Standards for Exhibiting Captive Raptors in New South Wales

Exhibited Animals Protection Act

A publication of the Director-General, NSW Department of Primary Industries pertaining to the conditions of display of captive raptors (pursuant to Clause 8(1) of the Exhibited Animals Protection Regulation 2005).

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Clause 1

Facilities

1.1 GENERAL REQUIREMENTS

1.1.1 Construction

a) Enclosures shall be constructed of such materials and be maintained in sufficiently good repair to ensure that they will contain the animals at all times and are to be safe for the animals, for the staff attending them and for the public.

b) Enclosures shall include a covered shelter, enclosed by weatherproof walls which provide roost security and protection from wind, rain and extremes in temperature and sunlight.

c) Enclosures for raptors shall include a water mist spray or allow the birds access to rain.

d) Enclosures shall be well drained and have either a readily cleanable substrate or be of a material which can be replaced to avoid the accumulation of faeces, urates, fungi and moulds.

e) Mesh netting surfaces for raptor enclosures shall preferably be of flexible nylon. Wire mesh shall be flexible to reduce the impact of birds colliding with it. Wire roof surfaces should be as near to horizontal as possible.

f) The size and shape of enclosures for raptors shall provide freedom of movement, both vertically and horizontally and should not fall below the minimum requirements set forth under 1.1.5.

g) Access to raptor enclosures should be through a double door safety entrance. Doors are to be self-closing and locked upon exiting.

1.1.2 Treatment Facilities

Suitable low light, warm isolation facilities shall be available for treatment of sick animals.

1.1.3 Inter-and Intra-Specific Interaction (Aggression Reduction)

a) Raptor species of similar size and hunting capacity may be held together in the same enclosure if they are not noted for inter-specific aggression.
b) If a raptor is being dangerously stressed by the aggression/presence of other raptor(s) of its own or other species in the enclosure, then arrangements shall be made for it to be housed separately from the other raptor(s) causing the stress.

1.1.4 Enclosure Furniture

a) The total number of perches and/or ledges shall outnumber the number of birds in an aviary.

b) Perch(es)/ledge(s) in the covered shelter shall be placed so that a raptor resting on one of these may avoid visual contact with raptors in adjoining enclosures. All perches should be placed so that birds in adjoining enclosures cannot perch within reach of each other through cage wire.

c) Perches/ledges should be placed so as to encourage the raptors to make maximum use of the flight possibilities within the enclosure. At least one perch should be no less than two(2) metres from the ground.

d) Competition for the highest vantage point shall be avoided by providing a number of perches at that height.

e) In addition to the requirements of (a), a number of stumps may also be provided. Enclosures containing raptors which are incapable of normal flight should include rough-barked branches which permit the birds to climb to perches from the substrate.

f) All perches/ledges/tree stumps shall be placed so that birds can perch comfortably without their plumage coming into contact with walls or fixtures.

g) Perches shall be constructed from uncontaminated natural branches and vary in diameter and cross-section so that at least some shall have circumferences not less than the talon span of the species to be housed.

h) Each nocturnal hole-nesting owl shall be provided with at least a darkened corner to hide from the light and provide roost security. Provision of a suitable hollow log is recommended.

i) Where enclosures contain male and female raptors, sight barriers shall be provided so that the sexes can isolate themselves visually.

j) Perches must be no closer to the roof of the enclosure than that distance which is needed for the bird's wing to go through its natural arc during take-off and landing.

k) Perches in breeding enclosures should be positioned so that there is sufficient overhead clearance for copulation.

l) An aviary for the housing of raptors shall contain a bathing pond/container with a diameter sufficient to allow normal bathing behaviour and a depth not greater than 15cm and not less than 5cm.
m) The pond/container shall have a non-slip, cleanable surface and no sharp edges.

n) The pond/container shall be kept filled with clean fresh water or where the length of the legs of the shortest bird is less than 15cm to a depth equal to the length of that bird's legs.

1.1.5 Space Requirements

An aviary for the housing of raptors shall be of the following minimum size standards:

<table>
<thead>
<tr>
<th>Name</th>
<th>Width(M)</th>
<th>Length(M)</th>
<th>Height(M)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ORDER CATHARTIFORMES</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Family: Cathartidae</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Andean Condor <em>Vultur gryphus</em></td>
<td>6</td>
<td>15</td>
<td>5</td>
</tr>
</tbody>
</table>

| ORDER ACCIPITRIFORMES  |          |           |           |
| Family: Pandionidae    |          |           |           |
| Osprey *Pandion haliaetus* | 3.5       | 8    | 4         |

<p>| Family: Accipitridae   |          |           |           |
| Black-shouldered Kite  | Elanus notatus | 2.5  | 6 | 4        |
| Letter-winged Kite     | Elanus scriptus | 2.5  | 6 | 4        |
| Black Kite             | Milvus migrans | 3    | 8 | 4        |
| Square-tailed Kite     | Lophoictinia isura | 3    | 8 | 4        |
| Black-breasted Buzzard | Hamirostra melanosternon | 3.5 | 8 | 4        |
| Brahminy Kite          | Haliastur indus | 3     | 8 | 4        |
| Whistling Kite         | Haliastur sphenurus | 3     | 8 | 4        |</p>
<table>
<thead>
<tr>
<th>Species</th>
<th>Minimum Length (m)</th>
<th>Minimum Spread (m)</th>
<th>Minimum Height (m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Collared Sparrowhawk <em>Accipiter cirrhocephalus</em></td>
<td>3</td>
<td>8</td>
<td>4.5</td>
</tr>
<tr>
<td>Brown Goshawk <em>Accipiter fasciatus</em></td>
<td>3.5</td>
<td>10</td>
<td>4.5</td>
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<tr>
<td>Grey Goshawk <em>Accipiter novaehollandiae</em></td>
<td>3.5</td>
<td>10</td>
<td>4.5</td>
</tr>
<tr>
<td>Red Goshawk <em>Erythrotriorchis radiatus</em></td>
<td>4</td>
<td>10</td>
<td>4.5</td>
</tr>
<tr>
<td>Little Eagle <em>Hieraaetus morphnoides</em></td>
<td>3</td>
<td>8</td>
<td>4</td>
</tr>
<tr>
<td>Wedge-tailed Eagle <em>Aquila audax</em></td>
<td>5.5</td>
<td>10</td>
<td>4.5</td>
</tr>
<tr>
<td>White-breasted Sea Eagle <em>Haliaeetus leucogaster</em></td>
<td>5</td>
<td>10</td>
<td>4.5</td>
</tr>
<tr>
<td>Spotted Harrier <em>Circus assimilis</em></td>
<td>3</td>
<td>8</td>
<td>4</td>
</tr>
<tr>
<td>Swamp Harrier <em>Circus aeruginosus</em></td>
<td>3</td>
<td>8</td>
<td>4</td>
</tr>
<tr>
<td>Crested Hawk (Pacific Baza) <em>Aviceda subcristata</em></td>
<td>2.5</td>
<td>6</td>
<td>4</td>
</tr>
</tbody>
</table>

**ORDER FALCONIFORMES**

**Family: Falconidae**

<table>
<thead>
<tr>
<th>Species</th>
<th>Minimum Length (m)</th>
<th>Minimum Spread (m)</th>
<th>Minimum Height (m)</th>
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<tbody>
<tr>
<td>Australian Hobby <em>Falco longipennis</em></td>
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<tr>
<td>Peregrine Falcon <em>Falco peregrinus</em></td>
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<td>10</td>
<td>4.5</td>
</tr>
<tr>
<td>Black Falcon <em>Falco subniger</em></td>
<td>3.5</td>
<td>10</td>
<td>4.5</td>
</tr>
<tr>
<td>Grey Falcon <em>Falco hypoleucos</em></td>
<td>3</td>
<td>10</td>
<td>4.5</td>
</tr>
<tr>
<td>Brown Falcon <em>Falco berigora</em></td>
<td>3.5</td>
<td>10</td>
<td>4.5</td>
</tr>
<tr>
<td>Australian (Nankeen) Kestrel <em>Falco cenchroides</em></td>
<td>2.5</td>
<td>6</td>
<td>4</td>
</tr>
</tbody>
</table>
ORDER STRIGIFORMES

Family: Strigidae

Rufous Owl *Ninox rufa* 3 7 3
Powerful Owl *Ninox strenua* 3 8 3
Boobook Owl *Ninox novaeseelandiae* 3 6 3
Barking Owl *Ninox connivens* 3 7 3

Family: Tytonidae

Barn Owl *Tyto alba* 3 6 3
Masked Owl *Tyto novaehollandiae* 3 7 3
Grass Owl *Tyto longimembris* 3 6 3
Sooty Owl *Tyto tenebricosa* 3 7 3

Clause 2

Staff

2.1

Raptors shall be under the supervision of a person capable of -

a) safely handling and/or restraining raptorial birds;

b) minimising the likelihood of, and danger of, attacks on keepers by raptors;

c) minimising the stress experienced by raptors;

d) "manning" (taming) raptors before being displayed;

e) providing adequate maintenance diets for the raptorial birds held; and

f) recognising aberrant behaviour and indicators of ill health in the species under his/her supervision.
2.2

a) If raptors are tethered on display, it shall only be for demonstration or other purposes approved by the Director-General. The tethered raptors shall be under constant supervision to protect them from the public and animal predators. Birds normally used for demonstrations may remain jessed.

b) If raptors are to be tethered, then the person wishing to handle the birds shall first satisfy the Director-General that the person has received adequate training in the manufacture and use of the following falconry equipment:
   - Aylemerie leather jesses
   - jess swivels
   - leashes
   - gloves
   - hoods
   - perches

Clause 3  Records

3.1 Identification

Each raptor shall be individually identified by an approved method of identification, e.g. a leg band.

3.2 Record-Keeping

a) Establishments shall keep records of all raptors on an individual basis in a form which can be quickly and easily examined, analysed and compared with those kept by other establishments because of the potential value for the development of improved management practices.

b) All documents and other information pertaining to each animal from previous locations must be kept safely. Animals moving to new locations must be accompanied by copies of all records relevant to those animals.

c) The records shall provide at least the following information for each individual:

i) The correct scientific name, common name, individual identification, any personal name and any distinctive markings;

ii) The origin (i.e. details of the wild population or of the parents and their origin, and of any previous location);

iii) The dates of acquisition and disposal, with details of circumstances and addresses;

iv) The date or estimated date of hatching, and the basis on which the date is estimated;

v) Clinical data, including results of physical examination by a qualified
veterinarian and details of, and date when, any form of treatment was given, together with results of routine health examinations;

vi) Breeding and details of any offspring;

vii) The date of death and the results of the post mortem examinations; and

viii) Normal diet (including supplement) and feeding routine.

**Clause 4**

**Diet & food collection**

**4.1 General**

a) Suitable whole animals shall provide at least 50% of the nutritional and energy requirements of raptors.

b) Suitable whole animals will depend upon the species and will include -

mammals such as guinea pigs (for Condors); domestic mice, rats, rabbits (for mammal-eating species); fish (for piscivorous sp.); insects (for insectivorous sp.); birds, such as coturnix quail, domestic chickens (for bird-eating species) and any natural prey species which can be legally obtained.

c) Suitable fish species shall provide at least 25% of the dietary requirements of piscivorous raptor species.

d) Suitable bird species shall provide at least 60% of the dietary requirements of birds of the Accipiter and Erythrotriorchis genera and bird-hunting species of the Falco genera.

e) An establishment applying for a permit to exhibit raptors must satisfy the Director-General that it has guaranteed access to adequate fresh and/or frozen supplies of suitable whole animals.

f) Mammal and bird specimens less than ten(10) weeks of age shall not form more than 25% by weight of the diet fed to raptors in any one week.

g) Except on starve days, a sufficient quantity of food shall be provided daily so that there is some left over each day.

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

**4.2 Quality of Food**

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

b) Before carcasses are offered as food, they shall be cut open and observed for gross lesions suggestive of disease.
c) The following shall **NOT** be fed to raptors:

* any animal that has died, or is suspected of dying from any toxic material, including insecticides, rodenticides, and euthanasing chemicals (CO₂ is acceptable).

* animals showing clinical signs of being infected by disease (especially trichomoniasis protozoa in pigeons and doves).

* birds which 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 degrees Celsius or remove upper gastro-intestinal tract directly after euthanasia.)

* laboratory mice and rats that have been used in those research programmes which lead to the food animals containing chemicals different from those of normal laboratory fed mice and rats.

* fatty meat.

* meat which has not been supplemented with an appropriate calcium additive.

* animals which have been killed by lead shot.

d) Food items shall be placed on a non-contaminated surface.

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**Clause 5**

* **Hygiene**

a) **Substrate of enclosures shall be cleaned at least weekly.** The substrate, perches, shelves, nestboxes, food and water containers and other components of the enclosure shall be maintained in a clean and hygienic condition, free from the accumulation of faeces and urates.

b) **Excrement, left-over food, fur, feathers and castings shall be removed at least weekly to avoid unhealthy and unsightly accumulation of these matters.**

c) **Contaminated substrate material shall be removed and replaced as necessary.**

d) **Solid surfaces within the enclosure shall be disinfected at least bi-annually.** These surfaces shall first be washed with soap and water, or steam. Disinfected surfaces shall be rinsed before raptors come in contact with them again. Use of suitable disinfectants shall be under veterinary instruction.

e) **Perches, shelves, nestboxes and other items of enclosure furniture made from wood shall be replaced after a period of no more than two(2) years.** The items replaced shall be destroyed by burning.
Entry of potential pests, such as wild rodents, birds and insects shall be controlled.

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.

** Clause 6  Veterinary Care **

Application for a permit to keep raptors should be accompanied by a statement which briefly explains the programme by which the veterinarian will monitor -

* growth of beaks and talons (to avoid bumblefoot)
* the level of internal parasites
* incidence of avian tuberculosis.

** Clause 7  Transport **

7.1 ** Containers **

a) A transport container for raptors shall not allow the entry of light except through ventilation holes. Ventilation holes shall be pierced around the lower half on all sides of the container, about 10cm above the internal floor height and about 7.5cm apart. Two holes shall be pierced on all four sides 10cm below the internal roof height.

b) The dimensions of the transport container shall be at least 30cm longer and wider than the length of the bird from beak tip to tail tip and shall provide at least 15cm head clearance for the bird when standing at rest on the floor of the container or on any perch in the container.
c) A perch consisting of a block of wood of sufficient size to allow the bird a firm grip may be firmly fixed to the floor of the container if desired.

d) If the container includes no perch, the floor of the container shall be lined firmly with a resistant material which will provide grip for the birds' talons. (Non-looped artificial grass is recommended.)

e) Access to the container shall be from a hinged or sliding door/lid on the top side of the container. The door/lid shall be well secured during carriage of the bird. The transport container may be constructed of sturdy cardboard, polystyrene, or wood. Use of any other material must first be approved by the Director-General.

f) In situations where the bird will not be accompanied by an experienced raptor handler at all times during its transport, the transport container shall be constructed of wooden sheets and framing sturdy enough to withstand damage in transport. Containers must be clearly marked 'LIVE ANIMAL, HANDLE WITH CARE, THIS WAY UP, KEEP COOL'.

g) No more than one raptor shall be enclosed in a compartment of a transport container unless all the birds in the container are young fledglings from the same nest.

h) It is recommended that the attending veterinarian or an approved raptor rehabilitator be consulted on conditions of transportation before transporting injured or sick raptors for medical treatment or diagnosis.

i) For journeys less than twenty-four(24) hours duration, the birds to be transported shall not be fed within four(4) hours of departure. Provision shall be made for feeding on arrival at the destination point.

j) For journeys greater than twenty-four(24) hours, transport containers must include access to food. Birds should be fed once they have been in transit for twenty-four(24) hours.

k) Provisions (i) and (j) do not apply to nestlings - feeding of these birds shall be under veterinary direction.

l) Raptors must not be subjected to temperatures greater than 30 degrees or less than 10 degrees Celsius during transport.

m) Noise must be minimised during transport.

n) Time from boxing to destination must be minimised.
7.2 Release into New Enclosure

a) Raptors that are to be released into a new enclosure (from the wild or from another enclosure/transport container) should be released at a suitable time, i.e. owls at dusk, diurnals early morning, so as to avoid heat/cold stress and allow time for orientation in a new surrounding. Release should be carried out away from public view (using screens) and separate from other birds when applicable (using partitions).

b) Raptors may be "manned" (tamed) before being put on display.

Clause 8 Security and public safety

a) Raptors shall not be enclosed in walk-through aviaries. If the Director-General is satisfied that visitors will not be attacked, exemption to this requirement may be granted.

b) Any raptor taken from its enclosure for show or performance purposes shall have been trained to accept being tethered and shall at all times be under the control of an experienced handler. The raptor shall be belled and be fitted with jesses which have the owner's name and contact address on them.

c) Members of the public are not permitted to handle raptors except when the birds are fully "manned" and are under the strict supervision of an experienced handler.

d) A safety fence shall be provided to keep visitors from coming into contact with enclosures containing White-breasted Sea Eagles or Wedge-tailed Eagles.
References


Klapste, J. & Klapste, P. 1982. Successful Rearing of the Spotted Harrier in an Artificial...
Nest. Corella. 6(2): 42-43.


With critiques from:

Liz Notley, Taronga Zoo Keeper
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Steve Wilson, Raptor Rehabilitator.
Philip Pain, Eagles Heritage, WA.