Review of the Australian Standards for the Export of Livestock

Technical Advisory Committee

Working Draft – Reformatted Standard

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Review of the Australian Standards for the Export of Livestock - Technical Advisory Committee
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Preface

The Export Standards for Australian Livestock [Year] (ASEL) builds on the existing regulatory framework for livestock exports and replaces the *Australian Standards for the Export of Livestock (ASEL) v2.3 2011* in its entirety.

These standards are applied by the *Australian Meat and Live-stock Industry (Standards) Order 2005*, made under section 17 of the *Australian Meat and Live-stock Industry Act 1997*.

The objective of these standards is to set out the requirements to ensure animals are fit to export and manage the risks to animals' health and welfare throughout the export voyage.

Under these standards all information applies to the export of livestock both by sea and by air. Where differences exist due to the means of export transportation, these will be clearly specified.

This edition is a general revision to collate the current regulatory requirements of *Australian Standards for the Export of Livestock (ASEL) v2.3 2011* and the export advisory notices (EANs) published since 2011, and to modernise the format of these standards.

Scope

The scope of these standards is to specify the:

(a) additional domestic activities required to prepare animals for the export voyage, beyond the requirements in other national standards and/or state and territory legislation

(b) domestic facilities and resources to be used to prepare animals for export

(c) management of animals throughout the export voyage in order to maintain their health and welfare status

(d) minimum required on-board resources

(e) record keeping and reporting obligations, and

(f) chain of responsibility for the animal's health and welfare.

Application

These standards are intended to be read in conjunction with relevant mandatory laws, regulations and guidelines for the treatment, preparation, transport and carriage of livestock from Australia, including:

(a) *Export Control Act 1982*

(b) *Export Control (Animals) Order 2004*

(c) *Australian Meat and Live-stock Industry Act 1997*

(d) *Australian Meat and Live-stock Industry (Export Licensing) Regulations 1998*

(e) Relevant state and territory legislation (e.g. animal welfare/ prevention of cruelty to animals/ farm practices relating to livestock etc.)

(f) National Model Codes of Practice for the Welfare of Animals and Australian Animal Welfare Standards and Guidelines including specifically; the Australian Animal Welfare Standards and Guidelines for the land transport of livestock

(g) Marine Order 43 (Cargo and cargo handling - livestock) 2018 made by the Australian Maritime Safety Authority

(h) International Air Transport Association (IATA) Live Animal Regulations

(i) *International Convention for the Prevention of Pollution from Vessels 1973*, as modified by the Protocol of 1978 relating thereto (MARPOL 73/78): Annex V: Prevention of pollution by garbage from vessels.

Vessels used for the export of livestock must comply with international and Australian Standards, including Australian Certificate for the Carriage of Livestock (ACCL) requirements.

The transport of livestock must be undertaken in accordance with the Australian Animal Welfare Standards and Guidelines for the land transport of livestock (Land Transport Standards), any requirements of state and territory legislation, ASEL, and *importing country requirements*. All livestock movements must comply with the National Livestock Identification System (*NLIS*) as required by Australian state and territory governments.

Exporters seeking to export some kinds of animals that do not meet the fit to export requirements under these standards because their export is deemed higher risk but are otherwise in good health, may be exported with an appropriate risk management plan, approved by the relevant Australian Government agency. Further details of the exceptions that may be considered are contained in Appendix M.

Compliance

These standards must be complied with as part of:

(a) the conditions of a livestock export licence

(b) the registration of a premises to be used for holding and assembling livestock for export, and

(c) an exporter's approved arrangement for the export of livestock, particularly in the preparation of livestock in order to be granted an *export permit* and health certificate for the export consignment.

Failure to comply with these standards may result in refusal to grant an *export permit* for affected consignment/s and/or performance management and compliance action including cancellation or suspension of registration or licence.

Non-compliance with any of the relevant mandatory laws, regulations and guidelines for the treatment, preparation, transport and carriage of livestock from Australia, would be considered to be material to the agency's assessment of competency and integrity of a person or company to continue to hold an approved arrangement, premises registration and/or export licence.

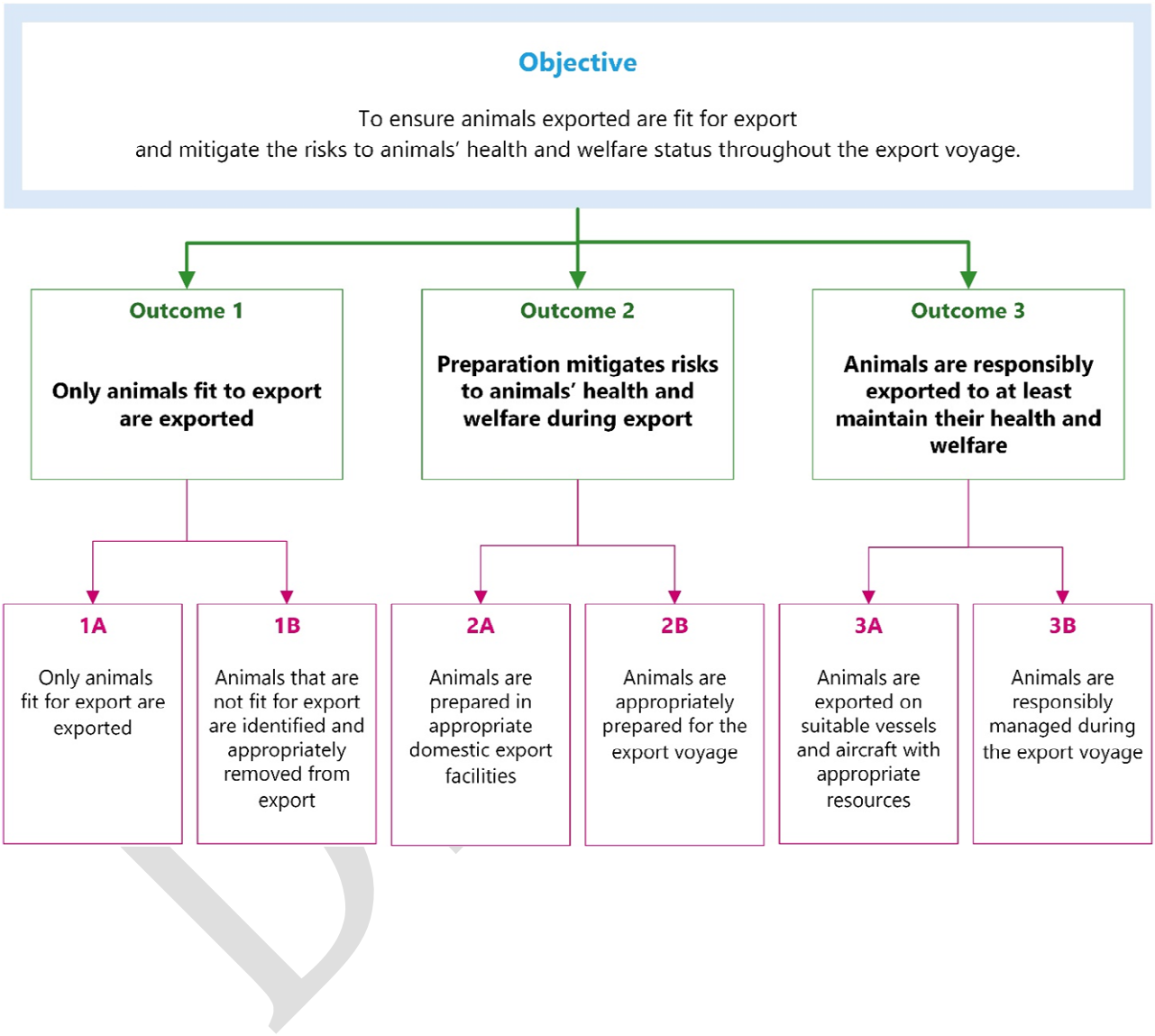
Outcomes

These standards are grouped into three core outcomes to achieve the objective:

(a) Animals are fit to export.

(b) Animals are appropriately prepared in order to mitigate the risks to their health and welfare during export.

(c) Animals are responsibly managed in order to maintain their health and welfare status during the export voyage.



Definitions

For the purposes of these standards the definitions below apply.

Accredited stockperson

Stockpersons who are accredited by LiveCorp for the shipboard husbandry of livestock.

Accredited veterinarian

A veterinarian who is accredited under section 4A.07 of the *Export Control (Animals) Order 2004* to carry out duties in relation to the export of livestock. Otherwise known as an Australian Government Accredited Veterinarian (AAV).

Adverse effect

An abnormal, harmful or undesirable effect on an animal that causes anatomical or functional damage, irreversible physical changes, or increases in susceptibility to other biological, chemical, or environmental stresses.

AMSA

AMSA means the Australian Maritime Safety Authority established by the *Australian Maritime Safety Authority Act 1990*.

Animal welfare

Animal welfare refers to the ability of an animal to cope with the conditions in which it lives, as described in the OIE Terrestrial Animal Health Code.

An animal is in a good state of welfare if (as indicated by scientific evidence) it is healthy, comfortable, well nourished, safe, able to express innate behaviour, and if it is not suffering from unpleasant states such as pain, fear, and distress.

Good animal welfare requires disease prevention and appropriate veterinary treatment, shelter, management and nutrition, humane handling and humane slaughter or killing. Animal welfare refers to the state of the animal; the treatment that an animal receives is covered by other terms such as animal care, animal husbandry, and humane treatment.

The concept of animal welfare involves the internationally recognised 'five freedoms', which are: freedom from hunger, thirst and malnutrition; freedom from fear and distress; freedom from physical and thermal discomfort; freedom from pain, injury and disease; and freedom to express normal patterns of behaviour.

Animals

The term animal or animals has the same meaning in these standards as the term 'live-stock' has in the *Export Control (Animals) Order 2004*.

Appropriately segregated

Livestock of the following types must be segregated in different lines or pens:

- animals of different species
- animals of the same species sourced for different end purposes, i.e. feeder animals must be segregated from breeder animals of the same species
- young animals from older animals
- animals of a dissimilar size
- any animals covered by an ASEL management plan from those that aren't covered by an ASEL management plan
- camels of different sexes.

Approved premises

A premises approved in accordance with the *Export Control (Animals) Order 2004* for the preparation, quarantine or isolation of livestock for export by air.

Authorised officer

A person appointed under section 20 of the Export Control Act 1982 as an Australian Government Authorised Officer.

Average daily mortality rate

A rate that is calculated by dividing final voyage mortality rate by the length of the *voyage* (in days).

Bos indicus

Cattle with 50 per cent or more *Bos indicus* genetics.

Bos taurus

Cattle with 50 per cent or more *Bos taurus* genetics.

Camelids

Includes camels, llamas, alpacas and vicunas.

Class

A group of livestock of the same species that share a common characteristic such as age, size or sex, or some other physiological characteristic such as pregnancy.

Clear day

A full day (from midnight to midnight) during which livestock are not subject to any feed or water *curfew*, and are not handled (including shearing), treated or moved from their holding pens or paddocks.

Competent pregnancy tester

A person permitted under a relevant state or territory law to conduct pregnancy tests in livestock.

Competent pregnancy testers may only diagnose pregnancy for feeder/slaughter cattle or buffalo by manual palpation and are not approved to use ultrasound diagnoses or the IDEXX pregnancy test. They cannot complete pregnancy testing of breeder or buffalo consignments for any market.

Competent stock handler

A person is a competent stock handler for the purpose of performing a requirement of these standards if he or she has the requisite knowledge, skills, experience, attitude and behaviour to perform the requirement, and has the ability to manage and handle animals humanely, efficiently and capably at the relevant stage(s) of the livestock export chain.

Supporting evidence of competency includes any of the following:

- records of on-the job training
- relevant experience
- recognised training and staff training registers
- induction training
- supervisor sign-off for specific tasks, or
- demonstrable ability.

Curfew

Also known as ‘empty out’ time, curfew is the deliberate and variable period of water and /or ‘green’ fresh feed deprivation before another procedure, such as weighing or transport. Any water curfew must be included in the total water-deprivation time with respect to transport journeys.

Disembarkation

The unloading of livestock, commencing at the first overseas port (and acceptance of the consignment, or part thereof, by the competent authority of the country). It commences with the unloading of the first animal and ends when the last animal is unloaded from the vessel.

Emaciated or over-fat body condition

Livestock is in an emaciated or over-fat body condition if it is assessed by a competent person against the corresponding species scoring system within Appendix A, as having the following body scores:

Species	**Body condition**		
	Emaciated (inclusive)	**Fit to export (inclusive)**	**Over-fat (inclusive)**
Cattle	less than 2	more than 2, but less than 5	5 or more
Buffalo	less than 2	more than 2, but less than 5	5 or more
Pregnant cattle	Less than 4	more than 4, but less than 5	5 or more
Dairy cattle	less than 3.5	more than 3.5, but less than 5.5	5.5 or more
All other livestock	less than 2	more than 2, but less than 4	4 or more

Euthanasia

The killing of an animal in a humane manner which causes immediate loss of consciousness and then rapid death of the animal, by a method approved under Australian Animal Welfare Standards or National Model Code for the species.

Export permit

A permit issued by the Secretary under the *Export Control (Animals) Order 2004* to export live animals from Australia.

Extended long haul voyage management plan

Exporters require an approved extended long haul voyage management plan as part of their approved arrangement before they submit a Notice of Intention (*NoI*). Requirements for an extended long haul voyage management plan are specified in the *Guidelines for Approved Arrangements* available on the relevant Australian Government agency's website.

Extreme weather

Temperature and climatic conditions (e.g. rain, hail, snow, wind, humidity and heat) that either individually or in combination, are likely to expose livestock to heat or cold stress.

Fat-tailed sheep

A general type of domestic sheep known for their distinctive large tails and hindquarters. Fat-tailed sheep are hardy and adaptable, able to withstand the tough challenges of desert life.

Fit to export

To be fit to export, animals must:

- meet the *importing country requirements*
- have the appropriate characteristics, i.e. not meet any of the rejection criteria specified in this standard
- not be showing behavioural or physical signs of illness or disease, or a condition that could cause the decline of the animal's health and welfare during export preparation or the export voyage.

Fodder

Any feed intended for consumption by livestock, including hay, pellets, or grain.

Hair sheep

Any sheep breed that grows hair rather than wool,

Heat stress risk assessment (HSRA)

The agreed heat stress risk assessment for livestock export voyages from Australia by sea is performed by a software program developed by LiveCorp and Meat and Livestock Australia called 'HotStuff'. The latest version of the software approved by the relevant Australian Government agency must be used.

Note: this is relevant to the requirement for a heat stress risk assessment under paragraph 4G.3.

Hospital pen

A designated area reserved for the sole purpose of special care of weak, sick or injured animals. Hospital pens/stalls need to comply with Division 12 or sections 73, 74 and 75 of Marine Order 43.

IATA Live Animal Regulations

The *International Air Transportation Association Live Animal Regulations* current edition as in force.

Importing country requirement

A reference to *importing country requirements* is a reference to:

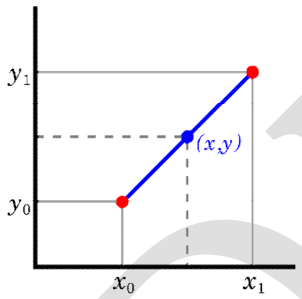
- the requirements of the relevant importing country protocol, and
- the requirements or conditions of the relevant import permit (including any waiver or variation of a requirement of the importing country protocol).

Land Transport Standards

The *Australian Animal Welfare Standards and Guidelines for the Land Transport of Livestock* published by Animal Health Australia.

Linear interpolation

Linear interpolation is a method of finding new values for any function using two given value points. A graphical representation of linear interpolation is below:



Livestock

As defined under 'live-stock' in the *Export Control (Animals) Order 2004*, livestock (live-stock) means cattle, sheep, goats, deer, buffalo and camelids (that is, camels, llamas, alpacas and vicunas) and includes the young of an animal of any of those kinds.

Load plan

A valid load plan for export by sea must be compliant with relevant vessel safety standards and include details of:

- the net available pen area on the vessel (excluding the area of the hospital pens) according to the vessel's record of equipment for the carriage of livestock
- the number of livestock that may be loaded on the vessel, stocking densities and pen group weight range tolerances for the species based on the minimum pen area per head for the relevant livestock species and *class* as specified in Appendix H.

The load plan for export by sea must also give due consideration to:

- the requirements of Marine Order 43, in particular Division 12 (hospital pens) and Division 4 (Restrictions on carriage of livestock)

- differences in handling, holding and husbandry needs of each livestock species, number of animals, sex, *class*, reproductive status, weight, breed, origin, preparation and transport history
- pen layout, available pen area for the particular consignment, ventilation, vessel characteristics, port rotation, discharge sequence and stability
- ensuring the livestock are Appropriately Segregated on-board
- separation of cattle or buffalo from other species by a passageway, an empty pen or an effective impermeable barrier, to the satisfaction of an accredited stock person or *accredited veterinarian*
- location of livestock in relation to health and welfare (there must be no penning or location of livestock on or in any part of a vessel where the livestock, livestock fittings, livestock equipment or carrying arrangements could substantially compromise the animal's health and/or welfare)
- any relevant HSRA stocking density outputs.

Marine Order 43

Marine Order 43 means *Marine Order 43 (Cargo and cargo handling - livestock) 2018* made under subsection 342(1) of the *Navigation Act 2012*.

Mortality rate

Mortality means, in respect of any species, the percentage determined by dividing the number of deaths of that species occurring while on the vessel (including during loading and unloading) by the total number of that species loaded and multiplying the resultant figure by 100. Mortalities which occur after arrival in the port but before the animal can be discharged must be included in the daily and end-of-voyage reports.

NLIS

NLIS (National Livestock Identification System) is Australia's system for the identification and tracing of livestock. It is a whole-of-life identification system that enables individual animals to be tracked from property of birth to slaughter for disease control, food safety, product integrity and market access purposes. NLIS provides the facility for livestock movements to be logged in a secure central database.

NoI

A Notice of Intention (NoI) to export submitted by the exporter under the *Export Control (Animals) Order 2004*.

Notifiable incident

An incident that has the potential to cause serious harm to the health and welfare of animals.

For the export of livestock by sea, a notifiable incident includes, but is not limited to:

- a shipboard mortality rate equal to, or greater than, a *reportable level*
- an *average daily mortality rate* of greater than a *reportable level*.
- disablement of ventilation, feeding and/or watering systems on a vessel carrying livestock, causing a serious *adverse effect* on *animal welfare*
- rejection of livestock at an overseas port or by an importing country government
- diagnosis or reasonable suspicion of an emergency disease in a consignment of livestock
- loss of a vessel (a marine casualty of a vessel) carrying livestock
- disablement of a vessel carrying livestock, such that assistance is required for return to port
- any other incident that has a serious *adverse effect* on animal health or welfare, and/or
- an act of terrorism or piracy.

For the export of livestock by air, a notifiable incident includes, but is not limited to:

- loss of aircraft
- breakdown of ventilation systems on an aircraft carrying livestock causing a serious *adverse effect* on *animal welfare*
- rejection of livestock at an overseas airport or by an importing country government
- a mortality rate equal to or greater than the *reportable level*, and/or
- any other incident that has an *adverse effect* on *animal welfare*.

Pastoral and station sheep

Sheep that have been sourced from the pastoral zone, as identified in Appendix N.

Portable livestock unit (PLU)

A portable livestock unit, and includes a box, platform, containers or other arrangement used to form pens or stalls for the carriage of livestock. Portable livestock units need to comply with Division 13 of Marine Order 43, a 'portable equipment' under that Order.

Note: Relevant to Appendix E.

Prepared for export

Includes actions taken from sourcing through to the completion of loading the animals onto the vessel or aircraft.

Pregnancy test

A valid pregnancy test is that which has been completed in accordance with the species pregnancy test requirements within the testing criteria section of these standards.

Registered premises

Premises registered for holding and assembling livestock for export in accordance with the *Export Control (Animals) Order 2004*.

Registered veterinarian

A person who is registered under the law of a State or Territory as a veterinarian, veterinary practitioner or veterinary surgeon, as defined in the *Export Control (Animals) Order 2004*.

Reportable level

A reportable level is:

- A mortality rate for a species of the percentage listed below, or three animals, whichever is the greater number of deceased animals:
  - sheep and goats: 1 per cent
  - cattle and buffalo: 0.5 per cent
  - camelids: 2 per cent
  - deer: 2 per cent, and
- An *average daily mortality rate* for a species of the percentage listed below:
  - cattle exports: 0.025 per cent
  - buffalo exports: 0.025 per cent
  - sheep exports: 0.05 per cent
  - goat exports: 0.05 per cent.

Spay declaration

A valid spay declaration for feeder or slaughter cattle or buffalo, is a written declaration by the vendor certifying either the animal has been spayed:

- not less than 280 days before export, or
- using the Willis dropped ovary technique not less than 30 days before export.

Sufficient personnel

The number of people required to ensure good *animal welfare* outcomes.

Unfit to export

Livestock are unfit to export if they meet rejection criteria in these standards, or do not meet tests results or other eligibility criteria for *importing country requirements*.

Voyage

A voyage covers the period from the time the first animal is loaded onto the vessel, until the time the last animal is unloaded at the final port of *disembarkation*.

Water deprivation time

The time that animals can be deprived of access to adequate water of a quality to maintain good health and welfare. Water deprivation time is the total continuous period of water deprivation, starting when all animals last had access to water. Each of the below must be included when calculating the total water deprivation time with respect to transport journeys:

- time off water during mustering and when yarded after mustering
- *curfew*
- all time on the transport vehicle, whether moving or stationary, and
- any time without water after unloading, such as at a saleyard, spelling centre or registered or *approved premises*.

Note: this term is used in Appendix B.

Outcome 1—Animals are fit to export

1A Only animals fit to export are sourced and prepared for export

1A.1 Inspection of animals prior to export

(a) Animals must be inspected regularly to ensure they are, and remain, *fit to export*. All animals must be inspected on-farm, and in accordance with the inspection requirements of the *Land Transport Standards* and as per either 1A.1.1 or 1A.1.2 depending on the intended mode of transport for export. Animals that are *unfit to export* must, in accordance with part 1B, not be sourced or *prepared for export*.

1A.1.1 Inspection for export by sea

(a) In addition to the inspection requirements of the *Land Transport Standards*, at a minimum, livestock to be exported by sea must be individually inspected by a *competent stock handler* familiar with the requirements of the consignment (unless otherwise specified) to determine if the animals remain *fit to export*:

(i) upon the animals being unloaded into a *registered premises*

(ii) daily whilst the animals are in the *registered premises* by a *competent stock handler*

(iii) prior to inspection by an *authorised officer*, and

(iv) immediately prior to the animals being loaded onto the vessel.

(b) If goats are to be exported by sea, they must be inspected at the *registered premises* by an *authorised officer* or *accredited veterinarian* on at least two (2) occasions during export preparation (excluding the day of delivery and the day of final inspection prior to loading) to confirm the goats have been held in the *registered premises* for five (5) *clear days* and fed appropriately as per Appendix D.

1A.1.2 Inspection for export by air

(a) In addition to the inspection requirements of the Land Transport Standards, to be exported by air livestock must be individually inspected by a competent person familiar with the requirements of the consignment (unless otherwise specified) to determine if the animals remain *fit to export* at a minimum:

(i) upon the animals being unloaded into a premises

(ii) daily whilst the animals are in the premises, and

(iii) once loaded, immediately prior to the departure of the aircraft.

1A.2 Animals must meet the importing country requirements

(a) Livestock sourced for export must meet the requirements set out in the applicable importing country protocol and import permit, such as sex, breed, and property clearances etc. Upon inspection, any animal that does not meet the *importing country requirements* is *unfit to export*. Animals that are *unfit to export* must, in accordance with part 1B, be removed from the export consignment.

1A.3 Animals have a suitable health and welfare status for export

(a) Livestock must be of a suitable health and welfare status in order to be *fit to export*. Upon inspection, any animal that meets the rejection criteria within these standards is not *fit to export*. In addition, any livestock showing behavioural or physical signs of illness or disease, or a condition that could cause the decline of the animal's health and welfare during export preparation or on the export

voyage, is *unfit to export*. Animals that are *unfit to export* must, in accordance with outcome 1B, be removed from the export consignment.

1A.3.1 Rejection criteria—All livestock

Any animal that meets any of the following rejection criteria is not *fit to export*:

(a) Livestock must not be sourced or *prepared for export* if they are showing signs consistent with any of the following rejection criteria:

Systemic conditions	*Emaciated or over-fat body condition* [refer definitions and Appendix A]. Anorexia (inappetence). Uncoordinated, collapsed, weak. Unwell, lethargic, dehydrated. Ill-thrift.
Gastrointestinal	Dysentery or profuse diarrhoea. Bloat.
Nervous system	Neurological symptoms (head tilt, circling, Incoordination). Abnormal, aggressive, intractable or violent behaviour.
External/skin	Generalised papillomatosis or generalised ringworm, dermatophilosis. Generalised and extensive buffalo fly lesions. Generalised skin disease. Visible external parasites. Significant lacerations. Discharging wounds or abscesses. Cutaneous myiasis (flystrike). Balanto-posthitis (pizzle rot). Blood/discharge from reproductive tract (vulva or prepuce).
Head	Blindness in one or both eyes. Cancer eye. Keratoconjunctivitis (including pink eye). Scabby mouth. Excessive salivation. Nasal discharge, the cause of which may affect the health or Welfare of the livestock. Severe coughing, or respiratory distress—difficulty in breathing. Un-healed de-horning or tipping wounds.
General	Lactating, unless with calves at foot and being transported by air. Lameness or abnormal gait. Abnormal soft tissue or bony swellings.

(b) In addition to the above, all livestock with horns must not be sourced or *prepared for export* if they have any of the following:

(i) untipped sharp horns (horns must be blunt)

(ii) horns that are turned in so as to cause damage to the head or the eyes

(iii) horns that would endanger other animals during transport, or

(iv) horns that would restrict access to feed or water during transport.

(c) Female livestock must not be treated with a prostaglandin drug within 14 days of export, and not during the 60 day period before export unless they have been pregnancy tested immediately before prostaglandin treatment and declared to be in the first trimester of pregnancy or not detectably pregnant.

(d) Mobs with unusual mortalities over the whole period of pre-export isolation are not *fit to export* and the whole mob must be rejected.

(e) In addition, for export by air, all eligible pregnant livestock or livestock that have given birth in the last 48 hours are not *fit to export* unless accompanied by a veterinary certificate certifying the animal is fit to travel and there is no evidence of imminent parturition.

(f) Animals intended to be exported for human consumption must comply with Australian food safety requirements, including standards for chemical residues or environmental contaminants.

1A.3.2 Rejection criteria—Cattle

Further to 1A.3.1:

(a) All cattle must have been weaned for at least 14 days prior to sourcing for export.

(b) If horned, cattle must have horns no longer than 12 cm and the nonvascular horn tip must be removed to a diameter of three (3) cm, unless otherwise agreed by the relevant Australian Government agency

Note: Australian Government approval is via a long horn management plan as described in Appendix M.

(c) For export by sea, cattle must have an individual liveweight between 200 kg and 650 kg inclusive, unless otherwise agreed by the relevant Australian Government agency.

Note: Australian Government approval is via a light or heavy cattle management plan as described in Appendix M.

(d) In addition to (c), for export by sea:

(i) female feeder or slaughter cattle must be determined not to be detectably pregnant by a valid *pregnancy test* or accompanied by a valid *spay declaration*.

(ii) female breeder cattle must be tested in accordance with the requirements of a valid *pregnancy test* and determined to be not be more than 190 days pregnant at the scheduled date of discharge from the vessel.

(iii) *Bos taurus* cattle from an area of Australia south of latitude 26° south must not be sourced for export on voyages that will cross the equator between 1 May to 31 October (inclusive) unless:

A. an agreed livestock heat stress risk assessment indicates the risk is manageable as per the testing criteria specified in these standards, and

B. if female, have been determined to be not detectably pregnant and tested in accordance with requirements of a valid *pregnancy test*.

[*Note for readers: (d)(iii)(A) may not be needed if 3A.4(a)(ii) is accepted.]*

(iv) *Bos taurus* cattle with a body condition score of four (4) or more must not be sourced for export from, or exported through, any area north of latitude 26° south from 1 October to 31 December (inclusive).

(e) For export by air, cattle have a liveweight of more than 150 kg prior to sourcing for export. In addition female breeder cattle must not be more than 250 days pregnant at the scheduled date of departure and tested in accordance with the requirements of a valid *pregnancy test*.

1A.3.3 Rejection criteria—Buffalo

Further to 1A.3.1:

(a) Buffalo must have been weaned for at least 14 days prior to sourcing for export.

(b) If horned, buffalo must have horns no longer than the spread of the ears, unless otherwise agreed by the relevant Australian Government agency.

Note: Australian Government approval is via a long horn management plan as described in Appendix M.

(c) For export by sea, buffalo must have an individual liveweight between 200 kg and 650 kg inclusive. unless otherwise agreed by the relevant Australian Government agency.

Note: Australian Government approval is via a light or heavy buffalo management plan as described in Appendix M.

(d) In addition, for export by sea:

(i) female feeder or slaughter buffalo must have been determined to be not detectably pregnant tested in accordance with the requirements of a valid *pregnancy test*, or accompanied by a valid *spay declaration*.

(ii) female breeder buffalo must be tested in accordance with the requirements of a valid *pregnancy test* and determined to be no more than 220 days pregnant at the scheduled date of discharge from the vessel.

(e) For export by air, all female breeder buffalo must be no more than 250 days pregnant at the scheduled date of departure and tested in accordance with the requirements of valid *pregnancy test*.

1A.3.4 Rejection criteria—Sheep

Further to 1A.3.1:

(a) All sheep must have been weaned for at least 14 days prior to sourcing for export.

(b) If horned, sheep must have horns no longer than one full curl, unless otherwise agreed by the relevant Australian Government agency.

Note: Australian Government approval is via a long horn management plan as described in Appendix M.

(c) All female feeder or slaughter sheep over 40 kg and all female *fat-tailed sheep* must be determined to be not detectably pregnant and tested in accordance with the requirements of a valid *pregnancy test*.

(d) In addition, for export by sea, all sheep must:

(i) Have a liveweight of more than 32 kg

(ii) Have wool not more than 25 mm in length

Note: This requirement does not apply to *hair sheep* breeds.

(iii) Either be:

A. 10 days or more off shears when sourced, if accommodated in paddocks at the *registered premises*, or

B. shorn during the 10 day period before export, and given at least one (1) *clear day* between shearing and loading for export, if accommodated in sheds at the *registered premises*.

Note: Refer definition of a *clear day*, and interaction with provisions relating to holding time in registered premises.

(iv) If female breeder sheep, must be tested in accordance with the requirements of a valid *pregnancy test* and determined to be not more than 100 days pregnant at the scheduled date of discharge from the vessel.

(v) Not be sourced for export through any ports north of 26° south from 1 November to 31 May (inclusive) in the following year.

(e) For export by air, sheep must have a liveweight of more than 20 kg. In addition all female breeder sheep over 40 kg must be tested in accordance with the requirements of a valid *pregnancy test* and determined to be not more than 115 days pregnant at the scheduled date of departure.

(f) The following classes of livestock must not be *prepared for export* by sea to the Middle East during the period from 1 May to 31 October:

(i) For sheep and goats held in paddocks at the *registered premises*:

a. pastoral sheep and station sheep

b. sheep less than 34 kg and with no permanent incisors, and

c. sheep and goats that have been held on trucks for more than 14 hours.

1A.3.5 Rejection criteria—Goats

Further to 1A.3.1:

(a) All goats must have been weaned for at least 14 days prior to sourcing for export.

(b) If horned, goats must have horns no longer than 15 cm long, or, if the ends of the horns are no further than 20 cm apart, horns no longer than 22 cm, unless otherwise agreed by the relevant Australian Government agency.

Note: Australian Government approval is via a long horn management plan as described in Appendix M.

(c) All goats must have become conditioned to being handled and to eating and drinking from troughs for a minimum of 21 days prior to transfer to the registered or *approved premises*.

(d) If female feeder or slaughter goats, must be determined not to be detectably pregnant and tested in accordance with the requirements of a valid *pregnancy test*.

(e) For export by sea, all goats must have a liveweight of more than 24 kg, and if they are female breeder goats, be tested in accordance with the requirements of a valid *pregnancy test* and determined to be no more than 100 days pregnant at the scheduled date of discharge from the vessel.

(f) For export by air, all goats must have a liveweight of more than 14 kg, and if they are female breeder goats, must not be more than 115 days pregnant at the scheduled date of departure and tested in accordance with the requirements of a valid *pregnancy test*.

1A.3.6 Rejection criteria—Camelids

Further to 1A.3.1:

(a) All female feeder or slaughter camelids must have been determined to be not detectably pregnant and tested in accordance with the requirements of valid *pregnancy test*.

(b) All camels must meet transport height requirements of the intended transport (i.e. camels standing in their natural position must not touch any overhead structures).

(c) All camels must have become conditioned to being handled and to eating and drinking from troughs for a minimum of 14 days prior to transfer to the registered or *approved premises*.

(d) For export by sea, meet any additional criteria set out in a consignment specific export plan agreed by the relevant Australian Government agency.

(e) For export by air:

(i) Alpacas and llamas must have a liveweight of more than 12 kg and be at least three (3) months old.

(ii) All female camels must be tested in accordance with the requirements of a valid *pregnancy test* and determined to be no more than 250 days pregnant at the scheduled date of departure.

1A.3.7 Rejection criteria—Deer

Further to 1A.3.1:

(a) All deer must:

(i) Have been weaned for at least two (2) months prior to sourcing

(ii) Be at least six (6) months old

(iii) Not have unhealed velveting wounds or broken antlers

(iv) Have become conditioned to being handled and to eating and drinking from troughs for a minimum of 14 days prior to transfer to the registered or *approved premises*.

(b) For export by sea, all deer must meet any additional criteria set out in a consignment specific export plan agreed by the relevant Australian Government agency.

(c) For export by air, all deer must:

(i) Not be in velvet or hard antler

(ii) Not be in the first week after velveting

(iii) Be outside the roar and rut periods if over twelve (12) months old, and

(iv) If female breeder deer, have been tested in accordance with the requirements of a *valid pregnancy test* and be no more than the following number of days pregnant at the scheduled date of departure:

A. Axis, Fallow and Sika–170 days

B. Rusa, Red and Reindeer–185 days.

1B Incorrectly selected animals and those that are no longer fit to export are identified and removed at the earliest appropriate time

1B.1 Animals that become unfit to export are clearly identified, not exported and treated humanely

(a) Livestock sourced for export that become sick, injured or otherwise *unfit to export* during export preparation, transport to, or at, the port of loading, must:

(i) be clearly identified as *unfit to export*

(ii) be excluded from further preparation for export, and

(iii) have arrangements made for their prompt and humane handling, treatment, or *euthanasia* and disposal in accordance with relevant state or territory legislation.

(b) Veterinary advice must be sought for any sick or injured livestock in the registered or *approved premises* if the cause of a sickness or injury is not obvious, or if action taken to prevent or treat the problem is ineffective.

(c) Investigation by a registered veterinarian must be conducted if mortalities in any one paddock or shed of the *registered premises* exceed:

(i) 0.1 per cent or three (3) deaths, whichever is the greater, on any one (1) day for cattle and buffalo, or

(ii) 0.25 per cent or three (3) deaths, whichever is the greater, on any one (1) day for any other species of livestock.

(d) Any animal that is *unfit to export* because it does not meet test results or other eligibility criteria for *importing country requirements* must be immediately removed from the consignment.

(e) Any animal that is identified as *unfit to export* for any reason other than failure to meet *importing country requirements* must be removed from the consignment prior to the *authorised officer*'s inspection, unless removal would not result in the best *animal welfare* outcome, in which case rejected animals must be distinctively identified, but may remain in the consignment if a valid reject plan is provided to the relevant Australian Government agency's *authorised officer* prior to inspection.

(f) Any animals identified by the *authorised officer* as *unfit to export* must be removed from the consignment before animals are loaded onto trucks, if not earlier.

(g) Any dead livestock must be removed from the consignment, with carcasses disposed of in accordance with relevant health and environmental legislation. In addition:

  (i) If dead livestock are identified at the port or airport, they must be removed from the port or airport.

  (ii) If dead livestock are identified at the *registered premises*, they must be removed daily and disposed of in an area that cannot be accessed by animals.

(h) Animals that are surplus to requirements must be handled appropriately and in a humane manner that prevents injury and minimises stress.

Outcome 2—Animals are appropriately prepared in order to mitigate the risks to their health and welfare during export.

2A Domestic export facilities are appropriate to prepare the animals for export.

2A.1 The location of the premises is appropriate

(a) The location of the *registered premises* used to hold and assemble livestock prior to transport to the vessel, must not be more than eight (8) hours journey time from the port of embarkation.

2A.2 Premises meet appropriate operational and design specifications for the type and species of livestock being prepared for export.

Registered premises used for the preparation of livestock for export must meet the following:

(a) To ensure adequate supply of feed and water:

(i) Feeders, self-feeders and water troughs must be of a design that allows for complete cleaning of all surfaces, prevents spoilage of feed during inclement weather, and minimises faecal contamination and injuries

(ii) All fodder must be placed in troughs so that animals do not eat from the ground or floor

(iii) All pelletised livestock feed at the *registered premises* must be stored in a manner that maintains the integrity and nutritional value of the feed, and protects it from weather, pests, external contaminants (including chemical spray drift) and direct access by animals

(iv) Feed trough allowance for sheep and goats held in paddocks at the *registered premises* is to be calculated on a paddock by-paddock basis and must be:

A. for ration feeding, no less than five (5) cm length of feed trough per head

B. for ad libitum feeding, no less than three (3) cm length of feed trough per head

(v) Feed troughs for sheep and goats must be fully sheltered, with the exception of areas of Australia north of latitude 26° south.

(vi) All livestock in the *registered premises* must have access to drinking water at all times (unless under *curfew* or being handled)

(vii) Water troughs must be positioned apart from hay and feed sources to prevent fouling, and kept clean.

(viii) Water quality must be suitable for the livestock and there must be sufficient storage and delivery capability or a contingency plan to ensure continuity of supply to all animals at peak demand for two (2) days.

(b) To ensure adequate shelter, the *registered premises* must be either constructed or located in such a manner as to provide animals with protection from extreme climatic conditions by means of:

(i) shade

(ii) windbreaks

(iii) shelter, or

(iv) other means approved by the relevant Australian Government agency.

(c) Livestock handling facilities and sheds at *registered premises* must comply with the following:

(i) Sheds must be constructed with sufficient drainage and ventilation to ensure that sheds are free draining.

(ii) Sheds with slatted or mesh floors must be designed and maintained to prevent entrapment of feet.

(iii) Facilities must be designed and maintained to facilitate livestock handling, inspection and removal of individual animals with a minimum of stress and injury to the animals.

(iv) Floors of yards, sheds, pens and loading ramps must have non slip surfaces.

(d) To control drainage, surface water, groundwater and effluent run-off, the *registered premises* must be located or constructed in such a manner that:

(i) surface water and livestock effluent are directed away from laneways, livestock handling areas, livestock confinement areas and feed storage areas

(ii) the livestock confinement area of the *registered premises* is free draining and remains firm under foot, and

(iii) the surfaces around feeders and water troughs are evenly graded and compacted to form a hard, durable surface that readily sheds surface water.

(e) Fencing at *registered premises* must:

(i) be appropriate to hold livestock and to prevent the unauthorised entry or escape of livestock

(ii) be maintained in a good state of repair

(iii) be inspected before the entry of each consignment and twice a week while livestock are in the *registered premises*, and

(iv) be consistent with the *importing country requirements*.

(f) Access to *registered premises* must be controlled at all times. The operator of the *registered premises* must have arrangements in place at the premises to restrict unauthorised entry and access to the feed when livestock are being *prepared for export*, ensuring that:

(i) all entry points to premises are clearly signed

(ii) only those persons necessary for the day to-day operation of the premises and state and territory government officials have direct access to the area of the premises, and

(iii) all non-employees report to reception for appropriate biosecurity checks relevant to the requirements of the premises.

(g) Unloading facilities must be designed, constructed and maintained to enable safe and efficient unloading of livestock.

2B Animals are responsibly managed in order to prepare them for the export voyage

2B.1 Animals have ready access to feed and water

To ensure animals have ready access to feed and water:

(a) All livestock must be offered water and feed as soon as possible after arriving at the *registered premises*, and no more than 12 hours after arrival.

(b) Animals must not be deprived of water beyond the maximum limits specified in Appendix B for each species and *class* of animal. If animals are deprived of water, the corresponding rest time specified in Appendix B must be provided with all animals offered appropriate feed and water.

(c) The quantity of feed available must meet at least the minimum daily feed requirements, which are:

  (i) Cattle and buffalo—2.5 per cent of their bodyweight, of a quality feed able to meet daily maintenance requirements

  (ii) Sheep and goats—3 per cent of their bodyweight per day for sheep younger than 4 tooth and 2 per cent of their bodyweight per day for 4 tooth or older, of a quality feed able to meet daily maintenance requirements, and

  (iii) Deer—2 per cent of their bodyweight per day of a quality feed able to meet daily maintenance requirements.

2B.2 Animals are managed by sufficient competent personnel

To ensure animals are managed by sufficient competent personnel:

(a) Operators of *registered premises* must employ sufficient competent personnel for the effective day to day operation of the premises and management of the livestock.

(b) A suitably competent person must be appointed by the exporter to be responsible for overseeing the handling, husbandry and welfare of the livestock for export, and to ensure that loading facilities and livestock handling standards at the port are satisfactory during unloading from the land transport, inspection and loading onto the vessel.

2B.3 Animals are appropriately segregated

Livestock must be *appropriately segregated* and held, assembled and presented for export in the *registered premises* in accordance with the approved *NOI*.

2B.4 Animals have an appropriate amount of space

Livestock in the *registered premises* must be provided with the appropriate amount of space in accordance with the relevant *registered premises* stocking density requirements in Appendix C.

2B.5 Animals are appropriately prepared for the export voyage

To ensure animals are appropriately prepared for the export voyage:

(a) Livestock must be prepared for the *voyage* in the *registered premises* in accordance with the relevant *registered premises* hold times and corresponding feed requirements in Appendix D.

(b) Animals must not be deprived of water past the maximum water deprivation times in Appendix B, and corresponding minimum rest periods in Appendix B must be observed for all land transport of livestock for export.

2B.6 Animals are loaded and unloaded safely

In addition to the requirements of the Land Transport Standards, to ensure animals are loaded and unloaded safely:

(a) Livestock must be expediently loaded and unloaded at all stages of the export process by a sufficient number of *competent stock handlers* in a manner that prevents injury, minimises stress and ensures that livestock husbandry and welfare needs are addressed.

(b) During every specified rest period required within Appendix B and the Land Transport Standards, sheep and goats of all ages must:

  (i) be unloaded

  (ii) have access to food and adequate water of a quality to maintain good health, which may be withdrawn during the *curfew* period of up to a maximum of eight (8) hours before reloading, and

  (iii) have enough space for exercise and rest.

(c) Dogs must be muzzled and the number of dogs used should be the minimum necessary to complete the task.

(d) For export by sea, unless otherwise agreed by the relevant Australian Government agency, livestock must not leave the *registered premises* until AMSA, the Department of Agriculture and Water Resources (sea ports) and the Master of the vessel have determined that the vessel is in a fit state for the vessel to load stock before departing.

  NOTE: The agreement to leave the registered premises before other approvals have been obtained is given effect via an agreed management plan as described in Appendix M.

(e) Loading of deer and camels onto vessels for export by sea must be in accordance with a consignment specific export plan agreed by the relevant government agency.

Outcome 3—Animals are responsibly managed in order to at least maintain their health and welfare during the export voyage

3A Animals are exported on suitable vessels and aircraft with appropriate resources.

3A.1 If animals are to be exported in portable livestock units, they are appropriate

(a) *Portable Livestock Units* (PLUs) must not be used to transport livestock from a port of loading to a port of discharge if there is a regular service between those ports of vessels that:

(i) are permanently equipped for the carriage of livestock, and

(ii) have valid Australian certificates for the carriage of livestock (ACCLs).

(b) If PLUs are used to transport livestock, the *voyage* must be 10 days or less.

(c) If a vessel that is not permanently equipped for the carriage of livestock is to be used for the export of livestock of a particular species from a port in Australia:

(i) the livestock must be carried in a PLU approved under Marine Order 43

(ii) the PLUs, the *voyage* and the vessel must conform to the requirements specified by Appendix E, and

(iii) the arrangements for the carriage of PLU's on-board the vessel must be approved by an inspector appointed in accordance with Marine Order 43.

3A.2 Animals are accompanied by appropriate veterinary medicines and equipment

For export by sea, vessels must:

(a) carry appropriate veterinary medicines and equipment sufficient for the species and number of livestock carried, as specified in Appendix F

(b) store veterinary medicines in accordance with veterinary directions and manufacturer's recommendations, and

(c) carry appropriate restraint equipment as specified in Appendix F.

3A.3 Animals are accompanied by adequate supplies of feed, water and bedding

3A.3.1 Water

For export by sea, vessels must hold or be able to produce the quantity of water to meet the anticipated needs of the animals throughout the *voyage* plus the statutory reserve amounts, as specified in Appendix G, taking into consideration the livestock species, *class*, age and expected weather conditions.

3A.3.2 Feed

For export by sea, the vessel must hold at least the quantity of feed to meet the anticipated needs of the animals throughout the *voyage*, including the following requirements:

(a) The vessel must hold the statutory reserve amounts, as specified in Appendix G.

(b) The shipboard ration must not contain more than 30 per cent by weight of wheat, barley or corn, unless the livestock have been adapted to the ration over a period of at least two (2) weeks before export.

(c) Fodder for cattle on:

(i) *voyages* of 30 days or less must include at least one (1) per cent of the required feed as chaff and/or hay.

(ii) *voyages* of 31 days or more must include at least two (2) per cent of the required feed as chaff and/or hay.

(d) Pelleted feed must:

(i) be of a type and quality that provides for the nutritional needs of the species and *class* of animals, and for sheep and goats also meets the nutritional requirements detailed in Appendix G.

(ii) where applicable, be accompanied by a manufacturer's declaration that states it is manufactured in accordance with any national standard approved by the relevant government agency.

(e) For deer and camelids, feed requirements set out in a consignment specific export plan agreed by the relevant Australian Government agency.

(f) Feed from a previous *voyage* may remain in a feed storage tank provided that:

(i) each tank is completely emptied at least once every 90 days

(ii) all feed that is no longer suitable for livestock consumption is emptied in its entirety before further suitable feed is loaded, and

(iii) records are maintained of the emptying of feed storage tanks.

(g) For all *voyage*s travelling through the Suez Canal, the Cape of Good Hope, the Panama Canal and Cape Horn, as well as any other route where the *voyage* is expected to be 31 days or more, the statutory reserve of additional fodder that must be loaded must be increased to at least seven (7) days.

3A.3.3 Bedding

(a) For export by sea, bedding must be provided in accordance with the following specifications:

(i) For all sheep *voyages*, sufficient sawdust, rice hulls or similar material must be carried on the vessel and applied as needed to manage moisture in the sheep manure pad, avoid slipping during loading and unloading, and manage incidents such as pen flooding.

(ii) Cattle and buffalo on:

A. *voyages* of 30 days or less must be provided with sawdust, rice hulls or similar material to be used predominantly for bedding at a minimum rate of four (4) tonnes per 1000 m^2 of cattle pen space per application, with a minimum of four (4) tonnes per 1000 m^2 of cattle pen space for each subsequent washdown

B. *voyages* of 31 days or more must be provided with bedding in accordance with an *extended long haul management plan* agreed with the relevant Australian Government agency.

(iii) Deer and camelids on all *voyage*s must be provided with bedding as required by a consignment specific export plan agreed with the relevant Australian Government agency.

(b) For export by air: feed, water and bedding must be provided by the exporter in accordance with the requirements within the IATA Live Animal Regulations.

3A.4 Stocking density and penning arrangements are appropriate

(a) For export by sea, prior to loading the animals:

(i) a *load plan* for the vessel on which the livestock are to be transported must be prepared in accordance with the stocking densities and pen-group weight-range tolerance specifications in Appendix H, and

(ii) for exports on *voyage*s that will cross the equator, an agreed heat stress risk assessment must be completed and indicate the risk is manageable as per the testing criteria in these standards.

(b) For export of deer and camelids by sea, livestock are to be loaded and penned in line with a consignment specific export plan agreed by the relevant Australian Government agency

(c) For export by air, animals must be loaded and penned in accordance with IATA live animal regulations, and stocking densities and penning arrangements as given in Appendix I.

3A.5 Contingency plans to ensure the safe carriage and maintenance of the animal's health and welfare during export are prepared.

(a) Contingency plans for the following emergencies must be prepared for each consignment:

(i) emergencies and interruption during loading, including procedures for contacting the exporter in the event of an animal health or welfare emergency

(ii) mechanical breakdown of the vessel or aircraft

(iii) rejection of the consignment by the importing country, and

(iv) For export by air:

A. unavailability of the aircraft to be used for the air transportation, and

B. livestock are unable to be loaded onto the aircraft.

(v) For export by sea:

A. a feed or water shortage during the *voyage*

B. an outbreak of disease during the *voyage*

C. *extreme weather* conditions during the *voyage*, and

D. to provide satisfactory tending, feeding and watering of the livestock in the event of a malfunction of the automatic feeding or watering systems, but without compromising the safe navigation of the vessel.

(b) The contingency plan under 3A.5(a)(v)A. for a shortage of feed, must include:

(i) Adequate means to match the *fodder* already on-board the vessel to prevent on-board mortalities, and

(ii) Advising the importer of any fodder shortages that occurred during the *voyage* and assisting the importer with details of the fodder composition and transitioning onto local fodder.

(c) The contingency plan under 3A.5(a)(v)A. for a shortage of feed, must consider:

(i) the time required to manufacture fodder that matches the composition of that on-board if the *voyage* length is extended and additional fodder must be sourced

(ii) the time and amount of existing fodder required to successfully transition to fodder of a different composition

(iii) *importing country requirements* for the origin of the fodder, and

(iv) availability and access to suitable fodder along the *voyage* route.

3B Animals are responsibly managed during the export voyage

3B.1 Animals have appropriate space

To ensure animals have appropriate space during the export *voyage*:

(a) For export by sea:

(i) Livestock must be appropriately segregated, loaded and penned on the vessel in accordance with the *load plan*. Livestock may also by segregated by any other relevant characteristic (and, where relevant, port of destination), in accordance with the *load plan*.

(ii) The consignment must be checked before departure to ensure that the livestock has been loaded in accordance with the *load plan*.

(iii) The pen stocking density must be checked regularly throughout the *voyage* and adjustments made as required.

(b) For export by air, loading density and penning arrangements must conform to stocking densities and penning arrangements as given in Appendix I and any relevant international requirements.

3B.2 Animals have ready access to feed and water

To ensure animals have ready access to feed and water whilst on the export *voyage*:

(a) For export by sea:

(i) Throughout the *voyage*, all livestock on the vessel must have *ad libitum* access to adequate water of a quantity and quality to maintain good health.

(ii) Throughout the *voyage*, all livestock on the vessel must be provided with, and be able to access, suitable feed to maintain good health, taking into consideration any particular needs of the livestock species, *class* and age.

(iii) All livestock must be offered feed and water as soon as possible after being loaded on the vessel, and at the very most, within 12 hours.

(iv) Feed and water supply systems must be monitored day and night throughout the *voyage* and maintained in good order.

(v) Adequate feed and water must be supplied to livestock awaiting and during the discharge period, and there must be no water *curfew* applied prior to unloading at ports in the Middle East during the northern hemisphere summer.

(b) For export by air, all livestock must be offered feed and water while in transit if climatic conditions, species and *class* of livestock and total time warrant.

3B.3 Animals are provided appropriate ventilation

To ensure animals have appropriate ventilation whilst on the export *voyage*:

(a) For export by sea:

(i) When livestock are loaded on vessels with enclosed decks, the ventilation system must be run continuously from the commencement of loading.

(ii) Ventilation must be monitored daily to ensure adequate thermoregulation of the livestock.

(b) For export by air: when the aircraft carrying livestock is on the ground (whether moving or stationary), the operator of the aircraft must ensure that ventilation and temperature in the livestock hold is adequate to maintain all of the animals' health and welfare.

3B.4 Bedding management

(a) Bedding management, including washing down of decks, disposal of faeces and litter, and replacement of bedding materials, must be sufficient to ensure good welfare outcomes for livestock, in particular, to minimise slipping and abrasions, lameness, pugging and faecal coating.

(b) When bedding is used, the consistency and depth must be routinely monitored, and it must meet requirements as set out in paragraph 3A.3.3 of these standards.

3B.5 Animals are managed by sufficient competent personnel

The on-board management of livestock for export by sea must ensure the health and welfare of animals throughout the *voyage*:

(a) An *accredited stockperson* must accompany each consignment of livestock and must remain with the consignment until the vessel has completed discharging at the final port of discharge.

(b) An *accredited veterinarian* must accompany each consignment of livestock where required by the relevant Australian Government agency and must remain with the consignment until the vessel has completed discharging at the final port of discharge.

(c) Notwithstanding (b), an *accredited veterinarian* must accompany each consignment of livestock on *voyages* of more than 10 days and all *voyage*s where there are pregnant livestock, unless otherwise agreed by the relevant Australian Government agency. The *accredited veterinarian* must remain with the consignment until the vessel has completed discharging at the final port of discharge.

(d) The *accredited veterinarian* and *accredited stockperson* cannot be the same person for any given *voyage*.

(e) *Accredited stockperson*s and *accredited veterinarian*s must work with the vessel's Master and crew to ensure and maintain the health and welfare of the livestock on-board.

(f) All personnel handling and caring for livestock or who are otherwise responsible for animals during the *voyage* must be able to demonstrate an adequate level of experience and skill to allow them to undertake their duties.

(g) Pregnant livestock must be accompanied by an *accredited stockperson* with experience with pregnant livestock.

(h) On every vessel, there must be one (1) *competent stock handler* per 3.000 (or part thereof) head of cattle and/or buffalo, and one (1) per 30,000 (or part thereof) head of sheep.

3B.6 Animals are inspected regularly (day and night) during the export voyage

(a) For export by sea:

  (i) livestock must be inspected systematically both day and night to ensure the health and welfare of the livestock are maintained.

  (ii) a meeting must be held daily during the *voyage* to discuss all issues relating to the health and welfare of the livestock. This must include the Master and/or the Master's representative, *accredited stockperson* and if on-board, the *accredited veterinarian*.

(b) For export by air, livestock must be checked to ensure health and welfare is maintained:

  (i) where feasible;

  (ii) within 30 to 60 minutes of commencement of the journey

  (iii) at least every two (2) to three (3) hours as conditions warrant; and

  (iv) immediately prior to departure after any transit stops.

3B.7 Animals identified to be in poor health and welfare status receive appropriate, prompt and humane handling and care

(a) For export by sea, any livestock identified after loading as being distressed, sick or injured must:

(i) be transferred to a *hospital pen*, if required

(ii) be given immediate appropriate treatment

(iii) if required to be treated using veterinary medicines or equipment, treated in accordance with veterinary directions and manufacturer's recommendations

(iv) if necessary, be safely and humanely *euthanised* without delay

NOTE: See the Australian Animal Welfare Standards and Guidelines, Standard 6—Humane Destruction, for recommended euthanasia practices.

(b) For export by air, any livestock for export identified during transport by air as being distressed, sick or injured must, where feasible:

(i) be given immediate appropriate treatment

(ii) if necessary, be safely and humanely *euthanised* without delay

(c) For export by air, arrangements must be made to remove or separate sick or dead livestock from pens carrying multiple animals in transit. If animals need to be off-loaded, arrangements must be made to ensure the health and welfare of the animals.

Overarching requirements

4A Responsibility for the health and welfare of animals

4A.1 Ensuring all animals are fit to export

To ensure all animals that are exported are *fit to export*:

(a) It is the responsibility of livestock exporters to have systems in place to ensure consignments of export livestock are compliant with this standard and all animals in the consignment are *fit to export*.

(b) Where animals are *unfit to export*, exporters must have systems in place to manage the animals as per part 1B of these standards, including implementing an effective identification system for these animals, suitable for the exporter's business.

4A.2 People responsible for animals are aware of the health and welfare status of the animals

People who are transferring responsibility for the livestock must notify the person assuming responsibility for the livestock, of any aspects of the export preparation and previous journey that may affect the future health and welfare of the livestock.

Point in the export process	Person responsible for the livestock
At point of sourcing	Livestock consignor
Loading for land transport	Driver and transporting company
Undertaking land transport	Driver and transporting company
Unloading into the *registered premises*	Designated person at the *registered premises* as the receiver
Loading for land transport	Driver and transporting company
Undertaking land transport	Driver and transporting company
For a consignment to be exported by sea:	
Arrival at port of embarkation	Person designated by the exporter
As the livestock load onto the vessel	Master of the vessel
For a consignment to be exported by air:	
Arrival at airport for loading	Person designated by the exporter
Once accepted for carriage by air	Airline
As the livestock load onto the aircraft	Captain of the aircraft

NOTE: The person responsible for the livestock at each point of the land transport journey is taken from the Land Transport Standards, see those Standards for further definitions.

4B Isolation requirements

4B.1 General isolation requirement

Where a period of pre-export quarantine or isolation is required by the importing country, animals must at all times be physically isolated from all other animals (whether for an alternative export market or domestic use) to prevent contact.

4B.2 Isolation procedures

Where handling facilities used for loading, holding, treating or inspecting livestock (including roadway and lanes) are to be used for both domestic and export livestock (including livestock of differing export status), the operator of the *registered premises premises* must have procedures in place to ensure that:

(a) handling facilities are not used simultaneously by livestock of differing pre-export quarantine or isolation status

(b) a minimum livestock traffic separation of two (2) m is maintained at all times, or livestock are separated by a physical barrier such as a fenced road or lane or a fully fenced empty paddock, unless specified otherwise by the importing country, and

(c) handling facilities and equipment used by different consignments of animals are managed in accordance with the pre-export quarantine or isolation requirements of each importing country.

4C Additional prohibitions for export by sea

4C.1 Extended long haul voyages by sea

The export of livestock by sea via the Suez Canal or the Cape of Good Hope, the Panama Canal or Cape Horn, or via another route where the *voyage* is expected to be 31 days or more, is prohibited unless otherwise agreed by the relevant Australian Government agency.

Note: Australian Government approval is via an *extended long haul voyage management plan* as described in Appendix M.

4C.2 Export of goats by sea

The export of goats by sea on a *voyage* of more than 10 days is prohibited unless otherwise agreed by the relevant Australian Government agency.

Note: Australian Government approval is via an approved goats by sea long haul voyage management plan as described in Appendix M.

4D Animals have appropriate traceability

4D.1 Animals meet traceability requirements

All animals must be:

(a) identified to the property of origin in accordance with the National Livestock Identification System (*NLIS*)

(b) accompanied by a correctly completed and signed declaration as to the identification of the livestock and property of origin

(c) individually identified where any testing (including spay or pregnancy testing) is required during export preparation, and

(d) if they are cattle or buffalo, individually identified by ear tag, *NLIS* number and property identification code (PIC) on both the submission to laboratory for testing of samples, and linked with the laboratory results, where any testing is required during export preparation.

4E Animals have appropriate identification and records

4E.1 Animal's treatment history

Records of the following must be kept for at least two (2) years after the date of export:

(a) all husbandry procedures relevant to livestock exports (such as pregnancy testing)

(b) all vaccinations relevant to livestock exports (such as for scabby mouth)

(c) all veterinary medicines and agricultural chemicals used to vaccinate, treat or prepare livestock from sourcing to *disembarkation* from the vessel

(d) daily inspections by *competent stock handlers* of the health, welfare and mortality of livestock while at the *registered premises*, and

(e) in the case of animals that die or become sick, injured, distressed or otherwise *unfit to export* prior to loading, all actions taken in accordance with part 1B.1 of these standards with the exception of actions taken under paragraph 1B.1(h).

4E.2 Vendor declarations

When receiving livestock, the operator of the *registered premises* must obtain a copy of the vendor declarations for each consignment regarding the property of origin and health and welfare status of the livestock before accepting the animals. The declaration is provided by the livestock producer and must be kept by the exporter for at least two (2) years after the date of export.

4F Reports must be completed by the specified people within the specified timeframes

4F.1 Notifiable incidents

To ensure *notifiable incidents* are promptly and appropriately reported:

(a) If a *notifiable incident* occurs at any time during the export of livestock a report must be provided to the relevant Australian Government agency by:

(i) The Master of the vessel or on-board *accredited veterinarian* in the case of exports by sea, or

(ii) The exporter in the case of exports by air.

NOTE: The obligation of the Master of the vessel to also provide this report to AMSA under Provision 37.1 of the Marine Order 43 is a penal provision.

(b) The report must be made as soon as possible and, for export by sea, must be made within twelve (12) hours of the *notifiable incident* occurring.

(c) For export by sea, if the *notifiable incident* involves a *mortality rate* or *average daily mortality rate* equal to or greater than the *reportable level*, a report must be provided that includes the following:

(i) details of the mortalities (e.g. number, species, suspected cause)

(ii) factors that may have contributed to the deaths, and

(iii) the current location of the vessel and, if appropriate, its destination and estimated time of arrival.

4F.2 Daily Reports

For *voyages* of more than 10 days, an *accredited stockperson* must provide daily reports on the health and welfare of the livestock to the relevant Australian Government agency. The report must include the information outlined in Appendix J for each consignment on the vessel. Where an *accredited veterinarian* is on-board, the veterinarian rather than the stockperson must provide the daily report.

4F.3 End-of-journey and end-of-voyage reports

To ensure end-of-journey and end-of-voyage reports are promptly and appropriately reported:

(a) For export by sea, an *accredited stockperson* or, if on-board, the *accredited veterinarian*, must provide an end-of-voyage report on the health and welfare of the livestock to the relevant Australian Government agency. The end-of-voyage report must be provided within five (5) days of completion of discharge at the final port of discharge, regardless of the duration of the *voyage*. The report must include the information outlined in Appendix L for each consignment on the vessel.

(b) For export by air, an end-of-journey report on the health and welfare of the livestock transported by air must be provided to the relevant Australian Government agency. The end-of-journey report must be provided within five (5) days of completion of discharge at final port of *disembarkation* and must contain the information outlined in Appendix K.

4G Testing criteria

For the purposes of these standards the following testing criteria apply.

4G.1 Pregnancy tests

(a) For the purposes 4G.1, the day that the animal is pregnancy tested is taken to be day zero (0). For example, if a heifer is pregnancy tested on 1 July, day zero is 1 July and the day of loading must be no later than 31 July to meet the valid *pregnancy test* requirements of testing during the 30 day period.

4G.1.1 Pregnancy test for breeder cattle or buffalo

A valid *pregnancy test* for breeder cattle or buffalo must:

(a) have been carried out during the 30 day period before export, unless otherwise agreed by the relevant Australian Government agency, with that agreement to be provided only where necessitated by circumstances outside the control of the exporter and where the exporter can demonstrate it will not impact on *animal welfare*.

(b) for *voyages* of more than 10 days, be carried out by a *registered veterinarian* who is a member of the Australian Cattle Veterinarians and an accredited tester under the National Cattle Pregnancy Diagnosis Scheme (NCPD)

(c) for *voyages* of 10 days or less, be carried out by a *registered veterinarian* who can attest to demonstrable current experience

(d) be evidenced by written certification by the person carrying out the test that the animal is no more than the following maximum days pregnant at the scheduled date of discharge:

  (i) For export by sea—190 days for cattle and 220 days for buffalo, or, if the export involves female *Bos taurus* cattle crossing the equator between 1 May and 31 October (inclusive), that the animal is not detectably pregnant.

  (ii) For export by air—250 days for cattle or buffalo

  NOTE: For consignments where an accredited NCPD tester is required, the exporter must ensure the name of the accredited tester, their accreditation number and a statement of their accreditation is provided on the pregnancy declaration for the consignment.

(e) That in relation to (a)(iv), the veterinarian may base this certification on assessment of the animals by a method other than manual palpation if the veterinarian:

  (i) is accredited under the National Cattle Pregnancy Diagnosis Scheme, and

  (ii) determines that cattle or buffalo are too small to be manually palpated safely.

4G.1.2 Pregnancy test for feeder or slaughter cattle and buffalo

A valid *pregnancy test* for feeder or slaughter cattle or buffalo must:

(a) have been carried out during the 30 day period before export

(b) be carried out by a *registered veterinarian* if exported by air, or if exported by sea by a *registered veterinarian* or a *competent pregnancy tester*

(c) be evidenced by written certification by the person carrying out the test, that the animal is not detectably pregnant.

4G.1.3 Pregnancy test for camelids

A valid *pregnancy test* for camelids must:

(a) have been carried out during the 30 day period before export, unless otherwise agreed by the relevant Australian Government agency, with that agreement to be provided only where necessitated by circumstances outside the control of the exporter and where the exporter can demonstrate it will not impact on *animal welfare*

(b) have been carried out by ultrasound, or in the case of breeders by ultrasound foetal measurement

(c) be carried out by a *registered veterinarian* with demonstrable current experience in camelid pregnancy diagnosis

(d) be evidenced by written certification by the person carrying out the test, that the animal is not detectably pregnant, or in the case of breeders, not more than 228 +/- 2 days pregnant at the scheduled date of discharge.

4G.1.4 Pregnancy test for goats, sheep or deer

A valid *pregnancy test* for goats, sheep or deer must:

(a) have been carried out during the 30 day period before export,

(b) have been carried out by ultrasound, or in the case of breeders by ultrasound foetal measurement

(c) be carried out by a person able to demonstrate a suitable level of experience and skill, and

(d) be evidenced by written certification by the person carrying out the test, that the animal is not detectably pregnant, or in the case of breeders, not more than the specified number of days pregnant (refer 1A.3) at the scheduled date of discharge.

4G.2 Heat stress risk assessment

Note for readers: Section 4G.2 is being considered in separate review of the heat stress risk assessment model.

(a) Using the agreed livestock heat stress risk assessment (HSRA), the assessment is taken to have indicated that the risk is manageable if:

  (i) The HSRA output is less than a 2 per cent risk of 5 per cent mortality

  (ii) The HSRA cross wind output for any open decks is less than seven (7) knots (3.6m per second)

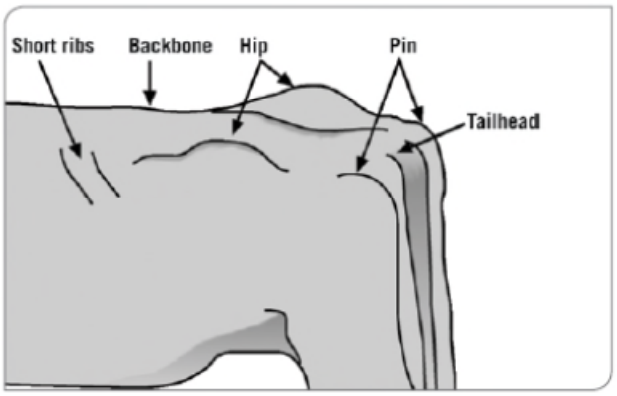
  (iii) The HSRA output for stocking density meets at least the relevant stocking density specified in these standards.

(b) When a HSRA is required, the HSRA must be provided to the relevant Australian Government agency in both PDF and the associated HotStuff *voyage* data file (either *.xls or *.docx).

(c) The *load plan* for the consignment must give at least as much space as specified in both these standards and the HSRA minimum stocking density output.

Appendix A—Body condition scoring system by species

TABLE 1—CATTLE BODY CONDITION SCORING



This picture assists with body condition scoring for beef cattle.

Score	Traditional muscle score equivalent	Traditional fat score equivalent	Description
0	E	0	Severely emaciated
1	D	0	The individual bones are sharp to the touch, with no fat at the head of the tail. Hip bones and ribs are prominent.
2	B-E	1	The individual bones can be felt easily, but feel rounded rather than sharp. There is some tissue cover around the tail head. Individual ribs are no longer visually obvious.
3	A-E	2	The short ribs can be felt only with firm thumb pressure. Areas either side of the tail head have fat cover which can be felt easily.
4	A-E	3	The ribs cannot be felt and fat cover around the tail head is easily seen as slight mounds, soft to touch. Folds of fat are beginning to develop over the ribs and thighs.
5	A-E	4-6	The bone structure of the animal is no longer noticeable and the tail head is almost completely buried in fatty tissue.

TABLE 2—DAIRY CATTLE BODY CONDITION SCORING

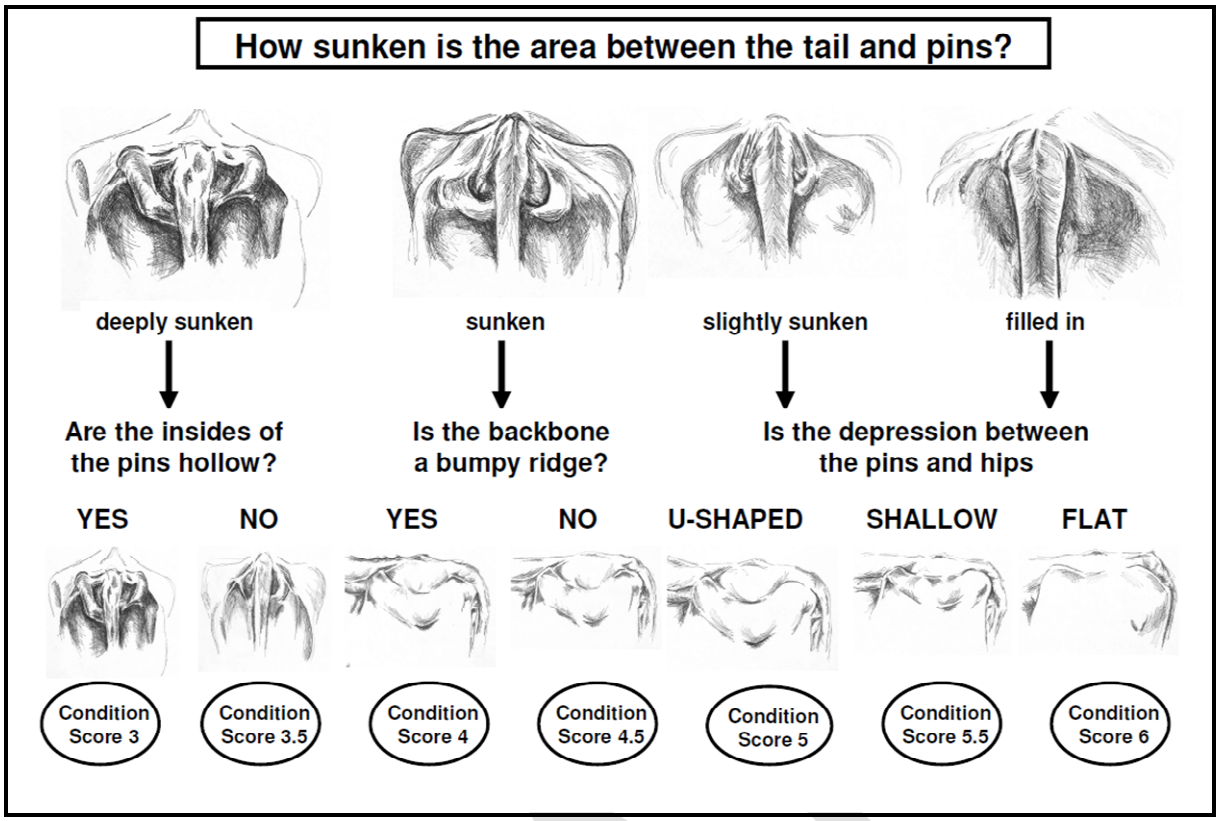


TABLE 3—BUFFALO BODY CONDITION SCORING

Score (1-5) Export (Agreed)	Optional Score [1-9] (Production/ Research)	Description	P8 Fat mm thickness (1-5) [1-9]	Loin Surface	Illustration of vertical section of the loin region between spinous and transverse processes
1	1	**Emaciated;** very weak – extreme muscle wastage. All bones highly visible. Skin 'draped' over skeleton. Unsteady gait.	0	Severely concave	
	2	**Very lean;** becoming quite angular, concave around most muscle groups including legs with muscle depletion evident.	0	Very concave	
2	3	**Lean;** short ribs visible, hook and pin bones still prominent. Can easily count all ribs. Some muscle depletion. No subcutaneous fat visible or palpable.	0	Moderately concave	
	4	**Backward store;** tail head still prominent with hollows to pins. Ribs visible only at top and rear.	[1-2]	Slightly concave	
3	5	**Store;** (Average) good muscle definition, with fat starting to be deposited, rib outlines disappearing, hook and pin bones still defined.	(1-4) [3-4]	Level, even slope	
	6	**Forward Store;** hook and pin bones becoming more rounded. Pin to stifle leg straight to slightly convex.	[5-7]	Slightly convex	
4	7	**Prime;** quite even and smooth over whole backline. Muscling becoming more convex due to fat deposition.	(5-35) [8-14]	Moderately convex	
	8	**Fat;** well-rounded all over all bone. Some unevenness of fat deposits appearing around rump area.	[15-35]	Very convex	
5	9	**Overfat;** usually only mature cows can achieve this condition. Bulbous fat deposits both sides of tail head. Pin and hook bones not discernable.	(>36) [>36]	Severely convex crease / dip along spine	

TABLE 4—SHEEP BODY CONDITION SCORING

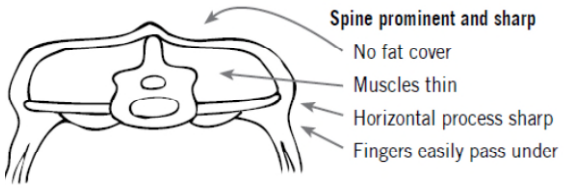
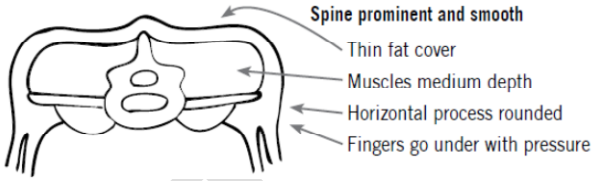
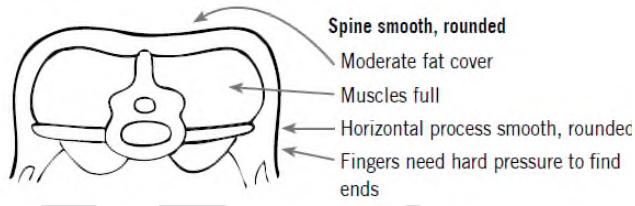
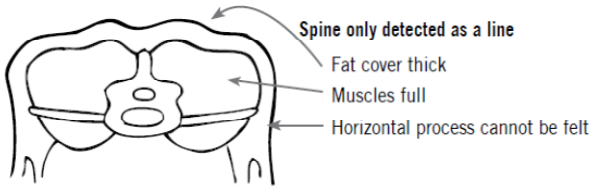
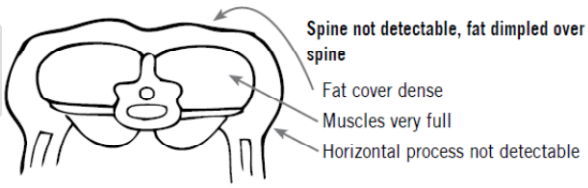
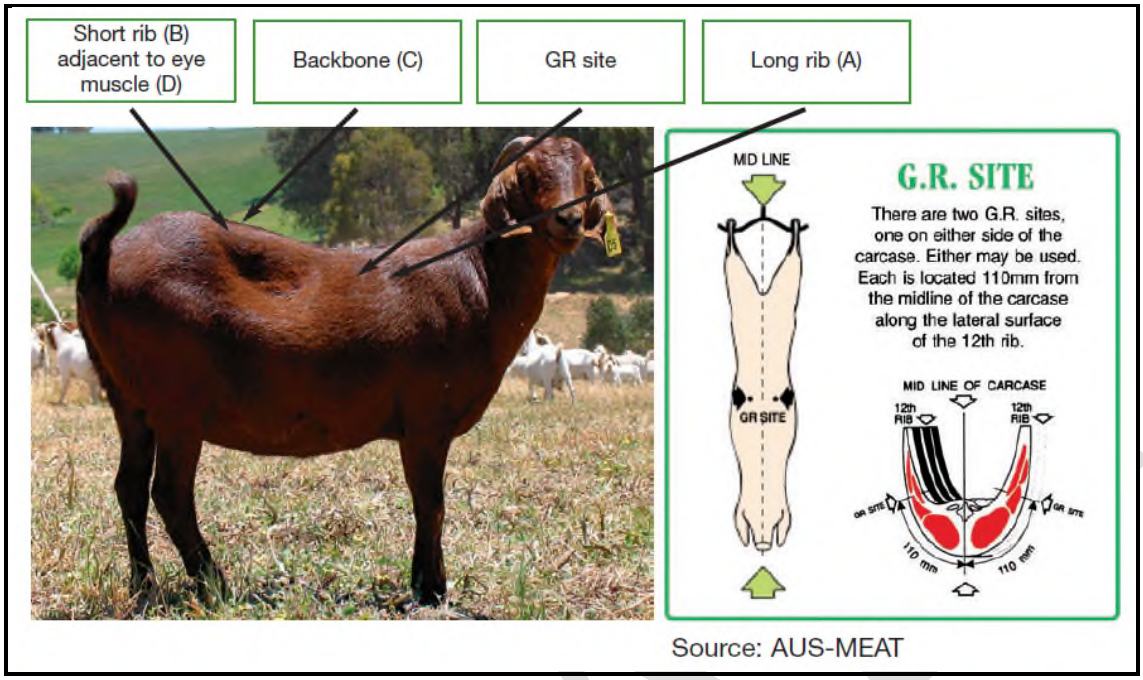
Score	Backbone	Short ribs	Eye muscle	
1	Prominent and sharp	Ends are sharp and easy to press between, over and around	Thin, the surface tending to feel hollow	
2	Prominent but smooth	Smooth, well-rounded ends — can feel between, over and around each smoothly	Reasonable depth with the surface tending to feel flat	
3	Can be felt, but smooth and rounded	Ends are smooth and well covered — firm pressure is necessary to feel under and between short ribs	Full and rounded	
4	Detectable with pressure on the thumb	Individual short ribs can only be felt with firm pressure	Full with a covering layer of fat	
5	Can be felt with firm pressure	Cannot be felt even with firm pressure	Muscle cannot be felt due to a thick layer of fat	

TABLE 5—GOATS BODY CONDITION SCORING

To determine the condition score, feel the grid reference (GR) site of the goat. This point is located 110mm from the backline along the second-last long rib. The condition score relates to the tissue depth (in mm) at the GR site. Table 5 below provides guidance on what to feel for when condition scoring. As the table indicates, the live condition scores assigned in Australia are from one to five. Refer to the diagram below to locate the positions on the goat indicated by A, B, C and D in the first row of table 5.



Body Score	GR site tissue depth	Long ribs A	Short ribs B	Backbone C	Eye muscle D
1	1-3mm	Individual ribs can be felt very easily; cannot feel any tissues over the ribs.	Short ribs are prominent; it is easy to feel between them. The muscle mass extends two-thirds or less of the way along them.	Bones are raised and sharp; it is easy to feel between them. The muscle mass extends two-thirds or less of the way along them.	Feels noticeably dished.
2	4-6mm	Individual ribs can be felt very easily but slight amount of tissue is present.	Ends of short ribs feel square; it is easy to feel between them. The muscle mass extends to the end of the short ribs.	Bones are slightly raised and can be easily felt, with noticeable dishing between them.	Feels straight or slightly dished.
3	7-9mm	Individual ribs can be felt easily but some tissue is present.	End of short ribs are rounded; it is still possible to feel between them.	Bones are raised and the ends are rounded; it is still possible to feel between them.	Feels slightly rounded.
4	10-12mm	Individual ribs can still be felt but tissue is prominent.	Ends of short ribs are rounded; it may be possible to press between them with pressure.	Bones are slightly raised; it is possible to feel them but not between them.	Feels well rounded.
5	Over 12mm	Individual ribs can be felt or just felt; tissue is very prominent and may be fluid.	None or only one or two bone ends nearest the rib cage may be felt. It is not possible to press between them.	Some bone ends may still be felt or backbone may be recessed in fat and difficult to feel. It is not possible to feel between bone ends.	Feels very well rounded.

TABLE 6—ALPACA BODY CONDITION SCORING

The picture on the left is an example of how to body score an alpaca by placing hand on the backbone, just forward of the pelvic area (or toward the last of the ribs).

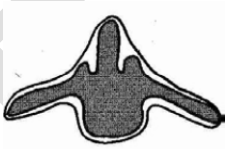
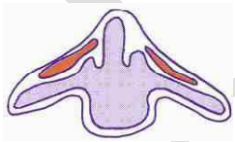
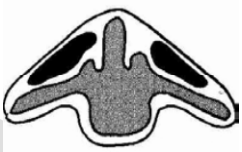
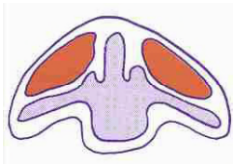
Score	Description	Illustration
1	Severely concave between spine and ribs. The backbone is very noticeable, ribs are clearly felt and brisket shows no fat.	
2	Slightly concave between spine and ribs. You can feel backbone, ribs are noticeable and brisket is firm.	
3	Neither concave nor convex between spine and robs. You can feel the backbone, but it does stand out and you can just feel the ribs and the brisket.	
4	Slightly convex between spine and ribs. You can feel the backbone, but it does not stand out and you can just feel the ribs and the brisket.	
5	Severely concave between spine and ribs, the top of the back feels flat. You cannot feel backbone or ribs, brisket wobbles when touched.	

TABLE 7—CAMEL BODY CONDITION SCORING

Score	Description	Illustration
1	Little or no fat in the hump sac; hump hairy and may be leaning to one side.	
2	Hump with moderate development rising 5 per cent higher than chest depth, but may also be leaning to one side.	
3	Hump with good development and rising to 10 per cent higher than chest depth. Hump is still sculptured inwards on both sides and still fits over the chest and abdominal area.	
4	Hump fully developed and rising to 15 per cent higher than chest depth. Hump rounded outwards on both sides and runs from the shoulder to the rump.	
5	Hump overextended and rising more than 15 per cent higher than chest, or so full that it is rounded on the sides like a semicircle.	

TABLE 8—DEER BODY CONDITION SCORING

Score	Description	Pelvis, ribs and spine	Rump area
1	Emaciated — no fat cover	Prominent	Concave
2	Lean — minimal fat cover	Prominent but appear rounded rather than sharp	Slightly concave
3	Prime — ideal fat cover	Not readily distinguished	Flat
4	Fat — fat (some trimming necessary)	Pelvis rounded, spine covered by fat	Rounded
5	Overfat — overfat (excessive trimming required)	Pelvis concealed by fat, spine hard to palpate	Very convex

Appendix B—Maximum water deprivation time and minimum rest times

In addition to the Land Transport Standard requirements, the following maximum water deprivation time and minimum rest times must be observed for all land transport of animals:

TABLE 9—MAXIMUM WATER DEPRIVATION TIME AND MINIMUM REST TIMES

Class	**Maximum journey duration[4]**	**Maximum water deprivation time**	**Minimum rest Period**
Cattle and buffalo[1] (normal time)		36 hours	12—24 hours
Cattle and buffalo (extended time)[2]	Less than 14 hours	36—48 hours	36 hours
Sheep – less than 6 months Goats – less than 12 months (normal time)		20 hours	12 hours (unweaned)
Sheep – over 6 months Goats – 12 or more months (normal time)		32 hours	12 hours[3]
Sheep – less than 6 months Goats – less than 12 months (extended time)[2]	Less than 14 hours	28 hours	12 hours
Sheep – over 6 months Goats – 12 or more months (extended time)[2]	Less than 14 hours	38 hours	12 hours[3]
Camelids	72 hours	Transport should allow for daily watering and feeding	If tied for transport, camels should be released and allowed to stand at least every 4 hours

[1] Buffalo must not be held off water prior to transport, no *curfew* is permissible

[2] Extended water deprivation times are only permissible if all of the following conditions have been met:

- animals are travelling well and not showing signs of fatigue, thirst or distress
- adverse weather conditions are neither prevailing nor predicted
- the extension will allow the journey to be completed within the extended time, and
- the total time the animals travel on the transport vehicle is less than 14 hours.

[3] For journeys longer than 28 hours; sheep and goats between weaning and 12 months must have a rest period of at least 12 hours after every 20 hours of transport.

[4] When counting journey time, the time begins upon the loading of the first animal onto the mode of transport (i.e. truck) and finishes when the last animal is discharged (i.e. into the registered premises).

Appendix C—Registered premises stocking density requirements

TABLE 10—STOCKING DENSITY REQUIREMENTS IN REGISTERED PREMISES

Species and individual liveweight	Hold time	Minimum space (m^2 per head)	Variance
Cattle and buffalo 500 kg	29 days or less	4 m^2	0.04 m^2 for each 5 kg change
	30 days or more	9 m^2	0.09 m^2 for each 5 kg change
Sheep and goats 54 kg	All	0.5 m^2	0.006m^2 for each 1 kg weight above 54 kg.

Appendix D—Registered premises hold times and feed requirements

TABLE 11—HOLD TIMES FOR CATTLE AND BUFFALO EXPORTED BY SEA

Type of livestock	***Voyage* length**	**Minimum length of time in *registered premises***
Cattle	30 days or less	Two (2) *clear days*
Buffalo	30 days or less	Five (5) *clear days*

TABLE 12—HOLD TIMES AND FEED REQUIREMENTS FOR SHEEP AND GOATS EXPORTED BY SEA

Type of livestock	**Minimum length of time in the one *registered premises***	**Feed requirements during period in *registered premises***
Sheep and goats	Five *clear days*	During the last three (3) *clear days*, livestock are fed ad libitum, but only on pelletised feed equivalent to that normally used during the export *voyage*.*

* The shipboard ration must include a minimum of 200 grams of chaff or hay per day per goat.

Appendix E—Portable Livestock Unit (PLU) requirements

The requirements within this Appendix applies where PLUs are used to transport livestock exported by sea.

(a) The maximum number of PLUs per *voyage*/consignment is 5 (not including 1 additional empty PLU, if a PLU is to be used as a hospital/isolation area).

(b) The stocking density within the PLU must be set in accordance with the minimum stocking densities within this standard, with an additional 15 per cent space allocation to account for the following as necessary:

  (i) species and *class*;

  (ii) size and body condition;

  (iii) wool or hair length;

  (iv) horn status;

  (v) predicted climatic conditions;

  (vi) design and capacity of the PLU.

(c) An appropriate hospital/isolation area must be available, and must be clearly stated in the exporter's standard export plan, as a means of segregating livestock if required. This can be either:

  (i) divider rails (any);

  (ii) an additional empty PLU, along with the required equipment or facilities to move livestock safely between PLUs.

  NOTE 1: Any division within a PLU must comply with the requirements of Marine Order Part 43.

  NOTE 2: If an additional empty PLU is used as the means of segregating livestock, details of livestock (stud) that are capable of being "led" between PLUs, or of a sheep trolley or portable panels, must be included within the consignment inventory.

(d) PLUs must be adequately equipped to provide shelter and shade (shade-cloth and tarpaulins).The accredited stock person or *accredited veterinarian* must take action before or during *extreme weather* conditions to minimise the risk to the welfare of livestock.

(e) The floor surface of a PLU must be non-slip and non-abrasive.

NOTE: This can be achieved through the use of sufficient and suitable bedding material for the *class* and species of livestock to be transported.

(f) For cattle, bedding material (kiln-dried sawdust/shavings or equivalent) must be applied at a minimum of 4 kg per m2 before loading.

(g) Soiled bedding material must be replaced as necessary (subject to type and species).

(h) The consistency and depth of bedding material must be continually monitored.

  (i) Bedding management must minimise abrasions, lameness, pugging, faecal coating and ammonia production.

  (ii) The placement and securing of PLUs on-board the vessel must be:

  (iii) done in accordance with sections 34 and 35 of the Marine Order Part 43; and

  (iv) done in a way approved by a surveyor appointed under the Navigation Act 2012.

(i) PLU's must not be stacked on top of each other.

(j) Each PLU must be stowed in a position that allows direct access to the PLU.

(k) Feed and water must be managed in accordance with the requirements within this standard and the Marine Order Part 43 with adequate storage space; and with sufficient protection from weather.

(l) The vessel must have adequate capacity to desalinate water or sufficient water storage on-board.

Appendix F—Mandatory veterinary medicines and equipment

While the following tables within this appendix state the minimum mandatory veterinary medicines and equipment, additional drugs and equipment may be necessary if there are other *class*es of the species in the consignment. For example, obstetrical supplies for pregnant animals).

For consignments of PLUs, only half the number of species relevant doses is required because of the lower numbers transported and must carry one rope halter, one nose grip pliers per consignment as well as equipment for the humane killing of livestock.

TABLE 13—MINIMUM RESTRAINT AND VETERINARY EQUIPMENT—SLAUGHTER/FEEDER CATTLE OR BUFFALO

Drugs and equipment (per 1000 cattle and buffalo)	***Voyages* of more than 10 days**	***Voyages* of 10 days or less**
Injectable antibiotics		
penicillin (short acting)	30 cattle doses	15 cattle doses
oxytetracycline (long acting) or equivalent	30 cattle doses	15 cattle doses
Antibiotic(s) appropriate for the treatment of bovine respiratory disease*	30 cattle doses	15 cattle doses
Anti-inflammatory drugs		
dexamethasone	30 cattle doses	15 cattle doses
flunixin or equivalent	30 cattle doses	15 cattle doses
Topical wound treatment	Sufficient to treat 20 minor wounds	Sufficient to treat 10 minor wounds
An effective pink eye treatment system	1 box of 20 tubes	10 tubes
Sedative		
Xylazine	10 cattle doses	5 cattle doses
Thermometers	3 per vessel	3 per vessel
Needles (18 G, 1½”) or equivalent	1 box of 100	1 box of 100
Hypodermic syringes	40 × 20 mL, 10 × 5 mL	20 × 20 mL, 5 × 5 mL
Other equipment	**All *voyages***	
Restraint equipment	Adjustable head bale (1 per vessel) should be included	
	Rope halter (1 per vessel)	
	Nose grip pliers (1 pair per vessel)	
Post-mortem kit	2 post-mortem knives plus steel and sharpening stone per vessel	
Remotely triggered syringe device	1 syringe plus spare parts per vessel, plus 10 spare needles per 1000 animals	
Captive-bolt gun	1 per vessel, plus 40 cartridges per 1000 animals	

TABLE 14—MINIMUM RESTRAINT AND VETERINARY EQUIPMENT—PREGNANT CATTLE AND BUFFALO

Note: Must be carried in addition to requirements for general cattle and buffalo

Drugs and equipment	
Obstetrical lubricant	5 litres per 2000 [dairy] cattle
Calving ropes	1 set per vessel
Obstetrical gloves	1 box per vessel
Oxytocin	50ml per 1000 cattle
Additional chlorohexidine (or equivalent)	5 litres per vessel
Iodine (umbilical testing)	1 litre per vessel
Uterine pessaries	10 per 2000 cattle and/or buffalo
Surgical equipment	Adequate to conduct a caesarean section

TABLE 15—MINIMUM RESTRAINT AND VETERINARY EQUIPMENT—SHEEP AND GOATS

Drugs and equipment (per 10,000 sheep and goats)	
Injectable antibiotics	
Penicillin (short acting)	10 sheep doses
Oxytetracycline (long acting) or equivalent	10 sheep doses
Flystrike dressing	Sufficient to treat 20 wounds
An effective pink eye treatment system (similar acting to Orbenin)	1 box of 20 tubes
Thermometers	3 per vessel
Needles (18 G, 1½") or equivalent	100
Hypodermic syringes	10 x 20 mL, 2 x 5 mL
Footrot secateurs	1 pair
Post-mortem kit	2 post-mortem knives plus steel and sharpening stone per vessel
Captive-bolt gun	1 per vessel, plus 100 cartridges per 10,000 animals

Appendix G—Feed and water requirements for export by sea

TABLE 16—FEED AND WATER ALLOWANCES

Type of livestock	Feed per head per day	Water per head per day
Cattle and buffalo that are: • Less than 250kg • Pregnant • Breeding heifers with ≤6 permanent incisor teeth	At least 2.5 per cent of liveweight	At least 12 per cent of liveweight*
For all other cattle and buffalo	At least 2.0 per cent of liveweight	
Sheep and goats with 5 or more permanent incisor teeth	At least 2.0 per cent of liveweight	4 litres Increase to 6 litres for each day the ambient temperature is expected to be ≥35 degrees Celsius
Young sheep and goats with 4 or less permanent incisor teeth	At least 3 per cent of liveweight	

*May be reduced to 10 per cent of liveweight, if water consumption for each of the three previous voyages on the ship averaged less than 10 per cent of liveweight per head per day.

TABLE 17—STATUTORY RESERVES

Type of livestock	Additional feed		Additional water
	***Voyages* of less than 10 days**	***Voyages* of 10 days or more**	
Cattle and buffalo	20 per cent or 3 days, whichever is less	4 days	3 days
Sheep and goats	25 per cent or 3 days whichever is less	4 days	25 per cent or 3 days whichever is less

TABLE 18— PELLETED FEED FOR SHEEP AND GOATS—NUTRITIONAL REQUIREMENT SPECIFICATIONS

Pellet Composition	Specification
Moisture content	Less than 12 per cent
Ash as a percentage of dry matter)	Less than 13 per cent
Crude protein as a percentage of dry matter)	Between 9 per cent and 12 per cent
Urea as a percentage of dry matter)	Less than 1.2 per cent
Acid detergent fibre as a percentage of dry matter	Between 18 per cent and 35 per cent
Metabolisable energy	> 8.0 MJ/kg dry matter

Appendix H—Vessel stocking density requirements

TABLE 19—MINIMUM PEN AREA PER HEAD FOR CATTLE EXPORTED BY SEA—DEFAULT TABLE

Liveweight (kg)	Minimum pen area (m^2/head)	Liveweight (kg)	Minimum pen area (m^2/head)
200 or less	0.990	305	1.308
205	1.007	310	1.323
210	1.023	315	1.337
215	1.039	320	1.351
220	1.055	325	1.364
225	1.070	330	1.378
230	1.086	335	1.392
235	1.102	340	1.406
240	1.117	345	1.419
245	1.132	350	1.433
250	1.148	355	1.446
255	1.163	360	1.460
260	1.178	365	1.473
265	1.193	370	1.486
270	1.207	375	1.500
275	1.222	380	1.513
280	1.237	385	1.526
285	1.251	390	1.539
290	1.266	395	1.552
295	1.280	400	1.565
300	1.294	(cont.)	(cont.)

TABLE 19—CONTINUED

Liveweight (kg)	Minimum pen area (m^2/head)		Liveweight (kg)	Minimum pen area (m^2/head)	
	***Voyages* of more than 10 days**	***Voyages* 10 days or less**		***Voyages* of more than 10 days**	***Voyages* 10 days or less**
405	1.578	1.578	505	1.825	1.825
410	1.591	1.591	510	1.837	1.837
415	1.603	1.603	515	1.849	1.849
420	1.616	1.616	520	1.861	1.861
425	1.629	1.629	525	1.875	1.873
430	1.641	1.641	530	1.892	1.884
435	1.654	1.654	535	1.909	1.896
440	1.666	1.666	540	1.926	1.908
445	1.679	1.679	545	1.943	1.919
450	1.691	1.691	550	1.96	1.931
455	1.704	1.704	555	1.977	1.942
460	1.716	1.716	560	1.994	1.954
465	1.728	1.728	565	2.011	1.966
470	1.741	1.741	570	2.028	1.977
475	1.753	1.753	575	2.045	1.988
480	1.765	1.765	580	2.062	2.000
485	1.777	1.777	585	2.079	2.011
490	1.789	1.789	590	2.096	2.022
495	1.801	1.801	595	2.113	2.034
500	1.813	1.813	600	2.13	2.045

NOTE:

(a) Pen group liveweight range: the liveweight range in each pen of cattle should not exceed the pen average plus or minus 50 kg.

(b) For weights between those shown in the table, the minimum pen area per head should be calculated by *linear interpolation*.

(c) For cattle weighing more than 600 kg, on *voyage*s of more than 10 days, the minimum pen area per head must be calculated by the formula: 2.13 m2 plus 0.017 m2 for each 5 kg above 600 kg.

(d) For cattle weighing more than 600 kg, on *voyage*s 10 days or less, the minimum pen area per head must be calculated by the formula: 2.045 m2 plus 0.014 m2 for each 5 kg above 600 kg.

TABLE 20—MINIMUM PEN AREA PER HEAD FOR CATTLE EXPORTED BY SEA FROM A PORT SOUTH OF LATITUDE 26° SOUTH, FROM 1 MAY TO 31 OCTOBER

Liveweight (kg)	Minimum pen area (m^2/head)	Liveweight (kg)	Minimum pen area (m^2/head)	Liveweight (kg)	Minimum pen area (m^2/head)
200 or less	0.990	300	1.294	400	1.668
205	1.007	305	1.308	405	1.688
210	1.023	310	1.323	410	1.707
215	1.039	315	1.337	415	1.727
220	1.055	320	1.351	420	1.746
225	1.070	325	1.364	425	1.766
230	1.086	330	1.378	430	1.785
235	1.102	335	1.392	435	1.805
240	1.117	340	1.406	440	1.824
245	1.132	345	1.419	445	1.844
250	1.148	350	1.433	450	1.863
255	1.163	355	1.446	455	1.883
260	1.178	360	1.460	460	1.902
265	1.193	365	1.473	465	1.922
270	1.207	370	1.486	475	1.961
275	1.222	375	1.502	480	1.98
280	1.237	380	1.52	485	2
285	1.251	385	1.539	490	2.019
290	1.266	390	1.558	495	2.039
295	1.280	395	1.613	500	2.06

NOTE:

(a) For weights between those shown in the table the minimum pen area per head must be calculated by *linear interpolation*.

(b) For cattle weighing more than 500 kg, the minimum pen area per head must be calculated by the formula: 2.06 m^2 plus 0.02 m^2 for each 5 kg above 500 kg.

(c) For shipments that originate or load from a port south of latitude 26° south and take a route that does not cross latitude 15° south, stocking densities will be calculated from Table 21 regardless of the date of the *voyage*.

TABLE 21—MINIMUM PEN AREA PER HEAD FOR CATTLE EXPORTED BY SEA FROM A PORT SOUTH OF LATITUDE 26° FROM 1 NOVEMBER TO 30 APRIL

Liveweight (kg)	Minimum pen area (m^2/head)	Liveweight (kg)	Minimum pen area (m^2/head)	Liveweight (kg)	Minimum pen area (m^2/head)
200 or less	0.990	320	1.351	440	1.666
205	1.007	325	1.364	445	1.679
210	1.023	330	1.378	450	1.691
215	1.039	335	1.392	455	1.704
220	1.055	340	1.406	460	1.716
225	1.070	345	1.419	465	1.728
230	1.086	350	1.433	470	1.741
235	1.102	355	1.446	475	1.753
240	1.117	360	1.460	480	1.765
245	1.132	365	1.473	485	1.777
250	1.148	370	1.486	490	1.827
255	1.163	375	1.500	495	1.88
260	1.178	380	1.513	500	1.932
265	1.193	385	1.526	505	1.984
270	1.207	390	1.539	510	2.035
275	1.222	395	1.552	515	2.086
280	1.237	400	1.565	520	2.137
285	1.251	405	1.578	525	2.157
290	1.266	410	1.591	530	2.176
295	1.280	415	1.603	535	2.196
300	1.294	420	1.616	540	2.215
305	1.308	425	1.629	545	2.235
310	1.323	430	1.641	550	2.255
315	1.337	435	1.654		

NOTE:

(a) For weights between those shown in the table the minimum pen area per head must be calculated by *linear interpolation*.

(b) For cattle weighing more than 550 kg, the minimum pen area per head must be calculated by the formula: 2.255m^2 plus 0.02 m^2 for each 5 kg above 500 kg.

(c) For shipments that originate or load from a port south of latitude 26° south and take a route that does not cross latitude 15° south, stocking densities will be calculated from this table regardless of the date of the *voyage*.

TABLE 22—MINIMUM PEN AREA PER HEAD FOR BUFFALO EXPORTED BY SEA

Liveweight (kg)	Minimum pen area (m^2/head)	Liveweight (kg)	Minimum pen area (m^2/head)	Liveweight (kg)	Minimum pen area (m^2/head)
200	1.089	355	1.591	510	2.021
205	1.107	360	1.606	515	2.034
210	1.125	365	1.620	520	2.047
215	1.143	370	1.635	525	2.063
220	1.160	375	1.650	530	2.081
225	1.177	380	1.664	535	2.100
230	1.195	385	1.678	540	2.119
235	1.212	390	1.693	545	2.137
240	1.229	395	1.707	550	2.156
245	1.246	400	1.721	555	2.175
250	1.262	405	1.736	560	2.193
255	1.279	410	1.750	565	2.212
260	1.295	415	1.764	570	2.231
265	1.312	420	1.778	575	2.250
270	1.328	425	1.792	580	2.268
275	1.344	430	1.806	585	2.287
280	1.360	435	1.819	590	2.306
285	1.376	440	1.833	595	2.324
290	1.392	445	1.847	600	2.343
295	1.408	450	1.861	605	2.362
300	1.424	455	1.874	610	2.380
305	1.439	460	1.888	615	2.399
310	1.455	465	1.901	620	2.418
315	1.470	470	1.915	625	2.437
320	1.486	475	1.928	630	2.455
325	1.501	480	1.941	635	2.474
330	1.516	485	1.955	640	2.493
335	1.531	490	1.968	645	2.511
340	1.546	495	1.981	650	2.530
345	1.561	500	1.995		
350	1.576	505	2.008		

NOTE:

(d) For weights between those shown in the table the minimum pen area per head must be calculated by *linear interpolation*.

TABLE 23—MINIMUM PEN AREA PER HEAD FOR SHEEP AND GOATS EXPORTED BY SEA

Liveweight (kg)	Minimum pen area (m^2/head)		Liveweight (kg)	Minimum pen area (m^2/head)	
	November to April	May to October		November to April	May to October
28	0.271	0.298	51	0.402	0.442
29	0.277	0.305	52	0.407	0.448
30	0.283	0.311	53	0.412	0.453
31	0.289	0.318	54	0.417	0.459
32	0.295	0.325	55	0.422	0.465
33	0.302	0.332	56	0.427	0.470
34	0.308	0.338	57	0.433	0.476
35	0.313	0.345	58	0.438	0.481
36	0.319	0.351	59	0.442	0.487
37	0.325	0.358	60	0.447	0.492
38	0.331	0.364	61	0.452	0.498
39	0.337	0.370	62	0.457	0.503
40	0.342	0.377	63	0.462	0.508
41	0.348	0.383	64	0.467	0.514
42	0.354	0.389	65	0.472	0.519
43	0.359	0.395	66	0.476	0.524
44	0.365	0.401	67	0.481	0.529
45	0.370	0.407	68	0.486	0.535
46	0.375	0.413	69	0.491	0.540
47	0.381	0.419	70	0.495	0.545
48	0.386	0.425	75	0.518	0.570
49	0.391	0.431	80	0.541	0.595
50	0.397	0.436	90	0.585	0.643

NOTE:

(a) For horned rams an additional 10 per cent pen space must be allocated.

(b) For goats with horns in excess of paragraph 1A.3.5 (b), the goats are penned separately and an additional 10 per cent space must be allocated.

(c) For weights between those shown in the table, the minimum pen area per head must be calculated by *linear interpolation*.

TABLE 24—MINIMUM PEN AREA PER HEAD FOR PREGNANT CATTLE EXPORTED BY SEA

Type of livestock	Minimum average floor area per head
Pregnant cattle of a *Bos taurus* breed	An area 15 per cent larger than the minimum area required for cattle under Table 20
Pregnant cattle of a *Bos indicus* breed	An area 15 per cent larger than the minimum area required for cattle under Table 19

Appendix I—Aircraft stocking density requirements

In general, when an animal stands in its natural position no part of the animal's body (or horns) should touch any overhead part of the container.

TABLE 25—MINIMUM AIRCRAFT CRATE PEN AREA FOR CATTLE OR BUFFALO EXPORTED BY AIR

Liveweight (kg)	Minimum pen area (m^2/head)	Liveweight (kg)	Minimum pen area (m^2/head)
150	0.54	500	1.27
160	0.56	510	1.29
170	0.58	520	1.31
180	0.60	530	1.34
190	0.62	540	1.36
200	0.64	550	1.38
210	0.66	560	1.40
220	0.68	570	1.42
230	0.70	580	1.44
240	0.72	590	1.46
250	0.74	600	1.48
260	0.76	610	1.50
270	0.78	620	1.53
280	0.80	630	1.55
290	0.82	640	1.57
300	0.84	650	1.59
310	0.87	660	1.61
320	0.89	670	1.64
330	0.91	680	1.66
340	0.93	690	1.68
350	0.95	700	1.70
360	0.98	710	1.72
370	1.00	720	1.74
380	1.02	730	1.76
390	1.04	740	1.78
400	1.06	750	1.80
410	1.08	760	1.82
420	1.10	770	1.84
430	1.12	780	1.86
440	1.15	790	1.88
450	1.17	800	1.90
460	1.19	810	1.93

470	1.21	820	1.95
480	1.23	830	1.97
Liveweight (kg)	Minimum pen area (m^2/head)	Liveweight (kg)	Minimum pen area (m^2/head)
490	1.25	840	1.99(cont.)
850	2.01	930	2.18
860	2.03	940	2.20
870	2.05	950	2.22
880	2.07	960	2.24
890	2.09	970	2.26
900	2.12	980	2.28
910	2.14	990	2.31
920	2.16	-	-

NOTE:

(a) For weights between those shown in the table, the minimum pen area per head should be calculated by *linear interpolation*.

(b) when calculating stocking rates, the following must be taken into account and the pen area per head must be increased by 10 per cent (not cumulative with other space requirements):

- Horned cattle or buffalo
- Total scheduled journey time exceeds 24 hours from start to finish
- Livestock are loaded with mixed cargo in an aircraft lower hold

(c) International Air Transport Association regulations stipulate that trained camels must be penned individually for air transport. However, wild-caught camels are not accustomed to individual penning or segregation and are best transported by air in cattle pens. Use of cattle pens must be limited to camels under 300 kg liveweight.

TABLE 26—MINIMUM AIRCRAFT CRATE PEN AREA FOR SHEEP OR ALPACAS EXPORTED BY AIR

Liveweight (kg)	Minimum pen area (m^2/head)	Liveweight (kg)	Minimum pen area (m^2/head)
20	0.150	49	0.266
21	0.154	50	0.270
22	0.158	51	0.274
23	0.162	52	0.279
24	0.166	53	0.283
25	0.170	54	0.288
26	0.174	55	0.293
27	0.178	56	0.297
28	0.182	57	0.302
29	0.186	58	0.306
30	0.190	59	0.311
31	0.194	60	0.315
32	0.198	61	0.320
33	0.202	62	0.324
34	0.206	63	0.329
35	0.210	64	0.333
36	0.214	65	0.338
37	0.218	66	0.342
38	0.222	67	0.347
39	0.226	68	0.352
40	0.230	69	0.356
41	0.234	70	0.360
42	0.238	75	0.383
43	0.242	80	0.405
44	0.246	85	0.428
45	0.250	90	0.450
46	0.254	95	0.473
47	0.258	100	0.495
48	0.262		

NOTE:

(a) For weights between those shown, the minimum pen area per head should be calculated by *linear interpolation*.

(b) The following must be taken into account, and the pen area increased by 10 per cent (not cumulative with other space requirements), for:

- Sheep and alpacas with more than 25 mm of wool/fibre
- Horned sheep
- Total scheduled journey time exceeds 24 hours from start to finish
- Livestock are loaded with mixed cargo in an aircraft lower hold.

TABLE 27—MINIMUM AIRCRAFT CRATE PEN AREA FOR GOATS EXPORTED BY AIR

Liveweight (kg)	Minimum pen area (m2/head)	Liveweight (kg)	Minimum pen area (m2/head)
15	0.093	40	0.213
16	0.098	41	0.218
17	0.103	42	0.223
18	0.107	43	0.227
19	0.112	44	0.232
20	0.117	45	0.237
21	0.122	46	0.242
22	0.127	47	0.247
23	0.131	48	0.251
24	0.136	49	0.256
25	0.141	50	0.261
26	0.146	51	0.266
27	0.151	52	0.271
28	0.155	53	0.275
29	0.160	54	0.280
30	0.165	55	0.285
31	0.170	60	0.309
32	0.175	65	0.333
33	0.179	70	0.357
34	0.184	75	0.381
35	0.189	80	0.405
36	0.194	85	0.429
37	0.199	90	0.453
38	0.203	95	0.477
39	0.208	100	0.501

NOTE:

(a) For weights between those shown in the table, the minimum pen area per head should be calculated by *linear interpolation*.

(b) The following must be taken into account, and the pen area per head increased by 10 per cent (not cumulative with other space requirements), for:

- Fibre goats with more than 25 mm of fibre
- Horned goats (goats with horns in excess of the standard must be penned separately)
- Total scheduled journey time exceeds 24 hours from start to finish
- Livestock are loaded with mixed cargo in an aircraft lower hold.

TABLE 28—MINIMUM AIRCRAFT CRATE PEN AREA FOR DEER EXPORTED BY AIR

Liveweight (kg)	Minimum pen area (m^2)	Liveweight (kg)	Minimum pen area (m^2)
20	0.13	100	0.53
22	0.14	110	0.55
24	0.15	120	0.57
26	0.16	130	0.59
28	0.17	140	0.61
30	0.18	150	0.63
32	0.19	160	0.64
34	0.20	170	0.66
36	0.21	180	0.68
38	0.22	190	0.69
40	0.23	200	0.70
42	0.25	210	0.73
44	0.26	220	0.75
46	0.27	230	0.77
48	0.28	240	0.79
50	0.29	250	0.81
55	0.31	260	0.84
60	0.34	270	0.86
65	0.37	280	0.88
70	0.39	290	0.90
75	0.42	300	0.92
80	0.45	310	0.96
85	0.47	320	0.98
90	0.49	330	1.00
95	0.51	340	1.02
350	1.05	390	1.14
360	1.08	400	1.17
370	1.10	410	1.19
380	1.12	420	1.21

NOTE:

(a) For deer, floor space must be adequate to allow deer to lie down during transport.

(b) The following must be taken into account, and the pen area per head increased by 10 per cent (not cumulative with other space requirements), for:

- Horned deer
- Total scheduled journey time exceeds 24 hours from start to finish
- Livestock loaded with mixed cargo in an aircraft lower hold

Appendix J—Daily report—Sea voyages

<table>
<tr><td></td><td>Daily reporting must commence on day one of the voyage and must include the following information.</td></tr>
<tr><td>1</td><td>Veterinarian’s name and AAV accreditation number (if on–board)</td></tr>
<tr><td>2</td><td>Stockperson’s name</td></tr>
<tr><td>3</td><td>Date of report</td></tr>
<tr><td>4</td><td>Journey day number (must be consistent with the day number used by the Master of the Vessel)</td></tr>
<tr><td>5</td><td>Vessel’s position and estimated time of arrival at next port</td></tr>
<tr><td>6</td><td>The number of animals loaded by port of loading and species. For example:
<table>
<tr><th>Species</th><th>e.g. Portland</th><th>e.g. Fremantle</th></tr>
<tr><td>Cattle</td><td>100</td><td>200</td></tr>
<tr><td>Buffalo</td><td>0</td><td>5</td></tr>
<tr><td>Sheep</td><td>5 000</td><td>1 000</td></tr>
</table></td></tr>
<tr><td>7</td><td>Daily environmental recordings:
Average dry bulb and wet bulb temperature (°C) for each deck
Humidity (%) for each deck
Bridge temperature (°C) (ambient/wet bulb) and humidity (%)
Environmental conditions e.g. Sea swell; calm (1), moderate (2), rough (3)</td></tr>
<tr><td>8</td><td>Feed and water consumption (average per head),</td></tr>
<tr><td>9</td><td>Animal health and welfare by deck/tier, based on an assessment of at least 1–2 representative pens of each species, representative of the class or line, per deck.
The assessment must address the matters indicated in the table below. The final two columns provide example material.
<table>
<tr><th>Mandatory matter</th><th>Further mandatory detail</th><th>Example</th><th>Example</th></tr>
<tr><td>Pen ID</td><td></td><td>3FWD</td><td>3AFT</td></tr>
<tr><td>Breed/line</td><td></td><td>B wether</td><td>Euro steer</td></tr>
<tr><td>General pen demeanour</td><td>Alert/active/lethargic/anxious/ dull or other</td><td>alert</td><td>dull</td></tr>
<tr><td>Fodder type</td><td>Pellets only/pellets mixed with chaff</td><td>pellets</td><td>Pellets & chaff</td></tr>
<tr><td>Feeding behaviour & trough space</td><td>Normal (1), mild lunging (2), many aggressive (3)</td><td>1</td><td>2/ inadequate trough space</td></tr>
<tr><td>Water quality and any supply issue</td><td>Clean/moderately clean/dirty</td><td>clean</td><td>moderately clean</td></tr>
<tr><td>Faeces type</td><td>Normal (1), sloppy (2), runny diarrhoea (3), firm pellets (4)</td><td>1</td><td>2</td></tr>
<tr><td>Manure pad score</td><td>Dry (1), sticky (2) and sloppy (3)</td><td>1</td><td>2</td></tr>
<tr><td>Panting score *</td><td>0–4 (see ‘Respiratory type’ below)</td><td>1</td><td>1–2</td></tr>
<tr><td colspan="2">If any animals at panting score _≥ PS 3, describe percentage of animals in pen at each panting score; approx. how many pens have animals _≥ PS 3,</td><td>10% PS3
rest at PS2
only x3 pens</td><td>20% PS 3
50% PS1
Most pens</td></tr>
</table></td></tr>
<tr><td>10</td><td>Respiratory type, by class and line and by deck, per day.
If a panting score of 3 or 4 is observed, wet and dry bulb readings should be taken twice per day near those pens and included in the daily report.</td></tr>
<tr><td>11</td><td>Health and hospital pen report.
Pen/Tag ID; clinical sign, medications, treatments or other actions</td></tr>
</table>

<table>
<tr><td>12</td><td>Mortality details, including Pen ID and tag numbers
By species and class of livestock
Number of animals euthanised, including reasons if known
Number of animals found dead, including reasons if known
Daily/cumulative mortality figure by species and class
EXAMPLE:<table><tr><th>Mortality</th><th>Species/class</th><th>Pen ID / tag ID</th><th>Euthanasia (reasons)</th><th>Found dead (reasons)</th><th>Deck</th></tr><tr><td>Daily</td><td>Cattle/Heavy euro bull
Buffalo</td><td></td><td>1 – BRD
0</td><td>0
1 – unknown</td><td>1</td></tr><tr><td>Cumulative</td><td>Cattle Heavy euro bull
Buffalo</td><td></td><td>3 BRD
0</td><td>0
1 trauma</td><td>2</td></tr><tr><td>Average daily</td><td>Cattle
Buffalo</td><td></td><td></td><td></td><td></td></tr></table></td></tr>
<tr><td>13</td><td>For sheep exported to the Middle East: number or per cent of sheep showing clinical signs of scabby mouth.</td></tr>
<tr><td>14</td><td>Births and abortions (including estimated stage of pregnancy) and ear tag ID/Pen ID</td></tr>
<tr><td>16</td><td>General comments</td></tr>
</table>

Appendix K—End of journey report—Air

This report must provide a general overview of the air journey, with mention of any specific issues relevant to the health and welfare of the livestock, and must include the following information:

#	Required information
1	Stock person's or Veterinarian's name or and AAV accreditation number (if on-board)
2	Aircraft type(s) and airline(s)
3	Flight number(s)
4	Departure port(s) Date Total loaded, by species
5	Transit stops Feed and water Access Maintenance issues
6	Flight conditions Weather Temperature (where the livestock is kept) Ventilation
7	Health and welfare of livestock Number of livestock born during the journey Number of abortions Number of mortalities
8	Discharge port(s) Date
9	Comments on discharge operations

Appendix L—End of voyage report—Sea

#	**The end of voyage report must provide a general overview of the voyage, with mention of any specific issues relevant to the health and welfare of the livestock. It must include the following information.**
1	Vessel name
2	Voyage number(s)
3	Departure port(s) Date the animals were loaded (by port if more than one) Total number of animals loaded, by port of loading and species. Do not combine cattle and buffalo.
4	Discharge port(s) Date the animals were unloaded (by port if more than one) Total number of animals unloaded, by port of unloading and species. Do not combine cattle and buffalo.
5	Feed and water issues, including fodder and water consumed during the voyage and detail of any issues surrounding supply, availability/accessibility and quality Maintenance issues and equipment failure
6	Environmental conditions, including sea conditions Weather Temperature (°C) and humidity (%) (where the livestock is kept) Ventilation Conditions of decks and bedding, if used. If used for sheep, provide information on type of bedding, amount used and purpose.
7	Detail on health and welfare of livestock, including any treatments given, reasons for the treatment and outcomes Number of livestock born during the voyage, and the dam(s) by species, class and ear tag Number of abortions during the voyage, and identities of the dam(s) by species, class and ear tag Number of mortalities (per day, by deck/tier, species and class of livestock) including reasons (where known), pen ID and tag numbers. Separately identify animals that were euthanised, including pen ID and tag numbers.
8	Relationships with Master/crew/accredited stockperson/AAV
9	Comments on discharge operations
10	Information about any unexpected animal health or welfare issues. Information can include video and photographs, animal identification and location on the vessel and information which may allow trace backs.
11	Stockperson's name. Veterinarian's name and AAV accreditation number (if on–board)

Appendix M—ASEL management plans

Exporters seeking to export animals that would otherwise be *unfit to export* due to the specific requirements outlined in the table below, may apply to the relevant Australian Government agency with an appropriate management plan demonstrating appropriate risk management. This plan must be approved by the relevant Australian Government agency before the exporter may submit any relevant consignment's notice of intention to export.

The exporter must provide notice that the management plan has been invoked for each relevant consignment within the exporter's declaration in applying for an *export permit* and may also be required to submit a detailed *load plan*.

The relevant Australian Government agency will only consider requests to vary the following requirements:

ASEL requirement	Management plan	Management plan must demonstrate	Relevant EAN
1A.3.2(c) and 1A.3.3(c): Source cattle or buffalo less than 200 kg	Light cattle/buffalo	Animals will be at least 200 kg at time of export	2016-11
1A.3.2(d) and 1A.3.3(c): Source cattle or buffalo more than 650 kg	Heavy cattle/buffalo	Additional appropriate animal preparation and voyage management procedures will be implemented to manage specific animal welfare risks	2016-12
4C.1: The export of livestock by sea via the Suez Canal or the Cape of Good Hope, the Panama Canal or Cape Horn, or via another route where the *voyage* is expected to be 31 days or more, is prohibited.	Extended long haul voyage management plan	Additional appropriate animal preparation and voyage management procedures will be implemented to manage specific animal welfare risks, including all cattle and buffalo must be vaccinated for bovine respiratory disease	2016-15
2B.6(d): Animals must not leave the *registered premises* until AMSA clearance of the vessel has been granted	Load out of *registered premises* prior to AMSA approval	Animals will remain compliant with importing country requirements, and the total transport time from the *registered premises* to the port to the alternative *registered premises* will not exceed the requirements within this standard	Approved arrangements for the export of livestock – guidelines.
1A.3.2(b) and 1A.3.3(b): If horned, cattle must have horns no longer than 12 cm, with the nonvascular horn tip removed to a diameter of three (3) cm. If horned, buffalo must have horns no longer than the spread of the ears.	Long horn	Cattle horns will be tipped and no longer than 60cm between the outermost edges of the horns, buffalo horns will be tipped and no longer than 5cm from the outer margin of the ears. Additional 30 per cent space per animal is provided and additional appropriate animal preparation and voyage management procedures will be implemented to manage specific animal welfare risks	2017-15
4C.2: The export of goats by sea on *voyages* or more than 10 days is prohibited	Export of goats by sea on a long haul voyage	Additional 10 per cent space per animal is provided and additional appropriate animal preparation and voyage management procedures will be implemented to manage specific animal welfare risks	2016-10

Appendix N—Pastoral zone definition

In South Australia and New South Wales, Property Identification Code (PIC) numbers are used to determine if properties are located in the pastoral zone. Refer Figure 1 and Figure 2 below.

The pastoral zone of Western Australia is shown in Figure 3.

All of Queensland is considered to be within the pastoral zone for the purposes of the standards.

Figure 1: New South Wales Pastoral Zone for the purposes of these standards

For NSW the 3rd and 4th character of the PIC indicates where the property is located. PICs with the following 3rd and 4th characters are pastoral: 03, 05, 07, 09, 13, 31, 39, 58, 61 and 60. The second character of the PIC is a validation character and should be ignored.

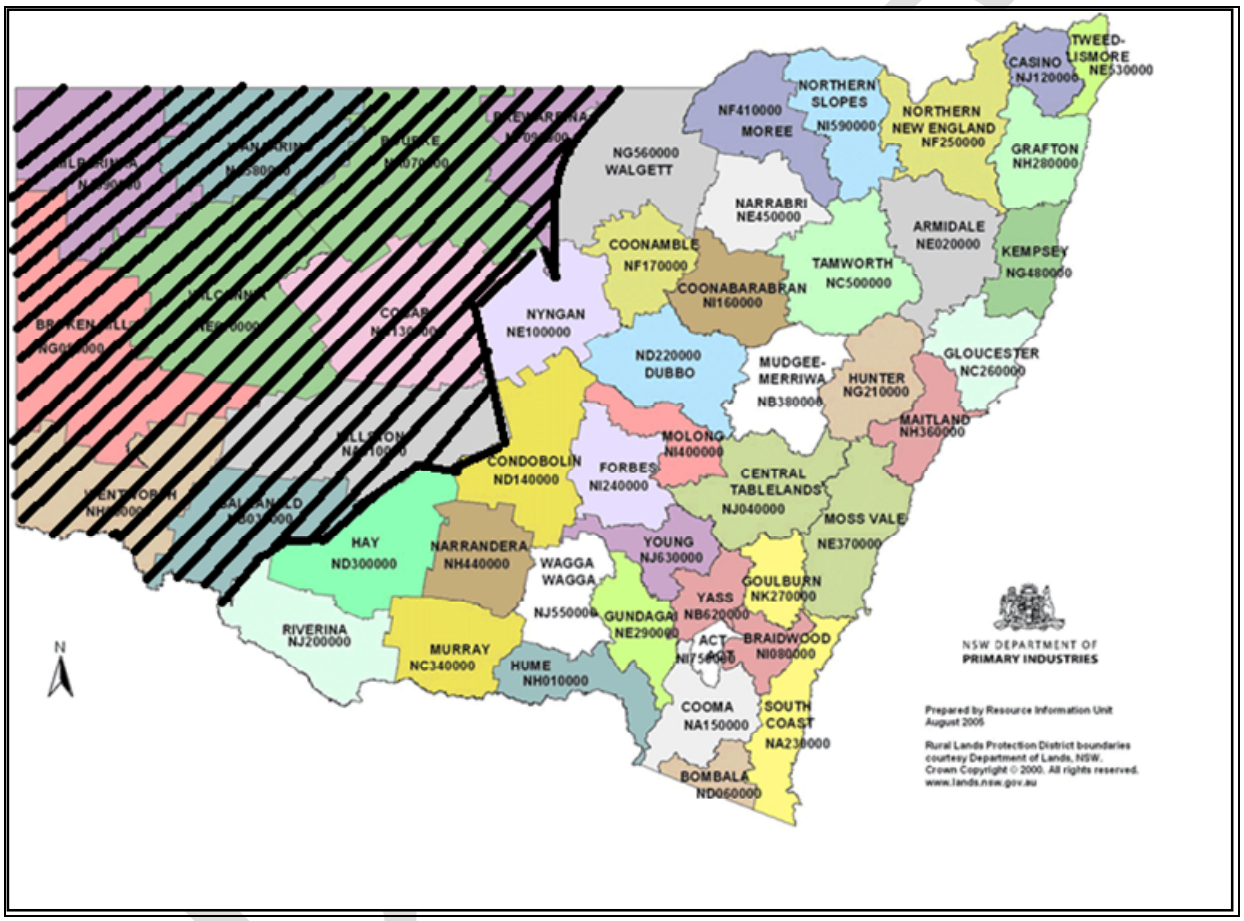


Figure 2: South Australian pastoral zone for the purposes of these standards.

For South Australia the 3rd and 4th digit of the PIC tells you where the property is located. PICs with the following 3rd and 4th characters are pastoral: 70, 80, 81, 82, 83, 84 and 85.

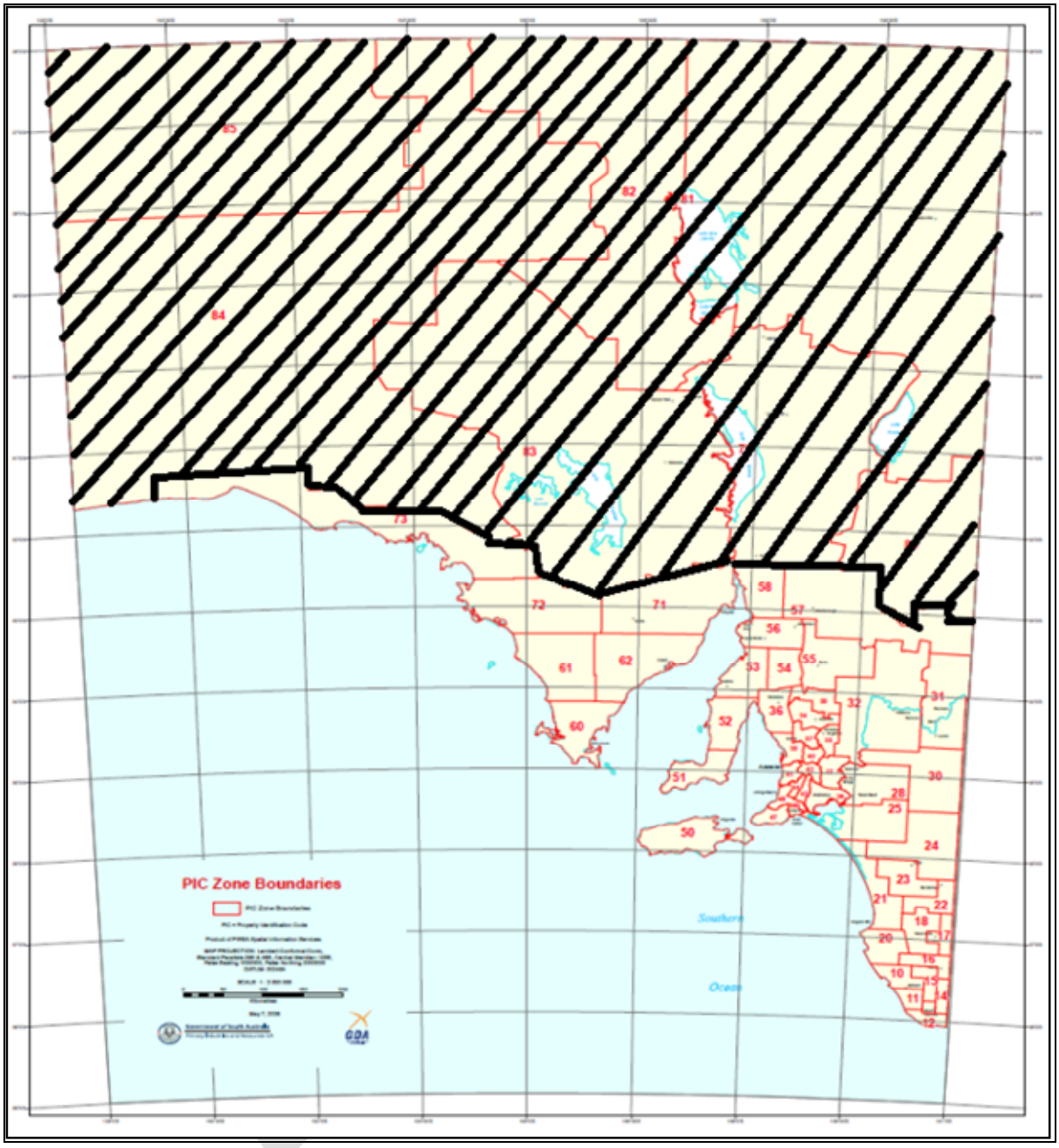


Figure 3: Western Australia pastoral zone for the purposes of these standards

The shires within the pastoral zone are: Ashburton, Mt Magnet, Boulder, Murchison, Broome, Roebourne, Carnarvon, Sandstone, Coolgardie, Shark Bay, Cue, Upper Gascoyne, Dundas, West Kimberly, East Pilbara, Wiluna, Exmouth, Wyndham/ East Kimberly, Hallscreek, Yalgoo, Kalgoorlie, Yilgarn, Laverton, Leonora, Meekatharra and Menzies.