

Department for Environment, Food and Rural Affairs

Secretary of State’s Standards of Modern Zoo Practice

Appendix 8 – Specialist exhibits, Elephants

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Contents

8.8	Elephants	1
	The captive environment	2
	Feeding and nutrition.....	6
	Behavioural management	7
	Healthcare	7
	Staff management	8
	Elephant training	10

8.8 Elephants

- 8.8.1 All elephant facilities will be inspected by at least one nominated Defra-appointed elephant inspector. If only one elephant inspector is present, the elephant inspectors may confer on elephant-related aspects of individual zoo inspection reports, including any recommendations or conditions, to ensure consistency of inspections. In addition to the Standards in this Section (8.8), the inspectors will refer to the current Management Guidelines for the Welfare of Zoo Animals: Elephants (BIAZA) and current recommendations of Defra/ZEC-endorsed elephant management groups such as the UK Elephant Welfare Group, and will use these to inform any recommendation or suggested conditions. Institutions will be expected to provide evidence in support of achieving these standards. Where facilities do not meet these standards, the inspectors will assess the justifications and mitigations.
- 8.8.2 All elephant holding institutions must produce a documented Long Term Management Plan (LTMP) for the elephant collection and an Individual Welfare Plan for each elephant (IWP).

Long Term Management Plan (LTMP)

- 8.8.3 It is recognised that zoo masterplans are generally designed to cover a 10-15 year time-frame and thus will not cover the expected lifespan of elephants. The LTMP should aim to cover at least 30 years and account for necessary flexibility needed when keeping and/or breeding elephants. It must cover the following:
- Purpose of collection; e.g. breeding herd, bachelor group, retirement facility for non-breeding animals
 - Herd compatibility details
 - Financial provision for animal care
 - Long term enclosure development planning
 - Management systems adopted
 - Elephant training programme
 - Staff training programme
 - Zoo management structure relative to elephants
 - Exit strategy should the collection choose to no longer hold elephants

Individual Welfare Plan (IWP)

8.8.4 This document must be produced for each individual elephant and contain, as a minimum, the following:

- Healthcare plan (see 8.8.39)
- Diet plan (see 8.8.33)
- Training plan
- Welfare monitoring data produced by Defra/ZEC-endorsed elephant management groups e.g. UK Elephant Welfare Group Health pack data and behavioural monitoring tool
- Behaviour profile
- Details of any behavioural issues and mitigation plan
- Exercise plan

In addition, bulls over four years old must have a bull profile (see 8.8.15)

All plans must be reviewed and updated regularly as appropriate, and in agreement with inspectors.

8.8.5 Elephants are long-lived, highly intelligent animals with large natural ranges and a complex social life. Meeting their needs in captivity is challenging. These standards should help inspectors and others in assessing the extent to which these welfare needs are being met, and in particular, in assessing the welfare needs of individual elephants and the measures being taken to secure good elephant welfare.

8.8.6 Inspectors, local authorities and zoos must consult the current Management Guidelines for the Welfare of Zoo Animals: Elephants (BIAZA). Elephant-keeping zoos must be aware of the function and current recommendations of Defra/ZEC-endorsed elephant management groups such as the UK Elephant Welfare Group (EWG) and engage constructively with such groups.

8.8.7 Health and welfare monitoring indices identified through Defra/ZEC-endorsed management groups must be implemented within each institution and data on their implementation made available to inspectors.

The captive environment

Social Grouping

8.8.8 Appropriate social grouping is key to successful elephant management and must be pre-eminent in all aspects of care. This must be reflected in the LTMP. The transfer of elephant (cows and bulls) between institutions must be minimised in line with

this. Regular behavioural profiles must be made for all elephants and form part of the Institutional Collection Plan (ICP) – these should be used to inform herd compatibility within the LTMP.

- 8.8.9 Breeding collections should aim for stable matriarchal herds wherever possible. Calves have a long learning period and must be brought up in a matriarchal group. Female elephants must learn calf care and benefit from the presence of a young animal. Cows should remain with their maternal herd, bulls also benefit from maximising the opportunity for socialisation with the matriarchal herd. The age for removal of bulls will vary with individuals, herd structure and facilities. Zoos must demonstrate through behaviour profiling and behaviour monitoring, evidence to inform decisions for the removal of bulls. The social development of young bulls is increasingly recognised as being very important, benefiting from the presence of older, adult males; this must not be overlooked, especially regarding acceptable patterns of aggression within the herd (see 8.8.14).
- 8.8.10 The zoo should maximise opportunities for every elephant to have unrestricted physical contact with other members of the herd for as many hours each day as possible (see also 8.8.12 for cows). It is recommended that this should be not less than 16 hours in any 24 hour period. Zoos should minimise the time that individuals within the herd are physically separated through management.
- 8.8.11 African and Asian elephants should never be mixed in the same social grouping.

Cows

- 8.8.12 Female elephants must have social contact with other elephants at all times. If herds are kept, groups should contain at least four compatible females over 2 years old. All elephants must have the option to get away from other elephants if so desired, through use of space and visual or physical barriers in the enclosure. Where evidenced compatibility problems arise, the zoo must keep records of the steps taken to try to resolve these issues, and plans (with time frame) should these steps prove unsuccessful. Such records must be made available to zoo inspectors upon request.

Bulls

- 8.8.13 Bull elephants can be difficult to manage (particularly in musth) and are not always compatible with cows. Provision must be made for them to be separated from cows and other bulls when necessary.
- 8.8.14 Bulls must be given the option to be in social contact with other elephants if they choose. Acceptable social situations for bulls are:
- a) housing bulls so they can mix regularly with the family herd, ideally with another bull present, to facilitate social learning (1 older bull, 1 younger); or

b) bachelor herd with other bulls of varying ages.

Bachelor herd size should reflect best practice in current guidelines. All elephants must have the option to get away from other elephants if so desired, through use of space and visual or physical barriers in the enclosure.

8.8.15 A bull profile must be drawn up and documented for each animal from the age of four and should be reviewed (in combination with a risk assessment) at least every six months. This profile will inform the management regime of the bull which should be modified in light of the development of the elephant's character.

8.8.16 All collections keeping bulls must have the facility to carry out any essential veterinary procedures in such a way that is safe for all staff and the elephant concerned. An Elephant Restraint Device (ERD) is recommended. All collections keeping bulls must be able to demonstrate evidence that staff are adequately trained to work with bulls (see current BIAZA Guidelines).

Enclosures

8.8.17 Requirements and justification for the size of indoor and outdoor enclosures in an individual zoo remains with the Defra-nominated elephant inspectors (see also 8.8.1), taking into consideration sections 8.8.20 and 8.8.23 and any other relevant factors such as complexity of the environment and social dynamics of the herd.

8.8.18 Indoor and outdoor accommodation must be provided and, other than in exceptional weather conditions, zoos must aim for all elephants to have access to both over a 24 hour period throughout the year with the ability to choose where they spend their time. Justification must be given if this cannot be achieved. Enclosure design must enhance the social dynamics of the group.

8.8.19 A complex and variable enclosure is essential (see also 8.8.34). The indoor and outdoor environment should be positively challenging and stimulating to the animals and contain devices, structures and terrain which provide variety and complexity to enrich the environment and encourage natural behaviour including, for example moving around, grazing, dustbathing, bathing, scratching, digging and exploration. Zoos must be able to demonstrate evidence that facilities provided to the elephants are being used and, if not, demonstrate plans to mitigate this.

8.8.20 It is recommended that all indoor cow/herd facilities provide at least 300 sq. m for four (or fewer) animals and increase by at least 80 sq. m for each additional animal over two years of age. It is recommended that indoor bull facilities provide at least 160sq.m for each bull.

8.8.21 Indoor enclosures must allow elephants to move freely as a group, turn and lie down. Indoor enclosures must be well ventilated but at sufficiently low velocity to avoid draughts and must be well lit, preferably with natural skylights and the ability to fade the lighting to minimise disturbance to the elephants. The inside

temperature should be no less than 16°C with an area able to be maintained at 21°C for sick or debilitated animals.

- 8.8.22 Concrete flooring for indoor enclosures can cause foot and joint problems for elephants so enclosures should use alternative substrates. There is increasing evidence that deep sand is the preferred substrate. The depth of sand should enable good drainage and allow for building of sand mounds to enhance recumbent sleep as well as other natural behaviours such as digging (i.e. no less than 1m). A range of other manipulable natural substrates (e.g. mud, clay, bark chip) can also be provided.
- 8.8.23 Outdoor enclosures must be as large and complex as possible and encourage walking and also exploration, grazing, foraging, social interaction and maintenance behaviours (e.g. dust-bathing). Outdoor areas for bulls and cows (i.e. over two years) must provide all animals with a minimum shared space of 3,000 sq. m (0.3ha) throughout the year, unless the current BIAZA guidelines exceed this. There is evidence that much larger spaces (e.g. >2 ha (20,000 sq. m) for five or fewer adults) are required to achieve suitable exercise levels, and development plans are strongly recommended to aim for larger spaces. Inspectors must be satisfied that all animals have sufficient space and access throughout the year. Enclosures must be flexible and allow for animals to get away from each other if they choose, and for separation where needed.
- 8.8.24 The outdoor area must provide all elephants with access to sufficient areas of shelter and protection from extremes of sunlight, wind and rain.
- 8.8.25 Outside substrates must be primarily natural e.g. soil, sand or grass with good drainage. Provision for all weather outdoor access must be available.
- 8.8.26 Elephants must be provided with the opportunity to bathe and enclosures must incorporate a variety of options including a pool, dust bath, and mud wallow, large and deep enough for the needs of all the animals. Sprinklers/showers can also be used. Opportunities for bathing should be provided both indoors and outdoors, particularly if animals spend the majority of their time indoors.

Boundaries

- 8.8.27 Barriers must prevent escapes and direct contact with the public and must also ensure the safety and well-being of both the elephants and staff. Methods of quick escape must be provided for keepers.
- 8.8.28 Barriers and gates should not have horizontal bars, which would allow elephants to climb. The minimum height is 1.9m for cows and 2.5m for bulls. A large bull may require a 3m barrier. Designated safety areas for keeping staff must be clearly identified in line with the management system employed. Stand-off areas must be designed to ensure no contact between elephants and public.

- 8.8.29 Gates should be robust and any hydraulic system should have manual back-up and/or alternative power. Hydraulic gates must be capable of being operated remotely by staff i.e. outside the area within elephant reach, and must be able to be opened and closed quickly with a stop facility to ensure trunks/tails are not crushed. The safe operation of any manual gates must be able to be demonstrated to inspectors, including safe systems of work for scenarios where direct access in free contact (FC) situations (see 8.8.51) is not possible.
- 8.8.30 Electric fences used as a secondary barrier must be of sufficient voltage to deter elephants and must have a failsafe alarm system. Fences should be checked daily and recorded. Electric fences should not normally be used as a main barrier, but where they are, such as to allow access to large grassed areas, suitably trained staff must be present, directly supervising the animals. Moats are not suitable as barriers and should not be used.

Feeding and nutrition

- 8.8.31 Feeding should match natural feeding activity as much as possible, where browse and grass accounts for the majority of the diet and feeding time budget. Food presentation should be varied to encourage a full range of natural foraging behaviour and cognitive stimulation.
- 8.8.32 Elephant diet must be high in fibre and low in nutrients with forage (browse, grass, hay and straw) comprising no less than 80% of the diet with the remainder comprising pellets and other foodstuffs. All forage must be of appropriate quality and analysed annually by appropriate laboratories to ensure it remains within nutritional guidelines. Such analysis must be made available to inspectors on request. Pellets must be high in fibre and low in protein, fed to provide adequate levels of vitamins and minerals in the diet – in general, feeding pelleted food significantly over 2-3kg per adult animal per day is not advised. Other items e.g. vegetables should be used in minimal amounts as needed for training and enrichment activities. High sugar fruits or bread should be avoided or their use carefully limited.
- 8.8.33 Individual diet plans must be detailed in the IWP and be tailored to individual needs based on body condition score (BCS) and weight. If optimum BCS is not achieved, collections must demonstrate evidence of a plan to achieve optimum BCS and progress made.
- 8.8.34 Complexity and variation in food presentation is required. Food must be presented to maximise foraging time. Grazing allows elephants to spend significant amounts of time consuming a small amount of forage, and should be encouraged. All facilities should provide some grazing access. Forage, including browse, should be available at all times to all elephants. Food presentation should be at unpredictable intervals, throughout the day and night and methods should be varied, time consuming and include intellectual challenge (e.g. puzzle feeders). Food should be

placed throughout the exhibit to provide psychological stimulation, avoid competition and encourage movement.

8.8.35 Animals must have access to clean drinking water at all times from the indoor and the outdoor areas.

Behavioural management

8.8.36 The individual behaviour of elephants must be continually monitored and assessed, (including overnight behaviour) using welfare monitoring tools produced by Defra/ZEC-endorsed elephant management groups. Monitoring tools require cameras to monitor overnight behaviour. Video footage must be stored for a reasonable amount of time to allow easy access and review to follow up any normal behaviour or concerns noted outside the formal use of the assessment tool.

8.8.37 Extensive and varied enrichment must be provided in both the inside and outside environments and be part of the daily management plan. Evidence must be provided of the implementation of a goal driven enrichment plan with clear aims and evaluation methods. The enrichment plan must be made up of activities from all of the five enrichment categories; social, cognitive, physical habitat, sensory and food.

Healthcare

8.8.38 General health must be assessed regularly and must form part of the daily management routine.

8.8.39 The documented healthcare plan forms part of the IWP. It must be reviewed/updated quarterly (but the appropriate frequency to be established in light of the individual health needs), for each elephant. The plan must contain health monitoring data gathered using methods recommended by Defra/ZEC-endorsed elephant management groups e.g. UK EWG health pack, and show evidence of the steps taken to address any issues and improvements achieved. It must also include: (i) baseline information on the elephant's state of health (ii) any behavioural issues, including stereotypy (iii) exercise plan (iv) weight and body condition score.

Health monitoring

8.8.40 To achieve optimum healthcare of captive elephants it is necessary to be able to achieve safe access to the elephant through training techniques without the need for anaesthesia.

Evidence must be provided to inspectors on request that keepers/vets can do the following:

Calves (1-8 years)

1. Examination of integument, mouth, ears, eyes, feet
2. Body weight and body condition scoring in line with monitoring protocols produced by Defra/ZEC-endorsed elephant management groups
3. Health monitoring photographs (e.g. body and feet) and scoring following protocols of Defra/ZEC-endorsed elephant management groups
4. Intravenous access
5. Rectal access
6. Acceptance of intramuscular injections
7. Acceptance of ultrasound examination
8. Trunk washes for disease screening and clinical monitoring e.g. tuberculosis, herpes virus

Adults (over 8 years)

1. Examination of integument, mouth, ears, eyes, feet
2. Ability to perform foot care as required
3. Body weight and body condition scoring in line with protocols from Defra/ZEC-endorsed elephant management groups
4. Health monitoring photographs (e.g. body and feet) and scoring following protocols of Defra/ZEC-endorsed elephant management groups
5. Intravenous access
6. Rectal access (including for ultrasonography)
7. Acceptance of intramuscular injections
8. Acceptance of ultrasound examination
9. Trunk washes for disease screening and clinical monitoring e.g. tuberculosis, herpes virus

Staff management

8.8.41 There must be a recognised team of elephant handlers. This team must have a structure that includes a team leader, who is responsible for ensuring that agreed protocols, procedures and training are correctly carried out and implemented. Inspectors will assess that adequate staff are available of appropriate training as well as the collection's staffing levels contingency plan (to cover sickness, holiday

etc.). There must be a clear decision-making pathway and protocol up to senior management.

Risk

8.8.42 All aspects of elephant management must be risk assessed and a comprehensive system of Safe Working Practices (SWP) implemented. There should be evidence of communication to, and training of, staff in risk management. All risk assessments and SWPs should be regularly reviewed. Risk assessments and SWPs must reflect the elephant management systems identified in the LTMP and IWP with particular reference to “Restricted contact” scenarios (see section 8.8.51 Management Systems).

Staff training

8.8.43 The collection must have a monitored and written staff training programme which is reviewed annually. This must encompass training of new staff and training reviews of existing staff and must also include the outcomes from the risk assessments that have been carried out.

8.8.44 The staff training programme should include an evaluation component suitable for each level of training. Institutions must support all their elephant keepers to continuously update their training to ensure continued professional development (CPD) and that best practice is adopted. CPD records should be available to inspectors on request.

Use of physical restraint

8.8.45 Consequences of bad practice in restraint are significant and severe. Physical restraint of elephants through the use of, for example, chains and shackles must be minimised. There is justification for limited periods of physical restraint for certain husbandry and veterinary procedures which must be documented and included in the IWP.

8.8.46 All restraint equipment must be maintained to the highest standard and replaced immediately if damaged or showing signs of wear and tear to ensure it is not causing physical harm to the elephant or safety risk to staff. The most appropriate equipment must always be used.

8.8.47 Elephants must not be physically restrained for periods in excess of one out of 24 hours except in exceptional circumstances under direct veterinary guidance, such as during specific procedures e.g. AI or during transport. All uses of restraints, over one hour must be documented and made available to inspectors on request.

8.8.48 Only named, trained persons may carry out physical restraint. This may include external elephant experts brought in for staff training and/or elephant transportation.

8.8.49 Keepers must be adequately trained in the use of restraint equipment and procedures, and safety aspects followed. Evidence of training must be demonstrated to inspectors upon request.

Elephant training

8.8.50 Each institution must have an elephant training programme (documented in the LTMP) and individual tailored goals for each animal (documented in the IWP).

Management systems

8.8.51 There are two recognised elephant management systems: free contact (FC) and protected contact (PC).

- Free Contact: The direct handling of an elephant, when the keeper and the elephants share the same unrestricted space (without any solid elephant proof barrier in between them).
- Protected Contact: The elephant and the keeper never share the same unrestricted space. Management of the animal or contact is undertaken through a protective barrier. In situations, in a PC management system, where direct contact with an elephant in restraints (referred to as Restricted Contact) is undertaken then this must be risk assessed in a similar fashion as per an elephant managed in 'Free Contact'.

Institutions must clearly state and describe their management systems in their LTMP and IWPs. This should be reflected in risk assessments and Safe Working Practices (see section 8.8.42).

Ankus or hook

8.8.52 The ankus is a tool used to cue the elephant to maintain commands and train them. It is intended to produce a light physical contact. The ankus must not hit, injure, damage or break the skin or be used in any other way that could cause physical or mental injury. The consequences of bad practice are significant and severe. All injuries caused by an ankus must be recorded, in conjunction with the situation and circumstances of its use, reviewed by management and be made available to inspectors on request. Justification for ankus use and evidence of ongoing staff training in the ankus use must be available to inspectors on request. All staff using the ankus must participate in continued professional development (CPD) and training to ensure best practice is maintained.

Electric goad

8.8.53 Electric goads must only ever be used to protect human safety in extreme situations (such as an imminent threat to human life) and never as a way of controlling the

animal to ensure compliance. Goads may be used only by staff that have had appropriate training. Establishments must have a written policy on electric goad use, approved by senior management, and available to inspectors. This must include named persons and parameters of use. In all cases where an electric goad has been used, a full report must be produced detailing the situation and circumstances of its use. The report must be reviewed by management and be made available to inspectors. Discussion must occur surrounding how use could be avoided in the future.



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Zoos Team, Animal Welfare
Department for Environment, Food and Rural Affairs
zoos.branch@defra.gov.uk