

ENCLOSURE DESIGN – BACKGROUND INFORMATION

- Zoos display living things. Zoos that existed over 100 years ago were very different to the modern zoo of today. Early zoos tried to display as many animals as possible in order to attract the greatest number of visitors. In those days people had little or no understanding of the behaviour, habitat or needs of the animals.
- This led to the displaying of animals in small, dirty, heavily barred cages that resulted in abnormal behaviour by many animals and little education was provided for the visitor.
- A great deal of planning and discussion goes into developing an enclosure or group of enclosures. Apart from external involvement from, e.g. Architects, Designers, etc. the expertise of many zoo staff is also utilised. These may include discovery and learning officers, zookeepers, horticulturists, maintenance staff, graphics designer and others.
- Naturalistic enclosures encourage animals to behave and reproduce as they would in the wild. However, it is almost impossible to completely recreate a natural habitat and compromises need to be made.
- Factors related to public viewing, safety, information, etc. and safe and easy access for keepers and maintenance staff also need to be considered. .
- Funding (sponsorship, donations, etc.) is also a major consideration
- Today the final presentation of the enclosure should provide people with a better understanding of the relationship between animals and their environment. Signage is now a critical part of the enclosure as it provides the public with more information, particularly about the problems affecting species, the zoo's role in conservation and how the public can play a role in conservation.



ANIMALS ARE IN ZOOS FOR A NUMBER OF REASONS.

This may vary between species for example animals may be in zoos for;

Education reasons such as seeing a real animal is a much more personal and more memorable experience than seeing that animal on TV.

By bringing people and animals together, zoos educate the public and foster an appreciation of the animals. This may motivate people to protect the animals and change behaviour in a positive with regards to environmental protection.



Conservation reasons such as the animals are at risk of extinction in the wild due to loss of habitat, overhunting, persecution, poaching for traditional beliefs, wildlife crime, and climate change. Zoos have breeding programmes for endangered species. So that animal are not taken from the wild and in some cases they can be returned to the wild if it is safe to do so. By having a self-sustaining populations in captivity it will maintain good genetic diversity of animals in zoos by pairing compatible individuals. This is important for species that are very close to extinction in the wild, and provides an "insurance" population.



Research reasons such as animals are extremely elusive and threatened in the wild. Therefore undertaking research in a zoo can take advantage of a significant opportunity to study factors important to conservation, which cannot be undertaken effectively in the wild. Breeding programmes are of great importance as many scientific studies are dedicated to understanding the reproductive biology and needs of the animals.



A large proportion of research carried out in zoos focuses on understanding how the captive environment may influence the animals and, where appropriate, how this can be minimized. Some studies set out to improve animal husbandry, focus on diets and how these can be enhanced, identify best practice in medical care for specific species, find out how visitors may affect animals and vice versa, evaluate the effectiveness of education tools, visitor awareness of native species etc. Ultimately research in zoos and aquariums is driven and governed by one main goal; to gather knowledge that benefits the conservation of threatened species through welfare, education and a good day out.

Other reasons why animals are in zoos is that they are ambassador animals, animals that are popular with the public and they generate money for the zoo or charity. They can also be of national importance, but not of educational, conservational or of research importance



WHEN DESIGNING AN ANIMAL ENCLOSURE IT IS IMPORTANT TO THINK ABOUT THE...



needs of the zoo staff?

- Substrate utilisation.
- Vegetation and habitat used.
- Mating system.
- Rearing system.
- Waste system.
- Strength.
- Anti-predator system.
- Movement.
- Security of enclosure.
- Ease of viewing for health checks.
- Is contact safe or desirable? (Is it possible to complete all work tasks without any direct contact with animals?).
- Ease of access for maintenance, cleaning, feeding, etc.
- Suitable off limits areas with appropriate holding facilities.
- Breeding programs provided for (i.e. if breeding is to occur).



needs of the animals?

- Body size of adults.
- Intelligence.
- Geographic range / natural habitat.
- Diet type / diversity of foods eaten.
- Sleeping facilities.
- Food finding strategies.
- Retreats from public.
- Shelter from the elements.
- No dangerous areas / substances to animals (plants, paints, sharp edges etc.).
- Level of activity – how to provide behavioural enrichment.
- Social groupings (size / structure – family, solitary, sex ratio, etc.).



needs of the public?

- Clear view of animal.
- Aesthetically appealing.
- Educational value – appropriate graphics
- Reflect the habitat of the animal.
- Does access to the exhibit cater for all, i.e. young, old, wheelchair bound, etc.



ANIMAL INFORMATION WEBSITES

Try doing a internet search for the species that you are studying or try these websites.

The IUCN Red List of
Threatened Species
www.iucnredlist.org/



THE IUCN RED LIST
OF THREATENED SPECIES™

BBC Earth - Official Site
www.bbcearth.com



WWF UK - Conservation,
climate change, sustainability
www.wwf.org.uk/



Animal Diversity Web
www.animaldiversity.org/



The RSPB
www.rspb.org.uk/



BirdLife International
<http://www.birdlife.org/>



National Geographic
<https://www.nationalgeographic.com/animals/facts-pictures/>



Zoolex; Zoo Design Organization
<https://www.zoolex.org/>



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Try doing a internet search for the species that you are studying or try these websites.

Highland Wildlife Park

<https://www.highlandwildlifepark.org.uk/>



Edinburgh Zoo's

<https://www.edinburghzoo.org.uk/>



Living Links
(Edinburgh Zoo)



<http://living-links.wp.st-andrews.ac.uk/>

IUCN

<https://www.iucn.org/>



BIAZA

<https://biaza.org.uk/>



EAZA

<https://www.eaza.net/>



WAZA

<https://www.waza.org/>



World Association of Zoos and Aquariums | **WAZA**
United for Conservation

Vertebrate database of European zoos and other public collections.

<https://www.zootierliste.de/en/?org=7>

