

General Principles of Small Animal Housing

The exact design of any small animal housing facility will depend on its intended use, the local environmental conditions, the amount of available finance, and a range of other different factors. However, certain basic requirements are common to all types of housing and are necessary to preserve the comfort and well-being of the animal.

Basic environment

All animals are entitled to the Five Freedoms wherever they are housed. Basic requirements such as an agreeable physical environment are necessary, and the animal should be well cared for.

The Five Freedoms are a set of five basic rules concerning the welfare of animals. They apply to the housing of both large and small animals. They are as follows:

- 1) Freedom from hunger and thirst
- 2) Freedom from discomfort
- 3) Freedom from pain, injury and disease
- 4) Freedom to express normal behaviour
- 5) Freedom from fear and distress

Wherever any animals are housed, they are entitled by law to these rights.

An agreeable physical environment should be:

- warm (but not too hot)
- dry
- clean
- odour free
- correctly lit (sufficiently intense light to see during the day, but sufficiently dark to sleep at night)

Well cared for animals should have at least:

- Regular access to 'toilet' areas
- Constant clean water supply
- Appropriate feeding
- Sufficient mental stimulation and companionship

This should all be provided as efficiently as possible.

Comfort and Security

Dogs are more relaxed when they feel comfortable and secure. They should be provided with a dark corner for sleeping, but allowed to sleep where they want within the kennel area. It is fairly common for a dog to drag its bedding to different places in the kennel for the first few days; this 'nesting' behaviour allows the dog to settle in.

Cats need protective sides to their bed; a cardboard box for instance. Shy cats may prefer an 'igloo' style bed, where they are completely enclosed except for a small entrance hole.

It should be remembered that animals may be distressed at being parted from their owners and confined. If so, they should be reassured and handled with consideration.

Animal Health and Safety

The animals' environment must be safe to prevent accidental injury. Hazardous substances such as bleach and other cleaning agents should be kept locked away in a cupboard to prevent consumption by an animal that has escaped from its kennel.

A safe kennel is free of sharp edges and abrasive surfaces, does not contain areas in which the animal could become trapped, and has grates over any drainage holes to prevent injury to the animals' legs

An animal's health should not be neglected while in a kennels; vaccinations and parasite treatments should always be kept up to date. Grooming is a useful time to check the animal for illness, and is an important social activity for dogs.

Vaccinations

The following organisms may be vaccinated against in the UK:

Dog Diseases	Cat Diseases
Canine distemper virus	Feline infectious enteritis (Panleucopaenia)
Canine parvovirus	Feline herpesvirus
Canine adenovirus	Feline calicivirus
Leptospirosis	Chlamydia psittacia
Canine parainfluenza virus	Feline leukaemia virus
Bordetella bronchiseptica	Rabies virus
Rabies virus	

Parasite treatments

Cats and dogs should be treated for fleas and lice with a topical (often spot-on) preparation, as well as for intestinal worms (Tapeworms eg Diploidium and Taenia; Roundworms eg Toxocara; Hookworms eg Ancylostoma and Uncinara; Whipworms; Coccidia; and Giardia) with oral parasitacides as required.

Behaviour

Dogs are naturally pack animals, and will usually seek to be part of a group. They therefore require regular human attention and may benefit from being able to see other dogs. Failure to provide companionship will result in attention seeking behaviour such as barking, which is undesirable.

Animals should also be able to see out of the kennel to provide mental stimulation and avoid the development of stereotyped behaviour. However, exposure to very active areas close to the kennel may result in excessive barking and should be avoided.

Stereotyped behaviour can be defined as a repetitive, constant action that serves no obvious function. It is often associated with bored, anxious, or attention seeking animals. A classic example in dogs is tail chasing.

Exercise

Dogs are usually more relaxed and quiet when they have had sufficient exercise. Although it is often not practical to 'walk' every dog in the kennel, they must at least be allowed out of the kennel several times a day.

Cats exercise themselves by playing hunting games. The run area must therefore contain toys to stalk and raised platforms to climb up to and jump between.

Urination and Defecation

All animals are naturally reluctant to foul the sleeping area. Dogs must be given frequent access to an intended toilet area, and be provided with a place in the kennel away from the sleeping area for 'accidents' (i.e. a concrete run). Adult dogs prefer to urinate on the surface they were taught to use as puppies, usually grass. 'Toilet trips' should preferably be more frequent than and separate from exercise, although the two are usually combined for efficiency.

Cats should be provided with a regularly cleaned litter tray in a corner for privacy.

Feed and Water

Animals kept in the same building should all be fed at the same time every day to build up a routine. Ideally this is in the evening as most pets are normally fed when their owners have their evening meal. The feed should be as similar as possible to the animal's usual feed to avoid the development of diarrhoea.

Clean, fresh water should be available at all times, either from bowls or an automatic water supply incorporated into the kennel design.

Food and / or water restriction may be necessary in hospital or Intensive Care Unit (ICU) kennels for medical reasons.

Bedding

An animal's bed represents its own territory, and is therefore very important. It may be at floor level or raised, and either a plastic bed or a fixed sleeping bench, but must be easily accessible and have sides to prevent draught. It must also contain bedding, and allow the animal to feel secure.

Bedding is necessary to warm and comfort the animal and prevent pressure sores, and may be non disposable or disposable.

Non disposable bedding types include blankets, acrylic bedding, and covered foam pads.

Disposable bedding types include newspaper, shredded paper, and disposable absorptive mats.

Noise

All kennels have the potential to develop a noise problem, and this is an important consideration in the design and management of all kennels, especially those sited in a residential area. Firm, calm handling of the dogs coupled with adequate attention and exercise reduces barking due to excitement and boredom. Sound proofing can help to reduce spontaneous barking due to external noise, and also helps to reduce the nuisance of the barking for the surrounding residents.

Lighting

Adequate lighting is necessary for cleaning of the kennel as well as handling and observation of the animal, but is also very important to promote the correct animal behaviour. Lighting should be left on all day (not just when workers are present), but with darker areas in the kennel to allow the animal to sleep during the day. Lights should be turned off at night. Problems are often encountered during the summer when the dogs wake up and bark at dawn.

Fluorescent lighting is more effective and safer than light bulbs, which can be dangerous if animals touch them.

Ventilation

Ventilation of kennels is important to reduce odour, provide clean air, and to reduce the concentration of airborne infectious agents.

Any type of ventilation where the airflow is not controlled directly, for example opening doors and windows, is referred to as Passive ventilation. Passive ventilation is adequate for a small number of animals, but may result in unacceptable levels of heat loss. Any type of ventilation where the airflow is controlled by specially designed blowers or extractor fans is known as Active ventilation. Active ventilation can be combined with heating (air conditioning), and is far more effective in larger establishments, affording a much higher degree of control. Commonly used systems include air conditioning with induction vents and an extractor fan with passive vents.

Air conditioning with induction vents

This system pushes air in from the roof of each kennel and forces the stale air out. It usually allows between 6 and 12 air changes per hour.

Extractor fan with passive vents

This system involves having a vent in each kennel and a large fan in the roof to cause air movement (either out or in), and is less effective than an air conditioning system.

The design of the ventilation system should be such that airflow between kennels is minimised to reduce the spread of diseases.

Heating

Heating is obviously important to keep the animal warm, but is also necessary to allow kennels to dry after cleaning and prevent problems such as damp and frozen water pipes.

Maximum and minimum thermometers are useful to check the temperature range in the kennels, and should be sited in a few different places.

Suitable temperature ranges for housing are given below:

Dog kennels should have a minimum temperature of 7°C, with the sleeping area at least 10°C, and should not exceed 26°C.

Cat accommodation should be between 10°C and 26°C.

Isolation and hospital accommodation should be kept between 18 and 21°C. Ill, young, and aged animals are less able to control their own body temperature.

Puppy accommodation should contain an area which is 26°C for the first week (although the bitch should be kept in the cooler area), and then 18 to 21°C until the puppies are weaned.

The type of heating may be local or central (controlled via a thermostat), but should be as safe and economical as possible. Hot surfaces should be avoided to prevent injury.

Examples of local heating include electric fans, under floor heating, Infra-Red dull emitters, and heated beds or pads. They have the advantage of being cheaper to install than central heating, and allow for variation in the temperature in a kennel block based on the different requirements of different animals.

Insulation and draft proofing is a very cheap and effective way of reducing heat loss; automatic door closers can be useful and cat flaps should be positioned in such a way as to minimise drafts onto the sleeping area.

Security

It is very important to include appropriate security measurements in the considerations for kennels, both in keeping the animals in and keeping unwanted intruders out.

Doors and windows should be fastened shut when not needed, a perimeter wire mesh fence should be erected and maintained, and there should always be at least one closed door between an animal and freedom. Additional measurements such as roofed kennels and mesh covering windows are necessary for cats.

Additional security such as alarm systems and CCTV are often used.

Servicing and Access

All buildings and kennels should ideally be designed as much as possible to allow staff to access them quickly and easily to improve the efficiency of the staff (in feeding etc). The design should allow for a means of closing a hatch between each kennel and run to allow access to 1 area whilst the animal is in the other.

The kennels need to be durable, accessible, and hygienic, and should be constructed from a material that allows for hygienic cleaning and disinfection.

Facilities

Buildings should be designed to allow for close placement of essential things like washing up and kitchen facilities, storage, grooming and bathing rooms, surgery or vet consulting rooms, isolation units, and a secure area for medicines and disinfectants.

There should also be a waiting area for clients, and toilets and a lounge area for the staff.

The Law

All commercial animal holding facilities (with the exception of veterinary hospital kennels) are licensed, and so are required to meet the standards of the licensing body. In addition, the facilities must meet local authority planning and building regulations, and health and safety. As with any commercial premises, waste produce is classified as industrial and must be collected by the local authority.

Different types of kennel facility are regulated by different authorities. Boarding and breeding kennels are licensed and inspected by the local authority (i.e. county council), Research kennels are regulated by the home office, and Quarantine kennels are regulated by DEFRA. Veterinary kennels (where run by licensed Veterinary surgeons) are not subject to inspection by any authority.

Regulations concerning the dimensions and conditions of the kennels are imprecise, requiring only that animals are given 'adequate space' and a 'suitable environment'. Local authority guidelines are changed frequently, but tend to only be enforced in the building of new facilities and not existing kennels.

The Animal Welfare Act ensures that dogs and cats have a suitable environment to live in, including in kennels. For more details see: <http://www.defra.gov.uk/foodfarm/faranimal/welfare/act/>

Where controlled drugs are kept on the premises, they must be locked away and a record of their use taken.

Types of Accommodation

The kennels themselves may be either purchased complete, purchased shed and cat cages, an adapted building, or purpose built buildings.

Types of accommodation include quarantine, boarding, hospital, whelping and puppy, training, private owner (small scale breeding kennels and kennels for show animals), and research kennels. The specific considerations of these are covered in other sections within this package.

End of Section

That's the end of the section on the General Principles of Small Animal Housing.