



NILLUMBIK'S CONSERVATION CORRIDORS

REMOTE SENSING CAMERAS
FOR FAUNA MONITORING:
USER GUIDE



Nillumbik's Conservation Corridors: Remote Sensing Cameras Instructions



Remote sensing cameras are an effective tool used to identify what animals are utilising the bushland on your property. It will help with capturing photos of and detecting secretive or nocturnal animals which may be difficult to observe on your property.

You will have access to the use of the camera, bait station, attractants and security equipment which will be set up in a suitable location on your property by the Nillumbik's Conservation Corridors (NCC) project manager. It will be left there for a period of two weeks and then it will be picked up and passed onto the next landholder. Any photos of animals will be downloaded and burnt onto a CD which will be provided to you along with the identification of any animals captured.

We ask that you take care of the camera and any accessories and that it comes back in the same condition as you received it.

Equipment provided:

- 1 x ScoutGuard Camera
- 8 x Imedion rechargeable batteries
- 1 x 8GB SD card
- 1 x Python lock
- 1 x Security box
- 1 x Bait station (if using)
- Baits – Oats mix, Fish sauce/tuna oil, Truffle Oil (if using)



The Camera

The camera provided is a ScoutGuard DTC-560K. It is fully covert, waterproof, has a long battery life and takes colour photos or video during the day and black and white photos or video at night. Photos or video are saved on the SD card supplied. **Please do not insert or remove the SD card when the camera power is turned ON.**

The camera consumes very little power in standby and runs on rechargeable batteries which last up to 3 – 6 months before needing to be recharged. There is a delay of approximately 1 second between the sensor detecting something and the camera taking the photo. The triggering interval will be set to 10 seconds, which means the motion sensor will be disabled for 10 seconds after each triggering.

Off mode: turns off the camera.

Setup mode: allows you to set operational parameters or play back photos and video via the display screen or via TV. The setup will be done for you and the trigger mode, photo interval and sensitivity will be pre-set.

On mode: turns on the surveillance setting which makes the camera ready to take photos.

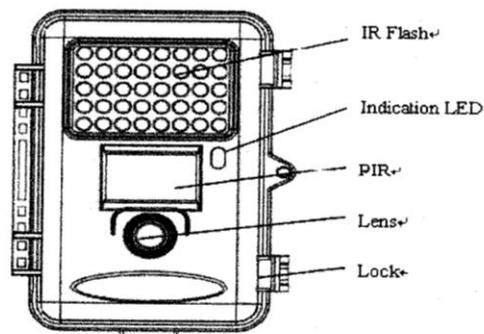


Figure 1: Front view

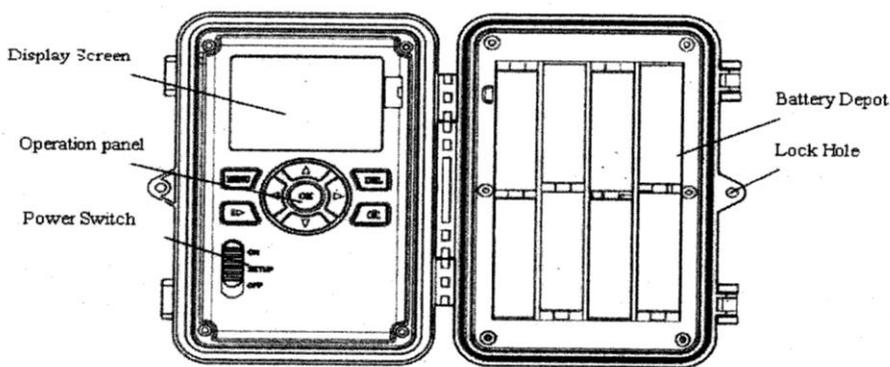


Figure 2: Operation interface

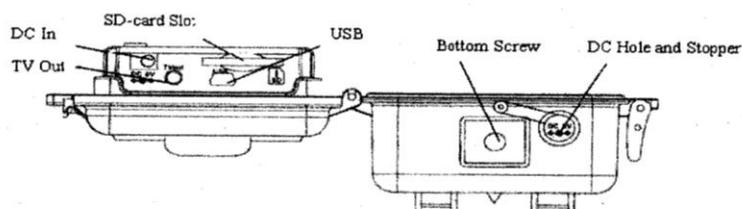


Figure 3: Bottom view



To bait or not to bait

When surveying animals you have the option of targeting features (such as den sites, burrows, watering points or animal trails), or using bait stations to lure animals to the camera.

Without the attractive effect of bait the likelihood that species will happen to pass by the camera and be detected may be very low. Using baits will maximise the likelihood of detection, but may also attract unwanted predators. If you do not wish to use bait then set the camera in a targeted area.

Targeting features on your property

If you are not using bait, you can set the camera up in front of a particular feature such as a den site, animal trail, vehicle trail or watering point. Set the camera close to the target area and carefully aim the sensor at the correct height to ensure the target area (such as a burrow entrance or hollow) is in the centre of the PIR sensor zone. You can place a bit of tape over part of the PIR sensor to narrow the detection window. To target a wide area (dam or track) you can set the camera back as far as possible (5m) to ensure full photos of an animal are obtained.

Baits

To maximise the likelihood of detection and to photograph a wide range of species that do not use predictable routes or habitats you can use baits to lure the animal into the view of the camera.

You can use one or a number of types of bait to attract animals. Three types of baits will be made available for you to use:

- **Oats, peanut butter and golden syrup:** this is a standard mammal trapping bait which will help to mammals such as possums, rodents and gliders.
- **Pistachio or truffle oil:** this will help to attract such as bandicoots and potoroos.
- **Fish sauce or tuna oil:** this will help to attract carnivores such as Spot-tailed Quoll, cats or foxes. Meat baits such as raw chicken or fish can also be used, but won't be supplied.

Bait Station

The bait station consists of a wire cage mounted on a wooden stake. The wire cage is fitted with a simple wire door that is held closed with a spring-loaded leash. Small amounts of each of the three different baits are housed in their own separate holders (metal tea infusers), which are then placed inside the wire cage. These will be 'pre-loaded' for you so it is ready to set up in the field.

Where to set up the camera

Careful location of the site and site preparation is important in order to reduce false triggers and help with species identification. Make sure the unit is facing south to avoid false triggers – direct sunlight on the sensor may result in false triggers or unclear photos.

Place the camera in an area clear of shrubs, ground vegetation, logs and rocks, but is shaded by trees. You can trim any dense vegetation to reduce false triggers, but the ideal location is a flat or gently sloping site with open vegetation. It is also ideal to place the unit within better quality habitat or areas where native fauna are active (burrows, tracks or scats are a good indication). Place it in an area with few weeds,



plenty of fallen branches and leaf litter, large old trees, and/or a variety of native plants. As the cameras will be circulated, it will provide back to you at a later date to place the camera in different locations and habitats on your property.

The site needs to be relatively clear of grass tussocks and shrubs for 1-2 m around the bait station so there is nothing obstructing the view of the camera. During summer, locating the camera near water may also improve the chances of detecting animals.



How to set up the camera and bait station

The NCC project manager or a Landcare representative will help to set up the unit on your property. However, the following instructions are available if you wish to do this yourself.

The camera should remain switched off while it is being set up. Once the camera and bait station has been fully set up only then should you turn the camera on. The camera should be placed inside the security box and locked to a tree with the python lock. Set up the camera on a fairly solid tree that will not move in the wind and ensure that it is secured tightly with the strap and lock supplied.

The camera should be set at a height approximately 50cm from the ground to detect medium sized mammals (bandicoots, possums, cats, foxes). If you wish to target very small species set the camera height at 20cm from the ground (*Antechinus* sp. or rodents) (Figure 4). If the camera is set at 1 – 2m high, then you will detect large animals such as deer, but this will reduce the detection of smaller species. The ideal distance for trapping all mammals is up to 3m from the camera to bait station and the camera height at 50cm (Figure 5).





Figure 4: An example of a remote camera set opposite a bait station to detect small mammals. The unit is attached to the tree so the sensor is 20cm above the ground and approximately 1.5m from the bait station.

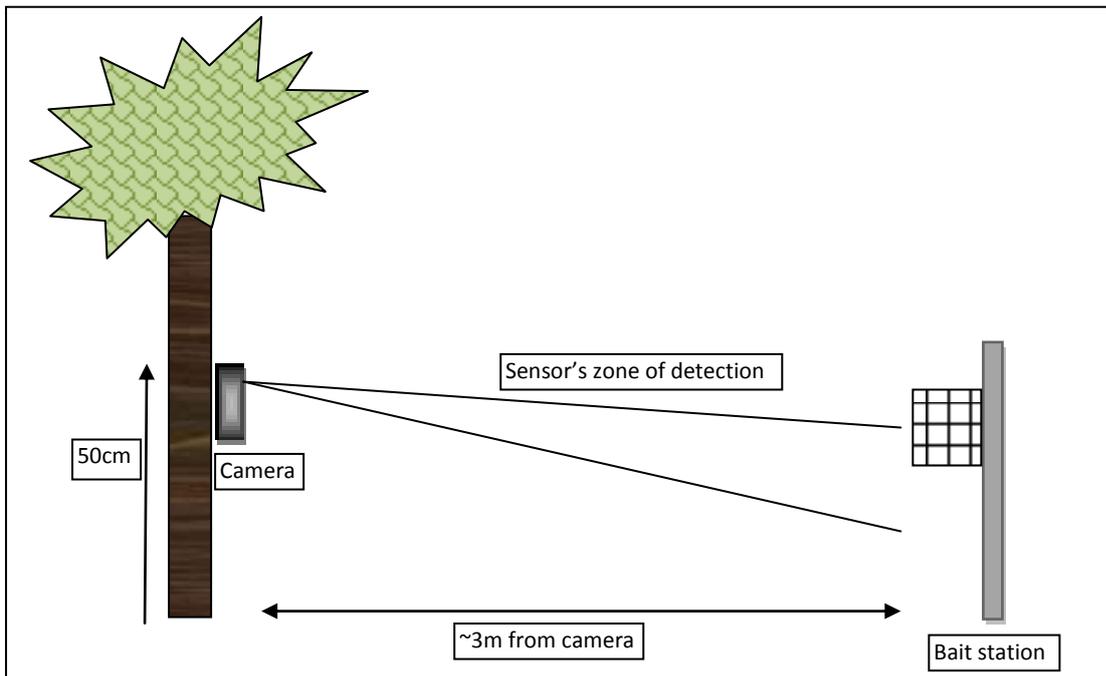


Figure 5: Preferred height of camera and distance to bait station or target area.



To set up the camera on site follow these steps:

- 1) Select a tree and mount the open security box (at the desired height) to the tree by using the belt provided. Secure the box as tight as possible so if it is knocked by an animal or tree branch it won't move. A stake may also be used as a mount, but it will need to be next to a tree or fixed structure so the python lock can be secured to it.
- 2) Hammer the stake with the bait station 3m in front of the camera security box. Depending on the slope of the land, you may need to tilt the camera security box upward (if facing upslope) or downwards (if facing downslope).
- 3) Add the baits to the bait station and clip the door shut.
- 4) Open the camera door and switch the camera on. The indicator LED will blink for 10 seconds which is the time interval you have to place the camera into position before it starts taking pictures (close the cover, lock it, place it in the security box and walk away). Close the camera properly, ensuring that it is closed to prevent any moisture entering the internal parts of the camera.
- 5) Place the camera inside the security box, close the security box lid and feed the python lock through the holes at the back of the box. Secure the cable and lock tightly. Once the bait station and camera position is set up the camera will start taking pictures according to the programmed settings when it is triggered by motion.
- 6) Record the location of the camera using a GPS. It is important that the camera location is accurately recorded and at a mutually agreeable time a Landcare representative or the NCC project manager will come and record the location of the camera on your property.



Viewing your images and camera rotation

As we have more participating landholders than cameras they will be circulated on a roster basis. Therefore, the camera and bait station will remain in place on your property for two weeks. There is no need to refresh the bait station during this time. After two weeks the camera will need to be returned to the NCC project manager or the NCC project manager or Landcare representative will come and collect the camera at a mutually agreeable time. Captured images will be checked and any significant images will be recorded and verified by a zoologist. Any photos of animals will be downloaded and burnt onto a CD which will be provided to you to keep along with the identification of any animals captured.

Sharing significant images

The location of records of significant species will be added to DSE's Victorian Biodiversity Atlas and the Spatial Vision Community Web Mapping Portal. Photos will also be added to the Nillumbik Shire Council website and will be linked to the mapping portal. Collecting these images helps to build up an important picture of the fauna that we have living in Nillumbik. It will not only help to enhance and contribute to our understanding of the biodiversity in the area, but will also inform and guide our future management practices.

