



DEPARTMENT OF PLANNING, INDUSTRY & ENVIRONMENT

Code of Practice

for injured, sick and orphaned birds of prey



© 2021 State of NSW and Department of Planning, Industry and Environment

With the exception of photographs, the State of NSW and Department of Planning, Industry and Environment are pleased to allow this material to be reproduced in whole or in part for educational and non-commercial use, provided the meaning is unchanged and its source, publisher and authorship are acknowledged. Specific permission is required for the reproduction of photographs.

The Department of Planning, Industry and Environment (DPIE) has compiled this report in good faith, exercising all due care and attention. No representation is made about the accuracy, completeness or suitability of the information in this publication for any particular purpose. DPIE shall not be liable for any damage which may occur to any person or organisation taking action or not on the basis of this publication. Readers should seek appropriate advice when applying the information to their specific needs.

All content in this publication is owned by DPIE and is protected by Crown Copyright, unless credited otherwise. It is licensed under the [Creative Commons Attribution 4.0 International \(CC BY 4.0\)](#), subject to the exemptions contained in the licence. The legal code for the licence is available at [Creative Commons](#).

DPIE asserts the right to be attributed as author of the original material in the following manner: © State of New South Wales and Department of Planning, Industry and Environment 2021.

Cover photo: Nankeen kestrel (*Falco cenchroides*). Shona Lorigan/DPIE

Acknowledgments: This code has been prepared for DPIE by Shona Lorigan in consultation with the veterinary specialists at Taronga Wildlife Hospital, NSW Wildlife Information, Rescue and Education Service Inc. (WIRES) and NSW Wildlife Council members: FAWNA NSW Inc. (For Australian Wildlife Needing Aid), Native Animal Trust Fund Inc. (NATF), Native Animal Rescue Group, Northern Rivers Wildlife Carers Inc., Northern Tablelands Wildlife Carers Inc., Sydney Metropolitan Wildlife Services Inc., Tweed Valley Wildlife Carers Inc., Wildlife A.R.C Inc., Wildcare Queanbeyan Inc. and Wildlife Rescue South Coast Inc.

Published by:

Environment, Energy and Science
Department of Planning, Industry and Environment
Locked Bag 5022, Parramatta NSW 2124
Phone: +61 2 9995 5000 (switchboard)
Phone: 1300 361 967 (Environment, Energy and Science enquiries)
TTY users: phone 133 677, then ask for 1300 361 967
Speak and listen users: phone 1300 555 727, then ask for 1300 361 967
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 978-1-922672-83-4
EES 2021/0363
September 2021

Find out more about your environment at:

www.environment.nsw.gov.au

Contents

Preface	1
1. Introduction	2
1.1 Principles	2
1.2 Interpretations	3
1.3 Definitions	4
2. Case assessment	5
2.1 Assessing birds of prey	5
3. Rescue	7
3.1 Rescuing birds of prey	7
4. Transport	9
4.1 Moving birds of prey	9
5. Euthanasia	11
5.1 When to euthanase	11
5.2 How to euthanase	12
5.3 Disposal of carcasses and animal waste	13
6. Care procedures	15
6.1 Assessment	15
6.2 Monitoring	16
6.3 Controlling disease transmission between animals	17
7. Husbandry	19
7.1 Food and water	19
7.2 Hygiene	20
7.3 General care	20
8. Housing	22
8.1 General requirements	22
8.2 Intensive care housing	23
8.3 Intermediate care housing	24
8.4 Pre-release housing	25
9. Suitability for release	27
9.1 Preparations for release	27
10. Release considerations	28
10.1 Timing of release	28
10.2 Release site selection	28
10.3 Release techniques	29

11. Training	31
11.1 Skills and experience	31
12. Record keeping	33
12.1 Wildlife database	33
13. Further reading	35
Appendix	36
Birds of prey relevant to this code	36

List of figures

Figure 1	Decision tree for course of action when a bird of prey is encountered	6
----------	---	---

Preface

The *Code of Practice for Injured, Sick and Orphaned Birds of Prey* (the code) is intended for those authorised to rescue, rehabilitate and release birds of prey. The code has been developed to ensure the welfare needs of these birds are met and the conservation benefits stemming from their rehabilitation and release are optimised. It also aims to ensure that risks to the health and safety of volunteers rescuing and caring for these animals are reduced and easily managed.

Compliance with the code does not remove the need to abide by the requirements of the:

- *Prevention of Cruelty to Animals Act 1979*
- *Poisons and Therapeutic Goods Act 1966*
- *Veterinary Practice Act 2003*
- *Local Government Act 1993*
- *Firearms Act 1996*

or any other relevant laws and regulations.

Compliance with the standards in the code is a condition of a biodiversity conservation licence (BCL) to rehabilitate and release sick, injured and orphaned protected animals issued under the NSW *Biodiversity Conservation Act 2016 (BC Act)*. A person who contravenes a condition of a BCL is guilty of an offence under section 2.14 (4) of this Act.

The code is neither a complete manual on animal husbandry, nor a static document, and must be implemented by a person trained in accordance with the *Bird of Prey Rehabilitation Training Standards for the Volunteer Wildlife Rehabilitation Sector*. It will be periodically reviewed to incorporate 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. The Department of Planning, Industry and Environment (the department) will consult with licence holders regarding potential changes to the code and give written notice when the code is superseded.

1. Introduction

This code sets standards for the care and housing of a bird of prey that is incapable of fending for itself in its natural habitat. It refers to 31 bird of prey species that have been recorded in New South Wales (see Appendix).

There are 10 species listed as vulnerable under the BC Act, while the red goshawk (*Erythrotriorchis radiatus*) is listed as critically endangered, and the grey falcon (*Falco hypoleucos*) is listed as endangered. Both the grey falcon and red goshawk are also listed as vulnerable under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999*, and there is a National Recovery Plan for the Red Goshawk to improve their conservation status.

This code comprises both enforceable provisions and guidelines. Enforceable provisions are identified by the word 'Standards' and they must be followed.

1.1 Principles

The development of the code has been guided by 4 key principles which apply to all aspects of bird of prey rescue, rehabilitation and release:

Prioritise the welfare of birds of prey

The main objective of wildlife rehabilitation is to relieve suffering in sick or injured wildlife. The rehabilitation and release of birds of prey to the wild is the primary objective. It must not be pursued to preserve life of the animal at all costs or to achieve broader conservation outcomes where the animal is subject to unreasonable and unjustifiable suffering.

Avoid harm to wild bird of prey populations and other wildlife communities

In wildlife rehabilitation there is a risk of adverse ecological outcomes. The inappropriate release of animals can have significant detrimental effects on the local ecosystem and wildlife communities. At all stages of wildlife rehabilitation, the potential adverse ecological outcomes must be considered, and conservation benefits for wild bird of prey populations maximised.

Minimise the risks to human health and safety

There are many risks in all aspects of rehabilitation, including both personal injury and disease, that require consideration to ensure preventative measures are in place. All personnel involved in rescue, rehabilitation and release of birds of prey must understand practical health and safety measures such as undertaking a risk assessment, using personal protective equipment (PPE) and even delaying action to ensure safety measures are in place to protect their health and safety.

Optimise capacity to care

Wildlife rehabilitators must ensure they have the capacity to provide for the essential needs of birds of prey undergoing rehabilitation, and the resources to adequately prepare the bird of prey for release back into the wild. When the wildlife rehabilitator's capacity to care is exceeded, unacceptable standards of care or welfare may result. Wildlife rehabilitators must

be mindful of their capacity to care, particularly when there is an influx of wildlife requiring care due to major incidents, significant weather events or disease outbreak.

When the capacity to care is exceeded there are three acceptable management options:

- refer the bird of prey to another licensed wildlife rehabilitator with a current capacity to care for the bird
- increase the capacity to care by increasing or pooling resources
- lower the euthanasia threshold in combination with early-stage triage of newly rescued animals and proper veterinary assessment and prognosis of birds of prey in care.

Lowering the standards of care, such that they are not consistent with this code, is not an acceptable response to exceeding the capacity to care. In circumstances that involve major catastrophic events and where capacity to care is exceeded, lowering the threshold for euthanasia is a more appropriate response than not rescuing animals in distress.

1.2 Interpretations

Objectives

'Objectives' are the intended outcomes for each section of this code.

Standards

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

Guidelines

'Guidelines' describe the agreed best practice following consideration of scientific information and accumulated experience. They also reflect society's values and expectations regarding the care of animals. A guideline is usually a higher standard of care than minimum standards, 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 the word 'should'.

Notes

Where appropriate, notes describe practical procedures to achieve the minimum standards and guidelines. They may also refer to relevant legislation.

1.3 Definitions

In this code:

Birds of prey or **raptors** refer 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 the Appendix.

Barrier nursing means husbandry practices used to provide complete isolation of a patient to minimise the risk of cross-contamination between patients and from patients to the wildlife rehabilitator responsible for their care. It includes the physical separation of patients, avoiding sharing tools and furniture equipment between animals, wearing personal protective equipment (PPE) (e.g. masks, eye protection, gloves, gowns, aprons, overshoes) and using infection-control procedures (e.g. equipment sterilisation and regular use of disinfectant).

Experienced bird of prey rehabilitator means someone who has an extensive knowledge of current rehabilitation techniques gained through training courses, many years of successfully rehabilitating and releasing birds of prey, and who is up to date with current best practice.

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

Mutes are excreted by a bird of prey and are made up of three parts: faeces is the solid material, urate is a crystalline acid, and urine is a liquid that assists to flush the waste from the bird of prey's system.

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 under the NSW *National Parks and Wildlife Act 1974*.

Protected animal means any amphibian, reptile, bird or mammal (except dingos) listed or referred to in Schedule 5 of the BC Act that is native to Australia or that periodically or occasionally migrates to Australia (including their eggs and young).

Recovery, when referring to an individual, means a return to a functional condition after an injury or illness. This includes the natural ability of an animal to feed, interact, move, and evade risks and hazards in a wild situation.

Species coordinator is an experienced wildlife rehabilitator nominated by a group to liaise and advise volunteers on the rehabilitation of particular species, e.g. birds of prey, koalas, possums and gliders. Species coordinators should be people who are skilled in applying the code and have a role in monitoring volunteers, distributing rescued animals to volunteers and liaising with the local veterinary hospitals.

Wildlife rehabilitator means someone who is either authorised by a wildlife rehabilitation provider or zoological park or is individually licensed by the department to rehabilitate and release protected animals.

Wildlife rehabilitation means the temporary care of an injured, sick or orphaned protected animal with the aim of successfully releasing it back into its natural habitat.

Wildlife rehabilitation provider means an incorporated wildlife rehabilitation group, individually licensed wildlife rehabilitator, or a facility that is licensed by the department under the BC Act to rehabilitate and release protected animals.

Zoonoses are diseases that can be transmitted from animals to humans.

2. Case assessment

2.1 Assessing birds of prey

Objective

To assess birds of prey to determine the type of intervention required. The primary objective of rehabilitation is the successful reintegration of the bird of prey into the wild population, and all decisions are in pursuit of this goal. This will mean some individual birds of prey may benefit from rehabilitation, whereas others will need to be euthanased.

Standards

- 2.1.1 The decision tree in Figure 1 must be followed when determining how to respond to a bird of prey encounter.
- 2.1.2 Rescuers must arrange for the bird of prey to be assessed by a veterinarian or experienced bird of prey 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. e.g. by phone.

Note

An animal that is creating a nuisance for the public generally refers to an animal that has entered a person's house or represents a human health risk. It does not include an animal defending its territory or exhibiting other normal behaviour.

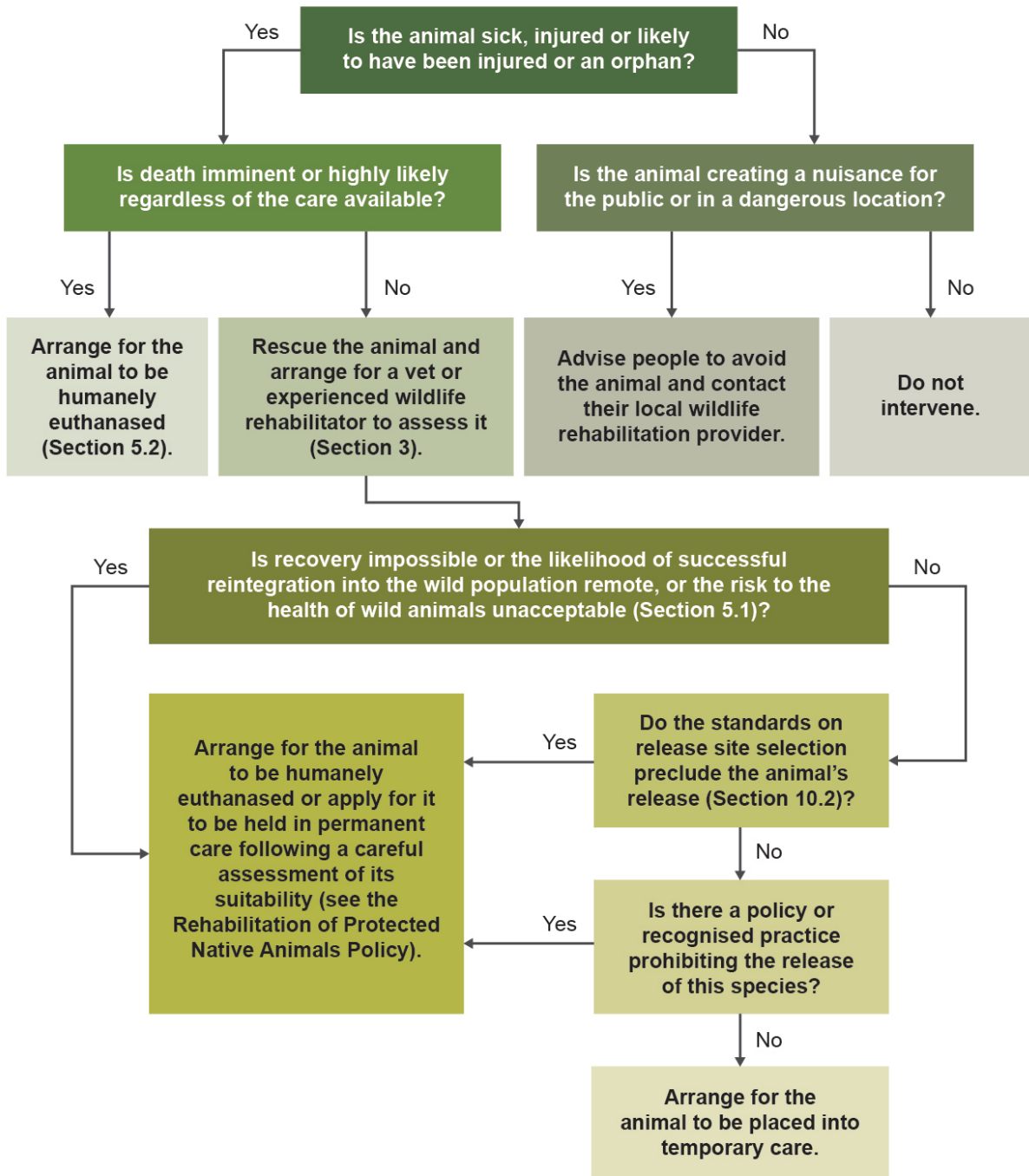


Figure 1 Decision tree for course of action when a bird of prey is encountered

3. Rescue

3.1 Rescuing birds of prey

Objective

To conduct a bird of prey rescue to minimise further stress and injury to the bird.

Standards

- 3.1.1 Before a rescue attempt, the rescuer must assess the risks to the bird of prey from environmental hazards and from capture.
- 3.1.2 Before a rescue attempt, the rescuer must assess the risks to themselves and members of the public.
- 3.1.3 Rescuers must employ the correct rescue equipment for the species, condition and location of the bird of prey and be trained in its use. See Section 11 'Training'.
- 3.1.4 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)
 - darting.
- 3.1.5 Care must be taken when using nets for rescue to prevent damage to the bird of prey's feathers. Wildlife rehabilitators must ensure:
 - the net is big enough for the species being rescued
 - the net has small diameter mesh made from a soft material, e.g. butterfly net or is lined
 - the bird of prey is removed from the net as soon as it has been captured.
- 3.1.6 Rescuers must monitor a chick or juvenile and check for the presence of a nest or an adult. The decision to intervene or try and reunite the bird with its parents must be taken in consultation with an experienced avian rehabilitator and include the following considerations:
 - stage of development (e.g. being on branches closer to the ground is normal behaviour for a fledgling in the early stages of flying)
 - proximity of predators such as domestic and feral animals
 - presence of injuries or disease
 - species match between the adult and chick or juvenile
 - temperature of the bird.
- 3.1.7 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.
- 3.1.8 Rescuers must contain both wings in the folded position and hold both legs to prevent further injury. However, birds of prey with severe wing or leg injuries (e.g. fractures), where it is preferable to limit movement, must be handled carefully to

minimise further damage, pain and stress (e.g. using towels to competently wrap the wings or legs).

- 3.1.9 Rescuers must 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.
- 3.1.10 Rescuers must use suitable work health and safety techniques to minimise the risk of injury to the rescuer. For example:
- wearing PPE such as gloves and long sleeves
 - not approaching a raptor from the front
 - seeking professional help when rescues involve cutting tree branches or climbing to heights
 - providing something for the bird's talons to grip.

Guidelines

- 3.1.11 The rescue of a bird of prey should only be undertaken by an experienced avian rehabilitator.

Notes

- Covering the bird's head will often assist with calming a bird of prey and facilitating a rapid rescue.
- A bird of prey on a slope, when approached, will attempt to glide, so should be approached from uphill and not downhill, facilitating a more rapid rescue.

4. Transport

4.1 Moving birds of prey

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, between rehabilitation facilities and to the release site.

Standards

- 4.1.1 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.
- 4.1.2 The container must be designed and set up to prevent further injuries and feather damage to the bird. For example:
 - position the bird of prey facing sideways to prevent injuries when the car stops suddenly.
- 4.1.3 The base of the transport container must be lined with a suitable surface: non-slip, non-organic, non-ingestible, and have no loose threads (e.g. grass, straw, newspaper or shredded paper must not be used).
- 4.1.4 The container must be well-ventilated so air can circulate around the bird of prey and around the transport container.
- 4.1.5 The container must be designed to prevent the bird of prey from escaping.
- 4.1.6 The container must be kept at a temperature that is appropriate for the age and condition 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 29°C is appropriate for owls unable to thermoregulate.
- 4.1.7 When transport is longer than two hours, the temperature and condition of the bird of prey must be monitored during transport.
- 4.1.8 Containers must minimise light, noise and vibrations and prevent contact with young children, people not directly involved in the rescue, pets and cigarette smoke.
- 4.1.9 Birds of prey must not be transported in the back of uncovered utility vehicles, utility vehicles with a rigid cover that are separate from the main cabin, or in car boots that are separate from the main cabin. Containers must be suitably secured.
- 4.1.10 The bird of prey must be provided with something to grip (e.g. a rolled towel) but perches must not be provided during transport.
- 4.1.11 The transport container must be covered with a dark-coloured cover. (e.g. dark towel or sheet).

Guidelines

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

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

Note

Good ventilation for air circulation is best achieved by placing holes in the side of the transport container; however, the holes should not be placed at the bird of prey's eye level.

5. Euthanasia

5.1 When to euthanase

Objective

To end a bird of prey's life in situations where death is imminent, full recovery is impossible, the likelihood of successful integration into the wild is remote, or the animal poses an unacceptable disease risk to other animals in the wild once released.

Standards

- 5.1.1 A bird of prey must be euthanased without exception when:
- death is imminent or highly likely regardless of the treatment provided
 - it is suffering from chronic, unrelievable pain or distress
 - it is suffering from chronic untreatable illness such as avian tuberculosis
 - its ability to consume food unaided is permanently impaired
 - any part of its wing is missing or amputated
 - recommended by an experienced wildlife veterinarian
 - it is habituated or imprinted.
- 5.1.2 A bird of prey must be euthanased (unless the department has granted permission to hold it in permanent care) when:
- there is no suitable release location
 - its ability to reproduce is lost due to an injury, disease or procedure
 - its ability to successfully hunt or locate food in a manner characteristic of the species is permanently impaired
 - its ability to locomote normally is permanently impaired due to an injured wing, missing or injured limb, multiple talons or both halluces
 - 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)
 - its advanced age renders it unable to survive in its natural habitat.
- In certain exceptional circumstances, the department may grant permission to hold such animals in permanent care or arrange placement with an authorised animal exhibitor licensed by the NSW Department of Primary Industries (DPI). See the [Rehabilitation of Protected Native Animals Policy](#) for details.

Guidelines

- 5.13 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.

5.2 How to euthanase

Objective

To induce death with minimal pain and distress to the bird of prey.

Standards

- 5.2.1 A euthanasia method must be used which produces a rapid loss of consciousness immediately followed by death.
- 5.2.2 Death must be confirmed before disposal of the carcass. The absence of a heartbeat and the loss of corneal reflexes indicate death has occurred.
- 5.2.3 Acceptable methods for euthanasia of birds of prey are:
- anaesthesia followed by an intravenous (preferred) or intracardiac injection of sodium pentobarbital; this must be performed by a veterinarian
 - gunshot to the brain for large birds of prey
 - stunning followed by cervical dislocation for small birds (less than 0.5 kilograms)
 - blunt force trauma to the back of the head.
- 5.2.4 Shooting must be undertaken by a licensed, skilled and experienced wildlife rehabilitation provider or an appropriate agency, such as the NSW National Parks and Wildlife Service (NPWS), the Royal Society for the Prevention of Cruelty to Animals (RSPCA) or NSW Police Force.
- 5.2.5 The following euthanasia methods must not be used on birds of prey:
- suffocation via drowning, strangulation or chest compression
 - freezing or burning
 - carbon dioxide or carbon monoxide in any form
 - poisoning with household products
 - air embolism
 - exsanguination or decapitation without prior stunning
 - electrocution or microwave irradiation
 - chloroform or strychnine
 - neuromuscular blocking agents.
- 5.2.6 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.

Guidelines

- 5.2.7 Shooting should only take place after an assessment (e.g. onsite, phone consultation or with photographs) by a qualified and experienced bird of prey rehabilitator or veterinarian.

Notes

For further information on appropriate euthanasia methods refer to:

- Australian Code for the Care and Use of Animals for Scientific Purposes (8th edition, NHMRC 2013).
- The Firearms Act 1996 specifies animal welfare as a genuine reason for having a firearms licence.
- The Veterinary Practice Act 2003 places restrictions on the types of procedures non-veterinarians can perform on animals.
- The Poisons and Therapeutic Goods Act 1966 places restrictions on the types of poisons people can possess.

5.3 Disposal of carcasses and animal waste

Objective

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

Standards

- 5.3.1 Carcasses and organic waste must either be incinerated (under licence), taken to a licensed waste facility or, if on private land, buried at a depth that will prevent scavengers from reaching them.
- 5.3.2 A bird of prey that has died from disease or chemical means (e.g. barbiturate overdose) must not be fed to other animals.

Guidelines

- 5.3.3 A deceased bird of prey should, whenever possible, undergo a necropsy by a veterinarian.
- 5.3.4 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.
- 5.3.5 Wings and tails exposed to chemicals and being retained for the feather bank should be clearly labelled.
- 5.3.6 Wildlife rehabilitators should make every effort to reduce the risk of contracting zoonoses such as salmonellosis, mycobacteriosis (avian tuberculosis) and fungal infections by:
 - implementing barrier nursing techniques (e.g. wearing PPE such as a mask, gloves and gown).
- 5.3.7 Samples for DNA should be collected from deceased birds of prey and sent to the Australian Museum. Using appropriate equipment (e.g. gloves and sterile scissors or scalpel) obtain a 0.5 centimetre x 0.5 centimetre tissue sample, place the sample into a tube with 90–95% ethanol or dimethyl sulfoxide (DMSO) for preservation, or store dry in a freezer. Label or affix details including as a minimum: name of species, date, location, organisation and the unique rehabilitation ID number. A certificate of deed will need to be provided for all samples sent to the Australian Museum.

Note

Further information on carcass disposal can be found in the Department of Primary Industries fact sheet: [Animal carcass disposal](#), including particular information on the proper construction and location for a burial site to protect the water table.

6. Care procedures

6.1 Assessment

Objective

To identify the severity of wounds, injuries or disease to determine the best course of action for a bird of prey undergoing rehabilitation.

Standards

- 6.1.1 Within 24 hours of admission, all birds of prey must undergo veterinary assessment or examination by an experienced bird of prey rehabilitator.
- 6.1.2 Within 24 hours of admission, all birds of prey rescued with major trauma or as a result of dog or cat attack must undergo veterinary assessment or examination by an experienced wildlife rehabilitator supervised by a wildlife veterinarian on the phone.
- 6.1.3 On admission, a bird of prey should be checked for:
 - dehydration
 - demeanour, e.g. depressed, quiet, alert
 - bleeding or wounds
 - bone fractures
 - body condition via keel bone assessment
 - feather condition
 - rapid breathing or elevated heart rate
 - head trauma or neurological issues, e.g. uneven gait, imbalance or head twitching
 - eye condition, e.g. no eye movement, sunken eyes, uneven pupils
 - internal mouth condition, e.g. colour, smell, presence of plaques, throat obstruction
 - hypothermia or hyperthermia
 - parasites
 - discharge from the eyes, ear openings, nostrils, mouth or cloaca
 - uncharacteristic smells
 - a broken beak or beak malalignment
 - food in the crop
 - missing digits or talons.
- 6.1.4 Upon admission, a bird of prey must be weighed and the species identified.
- 6.1.5 Once identified, disease or injury must be managed according to severity, and this will generally require veterinary input. Management of birds of prey in care must always strive for optimal animal welfare. Recognition and management of pain is important, and the use of pain relief medication must be undertaken with consultation and approval of a veterinarian.

Guidelines

6.1.4 Birds of prey should have the following tests undertaken:

- radiographs (X-ray) to screen for fractures and musculoskeletal injuries
- blood test for packed cell volume (PCV), white cell count (WCC) and total protein
- faecal exam for internal parasites
- vision exam.

Note

Weighing a bird of prey while still in the transport container and then subtracting the weight of the empty container is a quick technique to obtain weight while reducing the stress of handling a bird.

6.2 Monitoring

Objective

To check the health of a bird of prey undergoing rehabilitation so that concerns can be promptly identified and managed. The type and frequency of monitoring will vary with the species, age and stage of development, type of injury or illness and required treatment.

Standards

6.2.1 Monitoring a bird of prey must entail:

- visually assessing body condition and demeanour
- checking for signs of injury, disease and parasites
- determining foraging ability and food intake levels
- noting quantity and quality of mutes and pellets
- assessing skin and feather condition
- assessing keel coverage or weight gain over time for chicks
- looking for changes in behaviour.

6.2.2 Birds of prey in intensive care must be monitored during feeding and treatment procedures.

6.2.3 Monitoring of birds in intensive care will include assessment of hydration levels (i.e. by checking the eyes and pinching the skin above the foot).

6.2.4 Birds of prey in intermediate care must be monitored during feeding and treatment procedures. If not undergoing treatment, they must be monitored discreetly every day.

6.2.5 Birds of prey being prepared for release must be discreetly monitored every day, when the bird is naturally active, to determine if they are physically and behaviourally ready for release. See Section 10 'Suitability for release'.

6.2.6 Wildlife rehabilitation providers must monitor the ambient temperature within enclosures containing thermal support (e.g. blankets and electric heat mats) at least once a day to ensure appropriate temperatures are maintained.

- 6.2.7 Antibiotics must be given by or under the guidance of a veterinarian and with extreme caution due to the spread of antibiotic resistance and harm to wild populations.

6.3 Controlling disease transmission between animals

Objective

To prevent the spread of diseases among birds of prey undergoing rehabilitation. Stressed birds are more susceptible to contracting and expressing infectious diseases.

Standards

- 6.3.1 Newly arrived birds of prey must be isolated in separate areas until disease status can be determined by a veterinarian or experienced wildlife rehabilitator.
- 6.3.2 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, malnourishment, diarrhoea or discharge from the eyes or nose, foul smell from mouth or cloaca.
- 6.3.3 If an unusual disease or mortality event is suspected, the wildlife rehabilitator must immediately contact their species coordinator to notify the [DPI Emergency Animal Disease Hotline](#) (24 hours) on 1800 675 888 for immediate assessment of emerging health threats.
- 6.3.4 Dedicated cleaning equipment must be used for enclosures housing birds of prey with a suspected or confirmed infectious disease.
- 6.3.5 All enclosures, transport containers, cage furniture, food and water containers must be thoroughly cleaned and disinfected (e.g. using 'F10' which contains both antibacterial and antiviral properties) between each occupant.
- 6.3.6 Wildlife rehabilitators must wash their hands thoroughly with soap or disinfectant before and after handling each bird of prey in care.
- 6.3.7 When handling multiple birds, rehabilitators should start with the healthiest and finish with the sickest to reduce the risks of disease transmission.

Guidelines

- 6.3.8 Wildlife rehabilitators should make every effort to reduce the risk of contracting zoonoses such as avian influenza, salmonellosis, mycobacteriosis (avian tuberculosis) and fungal infections by implementing barrier nursing techniques (e.g. wearing PPE such as a mask, gloves and gown).
- 6.3.9 Pest control (but not rodent baits) is recommended for all rehabilitation facilities.

Notes

- Aspergillosis is a fungal infection that occurs from mould spores. The best prevention for birds undergoing rehabilitation is to minimise dust and moisture build-up in enclosures by providing adequate ventilation, frequent cleaning and use a substrate that does not harbour mould.

- If unwell, wildlife rehabilitators should remind the doctor, that they are caring for a sick animal and there is a possibility of having contracted a disease.

7. Husbandry

7.1 Food and water

Objective

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

Standards

- 7.1.1 Clean, fresh drinking water must be available at all times and changed daily.
- 7.1.2 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 (e.g. the water bowl needs to be wide enough to enable the bird of prey to scoop up the water).
- 7.1.3 Animal foodstuff involving dead mice or rats, meat or insects must be stored separately from human foodstuffs and out of reach of children and domestic animals, and must be protected from contamination, loss of nutrition and moisture.
- 7.1.4 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. For example:
 - peregrine falcons require at least 80% of their diet from avian protein
 - ospreys, whistling kites and white-bellied sea-eagles require fish as the bulk of their diet
 - kestrels require insects included in their diet
 - at least 50% of the bird of prey's diet must be sourced from whole foods (e.g. whole chicken including bones, internal organs and feathers, whole rat) and not from just parts of the animal (e.g. heart or liver).
- 7.1.5 Food that is available in the wild must form the basis of the bird of prey's diet.
- 7.1.6 Care must be taken when using wild caught animals as food for birds of prey in care as it poses a disease and poisoning risk, particularly to compromised animals. Considerations must include:
 - only to be used for birds of prey in pre-release
 - from animals with no signs of illness, a good plumage, good eyes and no bleeding or discharge from any orifice
 - free from gunshot pellets to avoid lead poisoning
 - not from an area with rat baits present.

Guidelines

- 7.1.7 Stored food should not be accessible to pets, pests and wild animals and should be protected from contamination, loss of nutrition and moisture.
- 7.1.8 Due to the potential for disease transfer, feral pigeons and parrot species should not be included in the bird of prey's diet.

- 7.1.9 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.
- 7.1.10 Birds of prey should have access to clean, smooth river pebbles of suitable size to aid with raptor food digestion.

Note

- 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.

7.2 Hygiene

Objective

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

Standards

- 7.2.1 Faeces and uneaten food must be removed daily and disposed of so it cannot be consumed by other animals (e.g. in closed garbage or compost bins).
- 7.2.2 Food and drinking water containers must be cleaned on a daily. Cleaning involves the use of water, detergent and the physical removal of all residues.
- 7.2.3 Enclosure furniture must be cleaned when soiled.
- 7.2.4 Birds of prey must be cleaned when soiled with faeces, urine or uneaten food.
- 7.2.5 Wildlife rehabilitators must use PPE during maintenance activities (e.g. gloves, eyewear).
- 7.2.6 Non-fixed enrichment furniture (e.g. perches, sticks and balls) must be replaced between each occupant, while permanent furniture must be disinfected and rinsed.
- 7.2.7 Wildlife rehabilitators must wash their hands and clean all food preparation surfaces and equipment before preparing bird of prey food.
- 7.2.8 Food that requires thawing must be thawed in a refrigerator (less than 4°C) over 24 to 48 hours, and unused food must never be refrozen. Food that is thawed and has been in a fridge for 24 hours and not fed to the bird of prey must be discarded.
- 7.2.9 Equipment used for cleaning animal enclosures, containers and furniture must be separate from those used domestically.

7.3 General care

Objective

To ensure birds of prey have a care regime that encourages rapid recovery, supports growth in juveniles and assists with behaviours necessary for survival in the wild.

Standards

- 7.3.1 All specific husbandries must be covered in specific training for birds of prey rehabilitation. See Section 11 'Training'.
- 7.3.2 Chicks are extremely prone to imprinting and humanisation. All care must be taken to minimise social interactions with humans, and natural behaviours should be allowed to develop.
- 7.3.3 The rehabilitation of hatchlings and nestlings is difficult and complex and must be undertaken only by experienced bird of prey rehabilitators.
- 7.3.4 A chick that is a suitable candidate for hacking must be:
 - healthy and uninjured
 - able to stand erect and pull its food
 - fed with a visual or temporal barrier to avoid all human contact.

Guidelines

- 7.3.5 Each bird of prey should have a husbandry plan.

8. Housing

8.1 General requirements

Objective

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

Standards

- 8.1.1 Enclosures must be escape-proof.
- 8.1.2 Housing must be made safe for a bird of prey by excluding hazards that might harm it. For example:
 - heat sources are shielded
 - all wire is lined to protect the bird of prey from feather and cere (i.e. fleshy area just above the beak) damage.
- 8.1.3 Housing must be designed and positioned to protect birds of prey from physical contact with wild animals, domestic pets and pests.
- 8.1.4 Housing must be designed so it minimises the risk for birds to damage their feathers when they fly, flap or land on the floor of the enclosure.
- 8.1.5 Benches, perches and feeding shelves are required for all species.
- 8.1.6 Peregrine falcons and kestrels also require a flat surface as well as traditional perches as they use caves and ledges in the wild.
- 8.1.7 Housing must be designed and positioned so birds of prey cannot see or hear domestic pets in close proximity.
- 8.1.8 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.
- 8.1.9 Housing must be designed so rehabilitators can readily access birds in care and change food and water containers with minimal disturbance to the bird of prey (e.g. place food and water containers near the enclosure entry).
- 8.1.10 Housing must be positioned so birds of prey are not exposed to strong vibrations, noxious smells (e.g. wood smoke), loud noises (e.g. radios and televisions, children and barking dogs), or extremes of hot or cold.
- 8.1.11 Housing must be constructed from non-toxic materials that can be easily cleaned and disinfected.
- 8.1.12 If multiple birds of prey are kept within a single enclosure, there must be sufficient space for individuals to avoid undue conflict and stress with cage mates, and consideration must be given so species housed together are not prey for each other.

Guidelines

- 8.1.13 Housing should be designed and positioned so birds of prey cannot see or hear domestic pets.

Note

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

8.2 Intensive care housing

Objective

To facilitate frequent monitoring, treatment, feeding and rehydration during the period immediately after coming into care and until the animal is stabilised.

Standards

- 8.2.1 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.
- 8.2.2 Intensive care enclosures must have the following dimensions:
 - for small raptors, such as hobbies and kestrels, enclosures must be a minimum of 0.5 metres long by 0.5 metres wide by 0.5 metres high
 - for large raptors such as eagles, falcons and hawks, enclosures must be a minimum of 1.5 metres long by 1.5 metres wide by 1.5 metres high.
- 8.2.3 Intensive care housing must provide a warm, dark, quiet environment, and there must be minimal external interference.
- 8.2.4 The temperature in intensive care housing must be regularly monitored using a thermometer, with minimal disturbance to the bird.
- 8.2.5 A thermostat must regulate electrical heat sources.
- 8.2.6 A bird in intensive care housing for longer than 24 hours 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.
- 8.2.7 Sawdust, wood shavings, newspaper, straw or organic coverings must not be used as a floor substrate.
- 8.2.8 A bird unable to perch must be supported (e.g. using a tightly rolled-up U-shaped towel with no loose threads) and requires extra padding in the form of rubber matting.
- 8.2.9 Birds of prey in intensive care must not be provided with bathing water.
- 8.2.10 Intensive care housing must be constructed in such a way as to allow the rehabilitator to readily capture and remove the bird for examination and treatment.
- 8.2.11 Substrate must be a soft, non-slip material that can be easily changed daily or as required (e.g. artificial turf, cardboard covered with a towel).
- 8.2.12 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 29°C is appropriate for owls that are unable to thermoregulate.

Guidelines

8.2.13 Intensive care housing should be 0.8 metres from the ground.

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

8.3 Intermediate care housing

Objective

To provide a mobile bird of prey with enough space to allow some physical activity while enabling it to be readily caught for monitoring or treatment.

Standards

- 8.3.1 Intermediate care housing must provide sufficient space for the bird of prey to move about freely while enabling easy capture.
- 8.3.2 Intermediate care enclosures must have the following floor dimensions:
- for small raptors, such as kestrels and hobbies, enclosures must be a minimum of 2 metres long by 2 metres wide by 2 metres high
 - for large raptors such as eagles, hawks and falcons, enclosures must be a minimum of 3 metres long by 3 metres wide by 3 metres high.
- 8.3.3 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.
- 8.3.4 The frame must be constructed from a solid, waterproof, non-toxic material.
- 8.3.5 Intermediate care housing must be constructed of timber or metal and the walls should be predominantly solid.
- 8.3.6 Parts of some walls may be open construction using either timber slats or wire mesh; however, wire mesh must be lined with shade cloth.
- 8.3.7 The housing must be designed and positioned so part of the roof is waterproof and provides an area offering protection from rain, weather conditions and excess heat, e.g. metal roofing is well-insulated, or is positioned under a tree that provides shade.
- 8.3.8 Part of the roof must be constructed with slatting or wire mesh, and the wire mesh must be lined with shade cloth.
- 8.3.9 The floor must include an area with a mixture of either small pebbles or washed river sand thickly spread over concrete, grass, or 20-millimetre blue metal aggregate. The pebbles must be hosed every second day.
- 8.3.10 Wooden perches must be provided to allow the bird to find a comfortable position and minimise the risks of pressure sores (bumblefoot). Raptors like to perch as high as possible. The perches must:
- be of varying diameters and at different heights
 - be high enough for the bird to stand normally
 - allow the bird to turn around after landing without brushing its feathers

- ensure the feathers clear the substrate
 - be of a diameter that prevents talons touching the feet when perching
 - 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.
- 8.3.11 Birds undergoing intermediate care must not be kept in cages with unlined wire as it can cause feather and cere damage.
- 8.3.12 Clean drinking water must always be available.

Guidelines

- 8.3.13 Swinging perches should also be used because the free movement of the perch absorbs the impact when birds of prey land.
- 8.3.14 Perches should be placed at staggered heights so birds of prey that cannot fly will be able to hop or jump from one perch to another.
- 8.3.15 Bathing water should be accessible to the bird of prey, but not if it has the potential to interfere with bandaging or wounds.
- 8.3.16 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.
- 8.3.17 Intermediate housing for birds of prey should have a double-door entry system.
- 8.3.18 Birds of prey should have access to clean, smooth river pebbles of suitable size to aid with raptor food digestion.

8.4 Pre-release housing

Objective

To give the bird of prey the opportunity to regain its physical condition, acclimatise to current weather conditions and practice natural behaviour. At this stage of rehabilitation, interactions between the bird of prey and humans will be greatly reduced.

Standards

- 8.4.1 Rectangular pre-release housing must have the following dimensions:
- for small raptors, such as kestrels and hobbies, housing must be a minimum of 6 metres long by 3 metres wide by 3 metres high
 - for large raptors, such as eagles, hawks and falcons, housing must be a minimum of 8 metres long by 4 metres wide by 4 metres high.
- 8.4.2 Circular aviaries must be constructed to encourage uninterrupted flight (i.e. inclusion of a central pavillion zone) and have the following dimensions:
- for small raptors, such as kestrels and hobbies, the aviary must have a minimum circumference of 45 metres, a 15-metre diameter, and be 6 metres high
 - for large raptors, such as eagles, hawks and falcons, the aviary must have a minimum circumference of 100 metres, a 30-metre diameter, and be 6 metres high.

- 8.4.3 Pre-release housing must provide sufficient space for the bird of prey to move about freely and express a range of natural behaviours. For example, the aviary must have:
- an area providing natural foliage protection the bird of prey can retreat to in order to avoid observation
 - space for species-specific hunting techniques e.g. hovering, systematically searching (quartering)
 - bathing water.
- 8.4.4 Housing requirements are the same as for intermediate housing except the roof must contain two areas – one exposed to prevailing weather conditions and another covered by protective shade cloth or soft netting.
- 8.4.5 Hacking boxes must:
- be a minimum of 1 metre long by 1 metre wide by 1 metre high
 - be a minimum of 1.5 metres above the ground
 - once the bird of prey is able to perch, contain a perch so 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
 - include unrestricted flight space from the box platform
 - avoid direct sun
 - be located to minimise opportunity for predators to gain access.
- 8.4.6 Pre-release housing must be designed and positioned so exposure to humans is kept to the minimum required for observation, feeding and cleaning.

Guidelines

- 8.4.7 A bird of prey should have some opportunity for flight (10 wing beats is recommended) and every effort should be made to provide the largest possible enclosure for birds of prey in the pre-release stage. Wildlife rehabilitation providers should liaise with other groups and transfer birds of prey that have been in rehabilitation for longer than two months to facilities with circular perpetual flight enclosures to ensure flight fitness. See Section 9 'Suitability for release'.
- 8.4.8 Pre-release housing should have the following dimensions:
- for small raptors, such as kestrels and hobbies, housing should be a minimum of 10 metres long by 3 metres wide by 3 metres high
 - for large raptors, such as eagles, hawks and falcons, housing should be a minimum of 15 metres long by 10 metres wide by 4 metres high.
- 8.4.9 Hacking boxes should:
- be east-facing
 - avoid cold prevailing winds or storms
 - maintain distance from human activity
 - include the presence of wild populations of that species
 - have a removable screen or door at the start of the hacking process so the bird of prey can be seen but not yet escape
 - be as high as possible above the ground.
- 8.4.10 Pre-release housing for birds of prey should have a double-door entry system.

9. Suitability for release

9.1 Preparations for release

Objective

To ensure the bird of prey is physically fit and possesses the appropriate survival skills before release. Preparations for release will start at the time of rescue and continue throughout the rehabilitation process. Many species will gradually lose their survival skills in captivity, so it is vital their time in care is kept to a minimum.

Standards

- 9.1.1 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 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).
- 9.1.2 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 or to sights, sounds or smells that are specific to captivity (i.e. not habituated)
 - can navigate effectively through its natural environment, catch its own food and recognise a normal wild diet.
- 9.1.3 A bird of prey's readiness for release must be assessed in consultation with an experienced bird of prey rehabilitator.
- 9.1.4 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.
- 9.1.5 In cases where an animal is determined to be non-releasable, the wildlife rehabilitation provider must:
- consider euthanasia (see Section 5 'Euthanasia')
 - if euthanasia is not considered appropriate, contact the Wildlife Team (wildlife.licensing@environment.nsw.gov.au) and apply for permanent care
 - notify the Wildlife Team (wildlife.licensing@environment.nsw.gov.au) to arrange placement with an authorised animal exhibitor licensed by DPI.

Guidelines

- 9.1.6 A bird of prey's readiness for release should be assessed by a veterinarian.

10. Release considerations

10.1 Timing of release

Objective

To ensure 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.

Standards

- 10.1.1 Once a bird of prey is deemed ready for release, it must be released as soon as conditions are suitable. (See below for what suitable conditions are.)
- 10.1.2 A bird of prey must be released at a time of day that enables it to immediately investigate its environment. The optimal release time for most diurnal animals is approximately one hour after dawn, and for most nocturnal animals is approximately one hour after dark.
- 10.1.3 A bird of prey must be released at a time of year that facilitates survival and reintegration into the wild population. For example:
- for juvenile birds of prey, release must occur when they would naturally disperse, except when injury prevents release
 - insectivorous species (e.g. Pacific baza) must be released during periods of high insect abundance (e.g. spring and summer).
- 10.1.4 A bird of prey must be released when weather conditions encourage high activity levels. They must not be released:
- immediately before or during a storm
 - during extremes of temperature
 - in very windy conditions.

10.2 Release site selection

Objective

To ensure the wild bird of prey populations and natural environment are not negatively impacted by the release of a bird of prey and the released bird of prey has the highest likelihood of survival.

Standards

- 10.2.1 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. The exception is subadult birds of prey, see Standard 10.2.8.
- 10.2.2 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 or human persecution.

10.2.3 If the location where the bird of prey was found is assessed as unsuitable, the bird of prey must be released in a suitable environment as near as possible to this location.

10.2.4 A bird of prey must be released in a park only if:

- written consent for the release has been obtained from the relevant NPWS Area Manager (issued under s.11 of the National Parks and Wildlife Regulation 2019)
- the release complies with the relevant Department of Planning, Industry and Environment policies on translocation.

These conditions also apply to the release of a bird of prey in a location where it might reasonably be expected to immediately enter a park (e.g. on a property adjoining a park).

10.2.5 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.

10.2.6 If there is no information about where the bird of prey was found it must not be released.

10.2.7 In cases where there is no suitable release site, the wildlife rehabilitation provider must:

- consider euthanasia (see Section 5 'Euthanasia')
- if euthanasia is not considered appropriate contact the department and apply for permanent care
- notify NPWS to arrange placement with an authorised animal exhibitor licensed by DPI.

10.2.8 Release site selection must consider the age of the bird of prey. For example:

- adult birds of prey pair bond from two to three years of age, and the release site must be close enough for them to re-join their mate
- subadult birds of prey that have lost their home range due to dispersal must not be returned to where they were found, but instead to a suitable environment as near as possible to this location.

Guidelines

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

Note

Wildlife rehabilitators who propose to release a bird of prey outside these standards and guidelines may require additional approval. Contact the Wildlife Team via email at wildlife.licensing@environment.nsw.gov.au.

10.3 Release techniques

Objective

The use of release techniques that ensure the released bird of prey has the highest likelihood of survival, and information is collected regarding the fate of the rehabilitated bird

of prey after release so the relative merits of different rehabilitation and release techniques can be compared.

Standards

- 10.3.1 Wildlife rehabilitators must not release large numbers of individuals at a single location, as increased competition is likely to have a detrimental effect on the existing population.
- 10.3.2 Hand-reared birds of prey must be provided with temporary post-release support (soft release). This may include supplementary feeding, shelter provision, or protection from predators and extreme weather.

Guidelines

- 10.3.3 The release site should be monitored for a minimum of 2 weeks after release.
- 10.3.4 Wildlife rehabilitators should arrange for birds of prey to be tagged, microchipped or marked as appropriate for individual identification before release. Wildlife rehabilitation groups, researchers and zoological groups are encouraged to participate in post-release monitoring programs to determine survivorship.

Notes

- All research involving protected animals requires a licence issued under the BC Act. and an ethics approval issued under the *Animal Research Act 1985*.
- Banding birds requires an authority issued by the Australian Bird and Bat Banding Scheme.

11. Training

11.1 Skills and experience

Objective

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

Standards

- 11.1.1 Intending bird of prey rehabilitators must have proven experience in native bird rehabilitation.
- 11.1.2 New wildlife rehabilitators must undertake an introductory training course.
- 11.1.3 Before undertaking bird of prey rehabilitation, a person must undertake specialist training.
- 11.1.4 A specialist training course must:
 - teach all the standards and guidelines described in this code
 - focus on what a person will be able to do as a result of completing the course (i.e. be competency-based)
 - teach health and safety issues associated with bird of prey rehabilitation (e.g. disease transmission and operating in hazardous locations)
 - have a written assessment component.
- 11.1.5 Wildlife rehabilitators must be assessed as competent in the relevant areas before undertaking rescue, rehabilitation or release of birds of prey.
- 11.1.6 Training must be accompanied by ongoing in-field support from an experienced bird of prey rehabilitator.
- 11.1.7 Wildlife rehabilitators must 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)
 - keeping accurate records.
- 11.1.8 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.
- 11.1.8 Wildlife rehabilitators must be authorised by the Australian Bird and Bat Banding Scheme to undertake bird banding.

11.1.9 All wildlife rehabilitators must undertake professional development and refresh their training for birds of prey every three years e.g. completing a refresher or advanced training course, attending a bird of prey conference, seminar or online course.

Guidelines

11.1.10 Wildlife rehabilitators should continue their professional development by keeping up to date with the latest findings from scientific papers on birds of prey and developing a relationship with their local veterinary hospital.

Notes

- The department has prepared Bird of Prey Training Standards for the Volunteer Wildlife Rehabilitation Sector including a bird of prey trainers' guide to ensure volunteers are trained to be competent in the implementation of this code.
- Attendance at bird of prey conferences or seminars may require pre-approval from a wildlife rehabilitator's group training coordinator to be eligible for consideration.

12. Record keeping

12.1 Wildlife database

Objective

To maintain a database of birds of prey that have been reported to wildlife rehabilitation providers, to inform improved rehabilitation outcomes for individual animals and contribute to the ecological viability of bird of prey species.

Standards

12.1.1 Licensed wildlife rehabilitation providers, zoological parks and individuals must maintain a current register of all birds of prey 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).

These records must be submitted to the Wildlife Team (wildlife.licensing@environment.nsw.gov.au) once a year using an approved electronic [template](#).

12.1.2 Wildlife rehabilitators must record the weight of birds of prey in their care so changes can be identified quickly. Weighing frequency will depend on the type of care provided. See Section 6: 'Care procedures'.

12.1.3 When an individual bird of prey is transferred to another wildlife rehabilitation provider for any reason, copies of its records must be transferred with it.

12.1.4 If the death of a bird of prey is suspected to be the result of a serious disease outbreak, the wildlife rehabilitator must immediately contact their species coordinator to ascertain whether tissue analysis or a necropsy is required. The [DPI Emergency Animal Disease Hotline](#) (24 hours) on 1800 675 888 must be notified immediately.

Guidelines

12.1.5 Wildlife 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 before transport.

12.1.6 Wildlife rehabilitators should record the following additional information at the time of assessment by a veterinarian or experienced wildlife rehabilitator:

- details of wounds, injuries, diseases and external parasites
- details of mobility
- details of abnormal behaviour

- recommended management (e.g. euthanasia or treatment)
 - standard length measurements (beak length, wing length, tail length and tarsometatarsus length).
- 12.1.7 Wildlife rehabilitators should record the following additional information at the time of entry into a rehabilitation facility:
- identifying features if it is to be housed communally
 - housing (e.g. intensive care, intermediate care or pre-release). See Section 8 'Housing'.
- 12.1.8 Wildlife rehabilitators should record the following daily care information:
- details regarding the type and quantity of food and 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 and urine).
- 12.1.9 Wildlife 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).
- 12.1.10 Wildlife rehabilitators should keep duplicates or backups of records to avoid information being lost.
- 12.1.11 Sightings of birds of prey that are not in need of rescue, should be uploaded to NSW BioNet and should contain encounter details (date, location, encounter circumstances and a unique ID number) as well as whether the bird of prey was alive or dead.
- 12.1.12 Wildlife rehabilitators should record the following information for dead birds of prey:
- cause of death
 - necropsy notes
 - DNA testing results
 - records of care of previous rehabilitation.

13. Further reading

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.

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

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

McDonald PJ 2017, To advance and exchange our knowledge of Australian raptor rehabilitation and release techniques – USA, Canada, UK, United Arab Emirates, South Africa, Winston Churchill Trust, <https://www.churchilltrust.com.au/fellow/peggy-mcdonald-nsw-2017/>.

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

Naisbitt R & 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 & 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.

Scott DE 2020 *Raptor Medicine, Surgery, and Rehabilitation*, 3rd edition, CAB International, Wallingford Oxfordshire, England.

Appendix

Birds of prey relevant to this code

Bionet Atlas code	Common name	Scientific name	BC Act 2016 NSW listing	EPBC Act 1999 Federal listing
Hawkes and eagles: Family Accipitridae				
0218	Spotted harrier	<i>Circus assimilis</i>	Vulnerable	
0219	Swamp harrier	<i>Circus approximans</i>		
0220	Grey goshawk	<i>Accipiter novaehollandiae</i>		
0221	Brown goshawk	<i>Accipiter fasciatus</i>		
0222	Collared sparrowhawk	<i>Accipiter cirrocephalus</i>		
0223	Red goshawk	<i>Erythrotriorchis radiatus</i>	Critically endangered	Vulnerable
0224	Wedge-tailed eagle	<i>Aquila audax</i>		
0225	Little eagle	<i>Hieraaetus morphnoide</i>	Vulnerable	
0226	White-bellied sea-eagle	<i>Haliaeetus leucogaster</i>	Vulnerable	
0227	Brahminy kite	<i>Haliastur indus</i>		
0228	Whistling kite	<i>Haliastur sphenurus</i>		
0229	Black kite	<i>Milvus migrans</i>		
0230	Square-tailed kite	<i>Lophoictinia isura</i>	Vulnerable	
0231	Black-breasted buzzard	<i>Hamirostra melanosternon</i>	Vulnerable	
0232	Black-shouldered kite	<i>Elanus axillaris</i>		
0233	Letter-winged kite	<i>Elanus scriptus</i>		
0234	Pacific baza	<i>Aviceda subcristata</i>		
8739	Eastern osprey	<i>Pandion cristatus</i>	Vulnerable	
Falcons and kestrels: Family Falconidae				
0235	Australian hobby	<i>Falco longipennis</i>		
0236	Grey falcon	<i>Falco hypoleucos</i>	Endangered	Vulnerable
0237	Peregrine falcon	<i>Falco peregrinus</i>		
0238	Black falcon	<i>Falco subniger</i>	Vulnerable	
0239	Brown falcon	<i>Falco berigora</i>		
0240	Nankeen kestrel	<i>Falco cenchroides</i>		
Hawk owls: Family Strigidae				
0246	Barking owl	<i>Ninox connivens</i>	Vulnerable	
0248	Powerful owl	<i>Ninox strenua</i>	Vulnerable	
9922	Southern boobook	<i>Ninox novaeseelandiae</i>		

Bionet Atlas code	Common name	Scientific name	BC Act 2016 NSW listing	EPBC Act 1999 Federal listing
<i>Barn owls: Family Tytonidae</i>				
0252	Eastern grass owl	<i>Tyto longimembris</i>	Vulnerable	
0250	Masked owl	<i>Tyto novaehollandiae</i>	Vulnerable	
9923	Eastern barn owl	<i>Tyto javanica</i>		
9924	Sooty owl	<i>Tyto tenebricosa</i>	Vulnerable	