systems. It aims to inspire visitors to support ZSL's elephant conservation work in Thailand.

We created a new space for our African hunting dogs at ZSL Whipsnade Zoo. Built to home five females bred at ZSL London Zoo, the exhibit features 8,500m² of outdoor space and a zip-line for keepers to use as a feeding tool to encourage the dogs' instinctive hunting behaviour. The African hunting dog is Endangered due to habitat fragmentation and human-wildlife conflict, and our intention is to form a new conservation breeding group, as part of the European Endangered Species Programme (EEP).

A special birthday

Sir David Attenborough's 90th birthday was celebrated at ZSL London Zoo with an event to officially rename the Komodo dragon enclosure *The Attenborough Komodo Dragon House*, attended exclusively by ZSL people and Sir David himself. Sir David expressed his delight at both the renaming of the exhibit and the progress and developments at ZSL London Zoo. The event generated international news headlines for the Society in 175 articles.

Moving day

In March 2016, HM The Queen (pictured above at the opening ceremony) and HRH The Duke of Edinburgh officially opened ZSL London Zoo's biggest exhibit experience to date, *Land of the Lions*. Home to a pride of four Endangered Asiatic lions, the 2,500m² development attracted more than 13,000 visitors on its opening day and was designed to transport visitors to the vibrant setting of Sasan Gir in India, the lions' last stronghold. Once widespread from the Mediterranean to eastern India, the Asiatic lion has now been reduced to a patch of forest the size of London. As well as working in

Gorilla news

ZSL London Zoo's male silverback gorilla, Kumbuka, made headlines in October 2016, when he left his enclosure for a short time. Despite misleading news reports, Kumbuka was never in a public area, after making his opportunistic escape through an unlocked door.

Thanks to regular training and quick-thinking staff, Kumbuka was quickly sedated and returned to his den. We've conducted an internal investigation and continue to evaluate our working practices so we can be reassured our animals are safe in the care of a team of dedicated zookeepers.





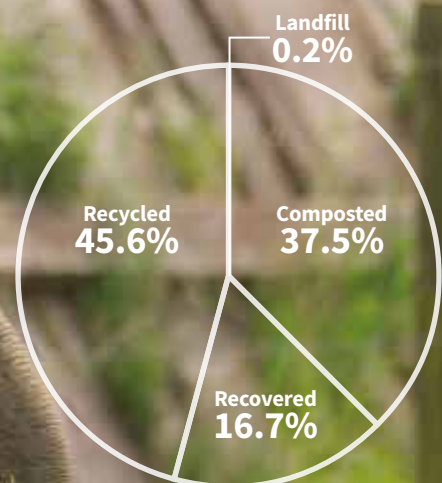
“

Zoos today are key institutions in the way we cherish the natural world. The attitudes which you will instil into your visitors here are crucial to the way in which we regard and look after the natural world, on which we depend. It's institutions like this that are mind changers. And I am therefore very honoured indeed you should name [*The Attenborough Komodo Dragon House*] after me.

Sir David Attenborough
at ZSL London Zoo,
9 August 2016

”

WHERE OUR WASTE GOES



292

trees have been 'saved' through cardboard and paper recycling across both ZSL sites

99.75%

of waste at both Zoos was diverted from landfill in 2016, for which we received a Gold Award from the Green Tourism Business Scheme



Making our work possible

ZSL’s global conservation efforts, groundbreaking scientific research and inspiring education programmes would not be possible without the dedication of our people, the vital funds raised from visitors at both our Zoos, special events and campaigns, and the development and maintenance of essential resources.

After our rebrand in 2015, we built on the success of ‘Let’s work for wildlife’ with our first-ever mission-led campaign aimed at raising awareness of ZSL’s international conservation work. The campaign’s message, ‘Imagine a world without wildlife’, was shared via a 40-second advert in cinemas and online, posters around London, a social media campaign and our Zoos. The film garnered 1.8 million views and received 50,000 likes and shares across social media, with VIP support for the campaign from the likes of Bill Bailey and Dermot O’Leary helping to reach 8.4 million people.

Investing in our people

The passion, ingenuity and diversity of our people is what makes the work of ZSL possible. A key focus for training and development in 2016 was devising and launching the ZSL competency framework. With hundreds of different jobs across ZSL, one constant for everyone is how we behave and treat each other. These competencies have been embedded into a newly designed appraisal process and form the basis of a leadership development programme and three new Institute of Leadership and Management (ILM) accredited programmes.

We continued to invest heavily in upskilling our staff. Six hundred people attended internal workshops in 2016, while a further 801 received health and safety or role-specific training. Despite an increase in recruitment campaigns to 296 in 2016 (a rise of 4% on 2015), our new recruitment system managed to reduce ‘time to hire’ by four weeks per role – saving valuable time and money.

Over the past two years we have worked closely with City and Islington College, London’s largest, to provide training and interviewing opportunities for its students. The programme involves learning how to write a CV, as well as interview and customer service skills. Upon successful completion, students were given the opportunity to interview for sales assistant and presenter roles at ZSL. We were presented with the Employer of the Year Award at the college’s 2016 student awards ceremony.

Working overseas

Beyond our London and Whipsnade sites, we are also working to increase support for our international teams, such as by improving insurance provision for staff based outside the UK.

Health and safety is another key priority, and we are conducting safety reviews to inform future planning in key countries, with the Philippines, Cameroon and Kenya covered so far. Cameroon has also hosted Wilderness First Aid training for field teams,

as has Indonesia; these bespoke sessions covered first aid provision in the difficult environments the teams work in, and also included tips on vehicle safety in off-road driving conditions.



The passion, ingenuity and diversity of our people is what makes the work of ZSL possible





60,000

hours of time (almost) have been donated over the past year by ZSL's 365 dedicated volunteers

8.4m

people were reached by the 'Imagine a world without wildlife' campaign

Horticulture

At ZSL, our Zoos provide an enjoyable and natural experience for both visitors and residents. The horticulture team is vital to this, ensuring the effective landscaping of exhibits, providing forage and browse crucial to our animals' enrichment, and keeping visitor trails impeccable. In 2016 the team landscaped *Land of the Lions*, Gir Lion Lodge and *Zoorassic Park*, and undertook the replanting of our bongo paddock at ZSL Whipsnade Zoo.

Expanding our audience

We continuously strive to devise creative, fun and inspiring experiences and events that will raise funds to support the running of our Zoos and our global conservation work. This is supported by the work of our communication team, which seeks to raise awareness of ZSL's work.

At ZSL Whipsnade Zoo, 2016's big summer draw was our temporary exhibit *Zoorassic Park*. Visitors were immersed in a world of animatronic dinosaurs, learning about the prehistoric species and how extinction is still a risk to wildlife today. BBC children's TV presenter Andy Day entertained visitors with his show, *How to Train Your Dinosaur*.

Building on our strategy of using special events to drive new visits to Whipsnade and increase member visits, *Zoorassic Park* attracted 40,000 more visitors to the Zoo throughout the summer compared to the same period in 2015.

In May 2016, we launched our Gir Lion Lodge overnight experience at ZSL London Zoo's *Land of the Lions*. Guests stay at one of nine cabins (pictured right), just metres away from our pride of Asiatic lions, before being treated to exclusive evening and morning tours and a night-vision expedition. The Gir Lion Lodge experience received fantastic press coverage and positive guest reviews, and finished the year with an exceptional 80% occupancy rate.

In 2016, we also launched our new online retail shop (shop.zsl.org), bringing ZSL's retail products to a huge new audience of animal lovers. The online outlet is home to hundreds of high-quality, affordable and sustainably sourced products, many of which are exclusive to ZSL. Along with providing a new source of revenue for the organisation, the online shop enables shoppers around the world to support ZSL while buying a gift from the comfort of their own homes.



4,430

Fellows currently support ZSL

200

people pitched their tents and spent a night camping under the stars for our dinosaur sleepover, *Snorassic Park*

95%

of visitors said they would recommend *Zoorassic Park* to others

At Zoorassic Park, visitors were immersed in a world of animatronic dinosaurs and learned that extinction is still a threat

ZSL SCIENTIFIC AWARDS

ZSL recognises the impact of others and their outstanding achievements in conservation and zoological research through its annual presentation of awards and prizes held at ZSL London Zoo. The following awards were presented at our annual ceremony in June 2016:

Prince Philip Award and Marsh Prize for best A-Level project: *Sacha Eyles-Owen*

Charles Darwin Award and Marsh Prize for best undergraduate project: *Simon Chen*

Thomas Henry Huxley Award and Marsh Prize for best PhD thesis: *Shan Quah*

Scientific Medal for contributions to zoology within 15 years of completing a PhD: *Ashleigh Griffin, Sarah Reece, Claire Spottiswoode*

Silver Medal for outstanding contributions to communicating zoology: *Richard Fortey*

Stamford Raffles Award for distinguished contributions outside the scope of professional zoology: *Malcolm Tait*

Frink Award for lifetime achievement in zoology: *Sarah Cleaveland*

Marsh Award for Conservation Biology: *Richard Griffiths*

Marsh Award for Marine and Freshwater Conservation: *Richard Thompson*

Thomson Reuters Award for Communicating Zoology: *Tim Birkhead*

180,000

visitors attended Zoorassic Park during its six weeks

A future *with* wildlife

ZSL has a clear Vision and Mission for the years ahead – and our forthcoming strategy will keep animals and habitats at the forefront of our work.

As ZSL approaches its 200th anniversary in 2026, we are working on a new strategy to focus our work for the next decade. Our Vision, ‘*A world where animals are valued and their conservation assured*’, and our Mission, ‘*To promote and achieve the global conservation of animals and their habitats, through our innovative and inspiring science, education and conservation programmes in our Zoos and around the world*’, remain true to the principles set out in the Royal Charter granted to ZSL in 1829.

The strategy will ensure ZSL is focused on where we can work well together to achieve appropriate, measurable impact in everything we do. Our new strategic approach epitomises our core values: **together; inspiring; scientific; impactful; positive.**

Aims and priorities

We will launch our new strategy in 2018 to set out what we will do and the way we will work to achieve our Mission. While our direction remains unchanged, we have redefined our Strategic Aims as set out below. These aims describe the changes

we want to make in the world and represent our overarching goals.

- To improve the status of biodiversity by delivering world-leading science and conservation.
- To support our mission as a global leader in the care and conservation of animals in zoos, while providing a high-quality and engaging visitor experience.
- To achieve understanding, learning and support for conservation by being an international centre of excellence for conservation education that engages and inspires society.

Cross-Society priorities

ZSL works at its best for wildlife when we draw on expertise and knowledge from across the Society. When we do this, we enable staff from our Zoos, research institute and field conservation programmes to work together to maximum effect, delivering on our Strategic Aims and protecting wildlife most in need. We will introduce a number of new **cross-Society priorities**, where we will bring together expertise and knowledge from across ZSL to tackle the issues facing wildlife around the world, effectively and efficiently. Alongside our core delivery areas, they will become focus areas across ZSL for people, resource and fundraising:

Landscapes and seascapes

We are identifying ‘showcase areas’ across the world, where specific ecosystems are key to species conservation and where different parts of ZSL, such as those working in our research institute, our Zoos and in field conservation, are collaborating on wildlife issues. We have chosen these places based on a range of attributes, including their ability to demonstrate long-term conservation benefits and foster cross-Society collaboration. We will showcase good practice and learning from these sites, identify ways to improve collaboration in other places where we are working, establish a basis for assessing future collaborative landscape priorities and foster further joint working to greater effect.

Wildlife health

Diseases, including non-infectious ones, are important drivers of species decline and extinction. Our experience shows that by understanding disease, assessing the risks and taking action to mitigate these, we can have a positive impact on threatened species. This priority brings together experts across science, zoos and conservation to identify, understand and reduce the threat of disease to wildlife conservation, taking a holistic approach to this issue. Our experience and existing work in this area, including research into diseases and their causes and effects, developing and sharing good practice and capacity building in the sector, will inform



the development of key work areas across research, education and conservation.

Wildlife trade

Wildlife trade, both legal and illegal, is a key threat to many species. We are identifying key species that are particularly at risk from the effects of trade and where we have the expertise and opportunity to make a difference. We are developing an approach and a range of interventions bringing together expertise from across ZSL. We will build on our long-standing positive track record in this area: strengthening wildlife protection, enhancing wildlife law enforcement, carrying out research to better understand and address the effects of wildlife trade, capacity building, supporting confiscations and management of seized wildlife, and changing behaviours to reduce demand for wildlife products.

Developing the detail

The strategy and detailed delivery plan will continue to be developed in preparation for launch in 2018.

As we roll out the new strategy for ZSL, we will continue to work for wildlife, and 2017-18 will see ZSL deliver an exciting array of events, symposiums and scientific talks to inspire the public to support our work.

New Director General

In early 2017, Director General of ZSL Ralph Armond announced his intention to retire at the end of the year, after more than 13 years at the helm of ZSL.

During Ralph's tenure, the Society increased the number of conservation projects around the world, developed its scientific research output, and raised the number of visitors to ZSL London Zoo and

ZSL Whipsnade Zoo. The recruitment process began in spring 2017 to find a new Director General for ZSL, who will steer the organisation into the future.

New Director of Conservation

Following the departure of Jonathan Baillie in 2016, a new Director of Conservation, Matthew Hatchwell, will join ZSL's Board of Directors in 2017.

Moving to ZSL from the Wildlife Conservation Society, where he was Director for International Policy and Programme Development, Matthew will be responsible for leading ZSL's conservation in more than 50 countries, working alongside governments, NGO partners and local communities to protect species and their habitats worldwide.

New at the Zoos

This year will see the unveiling of a brand-new home for ZSL London Zoo's northern white-cheeked gibbons. *Gibbons* will immerse visitors in the primates' treetop habitat and teach them about the close connection between humans and small apes. The new exhibit will highlight ZSL's important gibbon conservation work in China, where ZSL scientists are working to safeguard the world's rarest ape, the Hainan gibbon.

Proud global leaders in welfare and animal care, we are continually working to improve the habitats of our animals. The sea lion exhibit at ZSL Whipsnade Zoo will be rejuvenated in 2017-18 to increase enrichment for the marine mammals and create new areas for them to rest on land, while new reef tanks will be unveiled in ZSL London Zoo's Aquarium in early 2018, highlighting ZSL's work with the Heathrow-

based UK Customs to rescue illegally smuggled animals.

Engaging and inspiring

Inspiring passion, advocacy, and support for wildlife is intrinsic to our work, and 2017-18 will see the launch of a brand-new schedule of events across ZSL to engage the public with conservation.

Zoo Nights, a new evening event, will be launched in June 2017 at ZSL London Zoo. The adult-only event will offer guests a unique experience, featuring interactive guided tours and wildlife mystery trails, as well as talks and a varied street-food festival.

Our live interpretation team continues to create new ways for the Zoos' visitors to get involved and learn more about ZSL's work. A new show will be launched at ZSL London Zoo, *Gruesome Nature Live*, featuring fun and witty songs composed exclusively for ZSL, to celebrate the weird and wonderful creatures protected through ZSL's EDGE of Existence programme.

At ZSL Whipsnade Zoo, special guests and activities will be helping visitors explore the work of ZSL from a new perspective. Author Rod Campbell will be celebrating the 35th anniversary of his iconic children's book, *Dear Zoo*, during May half-term, with storytelling sessions, and summer will be the season of survival, with a special event, created by TV presenter Bear Grylls, highlighting the remarkable survival skills of wildlife.

A new campaign will be launched in 2017 to raise awareness of the breadth of a Zoo visit at ZSL and the impact on the charity's mission. #ZooLife will feature the strapline 'Really great days out which make a real difference' to drive home this message to key UK audiences.



Getting involved

ZSL inspires support worldwide, from individual members to sponsorship from like-minded businesses, and their generosity is crucial to our success.

A major focus for 2016-17 was an application to the Heritage Lottery Fund for the redevelopment of the Snowdon Aviary at ZSL London Zoo as a new home for our family of colobus monkeys. In April 2016, we were delighted to be awarded the first stage of funding, which has enabled us to spend a year developing the project, working alongside renowned architects Foster + Partners.

Fellows and Patrons

Patron numbers and contributions have grown in 2016-17 to achieve the highest income in the history of the programme. Retention rate continues to be very high, achieving close to 90%.

Fellowship engagement strengthened in 2016-17, with high attendance at our Fellows' receptions at our scientific talks and the Fellows' previews of *Land of the Lions*. Freshers' Fairs continue to be a successful activity for Fellowship recruitment, and we diversified in 2016-17 beyond the five London university fairs to include engagement with student societies and groups, including the Cambridge Conservation Unit and the Association of Veterinary Students.

Working with businesses

We were proud to name Liontrust, a specialist fund management group, as sponsor of ZSL's Asiatic lion campaign for the second year running (pictured above). We were also thrilled to welcome Panasonic, who worked with us on a variety of ZSL experiences, including Gir Lion Lodge, Safari in the City and the ZSL Animal Photography Prize. One of our newest corporate sponsors, equipment rental company Lavendon Group, created a custom-designed giraffe-themed cherry picker to hire out to its clients, donating all proceeds to ZSL.



The Cinnamon Collection, a group of contemporary Indian restaurants, chose to support ZSL through a 'dine and donate' scheme and, further afield, family-owned Norwegian ice cream manufacturer Hennig-Olsen donated to ZSL's Amur Leopard and Tiger Alliance programme, supporting our rapid-response teams in Russia working to protect Amur tigers, through sales of its Tiger lolly.

We are also extremely grateful to businesses who donated their time and materials. Global law firm White & Case and engineers Expedition donated their expertise; Bloomberg donated advertising space; Enterprise Plants helped to refurbish our Blackburn Pavilion with a variety of tropical plants; and Farm & Stable Supplies LLP provided us with heavy-duty weighing scales for our Bactrian camels.

Fundraising events

In 2016-17, more than 2,400 fearless fundraisers took on a whole host of challenges to raise funds for the Society – from throwing themselves out of a plane to swimming through cold water on a summer's evening.

Streak for Tigers returned for its fourth year, with 200 thrill-seekers streaking after hours around ZSL London Zoo to help raise vital funds for ZSL's

international tiger conservation work. The 2017 spring Stampede at ZSL London Zoo saw the introduction of a new 5k route to the running event, as well as the traditional 10k option, opening up the event to beginners.

Our annual fundraising gala, Safari in the City, was a great success. The third event of its kind, it provides an opportunity for ZSL to engage with supporters. Lord Archer was our auctioneer for the evening and helped raise £360k to combat illegal wildlife trade.

The Roar with Laughter comedy gala returned for a fifth consecutive year in November 2016, with famous comedians including Dara Ó Briain, Alan Davies and Aisling Bea kindly donating their time and jokes to the Society's efforts to work for wildlife.



Keepers are lifted up in this unique giraffe boom, named Yazz, donated by Lavendon Group to ZSL Whipsnade Zoo

8

3,000

supporters attended the Roar with Laughter comedy fundraising event at the Hammersmith Apollo

110,649

ZSL members

legacy donations

were given to ZSL in 2016-17



Over

2,400

fearless fundraisers took on a whole host of challenges to raise funds for ZSL

Get involved

To find out how to support ZSL, visit [zsl.org/get-involved](https://www.zsl.org/get-involved)



Support

ZSL's achievements would not be possible without the generous support of the individuals and agencies listed here. We would like to thank Fondation Segré for its support for the EDGE of Existence programme over the next five years and its ongoing funding of our global pangolin conservation initiative; the latter in conjunction with the IUCN SOS Fund, which, alongside the US Fish and Wildlife Service and DEFRA's Darwin Initiative and IWT Challenge Fund, also provides vital support for our projects in Africa and Asia.

For our marine conservation work, we thank the John Ellerman Foundation for help in securing large-scale marine protected areas; the Bertarelli Foundation for enabling our comprehensive science and conservation programme in the British Indian Ocean Territory; the Turing Foundation and the German Corporation for International Cooperation (GIZ) for scaling up mangrove restoration in the Philippines; and Selfridges for its ongoing support for Project Ocean, while ZSL's 'Our Sea Our Life' project in Mozambique has been supported by the European Union and Fondation Ensemble. We would like to thank the Ray C Anderson Foundation and the St Andrews Prize for the Environment for funding our Net-Works initiative; our #OneLess campaign is grateful for the support of the Calouste Gulbenkian Foundation and the Oak Foundation, and the latter, along with the Royal Foundation of The Duke and Duchess of Cambridge and Prince Harry, has also provided critical funding for rhino protection in Kenya, where investment from the UNDP-GEF has enabled the launch of our Rhino Impact Investment project. In Indonesia, our flagship landscape management partnership is supported by aid from the UK Government and the Norwegian Ministry of Foreign Affairs.

We are also grateful to the David and Lucile Packard Foundation for contributions to palm oil landscape management in Indonesia; the Rufford Foundation for ongoing support of our work in Cameroon and Kenya; and the Arcus Foundation, Disney Conservation Fund, Dorothy Howard Charitable Trust, Regina Bauer Frankenberg Foundation, Shining Charitable Trust, and the Elephant Crisis Fund for vital funding of our efforts to secure populations of Critically Endangered species. Our work to protect tigers in Nepal and Indonesia is also supported by the IUCN and KfW, and UNDP-GEF, respectively.

To all our donors listed here, and also those who have chosen to remain anonymous, ZSL would like to extend its utmost gratitude.

Royal Patrons
Her Majesty The Queen
His Royal Highness
The Prince of Wales

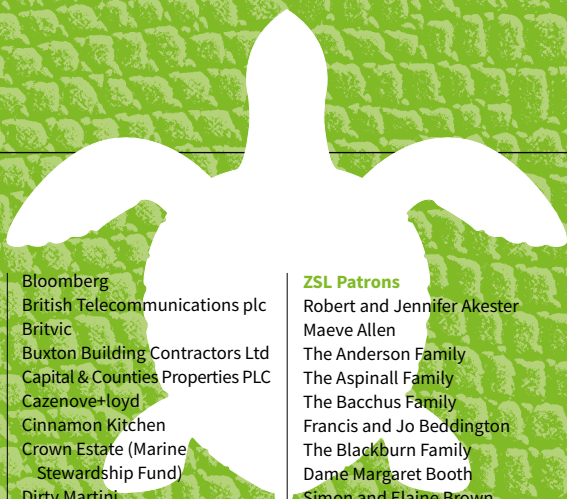
Charities, Trusts, Foundations, Statutory Bodies and Zoos

21st Century Tiger
 A G Leventis Foundation
 Agreement for the Conservation of Small Cetaceans in the Baltic and North Seas (ASCOBANS)
 Conservation Fund
 American Chemistry Council
 Amur Leopard and Tiger Alliance
 Animal and Plant Health Agency
 Antwerp Zoo
 The Architectural Heritage Fund
 Arcus Foundation
 AXA Foundation
 Badger and Cattle Vaccination Initiative (Save Me Trust)
 BBC Children in Need
 Bellewaerde
 Bertarelli Foundation
 Bioparco di Roma
 Biotechnology and Biological Sciences Research Council
 Blackpool Zoo
 British and Irish Association of Zoos and Aquariums (BIAZA)
 National Aquarium
 Conference Fund
 BIAZA Small Mammal Working Group
 British Ecological Society
 British Embassy, Kathmandu
 British Indian Overseas Territories Administration
 Bromley High School
 Calouste Gulbenkian Foundation
 Cardiff University
 Cecil King Memorial Fund
 Chagos Conservation Trust
 Charities Advisory Trust
 Charles Hayward Foundation
 Cheyenne Mountain Zoo
 City Bridge Trust
 Copenhagen Zoo
 Cordaid
 Crane Valley Partnership
 Darwin Initiative, DEFRA
 The David and Lucile Packard Foundation
 Daytrippers
 Disney Conservation Fund
 Dorothy Howard Charitable Trust
 The D'Oyly Carte Charitable Trust
 The Dr Robert Andrew Rutherford Trust
 Dreamworld Wildlife Foundation
 DS Smith Charitable Foundation
 Dublin Zoo
 Dudley Zoological Gardens
 East Yorkshire Long Distance Walkers Association
 Edinburgh Trust No. 2
 Emanuel J Friedman Philanthropies
 Environment Agency
 Environment Canada
 Environmental Resources Management Foundation

Ernest Kleinwort Charitable Trust
 Esmée Fairbairn Foundation
 European Association of Zoos and Aquaria (EAZA)
 European Commission
 European Union
 European Union Environment and Sustainable Management of Natural Resources including Energy (ENRTP)
 The Finnis Scott Foundation
 Fondation Ensemble
 Fondation Le Pal Nature
 Fondation Segré
 Fort Wayne Children's Zoo
 Fota Wildlife Park
 The Foundation for the Conservation of Salamanders
 Friedman-French Foundation
 German Corporation for International Cooperation (GIZ)
 The Global Environment Facility (GEF) through the United Nations Development Programme (UNDP)
 Government of Mongolia
 Hamerton Zoo Park
 Heathrow Community Fund
 Helsinki Zoo
 Heritage Lottery Fund
 Higher Education Funding Council for England
 The Hintze Family Charitable Foundation
 Honolulu Zoo
 Howard G. Buffett Foundation
 Indianapolis Zoo
 International Institute of Rural Reconstruction
 International Union for Conservation of Nature (IUCN)
 Cat Specialist Group
 IUCN UK
 IUCN/European Commission – Biodiversity and Ecosystem Services in Territories of European Overseas (BEST)
 IUCN-KfW Integrated Tiger Habitat Conservation Programme
 IUCN's SOS – Save Our Species initiative
 Jacksonville Zoo
 James Gibson Charitable Trust
 John Ellerman Foundation
 John S Cohen Foundation
 John Spedan Lewis Foundation
 Kenya Wildlife Trust
 Kolmarden Fundraising Foundation
 Laurentian University
 The March Conservation Fund of the Tides Foundation
 Maungatautari Ecological Island Trust
 Medical Research Council (MRC)
 The Michael & Nicola Sacher Charitable Trust
 Minnesota Zoo Foundation
 Mohamed bin Zayed Species Conservation Fund
 Morris Animal Foundation
 National Aquarium Ltd
 National Geographic Society

Natural England
 Natural Environment Research Council
 Natural Resources Wales
 The Nature Conservancy
 New England Aquarium
 New Zealand Department of Conservation
 Norway Government – International Climate and Forest Initiative
 Oak Foundation
 Ocean Park Conservation Foundation, Hong Kong
 Oceanario Lisboa
 Omaha's Henry Doorly Zoo
 Orana Wildlife Park
 Oregon Zoo
 Oriental Bird Club
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 Palm Beach Zoo & Conservation Society
 Panthera
 The Panton Trust
 Paradise Wildlife Park & Wildlife Heritage Foundation
 Parco Zoo Punta Verde
 Parken Zoo
 The Patron's Fund
 Pauline Meredith Charitable Trust
 People's Trust for Endangered Species
 Philippines Ecosystems Research and Development Bureau
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 Potawatomi Zoo
 Príncipe Trust Foundation
 The Ray C Anderson Foundation
 Regina Bauer Frankenberg Foundation
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 Rivers and Wetlands Community Days
 The Rose Foundation
 The Royal Foundation of The Duke and Duchess of Cambridge and Prince Harry
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 Royal Society for the Protection of Birds
 Royal Society of New Zealand (Marsden Fund)
 Rufford Foundation
 Sahara Conservation Fund
 San Diego (Zoological Society of San Diego)
 Santa Barbara Zoo
 Sargasso Sea Commission
 Saudi Wildlife Authority
 Save the Elephants
 Save the Elephants and Wildlife Conservation Network's Elephant Crisis Fund
 Science and Technology Facilities Council
 Seoul Grand Park Zoo
 Shepreth Wildlife Conservation Charity





Sir Siegmund Warburg's Voluntary Settlement
 SOS Félinis
 SPIRIT of Conservation (ConocoPhillips/ National Fish and Wildlife Fund)
 St Louis Zoo
 Stiftung Artenschutz Munster
 Sustainable Fisheries Greenland
 Symbio Wildlife Park
 Synchronicity Earth
 Taiwan Forestry Bureau
 Tallinn Zoo
 Taronga Conservation Society Australia
 Tayto Park
 Thriplow Charitable Trust
 Turing Foundation
 US Embassy London
 UK aid from the Government
 UK Department for Environment, Food and Rural Affairs (DEFRA)
 UK Foreign and Commonwealth Office
 The UK Government through the IWT Challenge Fund
 UK Trust for Nature Conservation in Nepal
 United Nations Development Programme (UNDP)
 United States Fish and Wildlife Service – Africa
 United States Fish and Wildlife Service – African Elephant Conservation Fund
 United States Fish and Wildlife Service – Asian Elephant Conservation Fund
 United States Fish and Wildlife Service – Combating Wildlife Trafficking
 United States Fish and Wildlife Service – Critically Endangered Animal Conservation Fund
 United States Fish and Wildlife Service – Rhino and Tiger Conservation Fund
 Universities Federation for Animal Welfare
 University College London
 University of Edinburgh
 University of Leicester
 USAID
 USAID Ecosystems Improved for Sustainable Fisheries
 Utah's Hogle Zoo
 The Waterloo Foundation
 West Midland Safari Park
 Wild Trout Trust
 Wildcat Foundation
 Wilhelma Stuttgart Zoo
 The Waxtree Trust
 Woburn Safari Park
 WWF International
 WWF Namibia
 WWF UK
 Yorkshire Wildlife Park Foundation
 Zoom Torino
 ZSL America

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 Dirty Martini
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 H A Bennett
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 Inenco Group
 Interface
 J C Bamford Excavators Limited
 Lavendon Group
 Liontrust
 Mazuri Zoo Foods
 Nationwide Building Society
 Panasonic
 Paper Round
 Pareto Facilities Management
 Petplan
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 Sipsmith Distillery
 Southoe Consultancy Ltd
 Sovereign Capital Partners
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 Ian Webb
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Donations in memory of

Cyril Brenman
 Robert and Paul Dodsworth
 Jake Hughes
 Surinder Kaur
 Mittra Kirby
 Lucy Pendar
 Margaret Stead

Legacies from the Estates of

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 Donald Evans
 Margaret Jeapes
 Jeanette Jenkins
 Richard John Martin
 Avis Palmer
 Ashley Thomas Smith
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Financial summary

Despite some challenging times in the wider world, ZSL has continued to grow and invest in the future of wildlife – as this review of our finances makes clear.

ZSL has continued to perform successfully during the 16-month financial period from 1 January 2016 to 30 April 2017, with total income of £85.6m over 16 months to fund our charitable activities across our mission areas. In a challenging political and economic environment, and with terror incidents in Europe and the UK over this period, it is a testament to the staff and supporters at ZSL that the Society was able to grow in many areas.

The Society changed its financial year end from 31 December to 30 April to enable budgeting and business planning processes to be carried out during the quieter months. This change in financial year end has extended the current reporting period from 12 to 16 months. This will revert back to 12 months for the 2017/18 financial year and future reporting periods.

Considerable capital investment has been made during the year across both Zoos to enhance our visitor experience and develop engaging new exhibits to promote and

support the conservation work that we do. ZSL London Zoo saw the successful opening of *Land of the Lions* and Gir Lion Lodge overnight accommodation during spring 2016. ZSL Whipsnade Zoo opened the Centre for Elephant Care and the African hunting dog exhibit in spring 2017.

As well as the admission income from our Zoos, membership schemes, grants and donations providing funding for our mission, ZSL aims to invest a further 10% of the cost of all new animal exhibits into conservation, to support related species in the wild through the creation of a designated conservation fund. All profits from our trading activities are used to support our charitable activities.

Expenditure on our field conservation work increased substantially from £7.3m for 2015 (12 months) to £18m for 2016/17 (16 months) as we expanded our fieldwork internationally. We have also increased the amount of work undertaken on our science and research activities during the year.

Going forward, we have continued to secure exciting new large-scale grants for our conservation and science work in the UK and

overseas. The generous support that we receive from our funders, donors and the visitors to our Zoos will remain critical to ensuring that we can sustain our vital conservation work into the future.

Income

For 2016/17, ZSL's total income increased to £85.6m (16 months): 16% higher than 2015 on a prorated basis. All income streams were successful in generating higher income.

In addition, we sold four paintings by the artist Jacques-Laurent Agasse at auction, which had been donated to ZSL. These raised £0.8m, helping to support the work of ZSL.

Zoo admission and membership schemes

Admission figures were strong at ZSL Whipsnade Zoo during the 16-month period in 2016/17, with a 3.3% increase in visitor numbers compared to the same 16-month period in 2015/16, continuing the long-term trend in growth in visitors. ZSL London Zoo maintained almost the same visitor numbers during the 16-month period in 2016/17. The numbers subscribing to our membership schemes

FINANCIAL HIGHLIGHTS

£m	2016/17 16 MONTHS			
	CHARITABLE ¹	TRADING ²	OTHER ³	TOTAL
INCOME	72.9	12.5	0.2	85.6
COSTS	(76.8)	(9.7)	1.8	(84.7)
SURPLUS	(3.9)	2.8	2	0.9

£m	2015 12 MONTHS			
	CHARITABLE ¹	TRADING ²	OTHER ³	TOTAL
INCOME	45.9	9.3	0.4	55.6
COSTS	(47.8)	(6.7)	3.9	(50.6)
SURPLUS	(1.9)	2.6	4.3	5

£m	2016/17 16 MONTHS	2015 12 MONTHS
	£m	£m
CAPITAL EXPENDITURE	6.2	9.5
CASH AND INVESTMENTS	21.1	19.5
GENERAL RESERVES ⁴	3.2	3.2
UNRESTRICTED LIQUIDITY	8.2	7.4

¹ Includes Zoo, membership, education, conservation programmes and science (Institute of Zoology), donations, legacies and raising funds

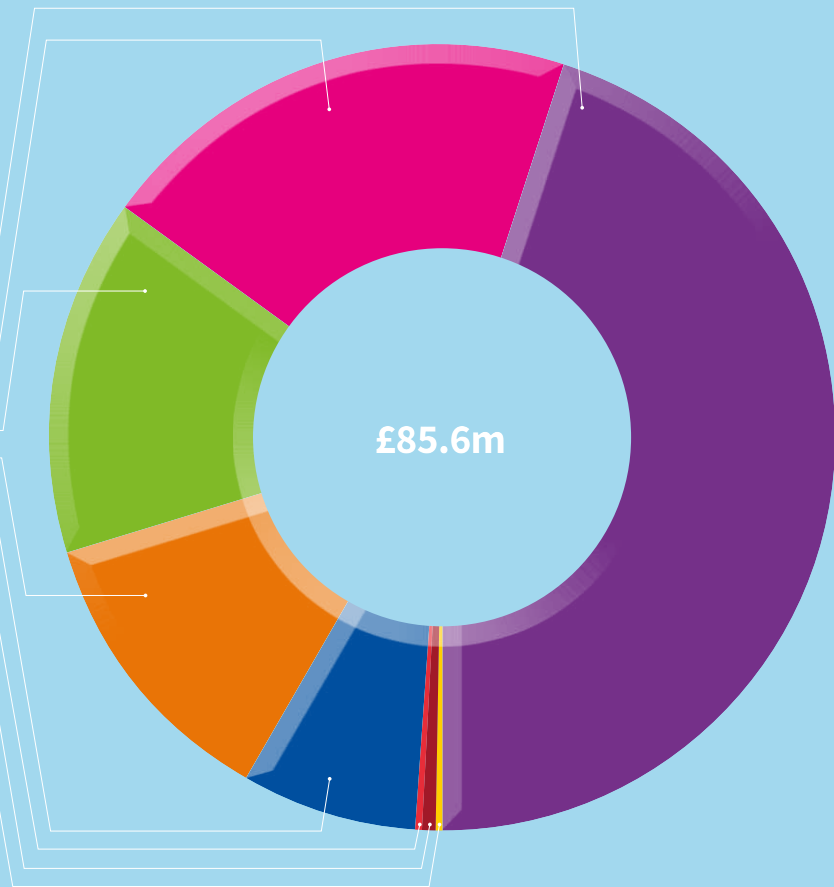
² Includes retail, catering, lodges at both Zoos and events/conferences

³ Includes gains on investments, VAT rebates from HMRC, and movements on pension liabilities

⁴ Funds not tied up in tangible fixed assets and other designated funds, any pension asset and restricted funds

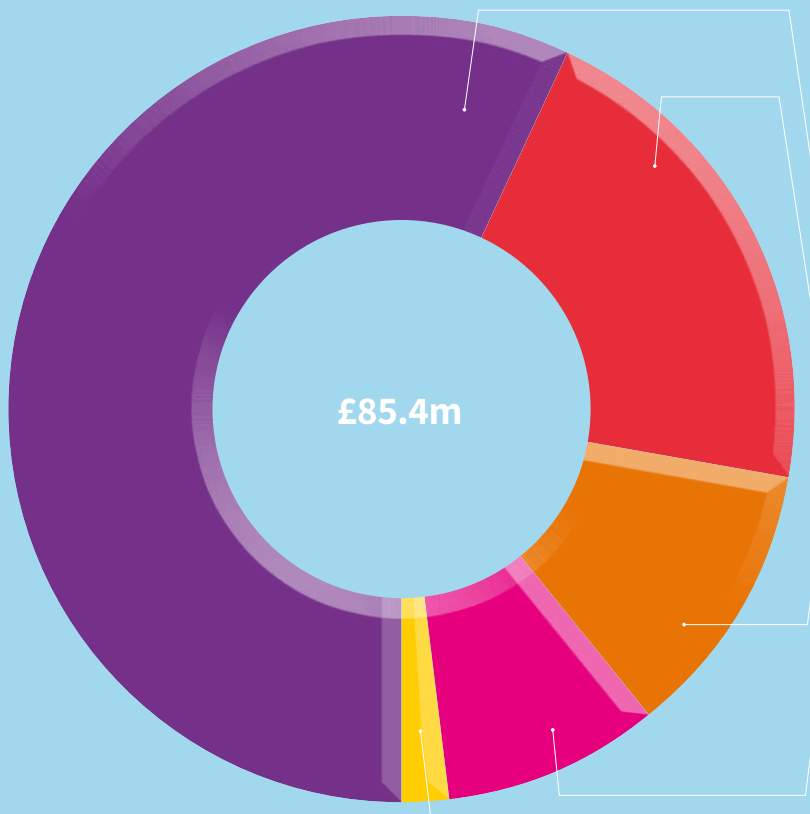
WHERE OUR INCOME CAME FROM IN 2016/17
(16 MONTHS)

- Zoo admissions and other **£38.1m**
- Grants & Foundations **£17.2m**
- Trading **£12.5m**
- Memberships **£10.6m**
- Donations & legacies **£6.3m**
- Sponsorships & promotions **£0.3m**
- Events & publications **£0.4m**
- Investment income **£0.2m**



WHERE OUR MONEY WAS SPENT IN 2016/17
(16 MONTHS)

- Looking after our animals **£48.2m**
- Field conservation **£18.0m**
- Costs of trading **£9.7m**
- Science & research **£7.8m**
- Cost of raising funds **£1.7m**



continued to increase in 2016/17 by 1% to 115,281 at 30 April 2017 (31 December 2015: 114,051), increasing income from membership schemes by 10% on a 16-month prorated basis.

Zoo commercial income

Commercial income from the shops, catering outlets and lodges in our Zoos increased by 1% to £12.5m in 2016/17 (16 months) on a prorated basis.

Donations and legacies

Donations and legacies increased to £6.3m in 2016/17 (16 months) from £3.6m in 2015 (12 months), with corporate sponsorships and promotions becoming an increasingly important source of income for us.

Grant income for our conservation and science work

Grant income from institutional donors, government agencies, trusts, foundations and private individuals grew significantly during 2016/17 (16 months) to £17.2m, compared to £7.6m in 2015 (12 months). This income provides essential funding for our field conservation, science and research work. This significant increase has enabled strong growth in our international programmes across the board, most notably in Asia and Africa. This income is primarily restricted to the specific projects that we undertake. The profits from our commercial activity also help to support the conservation work funded by these grants.

Investment income

We hold listed investments provided from restricted endowments and a scientific fund, together with funds held on our general reserves. The investment portfolio grew 18% in the period by £0.8m to £5.4m.

Expenditure

The Statement of Financial Activities shows the analysis of charitable activities split between expenditure on our Zoos, science and research, and field conservation. Total spending on charitable activities was £75.1m for 2016/17 (16 months) compared to £46.8m for 2015 (12 months). The increase is due to expanding our conservation programme activity internationally, growth in Zoo expenditure to improve the visitor experience and improve animal welfare, and general inflation.

We also benefited from a £1m rebate (2015: £1.588m rebate) of VAT on animal-keeping costs incurred between

2012 and 2015, which reduced our irrecoverable VAT cost included in our expenditure. This was the result of the successful outcome of a VAT claim from HMRC, following a tribunal.

Capital expenditure

ZSL has a continuous programme to replace old exhibits with new ones that provide improved animal welfare and lower maintenance and utilities costs, as well as new and innovative visitor experiences aligned with our conservation mission. During 2016/17 (16 months) we spent £6.2m on capital expenditure (2015: £9.5m for 12 months).

At ZSL Whipsnade Zoo this included the new Centre for Elephant Care opened by Her Majesty The Queen in April 2017, and the new African hunting dog enclosure. At ZSL London Zoo, *Land of the Lions* was opened by HM The Queen in March 2016, while we also improved the walk-through squirrel monkey enclosure and the Blackburn Pavilion, which holds our exotic birds.

In addition, there were works to improve facilities for staff, members, customers and volunteers, as well as an upgrade of our customer relationship management systems, to improve our interactions with our visitors at the gate and online.

Reserves policy

Reserves are maintained at a level that enables the Charity to manage financial risk and short-term income volatility. They allow the Charity to sustain optimal levels of science, research and conservation programme work over the long term, provide appropriate care for the animals in our Zoos and maintain the infrastructure that allows us to operate, ensuring that financial commitments can be met as they fall due.

ZSL's Council of Trustees has set a minimum liquidity and general reserves target to ensure the financial sustainability of the Society. The reserves target is based on the relationship between readily realisable cash and investments, future liabilities for committed capital developments, the cash requirements for sustaining ZSL's operations for a period of time and the level of general reserves required to support this.

ZSL's policy concerning the level of cash and investments and general reserves is to have funds available to cover the costs of running the Zoos during an emergency closure to the public for a period of up to three months, funding for ZSL's pension commitments and to meet liabilities as they fall due.

The Trustees' minimum liquidity and general reserves target is to hold readily realisable cash

and investments and general reserves in excess of £6.7m, increased from £4m in 2015. The policy is reviewed annually in connection with the setting of revenue and capital budgets and the charitable activities planned for the year.

At 30 April 2017, ZSL group held £8.2m of unrestricted liquidity (2015: £5.5m), (which was £1.7m in excess of the target minimum of £6.5m). ZSL has in place a revolving credit facility with Barclays Bank to provide additional short-term unrestricted liquidity, should this be required, during ZSL's low season for the Zoos.

General reserves, including the pension deficit (that is, those funds not tied up in tangible fixed assets and other designated funds, and restricted funds) for 2016/17 were £3.2m at 30 April 2017 (31 December 2015: £3.2m).

The general reserves at 30 April 2017 are £3.5m below ZSL's general reserves target (2015: £0.8m below the £4m general reserves target at the time). The Trustees are committed to increasing the level of general reserves through commercial activity and visitor income from our Zoos, general fundraising activities and through managing the phasing of future capital developments in order to build up the general reserves to reach their target level.

Investment policy

The investment policy is designed to support the reserves policy. The Charity seeks to adopt a cautious, prudent and well-diversified investment stance to balance potential returns with appropriate levels of risk, having regard to our mission objectives.

The Charter and Byelaws of ZSL give the Trustees the right to invest the funds of the Society in such investments, securities or property as may be thought fit. Investments are managed by Newton Investment Management Limited and M&G Investments, which have been instructed not to directly make investments that are contrary to the Society's stated purpose and objectives. Specific areas of constraint in investment include companies involved in animal testing, marine harvesting, high environmental impact products and practices using Red List ingredients and substances, and those using tropical hardwoods from unsustainable sources. In addition, all shareholder voting is to be actively conducted in line with these socially responsible guidelines and principles.

ZSL group holds most of its available funds in bank and short-term deposits, which at 30 April 2017 totalled £15.7m (31 December 2015: £15.9m), being the total of restricted, designated and general funds. In addition, ZSL holds listed investments of £5.4m

ZSL is investing in a wide range of educational experiences for visitors, such as the popular bird displays



£12.5m

was generated from shops, catering outlets and lodges in our Zoos

(2015: £4.6m), the majority in the Newton Investment Management Limited Socially Responsible Investment (SRI) Fund for Charities. This SRI Fund for Charities contains a mixture of funds with the intention of providing a balance between capital growth and income. The remainder are held in M&G Investments' Charifund, and a small number of listed investments.

The Charity ensures that performance is managed against appropriate benchmarks. The income from investments for the year was £0.2m (2015: £0.4m) and investment gains totalled £0.8m (2015: £0.1m loss). A review of the investment policy is conducted every year.

Pension schemes

The valuation of our ZS 1988 defined benefit pension scheme per Financial Reporting Standard (FRS102) shows a deficit of £3.4m at 30 April 2017 (2015: £2.3m), due to a £0.5m actuarial loss for 2016/17 (2015: £1.8m gain) before pension finance income and charges to service cost. The valuation is based on a full actuarial valuation as at 30 April 2017. The approach used for setting assumptions is to reflect market conditions at the year end, expected pay inflation and mortality assumptions. The main driver of the £0.5m actuarial loss in 2016/17 is the decrease in the yield on AA corporate bonds over 2016/17 (2.8% decreasing from 4%) and an increase in inflation assumptions, partly offset by higher than expected returns on scheme assets. The scheme value is very sensitive to the movement in bond yields; this has resulted in the scheme's deficit increasing as at 30 April 2017.

Funding levels of the ZS 1988 scheme continue to be monitored by ZSL and the pension fund Trustees on a regular basis. This scheme was closed to employees joining after 30 June 2011, with an auto-enrolment defined contribution scheme available for new employees. Given the increasing cost of this scheme, on 20 June 2017 ZSL will commence a 72-day formal consultation process with employee members of the ZS 1988 scheme on the closure of the scheme to the future accrual of benefits.

In addition, per FRS 102, ZSL is required to account for its commitment towards the future contributions required to address the deficit to the Universities Superannuation Scheme. This has required a £600k liability to be accounted for as at 30 April 2017.

Subsidiaries

Merchandising and catering are undertaken by Zoo Enterprises Limited (ZEL), a subsidiary

trading company, with the taxable net profits distributed to the Society annually.

The total income of ZEL during 2016/17 was £12.5m for 16 months (2015: £5.5m – 12 months), with a profit of £2.9m (2015: £2.5m – 12 months). On 31 December 2015 the trading business of Whipsnade Wild Animal Park Ltd (WWAP) (a ZSL subsidiary) was transferred to ZEL, and WWAP became dormant (2015: profit £0.1m – 12 months).

Financial position and 'going concern'

The Council of Trustees considers that there are sufficient general reserves and designated assets held at the year end to manage any foreseeable downturn in the UK and global economies. The Trustees consider that there is a reasonable expectation that ZSL has adequate resources to continue in operational existence for the foreseeable future and, for this reason, the Council of Trustees continues to adopt the 'going concern' basis in preparing the accounts.

Key management and remuneration policy

The Trustees determine and agree the overall policy for the remuneration and pension arrangements for all the Charity's employees and oversees any major changes to employee benefits.


The Charity's reward principles are to ensure the same remuneration system applies to all, except where there are justifiable reasons for making separate arrangements. For example, the Institute of Zoology's remuneration policy is aligned to the higher-education sector and has a separate remuneration committee linked to University College London.

The Charity aims to provide an overall reward package that is competitive within the sector it operates in. In assessing levels of remuneration, the Charity uses external professional advice and salary survey databases from public, private and charity sectors. While the Charity recognises that it should not and does not compete directly with the private sector on remuneration, it does aim to provide an overall reward package that is competitive to attract and retain high-calibre staff that are aligned with our mission, vision and values.

The Remuneration Committee reviews and approves the remuneration, benefits and pension arrangements of the Director General and the Director Group. Each position on the Director Group is individually benchmarked.



Recent expenditure included investment in new exhibits such as *Land of the Lions*, which opened in early 2016



£6.2m

was spent on capital expenditure, such as new and improved exhibits, during 2016-2017

13,000

visitors attended ZSL London Zoo for the opening day of *Land of the Lions* in 2016

£5m

worth of media coverage was generated from the opening of *Land of the Lions* and the Centre for Elephant Care, while 300 million people were reached by the stories

Principal risks and uncertainties

Every organisation must address uncertainty – and we have a robust system in place for identifying, managing and mitigating the risks we face.

ZSL is a diverse organisation operating business and mission functions in a number of discrete areas, each with their own unique set of challenges. In delivering all of our objectives we accept that we must face a range of risks, varying in substance and significance. We have strict procedures in place to identify and evaluate risk, and to design and implement effective measures not only to reduce the likelihood of risks occurring, but to limit the potential impact if those risks occur.

Our risk management process

We manage a Society-wide risk register, tracking and evaluating the strategic, operational, finance and compliance risks that we face. These risks are reviewed and assessed annually by our senior leadership team, our Finance and General Purposes Committee and our Council of Trustees, who have collective responsibility to identify, assess and manage risks, and ensure that risk management arrangements are robust, appropriate and comprehensive.

Outside of this annual assessment, we have risk assessment processes embedded in management

and operational processes, and a dedicated Head of Risk Management to track risks from an organisational perspective.

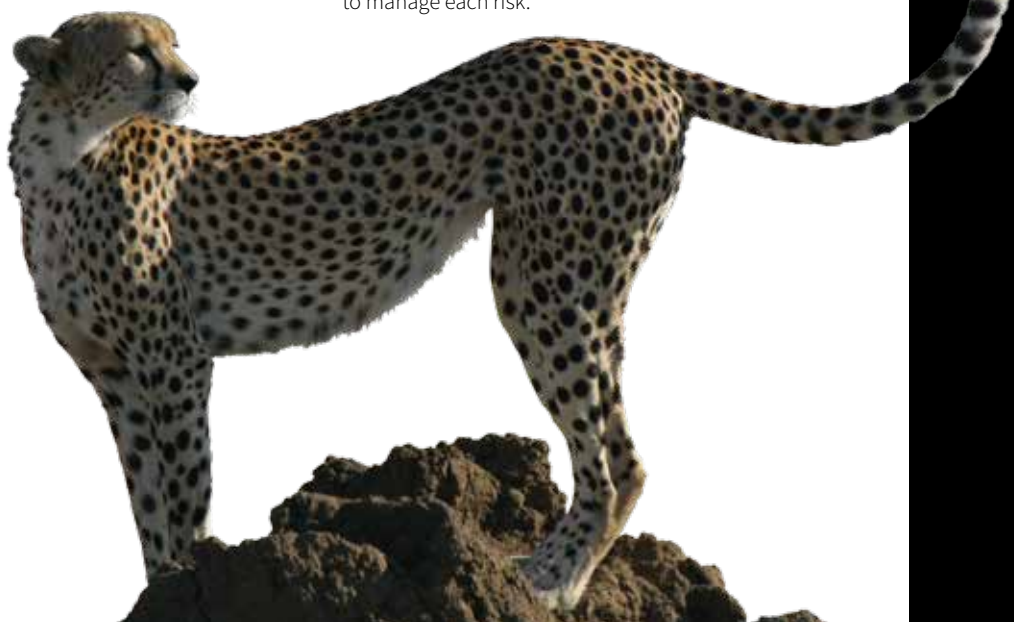
Newly identified risks are brought to the attention of the senior leadership team, which convenes regularly, so that any suggestions can be assessed and suitable mitigation plans developed and implemented.

Risk assessment

Risks are assessed according to their likelihood to occur, and their likely impact on the organisation. These values combine to provide a score that allows us to identify the major risks to the organisation and prioritise management actions accordingly.

Risk management statement

Our Trustees have given consideration to the major risks to which ZSL and its subsidiary undertaking is exposed and satisfied themselves that suitable procedures are established in order to identify and manage those risks. The following principal risks were identified during the 2016/17 accounting period. Specific actions are in place to manage each risk.



DESCRIPTION OF PRINCIPAL RISKS	SUMMARY OF MITIGATION ACTIONS
Changes in UK legislation, policy and rules resulting from Britain’s decision to leave the European Union and Article 50 negotiations	<ul style="list-style-type: none"> • Monitoring changes in legislation and potential impact on the Society • Adapt strategy to changing circumstances • Monitoring income and expenditure, general reserves and cash flow forecast • Managing capital allocations, marketing strategy and fundraising strategy
Stability of external fundraising to provide investment in our mission, capital investment and funding for our operating costs	<ul style="list-style-type: none"> • Monitoring external environment • Diversity of income streams and funders • Managing income and fundraising strategy • Monitoring income and expenditure, general reserves and cash flow forecast
Stability of commercial income to cover operating costs, provide investment in our mission and capital investment funding	<ul style="list-style-type: none"> • Diversity of income streams • Monitoring income and expenditure, general reserves and cash flow forecast • Managing commercial and marketing strategies and monitoring external environment • Development of online retail shop
Pension deficit (Defined Benefit Scheme) repayments exceed available resources	<ul style="list-style-type: none"> • Pension deficit management strategy developed • Budgeting processes, monitoring income and expenditure • Project management, engagement with pension trustees
ZSL is no longer able to use part or all of the main ZSL London Zoo car park	<ul style="list-style-type: none"> • Continued discussions with The Royal Parks, Thames Water, HS2, the Transport Department and Camden Council regarding alternative location for lorry-holding area and provisions for coach parking
Personal data is misused by ZSL in breach of data protection legislation	<ul style="list-style-type: none"> • Designated Data Protection Officer leading Society-wide Working Group to implement personal data management strategy • Continual improvement of data protection compliance systems procedures • Staff training



Governance

Our work as a charity is directed and controlled by our Council of Trustees and expert committees, outlined here.

CORPORATE STATUS

ZSL is a charity incorporated under Royal Charter, registered in England and Wales with the Charity Commission (No. 208728). Certain of the commercial operations of the two Zoos, principally catering and shops, are carried out through its wholly owned subsidiary company, Zoo Enterprises Limited, a company registered in England and Wales with company number 01178687 (together referred to below as 'the group').

ORGANISATION Council

The Society is governed by the Charter, the current version of which dates from 1995, and by Byelaws and Regulations. The Byelaws set out requirements concerning membership, the Officers (President, Secretary and Treasurer), the election and proceedings of Council, and general and other meetings. The Council is the ruling body of the Society, meets five times each year, and is responsible for establishing and monitoring the policies of the Society. Council members ('the Trustees') are elected from and by the membership of the Society by postal ballot and serve for periods of four years. Invitations are circulated to all members to nominate Trustees, and members are advised of the retiring Trustees and specialist skills that the Council considers would be helpful to the Society. The election is by postal ballot of the complete Fellowship. New Trustees are invited to an induction/training meeting prior to taking up their role, where, in accordance with Charity Commission guidelines, they are briefed on their legal obligations under charity law, the Charter and Byelaws of the Society, the committee and decision-making process, Directors' reports and the financial performance of the Society. Additional training, if required, is provided internally and externally to Trustees.

Council members/Trustees

The following were Council members in the period 1 January 2016 to the date of this report, unless otherwise indicated.

President: Professor Sir John Beddington CMG FRS

Secretary: Professor Geoff Boxshall FRS

Treasurer: Paul Rutteman CBE

Sheila Anderson MBE (Vice President)

Dr Brian Bertram

Martin Cooke

Ray Heaton*

Dr Andrew Kitchener+

Ken Livingstone**

Professor Anna Meredith

Dr Ruth Padel*

Elizabeth Passey

Professor Maggie Redshaw

Sean Rovai+

Martin Rowson (Vice President)

Ken Sims

Paul Wilson

Victoria Wilson+

Robert Wingate*

* to June 2016

** retired March 2016

+ from June 2016

COMMITTEES

In addition to Council, the Society operates through a number of committees and boards, whose terms of reference and membership are shown below (* retired during 2016, + joined during 2016).

Finance and General Purposes Committee

Terms of reference: To monitor the financial management of the Society and act as an audit committee, and to preview and prepare papers for Council requiring policy or capital investment decisions.

Membership: Paul Rutteman CBE (Chair), Professor Sir John Beddington CMG FRS, Dr Brian Bertram*, Professor Geoff Boxshall FRS, Rupert Hambro MBE, Ken Livingstone**, Elizabeth Passey, Martin Rowson+, Ken Sims*, Paul Wilson+

Animal Welfare Committee

Terms of reference: To advise Council and Directors on matters relating to animal

welfare in the Collections, at both ZSL London Zoo and ZSL Whipsnade Zoo, and in the work of the Institute of Zoology and in the work of Conservation Programmes.

Membership: Dr Maggie Redshaw (Chair), Sheila Anderson, Dr Heather Bacon, Dr Matthew Brash, Martin Cooke, Dr Kirsten Pullen, Michael Waters

Awards Committee

Terms of reference: Council presents a number of awards for contributions to zoology and conservation. The committee advises Council on all matters relating to these awards and the appointment of Honorary Fellows.

Membership: Dr David Ferrier (Chair), Professor Geoff Boxshall, Dr Paul Donald*, Professor Adam Eyre-Walker, Professor Sunetra Gupta*, Professor Chris Jiggins+, Dr Rebecca Kilner*, Professor Judith Mank, Professor EJ Milner-Gulland*, Professor Ken Norris, Dr Beth Okamura, Dr Debbie Pain+, Professor Andrew Rambaut, Professor Emily Rayfield+, Professor David Sims, Professor Jon Slate, Dr Rosie Trevelyan

Joint University College London/ZSL Committee

Terms of reference: To determine, in the light of the policies and plans of the Society and where appropriate those of the University, the academic policy and development of the IoZ, and to advise the Director of Science of the Society thereon. To coordinate and monitor the implementation of the IoZ's policies and plans, including planned staffing levels, student numbers and its financial management, and to submit an annual report thereon to the Council of the Society and the General Board of the Faculties of the University. To undertake other business as may be assigned to it by the Society or the University.

Membership: Professor Frances Brodsky (Chair), Ralph Armond, Professor Geoff Boxshall, Sir Cyril Chantler, Dr Helen Chatterjee, Professor Ian Owens, Professor Andrew Pomiankowski, Professor Geraint Rees

Zoos Advisory Committee

Terms of reference: To provide specialist advice on the objectives of the Zoos and on specific aspects of their management; to review the annual business and financial plans for the Zoos and to recommend them to Council; to review any material variances to the plans and, where necessary, recommend to Council remedial actions; to review and recommend to Council any capital developments.

Membership: Dr Simon Tonge (Chair), Martin Rowson (Vice Chair), James Breheny (corresponding member), Dr Brian Bertram, Mark Challis, Ray Heaton, Dr Andrew Kitchener+, Ruth Padel, Colomba de La Panouse-Turnbull, Mark Ridgway, Sean Rovai, Andrew Simpson, Ken Sims*, Paul Wilson, Victoria Wilson+

Day-to-day management

The day-to-day management of ZSL is delegated to the Director General and the seven Directors, and monitored by Council through the Officers. All matters of policy are determined by Council and by the Officers of ZSL.

DIRECTORS

Director General: Ralph Armond

Conservation Programmes Director: Professor Jonathan Baillie to November 2016

Human Resources Director: Fiona Evans

Zoological Director: Professor David Field

Director of Conservation:

Matthew Hatchwell from June 2017

Director of Science: Professor Ken Norris

Finance Director: Amanda Smith

Commercial and Communications

Director: Rich Storton

Development Director: James Wren

THE FINANCIAL STATEMENTS AND TRUSTEES' RESPONSIBILITIES

The Trustees are responsible for preparing the Trustees' Report and the financial statements in accordance with applicable law and UK Accounting Standards (UK Generally Accepted Accounting Practice). The law applicable to charities in England and Wales requires the Trustees to prepare financial statements for each financial year, which give a true and fair view of the state of affairs of the Charity and the group, and of the incoming resources and application of resources of the Charity and the group for that period.

In preparing these financial statements, the Trustees are required: to select suitable accounting policies and then apply them consistently; to observe the methods and principles in the Charities Statement of Recommended Practice (SORP); make judgements and estimates that are reasonable and prudent; state whether applicable UK accounting standards have been followed, subject to any material departures disclosed and explained in the financial statements; and prepare the financial statements on the going concern basis, unless it is inappropriate to presume that the Charity will continue in business.

The Trustees are responsible for keeping proper accounting records that disclose with reasonable accuracy at any time the financial position of the Charity and

the group, and enable them to ensure that the financial statements comply with the Charities Act 2011, the Charity (Accounts and Reports) Regulations 2008 and the provisions of the Royal Charter. They are also responsible for safeguarding the assets of the Charity and the group, and hence for taking reasonable steps for the prevention and detection of fraud and other irregularities. The Trustees are also responsible for the maintenance and integrity of the Charity and the group, and for financial information included on the Charity's website.

Auditor

A resolution to reappoint RSM UK Audit LLP, chartered accountants, as auditor will be put to the members at the Annual General Meeting.

REFERENCE AND ADMINISTRATIVE INFORMATION

Principal address:	Regent's Park London NW1 4RY	Principal bankers:	Barclays Bank PLC 1 Churchill Place London EC14 5HP
Also at:	ZSL Whipsnade Zoo Bedfordshire LU6 2LF	Statutory auditor:	RSM UK Audit LLP 25 Farringdon Street London EC4A 4AB
Registered office:	Regent's Park London NW1 4RY	Investment advisors:	Newton Investment 160 Queen Victoria Street London EC4V 4LA
Lawyers:	Hempsons Solicitors 40 Villiers Street London WC2N 6NJ	White & Case LLP 5 Old Broad Street London EC2N 1DW	

Approved by Council on Thursday 28 September 2017

Trustees' Report signed on behalf of Council

.....
Professor Sir John Beddington CMG FRS, President

Independent Auditor's Report to the Trustees of the Zoological Society of London

Opinion on financial statements

We have audited the financial statements of the Zoological Society of London (the 'Charity') and its subsidiary (the 'Group') for the period ended 30 April 2017, which comprise the Group Statement of Financial Activities, the Group and parent charity Balance Sheets, the Group Cash Flow Statement and notes to the financial statements, including a summary of significant accounting policies. The financial reporting framework that has been applied in their preparation is applicable law and United Kingdom Accounting Standards (United Kingdom Generally Accepted Accounting Practice), including FRS 102 'The Financial Reporting Standard applicable in the UK and Republic of Ireland'.

In our opinion, the financial statements:

- give a true and fair view of the state of the Group's and Charity's affairs as at 30 April 2017, and of their incoming resources and application of resources for the year then ended;
- have been properly prepared in accordance with United Kingdom Generally Accepted Accounting Practice; and
- have been prepared in accordance with the requirements of the Charities Act 2011.

Emphasis of matter – early adoption of the Charities SORP (FRS 102)

In forming our opinion, which is not modified, we have considered the disclosure in note 1 concerning the Charity's early adoption of the Charities SORP (FRS 102) issued in July 2014, rather than applying the Charities 2005 SORP, which has been withdrawn but is still referred to in the extant Charities (Accounts and Reports) Regulations 2008. This departure has been necessary for the financial statements to show a true and fair view in accordance with United Kingdom Generally Accepted Accounting Practice effective for accounting periods beginning on or after 1 January 2015.

Scope of the audit of the financial statements

A description of the scope of an audit of financial statements is provided on the Financial Reporting Council's website at frc.org.uk/auditscopeukprivate

Matters on which we are required to report by exception

We have nothing to report in respect of the following matters where the Charities Act 2011 requires us to report to you if, in our opinion:

- the information given in the Trustees' Report is inconsistent in any material respect with the financial statements; or
- sufficient accounting records have not been kept by the parent charity; or
- the parent charity financial statements are not in agreement with the accounting records and returns; or
- we have not received all the information and explanations we require for our audit.

Respective responsibilities of Trustees and auditor

As explained more fully in the Statement of Trustees' responsibilities set out on page 47, the Trustees are responsible for the preparation of the financial statements and for being satisfied that they give a true and fair view.

We have been appointed as auditor under section 151 of the Charities Act 2011, and report in accordance with regulations made under section 154 of that Act. Our responsibility is to audit and express an opinion on the financial statements in accordance with applicable law and International Standards on Auditing (UK and Ireland). Those standards require us to comply with the Auditing Practices Board's (APB's) Ethical Standards for Auditors.

This report is made solely to the Charity's Trustees as a body, in accordance with the Charities Act 2011. Our audit work has been undertaken so that we might state to the Charity's Trustees 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 Charity and the Charity's Trustees as a body, for our audit work, for this report, or for the opinion we have formed.

RSM UK Audit LLP

RSM UK Audit LLP, 13 October 2017

Statutory Auditor
Chartered Accountants
25 Farringdon Street
London
EC4A 4AB

RSM UK Audit LLP is eligible to act as an auditor in terms of section 1212 of the Companies Act 2006.

Consolidated Statement of Financial Activities

For the period ended 30 April 2017

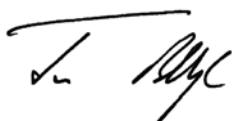
	Notes	Unrestricted £000	Restricted £000	Endowment £000	2016/17 16 months Total £000	2015 12 months Total £000
Income and endowments from						
Donations and legacies	2	3,717	2,613	–	6,330	3,580
Charitable activities:	3					
Animal collections		48,895	2	–	48,897	34,529
Science and research		3,415	3,575	–	6,990	4,424
Conservation programmes		54	10,613	–	10,667	3,385
Trading activities	4	12,519	–	–	12,519	9,257
Investment income	5	91	113	2	206	375
Total income		68,691	16,916	2	85,609	55,550
Expenditure on						
Raising funds:						
Costs of generating voluntary income		1,430	245	–	1,675	1,116
Fundraising trading:						
Cost of goods sold and other costs	4	9,670	–	–	9,670	6,704
Charitable activities:						
Animal collections		48,755	545	–	49,300	33,192
VAT reclaim on animal-related costs		(1,014)	–	–	(1,014)	(1,588)
Science and research		3,561	4,217	–	7,778	6,243
Conservation programmes		5,892	12,132	–	18,024	7,348
Total expenditure	6	68,294	17,139	–	85,433	53,015
Net gains/(losses) on investments	11	373	295	162	830	(130)
Net income/(expenditure)		770	72	164	1,006	2,405
Other recognised (losses)/gains:						
Remeasurement of defined benefit pension scheme obligation	17	(129)	–	–	(129)	2,600
Transfers	15	1,180	(1,180)	–	–	–
Net movement in funds		1,821	(1,108)	164	877	5,005
Reconciliation of funds:						
Total funds brought forward	15	56,243	7,824	769	64,836	59,831
Total funds carried forward		58,064	6,716	933	65,713	64,836

Consolidated and Charity Balance Sheets

As at 30 April 2017

	Notes	Group		Charity	
		2017 £000	2015 £000	2017 £000	2015 £000
Fixed assets					
Intangible assets	9	824	–	824	–
Tangible assets	10	49,951	49,915	49,951	49,915
Investments	11	5,435	4,605	7,208	6,378
		<u>56,210</u>	<u>54,520</u>	<u>57,983</u>	<u>56,293</u>
Current assets					
Stocks	12	570	458	–	1
Debtors	13	6,098	4,729	9,588	8,312
Short-term deposits		–	1,022	–	1,022
Cash at bank and in hand		15,724	14,889	10,600	11,082
		<u>22,392</u>	<u>21,098</u>	<u>20,188</u>	<u>20,417</u>
Liabilities					
Creditors: amounts falling due within one year	14	(9,446)	(8,482)	(9,025)	(9,584)
		<u>12,946</u>	<u>12,616</u>	<u>11,163</u>	<u>10,833</u>
Net current assets					
		69,156	67,136	69,146	67,126
Net assets excluding pension scheme liabilities					
Defined benefit pension scheme liabilities	17	(3,443)	(2,300)	(3,443)	(2,300)
		<u>65,713</u>	<u>64,836</u>	<u>65,703</u>	<u>64,826</u>
Net assets					
Funds					
Unrestricted funds excluding pension liability:					
– General		6,641	5,506	6,631	5,496
– Designated		54,866	53,037	54,866	53,037
		<u>61,507</u>	<u>58,543</u>	<u>61,497</u>	<u>58,533</u>
Unrestricted – Pension reserve		(3,443)	(2,300)	(3,443)	(2,300)
Total unrestricted funds		<u>58,064</u>	<u>56,243</u>	<u>58,054</u>	<u>56,233</u>
Restricted funds					
– Endowments		933	769	933	769
– Other		6,716	7,824	6,716	7,824
Total restricted funds		<u>7,649</u>	<u>8,593</u>	<u>7,649</u>	<u>8,593</u>
Total funds	15	<u>65,713</u>	<u>64,836</u>	<u>65,703</u>	<u>64,826</u>

Approved by Council on Thursday 28 September 2017 and signed on their behalf by:



Professor Sir John Beddington, CMG FRS, President



Paul Rutteman, FCA, Treasurer

Statement of Cash Flows and Consolidated Statement of Cash Flows

For the period ended 30 April 2017

		Group	
		2016/17	2015
	Notes	16 months	12 months
		total	total
Cash flows from operating activities	20	5,840	6,428
Cash flows from investment activities			
Interest received on bank and cash balances		91	235
Investment income		115	140
Purchase of tangible fixed assets		(5,330)	(9,514)
Purchase of intangible fixed assets		(903)	–
Net cash used in investing activities		(6,027)	(9,139)
Cash flows from financing activities			
Bank deposit receipt		–	1,430
Bank loan repayments		–	(1,430)
Net cash provided by financing activities		–	–
Change in cash and cash equivalents in the reporting period		(187)	(2,711)
Cash and cash equivalents at the beginning of the period		15,911	18,622
Cash and cash equivalents at the end of the period	20	15,724	15,911

Notes to the Financial Statements For the period ended 30 April 2017

1. Accounting policies

The Zoological Society of London is a registered charity in England and Wales (charity number 208728). The registered address is Regent's Park, London NW1 4RY.

Basis of preparation and assessment of going concern

The financial statements have been prepared in accordance with the Statement of Recommended Practice: Accounting and Reporting by Charities preparing their accounts in accordance with the Financial Reporting Standard applicable in the UK and Republic of Ireland (FRS 102) issued on 16 July 2014 and the Charities Act 2011.

The financial statements have been prepared under the historical cost convention, with items recognised at cost or transaction value unless otherwise stated in the relevant notes to these accounts.

The financial statements have been prepared to give a 'true and fair' view and have departed from the Charities (Accounts and Reports) Regulations 2008 only to the extent required to provide a 'true and fair view'. This departure has involved following Accounting and Reporting by Charities preparing their accounts in accordance with the Financial Reporting Standard applicable in the UK and Republic of Ireland (FRS 102) issued on 16 July 2014, rather than the Accounting and Reporting by Charities: Statement of Recommended Practice effective from 1 April 2005, which has since been withdrawn.

The Society constitutes a public benefit entity as defined by FRS 102.

The Trustees consider that there are no material uncertainties about the charity's ability to operate as a going concern.

Change of year end

The Society decided, following approval by the Council, to change the year end from 31 December to 30 April to better align the budgeting and business planning processes during the quieter months from October to February. This change in year end has extended the current reporting period to 16 months, up from the normal 12 months. This will revert back to 12 months for the 2017/18 financial year and future reporting periods.

Consolidation

The financial statements consolidate on a line-by-line basis the results and the assets and liabilities of the Society and its wholly owned subsidiaries – Zoo Operations Limited, Zoo Enterprises Limited and Whipsnade Wild Animal Park Limited. The Consolidated Statement of Financial Activities represents the results of both the charitable and non-charitable activities of the Society. A separate Statement of Financial Activities for the Charity itself is not presented; however, a summary statement of Financial Activities for the Charity itself is presented in note 24. The results for the activities carried out by the Society's subsidiaries are set out in note 4 in respect of catering and merchandising, and in note 11 in respect of other activities.

Funds

The Society maintains a number of internal funds, which include restricted and unrestricted funds:

Unrestricted – general fund

The general fund is the free fund of the Society.

Unrestricted – designated funds

These funds are derived from donations, grants, bequests and other resources set aside to be used in accordance with the resolutions passed by the Council of the Society. Both the capital and income may be spent. Until expended, the funds are held in cash or tangible fixed assets.

Restricted – endowment funds

These funds are derived from bequests to the Society, are held permanently by the Trustees, and comprise investments, the income from which may be used to support Society activities.

Restricted – other funds

These funds are subject to specific restriction imposed by the donor, by the purpose of an appeal or are received for a specific purpose.

Fund transfers

Restricted funds are transferred to unrestricted funds in accordance with restrictions upon which the Society may use such restricted funds and include occasions when restricted income has been used, in accordance with donors' instructions, in the acquisition of tangible fixed assets.

Income

In accordance with the SORP, all income, including Gift Aid on admissions, becoming receivable by the Society during the year is recognised in the Consolidated Statement of Financial Activities, regardless of the source or of the purpose to which they are to be put or have been put. The exception to this relates to membership income and similar income, which is deferred to the extent that it relates to a service to be provided in future periods, and grants and donations that are deferred where milestones and conditions for recognition are expected to be met in future periods.

Where income is received for a specific purpose, the income is included in Restricted Funds.

Income from conservation and scientific research grants is recognised in accordance with the recognition criteria of SORP when entitlement is assured, there is probability of receipt, and when the amount can be reliably measured. Government grants are recognised when received.

Legacies are recognised when the Society is entitled to the asset and have been advised that it is probable that payment will be made or assets transferred and the amount involved can be reasonably quantified.

Expenditure

Expenditure is recognised when a liability is incurred. Expenditure is allocated to categories in accordance with the main activity of the staff concerned or the substance of the costs incurred, as set out in note 6. Resources expended include the costs of raising funds and charitable expenditure, including support, management and administration costs.

Governance costs are a component of support costs and include those expenses incurred in the governance of the Society's assets, and are primarily associated with constitutional and statutory requirements and include an appropriate proportion of senior management time. Total Support Costs have been allocated to each of the Charity's core chargeable activities in the proportion that the activity has to the total of all other costs as set out in note 6.

Support costs are those costs incurred in support of expenditure on the objectives of the Society as set out in note 6.

VAT

Admissions income is treated as VAT exempt and, accordingly, as a partially exempt body, ZSL may not recover all VAT paid. The exception is VAT incurred in connection with the catering and merchandising operations that operate through subsidiary companies, which is fully recoverable. Irrecoverable VAT is included within the category of expenditure to which it related. Catering and merchandising income is stated excluding VAT.

Tangible assets and depreciation

Fixed assets acquired by purchase or gift are shown at cost or valuation and are depreciated (with the exception of freehold land and assets under construction, which are not depreciated) on a straight-line basis at rates appropriate to write off the cost over their expected useful lives. Freehold buildings are depreciated over five to 50 years; leasehold buildings from three years to the shorter of the lease term, and 50 years; plant and equipment five to 15 years; and motor vehicles one to five years.

Assets under construction consist of expenditure incurred in respect of tangible assets in the course of their construction and installation and that are directly attributable to bringing the asset into operation. These assets are not depreciated. Transfers are made to the relevant fixed assets category as and when the assets are available for use.

The carrying values of tangible fixed assets are reviewed for impairment when events or changes in circumstances indicate the carrying value may not be recoverable.

Tangible fixed assets with a cost below £5,000 are charged to resources expended and are not amortised.

Intangible assets and amortisation

Intangible assets are stated at cost less accumulated amortisation. Amortisation is calculated using the straight-line method to allocate the depreciable amount of the assets to their residual values of their estimated useful lives. Intangible assets comprise software and the website and is amortised over three to 15 years.

The carrying values of tangible fixed assets are reviewed for impairment when events or changes in circumstances indicate the carrying value may not be recoverable.

Intangible assets with an original cost of under £5,000 are charged to resources expended and are not capitalised.

Intangible assets under construction consist of expenditure incurred in respect of intangible assets in the course of their construction and installation and that are directly attributable to bringing the asset into operation, these assets are not depreciated. Transfers are made to the relevant fixed assets category as and when the assets are available for use.

Foreign currencies

Transactions in foreign currencies are recognised at the rate of exchange at the date of the transaction. Any exchange differences are recognised through the Consolidated Statement of Financial Activities. Foreign exchange monetary assets and liabilities are recognised at the rate of exchange ruling at the balance sheet date.

Investments

Listed investments are included in the balance sheet at market value, with realised and recognised gains or losses recognised in the Consolidated Statement of Financial Activities, in the year in which they arise. Investment income is accounted for an accruals basis.

Other investments comprise investments in subsidiaries and are initially measured at cost and subsequently measured at cost less any accumulated impairment losses.

Stocks

Stocks are stated at the lower of direct cost (determined on a first-in, first-out basis) and net realisable value.

Animals

The animals are generally acquired by the Society from other zoological organisations at zero cost or bred in our Zoos, and a realistic valuation cannot be placed thereon. Many of the animals acquired are held in trust with other zoological societies at zero cost.

Heritage assets

ZSL holds a collection of books and artwork located at the ZSL London Zoo site, which is held to support ZSL's charitable objectives, being the advancement of zoology. The Trustees do not consider that reliable cost or valuation information can be obtained for the vast majority of items held in the collection of books and artwork. This is because of the unique features of the assets held, the number of assets held and the lack of comparable market values.

Furthermore, the Trustees believe the cost of obtaining a valuation of these assets would be onerous compared with the benefit that would be derived by users of the financial statements in assessing their stewardship of the assets. The Society does not therefore recognise these assets on its balance sheet. In accordance with the requirement of section 34 of FRS 102 and section 18 of SORP FRS 102, note 23 to the financial statements provides additional disclosures on the nature and scale of the charity's heritage assets as well as collections, management policy and the extent to which access is permitted to the collection.

The collection of books and artwork is held to advance zoology by facilitating the improvement and dissemination of zoological knowledge.

Donated facilities

The Society leases the Regent's Park site from the Department for Culture, Media and Sport. The lease was renewed in 1999 for a term of 56 years at no annual rent. The Trustees do not believe it is practicable to reasonably quantify and measure the benefit conferred to the Society under this rent-free arrangement due to the Zoo's unique location and, as such, have not included the value of this donated facility in the Consolidated Statement of Financial Activities.

Advertising costs

Costs incurred in relation to advertising are charged to the Consolidated Statement of Financial Activities at the time the advertisements appear in the media or are otherwise made public. Amounts invoiced but not yet taken to the Consolidated Statement of Financial Activities are included in prepayments.

Pension costs

The Society participates in various defined benefit and defined contribution pension schemes:

Defined benefit scheme

The cost of providing benefits under defined benefit plans is determined using the projected unit credit method, and is based on actuarial advice.

The change in the net defined benefit liability arising from employee service during the year is recognised as an employee cost. The cost of plan introductions, benefit changes, settlements and curtailments are recognised as an expense in measuring profit or loss in the period in which they arise.

The net interest element is determined by multiplying the net defined benefit liability by the discount rate, taking into account any changes in the net defined benefit liability during the period as a result of contribution and benefit payments. The net interest is recognised in the Statement of Financial Activities (SOFA) as other finance revenue or cost.

Remeasurement changes comprise actuarial gains and losses, the effect of the asset ceiling and the return on the net defined benefit liability excluding amounts included in net interest. These are recognised immediately in the SOFA in the period in which they occur and are not reclassified to the SOFA in subsequent periods.

The defined net benefit pension asset or liability in the balance sheet comprises the total for each plan of the present value of the defined benefit obligation (using a discount rate based on high-quality corporate bonds), less the fair value of plan assets out of which the obligations are to be settled directly. Fair value is based on market price information, and in the case of quoted securities is the published bid price. The value of a net pension benefit asset is limited to the amount that may be recovered either through reduced contributions or agreed refunds from the scheme.

The institution participates in the Universities Superannuation Scheme. With effect from 1 October 2016, the scheme changed from a defined benefit-only pension scheme to a hybrid pension scheme, providing defined benefits (for all members), as well as defined contribution benefits. The assets of the scheme are held in a separate Trustee-administered fund. Because of the mutual nature of the scheme, the assets are not attributed to individual institutions and a scheme-wide contribution rate is set. The institution is therefore exposed to actuarial risks associated with other institutions' employees, and is unable to identify its share of the underlying assets and liabilities of the scheme on a consistent and reasonable basis. As required by section 28 of FRS 102 'Employee benefits', the institution therefore accounts for the scheme as if it were a wholly defined contribution scheme. As a result, the amount charged to the profit and loss account represents the contributions payable to the scheme. Since the institution has entered into an agreement (the Recovery Plan) that determines how each employer within the scheme will fund the overall deficit, the institution recognises a liability for the contributions payable that arise from the agreement (to the extent that they relate to the deficit), and therefore an expense is recognised.

Defined contribution scheme

Contributions to defined contribution schemes are recognised in the Consolidated Statement of Financial Activities in the period in which they become payable. Any unpaid (or prepaid) contributions are separately disclosed within note 17.

Leasing commitments

Rentals payable under operating leases are charged to the Consolidated Statement of Financial Activities on a straight-line basis over the lease term.

Financial instruments

Financial instruments are classified and accounted for according to the substance of the contractual arrangement as financial assets or financial liabilities.

Debtors and creditors

Trade and group debtors which are receivable within one year are initially measured at the transaction price. Trade and group debtors are subsequently measured at amortised cost, being the transaction price less any amounts settled and any impairment losses.

Other creditors and trade creditors payable within one year that do not constitute a financing transaction are initially measured at the transaction price and subsequently measured at amortised cost, being the transaction price less any amounts settled.

Bank loans are initially recognised at the transaction price, including transaction costs, and subsequently measured at amortised cost using the effective interest method. Interest expense is recognised on the basis of the effective interest method and included in expenditure.

Critical accounting estimates and judgements

The Society makes estimates and assumptions concerning the future. The resulting accounting estimates and assumptions will, by definition, seldom equal the related actual results. The estimates and assumptions that have a significant risk of causing a material adjustment to the carrying amounts of assets and liabilities within the next financial year are those used by the scheme actuary in calculating the Society's defined benefit pension scheme liability (see note 17 for details).

FRS 102 makes the distinction between a group plan and a multi-employer scheme. A group plan consists of a collection of entities under common control typically with a sponsoring employer. A multi-employer scheme is a scheme for entities not under common control and represents (typically) an industry-wide scheme such as Universities Superannuation Scheme. The accounting for a multi-employer scheme where the employer has entered into an agreement with the scheme that determines how the employer will fund a deficit results in the recognition of a liability for the contributions payable that arise from the agreement (to the extent that they relate to the deficit) and the resulting expense in profit or loss in accordance with section 28 of FRS 102. The directors are satisfied that the scheme provided by Universities Superannuation Scheme meets the definition of a multi-employer scheme and has therefore recognised the discounted fair value of the contractual contributions under the funding plan in existence at the date of approving the financial statements.

2. Donations and legacies

	2016/17 16 months £000	2015 12 months £000
Donations	6,152	3,473
Legacies	178	107
	6,330	3,580

3. Charitable activities income

	2016/17 16 months £000	2015 12 months £000
Animal collections		
Admissions	37,186	26,074
Membership	10,590	6,967
Other	1,121	1,488
	48,897	34,529
Science and research		
Grants	6,603	4,284
Studentships	352	128
Other	35	12
	6,990	4,424
Conservation programmes		
Grants	10,638	3,326
Other	29	59
	10,667	3,385
	66,554	42,338

Income from animal collections includes those derived from providing: access to ZSL London Zoo and ZSL Whipsnade Zoo to view the collections and to learn about animals and conservation; animal adoption services; animal keeping experiences; and animal and conservation educational services inside and outside (outreach programmes) the Zoos.

Income from science and research and conservation programmes include the following Government grants:

	2016/17 16 months £000	2015 12 months £000
Higher Education Funding Council for England (HEFCE)	2,933	2,142
Department for Environment, Food & Rural Affairs (DEFRA) [Darwin Initiative]	1,006	1,108
Department for International Development (DFID)	2,930	–
United Nations Development Programme (UNDP)	520	–
EU Funded	396	274
	7,785	3,524

Of the total for Government grants above, £4,852,000 (2015: £1,382,000) were contractual payments for the purposes of specific scientific research. The remaining amount was from grants for general purposes. There were no unfulfilled commitments relating to these grants as at 30 April 2017 (2015: none).

No other form of assistance has been received from the Government (2015: none).

4. Trading activities

The Society wholly owns Zoo Enterprises Limited, which undertakes the merchandising, catering activities, overnight experiences in our lodges at ZSL London Zoo and Whipsnade Zoo, and other commercial activities, in the period to 30 April 2017.

Taxable net profits are distributed to the Society annually.

The turnover and net contribution to the Society from catering and merchandising in Zoo Enterprises Limited (ZEL) (and Whipsnade Wild Animal Park Limited (WWAPL) in the prior year) were as follows:

	2016/17 16 months			2015 12 months		
	ZEL £000	WWAPL £000	Total £000	ZEL £000	WWAPL £000	Total £000
Turnover:						
Catering	4,578	–	4,578	1,466	2,038	3,504
Merchandising	7,941	–	7,941	4,013	1,740	5,753
	12,519	–	12,519	5,479	3,778	9,257
Cost of activities	(7,945)	–	(7,945)	(2,505)	(3,118)	(5,623)
Catering and merchandising (net)	4,574	–	4,574	2,974	660	3,634
Support and overhead costs	(1,725)	–	(1,725)	(537)	(544)	(1,081)
Interest receivable	14	–	14	35	–	35
Net profit for the period before distribution	2,863	–	2,863	2,472	116	2,588

Catering, merchandising and other commercial activity turnover at ZSL London and Whipsnade Zoos is generated by Zoo Enterprises Limited (in 2015 Zoo Enterprises Limited and Whipsnade Wild Animal Park Limited). Catering, merchandising and other commercial activity turnover of £12.5m – 16 months (2015: £9.3m – 12 months) is included in the Consolidated Statement of Financial Activities within subsidiaries' trading income. Cost of activities, support and overhead costs of £9.7m – 16 months (2015: £6.7m – 12 months) are included within fundraising trading, while interest receivable of £14,000 (2015: £35,000) is included within investment income.

5. Investment income

	2016/17 16 months £000	2015 12 months £000
Interest on bank and cash balance	91	235
Investment income	115	140
	206	375

6. Group analysis of total expenditure

	Direct staff costs £000	Direct costs £000	Other support costs £000	2016/17 16 months £000	2015 12 months £000
Charitable activities:					
Animal collections	18,170	23,715	7,415	49,300	33,192
Science and research	4,005	2,603	1,170	7,778	6,243
Conservation programmes	5,155	10,158	2,711	18,024	7,348
VAT reclaim on animal-related costs	–	(1,014)	–	(1,014)	(1,588)
	27,330	35,462	11,296	74,088	45,195
Expenditure on raising funds:					
Cost of generating voluntary income	1,180	243	252	1,675	1,116
Subsidiary costs of goods sold and other costs	3,221	4,724	1,725	9,670	6,704
	4,401	4,967	1,977	11,345	7,820
Total Group expenditure in 2016/17	31,731	40,429	13,273	85,433	
Total Group expenditure in 2015	22,241	23,205	7,569		53,015

Analysis of support costs

	2016/17 16 months £000	2015 12 months £000
Staff and related costs	7,042	3,161
Computer services	784	419
Depreciation	558	311
Insurance	616	383
Bank charges	363	185
Other costs	2,731	2,199
Pension costs on ZS 1988 scheme and USS scheme	1,014	800
Governance costs	165	111
	13,273	7,569

These costs have been allocated to the activities on the basis of total expenditure by activities.

Pension costs on the ZS 1988 pension scheme have been allocated directly in 2017.

7. Net income/(expenditure)

Net income before other recognised gains/(losses) is stated after charging the following items:

	2016/17 16 months £000	2015 12 months £000
Auditor's remuneration:		
Audit services – charged by RSM UK Audit LLP	68	70
Audit services for grants – charged by RSM UK Audit LLP	6	–
Non-audit services – charged by RSM UK Tax and Accounting Limited	68	34
Amortisation	79	–
Depreciation	5,294	3,691
Operating lease rentals in respect of plant, equipment and motor vehicles	666	465
Foreign exchange (gains)/losses on overseas balances and transactions	(176)	12
Trustees' expenses	5	4
	5	4

Trustees' expenses consist mainly of the reimbursement of travel expenses. In the current year, these Trustees' expenses relate to nine (2015: eight) Trustees who served as Council members during the year. None of the Trustees, nor any persons connected to the Trustees, received remuneration for their services. The Society pays the insurance premiums on behalf of the Trustees in respect of professional indemnity insurance. The premium paid is incorporated with the general professional liability premiums and so is not separately disclosable.

There are no other reportable transactions with Trustees. The auditor's remuneration for non-audit services is in respect of fees in connection with general tax advice.

8. Staff costs and remuneration of key management personnel

	2016/17 16 months £000	2015 12 months £000
Salaries and wages (including those of key management personnel)	31,346	20,906
Social security costs	2,898	1,928
Pension costs – defined benefit (excluding finance costs)	1,847	1,299
Pension costs – defined contribution	1,294	648
	37,385	24,781

In addition, the cost of temporary staff in the period was £234,000 (2015: £340,000).

The average full-time equivalent number of employees during the year was as follows:

	Full-time equivalent		Headcount	
	2016/17	2015	2016/17	2015
	16 months No.	12 months No.	16 months No.	12 months No.
Animal collections	275	268	296	292
Science and research	66	63	69	65
Conservation programmes	275	204	281	207
Cost of generating funds – voluntary income	46	39	52	44
Cost of generating funds – voluntary trading	162	163	253	249
Support staff	82	71	88	73
	<u>906</u>	<u>808</u>	<u>1,039</u>	<u>930</u>

The number of employees with emoluments in excess of £60,000 p.a. (high-paid employees) exclusive of pension contributions was:

Band	2016/17	2015
	16 months No.	12 months No.
£60,001 - £70,000	14	11
£70,001 - £80,000	6	5
£80,001 - £90,000	2	3
£90,001 - £100,000	3	2
£100,001 - £110,000	1	2
£110,001 - £120,000	2	–
£160,001 - £170,000	<u>1</u>	<u>1</u>

The key management personnel of ZSL comprise the Trustees, who are not remunerated, as well as the Directorate, which includes the Director General, Finance Director, Human Resources Director, Conservation Director, Institute of Zoology Director, Zoological Director, Commercial and Communications Director, and Development Director. The total employee benefits, including employer pension contributions of the key management personnel of ZSL, were £1.291m – 16 months (2015: £931,674 – 12 months), and employer NI contributions for these personnel were £141,800 – 16 months (2015: £99,403 – 12 months).

9. Intangible assets

Group and Charity	Software under development	Software	Total
	£000	£000	£000
Cost:			
At 1 January 2016	–	–	–
Additions during the period	746	157	903
Transfer of assets under construction	(746)	746	–
At 30 April 2017	<u>–</u>	<u>903</u>	<u>903</u>
Amortisation:			
At 1 January 2016	–	–	–
Charge for the period	–	79	79
At 30 April 2017	<u>–</u>	<u>79</u>	<u>79</u>
Net book value:			
At 30 April 2017	<u>–</u>	<u>824</u>	<u>824</u>

10. Tangible assets

	Freehold land and buildings £000	Buildings on leased land £000	Assets under construction £000	Plant and equipment £000	Motor vehicles £000	Total £000
Group and Charity						
Cost:						
At 1 January 2016	25,391	56,170	5,646	7,595	992	95,794
Additions during the period	291	2,336	2,512	191	–	5,330
Transfer of assets under construction	2,085	5,925	(8,010)	–	–	–
At 30 April 2017	27,767	64,431	148	7,786	992	101,124
Depreciation:						
At 1 January 2016	13,417	25,143	–	6,514	805	45,879
Charge for the period	1,480	3,181	–	534	99	5,294
At 30 April 2017	14,897	28,324	–	7,048	904	51,173
Net book value:						
At 30 April 2017	12,870	36,107	148	738	88	49,951
At 31 December 2015	11,974	31,027	5,646	1,081	187	49,915

All tangible fixed assets are held by ZSL and substantially all are used for the charitable purposes of the Society.

The land at ZSL Whipsnade Zoo was purchased by the Society many years ago at negligible cost. In the absence of a formal valuation, it is not considered practicable to quantify the market value of the land at Whipsnade.

The Trustees are not aware of any other material difference between the carrying value and the market value of land and buildings.

11. Investments

	Valued at 1 January 2016 £000	Acquisition £000	Unrealised net gains/(losses) £000	Valued at 30 April 2017 £000
Group and Charity				
Listed investments at market value:				
Fixed interest (UK)	2	–	–	2
Other (UK)	4,603	–	830	5,433
	4,605	–	830	5,435
Charity				
Unlisted investments at cost:				
Investment in Zoo Enterprises Limited	112	–	–	112
Investment in Zoo Operations Limited	1,661	–	–	1,661
	6,378	–	830	7,208
Listed investments historical cost	3,853	–	–	3,853

The unlisted investment in the wholly owned subsidiary, Zoo Operations Limited (company number 2226414), is carried in the Charity balance sheet at its net asset value and has remained as the investment holding company for its wholly owned subsidiary, Whipsnade Wild Animal Park Limited (company number 990860), and is incorporated in the UK. Both of these companies ceased trading on 31 December 2015.

The shares in ZSL's wholly owned subsidiary, Zoo Enterprises Limited (company number 1178687), previously held by Zoo Operations Limited, were purchased by the Charity in the prior year following a group reorganisation.

Zoo Enterprises Limited (and Whipsnade Wild Animal Park Limited in the prior year) undertake the merchandising, catering and commercial operations at ZSL London Zoo and ZSL Whipsnade Zoo respectively, and Gift Aid their profits to ZSL annually. The activities of Whipsnade Wild Animal Park Limited were transferred to Zoo Enterprises Limited at 31 December 2015, hence the trade for both Zoos is in Zoo Enterprises Limited for the period to 30 April 2017. The results of Zoo Enterprises Limited and Whipsnade Wild Animal Park Limited are set out in note 4.

The value of investments at 30 April 2017 where ZSL owns more than 5% of the holding included the following significant investments:

	£000
Newton SRI Fund for Charities	4,595
M&G Charibond	797
Zoo Enterprises Limited	112
Zoo Operations Limited	<u>1,661</u>

The financial position of the individual subsidiaries was as follows:

	Assets 2017 £000	Liabilities 2017 £000	Funds 2017 £000	Assets 2015 £000	Liabilities 2015 £000	Funds 2015 £000
Zoo Operations Limited	1,661	–	1,661	1,661	–	1,661
Zoo Enterprises Limited	5,820	(5,708)	112	4,584	(4,472)	112
Whipsnade Wild Animal Park Limited	357	–	357	357	–	357

12. Stock

	Group		Charity	
	2017 £000	2015 £000	2017 £000	2015 £000
Raw materials	–	21	–	1
Finished goods	570	437	–	–
	<u>570</u>	<u>458</u>	<u>–</u>	<u>1</u>

For the 16-month period to 30 April 2017, the amount of stocks recognised as an expense was £2.6m (2015: £1.7m – 12 months).

13. Debtors

	Group		Charity	
	2017 £000	2015 £000	2017 £000	2015 £000
Trade debtors	2,113	1,327	1,806	1,011
Amounts owed by group companies	–	–	3,857	3,744
Taxation and social security	–	1,588	–	1,588
Other debtors	477	486	480	642
Prepayments and accrued income	3,508	1,328	3,445	1,327
	<u>6,098</u>	<u>4,729</u>	<u>9,588</u>	<u>8,312</u>

14. Creditors

	Group		Charity	
	2017 £000	2015 £000	2017 £000	2015 £000
Trade creditors	1,257	1,161	1,233	1,054
Amounts owed by group companies	–	–	197	1,481
Taxation and social security	786	532	785	532
Accruals and deferred income	6,777	6,420	6,184	6,148
Other creditors	626	369	626	369
	<u>9,446</u>	<u>8,482</u>	<u>9,025</u>	<u>9,584</u>

The movement in deferred income included within creditors amounts falling due within one year is analysed below:

	Group		Charity	
	2017 £000	2015 £000	2017 £000	2015 £000
Deferred income at 1 January	3,829	3,155	3,654	3,063
Amounts released from prior year	(3,829)	(3,155)	(3,654)	(3,063)
Incoming resources deferred	4,533	3,829	4,232	3,654
Deferred income at 30 April	4,533	3,829	4,232	3,654

Deferred income comprises membership and similar income, which relates to services that will be provided in future periods, and grants and donations where milestones and conditions for recognition are expected to be met in future periods.

15. Funds

Movement of funds for the year – Group

	At 1 January 2016 £000	Income £000	Expenditure £000	Transfers £000	Gains/ (losses) £000	At 30 April 2017 £000
Unrestricted funds:						
General fund*	3,206	68,691	(67,831)	(1,112)	244	3,198
Designated funds						
Students' awards	4	–	(1)	–	–	3
Tiger SOS	73	–	–	(73)	–	–
Giraffe conservation	32	–	(32)	–	–	–
Lion conservation	456	–	(86)	–	–	370
Conservation, science and education mission	412	–	(159)	–	–	253
Science projects	–	–	(185)	936	–	751
Butterfly and crocodile conservation	65	–	–	–	–	65
Elephant conservation	180	–	–	–	–	180
Tangible fixed asset fund	49,915	–	–	860	–	50,775
Tangible fixed asset commitments	1,900	–	–	(931)	–	969
Change reserve	–	–	–	1,500	–	1,500
	53,037	–	(463)	2,292	–	54,866
Restricted funds:						
Endowment funds						
De Arroyave	729	2	–	–	149	880
Fantham Bequest	38	–	–	–	13	51
Davis	2	–	–	–	–	2
	769	2	–	–	162	933
Other restricted funds						
Scientific	2,077	–	–	–	295	2,372
Library support	98	–	(19)	–	–	79
HEFCE	–	3,672	(3,672)	–	–	–
Fundraising development	790	487	(772)	–	–	505
Conservation and science	4,859	12,757	(12,676)	(1,180)	–	3,760
	7,824	16,916	(17,139)	(1,180)	295	6,716
Total funds	64,836	85,609	(85,433)	–	701	65,713

* Incorporating the unrestricted pension liability at 30 April 2017, being £3,443,000 (2015: £2,300,000).

Movement of funds for the year – Charity

	At 1 January 2016 £000	Income £000	Expenditure £000	Transfers £000	Gains/ (losses) £000	At 30 April 2017 £000
Unrestricted funds:						
General fund*	3,196	59,021	(58,161)	(1,112)	244	3,188
Designated funds						
Students' awards	4	–	(1)	–	–	3
Tiger SOS	73	–	–	(73)	–	–
Giraffe conservation	32	–	(32)	–	–	–
Lion conservation	456	–	(86)	–	–	370
Conservation, science and education mission	412	–	(159)	–	–	253
Science projects	–	–	(185)	936	–	751
Butterfly and crocodile conservation	65	–	–	–	–	65
Elephant conservation	180	–	–	–	–	180
Tangible fixed asset fund	49,915	–	–	860	–	50,775
Tangible fixed asset commitments	1,900	–	–	(931)	–	969
Change reserve	–	–	–	1,500	–	1,500
	53,037	–	(463)	2,292	–	54,866
Restricted funds:						
Endowment funds						
De Arroyave	729	2	–	–	149	880
Fantham Bequest	38	–	–	–	13	51
Davis	2	–	–	–	–	2
	769	2	–	–	162	933
Other restricted funds						
Scientific	2,077	–	–	–	295	2,372
Library support	98	–	(19)	–	–	79
HEFCE	–	3,672	(3,672)	–	–	–
Fundraising development	790	487	(772)	–	–	505
Conservation and science	4,859	12,757	(12,676)	(1,180)	–	3,760
	7,824	16,916	(17,139)	(1,180)	295	6,716
Total funds	64,826	75,939	(75,763)	–	701	65,703

* Incorporating the unrestricted pension liability at 30 April 2017, being £3,443,000 (2015: £2,300,000).

Unrestricted – general fund: The general fund is the free fund of the Society.

Unrestricted – designated funds: These funds are derived from donations, grants, bequests and other resources set aside to be used in accordance with the resolutions passed by the Council of the Society. Both the capital and income may be spent. Until expended, the funds are held in cash or tangible fixed assets. Designated funds are as follows:

Students' awards fund – this fund represents resources set aside to meet the cost of an annual prize for best talk, awarded annually at the IoZ student conference, and to fund awards to IoZ registered students for travel and subsistence in connection with their research projects. This fund is expected to be fully utilised within the next 10 years.

Tiger SOS fund – this fund was set aside to meet the capital cost of *Tiger Territory*, which was completed and opened in March 2013 at ZSL London Zoo.

Giraffe conservation fund – this represents resources set aside to meet giraffe conservation project expenditure. The balance on the fund was fully utilised during the period.

Lion conservation fund – this represents resources set aside to meet lion conservation project expenditure.

Conservation, science and education mission fund – this represents resources set aside to meet conservation, science and education project expenditure.

Science projects – this represents resources set aside to meet science and education project expenditure.

Butterfly and crocodile conservation fund – this represents resources set aside to meet butterfly and crocodile conservation project expenditure.

Elephant conservation fund – this represents resources set aside to meet elephant conservation project expenditure.

Tangible fixed asset fund – this represents those resources that have been used to acquire tangible fixed assets. The value of this fund at the period-end represents the net book value of tangible fixed assets.

Tangible fixed asset commitments fund – this represents the resources required for assets under construction to be brought to completion in the coming months.

Change reserve – this represents those resources which have been prioritised to carry out a formal organisational review and deliver key operational changes.

Restricted – endowment funds: These funds are derived from bequests to the Society, are held permanently by the Trustees, and comprise investments, the income from which may be used to support Society activities. These funds are:

De Arroyave fund and Davis fund – these funds are held permanently by the Trustees, and comprise investments, the income from which, being unrestricted, may be used to support Society activities.

Fantham Bequest – this fund is held permanently by the Trustees, and comprises investments, the income from which is to be used to endow a Memorial Research Fellowship for research in parasitology or aquatic animal ecology.

Restricted – other funds: These funds are as follows:

Scientific fund – this fund was derived from grants and donations, and the Society, by trust deed dated 30 May 1991, created a trust over the fund and converted it into a restricted fund that can be used for the 'advancement of zoology and animal physiology'.

Library support fund – the fund represents the resources given for the activities of the ZSL Library.

HEFCE fund – this fund represents grants received from HEFCE to support the core IoZ science and research activities.

Fundraising development – this represents restricted donations acquired as a result of fundraising activities.

Conservation and Science – this represents grants and donations received to cover conservation, science and project expenditure.

Net funds transfers of £1,112,000 have been made from the general fund to designated funds.

Transfers to/from designated funds include £1,500,000 to the newly created change reserve fund, £860,000 to the tangible fixed asset fund, and £931,000 from the tangible fixed assets commitments fund.

Transfers to/from restricted funds totaling £1,180,000 have been made to reflect the balances on restricted funds as fully utilised, where expenditure had previously been included within unrestricted general funds.

Movement of funds for the year – Group (prior year)

	At 1 January 2015 £000	Income £000	Expenditure £000	Transfers £000	Gains/ (losses) £000	At 31 December 2015 £000
Unrestricted funds:						
General fund*	6,189	49,110	(46,703)	(7,998)	2,608	3,206
Designated funds						
Students' awards	8	4	(8)	–	–	4
Tiger SOS	73	–	–	–	–	73
Giraffe conservation	35	–	(3)	–	–	32
Lion conservation	495	–	(64)	25	–	456
Conservation, science and education mission	398	–	(236)	250	–	412
Butterfly and crocodile conservation	65	–	–	–	–	65
Elephant conservation	180	–	–	–	–	180
Tangible fixed asset fund	44,092	–	–	5,823	–	49,915
Tangible fixed asset commitments	–	–	–	1,900	–	1,900
	45,346	4	(311)	7,998	–	53,037
Restricted funds:						
Endowment funds						
De Arroyave	729	–	–	–	–	729
Fantham Bequest	74	1	–	–	(37)	38
Davis	4	–	–	–	(2)	2
	807	1	–	–	(39)	769
Other restricted funds						
Scientific	2,167	66	(57)	–	(99)	2,077
Library support	99	–	(1)	–	–	98
HEFCE	–	2,142	(2,142)	–	–	–
Fundraising development	485	325	(20)	–	–	790
Conservation and science	4,738	3,902	(3,781)	–	–	4,859
	7,489	6,435	(6,001)	–	(99)	7,824
Total funds	59,831	55,550	(53,015)	–	2,470	64,836

* Incorporating the unrestricted pension liability at 30 April 2017, being £3,443,000 (2015: £2,300,000).

Movement of funds for the year – Charity (prior year)

	At 1 January 2015 £000	Income £000	Expenditure £000	Transfers £000	Gains/ (losses) £000	At 31 December 2015 £000
Unrestricted funds:						
General fund*	6,179	42,406	(39,999)	(7,998)	2,608	3,196
Designated funds						
Students' awards	8	4	(8)	–	–	4
Tiger SOS	73	–	–	–	–	73
Giraffe conservation	35	–	(3)	–	–	32
Lion conservation	495	–	(64)	25	–	456
Conservation, science and education mission	398	–	(236)	250	–	412
Butterfly and crocodile conservation	65	–	–	–	–	65
Elephant conservation	180	–	–	–	–	180
Tangible fixed asset fund	44,092	–	–	5,823	–	49,915
Tangible fixed asset commitments	–	–	–	1,900	–	1,900
	45,346	4	(311)	7,998	–	53,037
Restricted funds:						
Endowment funds						
De Arroyave	729	–	–	–	–	729
Fantham Bequest	74	1	–	–	(37)	38
Davis	4	–	–	–	(2)	2
	807	1	–	–	(39)	769
Other restricted funds						
Scientific	2,167	66	(57)	–	(99)	2,077
Library support	99	–	(1)	–	–	98
HEFCE	–	2,142	(2,142)	–	–	–
Fundraising development	485	325	(20)	–	–	790
Conservation and science	4,738	3,902	(3,781)	–	–	4,859
	7,489	6,435	(6,001)	–	(99)	7,824
Total funds	59,821	48,846	(46,311)	–	2,470	64,826

* Incorporating the unrestricted pension liability at 30 April 2017, being £3,443,000 (2015: £2,300,000).

16. Analysis of group net assets between funds

Group

Fund balances at 30 April 2017 are represented by

	Tangible & intangible assets £000	Investments £000	Other net assets £000	Total £000
Unrestricted funds	50,775	2,180	5,109	58,064
Restricted funds				
– Endowment funds	–	933	–	933
– Other restricted funds	–	2,322	4,394	6,716
	50,775	5,435	9,503	65,713

Charity

Fund balances at 30 April 2017 are represented by

	Tangible & intangible assets £000	Investments £000	Other net assets £000	Total £000
Unrestricted funds	50,775	3,953	3,326	58,054
Restricted funds				
– Endowment funds	–	933	–	933
– Other restricted funds	–	2,322	4,394	6,716
	50,775	7,208	7,720	65,703

Group – prior year

Fund balances at 31 December 2015 are represented by

	Tangible & intangible assets £000	Investments £000	Other net assets £000	Total £000
Unrestricted funds	49,915	1,759	4,569	56,243
Restricted funds				
– Endowment funds	–	769	–	769
– Other restricted funds	–	2,077	5,747	7,824
	49,915	4,605	10,316	64,836

Charity – prior year

Fund balances at 31 December 2015 are represented by

	Tangible & intangible assets £000	Investments £000	Other net assets £000	Total £000
Unrestricted funds	49,915	3,532	2,786	56,233
Restricted funds				
– Endowment funds	–	769	–	769
– Other restricted funds	–	2,077	5,747	7,824
	49,915	6,378	8,533	64,826

17. Pension schemes

The Society has contributed to both defined benefit and defined contribution schemes during the year, and defined benefit schemes are accounted for as if they were defined contribution schemes if required by FRS 102 section 28 'Employee benefits'. Employees join the appropriate scheme, depending on their employment terms. The total cost to the Society for the period ended 30 April 2017 in respect of pension contributions, which has been allocated between resources expended categories in proportion to staff costs and charged to the Consolidated Statement of Financial Activities as appropriate, are as follows:

	2016/17 16 months £000	2015 12 months £000
Defined benefit scheme contributions	1,847	1,250
Defined contributions schemes*	1,277	697
	3,124	1,947

At 30 April, there were outstanding employer's and employees' contributions, including any additional voluntary contributions, to the schemes as follows:

	2017 £000	2015 £000
Defined benefit scheme contributions	9	91
Defined contributions schemes*	1	154
	10	245

* Includes amount in respect of the USS, which is a defined benefit scheme, but as required by FRS 102 section 28 'Employee benefits', is accounted for as if it were a defined contribution scheme.

Most employees who participate in a scheme do so in either the Zoological Society 1988 Pension Scheme (ZS 1988), which is the Society's own self-administered occupational pension scheme, or the Universities Superannuation Scheme, which is contracted out of the State Second Pension (S2P) or the Friends Life schemes. As the ZS 1988 scheme was closed to employees joining after 30 June 2011, a Friends Life stakeholder-defined contribution scheme is available for those employees.

The date of the last triennial actuarial valuation was 30 June 2014.

ZS 1988 Pension Scheme

	At period end 30 April 2017 £000	At year end 31 December 2015 £000
Change in present value of the defined benefit value of obligation		
Benefit obligation at the start of the period	44,100	45,100
Current service cost	1,808	1,700
Current interest cost	2,354	1,600
Actuarial loss/(gain)	7,218	(3,000)
Benefits paid	(2,072)	(1,200)
Premiums paid	–	(100)
Benefit obligation at the end of the period	53,408	44,100
Change in plan assets		
Fair value of plan assets at the start of the period	41,800	41,000
Interest income	2,194	1,500
Employer contribution	1,430	1,300
Benefits paid (including expenses)	(2,548)	(1,600)
Return on plan assets (excluding net interest on the net defined benefit liability)	7,089	(400)
Fair value of plan assets at the end of the period	49,965	41,800
Amounts recognised in the balance sheet		
Plans that are wholly unfunded and plans that are wholly or partly funded:		
Present value of wholly or partly funded obligations	53,408	44,100
Fair value of plan assets	49,965	41,800
Deficit for funded plans and net liabilities	3,443	2,300

	At period end 30 April 2017 £000	At year end 31 December 2015 £000
Components of pension cost		
Current service cost	1,808	1,700
Pension scheme expenses	476	300
Finance income	160	100
	2,444	2,100
Return on plan assets	(7,089)	400
Actuarial loss/(gain)	7,218	(3,000)
Total of pension cost recognised in the SOFA	2,573	(500)

Actual return on plan assets for 2017 is £9,283,000 (2015: £1,100,000).

Principal actuarial assumptions

Weighted average assumptions used to determine benefit obligations

	At period end 30 April 2017 %	At year end 31 December 2015 %
Discount rate	2.8	4.0
Future salary increase	4.4	4.1
Rate of price inflation (Retail Price Index)	3.4	3.0
Rate of price inflation (Consumer Price Index)	2.4	2.2
Future pension increases:		
Retail Price Index capped at 5%	3.2	3.1
Retail Price Index capped at 5% subject to a minimum of 3%	3.6	3.6

Plan assets

Fair value of plan assets

	At period end 30 April 2017 £000	At year end 31 December 2015 £000
Cash and cash equivalents	–	500
Equity investments	28,480	28,300
Diversified growth funds	3,498	–
Debt investments	16,988	11,900
Real estate	999	1,100
	<u>49,965</u>	<u>41,800</u>
Actual return on plan assets	9,283	1,100

Assumed life expectancy on retirement age at 65

	30 April 2017		31 December 2015	
	Male	Female	Male	Female
Retiring today (member age 65)	23.0	24.9	23.3	25.3
Retiring in 25 years (member age 40 today)	24.8	26.8	25.1	27.2

Plan assets

Percentage of plan assets by asset allocation

	2017 %	2015 %
Equity securities	64	67
Debt securities	34	29
Property	2	3
Other	–	1
Total	<u>100</u>	<u>100</u>

Contributions

There were outstanding contributions payable to the plan of £9,000 (2015: £92,000) at 30 April 2017 and the Society expects to pay £1,527,000 into the scheme in 2018.

Universities Superannuation Scheme (USS)

Key sources of estimation uncertainty

The total cost charged to the statement of financial activities is £1,014,000 (2015: £279,000) of which £607,000 relates to a provision for the USS scheme.

The latest available full actuarial valuation of the scheme was at 31 March 2014 (the valuation date), which was carried out using the projected unit method. The valuation as at 31 March 2017 is under way.

Since the institution cannot identify its share of scheme assets and liabilities, the following disclosures reflect those relevant for the scheme as a whole.

The 2014 valuation was the third valuation for USS under the scheme-specific funding regime introduced by the Pensions Act 2004, which requires schemes to adopt a statutory funding objective, which is to have sufficient and appropriate assets to cover their technical provisions. At the valuation date, the value of the assets of the scheme was £41.6bn and the value of the scheme's technical provisions was £46.9bn indicating a shortfall of £5.3bn. The assets, therefore, were sufficient to cover 89% of the benefits that had accrued to members after allowing for expected future increases in earnings.

Defined benefit liability numbers for the scheme have been produced using the following assumptions:

	2017	2016
Discount rate	2.57%	3.6%
Pensionable salary growth	n/a	n/a
Pensions increases (CPI)	2.41%	2.2%

The main demographic assumption used relates to the mortality assumptions. Mortality in retirement is assumed to be in line with the Continuous Mortality Investigation's (CMI) S1NA tables as follows:

Male members' mortality	98% of S1NA ['light'] YoB tables – No age rating
Female members' mortality	99% of S1NA ['light'] YoB tables – rated down 1 year

Use of these mortality tables reasonably reflects the actual USS experience. To allow for further improvements in mortality rates, the CMI 2014 projections with a 1.5%p.a. long-term rate were also adopted. The current life expectancies on retirement at age 65 are:

	2017	2016
Males currently aged 65 (years)	24.4	24.3
Females currently aged 65 (years)	26.6	26.5
Males currently aged 45 (years)	26.5	26.4
Females currently aged 45 (years)	29.0	28.8

	2017	2016
Scheme assets	£60.0bn	£49.8bn
Total scheme liabilities	£77.5bn	£58.3bn
FRS 102 total scheme deficit	£17.5bn	£8.5bn
FRS 102 total funding level	77%	85%

18. Leasing commitments

	2017 £000	2015 £000
Payments due:		
Within one year	664	414
Between two to five years	1,754	403
	<hr/>	<hr/>
	2,418	817

19. Capital commitments

Outstanding capital commitments at 30 April 2017 amounted to £88k (2015: £4.3m).

20. Net cash from operating activities

	2016/17 £000	Group 2015 £000
Net income before other gains/(losses)	1,006	2,405
Defined benefit pension scheme costs less contributions	1,014	800
(Gain)/loss on investments	(830)	130
Interest and investment income	(206)	(375)
Depreciation/amortisation of fixed assets	5,294	3,691
Amortisation of intangible assets	79	–
(Increase)/decrease in stock	(112)	254
(Increase)/decrease in debtors	(1,369)	(90)
Increase/(decrease) in creditors	964	(387)
Net cash inflow from operating activities	5,840	6,428

Analysis of consolidated net cash resources

	At 1 January 2016 £000	Cash flow £000	At 30 April 2017 £000
Cash at bank and in hand	14,889	835	15,724
Cash on short-term deposits	1,022	(1,022)	–
	15,911	(187)	15,724

21. Contingent liabilities

The Charity is jointly and severally liable for all Value Added Tax (VAT) debts of the VAT group registration of which it is a part, relating to the period that it has been a member of the VAT group. The total VAT debtor for the VAT group at 30 April 2017 was £147,420 (31 December 2015: £414).

22. Related parties

There were no material-related party transactions in the year (2015: none), except for the transactions with subsidiary companies. Per SORP and FRS 102, the related party disclosure for the subsidiaries (refer to note 11 regarding their purposes) are:

	2016/17			2015		
	Intercompany debtor/(creditor) at 30 April 2017	Gift aid distribution to ZSL	Support costs charged to subsidiary during the period	Intercompany debtor/(creditor) at 31 Dec 2015	Gift aid distribution to ZSL	Support costs charged to subsidiary during the period
Zoo Enterprises Limited	£4,619,144	£2,863,475	£1,725,053	(£3,934,745)	£2,742,000	£537,000
Whipsnade Wild Animal Park Limited	(£356,567)	–	–	(£356,567)	£116,000	£544,000
Zoo Operations Limited	(£1,314,478)	–	–	(£1,314,478)	–	–

23. Heritage assets

ZSL Library holds a significant range of important heritage items, including historic publications, illustrated books, art works, sculptures and archives of ZSL's own records.

Heritage items are acquired through donations and legacies. Annual funds are specifically allocated to the preservation of these items, and copies are made of priority items through a system of digitisation. Most heritage items are stored in secure areas on ZSL premises with controlled access. These items are recorded in an online catalogue. Viewing of heritage items is strictly controlled and invigilated at all times.

The Trustees of ZSL consider from time to time the maintenance or disposal of heritage assets.

During the period ended 30 April 2017, a collection of paintings by Swiss animal and landscape artist Jacques-Laurent Agasse were sold at auction for £860,000. The paintings were commissioned in the 1820s and were bequeathed to ZSL in 1950 by Mrs FE Emerson. There were no other major acquisitions or disposals for the period (2015: none).

24. Charity Statement of Financial Activities

A summary SOFA for the Charity itself is presented below, with the turnover and resources expended for Whipsnade Wild Animal Park Limited, Zoo Operations Limited and Zoo Enterprises Limited in the consolidated SOFA replaced in the Charity's SOFA by the amount of gift aid payable to the charity by these companies.

	Unrestricted £000	Endowment £000	Restricted £000	2016/17 16 months total £000	2015 12 months total £000
Income and endowments from					
Donations and legacies	3,717	–	2,613	6,330	3,580
Charitable activities	52,364	–	14,190	66,554	42,338
Gift aid from profits from trading subsidiaries	2,863	–	–	2,863	2,588
Investment income	77	2	113	192	340
Total income	59,021	2	16,916	75,939	48,846
Expenditure on					
Raising funds:					
Cost of generating voluntary income	1,430	–	245	1,675	1,116
Charitable activities:					
Animal collections	48,755	–	545	49,300	33,192
VAT reclaim on animal-related costs	(1,014)	–	–	(1,014)	(1,588)
Science and research	3,561	–	4,217	7,778	6,243
Conservation programmes	5,892	–	12,132	18,024	7,348
Total expenditure	58,624	–	17,139	75,763	46,311
Net gains/(losses) on investments	373	162	295	830	(130)
Net income/(expenditure)	770	164	72	1,006	2,405
Other recognised (losses)/gains:					
Remeasurement of defined benefit pension scheme obligation	(129)	–	–	(129)	2,600
Transfer	1,180	–	(1,180)	–	–
Net movement in funds	1,821	164	(1,108)	877	5,005
Reconciliation of funds:					
Total funds brought forward	56,233	769	7,824	64,826	59,821
Total funds carried forward	58,054	933	6,716	65,703	64,826

25. Consolidated Statement of Financial Activities for the year ended 31 December 2015

	Unrestricted £000	Endowment £000	Restricted £000	2015 total £000
Income and endowments from				
Donations and legacies	1,852	–	1,728	3,580
Charitable activities:				
Animal collection	34,529	–	–	34,529
Science and research	2,854	–	1,570	4,424
Conservation programmes	284	–	3,101	3,385
Trading activities	9,257	–	–	9,257
Investment income	338	1	36	375
Total income	49,114	1	6,435	55,550
Expenditure on				
Raising funds:				
Costs of generating voluntary income	1,116	–	–	1,116
Fundraising trading: cost of goods sold and other costs	6,704	–	–	6,704
Charitable activities:				
Animal collections	33,180	–	12	33,192
VAT reclaim on animal-related costs	(1,588)	–	–	(1,588)
Science and research	4,129	–	2,114	6,243
Conservation programmes	3,473	–	3,875	7,348
Total expenditure	47,014	–	6,001	53,015
Net gains/(losses) on investments	8	(39)	(99)	(130)
Net income/(expenditure)	2,108	(38)	335	2,405
Other recognised (losses)/gains:				
Remeasurement of defined benefit obligation	2,600	–	–	2,600
Net movement in funds	4,708	(38)	335	5,005
Reconciliation of funds:				
Total funds brought forward	51,535	807	7,489	59,831
Total funds carried forward	56,243	769	7,824	64,836

26. Financial instruments

The carrying amounts of the Society's financial instruments at the period end were:

	Group		Charity	
	2017 £000	2015 £000	2017 £000	2015 £000
Financial assets				
Debt instruments measured at amortised cost	5,050	4,653	8,343	8,544
	5,050	4,653	8,343	8,544
Financial liabilities				
Financial liabilities measured at amortised cost	4,294	3,699	3,979	4,820
	4,294	3,699	3,979	4,820

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