D. Species-specific provisions for dogs

1. Introduction

The domestic dog (*Canis familiaris*) is an inquisitive and highly social animal which actively seeks information about its surroundings, reflecting the behaviour of its ancestors in the wolf family. Although much of the day is spent resting, the dog requires a complex physical and social environment during the active phase.

Bitches seek solitude in a quiet area for parturition and rearing of young.

As aggression is a significant risk, care is needed to maintain dogs in socially harmonious groups. The recommendations provided are for the beagle, the most commonly used breed. Account should be taken of individual breed characteristics if other breeds are used.

2. The environment and its control

2.1. Ventilation

(See paragraph 2.1 of the General section)

2.2. Temperature

Dogs may be maintained within a wide room temperature range provided that their welfare is not compromised. Abrupt temperature changes and wide variations should be avoided where these could affect the physiology. A temperature range of 15°C to 21°C should be maintained when precise control is required for dogs under procedure (see paragraph 2.2.3 of the General Section).

As puppies have limited thermoregulatory control in the first ten days or so of life, additional local heating should be provided within the whelping enclosure.
2.3. Humidity
It is considered unnecessary to control relative humidity, as dogs can be exposed to wide fluctuations of ambient relative humidity without adverse effects.

2.4. Lighting
The holding of dogs under the natural twenty-four-hour light-dark cycle is acceptable. Where the light part of the photoperiod is provided by artificial lighting, this should be within a range of ten to twelve hours daily.

If natural light is totally excluded, low-level night lighting (5 to 10 lux) should be provided to allow dogs to retain some vision and to take account of their startle reflex.

2.5. Noise
Noise in dog kennels can reach high levels which are known to cause damage to humans, and which could affect dogs’ health or physiology. For these reasons it is important to consider methods of reducing noise in dog facilities. By addressing the dogs’ behavioural needs in the facility design, the level of vocalisation may be decreased e.g. socialisation and habituation of dogs to the presence of humans will reduce barking behaviour. Much of the noise is generated by the dogs’ own vocalisations, but may also be generated by husbandry operations within the facility and ingress from outside sources. Any source of noise that may stimulate further dog barking should therefore be limited as far as possible. Penetration of external noise can be reduced by appropriate siting of the facility and by appropriate architectural design. Noise generated within the facility can be reduced by noise absorbent materials or structures. Expert advice on noise reduction should be taken when designing or modifying dog accommodation.

2.6. Alarm systems
(See paragraph 2.6. of the General section)
3. Health

(See paragraphs 4.1. and 4.4. of the General section).

Two weeks is suggested as a minimum quarantine period and is also considered reasonable.

4. Housing, enrichment and care

4.1. Housing

Dogs should be housed in socially harmonious groups within the animal enclosure, unless the scientific procedures or welfare requirements make this impossible. Special care is needed when regrouping dogs or introducing an unfamiliar dog to a group. In all cases, groups should be monitored for social compatibility on an ongoing basis.

Outside runs provide an environmental enrichment opportunity for dogs in both breeding and user establishments and should be provided where possible.

Single-housing of dogs for even short periods can be a significant stress factor. Therefore, dogs should not be single-housed for more than four hours without justification on welfare or veterinary grounds. For single-housing for more than four hours on experimental grounds, see paragraph 4.5.2 of the General section.

In such circumstances, additional resources should be targeted to the welfare and care of these dogs. Additional human socialisation time, and visual, auditory and, where possible, tactile contact with other dogs should be provided for all single-housed animals on a daily basis.

Unless contra-indicated on scientific grounds, single-housed dogs should be allowed to exercise in a separate area with, if possible, other dogs, and with staff supervision and interaction, on a daily basis.
Stud dogs should, wherever possible, be housed in socially harmonious pairs or groups or with bitches.

Peri-parturient bitches should only be moved to the whelping enclosure between one and two weeks of expected parturition. While in the whelping enclosure they should have additional daily human contact.

Social behaviour in dogs develops between four and twenty weeks of age. During this period it is particularly important that the dog has social contacts with littermates, adult dogs (e.g. the bitch) and with humans, and is familiarised with conditions likely to be encountered during subsequent use. Daily handling during this sensitive stage of development is a prerequisite for the social behaviour of the adult dog and it has been shown that a short period of handling, even from the first day after birth onwards, is of importance as the young animals are already able to respond to scent and tactile stimulation.

Veterinary hospitalisation and isolation facilities must be provided. Where such facilities are below the space requirements outlined in this Code of Practice or limit social contact with other dogs, the amount of time spent in them by dogs needing treatment should be restricted to the minimum necessary and used only as directed by a veterinary surgeon.

4.2. Enrichment

The design of indoor and outdoor enclosures should allow some privacy for the dogs and enable them to exercise some control over their social interactions.

Separate areas for different activities should be provided. This can be achieved by, for example, inclusion of raised platforms and pen sub-divisions. Dog pens should be subdivided into separate sleeping and exercise area. This provides some environmental complexity and allows the animal to defecate/urinate away from its sleeping area.
The pen design should not overly restrict the dog’s ability to obtain information about its surroundings. Reducing solid partition height and use of horizontal rather than vertical bars will help with this. Provision of platforms within pens offers several benefits, provided that they have sufficient height so as not to limit the floor area below, including increasing the complexity of pens, providing a viewpoint for dogs and providing a retreat or sleeping area under the platform.

Dog treats and toys afford welfare benefits to the animals, providing these are used sensibly and their use is adequately monitored. As chewing is an important behaviour, items should be provided which meet this need.

The primary advantages of exercise are to allow additional opportunities for dogs to experience a complex and varied environment and to increase interaction with other dogs and humans. These will be particularly important where these needs cannot be fully met within the space provided by the animal enclosure. Therefore, unless contra-indicated on scientific or veterinary grounds, dogs should be removed to a separate area and allowed to exercise, with other dogs where possible, and with staff supervision and interaction, ideally on a daily basis.

4.3. Enclosures – dimensions and flooring

Animal enclosures, including the divisions between enclosures, should provide a robust and easy to clean environment for the dogs. In their design and construction they should seek to provide an open and light facility, giving the dogs comprehensive sight of other dogs and staff outside of their immediate animal enclosure.

4.3.1. Dimensions

These guidelines are intended to encourage the social housing of dogs and to permit adequate environment enrichment. It should be noted that within this concept and strategy every encouragement is given to holding dogs in large and socially harmonious groups both to increase the available floor space and to enhance socialisation opportunities.
Pens should have sufficient depth to allow nervous dogs to retreat from the front of the pen.

Dogs should never be forced to spend their entire lives outside and should at all times have access to an internal enclosure that meets the standards for construction and environmental control detailed in these guidelines. The internal enclosure should represent not less than 50% of the minimum space to be made available to the dogs, as detailed in Table D.1 below.

The space allowances detailed below are based on the requirements of beagles, but it should be noted that allowances significantly in excess may be required for giant breeds such as St Bernards or Irish wolfhounds. For breeds other than the beagle, space allowances should be decided in consultation with veterinary staff and the responsible authority.

**Table D.1. Dogs: Minimum enclosure dimensions and space allowances**

<table>
<thead>
<tr>
<th>Weight (kg)</th>
<th>Minimum enclosure size (m²)</th>
<th>Minimum floor area for one or two animals (m²)</th>
<th>For each additional animal add a minimum of (m²)</th>
<th>Minimum height (m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>up to 20</td>
<td></td>
<td></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>over 20</td>
<td></td>
<td></td>
<td></td>
<td>2</td>
</tr>
</tbody>
</table>

Dogs that are pair or group housed may each be constrained to half the total space provided (*text to be provided*) while they are undergoing procedures as defined in [UK legislation], if this separation is essential for scientific purposes. The period for which a dog should be so constrained should be minimised and should not in any event exceed four hours. This provision is made to encourage pair housing (particularly in toxicology studies) while at the same time allowing for the need to monitor feed intake and perform post-dosing observations.

Any further social or physical constraint, such as in a metabolism cage or physical restraint in a sling, may severely compromise the welfare of the
animals. Constraint in a metabolism cage or any similar type of housing for scientific purposes should be within a space that is as close as possible to that defined above and no less than that required for the animal to stretch fully, lie down and turn around.

4.3.2. Nursing bitches and litters, and puppies up to 7.5 kg
A nursing bitch and litter should have the same space allowance as a single bitch of equivalent weight. The whelping pen should be designed so that the bitch can move to an additional compartment or raised area away from the puppies.

The normal weaning age for puppies is six to nine weeks.

Table D.2. Dogs: Minimum enclosure dimensions and space allowances for post-weaned stock

<table>
<thead>
<tr>
<th>Weight of dog (kg)</th>
<th>Minimum enclosure size (m²)</th>
<th>Minimum floor area/animal (m²)</th>
<th>Minimum height (m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>up to 5</td>
<td></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>over 5 to 10</td>
<td></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>over 10 to 15</td>
<td></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>over 15 to 20</td>
<td></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>over 20</td>
<td></td>
<td></td>
<td>2</td>
</tr>
</tbody>
</table>

4.3.3. Flooring
The preferred flooring for dog accommodation is a solid continuous floor with a smooth non-slip finish. All dogs should be provided with a comfortable, solid resting area, for example, by the use of enclosure furniture such as raised beds or platforms.

Open flooring systems such as grids or mesh should not be used for dogs. Where there is a justification for open flooring, great care should be taken in their design and construction in order to avoid pain, injury or disease and to allow the animals to manifest normal behaviours. If any welfare problems do arise which are related to the flooring, veterinary advice should be sought and, if necessary, the dogs relocated onto solid flooring.
Pre-weaned puppies and peri-parturient and suckling bitches should not be kept in an open floor system.

The quality and finish of the floor of an outside run need not be to the standard of the inside enclosure, providing it is easily cleanable and not injurious to the dogs.

4.4. Feeding
(See paragraph 4.6. of the General section)

4.5. Watering
(See paragraph 4.7. of the General section)

4.6. Substrate, litter, bedding and nesting material
When dogs are held on solid floors, some litter or substrate material facilitates cleaning and minimises the necessity for regular washing or hosing down.

Provision of a warm, dry place to sleep is paramount. Peri-parturient and suckling bitches should be provided with a bed and bedding material to support whelping and the nursing of puppies. Puppies also benefit from the provision of bedding materials, as do the majority adult dogs.

4.7. Cleaning
Each occupied enclosure should be cleaned at least daily. All excreta and soiled materials should be removed from all areas used by dogs at least daily, and more frequently if necessary.

Wet cleaning by hosing down of enclosures should be carried out as necessary but should not result in the dogs becoming wet. When enclosures are hosed down, the dogs should be removed from the enclosure to a dry place and returned only when it is reasonably dry.
4.8. Handling

(See paragraph 4.1. above and paragraph 4.10. of the General section)

4.9. Humane killing

(See paragraph 4.11. of the General section)

4.10. Records

(See paragraph 4.12. of the General section)

4.11. Identification

(See paragraph 4.13. of the General section)

5. Staffing

The number of staff must be adequate to maintain the size of breeding colonies and good standards of husbandry and care. In setting staff levels it is most important to take into account the additional time for the essential human interactions required, especially with pups and single-housed animals.