NSW GOVERNMENT Office of Environment & Heritage

Code of Practice for Injured, Sick and Orphaned Birds of Prey

Published by:

Office of Environment and Heritage
59 Goulburn Street, Sydney NSW 2000
PO Box A290, Sydney South NSW 1232
Phone: +61 2 9995 5000 (switchboard)
Phone: 131 555 (environment information and publications requests)
Phone: 1300 361 967 (national parks, general environmental enquiries, and publications requests)
Fax: +61 2 9995 5999
TTY users: phone 133 677, then ask for 131 555
Speak and listen users: phone 1300 555 727, then ask for 131 555
Email: info@environment.nsw.gov.au
Website: www.environment.nsw.gov.au
Report pollution and environmental incidents
Environment Line: 131 555 (NSW only) or info@environment.nsw.gov.au
See also www.environment.nsw.gov.au

ISBN 978-1-76039-564-3
OEH 2016/665
November 2016

Find out more about your environment at:
www.environment.nsw.gov.au

Contents

Preface

The Code of Practice for Sick, Injured and Orphaned Birds of Prey (the Code) is designed for everyone trained in the activity of rescuing, rehabilitating and releasing birds of prey. It has been developed to protect the welfare of birds of prey in care, and to contribute to the conservation of birds of prey in the wild. The Code is designed to be read in conjunction with the Office of Environment and Heritage (OEH) Code of Practice for Injured, Sick and Orphaned Protected Fauna (General Code).

Compliance with the Code does not remove the need to abide by the requirements of the *National Parks and Wildlife Act 1974* (NPW Act), *Prevention of Cruelty to Animals Act 1979, NSW Threatened Species Conservation Act 1995* or any other relevant laws and regulations.

The Code contains standards and guidelines for the care of birds of prey that are incapable of fending for themselves in their natural habitat. Compliance with the standards is a condition of licences to rehabilitate and release sick, injured and orphaned protected fauna issued under section 120 of the NPW Act. Failure to comply with a licence condition is an offence under section 133 of the NPW Act and may result in a penalty infringement notice or prosecution.

The Code has been prepared by a number of wildlife rehabilitation groups working in consultation with specialist wildlife veterinarians and OEH. Groups involved in the preparation of the Code include For Australian Wildlife Needing Aid Inc NSW (FAWNA), Looking After Our Kosciuszko Orphans Inc (LAOKO), Native Animal Trust Fund Inc, Northern Rivers Wildlife Carers Inc, Tweed Valley Wildlife Carers, Wildcare Queanbeyan Inc, NSW Wildlife Information, Rescue and Education Service Inc (WIRES), and Wildlife Rescue South Coast Inc.

The Code is neither a complete manual on animal husbandry, nor a static document. It will be revised from time to time to take into account new knowledge of animal physiology and behaviour, technological advances, developments in standards of animal welfare and changing community attitudes and expectations about the humane treatment of birds of prey.

1 Introduction

The Code of Practice for Sick, Injured and Orphaned Birds of Prey (the Code) sets the standards for the care and housing of birds of prey that are incapable of fending for themselves in their natural habitat. It applies to the welfare of birds of prey held under a protected fauna rehabilitation and release licence (s.120 of the *National Parks and Wildlife Act 1974* (NPW Act)) issued by the Office of Environment and Heritage (OEH).

The Code comprises both enforceable provisions and guidelines. Enforceable provisions are identified by the word ‘Standards’.

1.1 Interpretations

Objectives

Objectives are the intended outcome(s) for each section of the Code.

Standards

Standards describe the mandatory specific actions needed to achieve acceptable animal welfare levels. These are the minimum standards that must be met under law. They are identified in the text by the heading ‘Standards’ and use of the word ‘must’.

Guidelines

Guidelines describe agreed best practice, based on consideration of scientific information and accumulated experience available at the time of writing this Code. They also reflect society’s values and expectations regarding the care of animals. A guideline is usually a higher standard of care than a minimum standard, except where the standard is best practice.

Guidelines will be particularly appropriate where it is desirable to promote or encourage better care for animals than is provided by the minimum standards. Guidelines are also appropriate where it is difficult to determine an assessable standard. Guidelines are identified in the text by the heading ‘Guidelines’ and use of the word ‘should’.

Notes

Notes describe practical procedures where appropriate to achieve the minimum standards and guidelines. They may also refer to relevant legislation.

1.2 Definitions

In this Code:

Birds of prey or raptors refers to animals classified as Accipitriformes, which means ‘hawk-shaped birds’ (diurnal hawks, kites and eagles), Falconiformes (‘falcon shaped birds’) and Strigiformes (nocturnal owls). The Nightjar family (e.g. tawny frogmouths) are not birds of prey. A list of Australian birds of prey is provided in Appendix 1.

Experienced fauna rehabilitator means someone who has an extensive knowledge of current rehabilitation techniques gained through training courses and many years of successfully caring for native fauna.

Fauna rehabilitation means the temporary care of injured, sick or orphaned fauna with the aim of successfully releasing them back into their natural habitat.

Fauna rehabilitation group means an incorporated group that is licensed by OEH to rehabilitate and release protected fauna.

Fauna rehabilitator means someone who is either authorised by a fauna rehabilitation group or zoological park or is individually licensed by OEH to rehabilitate and release protected fauna.

Hacking is a pre-release training method for orphaned nestling raptors to condition them for hunting in the wild.

Park means a national park, historic site, state conservation area, regional park, nature reserve, karst conservation reserve or Aboriginal area, or any land acquired by the Minister for the Environment under Part 11 of the NPW Act.

Protected fauna means any amphibian, reptile, bird or mammal apart from fauna specifically excluded in Schedule 11 of the NPW Act (such as horses, dogs and rabbits). For the purposes of this Code, protected fauna includes all native vertebrate fauna except fish, and is referred to as 'fauna'.

2 Authority to rehabilitate birds of prey

Objective

To ensure that licenced fauna rehabilitation groups have approval to rehabilitate birds of prey.

2.1.1 Standards

2.1.1.1 Licensed fauna rehabilitation groups and individual licence holders must have on their licence an authorisation to rehabilitate birds of prey.

3 Case assessment

Objective

To assess fauna to determine the type of intervention required. All decisions are to be informed by this goal. This will mean that some individual animals may benefit from rehabilitation while for others the most humane outcome will be euthanasia.

3.1.1 Standards

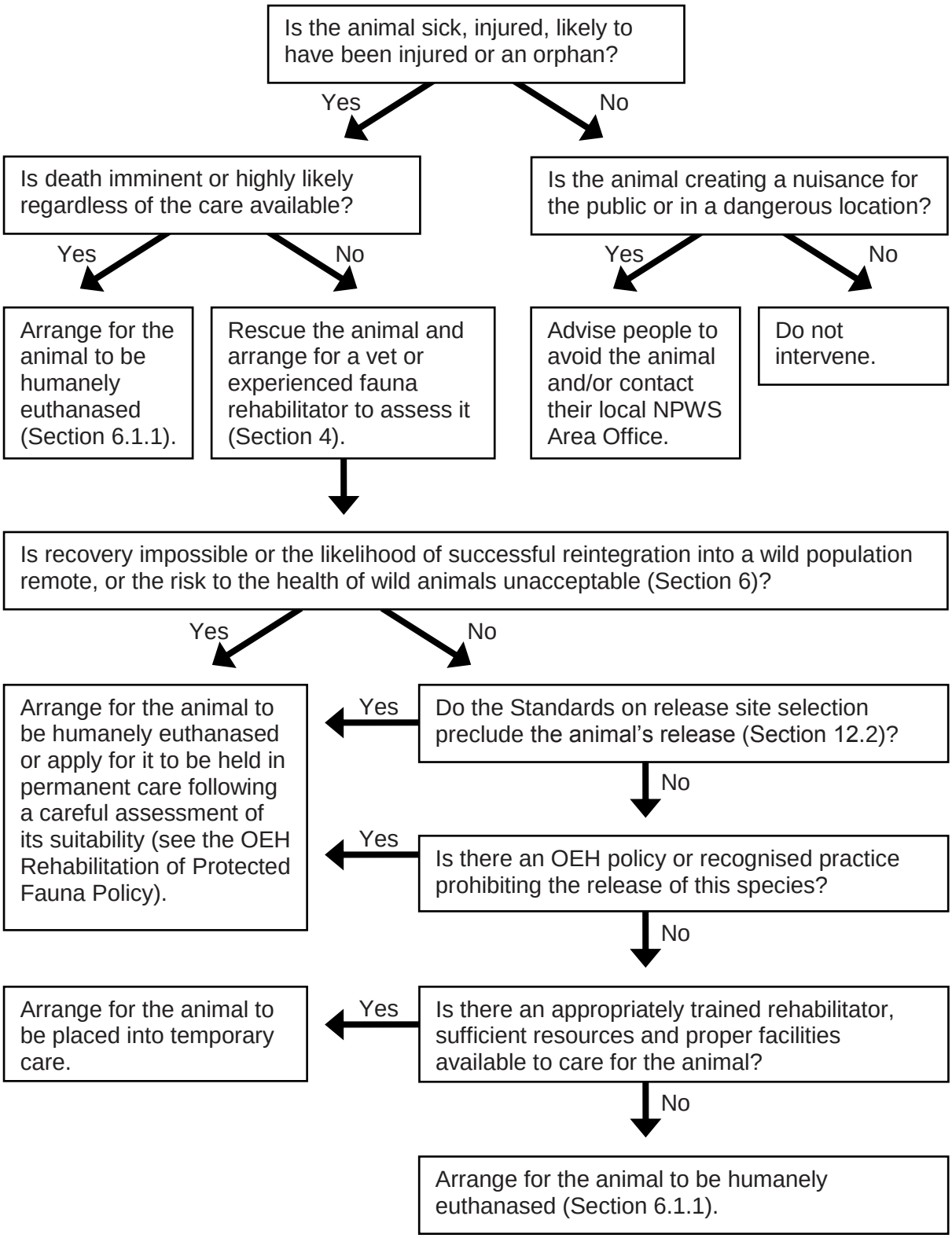
3.1.1.1 The decision tree below must be followed when determining how to respond to a fauna encounter.

3.1.1.2 Rescuers must arrange for fauna to be assessed by a veterinarian or experienced fauna rehabilitator within 24 hours of rescue to ensure accurate diagnosis and prompt treatment or euthanasia. If this is not possible due to the remoteness of the location, expert advice must be sought via telephone or email.

Notes:

An otherwise healthy animal that is creating a 'nuisance' for the public generally refers to an animal that represents a risk to human health or safety. This does not include an animal defending its territory or exhibiting other normal behaviour.

OEH has policies in place for managing negative interactions with protected fauna species that can impact the community, and regulates the management of 'nuisance' wildlife. It advocates the use of non-lethal measures as the first management response to animals considered to be a nuisance.



4 Rescue

Objective

To conduct bird of prey rescues so as to minimise further stress and injury to the animal.

4.1.1 Standards

4.1.1.1 Prior to a rescue attempt, the rescuer must assess the risks to the bird of prey and the rescuer from environmental hazards and from capture.

4.1.1.2 Rescuers must employ the correct rescue equipment for the condition and location of the bird of prey and be trained in its use. See Section 13 – Training.

4.1.1.3 The following methods must not be used to capture a bird of prey:

- noosing with a rope that tightens
- any capture method that relies on a single point of contact (for example, a wing or leg).

4.1.1.4 For chicks and juveniles, rescuers must check for presence of a nest or adult.

4.1.1.5 Holding of birds of prey by a non-raptor specialist within a rehabilitation group must be limited to a maximum of 24 hours, with immediate consultation with the bird of prey coordinator. In situations where a specialist is not available, arrangements must be made to transfer the bird to another appropriately authorised licensed group.

4.1.1.6 Every rescue must conform to licence reporting requirements by recording location and cause of rescue.

4.1.1.7 Rescuers must use suitable work health and safety techniques to minimise the risk of injury to the rescuer.

4.1.2 Guidelines

4.1.2.1 Rescuers should take steps to protect birds of prey from additional stressors during rescue, such as prolonged capture, onlookers, loud noises, other animals and extremes of temperature.

4.1.2.2 Rescuers should monitor healthy nestling and fledging birds rather than attempt to rescue them. Birds at risk of attack from domestic or feral animals may be protected by placing them in a nearby tree.

Notes:

Covering the bird's head, containing both wings in the folded position and holding both legs will often assist with calming a bird of prey and facilitating a rapid rescue.

5 Transport

Objective

To minimise further stress and injury to a bird of prey during transport. This section applies to all movement of the bird of prey including from the point-of-rescue to a veterinary surgery and between rehabilitation facilities and the release site.

5.1.1 Standards

5.1.1.1 Transport methods and container sizes must be appropriate for the species, size and condition of the bird; for example, a cardboard box or similar container that allows the bird to stand upright.

5.1.1.2 The container must be designed and set up to prevent further injuries and feather damage to the bird.

5.1.1.3 The base of the transport container must be lined with a suitable surface; nonslip, non-organic, non-ingestible, and have no loose threads.

5.1.1.4 The container must be well ventilated so air can circulate around the bird of prey and around the transport container.

5.1.1.5 The container must be designed to prevent the bird of prey from escaping.

5.1.1.6 The container must be kept at an ambient temperature of 26°C.

5.1.1.7 When transport is longer than two hours, the temperature and condition of the bird of prey must be monitored during transport.

5.1.1.8 Containers must minimise light, noise and vibrations and prevent contact with young children, pets and cigarette smoke.

5.1.1.9 Birds of prey must not be transported in the back of uncovered utility vehicles or in car boots that are separate from the main cabin. Containers must be suitably secured.

5.1.1.10 Perches must not be provided during transport.

5.1.2 Guidelines

5.1.2.1 Appropriate thermal support should be considered for highly stressed, injured birds of prey.

5.1.2.2 Birds of prey should not be provided with food or water during transport.

5.1.2.3 Transport of the bird of prey should be the sole purpose of the trip and undertaken in the shortest possible time.

5.1.2.4 When possible, face the bird in the direction of travel.

Note:

Good ventilation for air circulation is best achieved by placing holes in the side of the transport container; however, the holes should be as near to the bottom of the container as possible.

6 Euthanasia

6.1 When to euthanase

Objective

To end a bird of prey's life in situations where death is imminent, full recovery is impossible or the likelihood of successful integration into the wild is remote.

6.1.1 Standards

6.1.1.1 A bird of prey must be euthanased without exception, preferably under veterinary supervision, when:

- death is imminent or highly likely regardless of the treatment provided, or
- it is suffering from chronic, unrelievable pain or distress, or
- it is suffering from chronic untreatable illness such as avian tuberculosis, or
- its ability to consume food unaided is permanently impaired, or
- recommended by an experienced wildlife veterinarian.

6.1.1.2 A bird of prey must be euthanased (unless OEH has granted permission to hold it in permanent care) when:

- there is no suitable release location, or
- its ability to reproduce is lost due to an injury, disease or procedure, or
- its ability to successfully hunt or locate food in a manner characteristic of the species is permanently impaired, or
- its ability to locomote normally is permanently impaired due to a missing or injured wing or limb, or
- its ability to sense its environment (i.e. see, hear, smell, taste or feel) is permanently impaired due to a missing or injured organ (e.g. eye, ear, nose or beak), or
- its advanced age renders it unable to survive in its natural habitat.

6.1.2 Guidelines

6.1.2.1 A bird of prey should be euthanased when:

- it is at a stage of development where it is unlikely to be hand reared successfully to the point it can be released, or
- its ability to locomote is expected to be impaired for more than three months.

Notes:

The decision to euthanase should not be based on availability of carers within the rescue group. The group should liaise with other licensed groups to facilitate care.

In certain exceptional circumstances, OEH may grant permission to hold animals in permanent care. See the OEH Rehabilitation of Protected Fauna Policy for details.

6.2 How to euthanase

Objective

To induce death with minimal pain and distress to fauna.

6.2.1 Standards

6.2.1.1 A euthanasia method must be used which produces a rapid loss of consciousness immediately followed by death.

6.2.2 Guidelines

6.2.2.1 Wherever possible, fauna rehabilitators should arrange for a veterinarian to perform euthanasia and intravenous barbiturate overdose is the preferred method.

6.2.2.2 When a veterinarian is not available to perform euthanasia, a method appropriate for the species and circumstances should be employed to ensure minimal pain and suffering. This may include the following methods:

- stunning followed by cervical dislocation for birds up to 3 kilograms, or
- shooting with a rifle or shotgun for large birds of prey.

6.2.2.3 Shooting should be undertaken by a licensed, skilled and experienced operator from within an appropriate agency such as OEH, RSPCA, NSW Police or a rehabilitation organisation.

6.2.2.4 Shooting should only take place after an onsite assessment by a qualified and experienced raptor rehabilitator or vet.

6.2.2.5 The following euthanasia methods should not be used on birds of prey:

- suffocation via drowning, strangulation or chest compression
- freezing or burning
- carbon dioxide of any form
- poisoning with household products
- air embolism
- exsanguination, i.e. the process of blood loss to a degree sufficient to cause death
- electrocution or microwave irradiation
- chloroform or strychnine
- neuromuscular blocking agents.

6.2.2.6 A bird of prey that requires euthanasia should not be exposed to additional stressors such as large numbers of onlookers, excessive handling, loud noises or extremes of temperature.

6.3 Disposal of carcasses and animal waste

Objective

To dispose of waste so that the risks of disease transmission are minimised.

6.3.1 Standards

6.3.1.1 Death must be confirmed prior to disposal of the carcass. The absence of a heart beat and the loss of corneal reflexes indicate death has occurred.

6.3.1.2 Carcasses and organic waste suspected of disease contamination or that have been exposed to chemicals (e.g. barbiturates) must either be incinerated or buried at a depth that will prevent scavengers from reaching them.

6.3.2 Guidelines

6.3.2.1 A deceased bird of prey should, whenever possible, undergo a necropsy by a wildlife-trained veterinarian, or under such supervision, if the cause of death is uncertain.

6.3.2.2 Suitable carcasses should be collected in order to retain the primary and tail feathers for a feather bank. Contact either your group's NSW Wildlife Council representative or WIRES for access to the feather bank.

6.3.2.3 Wings and tails exposed to chemicals and being retained for the feather bank should be clearly labelled.

Notes:

Local councils have laws regulating the disposal of carcasses and other biological waste.

7 Care procedures

7.1 Monitoring

Objective

While undergoing rehabilitation, the recovery and eventual release of the bird of prey must always be the principal consideration. The type and frequency of monitoring will vary with the species, type of injury or illness and required treatment.

7.1.1 Standards

7.1.1.1 The bird of prey must in the first instance be taken to the closest and most appropriately trained rehabilitator.

7.1.1.2 Birds of prey must be weighed on admission.

7.1.1.3 Birds of prey must be monitored in a non-invasive manner.

7.1.1.4 Seriously ill birds of prey will be monitored during feeding and treatment procedures.

7.1.1.5 Birds of prey being prepared for release must be monitored every few days to determine if they are physically and behaviourally ready for release. See Section 11 – Suitability for release.

7.1.2 Guidelines

7.1.2.1 On admission, a bird of prey should be checked for:

- dehydration
- bleeding or wounds

- bone fractures
- body condition via keel bone assessment
- feather condition
- rapid breathing or elevated heart rate
- eye condition; for example, no eye movement, sunken eyes, uneven pupils
- internal mouth condition; for example, colour, smell, throat obstruction
- temperature
- parasites
- discharge from the eyes, nostrils, mouth or vent
- uncharacteristic smells
- a broken beak and/or beak misalignment
- food in the crop
- missing digits/talons.

7.1.2.2 Monitoring a bird of prey should entail:

- visually assessing body condition and demeanour
- checking for signs of injury, disease and parasites
- assessing hydration by checking the eyes and pinching the skin above the foot
- assessing feather condition
- assessing keel coverage or weight gain over time for chicks.

7.2 Controlling disease transmission between animals or to humans

Objective

To prevent both the spread of disease between birds of prey undergoing rehabilitation and also from infected birds to humans. Stressed animals are more susceptible to contracting and expressing infectious diseases.

7.2.1 Standards

7.2.1.1 Newly arrived birds of prey must be isolated in separate areas until disease status can be determined by a veterinarian or experienced fauna rehabilitator.

7.2.1.2 Birds of prey suspected or known to be carrying an infectious disease must be assessed as soon as possible by an experienced avian veterinarian and kept under strict quarantine conditions throughout rehabilitation. Signs of disease may include coughing, sneezing, abnormal breath sounds, discharge from the eyes or nose, or diarrhoea.

7.2.1.3 Dedicated cleaning equipment must be used for enclosures housing birds of prey with a suspected or confirmed infectious disease.

7.2.1.4 All enclosures, transport containers, cage furniture, food containers and water containers must be thoroughly cleaned and disinfected between each occupant.

7.2.1.5 Birds of prey undergoing rehabilitation must be prevented from coming into contact with domestic pets.

7.2.1.6 People rehabilitating birds of prey must wash their hands thoroughly with soap or disinfectant before and after handling each bird in care.

7.2.2 Guidelines

7.2.2.1 When handling multiple birds, rehabilitators should start with the youngest and healthiest and finish with the oldest and sickest to reduce the risks of disease transmission, washing hands in between each bird.

7.2.2.2 Stressed birds of prey in rehabilitation are susceptible to aspergillosis (i.e. an infectious fungal disease that can occur in birds of prey held in captivity). Providing preventative medication with itraconozole is recommended whenever possible during the intensive care phase of treatment.

7.2.2.3 Pest control (but not rodent baits) is recommended for all rehabilitation facilities.

8 Husbandry

8.1 Food and water

Objective

To ensure that the bird of prey has a feeding and watering regime that encourages rapid recovery, supports growth if it is a juvenile and assists with the development and maintenance of foraging behaviours necessary for survival in the wild.

8.1.1 Standards

8.1.1.1 Clean, fresh drinking water must be available at all times and changed daily.

8.1.1.2 Water containers must be designed and positioned to avoid spillage and contamination. They must be appropriate for the size, age and mobility of the bird of prey.

8.1.1.3 Birds of prey in intensive care must not be provided with bathing water.

8.1.1.4 Animal foodstuff involving dead mice and rats, meat and/or insects must be stored separately from human foodstuffs and out of reach of children and domestic animals.

8.1.1.5 Birds of prey must be provided with a balanced and complete diet that supports growth and development and is appropriate for the species, size, age, mobility and physiological status of the animal.

8.1.1.6 Food that is available in the wild must form the basis of the bird of prey's diet.

8.1.2 Guidelines

8.1.2.1 Stored food should not be accessible to pets, pests and wild animals and should be protected from contamination, loss of nutrition and moisture.

8.1.2.2 Due to the potential for disease transfer, feral pigeons should not be included in the bird of prey's diet.

8.1.2.3 Food should be presented to birds of prey in a varied manner to provide enrichment; for example, at different heights, positions and with varying species of food.

8.1.2.4 Birds of prey should have access to clean, smooth river pebbles of suitable size to aid with raptor food digestion.

Notes:

The feeding of live vertebrate prey to an animal is only acceptable under certain circumstances, as set out in the NSW *Prevention of Cruelty to Animals Act 1979*. Rehabilitators are encouraged to contact the Animal Welfare Branch of Industry and Investment NSW for further information.

The use of wild caught animals as food for birds of prey in care poses a disease and poisoning risk.

8.2 Hygiene

Objective

To maintain clean rehabilitation facilities so that diseases are prevented or contained.

8.2.1 Standards

8.2.1.1 Faeces and uneaten food must be removed on a daily basis and disposed of in a manner that prevents them being consumed by other animals (e.g. in closed garbage or compost bins).

8.2.1.2 Food and water containers must be cleaned on a daily basis. Cleaning involves the use of water, a detergent and the physical removal of all residues.

8.2.1.3 Enclosure furniture must be cleaned when soiled.

8.2.1.4 Birds of prey must be cleaned when soiled with faeces, urine or uneaten food.

8.2.1.5 Fauna rehabilitators must minimise the disturbance to birds of prey when cleaning enclosures.

8.2.1.6 Fauna rehabilitators must utilise personal protective equipment (PPE) during maintenance activities (e.g. gloves, eyewear).

8.2.2 Guidelines

8.2.2.1 Items of equipment used for cleaning animal enclosures, containers and furniture should be stored separately from those used domestically.

8.2.2.2 Fauna rehabilitators should wash their hands and clean all food preparation surfaces and equipment prior to preparing animal food.

8.3 General care

8.3.1 Guidelines

8.3.1.1 All specific husbandries should be covered in birds of prey specific training. See Section 13 – Training.

8.3.1.2 Chicks are extremely prone to imprinting and humanisation. All care should be taken to minimise social interactions with humans and natural behaviours should be allowed to develop.

9 Housing

9.1 General requirements

Objective

To ensure that birds of prey undergoing rehabilitation are housed in enclosures that keep them safe, secure and free from additional stress.

Three distinct housing types are required for the successful rehabilitation of birds of prey: intensive care housing, intermediate care housing and pre-release housing. Standards specific to each of these housing types are outlined in Sections 9.2 to 9.4.

9.1.1 Standards

9.1.1.1 Enclosures must be escape-proof.

9.1.1.2 Housing must be made safe for a bird of prey by excluding hazards that might harm it.

9.1.1.3 Housing must be designed and/or positioned to protect birds of prey from physical contact with wild animals and pests.

9.1.1.4 Housing must be designed so that the birds will not damage their feathers when they fly, flap or land on the floor of the enclosure.

9.1.1.5 Benches and feeding shelves are required for all species.

9.1.1.6 Peregrine falcons and kestrels require a flat surface to perch on/ sleep on as they use caves and ledges in the wild.

9.1.1.7 Housing must be designed and/or positioned so that birds of prey cannot see or hear domestic pets.

9.1.1.8 Birds of prey must not be housed in an area where they can see potential prey that is being held in other aviaries or enclosures.

9.1.1.9 Housing must be designed so rehabilitators can readily access birds in care.

9.1.1.10 Housing must be positioned so that birds of prey are not exposed to strong vibrations, noxious smells (e.g. wood smoke), loud noises (e.g. radios and televisions and barking dogs), or extremes of hot or cold.

9.1.1.11 Housing must be constructed from non-toxic materials that can be easily cleaned and disinfected.

9.1.1.12 If multiple birds of the same species are kept within a single enclosure, there must be sufficient space for individuals to avoid undue conflict and stress with cage-mates.

Notes:

Failure to recognise pet species as predators will preclude rehabilitated fauna from being released into the wild.

9.2 Intensive care housing

Objective

Intensive care housing is designed to restrict activity for a short period of time to facilitate frequent monitoring, treatment, feeding and rehydration and rest. It is suitable for birds of prey suffering severe injury and shock.

9.2.1 Standards

9.2.1.1 Intensive care housing for small raptors, such as hobbies and kestrels, must be a minimum of 0.5 metres long, 0.5 metres wide and 0.5 metres high.

9.2.1.2 Intensive care housing for large raptors such as eagles, falcons and hawks must be a minimum of 1.5 metres long, 1.5 metres wide and 1.5 metres high.

9.2.1.3 Intensive care housing must be 1 metre from the ground.

9.2.1.4 Intensive care housing must provide a warm, dark, quiet environment and there should be minimal external interference.

9.2.1.5 Intensive care housing must provide sufficient space for the animal to maintain a normal posture. This would include allowing the bird to stand fully erect or lie fully extended across the cage.

9.2.1.6 The heat source must be thermostatically controlled and shielded to prevent burns and disturbance to the bird.

9.2.1.7 Intensive care housing must experience a light–dark cycle that replicates outside conditions. If an artificial light source is used, it must be separate from any artificial heating.

9.2.1.8 Sawdust, wood shavings, straw or organic coverings must not be used as a floor substrate.

9.2.2 Guidelines

9.2.2.1 Intensive care housing should be constructed in such a way as to allow the rehabilitator to readily capture and remove the bird for examination and treatment.

9.2.2.2 Walls, roof and floor should be constructed of solid materials with adequate ventilation and warmth.

9.2.2.3 Substrate should be a soft, non-slip material that can be easily changed daily or as required.

9.2.2.4 Birds undergoing intensive care should not be kept in cages with unlined wire as it can cause feather and cere (i.e. fleshy area just above the beak) damage.

9.2.2.5 Intensive care housing should be kept at an ambient temperature which is appropriate for the age of development of the bird of prey; for example:

- a range of 28–30°C is appropriate for adult raptors
- a range of 32–34°C is appropriate for raptor chicks, depending on feather cover and species
- a temperature of 26°C is appropriate for owls.

9.3 Intermediate care housing

Objective

Intermediate care housing represents a transitional stage between intensive care and pre-release housing. Enclosures must be large enough to allow appropriate physical activity.

9.3.1 Standards

9.3.1.1 Intermediate care housing for small raptors, such as kestrels and hobbies, must be a minimum of 2 metres long, 2 metres wide and 2 metres high.

9.3.1.2 Intermediate care housing for large raptors such as eagles, hawks and falcons must be a minimum of 3 metres long, 3 metres wide and 3 metres high.

9.3.1.3 Intermediate care housing must provide sufficient space for the bird of prey to move about freely whilst enabling easy capture.

9.3.1.4 Intermediate care housing must be constructed so that:

- visual and auditory disturbances are limited
- climatic extremes are minimised
- it does not receive intense summer sunlight.

9.3.1.5 The frame must be constructed from a solid, waterproof, non-toxic material.

9.3.1.6 Intermediate care housing must be constructed of timber or metal and the walls should be predominantly solid.

9.3.1.7 Parts of some walls may be open construction from either timber slats or wire mesh; however, they must be lined with dense shade cloth.

9.3.1.8 Part of the roof must be solid and constructed from either waterproof or insulated metal to reduce heat transfer.

9.3.1.9 Part of the roof must be constructed with wire mesh or slatting and must be lined with dense shade cloth.

9.3.1.10 The floor must include an area with a mixture of either small pebbles or washed river sand thickly spread over concrete or grass. The pebbles must be hosed every second day.

9.3.1.11 Wooden perches of varying diameters and at different heights must be provided. Raptors like a perch as high as possible.

9.3.1.12 Perches must be of a diameter that prevents talons touching the feet when perching.

9.3.1.13 Birds undergoing intermediate care must not be kept in cages with unlined wire as it can cause feather and cere damage.

9.3.1.14 Clean drinking water must always be available.

9.3.2 Guidelines

9.3.2.1 Perches should be covered in artificial turf, rope, coconut fibre matting or similar soft covering that will not retain moisture. If limbs or trunks of native paperbark trees are used as perches, they do not require covering.

9.3.2.2 Swinging perches should also be used because the free movement of the perch absorbs the impact when birds of prey land.

9.3.2.3 Perches should be placed so that birds of prey that cannot fly will be able to hop from one perch to another.

9.3.2.4 Bathing water should be accessible to the bird of prey, but not if it has the potential to interfere with bandaging or wounds.

9.3.2.5 All outside facilities should ideally be oriented to face east or north-east, to get morning sunlight. The open sides should not face west or south. If a metal (Colorbond® or similar) section is used it should be sheltered from westerly sun, fully shaded or otherwise insulated, to prevent overheating.

9.4 Pre-release housing

Objective

Pre-release housing gives birds of prey the opportunity to regain their physical condition, acclimatise to current weather conditions and practise natural behaviour.

9.4.1 Standards

9.4.1.1 Pre-release housing for small raptors, such as kestrels and hobbies, must be a minimum of 4 metres long, 3 metres wide and 3 metres high.

9.4.1.2 Pre-release housing for large raptors, such as eagles, hawks and falcons must be a minimum of 6 metres long, 4 metres wide and 4 metres high.

9.4.1.3 Pre-release housing must provide sufficient space for the bird of prey to move about freely, express a range of natural behaviours and withdraw to a covered area if it wants to from undue conflict with co-housed birds of prey.

9.4.1.4 Housing requirements are the same as for intermediate housing except:

- the aviary must contain an area providing foliage protection that the bird of prey can retreat to in order to avoid observation and the elements
- the roof must contain two areas – one exposed to sunlight and weather and another covered by protective shade cloth
- a shallow bathing facility must be provided.

9.4.1.5 Hacking boxes must:

- be a minimum of 1 metre long, 1 metre wide and 1 metre high
- be a minimum of 1.5 metres above the ground
- contain a perch so that the bird of prey's head does not touch the roof, the tail does not touch the floor and the wings do not touch the wall
- contain a landing platform
- be located to minimise opportunity for predators to gain access.

9.4.1.6 Pre-release housing must be designed and/or positioned so that exposure to humans is kept to the minimum required for observation, feeding and cleaning.

9.4.2 Guidelines

9.4.2.1 A bird of prey should have some opportunity for flight (10 wing beats is recommended). This may not be feasible for the larger species such as the wedge-tailed eagle and white-bellied sea eagle; however, they should have enough space to flap their wings. Refer to Section 11 – Suitability for release.

9.4.2.2 Pre-release housing for small raptors, such as kestrels and hobbies should be a minimum of 5 metres long, 3 metres wide and 3 metres high.

9.4.2.3 Pre-release housing for large raptors, such as eagles, hawks and falcons should be a minimum of 15 metres in long, 10 metres wide and 4 metres high.

9.4.2.4 If a hacking box is used, a removable screen or door should be provided at the start of the hacking process so the bird of prey can be seen but not yet escape.

9.4.2.5 Pre-release housing for birds of prey should have a double door entry system.

10 Hacking

Objective

To raise nestlings in a hacking box/artificial nest in the field, allowing free flight at normal fledging time to enable them to instinctively hone their flight and hunting skills prior to natural dispersal.

10.1.1 Standards

10.1.1.1 To be a suitable candidate for hacking the bird of prey chick must be healthy and uninjured.

10.1.1.2 The bird of prey chick must also be able to stand erect and pull its food.

10.1.1.3 The bird of prey chick must be fed with a visual or temporal barrier to avoid all human contact.

10.1.2 Guidelines

10.1.2.1 Choice of hacking location should:

- include unrestricted flight space from the box platform
- avoid direct sun
- avoid cold prevailing winds or storms
- maintain distance from human activity
- provide protection from predators
- include the presence of wild populations of that species.

11 Suitability for release

Objective

To ensure that the bird of prey is physically fit and possesses the appropriate survival skills prior to release. Preparations for a bird of prey's release will start at the time of rescue and continue throughout the rehabilitation process.

11.1.1 Standards

11.1.1.1 A bird of prey must not be released until it is physically ready. This status has been achieved when:

- it has recovered from any injury and/or disease (e.g. it can fly, hover, perch, preen, walk and hunt normally)
- its wings are symmetrical at rest and in flight and its weight is within the appropriate range for the age, sex and stage of growth of the bird
- it can recognise wild food and exhibits natural behaviour when feeding
- it has acclimatised to prevailing climatic conditions
- its plumage is adequate for survival in its natural habitat
- it has appropriate fitness levels for the species as determined by both passive observation and active assessment (e.g. by encouraging the bird of prey to exercise and noting recovery time).

11.1.1.2 A bird of prey must not be released until it is behaviourally ready.

This status has been achieved if the bird of prey:

- is not attracted to humans (i.e. not humanised) or to sights, sounds or smells that are specific to captivity (i.e. not imprinted)
- can navigate effectively through its natural environment and catch its own food
- is in the appropriate weight range for its age, sex and stage of growth.

11.1.1.3 A bird of prey's readiness for release must be assessed in consultation with an experienced rehabilitator.

11.1.1.4 A bird of prey with any signs of infectious disease (such as avian tuberculosis, aspergillosis) must not be released as it poses a risk to wild bird of prey populations.

11.1.2 Guidelines

11.1.2.1 In certain exceptional circumstances, OEH may grant permission for animals deemed unable to be released to be held in permanent care. Refer to the OEH Rehabilitation of Protected Fauna Policy.

12 Release considerations

12.1 Timing of release

Objective

To ensure that a bird of prey is released as soon as it is ready and at a time that minimises stress and maximises its chances of survival in its natural habitat.

12.1.1 Standards

12.1.1.1 Once deemed ready for release, a bird of prey must be released as soon as conditions are suitable.

12.1.1.2 Release during extremes of temperature and storms must be avoided.

12.1.1.3 A bird of prey must be released at a time of day that enables it to immediately investigate its environment. The optimal release time from most diurnal animals is approximately one hour after dawn, and for most nocturnal animals is approximately one hour after dusk.

12.2 Release site selection

Objective

Considerations when selecting a release site include the welfare of the rehabilitated bird of prey after release and the impact the release will have on the wild bird of prey population and the natural environment.

12.2.1 Standards

12.2.1.1 If the exact location where the bird of prey was found is known and it is a suitable environment for release, the bird must be released there.

12.2.1.2 A suitable environment for release is one that:

- contains appropriate habitat and adequate food resources
- is occupied by members of the same species
- does not place the bird of prey at a high risk of serious injury.

12.2.1.3 A bird of prey must be released in a suitable environment as near as possible to the location at which it was found.

12.2.1.4 A bird of prey must only be released in a national park or reserve if:

- the bird of prey was originally encountered in that location, and
- the release has written approval from the relevant National Parks and Wildlife Service (NPWS) Area Manager.

12.2.1.5 If only the general location where the bird of prey was found is known and it contains or adjoins a suitable environment for release, it must be released there.

12.2.1.6 If there is no information about where the bird of prey was found it must not be released and OEH should be contacted regarding available options.

12.2.2 Guidelines

12.2.2.1 Birds of prey should be released in an area that is connected to other suitable habitat.

12.3 Release techniques

Objective

The use of release techniques that facilitate successful reintegration into the wild population.

12.3.1 Guidelines

12.3.1.1 The release site should be monitored for a minimum of two weeks after release.

12.3.1.2 Fauna rehabilitation groups, researchers and zoological groups are encouraged to participate in post-release monitoring programs to determine survivorship.

Notes:

All research involving protected fauna requires a licence issued under section 132c of the NPW Act and a current animal ethics approval issued under the *Animal Research Act 1985*.

13 Training

Objective

To ensure fauna rehabilitators are in possession of appropriate knowledge and skills to ensure the welfare of birds of prey in their care.

13.1.1 Standards

13.1.1.1 Intending bird of prey rehabilitators must first be a proven specialist bird carer.

13.1.1.2 Bird of prey rehabilitators must undertake a specialist training course covering the requirements of this Code prior to caring for the species listed in Appendix 1.

13.1.1.3 All fauna rehabilitators must comply with the ongoing training requirements outlined in the OEH Code of Practice for Injured, Sick and Orphaned Protected Fauna.

13.1.1.4 Training courses must:

- teach the standards and guidelines described in this Code
- be competency based and focus on what a person will be able to do as a result of completing the course
- have an assessment component.

13.1.1.5 Fauna rehabilitators must be assessed as competent in the relevant areas before undertaking rescue, rehabilitation or release of particular species.

13.1.1.6 Training must be accompanied by ongoing in-field support from fauna rehabilitation groups.

13.1.1.7 Training must include a work health and safety risk assessment plan.

13.1.1.8 Specialist raptor rehabilitators must also be proficient in:

- species identification
- bird of prey handling techniques
- first aid for injured birds of prey
- recognising the signs of disease and injury
- husbandry specific to birds of prey
- recognising when a rehabilitated bird is physically fit and possesses the appropriate survival skills for release.

13.1.2 Guidelines

13.1.2.1 Fauna rehabilitators should have an understanding of:

- the objectives of bird of prey rehabilitation
- wildlife ecology (e.g. population dynamics, habitat selection, competition and predator–prey interactions)
- bird of prey behaviour (e.g. feeding, predator avoidance and social interactions)
- health and safety issues associated with bird of prey rehabilitation (e.g. disease transmission, managing hazardous chemicals and operating in dangerous locations and times)
- keeping accurate records.

14 Record keeping

Objective

To maintain a database of fauna that has entered rehabilitation. Records of fauna admissions represent a vital resource for fauna rehabilitation groups, OEH and research institutions. They can be used to develop better treatments, educate rehabilitators, identify statewide trends in fauna incidents and identify threatening processes.

14.1.1 Standards

14.1.1.1 Licensed fauna rehabilitation groups, zoological parks and individuals must maintain a current register of all protected fauna reported, encountered or rescued.

The register must contain the following information on each animal:

- encounter details (e.g. date, location, encounter circumstances, animal's condition and unique ID number)
- species data (e.g. species name, sex, age and initial weight)
- care providers (e.g. name and address of the initial assessor, name and address of the fauna rehabilitator)
- fate details (e.g. date, final disposition, location and any permanent marking).

14.1.1.2 These records must be submitted to the NPWS Biodiversity and Wildlife Team of OEH in an approved electronic format on an annual basis.

14.1.1.3 Fauna rehabilitators must record the weight of birds of prey in their care so changes can be quickly identified. Weighing frequency will depend on the type of care provided. See Section 7 – Care procedures.

14.1.1.4 When an individual bird of prey is transferred to another fauna rehabilitator or organisation for any reason, copies of its records must be transferred with it.

14.1.1.5 If the death of a bird of prey is suspected to be the result of a serious disease outbreak, the fauna rehabilitator must immediately contact their fauna rehabilitation group to ascertain whether tissue analysis or a necropsy is required.

Notes:

Once you suspect an emergency animal disease you should immediately report it.

Call the Department of Primary Industries Emergency Animal Disease Watch Hotline on 1800 675 888, which is monitored 24 hours a day.

14.1.2 Guidelines

14.1.2.1 Fauna rehabilitators should record the following additional information at the time of rescue:

- who discovered the bird of prey (name and contact details)
- when the bird of prey was discovered (time of day)
- any treatment or food provided prior to transport.

14.1.2.2 Fauna rehabilitators should record the following additional information at the time of assessment by a veterinarian or experienced fauna rehabilitator:

- details of wounds, injuries, diseases and external parasites
- details of mobility
- details of abnormal behaviour
- recommended management (e.g. euthanasia or treatment).

14.1.2.3 Fauna rehabilitators should record the following additional information at the time of entry into a rehabilitation facility:

- standard length measurements
- identifying features if it is to be housed communally
- housing (e.g. intensive care, general). See Section 9 – Housing.

14.1.2.4 Fauna rehabilitators should record the following daily care information:

- details regarding the type and quantity of food/liquid ingested
- details of treatment (e.g. medication, therapy)
- details of instructions from veterinarians and species coordinators
- details of changes to general fitness and behaviour
- details of enclosure cleaning (e.g. quantity and quality of faeces/urine).

14.1.2.5 Fauna rehabilitators should record the following additional information regarding fate:

- if released, details regarding the type of release (hard or soft)
- if released, details regarding the condition of the bird (e.g. weight).

14.1.2.6 Fauna rehabilitators should keep duplicates or backups of records to avoid information being lost.

15 Further reading

ANZCCART 2001, *Euthanasia of Animals used for Scientific Purposes*, edited by JS Reilly (2nd edition), Australian and New Zealand Council for the Care of Animals in Research and Training, Adelaide University.

Arent LR 2007, *Raptors in captivity: Guidelines for care and management*, Hancock House, Surrey, Canada.

Debus S 2010, *The Owls of Australia: A Field Guide to Australian Night Birds*, Envirobook in association with Birds Australia, Canterbury, NSW.

Debus SJ 2012, *Birds of prey of Australia: A field Guide*, 2nd edition, CSIRO Publishing, Collingwood, VIC.

Department of Primary Industries (DPI) 2006, *GEN001: Humane Pest Animal Control – Methods of Euthanasia*, (Authors: Trudi Sharp and Glen Saunders DPI), Natural Heritage Trust.

Hollands D 1991, *Birds of the Night*, Reed, Sydney.

Hollands D 2003, *Eagles, hawks and falcons of Australia*, 2nd edition, Bloomings Books, Hawthorn, VIC.

Muller MG 2009, *Practical Handbook of Falcon Husbandry and Medicine*, Nova Science Publishers, New York, NY, USA.

Naisbitt R and Holz P 2004, *Captive raptor management and rehabilitation*, Hancock House, Surrey, Canada.

Olsen P 1995, *Australian Birds of Prey: the biology and ecology of raptors*, University of NSW Press, Sydney.

Proctor NF and Lynch PJ 1993, *Manual of Ornithology: Avian Structure and Function*, Yale University Press, New Haven, Connecticut, USA.

Redig PT (ed.) 1993, *Raptor Biomedicine*, University of Minnesota Press, Minneapolis, USA.

Appendix 1: Australian birds of prey

Family name	Common name	Species name	Notes
Accipitridae	Eastern osprey	*Pandion cristatus*	#2
	Black-shouldered kite	*Elanus axillaris*	
	Letter-winged kite	*Elanus scriptus*	
	Square-tailed kite	*Lophoictinia isura*	#2
	Black-breasted buzzard	*Hamirostra melanosternon*	
	White-bellied sea eagle	*Haliaeetus leucogaster*	
	Whistling kite	*Haliastur sphenurus*	
	Black kite	*Milvus migrans*	
	Brown goshawk	*Accipiter fasciatus*	
	Collared sparrowhawk	*Accipiter cirrhocephalus*	
	Grey goshawk	*Accipiter novaehollandiae*	
	Swamp harrier	*Circus approximans*	
	Spotted harrier	*Circus assimilis*	#2
	Wedge-tailed eagle (TAS)	*Aquila audax fleayi*	#1
	Little eagle	*Hieraaetus morphnoides*	#2
	Pacific baza	*Aviceda subcristata*	
	Brahminy kite	*Haliastur indus*	
	Red goshawk	*Erythrotriorchis radiatus*	#1,#2
Falconidae	Nankeen kestrel	*Falco cenchroides*	
	Brown falcon	*Falco berigora*	
	Australian hobby	*Falco longipennis*	
	Grey falcon	*Falco hypoleucos*	
	Black falcon	*Falco subniger*	#2
	Peregrine falcon	*Falco peregrinus*	#2
Strigidae	Powerful owl	*Ninox strenua*	#2
	Barking owl	*Ninox connivens*	#2
	Southern boobook (Lord Howe subspp.)	*Ninox novaeseelandiae albaria*	#1,#2
	Southern boobook (Norfolk Island)	*Ninox novaeseelandiae undulata*	#1
	Rufous owl	*Ninox rufa*	
	Christmas Island hawk-owl	*Ninox natalis*	#1
Tytonidae	Masked owl	*Tyto novaehollandiae*	#1,#2
	Eastern barn owl	*Tyto javanica*	
	Eastern grass owl	*Tyto longimembris*	#2
	Sooty owl	*Tyto tenebricosa*	#2

Notes:

#1 Listed by the Commonwealth Government as threatened under the *Environment Protection and Biodiversity Conservation Act 1999.*

#2 Listed as threatened under the NSW *Threatened Species Conservation Act 1995.*