PART 2G – GUIDANCE ON TRANSPORT OF ANIMALS BY AIR

1 Introduction

1.1 This Guidance has been prepared to assist with uniform application of Council Regulation (EC) 1/2005 on the protection of animals during transport and related operations (The Regulation) as it applies to live animal shipments carried in aircraft. Enforcement of the Regulation and other related provisions will be provided in the UK through: The Welfare of Animals (Transport) (England) Order 2006; The Welfare of Animals (Transport) (Wales) Order 2007; The Welfare of Animals (Transport) (Scotland) Regulations 2006; and The Welfare of Animals (Transport) Regulations (Northern Ireland) 2006.

1.2 Enforcement of the Regulation is the responsibility of Local Authorities (usually Trading Standards or Animal Health Officers) and the State Veterinary Service Agency.

1.3 The Regulation is directly applicable in all EU Member States with effect from 5 January 2007.

1.4 Technical Guidance for live animal shipments by air is given in order to consolidate relevant requirements into one place, and to assist with clarification of what Defra considers to be practical application and enforcement of the Regulation. However only a court of law will be able to give a definitive ruling concerning any matter in dispute between enforcers and transporters.

1.5 This Guidance focuses primarily on commercial air shipments of Farm Animals and Horses, but also covers transport of all other vertebrate species. A Defra booklet about “Protecting the welfare of pet dogs and cats during journeys - Advice to owners” gives guidance about these animals. This can be seen at: http://www.defra.gov.uk/animalh/welfare/pdf/dogs-catswelfare.pdf

1.6 Requirements set out here and in the Appendix are, for clarity of meaning, sometimes a précis of the legal wording in the Regulation. Not every provision has been included. The text of the Regulation should always be consulted.

2 Application

2.1 The Regulation is directly applicable, in all EU Member States, with effect from 5 January 2007.

2.2 Regulation only applies to transport “in connection with an economic activity” (Article 1.5) (commercial transport). Examples are given in part 1 of this guidance to assist with determination of the meaning of “economic activity”.

2.3 Transport of animals outside the scope of the Regulation is also regulated by the Welfare of Animals (Transport) (England) Order 2006 and parallel legislation in Scotland, Wales and Northern Ireland. The general principles of this guidance for air shipments should nevertheless be followed, as appropriate to the species, in order to comply with the requirement to protect the welfare of these animals during transport.

3 Notes

3.1 The Regulation defines a ‘Means of Transport’ as road or rail vehicles, vessels and aircraft used for the transport of animals (Article 2 (n)).

3.2 There is no requirement for inspection and approval of aircraft, air containers, or their fittings, before they are used to carry animals. However, the Competent Authority (Enforcement Officers may decide to carry out appropriate checks at any stage of a long journey (see 3.8) (Article 15.1 & Article 21(d)) in order to verify that the journey and the means of transport comply with the Regulation.

3.3 All ‘Means of Transport’, including aircraft when carrying animals, must comply with the general provisions of the Regulation, as applicable, in Annex I Chapters II and III.

3.4 Container is defined (Article 2 (g)) as any crate, box, receptacle or other rigid structure which is not a means of transport.

3.5 Containers for animals must comply with the provisions of the Regulation in Annex I Chapters II and III, as well as with the International Air Transport Association (IATA) Live Animals Regulations (LAR) (Annex I, Ch. II, 4.1) see Appendix.

3.6 When domestic cattle sheep goats and pigs (Farm Animals) and domestic equidae (Horses and Ponies etc.) are being transported on a long journey (see 3.8) the additional provisions in Annex I Chapter VI, where appropriate, must also be complied with.

3.7 ‘Journey’ is defined (Article 2 (j)) as the entire transport of the animals between places of departure and destination. This includes transport to and from the airport, and the time the animals spend there.

3.8 ‘Long Journey’ is defined (Article 2 (m)) as one that exceeds 8 hours from when the first animal is moved (i.e. loaded at the point of origin). Most air transport of animals is likely to be part of a long journey.

3.9 In order to fully protect the welfare of all animals being transported by air additional precautions and guidance (based on practical experience) should be followed and has been included in the Appendix.

4 Responsibilities

4.1 Every person involved with the commercial transport of animals has a responsibility (Article 3) as appropriate to their role in planning, organising, and carrying out the journey – to comply with the Regulation and to protect the welfare of the animals, in particular not to cause them injury or undue suffering. In the case of air transport such responsibility may be broadly, but not exclusively, described as follows.
4.2 Animal shippers (i.e. those who arrange for animals to be transported from one place to another) must plan the journey and have contingency arrangements in place should any delay occur. Examples might be delayed loading onto the aircraft; or its late departure caused by adverse weather or mechanical failure. They must ensure that the animal container or aircraft fittings are suitable and conform to the appropriate IATA LAR Container Requirement, that the aircraft operator is prepared to carry live animals, and that water feed and rest intervals for the animals can be complied with.

4.3 Aircraft owners/charterers/operators must ensure that the aircraft has suitable facilities for transport of animals by air, and that the aircraft commander, loadmaster and aircrew (as appropriate) are competent in and have specific instructions for air transport of animals.

4.4 Commanders, and loadmasters and aircrew under their authority must ensure that the aircraft and equipment are suitable for carriage of the animals concerned in the manner intended. They must ensure that the animals are loaded, carried and unloaded in a way which will protect their welfare. In particular they must ensure that the animals are accommodated in accordance with the IATA LAR, and that an appropriate environment of air quality and quantity, temperature and pressure is maintained whilst the animals are on the aircraft (Annex I Ch. II, 1.1(e)).

4.5 Airport ground-staff and Handling Agents must ensure that animal welfare is protected whilst the animals are waiting to be loaded onto the aircraft, or awaiting collection after unloading from the aircraft, and whilst being moved within the airport.

4.6 Attendants when accompanying animals during the flight must ensure, so far as possible taking into account access to animals and control of the conditions, that the welfare of the animals is protected. If unsuitable environmental conditions are noted, or other problems arise with the animals, the attendant should communicate with the aircrew and attempt to resolve the matter as quickly as possible.

5 Authorisation of transporters

5.1 All Transporters, defined as ‘any natural or legal person transporting animals on his own account, or for the account of a third party’ (Article 2(x)) must be authorised by the Competent Authority (Article 6.1) where the journey exceeds 65km (Article 6.7).

5.2 Authorisations are valid for not more than 5 years, and must be either for journeys up to 8 hours (‘Type 1’) (Article 10) or for long journeys (‘Type 2’) (Article 11). See section 3 in Part 1 of this guidance for detailed advice about authorisations.

5.3 In the case of air shipments (which are assumed to form part of a long journey) the Airline or aircraft operator/charterer will require a ‘Type 2’ authorisation where the flight is of more than 65 km, and the journey and the animals carried are within the scope of the Regulation.

6 Animal attendants – competence and training
6.1 Transporters (see 5.1) must ensure that an attendant accompanies the animals (Article 6.6). This could be a person provided by the shipper or a member of the aircrew.

6.2 The only exception to the requirement for an attendant is when the animals are in containers which are secured, adequately ventilated and, where necessary, contain enough food and water, in dispensers which cannot be tipped over, for a journey of twice the anticipated journey time (Article 6.6(a)). The meaning of ‘secured’ is unclear, but we understand it to refer to its being closed to prevent the escape of animals, rather than secured to the aircraft.

6.3 Transporters must ensure that personnel responsible for animals during transport have received training in relevant parts of the Regulation’s Annexes I and II (Article 6.4). Training may be by any suitable method.

6.4 The Commander, loadmaster and aircrew must be trained in and be competent to perform their duties with respect to carriage of animals as appropriate to their individual role in the operation. There is no requirement for any certificate of competence, but evidence of training may help the transporter to be sure that Article 6 has been fulfilled.

6.5 The animal attendant (if any) must be trained in and be competent to perform their duties with respect to carriage of the animals being transported as appropriate to their actual role in the operation. Evidence of training for attendants may help the transporter to be sure that Article 6 has been fulfilled.

6.6 Airport ground-staff and Handling Agents responsible for animals between delivery to or collection from the airport and loading or unloading from the aircraft should be trained in, and competent to perform, their role in protecting animal welfare.

6.7 See section 4 of the main guidance document for detailed advice about competence and training.
Annex

TECHNICAL REQUIREMENTS AND GUIDANCE

1    General

1.1 The aircraft and its fittings must be designed, constructed, maintained and operated so as to avoid injury and suffering and ensure the safety of the animals (Ch.II 1.1(a)).

1.2 The animals must be fit for the intended journey (Ch. I, 1). See section 2.3 of Part 1 of this guidance.

2    IATA Live Animals Regulations

2.1 The Regulation, in addition to other applicable provisions, requires that animals must be transported by air in containers, pens or stalls appropriate for the species, which comply with International Air Transport Association (IATA) Live Animals Regulations (LAR) (Ch. II, 4.1). This provision applies to all air shipments, not only those carried by IATA member airlines.

2.2 Container Requirements (which also include pens and stalls) are set out in Chapter 8.3 of the IATA LAR. There are ‘GENERAL’ requirements for a number of groups of animals and ‘SPECIFIC’ requirements for each species of animal. The general and specific requirements, when taken together, set out the minimum standard which must be complied with. A higher standard of container may be used. It should be noted that the illustrations are only examples, so individual container design may differ in appearance from that shown.

2.3 The Regulation only appears to require compliance with Chapter 8.3. However the LAR includes other requirements and advice, which cover important aspects of shipping animals by air. These include sections about animal behaviour, ground handling and loading procedures, documentation, and CITES. There is also worldwide information about various Government Regulations and Carrier Airline Variations.

2.4 The Regulation specifically refers to compliance with the 31st Edition, 1 October 2004 version of the IATA LAR. (Annex VI) However, the IATA LAR is revised annually by the IATA Live Animals and Perishables Board in light of available scientific evidence and practical experience. A new edition of the LAR becomes effective each 1st October (with the previous one becoming obsolete), and the IATA carriers (airlines) and air industry are obliged to work to the edition of the LAR in force at the time of the shipment. As each new edition of the IATA LAR is intended to improve the safety of animals being shipped by air there should be no conflict.

2.5 Copies of the IATA LAR (which are also available as a CD-ROM) may be purchased from IATA and their authorised distribution agents.

Specific information about transporting pet dogs and cats by air can be found at: http://www.iata.org/whatwedo/live_animals/pets.htm
3 Minimum space allowances (Stocking density) and height

3.1 Correct stocking of the animals according to species, weight, and age is the responsibility of the transporter and the attendant.

3.2 Minimum space allowances for horses and ponies, cattle, sheep and goats, pigs, and poultry are set in the Regulation (Ch. III, 2.1 and Ch. VII) but are reproduced here for information. Stocking Density Guidelines for these and several other species are also given in the IATA LAR Chapter 8.

**Horses**

<table>
<thead>
<tr>
<th>Weight Range</th>
<th>Area in m²</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-100 kg</td>
<td>0,42</td>
</tr>
<tr>
<td>100-200 kg</td>
<td>0,66</td>
</tr>
<tr>
<td>200-300 kg</td>
<td>0,87</td>
</tr>
<tr>
<td>300-400 kg</td>
<td>1,04</td>
</tr>
<tr>
<td>400-500 kg</td>
<td>1,19</td>
</tr>
<tr>
<td>500-600 kg</td>
<td>1,34</td>
</tr>
<tr>
<td>600-700 kg</td>
<td>1,51</td>
</tr>
<tr>
<td>700-800 kg</td>
<td>1,73</td>
</tr>
</tbody>
</table>

**Cattle**

<table>
<thead>
<tr>
<th>Category</th>
<th>Approximate weight (in kg)</th>
<th>Area in m² per animal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calves</td>
<td>50</td>
<td>0,23</td>
</tr>
<tr>
<td></td>
<td>70</td>
<td>0,28</td>
</tr>
<tr>
<td>Cattle</td>
<td>300</td>
<td>0,84</td>
</tr>
<tr>
<td></td>
<td>500</td>
<td>1,27</td>
</tr>
</tbody>
</table>

**Sheep and goats**

<table>
<thead>
<tr>
<th>Average weight (in kg)</th>
<th>Surface area per sheep/goat (in m²)</th>
</tr>
</thead>
<tbody>
<tr>
<td>25</td>
<td>0,20</td>
</tr>
<tr>
<td>50</td>
<td>0,30</td>
</tr>
<tr>
<td>75</td>
<td>0,40</td>
</tr>
</tbody>
</table>

*The loading density should be relatively high to preclude injury on take-off or landing or in the event of turbulence, although all animals must still be able to lie down. The climate, total journey time and hour of arrival should be taken into account in deciding on the loading density.*

**Pigs**

<table>
<thead>
<tr>
<th>Average weight</th>
<th>Surface area per pig</th>
</tr>
</thead>
<tbody>
<tr>
<td>15 kg</td>
<td>0,13 m²</td>
</tr>
<tr>
<td>25 kg</td>
<td>0,15 m²</td>
</tr>
<tr>
<td>50 kg</td>
<td>0,35 m²</td>
</tr>
<tr>
<td>100 kg</td>
<td>0,51 m²</td>
</tr>
</tbody>
</table>
### Poultry in containers

<table>
<thead>
<tr>
<th>Category</th>
<th>Space</th>
</tr>
</thead>
<tbody>
<tr>
<td>Day-old chicks</td>
<td>21-25 cm² per chick</td>
</tr>
<tr>
<td>Poultry weighing less than 1.6 kg</td>
<td>180 to 200 cm²/kg</td>
</tr>
<tr>
<td>Poultry weighing 1.6 kg and over but less than 3 kg</td>
<td>160 cm²/kg</td>
</tr>
<tr>
<td>Poultry weighing 3 kg and over but less than 5 kg</td>
<td>115 cm²/kg</td>
</tr>
<tr>
<td>Poultry weighing 5 kg and over</td>
<td>105 cm²/kg</td>
</tr>
</tbody>
</table>

*These figures may vary depending not only on the weight and size of the birds but also on their physical condition, the meteorological conditions and the likely journey time.*

3.3 Stocking density and numbers of animals for each container, pen or stall should have been arranged by the shipper (to the satisfaction of the carrier) before the animals arrive at the airport.

3.4 The loadmaster will need to know details of animal (and container) weights in order to make aircraft weight distribution calculations.

3.5 Sufficient space must be provided above the animals when standing in a normal position for airflow and ventilation to be effective (Ch. II 1.2).

### 4 Weather conditions and ambient temperature

4.1 Animals must not be shipped when the effects of weather conditions anticipated for the journey are likely to cause them injury or suffering (Ch. II 1.1(b)).

4.2 For transport by air several factors, including forecast ground temperature and humidity at airports of departure, transit (if any), and arrival will need to be considered when making this judgement.

4.3 If shipment of animals is likely to be refused on account of anticipated weather conditions (or for any other reason), the carrier should advise the shipper or agent as early as possible. This will enable the animals to be held at the premises of origin, or another suitable place, and could avoid unnecessary loading and unloading of the animals and the stress which this might cause.

### 5 Loading and unloading

5.1 Arrangements should be made for suitable equipment to be available for transfer of the animals from or to the road vehicle, and for loading into or unloading from the aircraft and/or containers.

5.2 When animals are walked onto or off the aircraft, the Regulation specifies maximum slope angles for the animal ramps (Ch. III, 1.4(a)):

- 20 degrees – for horses, pigs and calves;
- 26 degrees 34 minutes – for sheep and cattle (other than calves).
5.3 Foot battens, or similar anti-slip means, must be fitted to the ramp if its slope exceeds 10 degrees.

5.4 When animals are moved onto or off the aircraft by lifting platform this must have safety barriers to prevent falling or escape of the animals (Ch. III, 1.4(b)). This requirement will normally be met by the structure of the animal container.

5.5 Because any transfer of animals from or to a means of transport is likely to be stressful, it is recommended that such a transfer is effected in as quiet an area as possible. Where animals are walked between vehicle and container or aircraft suitable barriers should be erected to provide a secure passageway.

5.6 Adequate time should be allowed so that the loading or unloading can be effected in an orderly manner.

5.7 Loading of animals should take place as close to the expected time of take-off as possible. Whenever possible loading should be avoided in very hot ambient conditions. Animals should be unloaded as soon possible after the aircraft has landed.

5.8 In case any problem occurs with the aircraft it is recommended that vehicles delivering large consignments of animals for shipment, particularly where they are to be walked onto the aircraft, should remain at the airport until at least 15 minutes after the aircraft has taken off.

6 Ventilation, Temperature and Relative Humidity (Also see ‘Belly Holds’ at paragraph 7 below.)

6.1 Animals must be transported by aircraft in conditions where air quality, temperature and pressure can be maintained within an appropriate range during the entire journey, having regard to the species of the animals (Ch. II, 4.2).

6.2 The IATA LAR gives advice about temperature ranges for some species in Appendix C, and about animal heat and moisture load in Appendix D.

6.3 It is essential that adequate and appropriate ventilation is provided for the animals (Ch. III, 2.6). Apart from supplying them with oxygen and removing their waste gases, sufficient ventilation is necessary to maintain the air within and around their containers at a suitable temperature and humidity.

6.4 Animals produce heat and give off moisture which (for the majority of species) needs to be dispersed quickly to avoid a rapid deterioration of the environment surrounding them. A combination of high temperature and high relative humidity is likely to have a serious adverse effect on the animals, and can result in deaths if allowed to persist.

6.5 Animals produce more heat when disturbed, for example during loading, unloading, take-off and landing, than when at rest. It is therefore essential that the aircraft compartment is adequately ventilated at these times, otherwise a rapid build-up of heat is likely.

6.6 An aircraft’s own ventilation system may be less effective whilst the aircraft is on the ground, and during take-off and landing, than during the flight.
6.7 Arrangements should be made in advance for any additional equipment which may be required, such as a ground power unit or auxiliary ventilation, to be available for the aircraft whilst on the ground.

7 Belly holds (lower deck compartments)

7.1 Suitable lower deck compartments (belly holds) of aircraft can be used for live animal shipments - for which no in-flight access is required or needed – provided that all the relevant circumstances have been taken into account to ensure that the welfare of the animals is properly protected.

7.2 The ability to ventilate and regulate the temperature of an aircraft belly hold varies considerably. The arrangements vary between individual aircraft depending on the make and type, the compartment, and whether or not ‘standard’ or ‘special’ specifications have been fitted.

7.3 It is therefore essential that the aircraft operator, who should know the individual features of each of its aircraft, is satisfied that the belly hold to be used can be sufficiently ventilated and maintained at a satisfactory temperature during all stages of the proposed flight. This assessment should take into account the species, number, weight and size, and volume of the animals to be carried, and the heat and moisture that they will produce. Other cargo being carried at the same time will also need to be taken into account.

7.4 Experience has shown that, within a belly hold, certain pallet positions may be less well ventilated than others. This is a function of the actual position of air inlets and outlets, and the airflow patterns which are created by the cargo.

7.5 For practical purposes there is no in-flight access to the majority of belly holds. Although emergency access can be gained to some this is unlikely to be suitable for the purpose of tending animals carried there.

8 Access

8.1 The Regulation requires that access is provided to animals to allow them to be inspected and cared for (Ch. II, 1.1(f)) (Ch. II, 4.2) but ‘continual access’ is not specified.

8.2 Access needed to and available for animals during transport by air is dependent upon a number of factors. The following is intended as a guide.

Farm Animals and Horses and Ponies

- Containers must be constructed and positioned to permit inspection and care of the animals, and to feed and water them if necessary.

- When carried in the main deck of an aircraft, containers must be positioned so that there is access to each animal throughout the journey, including whilst in flight.

- When carried in a belly compartment, containers must be positioned to permit inspection, and if necessary care, of these animals whilst the aircraft is on the ground. Inspection and care may be achieved by unloading the animal container or other cargo.
Poultry. Domestic birds, rabbits, dogs, cats - other mammals and birds

- Containers must be constructed to permit appropriate inspection and care of these animals.

- If any of these animals require inspection and care during the journey, the container must be positioned to enable this to be undertaken at an appropriate time.

Other vertebrate and cold blooded animals

- The majority of animals which fall into this category will be shipped in containers which provide for their needs during transit, so it is unlikely that there will be any need for access during a flight.

- Containers must be constructed to permit inspection of the animals.

9 Lighting

9.1 The level of lighting at the loading point (Ch. III, 1.6), and in the aircraft (Ch. II, 1.1(i)), must be sufficient for inspection and care of the animals as appropriate to the species and the method of carriage. Lighting for inspection and care need only be provided when required, and may be portable. Some animal species travel best by air in dim light, others in darkness or semi-darkness.

10 Journey times and feed water and rest intervals

10.1 The Regulation specifically excludes air transport of horses and ponies and farm animals from provisions concerning water and feed intervals, journey times, and rest periods (Ch. V, 1.1). In effect, it treats the time that these animals are on an aircraft as a suspension of journey time.

10.2 But the Regulation has a general requirement that all animals shall be offered water, feed and the opportunity to rest as appropriate to their species and age. Also that mammals and birds must be fed at least every 24 hours and watered at least every 12 hours (Ch. III, 2.7).

10.3 The Regulation also requires that suitable food and water shall be available in adequate quantities:

- for poultry, and domestic birds and rabbits, unless the journey lasts less than 12 hours (disregarding loading and unloading time) (Ch. V, 2.1(a));

- for chicks of all species unless the journey lasts less than 24 hours and is completed within 72 hours of hatching (Ch. V, 2.1(b));

- for dogs and cats at intervals of no more than 24 hours for food and 8 hours for water (Ch. V, 2.2);

- for any other species at suitable intervals according to written instructions (provided by the shipper) (Ch. V, 2.3).
10.4 Those responsible for making arrangements for animals to be shipped by air should take the whole journey - from the premises of origin to the premises of final destination - into account when considering the needs of the animals with respect to feed, water and rest.

10.5 Each Container Requirement in the LAR gives specific guidance about feeding and watering for the species concerned, and the facilities needed for this.

11 Emergency treatment or slaughter of animals

11.1 The requirement concerning animals which fall ill or are injured during transport is that they must be separated from the other animals and receive first-aid treatment as soon as possible, be given appropriate veterinary treatment and if necessary undergo emergency slaughter or killing in a way which does not cause them unnecessary suffering (Ch. I, 4).

11.2 If safety regulations permit, an aircraft carrying animals on a flight which will exceed 3 hours must have a suitable means of emergency slaughter on board (Ch. II, 1.6). This should be made available, when needed, to the attendant or another person competent in its use.

11.3 However, the IATA LAR contains the statement:

“The use of humane killers or anaesthetic darts within the confines of an aircraft is extremely dangerous. If used incorrectly, damage to the aircraft and injury to the attendants, crew or animal could result. Administration of such devices is intended for experts only, and must be avoided in air transportation.”

11.4 The following guidance is given to assist with resolution of this apparent conflict between the Regulation and the LAR.

- The safety of the aircraft must be the first consideration.

- The circumstances of each case including the condition and species of the animal, and the time remaining until the aircraft lands, should be considered when determining what action needs to be taken.

- It is recommended that the aircraft commander has a procedure to enable advice to be obtained from a veterinarian, and consults the attendant, about appropriate action to take.

- An animal which is injured or becomes ill during transport by air must be given ‘first aid’ care, and if necessary veterinary treatment, as soon as possible.

- Separating an ill or injured animal from other animals may not be practical or possible in an aircraft.

- An animal which is seriously injured during transport by air, such that it cannot complete the flight without being caused unnecessary suffering, must be
slaughtered in a humane manner, as appropriate to the species, as soon as is practicable.

- If the seriously injured animal is accessible during the flight, and a means of humane slaughter appropriate for the species is available on the aircraft, and there is a person competent to use it, the animal should be humanely slaughtered.

- If the animal is not accessible, or there is no means of slaughter or competent person, the animal must be humanely slaughtered as soon as practicable after the aircraft lands.

12 Restrictions and additional requirements

12.1 Unbroken Equidae are limited to a maximum of four animals in an undivided group (Ch. III, 2.4).

12.2 Unbroken horses may not be transported on a long journey (Ch. III, 1.9).

12.3 Equidae must be in individual stalls when on a long journey. But a mare and her foal may travel together (Ch. VI, 1.6).

12.4 Long journeys are prohibited for:

- unregistered domestic equidae of 4 months age or less;

- calves of 14 days age or less;

- pigs of 10kg weight or less - unless they are accompanied by their mother (Ch. VI, 1.9).