



**Improvement update:**  
Lion enclosure  
Aviaries  
**To: Olsen Animal Trust**





## Enclosure Bella and Simba

### *Improvement 1*

To make it easier for the animals to drink and put less pressure on the neck vertebrae the level of the existing water pools will be brought up to a level of 40 cm above the ground. To accomplish this the existing water pools will be made more shallow and the edge will be built up with bricks to the required level. The edge of the pool will be plastered and the top will have the shape of a round moon (soft edge) to prevent the animals from scratching or hurting themselves.





*Result:*

The two existing water ponds were improved according to the initial program as stated in the proposal. One water pool has a shelter of 4 by 4.5 meter covering the water pool and protecting it from leaves following in.

Sand was also placed along the sides of the pool in order to make the ground more even, in order for both lions to have easy access.





### *Improvement 2*

Two shelters were built (3,5 x 4 meters) on different spots in the enclosure to provide Bella and Simba with more shady areas to lie under. It was decided to build one next to the water pond on the front of the enclosure where both lions are often spotted and one on the other side of the enclosure near a grassy area where they are often seen resting as well. These areas were chosen strategically in order to provide more access to shade in different parts of the enclosure where they are known to lie down.

Under the shelters a thick layer of sand was placed to provide a more softer bedding.

### *Result:*

Both shelters are being used extensively by both lions. Since both lions spend most of their time in close proximity of each other and the shelters are big in size they are often seen resting underneath them together.



### *Improvement 3*

Fly zappers were hung up in the two night enclosures. The fly zappers are hung up high enough to make sure the lions are not able to reach them. The solar system was placed on the roof to get power.



**Result:**

Initially the fly zappers were only turned on when there was a staff member and/or volunteer observing when Bella or Simba were inside. This was done in order to see whether the high pitch noise fly zappers make was causing any reaction to one or both of them. After no change in the behavior of both lions were noticed, the fly zappers are turned on every morning and turned off every evening since flies are not present in the night enclosures at that time and to save battery. The fly zappers contribute to minimizing the numbers of flies present in the night enclosures.



**General results:**

The upgrades which have been made have contributed significantly to especially the individual welfare of the lions the shelters give them more shade and therefore more options to lie down in a shady area on different spots. We used to see Bella and Simba mostly drinking from the water ponds inside. The new outside elevated ponds makes it easier for both lions to drink without bending their necks. Also the two ponds are in different areas which makes keeps the distance to a water source for both animals limited.



### Small aviary

The small aviary is extended as mentioned in the proposal. The extension is partly covered with the shade cloth in order to provide shade for birds to stay out of direct sunlight. The shade cloth will also prevent excess rain from entering the enclosure through the sides if the wind is blowing from a specific angle. The roof of the extended part is covered with metal sheets in order to provide birds with enough space to keep themselves dry. One big platform was built under the dry part. This platform can be used to place a nesting box. Another platform was built on a different location in order to provide another option to place a nest box. Two perches are built in the corners of the extended dry part for birds to sit high and dry.

Multiple other perches are constructed on the side of the enclosure to ensure that the birds have a maximum distance to fly without any obstructions in the middle of the enclosure. Tree stumps and gum poles are placed on different heights throughout the middle part of the enclosure for birds to sit on. Two small swings are placed in the middle to see whether birds would use them.



The pool has been extended with a deep part and shallow part to extend the suitability for birds to drink from and bath in. Different vegetation has been planted to create natural vegetation to perch on and to create a more natural look. Sandy parts have been kept in the aviary which allows birds to bath in dust.





### Big aviary

In the larger aviary, two new platforms were built. They are placed in the part of the aviary that is higher. The platform can be used to place nest boxes and food plates. Metal sheets are placed above the platform in order to keep it dry when it rains. Ladders are made for staff to climb up higher in order to have better access to the bird if needed and to be able to clean the platforms easily. It is also used by birds.



Extra perches and sitting stumps are placed on different heights throughout the enclosure to provide the animals to have different perch options.

Vegetation is slowly growing back and restored. A sprinkler system is used to water both aviaries a couple of days a week in order to stimulate growth of the new vegetation. Also sandy areas in this enclosure are kept to provide birds the option to bath in dust.



Throughout the enclosure perches are hanged up on ropes in order to provide a more natural effect when a bird lands on the perch since it moves when the birds land. It also provides high spots for the birds to sit on.



The water pond was adjusted to provide a shallow and a deeper part for different birds to be able to drink from and bath in.



#### **General results:**

The extra perches, swings and platforms have enriched both aviaries in a way that will contribute considerably to the rehabilitation process of all types of birds that will be kept in these enclosures temporarily. Also the adjusted ponds ensures that specie specific behaviour can be executed which was more difficult with the other ponds. In general upgrading the enclosures has provided the Lilongwe Wildlife Centre with an enhanced environment which will benefit the rehabilitation process of birds.