

**Standards for Exhibiting
Bottle-nosed Dolphins
(*Tursiops truncatus*)
in New South Wales**

Exhibited Animals Protection Act

A publication of the Director-General, NSW Agriculture
pertaining to the conditions of exhibit of
Bottle-nosed Dolphins (*Tursiops truncatus*)
(pursuant to Clause 8(2) of the Exhibited Animals Protection Regulation 1995)

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Clause 1 **Financial viability**

1.1 INTRODUCTION

- a) Establishments keeping, or seeking permission to keep *T. truncatus* must provide evidence to the appropriate authorities of their present and future financial ability to care for these animals and for any other existing or proposed animal holdings.
- b) A surety, bond or alternative guarantee may be required to ensure that all *T. truncatus* held in captivity will be cared for in the event of liquidation, financial collapse or any other unanticipated failure of the licensee.

1.2 LEASING

Any leasing, sub-contracting, or other arrangements where animals are not directly owned by the owner of the accommodation, may only be done under agreements approved by the appropriate authorities, where the financial and other arrangements are clearly set out and which ensure the care and welfare of the animals in all foreseeable circumstances.

Clause 2 **Facilities**

2.1 GENERAL REQUIREMENTS

2.1.1 Construction

- a) All enclosures (display, treatment, holding, isolation and other) must be constructed of such materials and be maintained in sufficiently good repair so as to ensure that they will

Clause 2 **Facilities**

contain the animals at all times and are safe for the animals, for the staff attending them and for the public.

- b) The principal requirement is that the enclosures are durable, watertight, non-porous, non-abrasive, non-toxic, and easily cleaned and disinfected. They shall be maintained in good repair as part of a regular ongoing maintenance program.
- c) Bare and/or sharp projections and edges, loose air or water hoses, cables or restraining nets and fences in poor repair are hazards to captive marine mammals and must be avoided in all main and subsidiary pools.
- d) No objects, furniture, apparatus, decoration, plants or other items which could interfere with the welfare of the animals or with efficient husbandry shall be kept, or allowed to remain, in the immediate surroundings of pools.
- e) Facilities which utilise natural water areas, such as tidal basins, bays or estuaries (subject to natural tidewater action) used for housing marine mammals shall be exempt from the drainage requirements of *clause 2.1.4*, but they must meet the minimum standards with regard to space, depth and water quality. The water must be monitored for coliforms and for pH and chemical content, if chemicals are added.

2.1.2 Water and power supply

Supply of water of appropriate quality and temperature, and of power, must be reliable and sufficient to maintain the conditions necessary for the animals' welfare in all circumstances. This includes the safe storage of food. Readily available contingency provisions for emergencies must be reviewed and approved.

2.1.3 Shelter

Appropriate shaded, covered or sheltered areas must be provided to protect the animals from adverse ambient conditions caused by weather, sunlight or artificial lighting, glare or other environmental factors.

2.1.4 Drainage

- a) Adequate drainage shall be provided for all pools and shall be located so that all of the water contained may be rapidly eliminated for cleaning the pools and for other purposes. Drainage effluent shall be disposed of in a manner that complies with all applicable Federal, State and local pollution control laws.
- b) Drainage must be provided for areas surrounding pools, such that water from these areas will not enter or re-enter pools.
- c) Waste water, and run off from soil and roofing, must be kept separate from pools.

2.1.5 Protection from noise and harassment

- a) All *T. truncatus* shall be provided with protection from abuse and harassment by the viewing public. This protection will be provided by the use of a sufficient number of employees or attendants to supervise the viewing public, or by physical barriers (such as fences, walls, glass partitions, or distance), or both, as well as appropriate sign posting. This shall include protection from excessive noise, potentially communicable pathogens from humans or their pets, and the possibility of injury by ingesting foreign bodies introduced intentionally or accidentally.
- b) Attention should be paid to acoustic treatment of buildings and protection of animals from disturbing noise, e.g. certain noises generated by mechanical systems and transmitted under water. Particular care must be taken during construction and maintenance work. If extraneous noise appears to be resulting in loss of animal appetite and condition, this problem must be corrected.
- c) Precautions must be taken to prevent any foreign bodies entering pools. Pools must be thoroughly checked for foreign bodies at least twice a day.
- d) Recreational swimming with the animals may only be permitted on

specific advice of either trainers or veterinarians and with adequate insurance cover for this activity.

- e) Cetacean pools may be reserved for the cetaceans. Other animal types may be included with prior approval of the Director-General.

2.1.6 Storage

- a) Supplies of food shall be stored in facilities which adequately protect such supplies from deterioration, moulding or contamination. Refrigerators and freezers shall be used for perishable food. No substances which are known to be, or may be, toxic or harmful to marine mammals shall be stored or maintained in the marine mammal food storage areas.
- b) Safe and suitable storage shall be provided for food supplements, for any medical supplies, for water treatment materials and for any other required materials.

2.1.7 Waste disposal

Provision shall be made for the removal and disposal of animal and food wastes, dead animals, trash and debris. Disposal facilities shall be provided and operated in a manner which will minimise vermin infestation, odours and disease hazards. All waste disposal procedures must comply with all applicable Federal, State and local laws pertaining to pollution control,

protection of the environment and public health.

2.1.8 Ablution and toilet facilities

- a) Facilities such as washrooms, basins, showers or sinks shall be provided to maintain cleanliness among employees and attendants.
- b) These facilities, and any other staff areas, must be kept clean, tidy and in good repair.

2.2 INDOOR FACILITIES

2.2.1 Air temperature

The air temperature in indoor accommodation must be controlled so that animals do not suffer from heat or cold, as determined by experienced veterinary advice. Rapid changes in air temperature must be avoided.

2.2.2 Ventilation

Indoor housing facilities shall be ventilated by natural or artificial means to provide a flow of fresh air for the marine mammals and to prevent the accumulation of potentially harmful agents including chlorine fumes, other gases and objectionable odours.

A vertical air space averaging at least 2.5 metres shall be maintained in all primary enclosures housing marine mammals, including pools of water.

2.2.3 Lighting

- a) Daylight must be available and of such quality, duration and intensity that normal physiological and behavioural functions are disturbed as little as possible.
- b) Lighting, whether artificial or natural, or both, must be adequate for routine health and hygiene checks and for cleaning.

require more and/or larger enclosures than the required minimum.

2.4.2 Number of animals

- a) Single animals will not be kept except as required for veterinary reasons, due to the unknown social habits of captive and wild *T. truncatus*.
- b) The basic group of *T. truncatus* should consist of a mature male and two, three or four females. If larger numbers of dolphins are to be held, groupings should reflect the following observations:

- i Adult males rarely associate with sub-adult males, the latter usually remaining in bachelor groups or with one or two adult females;
- ii Females with calves associate with each other and occasionally with other age and sex classes;
- iii Mean group size is between 2 and 18.

2.3 EMERGENCY ACCOMMODATION

- a) Contingency plans for emergency accommodation to which animals can be taken in the event of total failure of equipment, pools or other emergencies, must be arranged in advance and with the approval of the Director-General. The Director-General must be notified, in advance if possible, but in any case at the earliest practicable opportunity, if a dolphin has to be moved to emergency accommodation.
- b) Establishments must have contingency plans to cope with any foreseeable problems, including industrial disputes and financial difficulties, which might put the welfare of the animals at risk.

2.4.3 Number of enclosures

- a) For social reasons, as well as for maintenance and emergencies, at least two large enclosures (primary enclosures) capable of comfortably accommodating all *T. truncatus* held (as per guidelines of clause 2.4.4) shall be provided. **Note: Each pool does not have to individually hold all animals.**

2.4 SPACE REQUIREMENTS

2.4.1 General

Requirements listed here describe the minimum number and size of enclosures. The size, age and sex ratio of the captive group may

- b) One or more holding pools shall be provided for segregation of animals before shows, for feeding, for the introduction of new animals or as a precaution for calving. If the holding pool is separate from the main pool (i.e. not a netted section of a primary pool) the holding pool should be an adjunct of the main pool, so that animals can swim freely between the main pool and holding pools when dividing barriers are removed. The holding pool should also be designed to include provision for the lowering of water levels to facilitate handling and to allow routine treatment and examination of the dolphin.
- c) At least one isolation pool which meets the minimum space requirements for one animal (as per *clause 2.4.4*) shall be provided for the quarantine of new animals. Isolation facilities may also be used for sick animals, or animals which for other reasons must be temporarily separated from the social group, and should be able to operate independently of the main complex.
- 2.4.4 Size of pools**
- a) Enclosures housing *T. truncatus* shall contain a pool of water and may consist entirely of a pool of water.
- b) Sufficient space shall be provided both horizontally and vertically to enable the animals to exercise, to protect them from undue dominance or conflict and to provide for their social, breeding and husbandry needs. The space provided shall not fall below the minimum size requirements detailed below.
- c) Configuration of a pool shall provide for ease of cleaning, draining and maintenance of adequate water quality, as described in *clause 2.5*.
- d) Primary pools
- i At least one primary pool will provide a minimum of 1,400 cubic metres pool space in which up to five animals may be held. An additional 300 cubic metres must be provided for each additional animal when more than five are held.
 - ii Minimum dimensions
 - The primary pool shall not be narrower than 14 metres or shallower than 2.5 metres and at least half the pool will be at least 3 metres deep.
 - Minimum surface area for each animal will be 49 square metres, with 49 square metres to be added for every additional animal held (e.g. for 5 animals the minimum surface area will be 245 square metres).
 - iii The second primary pool shall meet the minimum dimension requirements outlined in *clause 2.4.4(d)(ii)* for the number of animals held, except that the pool shall not be narrower than 12 metres nor shallower than

- 1.8 metres and at least half the pool will be at least 2.5 metres deep. The second primary pool shall have a minimum volume of 600 cubic metres.
- iv The two primary pools may be connectable to allow the movement of animals, and may also be functionally separate. The second primary pool may also be used for breeding and calving as recommended by experienced veterinary advice.
- e) Holding pools
- i Minimum dimensions

These will vary according to the purpose for which the holding pool is used. The dimensions must meet with approval from a veterinarian experienced in *T. truncatus* management and should be determined by the specific needs of the establishment.
 - ii Holding pools may only be used for less than 24 hours, except on veterinary advice. Animals should have access to as much water space as possible at all times.
- f) Isolation pools
- i The isolation pool or pools will be provided with completely separate water systems with independent filtration. The isolation pool is not meant to be used on a long-term basis.
 - ii Minimum dimensions

An isolation pool will not be narrower than 7 metres, will have a minimum surface area of 49 square metres and will be no shallower than 2 metres, but shall be designed to include provision for the lowering of water levels to facilitate handling and to allow routine treatment, medication and examination of the dolphin.

2.5 WATER QUALITY

2.5.1 General

- a) No pools holding *T. truncatus* shall contain water which would be detrimental to the health of the animals.
- b) Establishments must determine all the normal operating water treatment parameters and investigate promptly if these are not being achieved.
- c) Water quality must be maintained by filtration, chemical treatment or other means, so as to comply with the water quality standards specified in this clause.
- d) *T. truncatus* should, as a general rule, be maintained in water of at least 10°C, but no more than 28°C, and protection should be provided against rapid changes of temperature, either within or outside that range.

2.5.2 Bacterial standards

- a) The coliform bacteria content of the pool must not exceed 500 MPN (most probable number) per 100 ml of water. Should the count exceed this level, the condition must be corrected immediately.
- b) If chemical treatment is used as a measure to maintain this standard, it should not cause harm to the animals. For instance, uneven mixing could result in locally excessive concentrations.

2.5.3 The pH of the pool water

The pool water must be maintained within the 7.5–8.4 pH range.

2.5.4 Salinity

T. truncatus shall be maintained in water with a salt concentration of not less than 20 parts per thousand and not more than 35 parts per thousand (specific gravity at 18°C between 1.022 and 1.024).

2.5.5 Water flow

- a) The rate of flow in a circulating system must achieve a sufficient frequency of turnover of the total water to ensure the removal of animal waste and suspended organic matter and to satisfy the standards set out in *clause 2.5*.

- b) Pools shall be designed so that there are no areas with inadequate water circulation.
- c) New pools must be tested during initial use and all pools must be thoroughly tested every year to check that full water circulation to all areas is being achieved. Immediate steps must be taken to remedy any problems.

2.5.6 Testing and monitoring

- a) Water samples must be tested at least three times a day to determine pH, salinity and temperature, and four times a day for chemical additive content. Facilities using natural sea water with no chemical treatment need only sample once a day for pH and salinity.
- b) Water samples must be tested for bacteria (and other pathogens if required) at least once a week.
- c) Appropriate surveillance of micro-organisms including pseudomonas or fungal pathogens, as required on veterinary advice, shall be performed where pools have a history of infection problems.
- d) Establishments must have a protocol on timing and place of water sampling, so that samples taken on different dates are comparable.
- e) Each pool must be sampled for each test, even when not operating separately, to check for any water circulation problems.

- f) The results of all tests must be recorded, including time and place of sampling.
- g) The contents of grids, meshes, skimmers and similar equipment must be carefully monitored, as well as filter debris after backwashing. Any unusual material must be promptly investigated.

2.5.7 Disinfection

- a) If disinfection of water is deemed necessary to maintain acceptable coliform counts, the chosen method must be proven safe and effective. The most commonly used systems include chlorination, chlorine dioxide and ozone.
- b) Adequate storage, administration, testing and control equipment and back-up systems must be provided.
- c) All relevant staff must be adequately trained in the general theory and practice of water treatment and its specific application in their establishment.
- d) If chlorination is used, the criteria that apply are as follows:

- i Glossary of terms
 - *Free residual chlorine:* hypochlorous acid has the greatest germicidal efficiency, and is non-toxic, tasteless and odourless. Results in super-clarity of water by destroying organic matter.

- *Combined chlorine:* mono-, di- and trichloramines formed by the combination of hypochlorous acid and organic matter. Di- and trichloramines are responsible for chlorine 'smell' and severely irritate the eyes, mucous membranes and skin.
- ii Chlorine levels are dependent on both pH and water temperatures, so that tests for free residual chlorine should take place more frequently in the summer; the minimum frequency at other times is four tests each day. (See *clause 2.5.6.*)
- iii Establishments will maintain combined chlorine levels at an average of no more than 0.5 ppm, with no more than an average of 100% excess of free chlorine. As far as possible, production of trichloramines must be avoided.
- iv If combined chlorine levels exceed 1.0 ppm and/or significant levels of trichloramines are detected and cannot quickly be brought under control, sufficient water must be replaced to remedy this situation.

2.5.8 Back-up systems

- a) Establishments must have a clear policy on pool water renewal if specific bacterial and pathogen content, nitrogenous compound content, combined chlorine content or any other limits are exceeded and

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- cannot be brought under control within a period where the animals suffer no harm.
- b) Provisions must be made to maintain water quality to standard specifications during routine maintenance and minor breakdowns of water treatment equipment.

Clause 3 Husbandry & management

3.1 STAFF

- a) Full details of the experience and qualifications of all relevant staff, including a summary of their careers and a history of all cetaceans previously under their care, must be submitted in support of any applications to acquire or continue keeping cetaceans.
- b) A sufficient number of adequately trained and competent staff must be employed to maintain the prescribed level of husbandry at all times.
- c) Staff must be encouraged to improve their knowledge and practical skills through recognised training courses, staff exchange and attendance at conferences.
- d) The senior staff in day to day contact with the animals must have representation at the highest management levels to ensure full consideration of the needs of the animals and authority to call for veterinary advice when required.

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- e) New staff must be expertly trained and provided with a job description and outline of responsibilities.

3.2 FOOD AND FEEDING

3.2.1 Facilities

- a) Adequate facilities for the storage and preparation of food will be provided.
- b) No dead mammal or other cadavers should be placed in food-fish storage areas.
- c) Food preparation areas should be indoors or completely screened and constructed of materials that can be subjected to periodic steam-cleaning or complete disinfection by chemical means. Walls should be of non-porous nature with no cracks or crevices.
- d) No toxic chemical or harmful material should be used or stored in food preparation areas, other than disinfectants used in cleaning the areas and food containers.
- e) Caution should be used in selecting the type of insecticide used and in its application in food preparation areas.

3.2.2 General practices

- a) Food for *T. truncatus* shall be wholesome, palatable and of a standard fit for human consumption.

- b) The food items' nutritional value must be sufficient to keep the animals healthy. The diet shall be prepared with consideration of the previous history of the specimen, age, size, condition, activity and water and air temperature.
- c) Animals should be weighed and measured at least monthly and the results recorded and compared with the expected normal body development for the species. Any necessary changes in the feeding of individuals in the light of these results must be made. Animals may be trained to co-operate with weighing and measuring, at the discretion of the establishment and its veterinary advisers.

3.2.3 Food

- a) Food species must be quick-frozen as soon as practicable after catching and packed in containers which prevent contamination and maximise retention of food quality.
- b) Sufficient quantities of food must be kept on hand to guard against problems with supply, but stocks must be rotated and preferably not stored for over six months.
- c) Frozen foods must be stored in freezers at a maximum temperature of -20° C, but preferably kept in the range of -25° to -30° C.

3.2.4 Food preparation

- a) All chemical and bacterial contamination must be avoided when preparing food.
- b) The thawing and preparation of food must be done in a manner which will ensure that the food retains its nutritive and wholesome quality.
- c) The thawed product shall be kept iced or refrigerated until just before feeding.
- d) All foods shall be fed to the animals within 24 hours of removal from freezers for thawing, or properly discarded. Discarded food should not be kept in fresh food storage areas.
- e) Food supplements should be added to the diet in accordance with veterinary advice.
- f) Food supplements must be appropriately handled and stored, and stocks appropriately rotated.
- g) Care must be taken not to include food that is known to have deleterious effects, e.g. fish that contain thiaminase.

3.2.5 Feeding

- a) The animals must be offered a variety of wholesome foods more than once each day and in sufficient quantities to ensure normal growth and good health unless otherwise dictated by sound veterinary practice or approved scientific research.

- b) Animals must be individually fed by a trained person who must be sufficiently competent to see that each animal receives an appropriate quantity of food and to observe variations in eating habits in order to ensure good health.
- c) Feeding by the public shall only be permitted on veterinary and/or trainer advice and must only be done in the presence and under the supervision of an experienced, uniformed staff member. Only food supplied by the establishment may be fed to animals.
- d) Feeding practices shall ensure that animals do not become habituated to a particular food item.

3.2.6 Hygiene

All utensils used in the preparation and distribution of food must be cleaned after use. The kitchens and surfaces for handling food must be washed down daily and treated with cleaning products (e.g. hot water, detergents, disinfectants). Such products must not be harmful to animals and must not be stored in areas used for storing foods.

3.3 SANITATION

- a) Particulate animal and food waste, trash or debris that enter the pools of water shall be removed as often as necessary to maintain the required water quality and to prevent health hazards to the marine mammals.

- b) The walls and floors of the pools shall be cleaned as often as necessary to maintain proper water quality.
- c) Buildings and grounds, as well as exhibit areas, shall be kept clean and in good repair. Fences shall be maintained in good repair.
- d) All boots, aprons, brooms, food buckets and receptacles must be kept clean.

3.4 VETERINARY CARE AND PREVENTATIVE MEDICINE

3.4.1 General

Licenseses maintaining *T. truncatus* in captivity are to be responsible for an effective program of veterinary care and preventative medicine. The attending veterinarian must examine the dolphins on a weekly basis.

3.4.2 Pest control

A safe and effective program for the control of insects, ectoparasites and for other pests should be established and maintained. Insecticides or other such chemical agents shall not be applied in a primary enclosure housing marine mammals except when deemed essential by an attending veterinarian.

3.4.3 Quarantine

Newly received *T. truncatus* should be separated from resident ones

and from the common water system until they can be reasonably determined to be in good health. Any communicable disease condition in a newly acquired *T. truncatus* must be remedied before the animal is placed with other resident *T. truncatus*. The period of quarantine should be as brief as possible because of these animals' known social behaviour.

3.4.4 Isolation

- a) Since isolation can be detrimental to the welfare of dolphins, the use of holding or isolation pools for purposes of investigating suspected illness, applying treatment and for special feeding, will be at the discretion of the veterinarian.
- b) Any *T. truncatus* exposed to a diseased animal shall be isolated for observation for an appropriate period of time as determined by the attending veterinarian.

3.4.5 Sanitation

Any pool containing a *T. truncatus* with an infectious or contagious disease shall be cleaned and sanitised in the manner prescribed by the attending veterinarian. No extra animals shall be introduced into the enclosure before such cleaning and sanitising procedures.

3.4.6 Observation

- a) All animals, their wastes and their behaviour should be observed each

day by a person in charge of the care of the animals or someone working under his/her supervision.

- b) Diseased, injured or stressed animals, or any animals with unusual behaviour, should receive immediate veterinary care. Any health problems must be promptly reported by the person making the observations to the veterinary adviser. Remains of parasites in faeces as well as regurgitated products should be retained for expert examination.

3.4.7 Medication

Anaesthetics, analgesics, tranquillisers, antibiotics, anthelmintics, or other chemotherapeutics must be administered under veterinary supervision.

3.4.8 Necropsies

- a) All persons who are responsible for *T. truncatus* held in captivity shall, in the event of any animal dying, notify an authorised officer of NSW Agriculture. This should occur immediately after the death of the animal (or beforehand if a veterinary surgeon has warned of an imminent death) and in any case within 24 hours.
- b) A complete post-mortem examination by a veterinary surgeon or practitioner, with training and

experience of animal pathology, must be carried out on all dead animals. Copies must be kept by establishments and submitted to the appropriate authorities.

to ensure safety to both the public and the animals. In particular, precautions must be taken to prevent visitors transmitting any pathogens or providing foreign bodies to the animals.

3.5 HANDLING

- a) Handling *T. truncatus* shall be kept to a minimum and shall be carried out as quickly and carefully as possible in a manner that does not cause unnecessary discomfort, overheating, behavioural stress or physical harm.
- b) A sufficient number of trained staff must be available at all times to handle the animals in the manner prescribed in these standards. Care must be exercised to avoid harm to the animal handlers.
- c) Animals may only be displayed for periods of time and under conditions consistent with their good health and welfare, as determined by the veterinary advisers.
- d) Contact by the public shall only be permitted on veterinary advice and only in the presence and under the supervision of an adequate number of experienced, uniformed staff.
- e) During public display, all *T. truncatus* must be handled so there is minimal risk of harm to the public or the animals, with sufficient distance allowed or barriers placed between the animals and the public

- f) Animals which are not compatible shall not be housed in the same enclosure. Animals shall not be housed near animals that would cause them distress or discomfort, or interfere with their good health. The exercise of sound judgement by experienced veterinary and curatorial staff (sometimes with reference to field ecologists) is essential in identifying and resolving problems relating to compatibility.
- g) Animals must be given access to other compatible animals, except when temporarily maintained in isolation on medical advice.
- h) Pregnant animals and animals with young must be accommodated in accordance with veterinary advice.

3.6 TRAINING

- a) Any training of cetaceans shall be done by or under the personal supervision of experienced trainers.
- b) The training of *T. truncatus* must be humane, without physical or mental punishment.
- c) Animals shall be trained to co-operate with handling and with regular veterinary procedures.

3.7 BREEDING

- a) Breeding should be a fundamental aim of any facility keeping *T. truncatus* unless this is unrealistic in light of the future welfare of the new captive-born individuals.
- b) A senior and suitably qualified member of staff, with expert knowledge of cetacean breeding, or in consultation with such an expert, should be in overall charge of the breeding program.
- c) Breeding requirements must be considered in the design of pools, in the balance of stock held and in planned acquisition of new animals.
- d) Genetic studies of captive animals and their offspring, as well as of the original wild populations, should be made.
- e) Full advantage should be taken of opportunities to obtain information on reproductive physiology and anatomy. Material obtained from routine veterinary examinations and post-mortem examinations should be fully processed.
- f) Establishments should take any opportunity during work with wild animals to obtain the information on mating patterns, sexual behaviour and rearing behaviour required for the understanding of breeding in captivity.

3.8 RECORD KEEPING AND PUBLICATION

- a) Establishments will keep records of all cetaceans on an individual basis that are quick and easy to examine, analyse and compare with those kept by other establishments.
- b) All papers and other information pertaining to each animal from previous locations must be kept safely. Permanent back-up copies of all records will be kept and stored safely. Animals moving to new locations will be accompanied by copies of all records relevant to those animals.
- c) A daily report shall be prepared and must include at least the following:
 - i clinical data including treatments administered and health observations;
 - ii observations of the behaviour of each individual:
 - at each training session and performance;
 - before, during and after breeding and during the rearing of young;
 - at any other time where any unusual or interesting behaviour is noted by staff;
 - iii any transfers of animals between enclosures;
 - iv the results of tests to determine the pH, salinity, temperature and coliform count of each pool as required by *clause 2.5*;

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- v the routine weight and length measurements required by *clause 3.2.2(c)*;
 - vi the time at which each feeding took place and the type, quality and amount of food taken by each animal at each feed and any variation in feeding behaviour;
 - vii the birth and/or death of any dolphin;
 - viii the arrival or departure of any dolphin;
 - ix any maintenance carried out or required;
 - x any measures taken to control pests;
 - xi the names of staff on duty.
- d) The consolidated records for each dolphin will provide at least the following information:
- i the correct identification, scientific name and any personal name(s) and identity number(s);
 - ii the origin (i.e. details of the wild population and social group 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 birth and the basis on which an estimation is made;
- v any distinctive markings;
 - vi clinical data, including details of and dates when any form of treatment, results of routine examinations and records of the health observations drawn from daily reports;
 - vii growth and development, including weight and length on arrival and the routine weight and length measurements;
 - viii social behaviour and social status, including any incompatibility and conflicts and records of any unusual or interesting behaviour reported in the daily report;
 - ix behaviour during training, performances and handling;
 - x breeding and the details of any offspring;
 - xi the date of death and the results of the post-mortem reports.
- e) Establishments will analyse their animal records annually in an approved format, to provide the information necessary for improving all aspects of the keeping of *T. truncatus*. Submissions to recognised journals, such as the International Zoo Yearbook, should be encouraged.

3.9 TRANSPORT

3.9.1 Transport authority

- a) Except in an emergency, only animals certified by an experienced veterinary surgeon or practitioner to be capable of withstanding the journey, may be transported.
- b) Written approval, both for sender and receiver, for the transportation of captive marine mammals must be obtained from the Registrar of the Exhibited Animals Protection Act and also the NSW National Parks and Wildlife Service. These authorities shall be informed of the following points:
 - i the transportation facilities;
 - ii the mode of transport;
 - iii the duration of the journey;
 - iv the departure and arrival times;
 - v details of stops;
 - vi approximate age, sex and species of animals to be transported;
 - vii identification features of each animal;
 - viii circumstances at the present and proposed accommodation;
 - ix contingency plans;
 - x qualifications of attendants.

3.9.2 Containers

- a) Containers used for transporting *T. truncatus* must be well ventilated and strongly built to a design that ensures the well being and safety of the animals. The containers should

conform with IATA requirements for live animal transportation, and any additional requirements provided by authorities at the time of the transport application.

- b) Containers shall be large enough to ensure that each animal has sufficient space for support of its body in slings, harnesses or other supporting devices, if used (as prescribed in paragraph (c) of this clause) without causing injury to the animal due to contact with the container.
- c) Straps, slings, harnesses or other devices, if used for body support or restraint, shall:
 - i be designed so as not to prevent access to the animals by attendants during transportation for the purpose of administering in-transit care;
 - ii be equipped with special padding to prevent trauma or injury at critical weight pressure points on the body of the animal;
 - iii keep the animals from thrashing about and prevent them from causing injury to themselves or their attendants;
 - iv provide holes for pectoral fins and for the clearance of excreta.
- d) Containers shall have solid bottoms to prevent leakage in shipment and shall be cleaned and sanitised.
- e) Containers should be secured and at all times maintained in a horizontal position and on no account should be stacked.

- f) External waterproof labels should be attached to the containers indicating:
 - i live cargo;
 - ii correct way up with arrows;
 - iii type and number of animals;
 - iv temperature range required;
 - v the consignor's and consignee's names, addresses and telephone numbers;
 - vi details of medical treatment given, if any;
 - vii date on which animals were crated for transport;
 - viii copy of written approval from the appropriate authorities;
 - ix a copy of the certificate from the veterinary surgeon who reviewed the transportation arrangements;
 - x time that the animal was removed from water;
 - xi estimated time of journey.
- v any material, substance or device which may be injurious to the health and well being of such marine mammals.
- b) Containers shall be positioned in such a manner that in an emergency the animals can be removed from the primary conveyances as soon as possible.
- c) The interiors of animal cargo spaces in primary conveyances shall be kept clean.
- d) Attendants must be able to keep the animals moist at all times during transportation.

3.9.4 Care immediately before and during transport

3.9.3 Primary conveyance

- a) The animal cargo space of primary conveyances used in transporting live *T. truncatus* shall be constructed in a manner which will protect the health and ensure the safety and comfort of the animals at all times, including protection from:
 - i draughts;
 - ii extremes of temperature beyond their thermoregulatory capacities;
 - iii the inhalation of engine exhaust fumes and gases;
 - iv vibration;
- a) All *T. truncatus* must be accompanied in transit by at least one approved attendant and veterinarian who is experienced in the care of these marine mammals during transportation. It will be the attendant's responsibility to provide for the animals' good health and well being, as outlined in further paragraphs of this clause.
- b) The weight of the animal should be evenly distributed to avoid pressure points.
- c) Eliminate sharp edges or points with which the animal could come in contact.

- d) The entire surfaces of the cetaceans must be kept evenly moist during transit and provision must be made for the movement of their pectoral fins.
- e) The blow hole must not be obstructed at any time and abrasion of the eyes must be avoided.
- f) The condition of the animals must be monitored and recorded periodically by the attendant and adjustments made to prevent injury, urine burn, wind burn, sunburn, pressure or other damage.
- g) The attendant shall calm animals to avoid struggling, thrashing and other unnecessary activity which may cause overheating or physical trauma.
- h) *T. truncatus* to be transported should receive no solid food for a period of time before transportation, as determined by a qualified veterinarian, in order to reduce faeces production and the consequent soiling and contamination of containers during transit, if applicable.

3.9.5 Transport records

- a) A written report on every transport operation, including records of clinical observations, must be submitted within 30 days. In particular, it should detail any problems arising and should include

suggestions as to how these may be avoided in the future.

- b) NSW Agriculture must keep a current summary of transport advice, based on these reports, and provide a copy to applicants for their information.

3.10 SPECIMEN DISPOSITION

- a) Any person responsible for a *T. truncatus* which dies in captivity shall, whether it is possible to arrange for a post-mortem examination or not, consult with an officer authorised by the Committee to ensure that all the required procedures are correctly undertaken. These include the removal, labelling, measuring, preservation and storage of specimens required for research in anatomy, histology, parasitology, taxonomy and osteology.

This arrangement shall not apply if, in the opinion of the veterinary surgeon conducting the post-mortem examination or other qualified person, the animal was suffering from a communicable disease or its retention would create a health hazard to humans or other animals or cause unreasonable inconvenience or unfair expense.

- b) The remains of all animals must be disposed of in a manner consistent with sound public health practice.

No person holding a *T. truncatus* which dies in captivity shall be

Clause 3 Husbandry & management

required to retain the remains for more than 48 hours on his own premises or at his own expense, whether or not a post-mortem or research dissection has been carried out.

Clause 4 Security

Establishments keeping, or seeking permission to keep, *T. truncatus* must satisfy the Board that a perimeter fence or alternative security measure is available to reasonably secure their premises at all times from unwanted intrusion by human or animal entrants.

Clause 5 Educational programs

5.1 INTRODUCTION

Applicants for a licence to maintain *T. truncatus* in captivity must demonstrate to the Director-General's satisfaction that education is a significant component of all aspects of the exhibition.

5.2 AIMS

- a) The main aim of the educational program should be to stimulate the interest and curiosity of all visitors in the biology, habits and conservation

Clause 5 Educational programs

of the species and its relatives. The program should also give visitors a wider appreciation of the natural world, by effectively exploiting the opportunities offered by exhibiting the living animals.

- b) Various means to satisfy this interest and curiosity should be provided at an appropriate range of levels, both immediately and in the longer term.

5.3 METHODS

- a) Through the use of some or all of the following, exhibitors shall promote public understanding and appreciation of the species exhibited and engender concern for their conservation: talks, presentations, live demonstrations, guided tours, films, displays, signs, publications and project sheets.
- b) The design of the educational program shall give particular emphasis to the provision of project material for school groups.
- c) Take full advantage of the opportunity to observe animals at close quarters, both above and under water, and to listen to sounds produced above and under water.

5.4 INFORMATION

Using the methods referred to above, exhibitors should ensure that the viewing public has elements of the following categories of information readily available:

Clause 5 **Educational programs**

- a) the taxonomic and evolutionary significance of the animals;
- b) the morphological, physiological and behavioural adaptations of the animals to their habitats;
- c) the distribution and abundance of *T. truncatus* in Australia and the world;
- d) the ecological relationships between the species and their predators, prey and parasites, and their effects on man and vice versa;
- e) the relevant features of the species' life cycle and behaviour patterns;
- f) the conservation status of the species and methods of ensuring long term survival and proper management.

5.5 STAFF

All staff in contact with the public or preparing educational materials for visitors must have at least adequate, and preferably expert, knowledge of the animals, their biology, habits and conservation, or seek the assistance of such a person.

5.6 REVIEW

Regular evaluation of the educational programs must be performed by qualified educators and submitted in support of applications to keep and exhibit *T. truncatus*.

Clause 6 **Research programs**

6.1 INTRODUCTION

Research, at its minimum the systematic acquisition of data, must be an integral part of the keeping of *T. truncatus*.

6.2 PROGRAM

- a) Establishments must set up information-gathering programs involving all their animals, to include such things as day to day behaviour changes, social relationships, breeding pool use, feeding, weight and length changes, health, breeding details, effects of husbandry changes, effects of training, effects of schedule changes and details of water treatment.
- b) Sufficient recording systems need to be set up to provide this data. Regular analyses must be made and staff responsibilities designated.
- c) Establishments should, as far as possible, co-operate and encourage liaison with approved research workers and students.
- d) Establishments should ensure, through collaboration with the veterinary profession, research workers and other interested parties, that the fullest use is made of any biological specimens and post-mortem material which may become available.

6.3 RECORDS AND REPORTS

- a) Regular reports on acquired data and analyses should be presented in publications used by researchers working on these animals (e.g. Australian Progress Report on Cetacean Research, Marine Mammal Science, Journal of Marine Mammology).
- b) Communication should also take place regularly with research and veterinary workers interested in *T. truncatus* both informally and at conferences, seminars and annual meetings (e.g. Australian Mammal Society, International Marine Animal Trainers Association).

6.4 STAFF

- a) A senior and suitably qualified member of staff must be in overall charge of the research programs. The programs are to be formulated and regularly reviewed by an approved researcher on dolphins.
- b) All staff in charge of animal husbandry and management should be given encouragement to improve and develop their research skills.
- c) Establishments should support and encourage the staff's work with wild animals, particularly where this would contribute directly to the information required for improved welfare and husbandry, to conservation and

management of wild populations and to the educational activities of the establishments.

Clause 7 Strandings & rehabilitations

- a) Without prejudice to any legal requirements, these standards need not apply to emergency arrangements for the nursing of live stranded animals, provided that these emergency arrangements are carried out under experienced veterinary supervision. These arrangements should be carried out in a manner which presents no risk to the health of any other animal or person and does not cause unnecessary suffering by prolonging the lives of animals which are obviously diseased, damaged or stressed.
- b) Such arrangements may continue for no more than 30 days. Animals which are not well enough for release must then receive care in facilities which fully comply with these standards.
- c) If it is obvious at the time of the stranding that no facilities which fully comply with these standards will be available for the longer term care of the animals, only animals likely to recover within 30 days may be taken to emergency accommodation.

All other animals, and those in emergency accommodation which have not recovered after 60 days, must be humanely destroyed, to prevent further suffering.

Approval may be sought from the Director-General for additional time to allow full recovery of stranded dolphins if necessary.

- d) Rescued animals in emergency accommodation may not be displayed to the public.
- e) The holder of a licence to maintain *T. truncatus* in captivity for exhibition must have a stranding and rehabilitation program and the facilities for these, in particular isolation pools.
- f) The holder of a licence to maintain *T. truncatus* may be requested to participate in stranding rescues or research, by providing information on care of cetaceans, assessment of condition of stranded cetaceans and manpower or other resources where possible, under the direction of the appropriate authority.
- g) Rescue and rehabilitation of stranded animals at an establishment is not to be carried out if, in the opinion of an experienced veterinarian, the health of the establishment's existing *T. truncatus* population would be put at risk.
- h) Rehabilitation of a stranded animal at an establishment is to be carried out as a research program under the guidelines of *clause 6*, with particular reference to data acquisition, records and reports.