



## Connecting to Nature at the Zoo How to Consider the Five Senses in Architecture

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### Zoos, Heritage and Climate

This panda enclosure is designed for a site at Hope Zoo and Botanical Gardens, located in Kingston, Jamaica. This site was selected because of its historical heritage as well as the positive impact the enclosure may exert on the zoo and cityscape overall. The new building is multifunctional, combining a botanical garden with a learning path, exhibitions spaces and panda enclosures – the highlight of the overall experience. For economic reasons the structure extends below the ground-floor level, keeping the building climatized and establishing harmony with the surrounding environment.

### Senses and Learning

Good teaching needs good architecture. In its most extreme interpretation this thesis sits comfortably with the concept of »the environment as third pedagogue«. My design objective is to connect the visitor with nature through sensual architecture, since architecture is experienced predominantly through the atmosphere it creates. Landscapes in particular forge an atmospheric identity. In this design, landscape architecture supports the shaping of experience through the interplay between interior and exterior spaces. Modern technology supports exhibition scenery (e.g. holograms, special sound effects, etc.) as well as natural materials which represent the soft and cuddly »feel« of a panda.

### Circulation and Interaction

Circulation is a characteristic form of movement. The interaction between the moving figure and the structural design is constitutive of the experience. Sightlines and pathways play an important role here. One may hear and smell around the corner, but is not able to see. Before finally being able to clasp eyes on the panda the goal is to activate the senses of visitors along different paths, to experience different spaces and first of all go grasp information. This enables visitors to be engaged and entertained before achieving the ultimate experience which is to witness the panda.

### A Focus on Sustainability

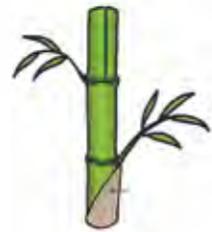
Sustainability is a vital part of the design in order to create an environment and atmosphere promoting comfort for both pandas and visitors. Usage of materials, design techniques and energy consumption are considered to a great extent. The indoor botanical garden and panda enclosure emulate natural surroundings through the use of natural lighting created with translucent glass materials. The use of natural materials implemented within this design is illustrated by the wooden roofing to help deflect intense heat radiation from the sun. Materials incorporated within and on to the enclosure help to keep the building climatized for the pandas. The interior creates the most comfortable climate for pandas.

»The more we know of other forms of life,  
the more we enjoy and respect ourselves.«

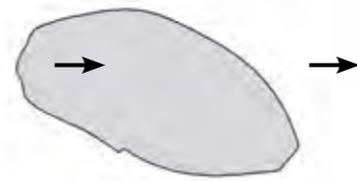
E.O. Wilson



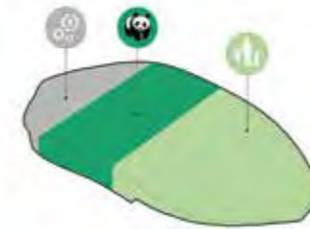
Form Finding



Bamboo leave



Massing

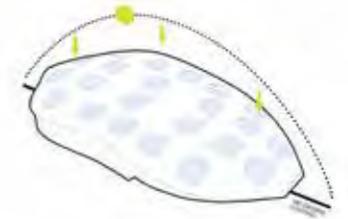


Functional program



Public

Keeper



Sun and Light

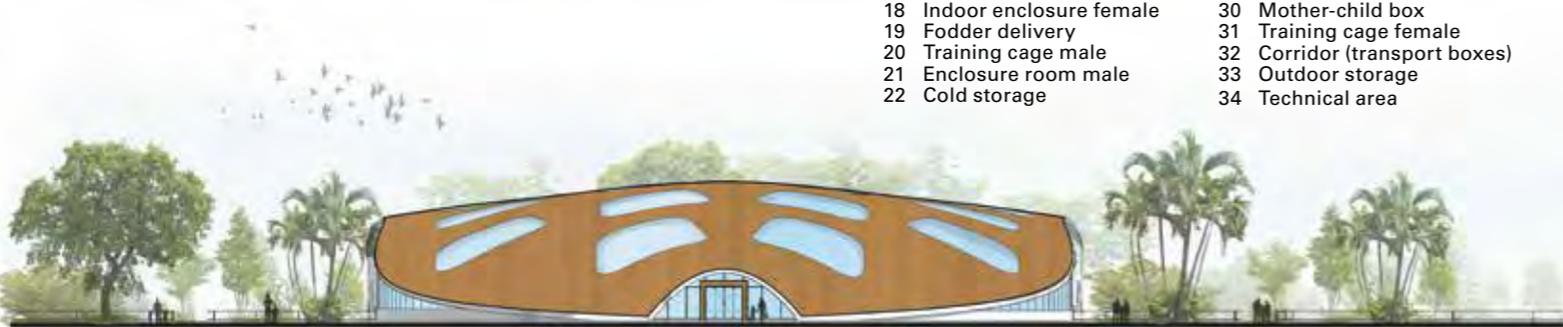


**Ground level**

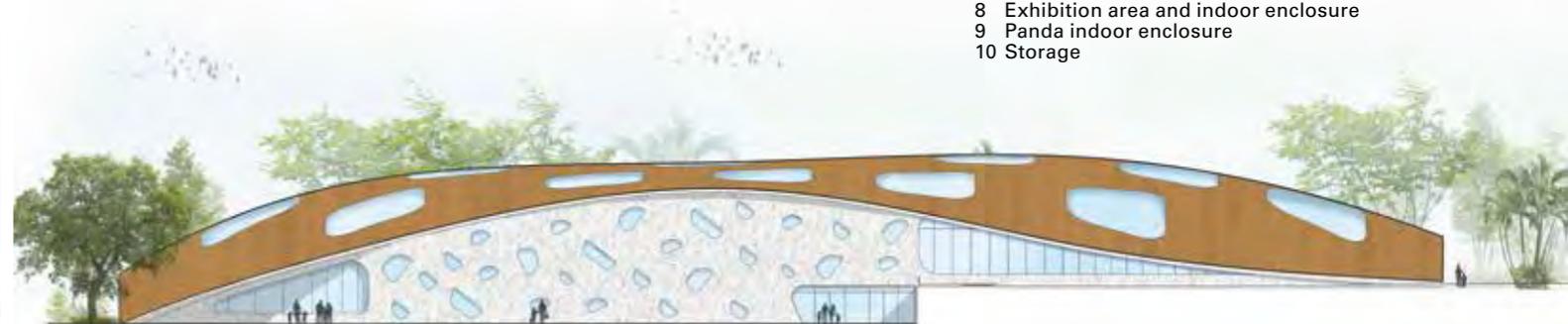
- |                              |                               |
|------------------------------|-------------------------------|
| 11 Education/Exhibition area | 23 Fodder preparation         |
| 12 Café                      | 24 Zookeeper lounge           |
| 13 VR-Cinema/Hologram room   | 25 Unisex restroom            |
| 14 Seating area              | 26 Zookeeper changing         |
| 15 Indoor enclosure male     | 27 Nursing area               |
| 16 Enclosure female          | 28 Veterinary clinic          |
| 17 Enclosure male            | 29 Enclosure room female      |
| 18 Indoor enclosure female   | 30 Mother-child box           |
| 19 Fodder delivery           | 31 Training cage female       |
| 20 Training cage male        | 32 Corridor (transport boxes) |
| 21 Enclosure room male       | 33 Outdoor storage            |
| 22 Cold storage              | 34 Technical area             |

**First level**

- |  |
|--|
| 1 Waiting area and lounge              |
| 2 Reception office                     |
| 3 Pathway to enclosure                 |
| 4 Elevator                             |
| 5 Restroom male                        |
| 6 Restroom female                      |
| 7 Bridge                               |
| 8 Exhibition area and indoor enclosure |
| 9 Panda indoor enclosure               |
| 10 Storage                             |



**East elevation**



**South elevation**



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