



GUIDANCE NOTES  
AND  
CODE OF PRACTICE  
FOR  
RAPTOR REHABILITATORS  
IN  
SOUTH AFRICA



These notes were compiled by Raptor Rescue,  
a working group of the African Raptor Trust, 053-515 -NPO.  
Further information available from Raptor Rescue  
P. O. Box 288 Umlaas Road 3730 KZN  
Telephone 031 7852981 or 082 35 90 900  
[rescue@africanraptor.co.za](mailto:rescue@africanraptor.co.za)

# CONTENTS

Introduction .....	3
Legalities and Permits.....	3
Facilities.....	4
Transport boxes	4
Treatment / examination area	4
Intensive care units / Initial care enclosures	4
Recovery aviaries / Secondary care enclosures	5
Flight aviaries	7
Husbandry and Management .....	8
Hygiene and Bio-Security	8
Food	8
Emergency first aid	9
Falconry equipment	10
Records	10
Admission Procedures.....	10
Shock therapy	10
Full examination	11
Euthanasia	11
Supportive treatment	11
Casualty Cases.....	12
Orphans and juveniles	12
Short-stay cases	12
Long-stay cases	13
Rehabilitation Considerations .....	13
Fitness	13
Assessing eyesight	13
Habitat assessment	13
Time of year	14
Territorial competition	14
Pre-release requirements	14
Release Methods .....	14
Traditional Hack	14
Hackboard	15
Aviary Hack	16
Lure Hack	16
Kite Hack	17
Full Falconry Hack	17
Appendix 1.....	18
Appendix 2.....	19

## Introduction

At present there are no minimum standards to guide either experienced or new raptor rehabilitators on the care and rehabilitation of sick or injured birds of prey in South Africa. Conservation officials issuing permits also have no guidelines as to what the minimum facility requirements should be to successfully rehabilitate a raptor.

This document is based on the UK's document, *Guidance notes and code of practice for raptor rehabilitators*, produced and published in 1999 by the UK's Raptor Rescue organization. We thank them for their affiliation and for allowing us to borrow information from their publication. It is hoped in future to introduce a Raptor Rescue Approved Accreditation similar to that used in the United Kingdom (UK). The minimum standards presented here are, as stated, the minimum and it is hoped that South African rehabilitators will strive for levels of husbandry and professionalism that exceeds these basic standards. The layout of this document handles each step of the raptor rehabilitation process, starting with transporting and ending with release techniques.

## Legalities & Permits

In order to practise rehabilitation on wildlife in South Africa a permit issued by your provincial nature conservation needs to be obtained. Acquisition of a rehabilitation permit will be based on the candidate's experience and suitable facilities.

Written application for bird of prey rehabilitation permits shall be made to the Provincial Permit office and contain the following information:

- 1) The name, address, telephone number, date of birth and identification number of the applicant;
- 2) The address of the proposed raptor rehabilitation activity or facility;
- 3) A detailed description of the applicant's facilities, including numbers and sizes of cages as well as pictures and or description, plans of the facilities
- 4) A description of educational background related to animal biology, veterinary medicine, and wildlife rehabilitation;
- 5) A detailed description of experience and training related specifically to raptor rehabilitation.
- 6) The name, address, and telephone number of the licensed veterinarian who has agreed to assist and consult with the applicant on the treatment and care of raptors being rehabilitated;
- 7) An outline as to the source of funding for the rehabilitation facility.
- 8) The method of securing suitable food for the raptor rehabilitation facility.

9) Any other pertinent information as requested by the Permit office.

**NOTE:** As of the year 2008, any facility holding or working with raptors recognized as 'Threatened or Protected Species' according to the National Environmental Management Biodiversity Act (Act 10 of 2004) shall be required to apply for a TOPS permit in order to do so. (See Appendix 1 for species affected.)

1. A TOPS Registration permit is valid for three years and is issued to a facility by the relevant provincial issuing authority.
2. Once registered a further TOPS Standing permit is required in order to undertake the restricted activity of raptor rehabilitation. (Valid for 36 months)

## **Facilities**

### **Transport boxes**

These may be purpose-built wooden boxes, specialised cardboard carriers, or standard cardboard boxes. The aim of any transport box is to keep the raptor secluded from its surroundings while travelling.

Ventilation is important in warm weather but holes must not be so big as to allow the casualty to view its surroundings. We suggest ventilation holes be drilled along the lower edge of the box walls. The box should be large enough to allow only limited movement and a non-slip surface such as a towel or piece of carpet should be placed on the floor to give the bird something to grip whilst travelling.

Cat and dog carry-baskets must not be used unless the meshed front is covered to prevent the raptor seeing out and becoming stressed. The bird must be kept quite during transport and not left unattended in a vehicle or in the boot of a car.

### **Treatment / examination area**

A clean, dedicated area for the examination and treatment of the casualty must be available. The cleanable examination table must be accessible from at least two sides. All doors must be closable. All windows must have vertical bars, or some other form of screen on the inside, to minimise injury in case of an attempted escape by a bird.

The area must have adequate electrical supply to provide sufficient lighting and allow the use of equipment such as heat pads, panel heaters and heat lamps. Drugs and medicines must always be stored in a cool, locked cupboard. Running or stored water as well as hot water must also be available.

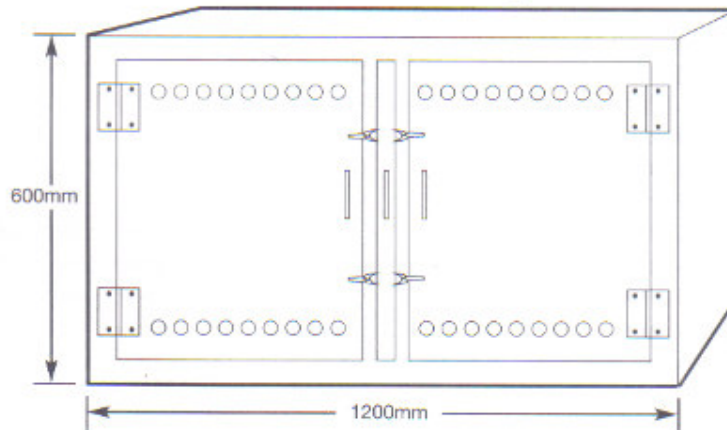
### **Intensive-care units / initial care enclosures**

These can take the form of, heavy-duty plastic boxes that are easily cleaned and disinfected. Such boxes are, however, generally not big enough for vultures and large eagles. Custom-made wooden boxes that are surface sealed to make them water proof, washable and able to be disinfected work well. Whatever container or box is used, provision needs to be made to allow the internal temperature to be maintained at 21-26<sup>0</sup> C during initial treatment. The Raptor Rescue (UK) intensive care unit is expensive to construct, but is an excellent design, (see Diagram 1).

The floor should be of a non-slip material to give the bird grip. Straw, hay or sawdust is not suitable and should not be used. Casualties should only be kept in these confined quarters whilst receiving initial treatment, during shock therapy or for a period determined by your veterinary surgeon.

### Diagram 1

Construction and layout of Raptor Rescue designed intensive care units



*Each unit is constructed from a lightweight, strong and durable plastic which is hygienic and easy to clean. All edges and corners are plastic welded to give a smooth and cleanable surface. The units are slightly translucent therefore making them light internally; this radical design has proved to work very well.*

*If required, the unit can be covered to create total darkness, however, in practice this is rarely necessary due to the seclusion offered by the unit. A sliding partition between each unit means that birds can be moved from one side to the other - eliminating unnecessary handling - particularly useful when cleaning is necessary.*

### Recovery aviaries / secondary care enclosures

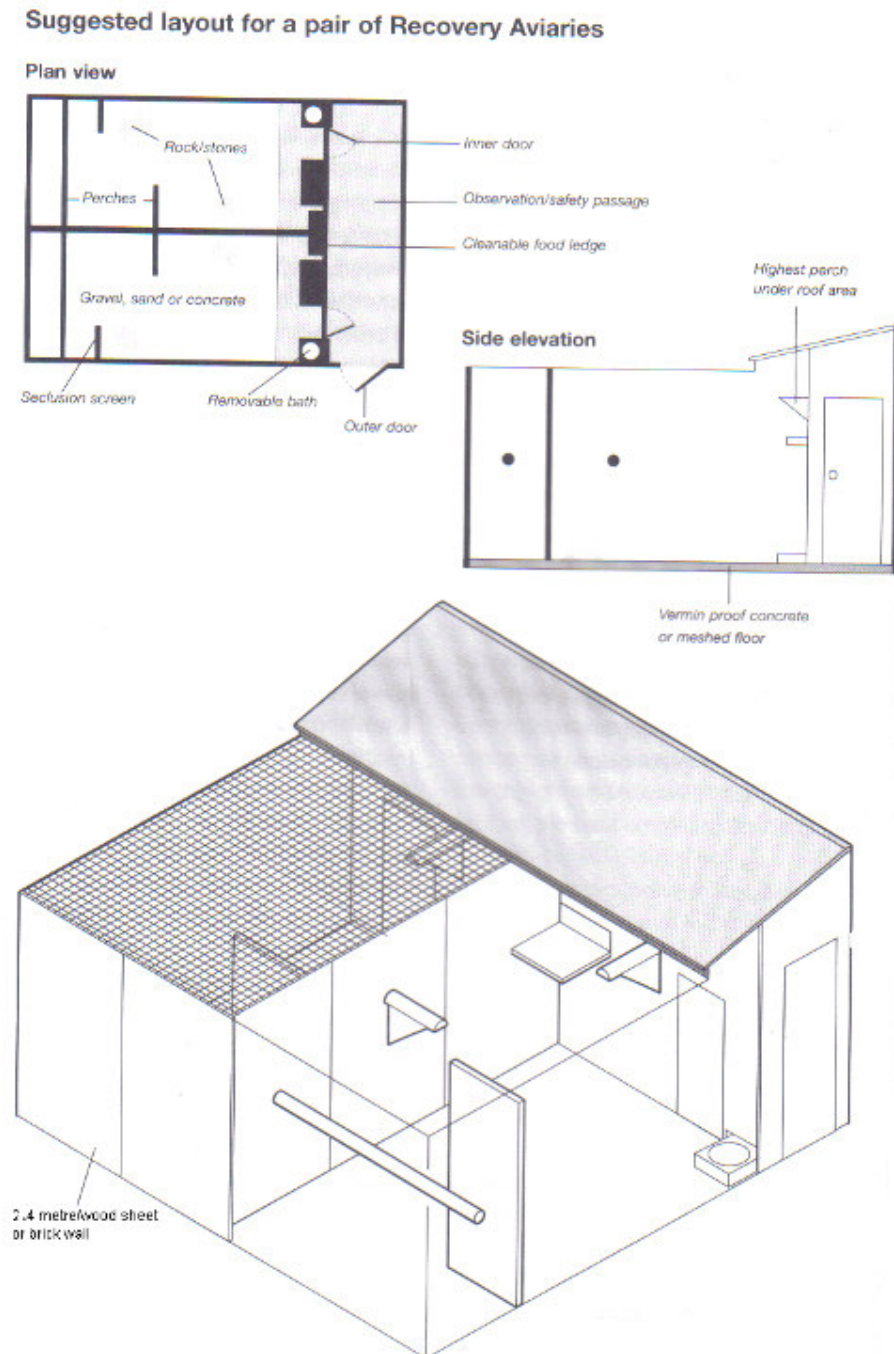
Recovery aviaries must be well drained and have adequate ventilation. Aviaries of the seclusion type, having solid walls with a net top, are best employed for housing wild casualties. (See recovery aviaries, Diagram 2) Each aviary should be sufficiently screened from any possible disturbance which may cause the occupants to panic. Wire-fronted aviaries should be avoided as the birds will fly into the wire and damage themselves. All sides should be constructed of timber or brick.

The aviary design must incorporate a double-door entrance system to avoid accidental escape of the birds. Different size enclosures will be required, appropriate to the species being housed. As a guide, aviaries measuring 2 metres by 2 metres, and 2 metres in height would be the minimum size for small raptors like kestrels and wood owls. For larger species such as falcons and buzzards, a minimum size of at least 3.0 metres by 2.5 m and 2.0 m high is needed.

Plastic coated mesh, nylon net or double-galvanized weld mesh of a reasonable (1.8 to 2mm) gauge should be used for an enclosure's roof. Non-galvanised mesh tends to rust eventually and can become abrasive, posing a possible source of injury. Chicken mesh should never be used. This type of mesh will cut birds' feet and heads if they fly into it, which wild birds will do. As an alternative to mesh roofs, sensibly

spaced plastic or wooden slats also work well. Shade cloth can also be used, but can be abrasive on raptors' feathers.

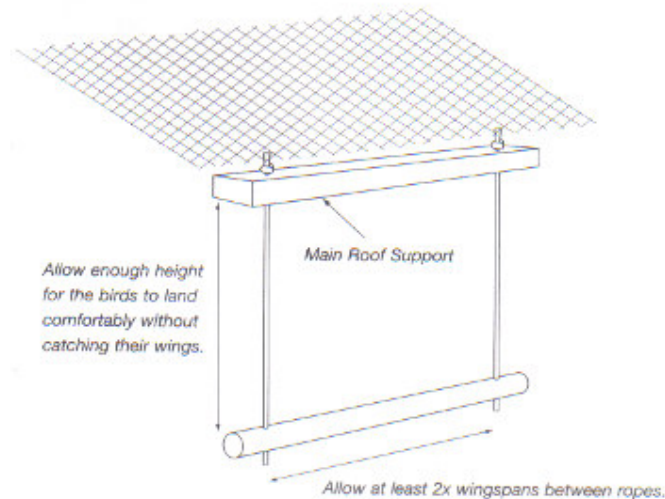
The aviary should have a roofed area for protection against the elements. A portion of the aviary can be screened off from the enclosure entrance to offer the raptor a place of retreat when the rehabilitator enters the aviary. (See recovery aviary diagrams below)



Perches of various diameters should be provided so as to allow the bird to select one suitable for its foot size. Enough space must be left above the perch to allow the bird to land and take off without hitting its wings on the roof.

Swinging perches (see Diagram 3) can be a useful addition, acting like a damper by absorbing some of the impact on the foot when the bird hits the perch at speed. They also encourage more frequent use of leg and wing muscles. Swing perches should be covered in astro-turf or heavy-duty carpeting to help prevent bumble foot.

**Diagram 3**



A cleanable food ledge or platform should be provided rather than the food being just dropped onto the floor. Bathing and drinking water should be available and to minimise disturbance, access to the baths for re-filling should be from the outside of the aviary. The depth of the water should be no greater than the length of the housed raptor's leg. Birds that have wounds with dressings should not be offered baths. Water containers should be cleaned regularly and the inclusion of a low level of disinfectant such as cetrimide (Hibiscrub) during warmer months will prevent bacterial growths and algae developing.

Observation points should be built into the design of the aviary to allow the rehabilitator to monitor the patients regularly. Well-drained aviary floors are best concreted and then covered with gravel or sand. Straw or bark chips should not be used on the floor as these substrates increase the risk of serious fungal infection.

When housing casualties it should be remembered that, in general, birds of prey avoid each other in the wild, (except migrating kestrels) and should therefore ideally be housed individually. The mixing of different wild species in a single enclosure may cause unnecessary stress.

### **Flight aviaries**

Although expensive to erect, due to the size of the structure, flight aviaries prove invaluable in increasing the raptors fitness level prior to release and enabling visual assessment that the bird is indeed able to fly properly. The flight must be at least 3m wide and at least 15 to 20 metres long. Swing perches must only be placed at either end to encourage the raptor to fly the full length of the aviary. The walls should be of a solid material with a viewing hatch at either end to enable the rehabilitator to observe the raptor's flight action.

# Husbandry and Management

## Hygiene and Bio-Security

**Note: With the emergence of the H5N1 bird flu the utmost precautions must be taken to protect both yourself and others. Consult with your local and state veterinary surgeons on current bio-security protocols.**

Raptors admitted to rehabilitation centres are often infected with disease. Every precaution must be taken to reduce the risk of either infecting yourself or transferring the disease to other birds, people or animals. Your veterinarian can advise you on the correct standards of hygiene, and these must be maintained at all times; this includes your personal hygiene. Quarantine protocols for the facility must be established and strictly followed, even in small rehabilitation centres. Limiting the number of human caregivers, incorporating foot baths and minimizing the number of access points into the facility are simple measures that increase bio-security. Disposable gloves should be worn when handling casualties and rehabilitators should be up-to-date with their tetanus injections and common flu vaccinations. All new raptor casualties should be kept isolated for 14 days or until diagnosis is complete to prevent cross infections.

Many wild birds carry parasitic infections. Often when a bird becomes sick or injured its parasitic load increases dramatically. A wild casualty may benefit from a general de-wormer once its condition has stabilised. Not all parasites are, however, controlled with the use of a general de-wormer. Consult a veterinary surgeon if in any doubt. Casualties should also be treated for external parasites. Many dog and cat insecticides are not suitable for birds of prey.

Fungal infections are quite common in raptors, with some species being more prone to infection than others. Sick or injured birds are particularly at risk. Decaying vegetation such as straw, hay or bark chips should not be used in or kept near aviaries. All enclosures must be cleaned and disinfected on a regular basis. Water baths must be cleaned regularly as these can be a source of dangerous bacteria.

Casualties that are in intensive care will require cage-cleaning at least once a day. This is best done at feeding or medication times to minimise stress. Preferably a second pre-cleaned enclosure should be available into which the casualty can be immediately transferred to minimize handling time. Caution must be taken with the type of disinfectants which are used; some are not suitable for use with birds. A veterinary surgeon will be able to advise on the brands which are safe and effective.

## Food

Food fed to a recovering raptor must be of good quality, whole, varied and fresh. Whenever possible the food should be similar to that the raptor would take naturally in the wild. This could include domestic rats and mice for mammal eating species, fish for piscivorous species (with long-term cases) and quail or day-old-chicks for avian eating species.

Sourcing non-contaminated food is of vital importance. Any wild-sourced food may be infected and carrying bacterial infections. Fresh pigeons and doves should not be fed due to the high risk that they may be infected with Trichomoniasis (Frounce).

Pigeons and doves which have been beheaded and frozen solid, however, can be safely fed as the freezing process will have eradicated the Trichomoniasis protozoa.

Food collected with the use of a shotgun should be avoided due to the risk of associated lead poisoning. Rifle-shot food should have the flesh removed from around the bullet entry site because residues of lead may be present; the same applies for pellet guns.

All food should be stored in a freezer dedicated for that purpose only. Care should be taken when freezing food that it is frozen quickly, and when defrosting it, precautions should be taken to prevent defrosting food becoming contaminated by flies. All defrosted food must be fed within 12 to 24 hours. Any delay in feeding will significantly increase bacterial presence.

### **Emergency first aid**

Any lay person may give emergency first aid care to a raptor casualty in attempt to minimise its suffering or to save its life. However, the practice of veterinary surgery may only be practised by a person registered with the South African Veterinary Council. The majority of casualties will have serious injuries and the diagnosis of these and their subsequent treatment must be carried out by a professional experienced in avian care. Persons involved with raptor rehabilitation must always therefore work closely with their veterinary surgeon.

Some casualties will have only minor injuries or be suffering from a condition that occurs regularly and may not require veterinary diagnosis. Such birds can be treated by an experienced rehabilitator and released. Discuss with your veterinary surgeon which cases he or she would be happy for you to treat yourself.

Rehabilitators must have a basic first aid kit to deal with emergencies and the daily care of casualties. The following will be required:

- Syringes, needles and crop tubes of various sizes, along with glucose lectade / ringers for the treatment of shock and replacement of body fluids.
- A controllable source of heat such as a heat pad or panel heater for use in shock therapy.
- Splinting material to support fractures, plus various sizes of self-adhering bandages (such as vet rap) and dressing tapes.
- A suitable dewormer and insecticide should be available to treat both internal and external parasites. Consult your veterinary surgeon for specific products and dosages.
- Antiseptic powder or cream (e.g. Bactroban) for the treatment of wounds.  
Warning: Some human and pet wound-powders contain a local anaesthetic which is toxic to birds.
- Scissors and forceps.
- Hand held catch nets.
- Tail sleeves for the protection of raptor's tails whilst in treatment.
- Towels.
- Cotton wool.
- Hills AD veterinary animal food
- Metholated Spirits

## **Falconry Equipment**

Falconry is practiced under the auspices of the South African Falconry Association (SAFA) at a national level, and through various affiliated falconry clubs at provincial level. Active falconers need to be registered with and graded by their clubs. The successful rehabilitation of a raptor often depends on falconry-related techniques and rehabilitators are encouraged to undergo training in falconry methods. If this is not an option, you are advised to enlist the services of a reputable, graded falconer in your area to assist you with certain rehabilitation cases.

Basic falconry equipment should be available for release training and in managing any lost falconry birds which might come to the rehabilitator. This equipment would include:

- Leather to make anklets
- Various sized hoods.
- Suitable block and bow perches for the species likely to be encountered.
- Weighing scales, falconry gloves, swivels, leashes, and bells.
- Telemetry equipment and water baths.

## **Records**

Record keeping is essential and is a legal requirement for all TOPS species (Threatened or Protected Species). Rehabilitators must be able to prove the origins of all raptor casualties in their care. Information to be recorded should include the name, telephone number and address of the rescuer, the location and date the bird was found, and the circumstances under which it was found. All treatments given should be recorded, as well as the death or euthanasia of any birds. The date, place and method of release must also be recorded, as well as the number of the SAFRING band fitted to the bird. (See Appendix 2 for record-sheet examples.)

## **Admission Procedures**

---

Any raptor that allows itself to be easily captured or which appears to be tame is either seriously injured, or very sick. In addition to any injuries or illness, the casualty is likely to be suffering from shock. In most cases, the more unresponsive the bird, the more severely it is suffering from shock. To minimise further stress, the new admission should only receive a quick examination to identify and stop any significant haemorrhage, to initiate shock therapy.

### **Shock therapy**

Shock, if untreated, is likely to cause the death of a raptor. Shock will become more critical the more pain, fear, loss of body heat, hunger or dehydration the bird experiences. Shock therapy should be initiated as soon as possible. Fluids can be administered orally, or by subcutaneous injection. Both methods should only be carried out by trained personnel. The initial dose of fluids on admission should be 1% of body weight, or 1 ml per 100 g of weight. The bird should then be placed in an

intensive care unit with an ambient temperature of around 21 to 26°C and left to rest for about two hours. If the bird is still weak or shocked after this period, fluid therapy should continue at the same dosage to a maximum of 4 % of body weight, or 4 ml per 100g of body weight in the first 24 hours.

### **Full examination**

After the initial rest period the raptor should start to stabilise. Once stable, a full examination can be carried out. The examination should follow a set format. Work systematically from the raptor's head to its tail and check for abnormalities, swellings and lesions. Careful attention should be paid to the head for damage, or infections in the eyes, ears, nares, and mouth. Breathing difficulties must be noted.

Check the inside the mouth for blood, as this may indicate internal bleeding from either poisoning or collision damage. Wings, legs and feet should be checked for fractures and damage. The amount of flesh and muscle on the sternum will indicate the bird's general condition and can help in judging how long it has been sick or injured. The vent area should also be checked for haemorrhage, soiling or compaction. Once stable the bird can be examined by your veterinarian for further diagnosis or surgery.

### **Euthanasia**

If the casualty is obviously not going to be suitable for release or will have an unacceptable quality of life in captivity, the bird should be humanely destroyed. Whenever possible euthanasia should be carried out by a veterinary surgeon. Rehabilitators should, however, familiarise themselves with suitable methods of euthanasia for those occasions when they must destroy birds immediately to avoid prolonged suffering.

### **Supportive treatment**

In consultation with your veterinary surgeon a decision must be made as to the rehabilitation process. Many casualties will be emaciated when admitted. Liquid or finely ground convalescent feeds are available, such as Hill's AD, which can be fed with a crop tube. Recovering birds should still be held in confined quarters to allow them to be caught for medication and force feeding. The feeding of solids should be introduced slowly, with no casting (feathers and bone). Meals should be small and frequent, but successive meals can be only given when the crop is empty.

Damage to plumage during this period must be prevented. Tail feathers must be protected with tail-sleeves, or alternatively taped with micro-pore or gummed paper, which can later be removed with Metholated spirits for micro-pore or warm water for gummed paper.

## Casualty Cases

---

### Orphans and juveniles

Most orphaned or juvenile birds will have no injuries; if possible they should be returned to where they were found as soon as practicable. If this is not possible, orphans can be reared in captivity by foster parents and hacked back to the wild at a later stage in their development. It is imperative that orphans be imprinted on their own species; simply preventing imprinting on humans is not sufficient.

If there is no alternative but to hand-raise the orphan, then a puppet resembling the relevant species parent should be used as a visual fixation at feeding times. Rehabilitation is more successful when multiple orphans are hand-raised together. Keep in contact with other rehabilitation centres during breeding season so that fledglings of the same species can be raised together. This works particularly well with owl species. From 12 to 14 days of age all raptor species can be encouraged to pick up and eat chopped up food themselves.

Great care must be taken to ensure that young birds do not know that a person is supplying the food otherwise imprinting will occur. Generally it is very important to adopt a 'hands-off' approach. For any bird to integrate into the wild breeding population it is wise to orientate it towards its natural nesting situation and create a suitable artificial rearing site. (Cliff faces for falcons, stick nests for accipiter, and scrapes or cavities for owls).

The last alternative is to place the orphaned birds into a wild foster nest or split them between several nests. This is, however, not as straight forward as it seems. Difficulties can arise in finding a suitable foster nest. Orphaned chicks have to be younger than the chicks in the foster nest. The number of chicks already in the nest will also determine suitability. Cross fostering (using a different species as foster parents) is not recommended as it could result in the fostered bird becoming disorientated towards its own species.

### Short-stay Cases

The shorter the time the raptor has to stay in captivity the better, because raptors are essentially performance creatures and will rapidly lose flying condition through inactivity. Although all casualties are treated in the same manner, the duration of their stay will affect pre-release preparation. If a raptor has been in captivity for less than two weeks and at least part of that time has been spent in a recovery enclosure, then it can be termed a short-stay case and will need no fitness preparation prior to release. Typically birds that have suffered, severe concussion, dehydration or have merely been caught up in man-made structures fall into this category.

The hunting methods of the species in question do also determine the degree of fitness needed for a successful release. For example, a buzzard which is a sedentary hunter, and which has been in captivity for two to three weeks, with moderate exercise in an aviary, will perform reasonably well if released at this stage. A Peregrine falcon or Black Sparrowhawk would be out of condition in three weeks and would starve to death if simply released. Any bird which has been strictly confined in an intensive care unit or hospital cage, without any exercise, should receive some sort of pre-release fitness preparation.

## **Long-stay cases**

Birds that have suffered major trauma or illness may have been in care for weeks or even months. Casualties which were severely emaciated will, following treatment, need to regain body weight steadily over a period of time. These birds will be unfit and out of condition. Their fat to muscle ratio will almost certainly be incorrect. Birds which were not originally emaciated, but have been confined for a period, will be in a similar condition.

Assessment for release suitability is of particular importance when birds have had fractures which appear to have healed. These birds may appear to fly perfectly well around the aviary but, as more exercise is introduced, it is not uncommon for complications to become apparent. All long-stay cases must undergo some sort of fitness preparation to ensure that they are reasonably strong before release. This preparation will vary, depending on the species concerned and the original disability. The bare minimum would be to get the raptor to fly actively in a large flight aviary. The better option is to employ one of the training methods listed below to ensure that the raptor stands the best possible chance of survival. This is, however, obviously very labour intensive.

## **Rehabilitation Considerations**

---

### **Fitness**

Any raptor which has no hunting experience or which has suffered a major trauma or illness, requiring lengthy convalescence, will need some sort of fitness preparation prior to being released. Such birds may be capable of flying around an aviary perfectly well, and could be carrying a lot of flesh, but will not be in hunting condition and will be completely unfit for release. Any bird released in this state will starve to death before it has built up the necessary muscle to out manoeuvre and fly-down its quarry. It is therefore essential that released casualties are either made fit before being released or are subjected to a controlled release programme with the provision of food.

### **Assessing eyesight**

Thirty to forty percent of all raptor trauma cases involve damage to the eyes, and in 70% of these cases the damage is at the back of the eye where it may only be seen by a veterinary surgeon using an ophthalmoscope. A raptor's eyesight must be assessed by a vet prior to its release.

### **Habitat assessment**

For any rehabilitation process to be successful the natural habitat into which the raptor is released must be appropriate for the species concerned. The vegetation and other physical features must be suitable for the hunting strategies of the species being rehabilitated. Account must also be taken of potential man-related threats in the immediate area. Busy roads are potentially dangerous for rodent hunting buzzards, small eagles or owls because they may be killed by passing vehicles. A large number of unprotected electricity pylons in the release area could be dangerous for the reintroduction of large eagles or vultures. The close proximity of subsistence farmers with free range poultry could prove to be too easy for a large

accipiter or falcon to resist if released from nearby, once again getting the released raptor into trouble.

### **Time of year**

The availability of natural prey is also an important factor when assessing any release site. During winter it may be beneficial to prolong a treated raptor's stay in captivity and wait for the spring rains before releasing it.

Breeding seasons for the various species will also determine the suitability of a release site. During their breeding seasons yellow billed kites and black shouldered kites will, for example, chase any bird from near their nests.

Migratory species should not be released at, or after, the time that the wild birds are departing as they will not be fit enough to make the journey.

### **Territorial competition**

Raptors are highly territorial, so short-term cases should be released directly back into the area from whence they came. Raptors in adult plumage must not be released in territories already occupied by the same species because they will just be displaced. Corvids can also be very aggressive towards raptors and if present in an area in large numbers they will attack and chase released raptors out of the area.

### **Pre-release requirements**

Birds must not be released before being banded with a SAFRING band. To find a licensed SAFRING bander in your area, contact your local bird club.

Remember that permission and co-operation must always be obtained from landowners before rehabilitating birds onto their land.

## **Release Methods**

---

There are numerous release methods which can be employed to re-introduce raptors back into the wild, each having advantages and disadvantages. The majority of release techniques are variations on traditional falconry hack methods, or based on falconry itself. The term *hack* originates from a process used to get young birds flying-fit prior to being trained for falconry. Juvenile birds will instinctively return to food left out for them at their site of release (called a *hack* site). When their visits for food decline in frequency, it is an indication that they are now hunting for themselves. The advantage of birds being put through this process is that they learn to hunt and get fit while still having access to food, should their initial attempts be unsuccessful.

### **The 'traditional' hack**

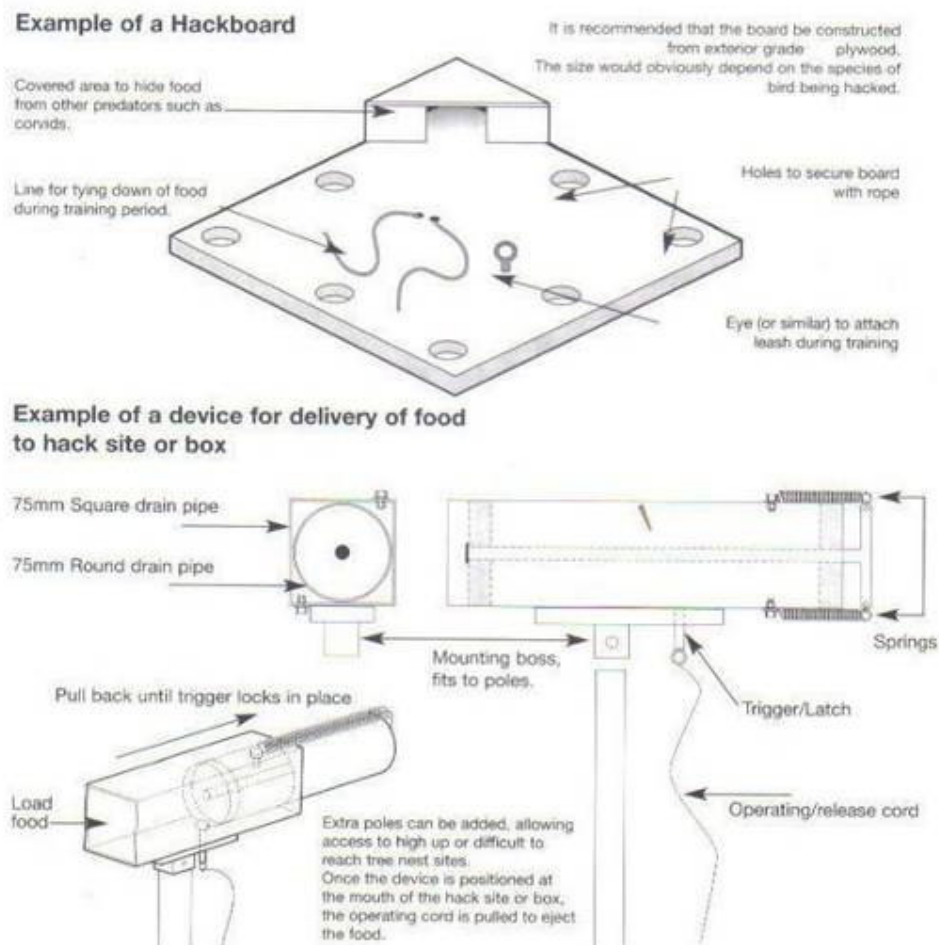
This method is suited for a complete brood or group of young raptors of about the same age; it does not work for a single bird. The birds are placed in an artificial nest site which is similar to that which the species would normally use in the wild. Food is placed on the nest at the same time each day, but it is important that precautions are taken to prevent the birds associating the food directly with the human provider. Food may be discharged onto the nest using a chute, pipe or device mounted on a pole (see Diagram 4). Food should be provided at night for the nocturnal species and during the day for the diurnal species.

The age of the chicks when hacked is of great importance and must be less than four weeks. If the birds are already starting to branch or fledge, then they are too old to be hacked in this way. Birds of the right age will stay in the nest long enough to associate it with food and are likely to return to this place. This facilitates continued feeding as they learn to fly and hunt for themselves. Once the bird has been at liberty for a few weeks and is flying daily on ever increasing journeys, the food supply may be reduced to encourage hunting. Although this hacking method is reasonably successful, birds do occasionally get lost or killed by predators, as in any wild fledgling process.

## A hackboard

This is simply a food platform, where food can be tied down (see Diagram 4). It should have a three sided compartment under which food can be hidden to keep it out of sight of other predators and crows. This hacking method involves training the bird to fly to the board for food (falconry knowledge is essential here). Initially the flying distance is only a few metres. The bird is allowed to feed on the food which is tied down to prevent the bird flying off with it. The distance to the board is increased every day and the bird is flown on a creance line to avoid early, accidental release. The bird is allowed to finish its meal on the board. After a few weeks the bird should be flying 50 meters to the board and can then be flown free. This method can be used to release a single bird or for several together.

**Diagram 4**



Before being given full liberty in the area, the bird is trained to find the food hidden in back of the compartment. This is achieved by partially hiding the food so that the bird can still see it, and gradually placing the food further into the compartment. Eventually the food is hidden completely. Once the bird can find the hidden food it can then be released. Food is left on a daily basis, but after a few weeks the ration can be decreased. Caution must be exercised not to reduce the amount of food too quickly because the bird might start sitting at the hackboard waiting for food.

### **The aviary hack**

A building, aviary or movable enclosure is used in this hacking method which is the least labour intensive, but is usually less successful than the others. It is best used for young birds that are too old to undergo traditional hacking. As with some of the other hack methods, it is better if more than one bird is hacked from an aviary at the same time.

The method involves placing the birds into an aviary or building that has a good view over the surrounding, suitable habitat. Food is left daily at the same time via a hatch or pipe to minimise any association of food with the feeder. After the birds have been in the enclosure for four to six weeks the door is quietly opened. It is important that the release is carried out carefully to avoid frightening the birds out of the aviary, as they may panic and fly out of the area altogether and are then unlikely to return.

Food rations should be reduced just prior to release (opening the door) to encourage the birds to stay in the area as they are feeling hungrier. Food is left at the aviary every day as before. Once the birds have been at hack for a few weeks the amount of food can be reduced to encourage the birds to hunt for themselves.

A disadvantage of this method is that territory is not reinforced on the birds prior to their release because they are not flying freely around. This may make them vulnerable to being driven out of the area by other birds.

A variation of this method is sometimes used for introducing owls to new areas. A breeding pair of owls is placed in a barn, or suitable area, until they have young. The parents are allowed to leave, but because they have young they naturally return. Food is provided and the young owls should be hacked back to the wild as well as their parents. With this method the original pair often returns to the hack site to breed.

### **Lure hack**

This method requires knowledge of falconry methods and involves training the bird to fly to a lure on a daily basis in the area where it is to be released. This introduces the territory to the bird before release. This method works well on mature birds which have suffered severe trauma or which require the building up of muscle. The bird is flown straight to a lure over increasing distances until it is considered fit. This exercise should take place at approximately the same time every day to reinforce the routine. The bird is then released in the area.

Daily visits should be made to the area at the same time as during training while calling the bird to the lure. Calling the bird every day should continue for a few weeks even if the bird is not always seen. For birds with hunting experience, they can easily miss a day here and there.

The disadvantage of this method with young birds is that it establishes an artificial food supply. This method is therefore recommended for birds with hunting experience.

### **The kite hack**

Falconry experience is also required for this method. It involves training a bird to fly towards a kite, to which food is attached. The bird is flown daily to the kite and every day the kite is made to go a little higher. Eventually the kite can be raised to 700 or 800 metres. The food is attached to the kite with a quick release device which is detached when the bird grabs the food. This method introduces a territory to the bird, gets it very fit, and when the kite is up it can be seen from a long distance which helps in calling the bird back after release.

### **A full falconry hack**

This is the method of choice for the rehabilitation of most species which have suffered severe trauma. It is unfortunately not suitable for owls, vultures and is difficult with big eagles. The method involves training the bird to accept man as a hunting partner. By flying the bird at natural quarry it gains fitness. The success of the bird on wild quarry will be the deciding factor in determining when it is ready for release. This method also introduces and familiarises the bird to its new territory. The person undertaking the training must be an experienced falconer, registered with the provincial club, with the understanding that the bird is to be released once fit.

**APPENDIX 1****Threatened or Protected (TOPS) Raptor Species**

As listed in Government Gazette number 29657, Regulation Gazette number R.8638, Notice No. R 151

**Critically Endangered** Egyptian Vulture *Neophron percnopterus*

**Endangered** Bearded Vulture *Gypaetus barbatus*  
 White-backed Vulture *Gyps africanus*  
 Cape Vulture *Gyps coprotheres*  
 Hooded Vulture *Necrosyrtes monachus*  
 Lappet-faced Vulture *Torgos trachelfotus*

Pels Fishing Owl *Scotopelia peli*

**Vulnerable** White-headed Vulture *Trigonoceps occipitalis*

Tawny Eagle *Aquila rapax*  
 Martial Eagle *Polemaetus bellicosus*  
 Bateleur Eagle *Terathopius ecaudatus*  
 Southern Banded Snake Eagle *Circaetus fasciolatus*

Taita Falcon *Falco fasciinucha*  
 Peregrine Falcon *Falco peregrinus*  
 Lesser Kestrel *Falco naumanni*

Grass Owl *Tyto capensis*

**Protected** African Marsh Harrier *Circus ranivorus*

**APPENDIX 2**



CASE NUMBER

**RAPTOR ADMISSION FORM**

Date: ..... Species:.....

Admitted by : ..... Ring No : .....

Thank you for coming to the aid of this bird of prey. Your input plays a valuable role in the ongoing conservation network of the African Raptor Trust.

**COULD YOU PLEASE PROVIDE US WITH THE FOLLOWING DETAILS?**

NAME :.....

ADDRESS :.....

TEL.....E-MAIL.....

DATE FOUND..... AREA FOUND.....

WHAT HAPPENED TO THE BIRD? .....

HAVE YOU GIVEN THE RAPTOR ANY THING TO EAT OR DRINK? .....

HAS THE RAPTOR BEEN TREATED IN ANY WAY? .....

I HEREBY RELINQUISH ANY RIGHTS TO CUSTODY OF THE ABOVE RAPTOR AND ENTRUST THIS BIRD TO RAPTOR RESCUE'S CARE.

SIGNED.....

PS. A donation towards the care and rehabilitation of your patient, although not expected, will be gratefully received.

\_\_\_\_\_ DONATION :



CASE NUMBER

# RAPTOR TREATMENT FORM

SPECIES..... ADMITTANCE DATE .....

**AGE** : FLEDGLING  JUVENILE  SUBADULT  ADULT

CONDITION: General ..... Feather : .....

WEIGHT..... **SEX** : MALE  FEMALE  UNKNOWN

CASE HISTORY.....  
.....

### ASSESSMENT OF CONDITION

Habitus : ..... Respiration : .....

Hydration : ..... Appetite : .....

Feaces : ..... Parasites : .....

Response : Ocular ..... Nervous .....

SYMPTOMS/INJURIES.....  
.....

FIRST AID / TREATMENT.....  
.....  
.....

<p>VETERINARY ATTENTION DIAGNOSIS BY ATTENDING DR..... ..... .....</p> <p>Treatment:..... ..... ..... ..... .....</p>
---



CASE NUMBER

RAPTOR DISPOSAL FORM

SPECIES : ..... RING NO : .....

SEX : ..... AGE : .....

AQUIRED FROM : ..... DATE : .....

History: .....

.....

This bird of prey is deemed **unreleaseable** by:

Signature 1 : ..... Signature 2 : .....

Current Status & Condition : .....

.....

.....

**AGREEMENT : TRANSFER OF CUSTODIANSHIP**

I..... ID number.....

of ..... acquire the above raptor from Raptor

Rescue for the purpose of :

- Temporary custodianship for training and release
 Breeding  Commercial Display  Other .....

and agree to care for it in the best possible manner

Conditions of Acquisition: .....

Signed : ..... on Date : .....