

# Conservation Framework

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**Vision:** Living in balance with nature.

**Mission:** Dedicated to the conservation of biodiversity and other natural resources.

**Aims:**

- Conserve species and their habitats, locally and globally
- Inspire care for the natural world
- Undertake and share results of scientific studies
- Improve our environmental performance and promote sustainable living

## About this plan

In 2012, Marwell Wildlife reaches its 40<sup>th</sup> anniversary; an apt time to take stock and review our past and future contributions to conservation. Our new framework is outward looking, motivated by global need, and intrinsically optimistic. We set out to create a plan to meet our aspirations: genuine participative conservation, making a real difference for wildlife and people, delivered with scientific rigour and integrity, and achieving wider impact by setting examples of good practise and success.

The ideas are grounded in the principles of biological, financial, social and political sustainability. We considered how to build necessary capacity and capability on the way to becoming a locally and internationally recognised force for good: how to increase impact in innovative and cost-effective ways, and recognising a starting point limited by existing resources. To achieve our goals, we will need to ask some fundamental questions about the way we currently operate, to rationalise our activities in order to grow from a stronger foundation, and to develop the requisite specialist knowledge and expertise. Our vision is holistic in nature, requiring and providing opportunity for participation of the whole organisation, volunteers, and partners.

## Adapting to a rapidly changing world

Over the past four decades human population has grown from four to nearly seven billion people and we are now living beyond the Earth's capacity to renew its natural resources. As a result, habitat loss and other pressures on wildlife have been greatly exacerbated, while the more recently recognised global threat to climate is likely to drive rapid environmental change with uncertain outcomes.

Anticipating and responding to the pace and nature of global change will be critical to the sustainability of biodiversity and other natural resources. Many species will struggle to adapt and the composition and character of entire ecosystems may radically alter. Regardless of how nature is realigned, the key goal is to retain the provision of ecosystem goods and services that are fundamental to the continuity and quality of life.

Our plans need to make explicit links between our core business of conserving endangered species and the functioning of ecosystems: understanding adaptation, retaining genetic options for the future, and taking action to restore species and habitats. This work needs to be supported by the way we behave: how we protect the wider environment, provide social leadership and set examples for sustainable living. Never in the history of the planet has it been more important to engage the public in these issues and find positive ways of winning hearts and minds to the benefits of the natural world.

We are well placed to deliver against these needs and aspirations. We have an established track record and successes in practical animal, population and habitat management in the UK and internationally. Our credentials for sustainability, achieved through an effective environmental management system, have been recognised through awards and independent audit. Our offer to schools has grown based on excellent reputation and positive professional feedback. We have a large audience, broadly representative of the population from which it's drawn, and the attention of the media. This brings opportunity to promote meaningful dialogue about the impacts of consumption and lifestyle versus the benefits of nature for human wellbeing, and to galvanise support for wildlife across the planet in one of the wealthiest parts of one of the wealthiest countries in the world.

## Themes

### Restoration

Nature is in a continuous state of flux, but the pace of change is accelerating and ecological outcomes are uncertain. Our direct conservation efforts will address the need to retain options for the future, while helping to restore functioning ecosystems and promoting the sustainable use of nature's products and services that are in increasing demand.

Today, there is even more need to actively manage populations of threatened species to ensure their survival. This includes small, fragmented populations in nature as well as those maintained in captivity, with increasing overlap between the two. There are specific challenges to address - maintaining genetic and phenotypic diversity, while avoiding adaptation to contained environments. Here, we are more likely to have success with taxa for which we have existing track record and international influence, alongside more cost effective smaller bodied animals, plants, and locally occurring species.

Our species conservation efforts must be contiguous with ecosystems: restoring degraded habitat, making new spaces to accommodate climate driven migration of habitats and associated wildlife, and the reintroduction of species lost to nature. In the long term, human communities must be able to derive complementary socio-economic benefits for our efforts to succeed. We will therefore focus our biological conservation efforts on:

- Determining the status of endangered species
- Maintaining viable assurance populations & species integrity
- Reintroducing species that have become locally or globally extinct
- Restoring habitats
- Establishing & encouraging systems of sustainable, multi-functional land management

## Sustainable Living

The future of biodiversity ultimately depends on addressing the pressures placed on species and their habitats such as climate change, pollution and the over-exploitation of natural resources. We will systematically make our business and supply chain more sustainable, leading by example in the process. To be successful and have wider impact, our green business model must be financially buoyant, benefitting from the cost savings of environmental efficiencies, security of renewable energy generation and water conservation, and the resulting marketing and fund raising opportunities.

Much of the focus for delivery will be at home. However, we will also encourage and facilitate others to achieve similar goals, and consider our carbon and water footprints, and our social responsibilities wherever we work in the world. Our priorities are:

- Becoming carbon neutral
- Conserving clean water
- Establishing green & socially responsible purchasing

## Inspiring Change

Ultimately, our vision of living in harmony with nature can only be achieved through changes in public values, attitudes and behaviour; by providing opportunities for individuals to make a difference; and by sharing our knowledge.

Our park provides a means of engaging a cross-section of society who are, in the main, motivated by fun, curiosity and relaxation, while our significant formal education audience has additional expectations of their visit. All these conditions need to be satisfied to create both a stimulating learning environment and one that is successful in generating income needed to support our charitable work. Meanwhile, there is no better way to deliver our brand promise of 'connecting people with nature' than to create opportunities for direct participation, be it our staff, volunteers, students, local community, or people living alongside wildlife elsewhere in the world. To inspire change we will focus on:

- Defining & developing a world class zoological experience
- Increasing opportunities for schools, colleges & universities
- Creating opportunities for participative conservation & training
- Enhancing our scientific capacity & capability

## Guiding Principles & Implications

### **Holistic Approach**

Restoration, Sustainable Living and Inspiring Change must permeate all that we do, guiding resource allocation, monitoring and evaluation. Activities and processes throughout the organisation must be mutually supportive of the strategy, and of scientific and educational integrity.

### **Aligned with Quality & Success**

As a relatively small organisation, and with limited resources, the quality of our work will determine the magnitude of positive impact. We can achieve a great deal with a focus on high standards, by having world class aspiration, and by being leaders in our field at the forefront of conservation. We must be success-minded, taking time to monitor, evaluate and demonstrate the value of our work. People are key and we will need to develop the multidisciplinary specialist knowledge needed.

### **Ethically Robust**

The values that people place on animals and nature are intrinsic to conservation. Our activities can have far reaching consequences for individuals, populations and communities, both human and animal. In some cases, their futures are literally in our hands! Respect and care for life, and the welfare of people and animals must be at the heart of our business.

### **An expansive view**

To enhance our impacts we will need to participate in and promote meaningful dialogue with our colleagues in the zoological, and the wider conservation and scientific communities, helping to shape sound policy & practise.

### **Strengthening Science**

Science is integral to our mission, helping us to gain and share knowledge to support our activities, influence decision-makers, and to monitor and evaluate outcomes. We have robust policy & procedures, seen tangible improvements in the quality of our research, and have strong academic links to universities. However, we need to increase the scientific value of our animal collection, including better focused and defined animal record keeping, and to enhance our impact by creating a formal scheme for research associates and by sharing our knowledge through more publications.

## Monitoring & Evaluation

Motivated by a desire for tangible achievement, we will implement a robust programme to monitor and evaluate the benefits we deliver for wildlife, the environment and society. This will be based on measuring our inputs (resources mobilised for conservation), and the outcomes of our work, and through external feedback and audit.

### Outcomes:

- **Legacies** of training, knowledge, policy change & infrastructure: These are contributions that have wider impact, beyond the specific scope of our projects and have a lasting effect regardless of the timescale of our direct input.
- **Biological outcomes:** Improvements in the status of target species or habitats, based on measures of population size, genetic diversity & demographic stability, species diversity, changes in size & structure of habitat, and diversity of habitat type.
- **Sustainability outcomes:** Meeting both qualitative and quantitative objectives & targets set in our environmental management system, principally our annual carbon and water footprints.
- **Learning outcomes:** Measures of our effectiveness in delivering knowledge & understanding; skills; creativity, inspiration & enjoyment; changing values & attitudes; and encouraging changes in behaviour and progressive learning.

### Quality Assurance

Here, we seek to have our work validated by both statutory and voluntary external scrutiny. This includes Zoo Licensing (including the proper accommodation and care of animals; keeping up to date records, appropriate measures to prevent escapes; contributions to conservation and education); ISO14001 audit of our environmental management system; statutory habitat condition assessment; Learning Outside the Classroom Quality Badge; teacher evaluation; and submission of papers for peer review publications.



## Appendix 1: Supporting Policies & Plans

**Animal Collection Plan:** Selection of species driven by the visitor journey, priorities for biological conservation & sustainability of populations, and science.

**Animal Welfare Policy:** Promoting the highest standards of welfare including suitable environment, diet, social conditions; ability to exhibit normal behaviour; free from pain, injury, suffering & disease; handling animals for educational purposes; and a welfare audit framework for all animals under our care.

**Bio-security Policy:** Managing animals, plants, employees, guests & suppliers to prevent transmission of infectious diseases, including animal handling, disinfection, disease surveillance, fences & other physical barriers, vectors (e.g. rats, corvids), controls measures & emergency response (e.g. avian influenza, foot & mouth), compliance (BALAI Directive 92/65/EEC).

**Conservation Programmes Plan:** Prioritising, developing & managing wildlife conservation projects, undertaken in the UK & internationally.

**Cooperative Population Management:** Managing & evaluating our contributions to British, European & global meta-population management, including International & European Studbooks, European Endangered Species Programmes (EEPs), Taxon Advisory Groups, Species Committees & representation, & regional collection planning.

**Education Plan:** Developing & managing our education programmes, including curriculum led sessions, supporting interpretation, managing education bookings, marketing of education services, and external consultation with teachers.

**Environmental Policy & Management System:** Identifying & controlling environmental aspects, complying with legislation, setting targets for improvement, and ISO14001 audit.

**Ethics Policy & Procedure:** Setting out a framework for ethics and the process of ethical review.

**Land Management Plan:** Including ecological restoration & sustainable use of our land including woodland management, habitat creation & restoration across the estate, tree management, ecological monitoring, products (hay, timber, browse, wood chip, compost), controlling invasive plants & animals, and income from grants & sale of products.

**Park Development Plan:** Including design & delivery of interpretative hubs & exhibits; interpretative methods & evaluation (ID signs, graphics, art, people, technology); animal isolation & quarantine facilities, veterinary hospital, post-mortem room; suitable & efficient animal housing; horticultural facilities, equipment & materials storage.

**Population Management Policy:** Sustainable acquisition & breeding, and removal of stock, including hand rearing, contraception & euthanasia.

**Research & Higher Education Plan:** Research policy & procedures; quality control of publications; developing higher education courses & income; managing student projects & work experience opportunities; developing academic resources.

## Appendix 2: Biodiversity; the Context for our work

### **Biodiversity**

Biological diversity or 'biodiversity' is an expression of the wealth of life on earth. It encompasses all living organisms including variety found within species, between species and of biological communities and ecosystems. These biological resources are essential for the quality and continuity of human life:

- Ecosystems provide goods and services such as food, oxygen, water, climate regulation, soil stabilisation, flood defence and the ability to clean the environment of pollutants. Richness and equitable abundance of species are significant for the planet's life support system as diverse ecosystems function more effectively.
- Biodiversity is significant for aesthetic, cultural and social reasons, and there is increasing recognition of the importance of access to nature for human well-being.
- Collectively, the goods and services derived from nature drive the global economy. Unfortunately, current measures of economic success, such as the gross domestic product (GDP), do not reflect the total economic value of ecosystems. As a result governments and corporations make the mistake of treating biological resources as free to use and limitless in abundance.
- Despite the enormous range of benefits already derived from biodiversity, there remains as yet unexplored potential for food, medicine and other products that could benefit society. However, our ability to retain these options is dependent on conservation and sustainable utilisation.

### **Loss of Biodiversity**

Unfortunately, many of the individual species that form the world's biodiversity are under threat of extinction from human activity. The primary causes of decline are: habitat loss; over-exploitation; invasive species; nutrient loading and pollution; and, climate change. Species and biological communities unable to adapt or move in response to these pressures disappear locally or globally. The repercussions of these changes are difficult to predict, but may lead chains of extinction where the loss of one species leads to the disappearance of others that are dependent on it, as well as major shifts in populations and diversity.

- Around 1.75 million species have been catalogued by science. However, that does not mean that we know all about them or their potential for mankind. Moreover, previously unknown species are being discovered regularly and current estimates suggest that around 13 million species actually exist on the planet.
- The conservation status of only 45,000 species has been evaluated, but of these, 38% are threatened with extinction.
- Current extinction rates are estimated to be 1,000 times greater than observed in the fossil record. In the next 50 years, extinction rates are projected to be ten times higher than at present.

### **Legal & Strategic Framework**

The importance of biodiversity and need to conserve these resources was recognised by the signing of the international Convention of Biological Diversity (CBD) in Rio de Janeiro in 1992. CBD continues to provide a global framework for conservation, sustainable use of biodiversity and equitable sharing of biological resources. Indeed, the 2010 Nagoya

Biodiversity Summit set new 10 year targets for biodiversity conservation. CBD therefore provides context for Marwell's work alongside related initiatives:

- Key documents such as the Global Biodiversity Assessments (1 & 2) and the UN Millennium Ecosystem Assessment provide context, setting out the consequences of ecosystem change for human well-being and the scientific basis for action needed for conservation.
- As an international treaty, CBD identifies a common problem, sets overall goals and policies, and organises technical and financial cooperation. However, the mechanism for achieving goals rests with the countries themselves through their own strategies and Biodiversity Action Plans. Relevant statutory agencies and local government are responsible for coordination and reporting (e.g. the Hampshire Biodiversity Action Plan), but individual action plans may be led or otherwise supported by other organisations.
- As the distribution or movements of species may cross political boundaries, there is synergy between CBD and the Convention on Migratory Species (CMS) which promotes trans-boundary, coordinated and concerted action on a regional, continental and global scale.
- Similarly, there is overlap with other treaties such as the Convention on the International Trade of Endangered Species (CITES) and the Ramsar Convention, which promotes local, regional, national and international cooperation for the conservation of wetlands and related sustainable development.

Marwell is a member of IUCN, the International Union for Conservation of Nature which is the world's largest environmental network. It supports research and brings together UN agencies, governments, non-governmental organisations, companies and local communities to develop and implement policy and best practise. As a result IUCN has produced a number of key documents that help guide and plan our work, and offers a network for expert consultation.