

Code of Practice – Care and rehabilitation of orphaned, sick or injured protected animals by wildlife care volunteers

Nature Conservation Act 1992

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Acknowledgements:

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1 Introduction

- 1.1 All native birds, mammals (except the dingo outside protected areas), reptiles and amphibians in Queensland are protected under the *Nature Conservation Act 1992* ('the Act').
- 1.2 This Code of Practice is approved by the Minister under the *Nature Conservation Act 1992*. Other relevant legislation for this purpose includes the *Nature Conservation Regulation 1994* ('the Regulation'), the *Nature Conservation (Wildlife) Regulation 1994* ('Wildlife Regulation') and the *Animal Care and Protection Act 2001*.
- 1.3 This Code has been prepared by the Queensland Parks and Wildlife Service (QPWS), Department of Primary Industries and Fisheries (DPI&F) and the Queensland Wildlife Rehabilitation Council (QWRC) to help ensure acceptable standards of welfare for native wildlife being cared for by volunteer wildlife carers and to ensure that the efforts of carers will result in the successful rehabilitation of animals for release in the wild.
- 1.4 QWRC is the peak representative body for the wildlife rehabilitation industry in Queensland. The council's focus is to ensure excellent welfare for native animals during and after rehabilitation to achieve, complement and advance conservation benefits and outcomes.
- 1.5 This Code applies to all wildlife carers caring for orphaned, sick, or injured wildlife that are intended for return to the wild.
- 1.6 QPWS must be contacted within 72 hours of native wildlife coming into care unless the carer is already licenced or an existing member of a care group. QPWS must be contacted immediately for marine mammals.
- 1.7 The Environmental Protection Agency (EPA) may issue a rehabilitation permit to an individual or a corporation. A voluntary wildlife care association may obtain a rehabilitation permit once it has become incorporated. All members in the association will operate under the permit of that group. Further details of this requirement are outlined in Section 17 of this Code.
- 1.8 The basic requirements for the well-being of native animals are:
 - a) freedom to exhibit normal animal behaviour to the extent possible in a captive environment;
 - b) sufficient area of appropriate quality to maintain their well-being and allow them to exhibit natural behaviour;
 - c) protection from predation;
 - d) protection from injury and disease, including the provision of veterinary treatment;
 - e) protection from extremes of climate, particularly when young or injured;
 - f) protection from pain, distress, suffering, and injury; and
 - g) appropriate and sufficient food and water to sustain health and vitality.
- 1.9 Carers must have a sound knowledge of the captive husbandry and rehabilitation practices for each species they care for. A sound knowledge of particular species enables the early detection of signs of distress and disease, so that the cause can be identified and prompt, appropriate remedial action taken.
- 1.10 All animals coming into care must be examined by a veterinary surgeon as a matter of urgency to establish whether they are suitable for rehabilitation (see Section 14)¹.
- 1.11 Animals can carry diseases that may be transmitted to people, known as zoonotic diseases. Some zoonotic diseases can cause serious health problems in people. Carers should follow the advice of their health care professional before handling any animals.

¹ For those animals deemed not suitable for rehabilitation see Section 14.

- 1.12 The Regulation requires a person that keeps an animal under a rehabilitation permit to release the animal into appropriate natural habitat as close as practical to where the animal was found once the animal is again able to live in that habitat.
- 1.13 The primary aim of caring for orphaned, sick or injured protected animals is to rehabilitate the animal and return it to the wild. As a consequence, information may be obtained about animal biology, ecology and conservation of native wildlife.
- 1.14 The work of volunteer wildlife carers may contribute to conservation through research, community education and promotion of a respect for animals and, in some cases, for sustaining populations of species in the wild. Although the survival rate of the majority of rehabilitated wildlife in the wild is not known, the techniques and data developed when caring for common animals can be of benefit when threatened species come into care.
- 1.15 This Code is current at the time of publication and may be subject to periodic review.

2 Considerations about rehabilitating an animal

- 2.1 To help promote survival, rehabilitated animals should be returned to suitable habitat close to the location where they were found. Habitats have a carrying capacity for a particular species, and most occupied sites tend to function at carrying capacity. Relocating wildlife to new areas is not recommended, as there is the potential to spread disease, compromise genetic integrity, displace other animals from their home ranges and create competition with local wildlife.
- 2.2 When the carrying capacity of an area for a particular species is reached, new individuals may be unable to find an available territory. With this in mind, when assessing an animal's suitability for successful rehabilitation, the potential of the animal to be successfully reintroduced should be taken into account. This assessment should include:
 - a) age and sex of the animal;
 - b) ability to establish a home range; and
 - c) need for social interaction.
- 2.3 Captivity can cause high levels of distress in wildlife, sometimes resulting in the development of abnormal behaviours and reduced rehabilitation success and impair the long-term survival of the individual and species.
- 2.4 Hand-reared wildlife may not have developed the necessary behaviours and skills to survive, resulting in a disadvantage when competing for food, shelter and territory. Captivity for extended periods can result in:
 - a) loss of survival skills;
 - b) imprinting or reliance on humans; and
 - c) loss of territory in the wild to members of the same species.
- 2.5 Wildlife carers should strive to maintain the highest possible standards of welfare for animals in their care. This can be achieved by a high standard of care and maintaining a sound knowledge and understanding of the species and current rehabilitation information, methods and regulations. Membership with an animal welfare or wildlife organisations is strongly recommended to maintain this knowledge.
- 2.6 To help maintain high standards of animal welfare and avoid personal injury, it is essential that carers are trained and competent to deal with orphaned, sick, or injured native animals.
- 2.7 Carers are encouraged to co-operate with other carers in their area by sharing resources and knowledge. This is particularly important for gregarious species that require the company of their own kind, e.g. lorikeets, kangaroos and some species of glider. This will assist in creating an established grouping prior to release.

3 Objectives of wildlife rehabilitation

- 3.1 The primary aim of wildlife rehabilitation is to return healthy, functioning native animals to the wild. The broad objectives of wildlife rehabilitation as outlined in this Code are to:
- a) provide immediate sanctuary, emergency care and first aid for distressed native wildlife;
 - b) provide appropriate longer term care for animals suitable for rehabilitation;
 - c) suitably prepare animals for survival upon release; and
 - d) treat all animals in a humane manner.
- 3.2 To foster an environment conducive to the effective rehabilitation of animals and to ensure that the likelihood of the survival of animals once released to the wild is maximised, carers should:
- a) arrange for the early assessment (e.g. state of health, injury or dependence) of an orphaned, sick or injured protected animal;
 - b) provide immediate first aid;
 - c) ensure prompt veterinary treatment where required;
 - d) ensure that each animal is assessed within 72 hours, usually in consultation with either a veterinarian, preferably with wildlife experience, or other knowledgeable person, as to the suitability of the animal for rehabilitation;
 - e) provide suitable treatment and housing for the animal that promotes the well-being of the particular species and conforms to this Code;
 - f) ensure animals that are not suitable for release (and are not listed under the Convention on International Trade in Endangered Species of Wild Flora and Fauna (CITES)) are euthanased promptly by a veterinary surgeon or another person who has authority to administer drugs to an animal under the *Health (Drugs and Poisons) Regulations 1996*;
 - g) attend at least two (2) organised training sessions each year to continue developing animal care skills and knowledge;
 - h) obtain and follow the instructions of veterinary surgeons, QPWS officers and taxon co-ordinators within the person's volunteer wildlife care association (if applicable), concerning husbandry, rehabilitation and release of animals in their care;
 - i) co-operate and communicate with members of the wildlife care network; and
 - j) take the responsibility for arranging for the humane euthanasia of animals unable to be successfully rehabilitated and released back into the wild.

4 Restrictions on caring for animals with special needs

- 4.1 The species listed below may have requirements outside the normal capacity of most carers. Additional requirements are placed upon carers who intend to keep these species to improve the likelihood of successful rehabilitation and their return to the wild. The criteria against which a rehabilitation permit may be granted depend upon the person meeting the requirements stated for the species.
- 4.2 Permits may only be granted to persons assessed as having the appropriate skills and facilities to house and care for the following wildlife:
- a) Cassowary
 - Contact Queensland Parks and Wildlife Service.
 - b) Echidna
 - Contact Queensland Parks and Wildlife Service or a person who holds a permit that specifically provides for this species to be rehabilitated.

- c) Emu
 - Contact Queensland Parks and Wildlife Service. This species may only be rehabilitated on rural-residential and rural land.
- d) Koala
 - Contact Queensland Parks and Wildlife Service or a person who holds a permit that specifically provides for this species to be rehabilitated.
- e) Raptors
 - Contact Queensland Parks and Wildlife Service or a person who holds a permit that specifically provides for this species to be rehabilitated. Only carers who are affiliated with a Raptor Association or those with a proven record and suitable facilities in raptor rehabilitation may keep raptors (see Part 2).
- f) Reptiles
 - Contact Queensland Parks and Wildlife Service or a person who holds a permit that specifically provides for this species to be rehabilitated.
- g) Marine turtles
 - Contact Queensland Parks and Wildlife Service.
- h) Platypus
 - Contact Queensland Parks and Wildlife Service.
- i) Flying-foxes and micro-bats
 - All persons caring for flying foxes and insectivorous bats must be vaccinated against Australian Bat Lyssavirus (ABL) and must regularly consult their General Practitioner or Public Health Unit to maintain vaccinations.
- j) Seabirds
 - Contact Queensland Parks and Wildlife Service or a person who holds a permit that specifically provides for this species to be rehabilitated.

5 Number of wildlife

- 5.1 Some local governments may have specific local laws concerning the number of animals permitted to be held in residential or commercial premises.
- 5.2 Where no local government regulations exist, it is recommended that no more than five (5) animals be held on a single property. This, however, excludes the holding of social or gregarious species including at approved pre-release facilities.
- 5.3 Carers may only keep an animal if they are satisfied that the animal can be rehabilitated for release to the wild.
- 5.4 Carers must ensure they have sufficient space to rehabilitate animals.

6 Triage or veterinary assessment

- 6.1 It is recommended that wildlife carers present all orphaned, sick or injured protected animals to a veterinarian or another person who is particularly knowledgeable about the species as soon as practical

after the animals come into their care. This will help to quickly and accurately assess the animal's suitability for rehabilitation and release to the wild and to obtain advice on appropriate treatment.

- 6.2 The veterinarian or knowledgeable person must:
- determine the overall health, and/or severity of any injury or disease;
 - as far as practicable test for congenital diseases known to affect the survival of a particular species;
 - provide advice on appropriate treatment for the animal. This must be within the scope of the person's expertise; and
 - if not suitable for future release into the wild, humanely euthanase the animal (except in the case where the animal has significant conservation value or is a priority listed species, see Section 14).
- 6.3 Conditions that may prevent successful rehabilitation include:
- loss of limbs or function of limbs, including tails;
 - permanent vital sensory loss (e.g. hearing, sight, smell);
 - incurable, infectious and contagious disease;
 - permanent damage to the nervous system;
 - imprinted behaviour patterns;
 - inability to adjust to captivity; and
 - chronic ill health.
- 6.4 Possible outcomes of the assessment are that the animal is:
- judged to be potentially suitable for rehabilitation and release to the wild;
 - borderline, and further assessment is required by another specialised veterinarian;
 - unlikely to survive without radical surgery (e.g. amputation of a limb), which would prevent its return to the wild; or
 - injured so badly that survival is unlikely.

In assessment (c) refer to Section 15.4 and in assessment (d) the animal should be promptly and humanely euthanased to prevent further suffering.

7 Health monitoring

- 7.1 Prompt veterinary treatment is vital to ensure the welfare of orphaned, sick or injured wildlife.
- 7.2 Carers must monitor the condition of animals in their care, as the early detection of any change in an animal's condition and signs of distress are essential to ensure the successful rehabilitation of the animal.
- 7.3 Recommended guidelines for frequency of monitoring by rehabilitators are as follows:
- Very young orphans, seriously ill or injured animals, are monitored every four hours at each feed.
 - Older orphans or animals with minor injury or illness, are monitored every 12 hours by manual restraint.
 - All animals being prepared for release, are monitored visually once a day.
- 7.4 The frequency of veterinary inspections will vary with the animal's age, type of injury or illness, and required treatments.

8 Human health risks

- 8.1 There are a number of diseases in native wildlife that are transmissible between animals and humans (zoonotic diseases) that can cause illness and disease. These include, but are not limited to:

- a) Australian Bat Lyssavirus (ABL);
 - b) Q fever;
 - c) leptospirosis;
 - d) ornithosis (Psittacosis);
 - e) salmonellosis;
 - f) tuberculosis;
 - g) yersiniosis;
 - h) pasteurellosis;
 - i) aspergillosis;
 - j) scabies;
 - k) lice; and
 - l) ticks.
- 8.2 Many of these diseases can cause serious illness in humans and some are potentially fatal. Volunteer wildlife carers should seek medical advice on suitable strategies to prevent or minimise the chances of contracting a zoonotic disease from animals in their care. Contact the Queensland Department of Health or your medical practitioner for further information.
- 8.3 All animals should be considered potential disease carriers throughout their entire period of care.
- 8.4 Stressed, injured or diseased animals may be aggressive towards humans. It is important to consider and minimise the risks to your personal safety from the animal and its surroundings before attempting to handle the animal.

9 Minimising stress

- 9.1 Wildlife held in captivity are generally highly susceptible to both acute and chronic effects of stress. Factors causing stress include:

- human presence and contact;
- confinement;
- unfamiliar surroundings;
- changes in diet;
- break-up of social groups;
- presence of unfamiliar animals; and
- unfamiliar odours and noises.

This susceptibility to stress increases in animals that are orphaned, sick or injured.

- 9.2 Chronic stress can result in reduced growth rates, retarded recovery, abnormal behaviour (e.g. self-mutilation) and increased mortalities.
- 9.3 To minimise the factors causing stress, careful consideration must be given to the behavioural needs of the animal, its age, the design and location of housing and the animal's management.

10 Transportation

- 10.1 Transportation is stressful for any wild animal. It is important that the method of transport used is appropriate for the particular species and that travel duration is minimised.

10.2 Factors that need to be carefully considered before transporting any wildlife include:

- particular needs of the species;
- temperament;
- size;
- age;
- extent of injury or disease;
- safety of animal and handler; and
- other animals being transported.

10.3 Queensland Wildlife Rehabilitation Council (QWRC), your local wildlife care association or QPWS are able to provide further information on the transport requirements for the various wildlife species.

11 Housing

11.1 Accommodation plays an integral part in the rehabilitation process. Housing must be provided in such a way as to:

- a) fulfil the animal's needs during the care period;
- b) minimise handling and stress; and
- c) enable development for survival in the wild.

11.2 Birds, reptiles and mammals must be housed with a floor area as listed in Appendix 1.

11.3 Carers should make sure that only compatible species are housed together.

11.4 Carers should ensure that captive birds are located at a suitable distance from human dwellings.

11.5 Avoid imprinting by humans and exposure to domestic pets. Human imprinting or cohabitation with domestic pets may prevent successful rehabilitation.

11.6 Some individual animals are adapted to living in social groups and rehabilitate more successfully when housed with members of their own species. Communication and co-operation between wildlife carers can help solve these problems. Imprinting by humans is much less likely under these circumstances.

12 Food and water

12.1 Food and water of suitable quality and appropriate quantity for the species must be provided to ensure:

- a) maximum potential for healing and recovery from wounds and injuries;
- b) growth of young animals; and
- c) maximum development of natural survival techniques.

12.2 Carers must be aware of the appropriate food and water requirements for the particular species in care. Advice must be sought from a knowledgeable person when caring for a species unfamiliar to the carer.

12.3 Food and water for captive birds must be sufficiently protected from contamination by wild birds.

12.4 Captive diets must be similar to the natural diet for the species to minimise the impact of captivity and to stimulate normal digestive function. Overfeeding of animals may reduce the likelihood of survival after release.

12.5 Prior to release, animals must have foods included into their diet that would be available to them in the area where they are to be released (e.g. must be eating at least 85 percent natural diet).

13 Veterinary treatments and major surgical procedures

- 13.1 Part 4B of *The Veterinary Surgeons Act 1936* precludes a person other than a registered veterinarian from practising veterinary surgery or medicine.
- 13.2 'Veterinary science' means the science of veterinary surgery or veterinary medicine.
- 13.3 'Veterinary science' includes the following:
- a) diagnosing diseases in, and injuries to, animals, including, for example, testing animals for diagnostic purposes;
 - b) giving advice based on a diagnosis under paragraph (a);
 - c) medical or surgical treatment of animals;
 - d) performing surgical operations on animals;
 - e) administering anaesthetics to animals; and
 - f) signing or issuing certificates relating to the description, health, diagnosis or treatment of animals.
- 13.4 However, 'veterinary science' does not include an act done for animal husbandry or animal dentistry prescribed under a regulation not to be veterinary science.
- 13.5 Volunteer wildlife carers may only administer basic first aid of help and assistance to wildlife until professional help can be obtained. In cases where veterinarians are not able to examine the animal directly, the carer must make every effort to obtain verbal veterinary advice. Incorrect diagnosis and treatment can have a detrimental effect on the welfare of the animal.
- 13.6 A carer under the direction or supervision of a veterinarian may administer some veterinary treatments. The use of drugs is controlled under the *Health (Drugs and Poisons) Regulation 1996*.
- 13.7 Cruelty to an animal is an offence under the *Animal Care and Protection Act 2001*.

14 Euthanasia

- 14.1 Euthanasia of wildlife may be necessary:
- a) to alleviate pain or suffering;
 - b) when further treatment is not practical or recovery is not expected such that the animal can be successfully rehabilitated to the wild; or
 - c) when there is a reasonable expectation that the animal will not be suitable for return to the wild (unless the species is listed under CITES).
- 14.2 To achieve humane destruction (or 'euthanasia') of an animal the method must 'achieve instant insensibility followed by rapid death of the animal without first regaining sensation or consciousness'.
- 14.3 The preferred method of euthanasia for most species is by intravenous barbiturate overdose.
- 14.4 Euthanasia by intravenous barbiturate overdose MUST be carried out by a registered veterinarian, approved wildlife staff of the Queensland Parks and Wildlife Service, or by persons authorised by the Chief Executive of Queensland Health.**

15 Release procedures

- 15.1 This phase of the rehabilitation process is critical and must be carefully planned. To this end, rehabilitation must incorporate not only the physical health and well-being of the animal, but also ensure that the necessary survival skills are present. This is particularly important for predatory animals and those with highly specialised diets. In these cases, the animals may have to be taught to hunt or weaned to an appropriate diet prior to release.
- 15.2 In order to facilitate a successful approach, steps to be followed in releasing an animal are listed below and only apply to animals judged fit for release:

- a) The animal must be released as near as possible to the point of origin. If the habitat has been destroyed, the animal must be released within five (5) km of the capture site.
 - b) Prior to release, all animals must be inspected by a veterinarian to ensure that they are clinically free of diseases and parasites.
 - c) If a group has a release program approved by QPWS, the animal may be tagged or marked to assess the success or otherwise of the release program. Tagging, banding or other marking, including electromagnetic implanting, can only be undertaken by those persons who are accredited to band wildlife or by a registered veterinarian.
 - d) When releasing an animal, attention must be paid to a number of factors, including weather conditions, seasonal conditions and the animal's ecology. More particularly, the animal should be released:
 - i into a suitable habitat with adequate food supply.
 - ii in appropriate weather, season and time of day. This is particularly important for migratory species.
 - iii under circumstances which will not cause additional stress, such as extremes of weather, the wrong time of the day (i.e. nocturnal animals).
 - iv in the appropriate social group. Some animals fare better if released into social groups.
 - e) It is the responsibility of each carer to contact their local wildlife care association to discuss release strategies and sites for each species.
- 15.3 If the release is unsuccessful, despite repeated attempts to rehabilitate the animal for release to the wild, other options must be discussed with QPWS staff.
- 15.4 QPWS staff should contact the EPA representative on the Queensland Species Management Plan (QSMP) Committee (a committee of the Australasian Regional Association of Zoological Parks and Aquaria Queensland [ARAZPAQ]) to check whether the animal should be directed to the QSMP for captive breeding programs. Animals cannot be kept permanently on a rehabilitation permit.
- 15.5 Progeny of wildlife held on a rehabilitation permit must be released to the wild when self-sufficient.
- 15.6 Glider species (except the greater glider, *Petauroides volans*, which is solitary) must be held in appropriate groups as early as possible to enable the social unit to develop before release.
- 15.7 Individual carers should contact a knowledgeable person, carer group or QPWS for advice on 'soft' release of animals with a close social structure such as bats (including flying-foxes), gliders and macropods.

16 Records

- 16.1 An important task of a wildlife care volunteer is the maintenance of detailed and accurate records for each animal. Such records will assist in the treatment, rehabilitation and release of the animals and will provide valuable case histories for the future.
- 16.2 Records should include the following:
- a) species and sex of the animal for each individual animal. Correct species identification of the animal is vital in order to properly treat, care for and release the animal.
 - b) nature of any injuries and possible cause, or reason for care;
 - c) accurate locality data describing where the animal was found, name and address (where possible) of the person who found the animal and/or delivered it and the date it was received. This information is vital to ensure the animal is released back into the area it formerly occupied. Releasing the animal at the site of collection maintains geographic genetic variations and minimises the risk of introducing new diseases or parasites to an area.
 - d) details of veterinary diagnosis and treatments, including surgery and medication;

- e) regular body weight (and for juveniles other growth measurements as appropriate), foot and tail length for macropods and wing length for birds;
- f) method and locality of release, noting if supplementary food or shelter was provided;
- g) details of the animal's individual identifying markings and tag or band number if applicable;
- h) if the animal cannot be released to the wild, then the reason for this, and the means of euthanasia or placement with QSMP must be recorded;
- i) details of care and treatment and a description of the rehabilitation steps, e.g. exercise, training, introduction to correct diet;
- j) history of consultation with the QPWS and other persons; and
- k) records of any post-release sightings.

17 Responsibility of incorporated associations

17.1 It is the responsibility of any incorporated wildlife care group to ensure that:

- a) This Code of Practice forms part of the Rules of Membership or Constitution of the Group.
- b) The group provides current membership cards or letters to members stating the name of the group, name of the member and signature and duration of membership.
- c) Membership lists are updated and forwarded annually to the Ecoaccess Customer Service Unit (ECSU), Environmental Protection Agency, PO Box 15155 CITY EAST QLD 4002.
- d) Release sites are located and members are advised of suitable sites and procedures for release.
- e) Programs are developed that provide information to members on care, diet and release of all species that the corporation is permitted to keep.
- f) Potential members are informed of matters such as costs, both financial and time, that are borne by the individual.
- g) All members are aware of and abide by the provisions of this Code.
- h) A process is established for handling difficulties or complaints against members either from external or internal parties and a policy developed on handling grievances by members against the group. All new members must be given copies of such procedures or policies.
- i) All members are given clear and unambiguous directions by the person in charge stated on the rehabilitation permit concerning the things that the member may do under the authority of the rehabilitation permit.
- j) The association shall advise any person who is no longer a member of the association that they are no longer permitted to operate under the permit.
- k) If the association becomes aware that a member operating under the permit does not comply with this Code, the association shall either:
 - i) identify actions or steps needed to be taken by the member to comply with this Code within stated time frames;
 - ii) limit the authority of the member to operate under the permit; or
 - iii) instruct the person that they are no longer permitted to operate under the permit.

Part 2: Caring for raptors

1 General

- 1.1 The successful rehabilitation of orphaned, sick or injured raptors into the wild requires a highly trained, motivated and dedicated person whose prime concern is the welfare of the birds in their care. They will need to have access to very specialised skills, equipment, resources and techniques.
- 1.2 Permits to rehabilitate raptors will only be issued to individuals or groups that have been assessed by QPWS officers as having the appropriate experience and facilities to meet the requirements of this Code.
- 1.3 The requirements of the Raptor Code are in addition to the requirements of the general Code of Practice — Care and rehabilitation of orphaned, sick or injured protected animals by wildlife care volunteers.
- 1.4 Falconry (the training and use of birds of prey) must not be practiced except in the final stages of rehabilitation immediately before the animal is to be released.

2 Carer qualifications

- 2.1 A rehabilitation permit for raptors may only be granted to a person who:
 - a) has a professional association with a raptor group or can otherwise demonstrate a long-standing commitment to raptor conservation;
 - b) has a proven record in raptor rehabilitation and knowledge of raptors; and
 - c) provides care and facilities including access to a veterinarian with appropriate experience in raptors as required under this Raptor Code and this general Code.

3 Tethering and use of falconry techniques

- 3.1 To protect them from animal predators, tethered raptors shall either be under constant supervision or enclosed.
- 3.2 If raptors are to be tethered, then the person wishing to handle the birds shall be fully conversant in the manufacture and use of the following falconry equipment:
 - leather jesses (proper fit to avoid injury);
 - gloves;
 - jess swivels;
 - hoods (improper fit is likely to cause injury);
 - leashes; and
 - perches (unsuitable perches can cause tangling or bumble foot).

4 Diet and food collection

- 4.1 Where animals are in captivity long-term, suitable whole dead animals shall provide at least 50percent of the nutritional and energy requirements of raptors, noting that for piscivorous species at least 25percent of the dietary requirements shall be fish.
- 4.2 For birds of the *Accipiter* and *Erythrorchis* genera and bird-hunting species of the *Falco* genera, at least 60percent of their diet shall be suitable bird species.

4.3 Lean meat is only a suitable surrogate provided that some whole dead animals of a suitable size are provided. This is to enable the birds to ingest some bone and then only if fed on lean meat for a limited time such that the bird's ability to handle natural food is not compromised (i.e. a few weeks up to two (2) months).

4.4 Suitable whole dead animals will depend upon the species and should include:

- domestic mice, rats and rabbits (for mammal eating species);
- fish (for piscivorous species);
- birds, such as quail of the *Coturnix* genus and domestic chickens (for bird eating species); and
- any natural prey, which can be legally obtained.

4.5 Growing chicks and long-term birds held must not be fed diets containing more than 50percent young whole dead animals/birds (less than six (6) weeks old), as these animals do not have well calcified bones and therefore do not provide a balanced diet.

4.6 Where few whole dead animals are supplied, the meat must be supplemented with an appropriate calcium–phosphorus balanced mineral supplement.

4.7 Except on starve days (days where no food is given), a sufficient quantity of food should be provided daily so that there is some left over each day. Growing nestlings and very thin or ill patients should not have any starve days.

4.8 Raptors may be given no more than one (1) starve day a week and there shall be at least three (3) days between any two (2) starve days.

4.9 Food items shall be placed on a clean surface.

5 Quality of food

5.1 Food supplied to raptors shall be clean and fresh, obtained from a reliable source and preferably, bred under laboratory/captive conditions.

5.2 Before carcasses are offered as food, they shall be cut open, inspected and discarded if there are gross lesions or other signs of disease.

5.3 The following should not be fed to raptors:

- a) any animal that has died, or is suspected of dying from any toxic material, including insecticides, rodenticides and animals euthanased by drugs such as barbiturates (carbon dioxide and nitrogen are acceptable);
- b) animals showing clinical signs of being infected by disease (especially 'trichomonid protozoa' in pigeons and doves) and animals that are suffering from parasitic infestation;
- c) birds that have not undergone treatment to remove the risk of trichomoniasis infection. Preferred treatment: freeze for at least 24 hours at a temperature equal to or below 18°C;
- d) fatty meat; and
- e) animals that have been killed by lead shot.

6 Housing

6.1 As a general rule, it is unwise to mix species in any one cage unless the species are of similar size and disposition.

6.2 At least three (3) distinct holding facility types are required for successful rehabilitation of raptors. It is most important that the advice of specialists is sought and used for the construction and management of these facilities.

a) Hospital box

- Similar design to those used for other birds. Used for the initial holding of birds suffering from severe injury or shock, or requiring assisted feeding. This type of box would be used for longer periods in cases in which the bird has suffered leg damage and must not be allowed to stand.
- A hospital box should:
 - i provide a warm, dimly lit, quiet environment;
 - ii minimise external interference;
 - iii be of sufficient size to allow the housed bird to stand fully erect or lie fully extended and allow the carer to readily capture and remove the bird for examination or treatment;
 - iv be of solid construction with adequate ventilation and heating;
 - v be easily cleaned; and
 - vi provide a small, very shallow dish of water (healthy raptors rarely drink, but sick ones can be dehydrated and need water).
- Raptors must be held in hospital boxes for the minimum time required.

b) Convalescence enclosure

- A bird that requires continuing intensive care, but does not require holding in a hospital box should be housed in a small enclosure which allows easy access to the bird. As a guide only and dependent on the size of the raptor in care, a suitable enclosure for a medium sized raptor could be constructed as follows:
 - i Approximately three (3) metres long by three (3) metres wide and two and a half (2.5) metres high;
 - ii Construction may be either timber or steel frame, with three (3) walls solid or one-half (0.5) solid with the top half timber slats;
 - iii Care should be taken with the use of sheet metal for walls to avoid the 'hot box' situation. The enclosure should allow good air circulation and should not become damp and mildewy;
 - iv Enclosure should be orientated so that the bird does not receive intense summer sun or be exposed to prevailing cold winds in winter;
 - v Care should be taken to ensure that there are no internal projections or obstacles, that are likely to injure birds;
 - vi The floor can be grass or a mixture of small pebbles thickly spread. The pebbles should be hosed at regular intervals and exposed to the sun for air-drying and UV exposure; if a grass floor is used for a patient, then a small number of river washed pebbles should be left in the enclosure. Raptors are known to ingest these and it is thought that they aid in food digestion;
 - vii A small number of perches should be placed in the cage so that when the raptor perches on the top its head does not touch the roof. Perches must be of sufficient diameter that the span of the raptors toes/talons only goes about half way round the perch, lessening the chance of bumble foot;

- viii The perches should be placed so that a bird that is unable to fly can still hop from one perch to the other. All raptors like to perch as high as possible in an enclosure. For birds that are well enough to fly, it is good exercise for them to fly up steeply;
- ix Clean fresh water should be accessible to the bird; and
- x The roof should be constructed of non-abrasive roofing material with a covered section, with a perch below to allow the bird to shelter them from rain/sun.

c) Flight enclosure

- The flight enclosure is required for birds that are past the intensive care stage and are likely to be in care for more than 1–2 months. For most rehabilitation patients where the bird will only be in captivity for 1–2 months, the convalescence enclosure will be sufficient.
- The minimum dimensions for a diurnal raptor (eagles, hawks, kites and falcons) flight enclosure are length six (6) metres or greater, width six (6) metres or greater and height four (4) metres or greater.
- The minimum dimensions for a nocturnal raptor (owls) flight enclosure are length four (4) metres or greater, width three (3) metres or greater and height three (3) metres or greater.
- The construction and orientation of the enclosure should be in line with the requirements for the convalescence enclosure, with the following exceptions:
 - i The walls can be constructed from wooden slats or wire that has shade cloth or hessian fixed to the inside.
 - ii One part of the enclosure must be fully enclosed on three sides and the roof to provide protection from the elements. This allows the bird to retreat and be free from observation.
 - iii A shallow bathing facility with a diameter sufficient to allow normal bathing behaviour with a depth of no greater than 15cm and not less than 5cm must be present.
 - iv The pond/container shall have a non-slip, cleanable surface and no sharp edges.
 - v The pond/container shall be kept filled with clean fresh water or where the length of the legs of the smallest bird is less than 15cm to a depth equal to the length of the bird's legs.
 - vi The enclosure must allow the bird access to direct sunlight over a good portion of the day.
 - vii Roof material needs to be non-abrasive and high enough above the perches so that the raptor does not scrape its head.

Note: Allowance will be made for co-operative caring, e.g. one carer could have hospital boxes and convalescence facilities while another carer could provide the flight enclosure.

7 Hygiene

- 7.1 Substrate of enclosures shall be cleaned at least weekly or earlier if required. The substrate and fixtures shall be maintained in a clean and hygienic condition, free from the accumulation of droppings.
- 7.2 Excrement, leftover food, fur, feathers and castings shall be removed at least weekly and between patients to avoid unhealthy accumulation.
- 7.3 Entry of potential pests, such as wild rodents, birds and insects shall be controlled.

7.4 The use in or around raptor enclosures of insecticides containing chlorinated hydrocarbons and animal poisons (e.g. rodent baits), shall be under veterinary instruction in view of the known toxicity of these substances to raptorial birds.

8 Orphans

8.1 Care must be taken to ensure that humans do not imprint on nestlings and that they are fed in appropriate amounts at times appropriate to their development.

8.2 Suggested feeding regimes

- a) Young nestlings must be fed behind a sheet or with a puppet as hand feeding will cause imprinting on the feeder and result in dysfunctional birds unsuitable for release.
- b) Very young nestlings need to be kept in a brooder or on a heat pad (up to about ten (10) days to two (2) weeks in smaller species and four (4) weeks in larger eagles).
- c) They should be fed in small amounts using tweezers about four (4) times per day, on diced meat with a supplement added, ground up rats' tails or on whole ground quail. Usually, if hungry they will respond to a sharp sound or imitation of the adult call that results in begging.
- d) They should be fed only as long as they keep begging and should not be force-fed. Older nestlings can be fed larger pieces, a couple of times per day.
- e) Eventually, after about three (3) weeks for smaller and approximately six (6) weeks for larger species, they can be left with food to tear for themselves.

8.3 Nestlings can be kept in a box on a clean towel over a brooder pad or similar. Once they are older and standing, use pea gravel to stop straddling.

8.4 They need to be held in a suitable enclosure that allows for normal development and provides access to sunlight for at least part of the day.

9 Hacking

9.1 Hacking must only be used for birds that have already fledged. The box used must be of sufficient size to allow the nestling to stand and stretch out its wings when it is at the size at which it will start to fly.

9.2 The following restrictions should be considered when hacking:

- a) Nestlings must not be placed in a hacking box until they are old enough to keep themselves warm.
- b) Nestlings that can fly must not be kept in a hacking box.
- c) Nestlings must be fed every day in the hacking box until such time as they are able to fly.
- d) Food must be left at the hacking box daily for at least a month and every few days after that until the birds stop returning.
- e) More than one (1) nestling of the same species and similar size may be kept in a suitable sized hacking box (group hacking tends to work more effectively than for just one (1) bird).

10 Threatened species

10.1 All threatened raptors coming into care should be reported to QPWS. If a threatened raptor dies in care it should be reported immediately, and its carcass may be required for scientific purposes.

10.2 In Queensland the following species are listed as endangered or vulnerable:

- a) Square-tailed kite – *Lophoictinia isura*

- b) Red goshawk – *Erythrotriorchis radiatus*
- c) Grey goshawk – *Accipiter novaehollandiae*
- d) Grey falcon – *Falco hypoleucos*
- e) Rufous owl – *Ninox rufa*
- f) Powerful owl – *Ninox strenua*
- g) Sooty owl – *Tyto tenebricosa*
- h) Masked owl – *Tyto novaehollandiae*

Definitions

In this Code of Practice-

Act	the <i>Nature Conservation Act 1992</i> .
Approved wildlife staff	a Conservation Officer approved by the Chief Executive as prescribed by the Act and having completed the approved training in the administration of a barbiturate drug as required by the Chief Executive of Queensland Health and issued with an authority under the provisions of the <i>Health (Drugs and Poisons) Regulation 1996</i> .
Association permit	a Rehabilitation Permit issued to a volunteer wildlife care association (incorporated under the <i>Associations Incorporation Act 1981</i>) to cover members of the corporation.
Euthanasia	achieve humane destruction (or 'euthanasia') of an animal. The method must 'achieve instant insensibility followed by rapid death of the animal without first regaining sensation or consciousness'.
Distress	a state of danger or desperate need.
Knowledgeable person	a person with a minimum of two (2) years demonstrated wildlife care or falconry experience in the care of that specific species of orphaned, sick or injured wildlife.
Permit	a Rehabilitation Permit issued under the Act.
QPWS	the Queensland Parks and Wildlife Service.
QSMP	the Queensland Species Management Plan.
QWRC	the Queensland Wildlife Rehabilitation Council.
Qualified person	a person who has completed a training course approved by the Chief Executive of Queensland Health and issued with an authority under the provisions of the <i>Health (Drugs and Poisons) Regulation 1996</i> or a person registered by the Veterinary Surgeons Board as a Veterinary Surgeon.
Raptor Code	see Part 2 of the Code of Practice for the Care and rehabilitation of orphaned, sick or injured protected animals by wildlife care volunteers.
Regulation	the <i>Nature Conservation Regulation 1994</i> .

Release	released into the wild where the protected animal is able to sustain life and perform its normal biological and ecological functions without human interference.
Soft release	a soft or gradual release. This involves providing the animal with support, such as supplementary feeding, once it has been released to the wild.
Veterinary treatment	the art and science of veterinary surgery and veterinary medicine.
Wildlife	Australian native animals.
Wildlife Regulation	the <i>Nature Conservation (Wildlife) Regulation 1994</i> .

Other terms are defined in the Act and the Regulation.

Disclaimer

While this document has been prepared with care, it contains general information and does not profess to offer legal, professional or commercial advice. The Queensland Government accepts no liability for any external decisions or actions taken on the basis of this document. Persons external to the Environmental Protection Agency should satisfy themselves independently and by consulting their own professional advisers before embarking on any proposed course of action.

Appendix 1: Minimum cage sizes

In the design of any bird-cage, the ratio between the lengths of the two longest straight lines which can be measured on the floor of the cage and at right angles to each other shall not exceed 4:1, unless the shorter of those two lines is at least 900mm long.

The length of this line should be at least twice the wingspan of the largest bird to be kept in the cage.

Birds: Indoor cage dimensions

Size of bird (approximate length) NOTE: Birds specified below are examples.	Minimum Floor area (cm ²)	Number of birds	Minimum height (cm)	Increased floor area for each additional bird (cm ²)
100mm (10cm) e.g. finches	1000 (e.g. 32 x 32cm)	1	34	500
200mm (20cm) e.g. <i>Neophema</i> , budgerigars, lorikeets (except rainbow and red-collared)	1600 (e.g. 40 x 40cm)	1	34	800
300mm (30cm) e.g. rosellas, cockatiels, rainbow lorikeets and bronzewing pigeons	5000 (e.g. 70 x 70cm)	1	90	2500
400mm (40cm) e.g. king parrots, galahs and long-billed corellas	10,000 (e.g. 100 x 100cm)	1	90	5000
500mm (50cm) e.g. sulphur-crested cockatoos	15,000 (e.g. 120 x 120cm)	1	150	7500

Birds: Outdoor cage dimensions

Size of bird (approximate length) NOTE: Birds specified below are examples.	Minimum Floor area (cm²)	Number of birds	Minimum height (cm)	Increased floor area for each additional bird (cm²)
100mm (10cm) e.g. finches	3700 (e.g. 60 x 60cm)	1	60	1800
200mm (20cm) e.g. <i>Neophema</i> , budgerigars, lorikeets (except rainbow and red- collared)	7200 (e.g. 85 x 85cm)	1	60	3600
300mm (30cm) e.g. rosellas, cockatiels, rainbow lorikeets and bronzewing pigeons	10,000 (e.g. 100 x 100cm)	1	90	5000
400mm (40cm) e.g. king parrots, galahs and long- billed corellas	15,000 (e.g. 122 x 122cm)	1	90	7500
500mm (50cm) e.g. sulphur-crested cockatoos	25,000 (e.g. 158 x 158cm)	1	150	12,500

Wading birds

Wading birds require shallow areas providing soft substrate and natural feeding opportunities. Failure to provide these conditions may lead to chronic foot problems.

Group NOTE: Birds specified below are examples.	Minimum Floor area (m²)	No. of birds	Minimum height (m) For fully enclosed aviaries	Pond size as % of total floor area	Increased area of floor and pond for each additional bird (m²)
Group 1 10–30cm birds e.g. dotterels, crakes, plovers	20	4	2	25%	2
Group 2 35–50cm birds e.g. grebes, maned duck, teal	30	4	3	30%	3
Group 3 55–70cm birds e.g. black duck, small egrets and herons	40	6	4	35%	4
Group 4 75–95cm birds e.g. spoonbills, ibis, large egrets, cormorants, swamp hens	75	6	4	35%	4
Group 5 100–165cm birds e.g. pelicans, swans	100	2	3	60%	25
Group 6 100–160cm birds e.g. magpie geese, broilgas	150	2	4	20%	30

Note: The requirement for pond size to be percentage of total floor area does not apply if the pond size exceeds 100m².

Reptiles

Only compatible animals may be housed together.

Type of animal	Minimum floor area (cm ²)	Maximum number of animals	Minimum height (cm)	Increased floor area for each additional animal (cm ²)
Tortoises/Turtles (freshwater)				
Up to 10cm length	1600 (e.g. 40 x 40cm)	1	20	400
Over 10cm length.	20,000 (e.g. 141 x 141cm)	1	20	10,000
Snakes				
Small terrestrial of <60cm in length. e.g. adult crowned snakes or juvenile pythons	1800 (e.g. 42 x 42cm)	2	30	900
Less than 1.2 metres in length. e.g. Children's python, death adder and tiger snake	4000 (e.g. 63 x 63cm)	2	50	2000
Less than 2.5 metres in length. e.g. eastern brown, taipan and mulga snake	15,000 (e.g. 122 x 122cm)	1	120	7500
Tree snakes up to 1.2 metres in length.	4800 (e.g. 69 x 69cm)	2	80	2400
Large pythons up to 2.5 metres in length. e.g. diamond python, carpet python, water and amethystine pythons	20,000 (e.g. 141 x 141cm)	1	150	10,000
Note: Snakes longer than 2.5 metres require a minimum area of half their length squared.				
Lizards				
Skinks, dragons and water dragons	10,000 (e.g. 100 x 100cm)	1	100	5000
Goannas	45,000 (e.g. 212 x 212cm)	1	200	20,000

Mammals

Only compatible animals may be housed together.

Type of animal	Minimum floor area (m ²)	Maximum number of animals	Minimum height (m)	Increased floor area for each additional animal (m ²)
Hopping mice, dunnarts	1	2	0.5*	0.25
Kowaris, antechinus	2	2	0.5*	0.5
Feathertail gliders	5	4	2*	1.5
Small quolls, phascogales	10	2	2*	5
All possums, sugar and squirrel gliders	10	2	3*	5
Yellow-bellied and greater gliders	20	1	3*	10
Potoroos and bettongs	20	1	2*	10
Bandicoots	20	1	1.5	10
Echidnas	20	1	1	10
Koalas	40	1	1.5	10
Wallabies less than 10kg	100	1	1.5	50
Wallabies greater than 10kg / pademelons	300	1	1.5	150
Kangaroos	1000	1	2	500

Note: * denotes roofed enclosures.

- Height for hopping mice, dunnarts, antechinus and kowaris is above substrate.
- Bettong males should not be housed together.
- Wombats prefer to be solitary in permanent confinement.
- Pademelons require dense cover, a minimum of 1.5 metres above ground.

Raptors and other carnivorous birds

Cage sizes are for two birds

Type of animal	Minimum floor area (m ²)	Minimum width (m)	Minimum height (m)	Increased floor area for each additional bird (m ²)
Barn owl, southern boobook, grass owl, nankeen kestrel, Pacific baza, letter-winged kite, black-shouldered kite, magpies, ravens, kookaburras, frogmouths.	15	2.5	3	5
Sooty owl, masked owl, barking owl, rufous owl.	21	3	3	7
Powerful owl, Australian hobby, swamp harrier, spotted harrier, little eagle, whistling kite, brahminy kite, square-tailed kite, black kite.	24	3	3	8
Brown falcon, grey falcon, black falcon, peregrine falcon, red goshawk, grey goshawk, brown goshawk, collared sparrowhawk, osprey.	24	3	3.5	8
Wedge-tailed eagle, white-bellied sea eagle.	50	5	4.5	17