

Case Study
Environmentally Friendly Rodent Control Project
 Mitchells Plain Hospital, Western Cape (South Africa)

Global Green and Healthy Hospital Agenda Goal

- Chemicals

Hospital Goals:

- Controlling pest bird and rodent population via the establishment of predator birds.
- Eliminate the need for poisoned rodent bait

Date of project: 2012 – 2014

Demographic information

Mitchells Plain Hospital is a new 330 bed district level hospital, which was constructed on the outskirts of Cape Town from end of 2009 to 2013. The hospital services a relatively poor community with high crime, mortality, HIV and birth rates. It was designed for primary healthcare, focusing on Trauma, Obstetrics and Outpatient functions. The hospital was constructed adjacent to a nature reservation area with natural wild life.

The Issue

A strong motive during the development of the hospital was to establish environmentally friendly principles, both in infrastructure and operationally, which would be sustainable throughout the facility’s life expectancy. Due to the environmental setting a solution was required to control pest bird and rodent populations without using poisonous chemicals in the vicinity of the nature reserve.

Sustainability Strategy Implemented

A project was undertaken to control pest bird and rodent populations without using poison bait traps. The aim was to attract and promote the nesting of birds-of-prey around the facility. This was done through the design and establishment of a raptor nesting box scheme at the hospital site, in order to promote the natural control of pest bird and rodent populations.

Implementation process

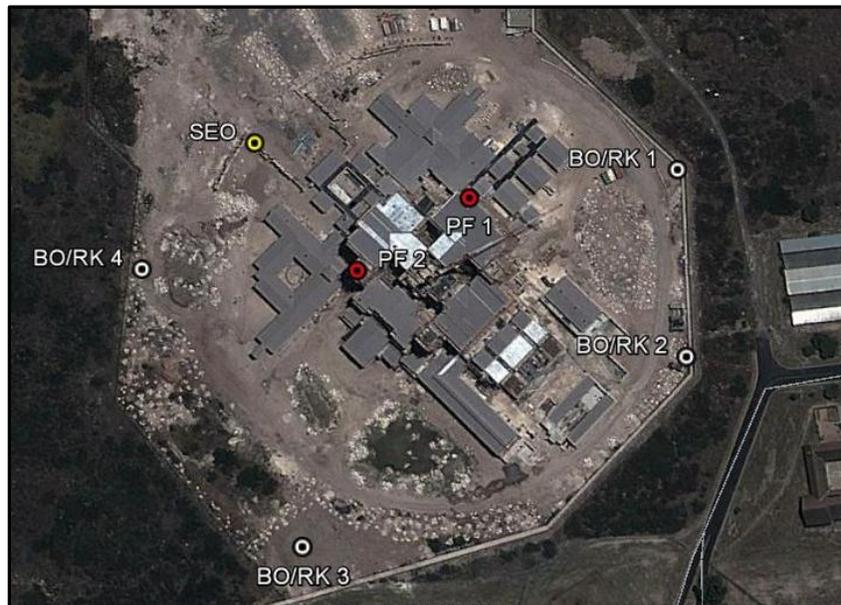
The main objectives of the project were to encourage diurnal and nocturnal raptors to reside and breed within the grounds of the hospital, effectively increasing natural predation pressure on



populations of avian (mainly pigeon and starling spp.) and mammalian (mainly rodent) pests, and providing an environmentally friendly and sustainable alternative to poisoning as a means of pest control

Progress towards achieving these objectives:

- A survey of the general area of the hospital determined the ecological context within which the ‘subsidised’ raptor community was to be established, and to estimate the raptor community that could be supported on the site.
- The identification of suitable locations for nest boxes to support the requisite number of pairs of owls (Spotted Eagle-Owl *Bubo africanus* and/or Barn Owl *Tyto alba*) and falcons (Peregrine Falcon *Falco peregrinus* and/or Rock Kestrel *Falco rupicolus*).
- The sourcing and installation of the requisite nest-boxes – 2 falcon boxes located on the roof of the hospital itself, one eagle-owl box attached to the inside of one of the peripheral walls, and four Barn Owl/Rock Kestrel boxes erected on poles located around the hospital grounds - as per attached layout. This process could only be completed once heavy construction activities had ceased.
- Monitoring and evaluation.



Benefits

- Savings on poisonous chemicals
- Not releasing poison into the environment
- Not disrupting the food chain and supporting the natural eco-balance

Tracking Progress

The hospital had an expert on birds-of-prey to monitor, update and advise on the process. He frequently visited the site to report on population numbers, nesting patterns and advise of maintenance & sustainability issues.

Challenges and lessons learned

- A major challenge was to prevent the use of poison as a pest control in the greater area. Once a rodent becomes poisoned, they become disorientated and very easy prey, which brought an ethical conflict, as the birds that are attracted, therefore become poisoned. This required an ongoing awareness and collaboration with adjacent facilities to not employ poison baiting. We encouraged mechanical trapping. Being a government hospital, it has a large organisational complement with standard protocols on procurement and tendering. With rotation of staff within the organisation, there are frequently new procurement officers that simply do-as-at-their-previous-facility and instruct normal pest control services.
- It must be noted that there needs to be a tolerance of some rodent populations. Naturally, birds-of-prey need prey. Thus it is an inherent requirement of the project to have some mice and rats around the facility. This is a challenge as health facilities by default have zero tolerance on rodents.
- Some of the nesting boxes became infested with other occupants, such as bees. This is problematic, as the birds will not return to a box once bees have left their nest.

Outcome and Status Quo

The project is deemed successful.

- There has been various sightings of predator birds in the vicinity, and a marginally low pigeon pest population. It has been noticed that the pigeon population also varies with the seasonal presence of owl presence.
- Within the two years after the initiation of this project, the hospital continues to refrain from poison baiting.
- Some complaints of mice have been received, which was expected and acceptable.
- The project is considered for other facilities.