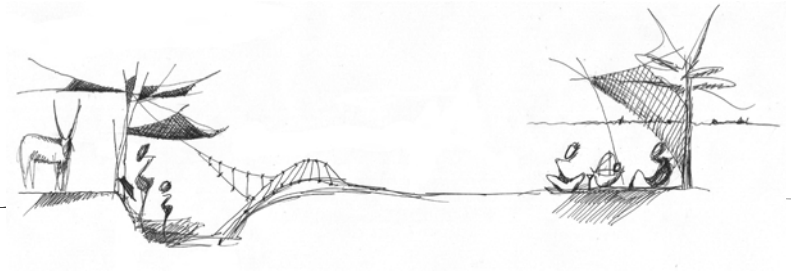

DESIGN DEVELOPMENT

5.1. AIMS AND GOALS

Existing and new principles and objectives for designing the *Animan* Parrot Precinct are summarized.
The aims are to expand architecture and Interior Architecture in its range of subjects;
–To conserve the existing human and animal green spaces as recreation spaces.
–To improve experiential spaces for man in recreation spaces
–To improve the qualities of the captive environments' surroundings (in this case the SA Zoo).
–To make light of the captive environments' contributions to man and animal and the environment (contributions include conservation, education, experience, community values).
–To create or enhance animal spaces using enrichment (enrichment of the environment, not just using props) to make this visible and an experience for humans and animals.
–To create models for zoos to use when redesigning or improving animal or/and human spaces.
–To consider the needs of the different parties, animals and the environment when designing animal or human spaces in captive environments.
–To use design illusions to rather heighten human experiences than compromise animal well–being.
–To use design elements and principles (in this project those mentioned by Ching and Miller) as a basis when creating new or improving existing animal or human spaces. These principles can be used for large structures and even down to small details.
–To choose a problem site that needs valid improvements.
– To accommodate service workers
– To accommodate birds needs
– To accommodate different visitors
– To use design elements

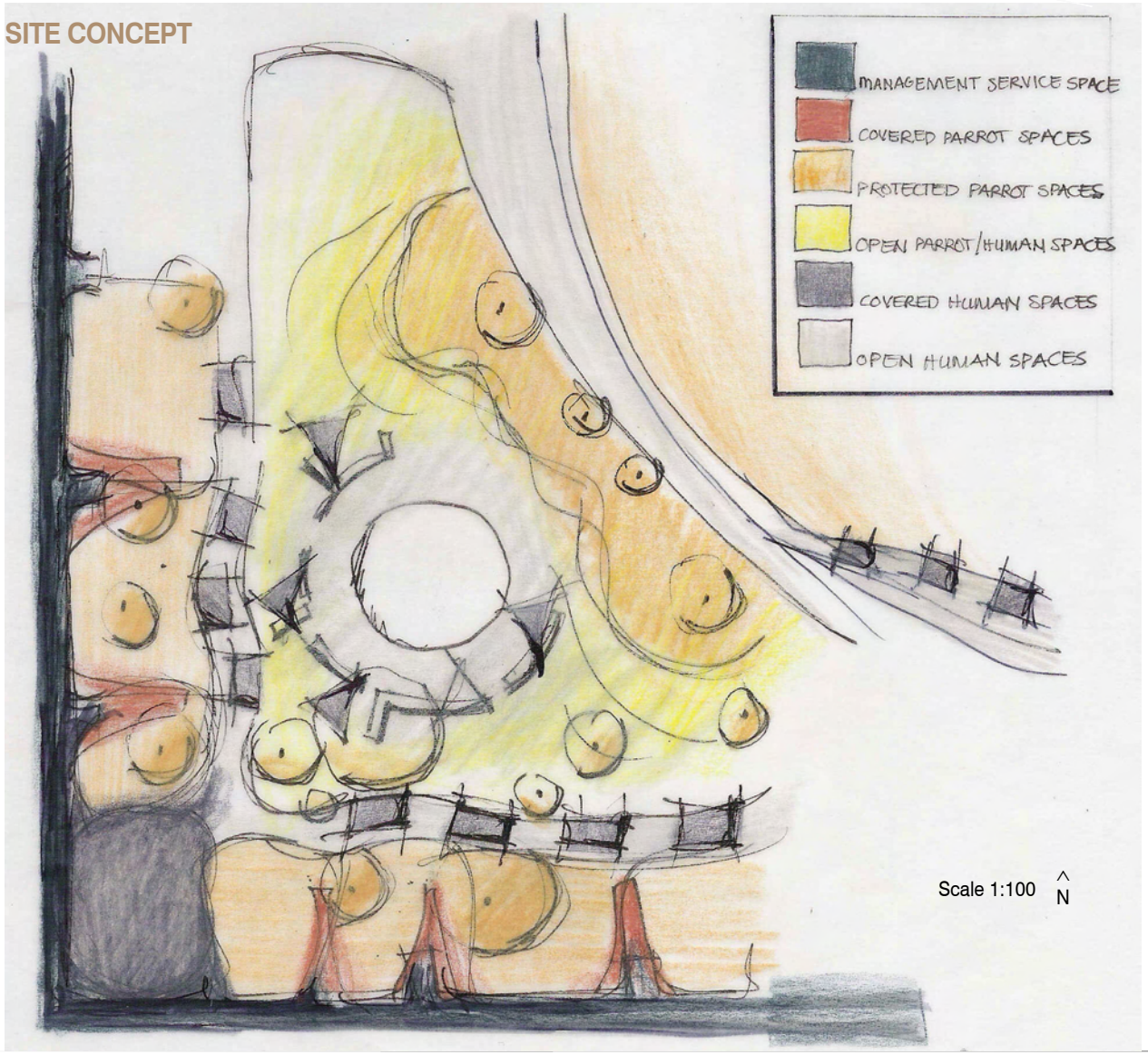

Figure 134. *New Parrot Animan Precinct – Concept Plan.*

5.2. AN ANIMAL PRECINCT

According to the curator, a variety of new habitats (enclosures) at the existing Parrot Enclosure Area would be useful. An *animan* precinct could bring more human activity than is usual to these birds, however some of these birds are noted to breed in noisy circumstances anyway. Should the parrot curator note that any parrots are not behaving as they should in this new Parrot *Animan* Precinct, there are measures that can be taken to take care of them. The zoo management and parrot curator would need to discuss what these could be. The structure should thus allow for privacy of the animals to be altered.

5.2.1. Birds Spaces

It has been decided to incorporate new Protected Parrot Habitats (that can facilitate breeding) as well as Open-air Habitats (to facilitate free-roaming birds with clipped wings). Parrots in the existing enclosures will be kept, and the other species (cranes and owls) will be shifted to other locations.

5.2.1.1. Protected Parrot Habitats

Birds to remain and those to be shifted into the new Protected Parrot Habitats include pairs of Brown-necked parrots; Little Corellas; Abbot's yellow crested Cockatoos; Scarlet Macaws; Major Mitchells Cockatoos; Blue-fronted Amazons; Illiger's Macaws and Sulphur-crested Cockatoos.

(a) Flying. The new habitats will have larger spaces than the existing enclosures to facilitate flying (figure 135).

(b) Feeding. The new design of feeding trays (figure 136) will be of a material and shape that can be easily cleaned and does not attract pests. The design has feeding trays positioned off the ground and protected above from direct sunlight (with the incorporation of an overhead structure – figure 137). This structure will also avoid contamination from enclosed birds and wild birds in flight (McMillan, online)

(c) Nesting or Breeding. A solid separating structure in the Protected Habitats will separate breeding spaces adjacent to each other, due to the fact that some birds become aggressive when breeding. The breeding space must be protected from atleast two sides, and placed above ground (figure 138). The breeding space must be protected from atleast two sides, and placed above ground (figure 138). Nesting boxes will be available all year round so that when the birds are ready for breeding, they can move to these areas.

(d) Resting. Replaceable perching sticks will be of natural branches of varying diameters (figure 139), and not dowel perches (bought in pet stores). Dowel perches are unhealthy for the development of birds' feet because it does not provide enough friction and stimulation to the feet, resulting in abnormalities and calluses (McMillan, online) The new perches will be placed far enough apart to allow maximum flight for exercise, but not too close to the boundary mesh so that birds do not rub against it in flight and injure themselves (McMillan, online). Perch spaces will be supplied at different levels, and different places to accommodate for boredom and

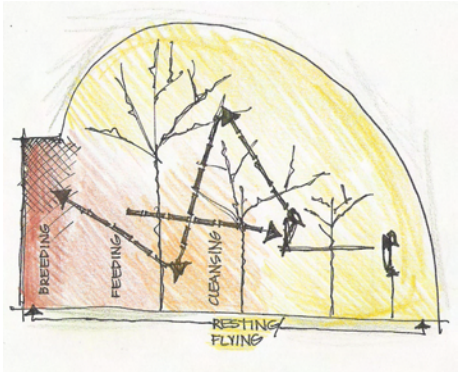

Figure 135. *A new Protected Habitat's concept of spaces.*

Figure 136. *Bird feeders' conceptual form and orientation.*

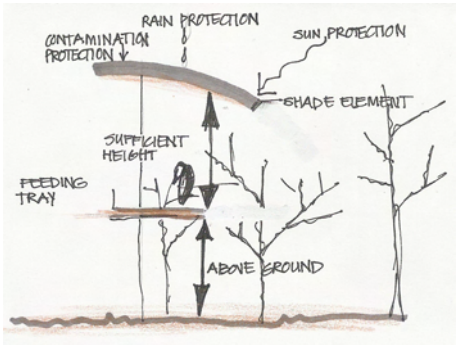

Figure 137. *A structure feeding zone to cover the birds'.*

depression of birds in their environment – see figure 140 (McMillan, online) Some of the new perches will be shaded, but all of these must be disinfected and treated for parasites.

(e) Cleansing. Bird water baths in the new Protected Habitats will allow normal grooming bird routines. The provision of baths help the birds control external parasites, as stated by McMillan.

(f) Protection. The new Protected Parrot Habitats will have atleast two solid planes at breeding areas (figure 138). A rear barrier wall and overhang give the animals a sense of protection. Base barriers (a concrete floor) will be incorporated below the soil in each enclosure. *Toucans at Riverbanks Zoo.* (online) also mentions that birds need to feel protected when breeding to prevent rats, mice and predators from burrowing into the habitats from below. These base barriers will allow easy cleaning and replacement of the covering soil. Baffles and site barriers will be used (birds need visual protection from humans and other animals). Any barriers should not be positioned to form enclosed corners and instead need to provide an exit from atleast three sides according to Rason (online).

5.2.1.2. Open-air Habitats

Open-air Habitats will be added into the Parrot Animan Precinct as these add an element of interest into the precint, and the roaming birds can further educate visitors on a different experiential level. Humans will watch the birds

5.2.1.2.1. Services

Irrigation will be placed so that it can be manually controlled by management.

5.2.1.2.2. Enrichment

Visitors should be made to feel like humble guests in the birds' open environment. Blue-throated Macaws and Citron-crested Cockatoos will inhabit the open-air enclosures and will be free to roam the precinct.

(a) Flying. Birds wings will be clipped so these birds can fly short distances but will generally remain in the borders of the main *Animan* Parrot Precinct. Climbing objects and perches in the Open-air Habitats will promote movement and muscle development (figure 141).

(b) Feeding. As with the Protected Habitats, food containers will be designed of a material and shape that is easy to clean. It will be positioned

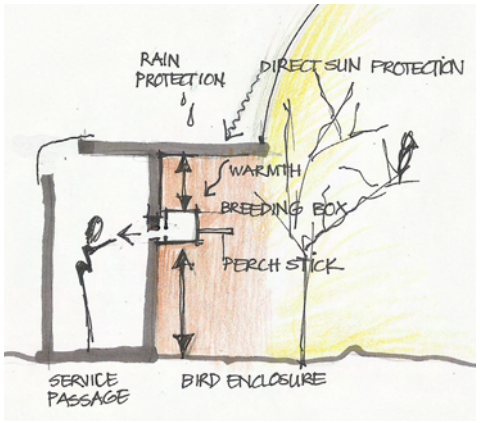

Figure 138. *A typical breeding zone in a new protected parrot habitat.*

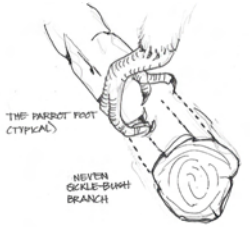

Figure 139. *Concept for all perch elements.*

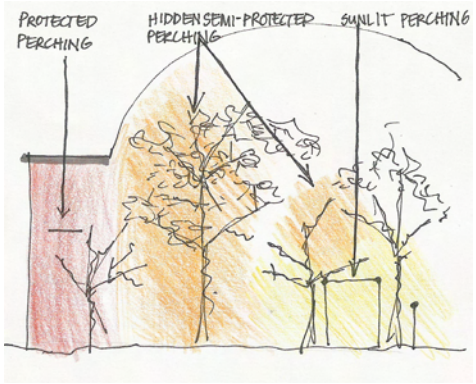

Figure 140. *Concept for variety of resting spaces in the new enclosures.*

above ground and covered overhead to avoid contamination and sunlight and rain protection (figure 141).

(c) Nesting/Breeding. Protected breeding spaces will not be provided at these habitats, because the birds will be too distracted to breed.

(d) Resting. Shaded and sunlit resting spaces are required to offer the animals a variety of spaces (as noted by the curator). The position, materials and shapes of perching branches have similar requirements to those of the Protected Habitats (figure 139). The free roaming birds can find spaces to rest beyond the Open-air Habitats.

(e) Cleansing. Grooming and cleansing will take place under a covering where water can also be protected from weather and contamination from other birds

(f) Protection.

A structure will protect the food and water from above, and a human barrier will border the habitat to allow animal but not human movement in and out of the habitat. Vegetation can further create hiding spaces for these animals.

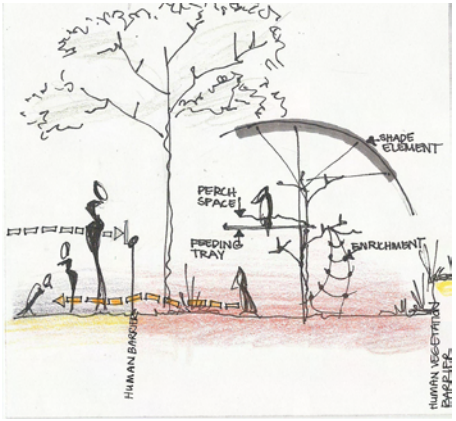

Figure 141. *Concept for an Open-air Habitat.*

5.2.2. Human Spaces

A variety of human spaces will be designed (figure 142) for both visitors and management alike.

5.2.2.1. Management Service spaces

Record keeping is essential to maintain detailed records on each bird kept.

5.2.2.2. Visitor spaces

(a) Experi-path educational space. Signage especially close to the Protected Habitats to inform visitors in conjunction with a proposed Life Science discovery centre at the entrance of the zoo. Education should be diagrammatic, in a position easier for visitors to move closer and focus on, and at a height and angle that will not block others' views from the birds. Easy to reach signage can be easily changed, and accessible to those who need to feel Braille. A textured pathway will aid in guiding the visually impaired to the Braille panels. These information panels should provide steps onto which children can step onto and have fun elevated experiences. The pathway need not be too wide as large crowds of visitors get split into smaller groups, and the circulation should not allow overcrowding. Signage should include parrot conservation information.

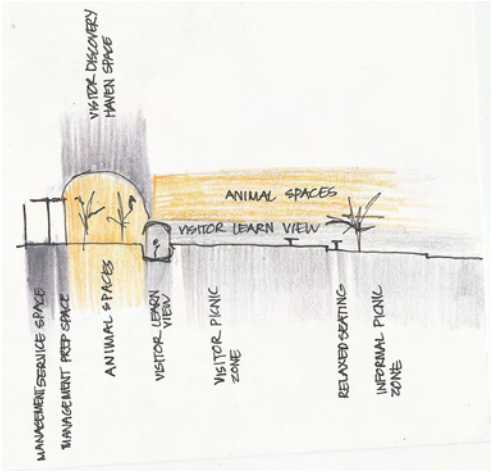

Figure 142. *Concept of spaces in the Animan Parrot Precinct.*

b) Discovery Haven. An area will be designed in which visitors can learn through a variety of multimedia, and view the birds from covered, hidden vantage points. The area will have information and multimedia equipment and will be able to be locked up and controlled. The space should be of a design that allows adaptability for exhibitions or events.

(c) Picnic Zone. A proposed picnic lawn and shaded seating will attract visitors, and encourage them to stay regardless of the weather conditions.

(g) Relaxing Watch spots. Integrative seating with open-air habitats create an extra experience for visitors.

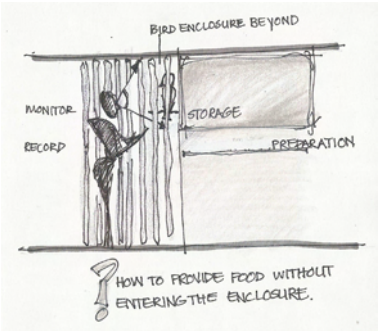

Figure 143. *Concept for a preparation and monitoring area.*

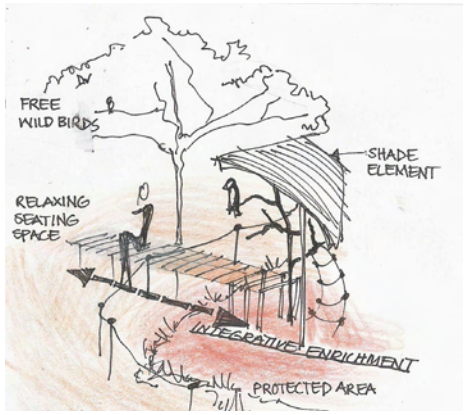

Figure 144. *Open-air Habitat concept.*

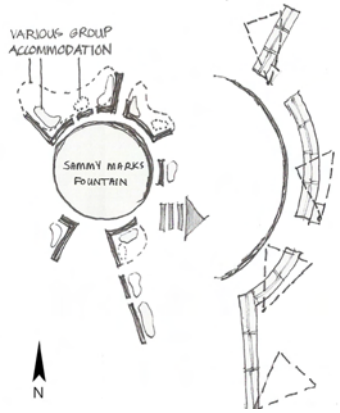

Figure 145. *Picnic Zone concept*

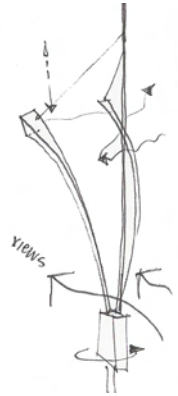

Figure 146. *Picnic Zone concept*

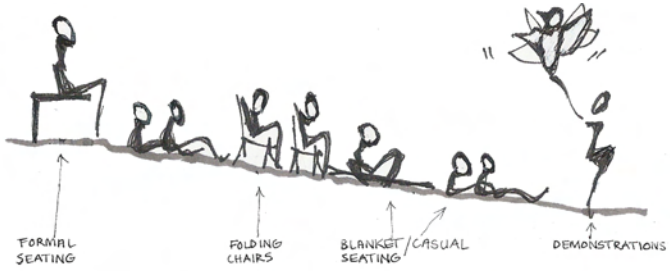

Figure 147. *Sloped lawn concept.*