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Department of Agriculture, Water and the Environment

GPO Box 858 Canberra ACT 2601

Telephone 1800 900 090

Web awe.gov.au

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The ASEL 3.2 update

The Australian Standards for the Export of Livestock (ASEL) sets out the minimum animal health and welfare standards exporters must meet throughout the export supply chain. The ASEL is given effect under the *Export Control Act 2020* and is referenced in the Export Control (Animals) Rules 2021. Exporters must comply with the ASEL to be permitted to export livestock from Australia. The ASEL applies to exports of cattle, sheep, goats, buffalo, deer, and camelids.

The Department of Agriculture, Water and the Environment has committed to undertaking regular consultative, user-centric updates and reviews of the standards, to ensure they are fit-for-purpose and based on science, evidence and best practice.

The 2021 update of the ASEL has resulted in a new version of the standards, ASEL 3.2. The changes are a result of issues that have been raised by internal and external stakeholders since the introduction of ASEL 3.0 in 2020, including feedback received during public consultation on a draft ASEL 3.2 in October and September 2021. ASEL 3.2 incorporates changes that reduce ambiguity and improve readability and usability. Issues raised that are complex or would result in a large regulatory impact have not been addressed in this update but will be reviewed in separate processes in consultation with industry and other stakeholders.

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Definitions

These terms have been defined for the purpose of the Australian Standards for the Export of Livestock 3.2.

Accredited stockperson means a stockperson who is accredited by the Australian Livestock Export Corporation Ltd (LiveCorp) for the management of livestock on vessels.

Accredited Veterinarian (AAV) means a veterinarian who is accredited under the Export Control (Animals) Rules 2021 to carry out export operations in approved export programs.

Ad libitum means that food and water is available at all times with the quantity and frequency of consumption being the free choice of the animal.

Adverse effect means 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.

Adverse weather means temperature and climatic conditions (such as rain, hail, snow, wind, humidity, heat, storms, cyclones, heatwaves and drought) that either individually or in combination, are likely to expose livestock to heat or cold stress, cause injury and/or result in other unfavourable animal health or welfare outcomes.

Air export journey means the period from the time the first animal is loaded into a crate for transport by air (be it on the approved premises, other premises used for export preparation, at the airport or other), until the time the last animal is unloaded from the aircraft at the final destination. To calculate journey length, 24 hour periods are to be recorded in a single standard time zone — such as Coordinated Universal Time (UTC) — for the duration of the journey. Also see **flight**.

Animal means the same as livestock.

Animal welfare means the physical and mental state of an animal in relation to the conditions in which it lives and dies, as described in the World Organisation for Animal Health (OIE) Terrestrial Animal Health Code 2021.

Appropriate for export means complying with all the requirements of ASEL, the importing country requirements, the *Export Control Act 2020* and the Export Control (Animals) Rules 2021 at the relevant stage of preparation for export.

Approved arrangement means an approved arrangement that covers a kind of export operations in relation to prescribed livestock that is approved under the *Export Control Act 2020* and Export Control (Animals) Rules 2021.

Approved export program (AEP) means an exporter's program of activities, approved by the Secretary, for AAVs preparing livestock consignments for export or accompanying livestock consignments on ships.

Approved blood test means an ELISA (enzyme-linked immunosorbent assay) that detects specific pregnancy-associated glycoproteins, including pregnancy-specific protein B, on serum

or plasma samples. The test must be conducted by a laboratory holding the appropriate score of ISO/IEC 17025 accreditation for the test.

Approved premises means a place approved under the Export Control (Animals) Rules 2021 for the pre-export quarantine or isolation of livestock for export by air.

Australian Certificate for the Carriage of Livestock (ACCL) means the document issued by the Australian Maritime Safety Authority under Marine Order 43 (Cargo and cargo handling—livestock) 2018.

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

Australian Veterinary Antimicrobial Prescribing Guidelines (AVAPG) means the guidelines for the responsible prescription of veterinary antimicrobials. They can be viewed online at: National Centre for Antimicrobial Stewardship (ncas-australia.org).

Authorised officer means, for the purposes of ASEL an Australian Commonwealth Government official authorised under the *Export Control Act 2020* to perform functions in accordance with Australian export legislation.

Average daily mortality rate means the rate (percentage) that is calculated by dividing the mortality rate for each species of the consignment, by the number of voyage days. Average daily mortality rate only applies to consignments exported by sea and is to be calculated at the end of the voyage.

Certificate of health means a government certificate, issued by an authorised officer, which states that the livestock meet the requirements of a specified importing country relating to the health status of the livestock.

Class means the export grouping of animals based on their end use, be it feeder, slaughter or breeder. The term breeder includes any subsets of this class such as productive heifers.

Clear day means a full day, being 24 hours starting immediately after midnight, not including the day of arrival to the registered establishment for export preparation or the day of loading for export at the registered establishment. Clear days apply to the animal, rather than at a whole-of-consignment level.

Competent pregnancy tester means for cattle and buffalo, a person accredited or permitted by the relevant state or territory legislation, agency, or industry body if accepted by the state or territory, to make a pregnancy diagnosis in the particular species. Competent pregnancy testers may only diagnose pregnancy for feeder/slaughter cattle or buffalo by manual palpation. For deer, goat and sheep, a competent pregnancy tester means a person who can attest to experience and skill in pregnancy testing of the particular species.

Competent stock handler means a person who can demonstrate that they have the requisite knowledge, skills, experience, attitude and behaviour to perform the required activity, and has the ability to manage and handle animals humanely, efficiently and capably. Supporting evidence of competency includes:

- induction training; and/or

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

Accredited stockpersons and AAVs can perform the role of a competent stock handler without supporting evidence.

Consignment means a group of livestock that are under export preparation by one exporter and are destined for export, or have been exported, from a single seaport or airport.

Cow means a female bovine animal that has produced a calf or is over 3 years of age.

Curfew (also known as 'empty out' time) means the deliberate and variable period of water and/or feed deprivation.

Curfew factor means an additional percentage applied to the liveweight of curfewed animals to account for weight loss due to curfew, in order to more accurately estimate normal liveweight.

Delay means an additional unforeseeable extension to the voyage duration above the estimated voyage length.

Department means the relevant Commonwealth government agency responsible for the regulation of live animal exports. At the time of publication of this standard, this is the Department of Agriculture, Water and the Environment.

Disembarkation means the unloading of livestock at any overseas seaport or airport. Disembarkation commences with the unloading of the first animal and ends when the last animal is unloaded from the vessel or aircraft at the port.

Embarkation means the loading of livestock at any Australian seaport or airport. Embarkation commences with the loading of the first animal and ends when the last animal is loaded onto the vessel or aircraft at the port.

Euthanasia means the act of inducing death of an animal in a humane manner that causes immediate loss of consciousness and then rapid death, by a method approved under national animal welfare standards and guidelines, and model codes of practice, for the species where available.

Export permit means a permit issued by the Secretary, or delegate, under the *Export Control Act 2020* to enable the export of live animals from Australia.

Extended long-haul means a voyage that is 31 voyage days or more in duration. See also **short-haul** and **long-haul**.

Far markets means all other destination ports not covered in the definition of **near markets**.

Fat-tailed sheep means a general type of domestic sheep known for their distinctive large tails and hindquarters.

Feed means any food intended for consumption by livestock, such as chaff, hay, pellets, or grain.

Fit to travel means the animal:

- can walk on its own by evenly bearing weight on all 4 legs; and
- is free from visible signs of injury or distress or conditions likely to further compromise its health or welfare during transport; and
- is strong enough to make the journey and is not dehydrated or emaciated; and
- is not blind in either eye and can see well enough to walk, load and travel without impairment or distress; and
- has had adequate access to water prior to loading.

Flight means the portion of an air export journey that begins when the first animal is loaded onto an aircraft and concludes when the last animal is unloaded from the aircraft at the final destination airport, and includes any transit stops en route.

Hair sheep means any sheep breed that grows hair rather than wool.

Health status means the status of an animal with respect to animal disease and the importing country requirements.

Heat stress risk assessment (HSRA) means an assessment performed using a heat stress model that combines weather statistics, vessel parameters and animal heat tolerance factors to determine the pen space allocation for the livestock for an intended voyage to predict the risk of mortality or heat stress.

Heifer means a female bovine animal less than 3 years of age that has not produced a calf.

Hospital pen means a designated area reserved for the sole purpose of special care of weak, sick or injured animals. Requirements for hospital pens can be found in Marine Order 43.

IATA Live Animal Regulations means the document titled *Live Animal Regulations* published by the International Air Transportation Association as it exists from time to time.

Immature animal means an animal that has not reached sexual maturity and is not displaying secondary sexual characteristics typical for the species such as descended testes, signs of being in heat (oestrous), udder maturity or antlers. Typically, an immature animal is yet to exhibit behavioural changes such as dominance, riding, or aggression.

Importing country requirements means:

- the conditions of the relevant importing country protocol; and/or
- the conditions imposed by an importing country, any relevant import permit, dispensation or approved equivalency agreement.

Individual identification means a method of identifying each animal in a way that is permanent or semi-permanent as to be individually identifiable for the entire period of export preparation, and the voyage or air export journey.

Land Transport Standards means the Australian Animal Welfare Standards and Guidelines for the Land Transport of Livestock published by Animal Health Australia (21 September 2012).

Linear interpolation means a method of finding new values at positions between two data points. The formula is: $y = y_1 + ((x - x_1) * (y_2 - y_1)) / (x_2 - x_1) (y_2 - y_1)$, where x is the known value, y is the unknown value, x_1 and y_1 are the coordinates that are below the known x value, and x_2 and y_2 are the coordinates that are above the x value.

For example, to find the pen area for a 23kg animal in the below example:

Liveweight (kg)	Minimum pen area (m ² /head)
20	0.238
30	0.311

$$x = 23 \quad y = \text{pen area} \quad y_1 = 0.238 \quad x_1 = 20 \quad y_2 = 0.311 \quad x_2 = 30$$

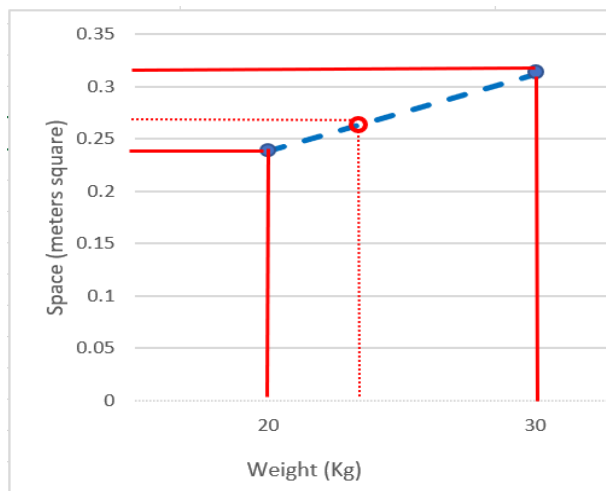
$$y = y_1 + ((x - x_1) * (y_2 - y_1)) / (x_2 - x_1) (y_2 - y_1)$$

$$\text{Minimum pen area} = 0.238 + ((23 - 20) * (0.311 - 0.238)) / (30 - 20)$$

$$\text{Minimum pen area for 23kg animal} = 0.26\text{m}^2$$

A graphical representation of linear interpolation is contained in Figure 1.

Figure 1 Graphical representation of linear interpolation



Source: Department of Agriculture, Water and the Environment

Livestock means the same as defined under the Export Control (Animals) Rules 2021.

Loading plan or **load plan** means a plan which details the number and species of livestock, where they will be placed on the vessel or aircraft and how much space they are allocated.

Long-haul means a voyage that is 10 voyage days or more in duration, but less than 31 voyage days. See also **short-haul** and **extended long-haul**.

Management plan means a plan approved under an exporter’s approved arrangement detailing how the exporter will manage the risks associated with undertaking certain activities.

Marine Order 43 means Marine Order 43 (Cargo and cargo handling—livestock) 2018 made under the *Navigation Act 2012*.

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

Mature animal means an animal that has reached sexual maturity or is displaying secondary sexual characteristics typical for the species such as descended testes, signs of being in heat (oestrous), udder maturity or antlers. Mature animals may show behaviours such as dominance, riding, or aggression.

Model codes of practice means the codes of practice for minimum welfare standards and practices for a range of livestock species. A link to the model codes of practice can be found at awe.gov.au/animal/welfare/standards-guidelines.

Mortality rate means the rate (percentage) that is calculated by dividing the number of deaths of a species occurring during the voyage or air export journey, for each export consignment in the case of a shared vessel or aircraft, by the total number of that species loaded and multiplying the resultant figure by 100. See also **average daily mortality rate**.

National Animal Welfare Standards and Guidelines means the welfare standards and guidelines that provide legal requirements and recommended practices for the welfare of livestock. A link to the National Animal Welfare Standards and Guidelines can be found at awe.gov.au/animal/welfare/standards-guidelines.

National Livestock Identification System (NLIS) means Australia's system for the identification and tracing of cattle, buffalo, sheep and goats.

National Vendor Declaration (NVD)/Waybill means a declaration that a livestock owner or person responsible for the livestock signs and acts to trace an animal's movement from premises to premises throughout its life. NVDs/Waybills link the traceability of livestock from the farm to other farms, through to saleyards, transport, and processing.

Near markets means destination ports located south of latitude 15°N, east of longitude 90°E and west of longitude 180°.

Notice of Intention (NOI) means an application made to the department by the exporter in accordance with the *Export Control Act 2020* and the Export Control (Animals) Rules 2021.

Notifiable incident means an incident that has the potential to cause, or has caused a serious adverse effect to the health or welfare of animals, as outlined in Standards 5.6.5 and 6.11.1.

Notifiable mortality level means for each species, the mortality rate or 3 animals, whichever is the greater number of deceased animals, where notification to the department is required (see Table 22 and Table 37).

Pastoral and station sheep refers to sheep that have been sourced from the pastoral zone, as identified in Appendix A.

Portable Livestock Unit (PLU) includes a box, platform, container or other arrangement used to form pens or stalls for the carriage of livestock by sea. Portable livestock units are required to comply with Marine Order 43, as they are 'portable equipment' under that Order. Requirements for PLUs are detailed in Appendix C and, where applicable, Standard 5.

Pre-export quarantine or isolation means a period of quarantine or isolation of livestock prior to export, required by an importing country.

PREgCHECK (National Cattle Pregnancy Detection (NCPD)) Scheme means the pregnancy detection accreditation program offered to members of the Australian Cattle Veterinarians group.

Preparation for export includes actions taken from sourcing livestock through to the completion of loading those animals onto the vessel or aircraft crate.

Property Identification Code (PIC) means a unique identification code allocated by the relevant authority in a state or territory to a block (or blocks) of land usually used for agricultural purposes.

Property of source means, for the purposes of ASEL, the premises or farm where the livestock resided prior to transport to the registered establishment, approved premises or, for air consignments, any other premises used for export preparation.

Registered establishment means a premises registered to prepare livestock for export under the *Export Control Act 2020* and the Export Control (Animals) Rules 2021.

Registered establishment occupier means a person in whose name the registered establishment is registered. See also **registered establishment**.

Registered establishment operations manual means the operations manual for a registered establishment that sets out how the premises will operate as approved under the *Export Control Act 2020* and the Export Control (Animals) Rules 2021.

Registered veterinarian means a person who is registered under the law of an Australian state or territory as a veterinarian, veterinary practitioner or veterinary surgeon.

Reporting day means, for onboard daily reporting purposes, midday to midday local vessel time, with the exception of the first day of loading and last day of unloading, arrangements for which are described in the department's policy on reporting. For the purposes of calculating days for voyage length, see **voyage** and **voyage day**.

Spay declaration means a declaration certifying an animal has been spayed, made by the owner or manager of the premises where the procedure was performed, including their name, contact information and signature. The declaration also contains the animal's individual NLIS identification number, date of procedure and type of the procedure.

South-East Asia means the countries of Brunei, Cambodia, Timor-Leste, Indonesia, Laos, Malaysia, Myanmar, the Philippines, Singapore, Thailand and Vietnam.

Short-haul means a voyage that is less than 10 voyage days duration. See also **long-haul** and **extended long-haul**.

Sourced for export means the point in time at which livestock are selected for export preparation for a consignment intending to be exported, including 'spare' animals that may also be prepared that serve as a contingency (e.g. if final weight allowances permit or if other animals under preparation are rejected). This point in time may be before or after transport to the registered establishment, approved premises or, for air consignments, any other premises used for export preparation and must be prior to commencement of any pre-export quarantine or isolation, including required period of clear days.

Transshipment means a stop made en route to the final destination airport, and the consignment changes aircraft.

Transit means a stop made en route to final destination airport, and the consignment remains on board or is re-loaded onto the same aircraft.

Vendor declaration means a declaration provided by an owner or person responsible for the livestock with the required knowledge of what is being declared, attesting to factors such as an animal's residency period at a premises, or if certain non-notifiable diseases have been present on a premises where the livestock have resided. This definition does not apply to National Vendor Declarations (NVDs)/Waybills, which are defined under **National Vendor Declaration (NVD)/Waybill**.

Voyage means the period from the time the first animal is loaded onto the vessel (the first day of the voyage) until the time the last animal is unloaded at the final port of disembarkation. Voyage applies to sea consignments only. See **air export journey** for information relevant to air consignments.

Voyage day means each 24 hour period from the commencement of the voyage (or part thereof for the last day of unloading). Voyage day applies to sea consignments only. See **air export journey** for information relevant to air consignments.

Water deprivation time means a continuous period that livestock do not have access to water. The criteria that must be included when calculating the total water deprivation time are:

- time off water during mustering and when yarded after mustering; and
- water curfew; and
- all the time in transit, whether moving or stationary; and
- any time without water after unloading, such as at a saleyard, spelling centre, transit/transfer point or registered establishment or approved premises or other premises; and
- any time without water after unloading from an aircraft in the importing country (for air consignments only).

Wether means male sheep castrated at an early age before secondary sexual characteristics have developed.

Introduction

The Australian Standards for the Export of Livestock (ASEL) sets the minimum animal health and welfare requirements the livestock export industry must meet throughout the supply chain, from sourcing to completion of disembarkation overseas. The standards apply to cattle, sheep, goats, buffalo, deer and camelids exported by air or sea.

The standards are enforceable under the *Export Control Act 2020* and the Export Control (Animals) Rules 2021. The Australian approach is consistent with that taken by international bodies, such as the World Organisation for Animal Health (OIE), involved in determining criteria for the health and welfare of livestock.

Purpose

The purpose of these standards is to ensure livestock are appropriate for export to manage the risks to livestock health and welfare throughout the export supply chain, from sourcing to completion of disembarkation overseas.

Compliance

These standards must be complied with as part of:

- the conditions of a livestock export licence
- the registration of an establishment or approval of a premises to be used for holding, assembling and preparing livestock for export
- an exporter's approved arrangement and Approved Export Program (AEP) for the export of livestock.

Failure to comply with these standards may result in refusal to grant an export permit and revocation of the certificate of health and may result in performance management and compliance action including cancellation or suspension of registration, licence or approved arrangement.

Non-compliance with any relevant laws, regulations, standards and guidelines relating to the health, welfare, handling, treatment, transport and carriage of livestock will be considered when assessing the competency and integrity of a person or body corporate to continue to hold an establishment registration and/or export licence.

Application

These standards must be read in conjunction with Commonwealth, state and territory laws, regulations, standards and guidelines relevant to the health, welfare, handling, treatment, transport and carriage (sea and air) of livestock. Importing country requirements relevant to the export consignment must also be met.

Standard 1 Sourcing and preparation of livestock for export by sea

Standard 1 covers the standards that relate to the sourcing and preparation of livestock for export by sea. Please see Standard 6 for the standards that relate to the sourcing and preparation of livestock for export by air.

1.1 General and all species requirements

1.1.1 Livestock sourced for export must meet all relevant animal health and welfare requirements under state and territory legislation and relevant requirements under national animal welfare standards and guidelines, and model codes of practice.

1.1.2 Livestock sourced for export must meet importing country requirements.

1.1.3 Livestock sourced for export must be:

- a) identified in accordance with state and territory and National Livestock Identification System (NLIS) requirements; and
- b) traceable to the property of source; and
- c) accompanied by a correctly completed and signed movement records such as NVDs/waybills; and
- d) individually identified where testing, including pregnancy testing, is required during preparation, excluding feeder/slaughter sheep and goats where the pregnancy testing certification may identify animals to a mob-based level; and
- e) accompanied by any test results, including all pregnancy testing and spay declarations where applicable. Laboratory test results must be linked to the PIC from where the animal was sampled and the NLIS tag number of the animal where individual identification is required by state or territory legislation.

1.1.4 Livestock sourced for export and intended for human consumption must comply with Australian food safety requirements, including standards for chemical residues or environmental contaminants.

1.1.5 Livestock must not be sourced for export or exported unless dehorning and tipping wounds are fully healed prior to any transport.

1.1.6 Livestock must not be sourced for export or exported unless they have been inspected by a competent stock handler and do not show signs consistent with the rejection criteria specified in Table 1, or any other condition that could cause the animal's health or welfare to decline during export preparation or transport.

Table 1 Rejection criteria for all species by sea

Category	Rejection criteria
General requirements	<ul style="list-style-type: none"> • Failure to meet importing country requirements including sex or breed if specified • Pregnancy status not confirmed as appropriate for export • Lactating animals/lactating animals with young at foot • Viral diseases such as scabby mouth or infectious bovine rhinotracheitis • Animals displaying clinical signs of infectious or contagious disease or external parasites • Animals showing signs of injury such as but not limited to fractures or swelling
Systemic conditions	<ul style="list-style-type: none"> • Body condition score not appropriate for export (such as emaciated or over-fat) • Anorexia (inappetence or 'shy feeders') • Uncoordinated, collapsed, weak • Unwell, lethargic, dehydrated • Ill-thrift
Gastrointestinal system	<ul style="list-style-type: none"> • Dysentery or profuse diarrhoea • Bloat
Musculoskeletal system	<ul style="list-style-type: none"> • Abnormal gait or lameness of any kind • Abnormal soft tissue or bony swellings
Nervous system	<ul style="list-style-type: none"> • Nervous symptoms such as head tilt, circling, incoordination • Abnormal or aggressive behaviour/intractable or violent
External/skin	<ul style="list-style-type: none"> • Generalised papillomatosis or generalised ringworm or dermatophilosis • Generalised and extensive buffalo fly lesions • Generalised skin disease or infection • External skin cancer • Lacerations that penetrate the full thickness of the dermis or are likely to affect the health or welfare of the animal • Discharging wounds or abscesses • Cutaneous myiasis (flystrike) • Balanitis (pizzle rot in sheep) • Blood/abnormal discharge from reproductive tract (vulva/prepuce) • Visible external parasites
Head	<ul style="list-style-type: none"> • Blindness in 1 or both eyes • Cancer eye • Keratoconjunctivitis (pink eye) • Excessive salivation • Nasal discharge consistent with signs of a contagious or infectious disease • Coughing consistent with signs of a contagious or infectious disease • Respiratory distress or difficulty breathing • Sharp horns • Horns causing damage to the head or eyes • Bleeding horn stumps or broken antlers • Horns longer than appropriate for export • Scabby mouth
Other	<ul style="list-style-type: none"> • Groups of animals with unusual mortalities • Disparities in sex, size, weight or age that could cause an issue with the health or welfare of the animals (redraft animals in this case)

1.1.7 Female livestock must not be treated with a prostaglandin drug:

- a) within the 60 day period prior to 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; nor
- b) within 14 days prior to export.

1.1.8 Animal records must be kept by the exporter, from the time of sourcing of livestock to their disembarkation in the importing country, and retained for at least 2 years after the date of export. These records must include details of:

- a) the animal's identification in accordance with state and territory and NLIS requirements including:
 - i) all management procedures relevant to export preparation such as disease testing, pregnancy testing, shearing (to a mob/pen-based level), and date(s) undertaken; and
 - ii) all veterinary medicines and agricultural chemicals used to vaccinate or treat the animal (including species, treatment date(s), trade name or active ingredient, batch number, and if used according to manufacturer's directions. If not used according to manufacturer's directions, the dose administered is to be included); and
 - iii) any mortality, sickness, injury or other sign consistent with the rejection criteria found, and where applicable, actions taken to remove any rejected animals from the consignment, and the animal's handling, care, treatment, euthanasia and/or disposal; and
- b) inspections by veterinarians or competent stock handlers of livestock health, welfare and appropriateness for export; and
- c) all other information required to demonstrate compliance with relevant ASEL standards.

1.1.9 Veterinary medicines, chemicals and equipment must be stored and used according to any applicable veterinary directions and/or manufacturers' recommendations.

1.2 Buffalo sourcing and export criteria

1.2.1 Buffalo must have been weaned at least 14 days prior to sourcing for export.






1.2.2 Buffalo must not be sourced for export unless they have become conditioned to being handled and to eating and drinking from troughs for a minimum of 21 days.

1.2.3 Buffalo sourced for export must have an individual liveweight of 200kg to 500kg (inclusive). Animals outside of these weights must not be sourced for export or exported, unless otherwise provided:

- a) for buffalo less than 200kg, in a *light buffalo management plan* approved in writing by the department, and buffalo must have an individual liveweight of 200kg or more at the time of export; or
- b) for buffalo more than 500kg, in a *heavy buffalo management plan* approved in writing by the department.

1.2.4 Buffalo must not be sourced for export or exported unless they have been assessed by a competent stock handler against the buffalo body condition scoring in Table 1a and have a body condition score of 2 to 4 (inclusive) (on a scale of 1 to 5).

Table 1a Buffalo body condition score

Score	Description	P8 fat mm thickness	Loin surface	Illustration of vertical section of the loin region between spinous and traverse processes
1	Emaciated; very weak – extreme muscle wastage. All bones highly visible. Skin 'draped' over skeleton. Unsteady gait.	0	Severely concave	
2	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	
3	Store; (average) good muscle definition, with fat starting to be deposited, rib outlines disappearing, hook and pin bones still defined.	1 to 4	Level, even slope	
4	Prime; quite even and smooth over whole backline. Muscling becoming more convex due to fat deposition.	5 to 35	Moderately convex	
5	Overfat; usually only mature cows can achieve this condition. Bulbous fat deposits both sides of tail head. Pin and hook bones not discernible.	>36	Severely convex, crease/dip along spine	

Source: NT Buffalo Industry Council Inc.

1.2.5 Female buffalo sourced for export as feeder or slaughter animals must:

- a) be accompanied by a spay declaration from the owner or manager of the premises where the procedure was performed including name, contact information and signature, that certifies that the animal has been spayed not less than 30 days prior to export using the Willis dropped ovary technique and includes the animal's individual NLIS identification number and date of the procedure; or
- b) be accompanied by a spay declaration from the owner or manager of the premises where the procedure was performed including name, contact information and signature, that certifies that the animal has been spayed not less than 280 days prior to export and includes the animal's individual NLIS identification number and date of the procedure; or
- c) be pregnancy tested within 30 days prior to export, by a registered veterinarian or competent pregnancy tester who must certify in writing that the animal is not detectably pregnant and include with the certification their name, registration or accreditation number (or other authorisation) and signature, and the animal's individual NLIS identification number and the date of the procedure; and

- d) undergo the above pregnancy testing by manual palpation or an approved blood test (as accreditation/authorisation permits). Registered veterinarians may use ultrasound if the animal is too small to be manually palpated.

1.2.6 Female buffalo sourced for export as breeder animals must be no more than 220 days pregnant at the scheduled date of discharge in the importing country, and must be pregnancy tested within 30 days prior to export:

- a) by a registered veterinarian using an approved blood test; and
 - i) if the test result is negative, be certified in writing as not detectably pregnant; or
 - ii) if the test result is positive, undergo testing as per b) or c) below; or
- b) if the voyage is less than 10 voyage days, by a registered veterinarian that attests to current experience and competency in buffalo pregnancy diagnosis, using manual palpation, or by a registered veterinarian that is accredited under the PREgCHECK (NCPD) Scheme if the animal is too small to be manually palpated safely, using ultrasound; and
 - i) if the test result is negative, be certified in writing as not detectably pregnant; or
 - ii) if the test result is positive, be certified in writing as pregnant with number of days pregnant stated; or
- c) if the voyage is 10 voyage days or more, by a registered veterinarian that is accredited under the PREgCHECK (NCPD) Scheme, using manual palpation or if the animal is too small to be manually palpated safely, using ultrasound; and
 - i) if the test result is negative, be certified in writing as not detectably pregnant; or
 - ii) if the test result is positive, be certified in writing as pregnant with number of days pregnant stated; and
- d) with the certification stating the animal's individual NLIS identification number and date of the procedure, the veterinarians name, registration number and signature, their attestation to experience and competency, or for voyages 10 days or more or animals tested by ultrasound, their PREgCHECK accreditation number and a statement of their accreditation.

1.2.7 Buffalo with horns must only be sourced for export or exported if they have:

- a) blunt horns; and
- b) horns that are less than the spread of the ears, unless otherwise provided in a *long-horned livestock management plan* approved in writing by the department.

1.3 Camelids sourcing and export criteria

1.3.1 Camelids must not be sourced for export or exported unless otherwise provided in a *camelids by sea management plan* approved in writing by the department.

1.4 Cattle sourcing and export criteria

1.4.1 Cattle must have been weaned at least 14 days prior to sourcing for export.

1.4.2 Cattle sourced for export must have an individual liveweight of 200kg to 500kg. Animals outside of these weights must not be sourced for export or exported, unless otherwise provided:

- a) for cattle less than 200kg, in a *light cattle management plan* approved in writing by the department, and cattle must have an individual liveweight of 200kg or more at the time of export; or
- b) for cattle more than 500kg, in a *heavy cattle management plan* approved in writing by the department.

1.4.3 *Bos taurus* cattle sourced for export from any area of Australia south of latitude 26°S must only be exported on voyages that cross the equator and depart between 1 May and 31 October (inclusive) if:

- a) they have been determined in accordance with the conditions in Standard 1.4.5, or Standard 1.4.6 and 1.4.7, to be not detectably pregnant, unless otherwise provided in a *pregnant southern sourced Bos taurus cattle crossing the equator from May to October management plan* approved in writing by the department; and
- b) for cattle to or through the Middle East, a HSRA indicates that the risk is manageable (less than 2% risk of a 5% mortality).

1.4.4 Cattle must not be sourced for export or exported unless they have been assessed by a competent stock handler against the cattle body condition scoring in Table 2a (non-dairy breed cattle) or Figure 2a (dairy breed cattle) and have:

- a) for non-dairy breed cattle, a body condition score of 2 to 4 (inclusive) (on a scale of 0 to 5), unless they are *Bos taurus* cattle sourced for export from, or exported through, any area of Australia north of latitude 26°S between 1 October and 31 December (inclusive), then they must have a body condition score of 2 to 3 (inclusive) (on a scale of 0 to 5);
- b) for dairy breed cattle, a body condition score of 3.5 but less than 5.5 (on a scale of 1 to 8), unless they are *Bos taurus* cattle sourced for export from, or exported through, any area of Australia north of latitude 26°S between 1 October and 31 December (inclusive), then they must have a body condition score of 3.5 or more but less than 5 (on a scale of 1 to 8).

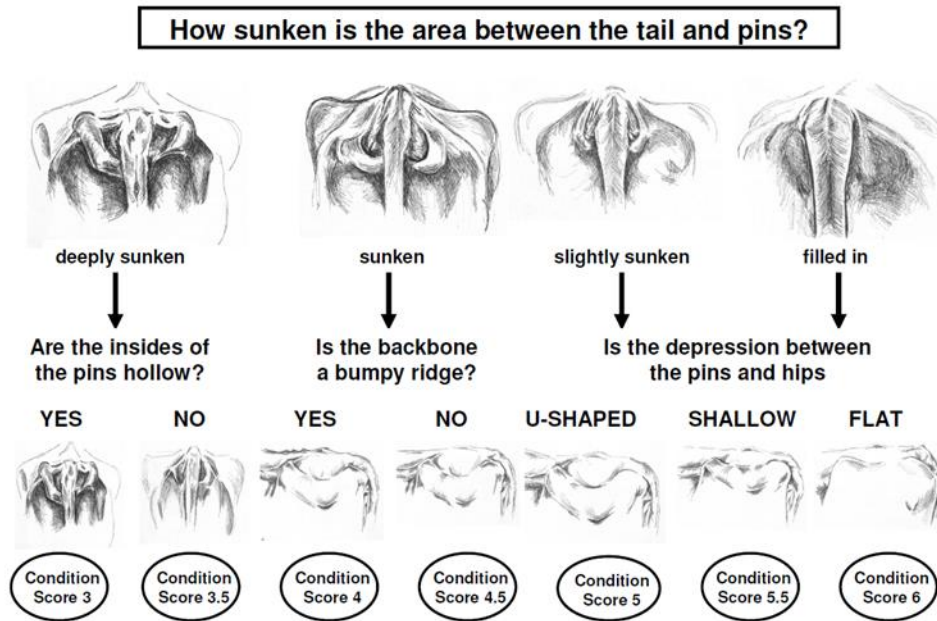
Table 2 [deleted]

Table 2a Non-dairy breed cattle body condition score

Score	Description
0	Severely emaciated
1	The individual bones are sharp to the touch, with no fat at the head of the tail. Hip bones and ribs are prominent.
2	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	The short ribs can be felt only with firm thumb pressure. Areas either side of the tail head have fat cover that can be felt easily.
4	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	The bone structure of the animal is no longer noticeable and the tail head is almost completely buried in fatty tissue.

Source: Cattle Council of Australia

Figure 2a Dairy breed cattle body condition score (diagram shows 3 to 6 on scale of 1 to 8)



Source: DEPI (Vic)

1.4.5 Female cattle sourced for export as feeder or slaughter animals must:

- a) be accompanied by a spay declaration from the owner or manager of the premises where the procedure was performed including name, contact information and signature, that certifies that the animal has been spayed not less than 30 days prior to export using the Willis dropped ovary technique and includes the animal's individual NLIS identification number and date of the procedure; or
- b) be accompanied by a spay declaration from the owner or manager of the premises where the procedure was performed including name, contact information and signature, that certifies that the animal has been spayed not less than 280 days prior to export and includes the animal's individual NLIS identification number and date of the procedure; or
- c) be pregnancy tested within 30 days prior to export, by a registered veterinarian or competent pregnancy tester who must certify in writing that the animal is not detectably pregnant and include with the certification their name, registration or accreditation number (or other authorisation) and signature, and the animal's individual NLIS identification number and the date of the procedure; and
- d) undergo the above pregnancy testing by manual palpation or an approved blood test (as accreditation/authorisation permits). Registered veterinarians may use ultrasound if the animal is too small to be manually palpated.

1.4.6 Female cattle sourced for export as breeder animals must be no more than 190 days pregnant at the scheduled date of discharge in the importing country, and must be pregnancy tested:

- a) by a registered veterinarian using an approved blood test; and
 - i) if the test result is negative, be certified in writing as not detectably pregnant; or

- ii) if the test result is positive, undergo testing as per b) or c) below; or
- b) if the voyage is less than 10 voyage days, by a registered veterinarian that attests to current experience and competency in cattle pregnancy diagnosis, using manual palpation or by a registered veterinarian that is accredited under the PREgCHECK (NCPD) Scheme if the animal is too small to be manually palpated safely, using ultrasound; and
 - i) if the test result is negative, be certified in writing as not detectably pregnant; or
 - ii) if the test result is positive, be certified in writing as pregnant with number of days pregnant stated; or
- c) if the voyage is 10 voyage days or more, by a registered veterinarian that is accredited under the PREgCHECK (NCPD) Scheme, using manual palpation or if the animal is too small to be manually palpated safely, using ultrasound; and
 - i) if the test result is negative, be certified in writing as not detectably pregnant; or
 - ii) if the test result is positive, be certified in writing as pregnant with number of days pregnant stated; and
- d) with the certification stating the animal's individual NLIS identification number and date of the procedure, the veterinarians name, registration number and signature, their attestation to experience and competency, or for voyages 10 voyage days or more or animals tested by ultrasound, their PREgCHECK accreditation number and a statement of their accreditation.

1.4.7 Pregnancy test certification for Standard 1.4.6 is valid for:

- a) 30 days for pregnant cattle, unless an exporter has applied for a certification validity extension, and received approval in writing from the department, prior to loading; and
- b) 60 days for not detectably pregnant cattle, from the date of the procedure or collection of blood sample.

1.4.8 Cattle with horns must only be sourced for export or exported if the:

- a) solid non-vascular tip has been removed to a diameter of 3cm (or less if the horn vasculature does not allow) and horns have a blunt horn end; and
- b) horns are no longer than 12cm in length at the time of export, unless otherwise provided in a *long-horned livestock management plan* approved in writing by the department.

1.5 Deer sourcing and export criteria

1.5.1 Deer must not be sourced for export or exported unless otherwise provided in a *deer by sea management plan* approved in writing by the department.

1.6 Goat sourcing and export criteria

1.6.1 Goats must not be exported by sea on voyages of 10 voyage days or more.

1.6.2 Goats must have been weaned at least 14 days prior to sourcing for export.

1.6.3 Goats must not be sourced for export unless they have become conditioned to being handled and to eating and drinking from troughs for a minimum of 21 days.

1.6.4 Goats must not be sourced for export or exported unless they have a liveweight of 24kg or more.

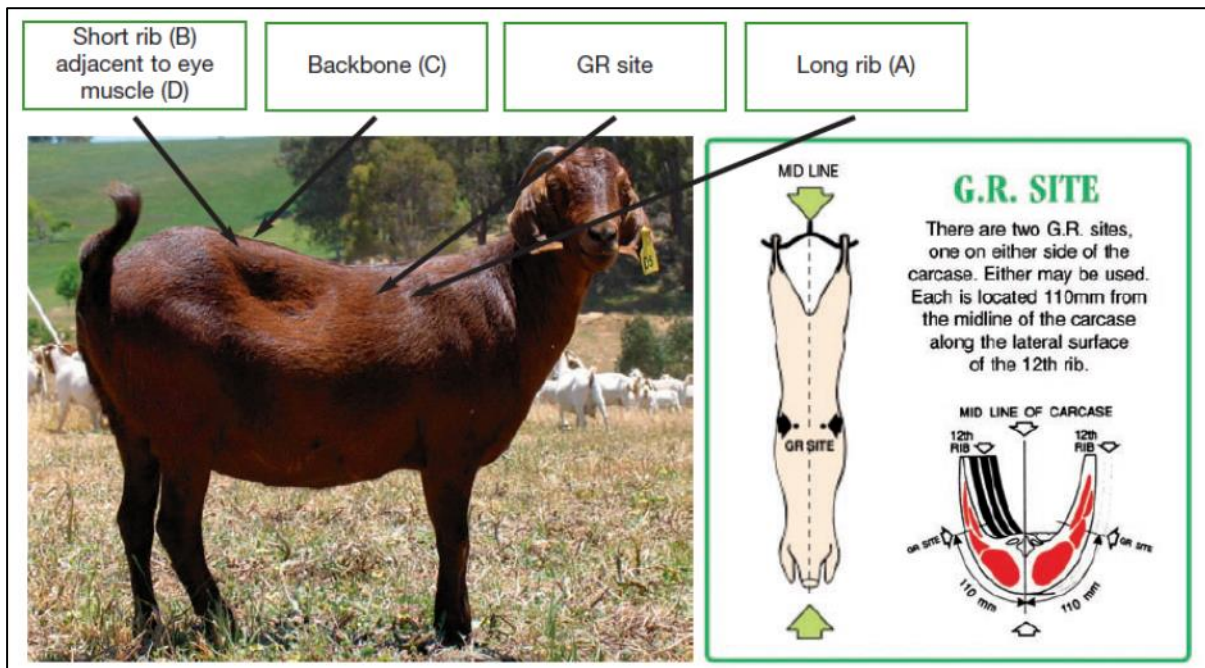
1.6.5 Goats must not be sourced for export or exported unless they have been assessed by a competent stock handler against the goat body condition scoring in Table 3 and have a body condition score of 2 to 4 (inclusive) (on a scale of 1 to 5).

Table 3 Goat body condition score

Score	Long ribs (A)	Short ribs (B)	Backbone (C)	Eye muscle (D)
1	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	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	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	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	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.

Source: Greenwood et al., 2001

Figure 2b Visual aid for assisting with body condition scoring of goats



Source: AUS-MEAT

1.6.6 Female goats sourced for export as feeder or slaughter animals must be individually pregnancy tested using ultrasound within 30 days prior to export, by a competent pregnancy tester who must certify in writing that the animals are not detectably pregnant. The certification must include the certifier's name, veterinary registration number or attestation to experience and skill in pregnancy testing of goats, signature, the mob's identification, and the date of the procedure.

1.6.7 Female goats sourced for export as breeder animals must:

- a) be pregnancy tested using ultrasound foetal measurement within 30 days prior to export, by a competent pregnancy tester; and
- b) be certified in writing by the competent pregnancy tester as either not detectably pregnant or pregnant and if pregnant include the number of days pregnant. The certification must include the certifier's name, veterinary registration number or attestation to experience and skill in pregnancy testing of goats, signature, the individual identification number of the animal and the date of the procedure; and
- c) be no more than 100 days pregnant at the scheduled date of discharge in the importing country.

1.6.8 Goats with horns must only be sourced for export or exported if:

- a) the horns would not cause damage to the head or eyes of the animal or other animals; and
- b) the horns would not endanger other animals during transport; and
- c) the horns would not restrict access to feed or water during transport; and
- d) unless otherwise provided in a *long-horned livestock management plan* approved in writing by the department, the horns:

- i) are no longer than 22cm with tips that are no more than 20cm apart; or
- ii) have tips that are further than 20cm apart, but the horns are no longer than 15cm and are blunt.

1.7 Sheep sourcing and export criteria





1.7.1 Sheep must have been weaned at least 14 days prior to sourcing for export.


1.7.2 Sheep must not be sourced for export or exported unless they have a liveweight of 32kg or more, or if pregnant, 40kg or more.

1.7.3 Sheep must not be sourced for export or exported through any Australian ports north of latitude 26°S from 1 November to 31 May (inclusive).

1.7.4 Sheep must not be sourced for export or exported unless they have been assessed by a competent stock handler against the sheep body condition scoring in Table 4 and have a body condition score of 2 to 4 (inclusive) (on a scale of 1 to 5).

Table 4 Sheep body condition score

Score	Backbone	Short ribs	Illustration
1	The bones form a sharp narrow ridge. Each vertebra can be easily felt as a bone under the skin. There is only a very small eye muscle. The sheep is quite thin (virtually unsaleable).	The ends of the short ribs are very obvious. It is easy to feel the squarish shape of the ends. Using fingers spread 1 cm apart, it feels like the fingernail under the skin with practically no covering.	<p>Condition Score 1</p> 
2	The bones form a narrow ridge but the points are rounded with muscle. It is easy to press between each bone. There is a reasonable eye muscle. Store condition ideal for wethers and lean meat.	The ends of the short ribs are rounded but it is easy to press between them. Using fingers spread 0.5 cm apart, the ends feel rounded like finger ends. They are covered with flesh but it is easy to press under and between them.	<p>Condition Score 2</p> 
3	The vertebrae are only slightly elevated above a full eye muscle. It is possible to feel each rounded bone but not to press between them. Forward store condition ideal for most lamb markets now. No excess fat.	The ends of the short ribs are well rounded and filled in with muscle. Using 4 fingers pressed tightly together, it is possible to feel the rounded ends but not between them. They are well covered and filled in with muscle.	<p>Condition Score 3</p> 
4	It is possible to feel most vertebrae with pressure. The back bone is a smooth slightly raised ridge above full eye muscles and the skin floats over it.	It is only possible to feel or sense 1 or 2 short ribs and only possible to press under them with difficulty. It feels like the side of the palm, where maybe one end can just be sensed.	<p>Condition Score 4</p> 

Score	Backbone	Short ribs	Illustration
5	The spine may only be felt (if at all) by pressing down firmly between the fat covered eye muscles. A bustle of fat may appear over the tail (wasteful and uneconomic).	It is virtually impossible to feel under the ends as the triangle formed by the long ribs and hip bone is filled with meat and fat. The short rib ends cannot be felt.	<p style="text-align: center;">Condition Score 5</p> 

Source: Lifetime Wool

1.7.5 Female sheep with a weight of 40kg or more, and all female fat-tailed sheep sourced for export as feeder or slaughter animals must be individually pregnancy tested using ultrasound within 30 days prior to export, by a competent pregnancy tester who must certify in writing that the animals are not detectably pregnant. The certification must include the certifier's name, veterinary registration number or attestation to experience and skill in pregnancy testing of sheep, signature, the mob's identification, and the date of the procedure.

1.7.6 Female sheep sourced for export as breeder animals must:

- a) be pregnancy tested using ultrasound foetal measurement within 30 days prior to export, by a competent pregnancy tester; and
- b) be certified in writing by the competent pregnancy tester as either not detectably pregnant or pregnant and if pregnant include the number of days pregnant. The certification must include the certifier's name, veterinary registration number or attestation to experience and skill in pregnancy testing of sheep, signature, the individual identification number of the animal and the date of the procedure; and
- c) be no more than 100 days pregnant at the scheduled date of discharge in the importing country.

1.7.7 Sheep with horns must only be sourced for export or exported if the horns:

- a) would not cause damage to the head or eyes of the animal or other animals; and
- b) would not endanger other animals during transport; and
- c) would not restrict access to feed or water during transport; and
- d) are no more than 1 full curl, unless otherwise provided in a *long-horned livestock management plan* approved in writing by the department.

Standard 2 Land transport of livestock

Standard 2 sets the land transport requirements for the export of livestock by sea. This standard must be read in conjunction with the Land Transport Standards, which must also be adhered to.

2.1 General and all species requirements

2.1.1 The land transport of livestock must meet the Land Transport Standards, as well as any relevant animal health and welfare and road transport requirements under state and territory legislation and relevant requirements under national animal welfare standards and guidelines, and model codes of practice.

2.1.2 The land transport of livestock must also meet any importing country requirements for the land transport phases in the export supply chain.

2.1.3 The maximum water deprivation time and minimum rest times in the Land Transport Standards must be adhered to for all land transport of livestock.

2.1.4 Well-trained dogs may be used to help with the loading and unloading of livestock (other than camelids and deer). Dogs must be muzzled. The number of dogs used should be the minimum necessary to complete the task. Working dogs must not be transported in the same pen as livestock.

Standard 3 Management of livestock in registered establishments

Standard 3 covers the standards that relate to the management of livestock in registered establishments for exports by sea. Requirements for livestock in the registered establishment are applicable once livestock have been sourced for export (see *Sourced for export* definition). Please see Standard 6 for the standards that relate to the management of livestock in premises for export by air.

3.1 General and all species requirements

3.1.1 The location of the registered establishment used to hold and assemble livestock prior to transport to the vessel must not be more than 8 hours journey time from the port of embarkation, unless the livestock are camels and the location of the registered establishment is otherwise provided in a *camelids by sea management plan* approved in writing by the department.

3.1.2 Livestock must not leave the registered establishment to be loaded onto a vessel until the vessel is in a fit state to load livestock in relation to AMSA, biosecurity and the master's requirements, unless otherwise provided in a *leaving registered establishment before vessel clearance management plan* approved in writing by the department.

3.1.3 The occupier of a registered establishment must employ sufficient appropriately trained staff for the effective day-to-day operation of the establishment and management of the livestock.

3.1.4 To control drainage, surface water, groundwater and effluent run-off, the registered establishment must be located and/or constructed in such a manner that:

- a) surface water and livestock effluent are directed away from laneways, livestock handling areas, livestock confinement areas and feed storage areas; and
- b) the livestock confinement area of the registered establishment is free draining and that the surface remains firm; and
- c) the surfaces around feed and water troughs are evenly graded and compacted to form a hard, durable surface that readily sheds surface water.

3.1.5 The registered establishment must be located and/or constructed in such a manner as to provide the livestock with adequate protection from adverse climatic conditions, that addresses the particular needs of the species, class and maximum number of animals to be held at the establishment and the types of operations to be carried out, by the means of:

- a) shade; and/or
- b) windbreaks; and/or
- c) shelter; and/or

- d) other means provided in a registered establishment operations manual approved in writing by the department.

3.1.6 Livestock handling facilities and livestock sheds at registered establishment must meet specified conditions:

- a) where sheds are used:
 - i) they must be constructed with sufficient drainage and ventilation to ensure that the shed is free draining; and
 - ii) any slatted or mesh floors must be designed and maintained to prevent entrapment of feet; and
- b) livestock handling facilities must be designed, constructed and maintained to facilitate livestock handling, inspection and separation of individual animals that prevents injury and minimises stress; and
- c) floors of yards, sheds, pens and loading ramps must have non-slip surfaces.

3.1.7 Fencing at the registered establishment must:

- a) be appropriate to hold livestock and to prevent the unintended entry or exit of livestock; and
- b) be maintained in a good state of repair; and
- c) be inspected by the registered establishment occupier to ensure that the fences are fit for purpose, before the entry of each consignment and twice a week while livestock are in the registered establishment; and
- d) be consistent with any importing country requirements.

3.1.8 To ensure adequate supply of feed and water, the registered establishment occupier is responsible for ensuring that:

- a) feeders, self-feeders and water troughs must be of a design or managed in such a way that prevents spoilage of feed, particularly during adverse climatic conditions; and
- b) livestock must be fed feed that is neither contaminated nor spoiled, and all pelletised feed must be placed in troughs so that animals do not eat from the ground or floor; and
- c) all livestock feed must be stored in a manner that maintains the integrity and nutritional value of the feed, and protects it from weather, pests and external contaminants including chemical spray drift, and from direct access by animals; and
- d) all livestock in the registered establishment must have access to drinking water at all times unless under curfew; and
- e) water troughs are inspected daily, kept clean and positioned apart from bedding and feed sources to prevent fouling.

3.1.9 Water quality must be suitable for the livestock.

3.1.10 The occupier of the registered establishment must have arrangements in place to ensure that backup water storage exists, or a contingency plan to address loss of supply is in place, to ensure continuity of water supply to all livestock held at the registered establishment at peak demand for at least 2 days. This must be a minimum daily amount of 12% of liveweight for cattle

and buffalo, and 4 litres/head for sheep and goats. If temperatures exceed 35°C, water supply must be increased by 25%.

3.1.11 The occupier of the registered establishment must have arrangements in place to prevent unauthorised entry and access to the establishment, including feed storage areas, when livestock are being prepared for export. Access to the establishment must be controlled at all times, with:

- a) all entry points to the establishment being clearly signed and able to be secured; and
- b) only those persons necessary for the day to-day operation of the establishment and government officials having direct access to the establishment; and
- c) all non-employees first reporting to reception for appropriate biosecurity checks and induction relevant to the requirements of the establishment.

3.1.12 When receiving and identifying livestock, the occupier of the registered establishment must obtain a copy of all relevant NVDs/waybills regarding the property of source of the livestock before accepting the livestock.

3.1.13 [deleted]

3.1.14 All livestock accepted into the registered establishment must be offered water and feed as soon as possible after unloading and no more than 12 hours after arrival at the registered establishment. Maximum water deprivation times, as outlined in the Land Transport Standards and relevant legislation, must not be exceeded.

3.1.15 Livestock must be individually inspected at unloading, and inspected at least daily, to determine whether they are suitable for preparation for export. Any livestock identified as being distressed, injured or otherwise unsuitable for export (including the rejection criteria outlined in Standard 1 Table 1) must be rejected from the consignment, marked by a semi-permanent or permanent method and isolated from the rest of the consignment. Any other condition that could be defined as an infectious or contagious disease, or would mean that the animal's health or welfare could decline or that the animal would suffer distress during transport, also requires the animal's rejection from export preparation. For any livestock found unsuitable, arrangements must be made for their prompt and humane handling, treatment and care, including:

- a) provision of treatment to all sick or injured livestock; and
- b) provision of veterinary advice if the cause of a sickness or injury is not obvious, or if action taken to prevent or treat the problem is ineffective; and
- c) where required euthanasia and/or disposal, in compliance with all relevant and applicable legislation.

3.1.16 Livestock must be penned so that:

- a) animals of different species are not mixed in a single pen; and
- b) different classes of animals are not mixed in a single pen; and
- c) animals of different sexes, pregnancy status, or physical characteristics (such as those covered under any applicable management plans and entire vs castrated male livestock) are

not mixed in a single pen. This excludes differences in the following categories where animals may be penned together:

- i) ewe and wether lambs;
 - ii) entire and spayed female livestock;
 - iii) ≤500kg and >500kg cattle and buffalo (provided the weight of each animal in the pen does not vary from the pen average weight by more than 50 kg, and that all animals in the pen are managed in accordance with ASEL and an approved heavy management plan); and
 - iv) immature bulls and steers which have been socialised in the source mob.
- d) animals of different health status are kept separated; and
 - e) immature animals are separated from mature animals; and
 - f) animals of a dissimilar size and/or weight are separated.

3.1.17 Livestock for export must be held and assembled at the registered establishment in accordance with the exporter's approved arrangement and any applicable management plans.

3.1.18 Where a period of pre-export quarantine or isolation is required by the importing country, animals forming the consignment must at all times be physically isolated to prevent contact with all other animals and as per the importing country requirements, whether the other animals are for an alternative export market or domestic use.

3.1.19 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 with different health status), the occupier of the establishment must have procedures in place to ensure that:

- a) handling facilities are not used simultaneously by livestock of differing health status; and
- b) a minimum livestock traffic separation of 2 metres 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 otherwise specified by the importing country; and
- c) handling facilities, equipment and human resources used by different consignments of animals are managed in accordance with the pre-export quarantine or isolation requirements of each importing country.

3.1.20 Daily monitoring of livestock health, welfare and mortality must include:

- a) inspection of all livestock by a competent stock handler; and
- b) rejection of any livestock and their management as per Standard 3.1.15; and
- c) investigation by a registered veterinarian if mortalities in any 1 paddock or shed exceed 0.1% or 3 deaths, whichever is the greater, on any 1 day for cattle and buffalo, or 0.25% or 3 deaths, whichever is greater, on any 1 day for any other species of livestock; and
- d) removal of dead livestock on a daily basis. Carcasses must be disposed of in compliance with all relevant and applicable legislation.

3.2 Buffalo management requirements

3.2.1 Buffalo must be fed daily a minimum of 2.5% of their body weight of suitable monensin-free feed of a quality able to meet daily maintenance requirements.

3.2.2 The minimum length of time that buffalo must remain in a registered establishment prior to departure for the port is 5 clear days. For any clear day on which animals are subject to a feed or water curfew, an additional clear day is required.

3.2.3 Buffalo at the registered establishment must be penned in accordance with these space allocations:

- a) for buffalo held for less than 30 days, a minimum of 4m² each, based on an individual liveweight of 500kg (this allowance can be decreased by 0.04m² for each 5kg decrease in individual liveweight and must be increased by 0.04m² for each 5kg increase in individual liveweight); or
- b) for buffalo held for 30 days or more, a minimum of 9m² each, based on an individual liveweight of 500kg (this allowance can be decreased by 0.09m² for each 5kg decrease in individual liveweight and must be increased by 0.09m² for each 5kg increase in individual liveweight).

3.3 Camelids management requirements

3.3.1 Preparation and holding of camelids at the registered establishment must be in accordance with the species specific clauses outlined in the registered establishment operations manual approved in writing by the department.

3.4 Cattle management requirements

3.4.1 Cattle must be fed daily a minimum of 2.5% of their body weight of suitable feed of a quality able to meet daily maintenance requirements.

3.4.2 The minimum length of time that cattle must remain in a registered establishment prior to departure for the port is 2 clear days for short or long-haul voyages, or 3 clear days for extended long-haul voyages. For any clear day on which animals are subject to a feed or water curfew, an additional clear day is required.

3.4.3 Cattle at the registered establishment must be penned in accordance with these space allocations:

- a) for cattle held for less than 30 days, a minimum of 4m² each, based on an individual liveweight of 500kg (this allowance can be decreased by 0.04m² for each 5kg decrease in individual liveweight and must be increased by 0.04m² for each 5kg increase in individual liveweight); or
- b) for cattle held for 30 days or more, a minimum of 9m² each, based on an individual liveweight of 500kg (this allowance can be decreased by 0.09m² for each 5kg decrease in individual liveweight and must be increased by 0.09m² for each 5kg increase in individual liveweight).

3.5 Deer management requirements

3.5.1 Preparation and holding of deer at the registered establishment must be in accordance with the species specific clauses outlined in the registered establishment operations manual approved in writing by the department.

3.6 Goat management requirements

3.6.1 The feed trough allowance for goats held in paddocks at the registered establishment is to be calculated on a paddock-by-paddock basis and must be:

- a) for ration feeding, no less than 5cm of feed trough width per head; or
- b) for *ad libitum* feeding, no less than 3cm of feed trough width per head.

3.6.2 For areas of Australia south of latitude 26°S from 1 May to 31 October (inclusive), feeding must occur from fully sheltered feed troughs.

3.6.3 Goats must be fed daily suitable feed of:

- a) at least 3% of their bodyweight for goats younger than 4 tooth; and
- b) at least 2% of their bodyweight for 4 tooth or older; and
- c) a quality able to meet daily maintenance requirements.

3.6.4 The minimum length of time that goats must remain in a registered establishment prior to departure for the port is 5 clear days. For any clear day on which animals are subject to a feed or water curfew, an additional clear day is required. During at least the 3 clear days prior to export, goats are to be fed *ad libitum* on a ration equivalent in both form and composition to that which is to be used on the voyage.

3.6.5 Goats at the registered establishment must be penned in accordance with these space allocations:

- a) for goats held for less than 10 days, a minimum of 0.33m² each which must be increased by 0.006m² for each 1kg above 54kg liveweight; or
- b) for goats held for 10 days or more, a minimum of 0.5m² each which must be increased by 0.006m² for each 1kg above 54kg liveweight.

3.7 Sheep management requirements

3.7.1 Sheep that are 10 clear days or more off shears may be accommodated in paddocks at the registered establishment.

3.7.2 Sheep that are less than 10 clear days off shears must be accommodated in sheds at the registered establishment and given at least 2 clear days between shearing and loading for export.

3.7.3 Sheep sourced for export must have wool or hair no longer than 25mm in length at the time of loading for transport to the port of embarkation.

3.7.4 The feed trough allowance for sheep held in paddocks at the registered establishment is to be calculated on a paddock-by-paddock basis and must be:

- a) for ration feeding, no less than 5cm of feed trough width per head; or
- b) for *ad libitum* feeding, no less than 3cm of feed trough width per head.

3.7.5 For areas of Australia south of latitude 26°S from 1 May to 31 October (inclusive), feeding must occur from fully sheltered feed troughs.

3.7.6 Sheep must be fed daily suitable feed of:

- a) at least 3% of their bodyweight for sheep younger than 4 tooth; and
- b) at least 2% of their bodyweight for 4 tooth or older; and
- c) a quality able to meet daily maintenance requirements.

3.7.7 The minimum length of time that sheep must remain in a registered establishment prior to departure for the port is 5 clear days. For any clear day on which animals are subject to a feed or water curfew or are shorn, an additional clear day is required. During at least the last 3 clear days prior to export, sheep are to be fed *ad libitum* on a ration equivalent in both form and composition to that which is to be used on the export voyage.

3.7.8 For export to or through the Middle East by sea between 1 May and 31 October (inclusive), the occupier of the registered establishment must not prepare these classes of sheep:

- a) for sheep held in paddocks at the registered establishment:
 - i) pastoral and station sheep (see Appendix A); or
 - ii) lambs less than 34kg and no permanent incisors; or
 - iii) sheep that have been held on trucks for more than 14 hours prior to entering the registered establishment, unless these sheep have been fed, watered and rested for a minimum of 24 hours prior to commencing any export preparation activities (including commencement of clear days); and
- b) for sheep held in paddocks or sheds at the registered establishment:
 - i) full mouth sheep with a body condition score of 4 or more (on a scale of 1 to 5); or
 - ii) broken mouth sheep; or
 - iii) pregnant sheep.

3.7.9 Sheep at registered establishment must be penned in accordance with these space allocations:

- a) for sheep held for less than 10 days, a minimum of 0.33m² each which must be increased by 0.006m² for each 1kg above 54kg liveweight (this allowance can be decreased by 0.006m² for each 1kg decrease in individual liveweight below 40kg); or
- b) for sheep held for 10 days or more, a minimum of 0.5m² each which must be increased by 0.006m² for each 1kg above 54kg liveweight (this allowance can be decreased by 0.006m² for each 1kg decrease in individual liveweight below 40kg).

3.8 Monitoring and reporting requirements

3.8.1 Animal records must be kept by the registered establishment occupier, from the time of unloading of livestock at the registered establishment to their loading for transport to the port of disembarkation, and retained for at least 2 years after the date of export. These must include:

- a) the animal's identification in accordance with state and territory and NLIS requirements including:
 - i) all management procedures relevant to export preparation, such as disease testing, pregnancy testing and shearing, and date(s) undertaken; and
 - ii) all veterinary medicines and agricultural chemicals used to vaccinate, treat or otherwise prepare the animal (including species, treatment date(s), trade name or active ingredient, batch number and if used according to manufacturer's directions. If not used according to manufacturer's directions, the dose administered is to be included); and
- b) daily inspections by competent stock handlers of livestock health, welfare and appropriateness for export; and
- c) any mortality, sickness, injury or other sign consistent with the rejection criteria found, and actions taken to identify and remove any rejected livestock from the consignment, including handling, care, treatment, euthanasia and/or disposal; and
- d) all other information required to demonstrate compliance with relevant ASEL standards.

3.8.2 Veterinary medicines, chemicals and equipment must be stored and used according to any applicable veterinary directions and/or manufacturers' recommendations.

3.8.3 A mortality report for each consignment at the registered establishment must be provided by the registered establishment occupier to the department within 5 days of departure of the last animal in the consignment from the registered establishment. The report must be in the form provided on the department's website and include all information required in the form.

Standard 4 Vessel preparation and general management for export by sea

Standard 4 covers the standards that relate to planning and vessel preparation for export of livestock by sea. Please see Standard 6 for the standards that relate to export of livestock by air.

4.1 General and all species requirements

4.1.1 A vessel to be used for the export of livestock must comply with:

- a) all Australian and relevant international vessel requirements including biosecurity requirements; and
- b) all requirements for the safe carriage of livestock.

4.1.2 If a vessel that is permanently equipped for the carriage of livestock is to be used:

- a) a valid Australian Certificate for the Carriage of Livestock, issued by AMSA, must be in force for the vessel; and
- b) the Australian Certificate for the Carriage of Livestock must specify the species of livestock to which it relates.

4.1.3 If a vessel that is not permanently equipped for the carriage of livestock is to be used, the livestock must be carried in PLUs approved under Marine Order 43 and:

- a) the arrangements for the carriage of PLUs on board the vessel must be approved by a surveyor appointed under section 190 of the *Navigation Act 2012* in accordance with Marine Order 43; and
- b) the PLU and the vessel must conform to the requirements set out in Appendix C.

4.1.4 A vessel to be used for the export of livestock must have restraint facilities and veterinary equipment, including equipment for humane euthanasia, medicines, instruments and stores sufficient for the species and number of livestock carried. Restraint facilities and veterinary equipment must be inspected by the exporter prior to loading of livestock and any equipment not in good working condition must be repaired or replaced as soon as possible and before departure. A record of inspection confirming the above must be kept and retained by the exporter for at least 2 years after the date of export.

4.1.5 Veterinary medicines, chemicals and equipment must be stored and used according to any applicable veterinary directions and/or manufacturers' recommendations.

Personnel

4.1.6 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.

4.1.7 A competent stock handler must be appointed by the exporter to be responsible for the handling, management and welfare of the livestock. The exporter must ensure that loading

facilities and livestock handling standards at the port of embarkation are satisfactory during unloading from the land transport, inspection and loading onto the vessel.

4.1.8 An accredited stockperson who is employed or contracted by the exporter must be appointed to accompany each consignment of livestock on the vessel and must remain with the consignment until the last animal has been unloaded at the final port of disembarkation. The accredited stockperson must not be a member of the vessel's crew.

4.1.9 Unless the exporter has approval under Standard 4.1.10, an AAV must accompany each consignment of livestock and must remain with the consignment until the last animal has been unloaded at the final port of disembarkation in these circumstances:

- a) if the voyage is expected to be an extended long-haul voyage; and
- b) on voyages with pregnant livestock; and
- c) any other voyage when directed by the department.

4.1.10 An exporter may apply for an alternative arrangement to Standard 4.1.9 when providing a NOI under the *Export Control Act 2020* and Export Control (Animals) Rules 2021. The alternative arrangement may be approved where the Secretary, or delegate, is satisfied that the international transport arrangements for the livestock are adequate for their health and welfare.

4.1.11 Unless the exporter has approval under Standard 4.1.12, the accredited stockperson and the AAV cannot be the same person for any given voyage.

4.1.12 An exporter may apply for an alternative arrangement to Standard 4.1.11 when providing a NOI under the *Export Control Act 2020* and Export Control (Animals) Rules 2021. The alternative arrangement may be approved where the Secretary, or delegate, is satisfied that the international transport arrangements for the livestock are adequate for their health and welfare.

4.1.13 Accredited stockperson(s) and the AAV must work with the vessel's master and crew to maintain the health and welfare of the livestock on board.

4.1.14 There must be 1 competent stock handler per 3,000 (or part thereof) head of cattle and/or buffalo and 1 per 30,000 (or part thereof) head of sheep and/or goats on every voyage. The competent stock handler can be:

- a) a crew member, provided they have the required skills and competencies and the exporter retains evidence of the information they attained to establish their skill and competency; or
- b) an accredited stockperson.

4.1.15 Sufficient personnel must be available both at loading and during the voyage to ensure that livestock management and welfare needs are addressed.

Planning

4.1.16 A communication plan must be prepared in writing by the exporter, in consultation with all responsible parties before the loading of livestock for export begins. This plan must address:

- a) roles and responsibilities of the exporter or nominated representative(s), the accredited stockperson(s), the AAV (if required), the master of the vessel, nominated officers and crew members, and government and port authorities; and
- b) arrangements for regular meetings (including time, attendees and agenda) of key personnel before, during and after the voyage; and
- c) details of reporting procedures during and on completion of the voyage.

4.1.17 Loading arrangements must be prepared in writing by the exporter and must consider:

- a) port facilities, including the available water supply rate; and
- b) port and vessel security; and
- c) environmental management, including weather; and
- d) labour availability and competency.
- e) [deleted]

4.1.18 Contingency plans, including procedures for contacting the exporter, must be prepared in writing for each consignment that address:

- a) mechanical breakdown of the vessel or functionality relevant to maintaining the livestock's health and welfare; and
- b) a feed and/or water shortage during the voyage; and
- c) the satisfactory tending, feeding and watering of the livestock in the event of a malfunction of the automatic feeding or watering systems, without compromising the safe navigation of the vessel; and
- d) an outbreak of a disease during the voyage; and
- e) adverse weather conditions during the voyage; and
- f) rejection of the consignment by the overseas country.

4.1.19 Written instructions (these may take the form of standard operating procedures and/or the loading plan) for the handling and care of the livestock being exported, to maintain their health and welfare during the voyage, must be prepared by the exporter before loading of the vessel. These must address:

- a) differences in handling, holding and management needs of each livestock species, number of animals, sex, class, reproductive status, weight, breed, origin, export preparations, transport history and importing country requirements; and
- b) the quantity and type of feed to be provided, and frequency of feeding required, for the livestock during the voyage; and
- c) if water cannot be supplied *ad libitum* due to circumstances outside of the exporter's control, the quantity of water to be provided and frequency of watering required during the voyage; and
- d) pen and deck cleaning and maintenance (including bedding) requirements; and
- e) management of livestock (including inspections, disease investigations and treatment) during the voyage; and

- f) authority to destroy humanely any animal that is seriously ill or injured; and
- g) relevant points in Standards 5.1.1 and 5.1.2.

Standard 5 Loading and onboard management requirements

Standard 5 covers the standards that relate to loading onto vessels and onboard management of livestock for export by sea. Please see Standard 6 for the standards that relate to export of livestock by air.

5.1 General and all species requirements

5.1.1 The exporter must ensure that before and after loading of livestock:

- a) pen space allocation and pen group weight range tolerances for livestock are in accordance with the relevant species specifications in Standards 5.2 to 5.5 and where applicable, a HSRA; and
- b) segregation of livestock is in accordance with the penning arrangements equal to Standard 3.1.16 and any other relevant characteristic and market and port of disembarkation; and
- c) different species are separated by a passageway, an empty pen or an effective impermeable barrier, to the satisfaction of an accredited stockperson or AAV; and
- d) livestock are not located or moved over any hatchway, unless the hatchway is protected against consequential damage and the hatchway covers are secured against movement; and
- e) livestock are not located on the vessel where their health or welfare may be adversely affected (there must be no penning or locating of livestock on or in any part of a vessel where the livestock, livestock fittings, livestock equipment or carrying arrangements could compromise livestock health or welfare).

5.1.2 Before loading of livestock for transport to the port of embarkation, a loading plan for the vessel on which the livestock are to be transported must be prepared in writing by the exporter. The loading plan must be compliant with relevant vessel safety standards and include details of:

- a) 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; and
- b) pen layout, available pen area for the particular consignment, hospital pens, ventilation, vessel characteristics and stability requirements, port rotation, and discharge sequence; and
- c) the total number of livestock that are to be loaded on the vessel and number of livestock to be placed in each pen, based on the minimum pen area per head required for the relevant livestock species, weight, class, sex, reproductive status and physical characteristics as specified in Standard 5. Basis for calculations must be included.

Loading

5.1.3 Upon arrival of the livestock at the port of embarkation:

- a) responsibility for the livestock must be transferred to a competent person nominated by the exporter; and

- b) that person must be notified of any aspect of transport to the port of embarkation that might affect the ongoing health or welfare of the livestock.

5.1.4 Livestock for export must be loaded onto the vessel by competent stock handlers in a manner that prevents injury and minimises stress on the livestock.

5.1.5 As the livestock for export are loaded on board the vessel, the exporter must notify the master of the vessel of any aspect of the preparation or transport of the livestock for export that might affect their ongoing health or welfare.

5.1.6 To ensure that only fit and healthy livestock are loaded onto the vessel:

- a) the exporter must arrange for an accredited stockperson, an AAV and/or a competent stock handler to inspect the livestock for health and welfare and fitness to travel, immediately before they are loaded onto the vessel; and
- b) only livestock that are healthy and fit to travel including not showing signs consistent with the rejection criteria specified in Standard 1 Table 1, can be loaded; and
- c) any livestock rejected for export must be distinctively identified, segregated from the consignment and treated if necessary. Humane and effective arrangements must be made for their removal from the port; and
- d) if euthanasia is necessary, it must be carried out promptly and in a humane manner that causes prompt loss of consciousness and then rapid death by a method approved under the national animal welfare standards and guidelines or model codes of practice; and
- e) dead livestock must be removed from the port, and carcasses must be disposed of in compliance with all relevant and applicable legislation.

5.1.7 Livestock for export must be presented for loading, and penned on the vessel, in lines segregated according to the loading plan.

5.1.8 Humane and effective arrangements must be made for the handling and care of any livestock surplus to requirements that are not loaded onto the vessel. In the case of surplus livestock, a record that includes the identification of the animal(s), reason for surplus and relevant handling and care must be kept and retained by the exporter for at least 2 years after the date of export.

5.1.9 Once loading has been completed and before departure, the exporter must ensure:

- a) the consignment has been checked and confirm that the livestock have been loaded according to the loading plan and any applicable written instructions and standard operating procedures; and
- b) the loaded feed has been checked and confirm that feed requirements in this standard have been met, using accurate liveweights.

Food and water, bedding and ventilation requirements

5.1.10 Feed and water provisions must be appropriate for the species, class, weight and age of livestock, voyage length and expected weather conditions.

5.1.11 All livestock must be provided with adequate trough space during the voyage to ensure each animal can meet its daily requirements for feed and water without risk to their health or welfare.

5.1.12 Livestock must have access to suitable feed and *ad libitum* water:

- a) as soon as possible and no more than 12 hours after being loaded on the vessel; and
- b) for water, within maximum water deprivation times equal to those set out in the Land Transport Standards; and
- c) of a quality to maintain good health, hydration and welfare and satisfy energy requirements for the duration of the voyage, including loading and unloading, and in the event of delay.

5.1.13 There must be no water curfew applied prior to unloading of livestock at ports in the Middle East between 1 May and 31 October (inclusive).

5.1.14 The ration fed on the vessel must comply with these conditions:

- a) the ration must not contain more than 30% by weight of wheat, barley or corn, unless the livestock have been adapted to the ration over a period of at least 2 weeks prior to export; and
- b) all pelleted feed must be accompanied by a manufacturer's declaration that states it is manufactured in accordance with the Australian Code of Good Manufacturing Practice for the Feed Milling Industry (2009); and
- c) all Australian-origin feed from a previous voyage that is suitable for livestock consumption may remain in a feed storage tank provided that:
 - i) each tank is completely emptied, and feed discarded at least once in every 90 days; and
 - ii) all feed that is no longer suitable for livestock consumption is emptied in its entirety before further feed is loaded; and
 - iii) records are maintained of the emptying of feed storage tanks and are available for inspection.
- d) fodder must not be loaded post-departure from Australia except in exceptional circumstances and written approval must be given by the department before this is to occur. Importing country requirements must be met.

5.1.15 To manage daily feed requirements when a voyage experiences a delay, a minimum of 3 days of reserve feed must be carried on the vessel. The 3-day feed reserve requirement is in addition to the calculated daily feed provisions for the loading/unloading time and the estimated voyage length. Reserve feed must only be used if a delay is experienced during the voyage.

5.1.16 The minimum additional reserve of water that must be carried on the vessel to be used in the event of delay is 3 voyage days of daily water maintenance requirements for all livestock on board. Allowance may be made for fresh water produced on the vessel while at sea.

5.1.17 For extended long-haul voyages and/or any voyages that will travel via the Suez Canal, the Cape of Good Hope, the Panama Canal or Cape Horn:

- a) any consignments that are expected to be on the voyage for 31 voyage days or more must not be exported unless otherwise provided in *extended long-haul management plan* approved in writing by the department; and
- b) a minimum of 7 voyage days of reserve feed and water (not cumulative with the reserve requirements in Standards 5.1.15 and 5.1.16) must be carried, to be used in the event of delay. Allowance may be made for fresh water produced on the vessel while at sea.

5.1.18 Bedding provisions must be loaded for all voyages and:

- a) applied in a sufficient quantity that allows pens to be maintained in a manner that ensures the health and welfare of the livestock and minimises slipping, injuries, abrasions, lameness, pugging and faecal coating; and
- b) applied to slippage risk areas of laneways and ramps prior to and during loading and unloading using a material that minimises slipping during loading and unloading; and
- c) be monitored routinely (at least daily) to ensure consistency and depth is appropriate to mitigate risks to the health or welfare of the livestock.

5.1.19 When livestock for export are loaded on vessels with enclosed decks, the ventilation system must be run continuously from the commencement of loading until the last animal has been unloaded.

5.1.20 Ammonia levels in a representative number of pens must be measured daily. If ammonia levels exceed or are likely to exceed 25ppm in any livestock spaces, appropriate reduction measures must be implemented. Compliance with this standard will be delayed until further notice by the department.

5.2 Buffalo loading and management requirements

5.2.1 The minimum pen space allocation for buffalo exported by sea is contained in Table 5. These criteria apply to this allocation:

- a) where a curfew of more than 12 hours will be undertaken at the registered establishment prior to transport to the port of embarkation, a curfew factor of an additional 5% must be applied when calculating liveweight (cumulative with other additional space requirements and must be calculated first); and
- b) for weights between those shown in Table 5 the minimum pen area per head must be calculated by linear interpolation; and
- c) the weight of each animal in a pen must not vary from pen average weight by 50kg. The pen average weight is calculated by dividing the total weight of the buffalo in the pen by the number of buffalo in the pen; and
- d) for pregnant buffalo, a minimum additional 15% space must be provided; and
- e) buffalo outside of the weights shown in Table 5 must only be sourced for export or exported in accordance with a *light* or *heavy buffalo management plan* where an exporter has approval under Standard 1.2.3.

Table 5 Minimum pen space allocation 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	305	1.439	410	1.750
205	1.107	310	1.455	415	1.764
210	1.125	315	1.470	420	1.778
215	1.143	320	1.486	425	1.792
220	1.160	325	1.501	430	1.806
225	1.177	330	1.516	435	1.819
230	1.195	335	1.531	440	1.833
235	1.212	340	1.546	445	1.847
240	1.229	345	1.561	450	1.861
245	1.246	350	1.576	455	1.874
250	1.262	355	1.591	460	1.888
255	1.279	360	1.606	465	1.901
260	1.295	365	1.620	470	1.915
265	1.312	370	1.635	475	1.928
270	1.328	375	1.650	480	1.941
275	1.344	380	1.664	485	1.955
280	1.360	385	1.678	490	1.968
285	1.376	390	1.693	495	1.981
290	1.392	395	1.707	500	1.995
295	1.408	400	1.721		
300	1.424	405	1.736		

5.2.2 When calculating feed and water requirements, allowance must be made for, and buffalo must be provided with:

- a) at least the quantity of feed shown in Table 6; and
- b) at least 12% of liveweight of water per head per day.

Table 6 Feed requirements for buffalo

Class of buffalo	Minimum feed allowance/head/day (% liveweight)
Buffalo weighing less than 250 kg	2.5
Breeding buffalo heifers with 6 or fewer permanent incisor teeth (regardless of pregnancy status)	2.5
Pregnant buffalo cows	2.5
Other classes of buffalo	2.0

5.2.3 Feed loaded and provided to buffalo exported on:

- a) short and long-haul voyages, must include at least 1% of the required feed as chaff and/or hay; or
- b) extended long-haul voyages where an exporter has approval under Standard 5.1.17 to export buffalo on extended long-haul voyages, must include at least 2% of the required feed as chaff and/or hay.

5.2.4 In addition to standard 5.1.18, buffalo exported on voyages of 10 voyage days or more must be provided with additional sawdust, rice hulls or similar bedding material to be used exclusively for bedding at a rate of at least 7 tonnes or 25m³ for every 1000m² of buffalo pen space. This additional bedding requirement does not apply to buffalo loaded from a port north of latitude 26°S and exported to South-East Asia.

5.2.5 The minimum veterinary medicines and equipment to be carried on the vessel are in Table 7. Additional veterinary medicines and equipment to be carried on voyages with pregnant buffalo are in Table 8. Additional veterinary medicines and equipment may be necessary if there are other classes of buffalo on the vessel.

Table 7 Minimum veterinary medicines and equipment for buffalo

Category	Medicines and equipment (per 1,000 buffalo)	Voyages of less than 10 days	Voyages of 10 days or more
Injectable antibiotics	¹ Penicillin (short acting)	15 buffalo doses	30 buffalo doses
	¹ Oxytetracycline (long acting) or equivalent	15 buffalo doses	30 buffalo doses
	¹ Antibiotic(s) appropriate for the treatment of bovine respiratory disease (may include Florfenicol, Tilmicosin, Tulathromycin, Tylosin)	15 buffalo doses	30 buffalo doses
Anti-inflammatory medicines	Dexadreson	15 buffalo doses	30 buffalo doses
	Flunixin or equivalent	15 buffalo doses	30 buffalo doses
	Topical wound treatment	Sufficient to treat 10 minor wounds	Sufficient to treat 20 minor wounds
	Pink eye treatment	10 tubes	1 box of 20 tubes
Sedative	Xylazine	5 buffalo doses	10 buffalo doses
Other equipment	Thermometers	3 per vessel	3 per vessel
	Needles (18 gauge, 1 ½ inch) or equivalent	1 box of 100	1 box of 100
	Hypodermic syringes	40 x 20mL, 10 x 5mL	40 x 20mL, 10 x 5mL
	Restraint equipment	Adjustable head bale (1 per vessel) should be included	Adjustable head bale (1 per vessel) should be included
		Rope halter (1 per vessel)	Rope halter (1 per vessel)
		Nose grip pliers (1 pair per vessel)	Nose grip pliers (1 pair per vessel)
Post-mortem kit	2 post-mortem knives plus steel and sharpening stone per vessel	2 post-mortem knives plus steel and sharpening stone per vessel	

Category	Medicines and equipment (per 1,000 buffalo)	Voyages of less than 10 days	Voyages of 10 days or more
	Remotely triggered syringe device	1 syringe plus spare parts per vessel, plus 10 spare needles per 1,000 animals	1 syringe plus spare parts per vessel, plus 10 spare needles per 1,000 animals
	Captive-bolt gun	1 per vessel, plus 40 cartridges per 1,000 animals	1 per vessel, plus 40 cartridges per 1,000 animals

¹ Refer to veterinary advice and the Australian veterinary antimicrobial prescribing guidelines

Table 8 Additional minimum veterinary medicines and equipment for pregnant buffalo

Medicines and equipment	Minimum requirement
Obstetrical lubricant	5 litres per 2,000 buffalo
Calving ropes	1 set per vessel
Obstetrical gloves	1 box per vessel
Oxytocin	50 ml per 1,000 buffalo
Additional chlorohexidine (or equivalent)	5 litres per vessel
Iodine (umbilical treatment)	1 litre per vessel
Uterine pessaries	10 per 2,000 buffalo
Surgical equipment	Adequate to conduct a caesarean section

5.3 Cattle loading and management requirements

General penning arrangements

5.3.1 The minimum pen space allocations for cattle exported by sea are contained in Table 9, Table 10a, Table 10b, Table 11a, Table 11b, Table 12a and Table 12b. These penning criteria apply:

- a) where a curfew of more than 12 hours will be undertaken at the registered establishment prior to transport to the port of embarkation, a curfew factor of an additional 5% must be applied when calculating liveweight (cumulative with other additional space requirements and must be calculated first); and
- b) the weight of each animal in a pen must not vary from pen average weight by more than 50kg. The pen average weight is calculated by dividing the total weight of the cattle in the pen by the number of cattle in the pen; and
- c) for pregnant cattle, a minimum additional 15% space must be provided; and
- d) cattle without horns may be penned with cattle with horns up to 12cm in length and where the horns are tipped (blunt); and
- e) cattle outside of the weights shown in Table 9, Table 10a, Table 10b, Table 11a, Table 11b, Table 12a and Table 12b must only be sourced for export or exported in accordance with a *light or heavy cattle management plan* where an exporter has approval under Standard 1.4.2.

Consignments of cattle loaded at a port north of latitude 26°S (default pen space)

5.3.2 The minimum default pen space allocation for consignments of cattle exported by sea loaded at a port north of latitude 26°S is contained in Table 9. For weights between those shown in Table 9, the minimum pen area per head must be calculated by linear interpolation.

Table 9 Minimum default pen space allocation for consignments of cattle loaded at a port north of latitude 26°S

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	0.990	305	1.308	410	1.591
205	1.007	310	1.323	415	1.603
210	1.023	315	1.337	420	1.616
215	1.039	320	1.351	425	1.629
220	1.055	325	1.364	430	1.641
225	1.070	330	1.378	435	1.654
230	1.086	335	1.392	440	1.666
235	1.102	340	1.406	445	1.679
240	1.117	345	1.419	450	1.691
245	1.132	350	1.433	455	1.704
250	1.148	355	1.446	460	1.716
255	1.163	360	1.460	465	1.728
260	1.178	365	1.473	470	1.741
265	1.193	370	1.486	475	1.753
270	1.207	375	1.500	480	1.765
275	1.222	380	1.513	485	1.777
280	1.237	385	1.526	490	1.789
285	1.251	390	1.539	495	1.801
290	1.266	395	1.552	500	1.813
295	1.280	400	1.565		
300	1.294	405	1.578		

Consignments of cattle that are loaded at a port north of latitude 26°S (alternative pen space)

5.3.3 Standard 5.3.2 applies unless an exporter is approved in writing under their approved arrangement to use alternative pen space for cattle loaded at a port north of latitude 26°S to a particular destination. The alternative pen space allocation is contained in Table 10a for near markets. Table 10b contains the alternative pen space allocation for far markets. For weights between those shown in Table 10a or those shown in Table 10b, the minimum pen area per head must be calculated by linear interpolation. Daily reports must be provided as set out in Standard 5.6.6.

Table 10a Alternative minimum pen space allocation for consignments of cattle loaded at a port north of latitude 26°S where an exporter is approved to use the alternative pen space – near markets

Liveweight (kg)	Alternative minimum pen area (m ² /head)	Liveweight (kg)	Alternative minimum pen area (m ² /head)	Liveweight (kg)	Alternative minimum pen area (m ² /head)
200	0.770	300	1.110	405	1.459
205	0.787	305	1.127	410	1.468
210	0.804	310	1.144	415	1.487
215	0.821	315	1.161	420	1.505
220	0.838	320	1.178	425	1.519
225	0.855	325	1.195	430	1.533
230	0.872	330	1.212	435	1.547
235	0.889	335	1.229	440	1.560
240	0.906	340	1.246	445	1.574
245	0.923	345	1.263	450	1.588
250	0.940	350	1.280	455	1.602
255	0.957	355	1.297	460	1.615
260	0.974	360	1.314	465	1.629
265	0.991	365	1.331	470	1.643
270	1.008	370	1.348	475	1.657
275	1.025	375	1.365	480	1.670
280	1.042	380	1.382	485	1.684
285	1.059	385	1.399	490	1.698
290	1.076	390	1.416	495	1.712
295	1.093	395	1.433	500	1.725
		400	1.450		

Table 10b Alternative minimum pen space allocation for consignments of cattle loaded at a port north of latitude 26°S where an exporter is approved to use the alternative pen space – far markets

Liveweight (kg)	Alternative minimum pen area (m ² /head)	Liveweight (kg)	Alternative minimum pen area (m ² /head)	Liveweight (kg)	Alternative minimum pen area (m ² /head)
200	0.770	245	0.923	290	1.076
205	0.787	250	0.940	295	1.093
210	0.804	255	0.957	300	1.110
215	0.821	260	0.974	305	1.127
220	0.838	265	0.991	310	1.144
225	0.855	270	1.008	315	1.161
230	0.872	275	1.025	320	1.178
235	0.889	280	1.042	325	1.195
240	0.906	285	1.059	330	1.212

Liveweight (kg)	Alternative minimum pen area (m ² /head)	Liveweight (kg)	Alternative minimum pen area (m ² /head)	Liveweight (kg)	Alternative minimum pen area (m ² /head)
335	1.229	395	1.433	455	1.637
340	1.246	400	1.450	460	1.654
345	1.263	405	1.467	465	1.671
350	1.280	410	1.484	470	1.688
355	1.297	415	1.501	475	1.705
360	1.314	420	1.518	480	1.722
365	1.331	425	1.535	485	1.739
370	1.348	430	1.552	490	1.756
375	1.365	435	1.567	495	1.773
380	1.382	440	1.586	500	1.790
385	1.399	445	1.603		
390	1.416	450	1.620		

Consignments of cattle loaded at a port south of latitude 26°S between 1 May to 31 October (inclusive) and the voyage crosses latitude 15°S

5.3.4 The minimum pen space allocation for consignments of cattle exported by sea that are loaded at a port south of latitude 26°S, between 1 May and 31 October (inclusive) and the voyage crosses latitude 15°S is contained in Table 11a. These pen space allocations apply unless an exporter is approved in writing under their approved arrangement to use the alternative pen space for cattle loaded at a port south of latitude 26°S, between 1 May and 31 October (inclusive) and the voyage crosses latitude 15°S. The alternative pen space allocation is contained in Table 11b. For weights between those shown in Table 11a or those shown in Table 11b, the minimum pen area per head must be calculated by linear interpolation.

Table 11a Minimum pen space allocation for consignments of cattle loaded at a port south of latitude 26°S between 1 May and 31 October (inclusive) and the voyage crosses latitude 15°S – default

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	0.990	250	1.148	300	1.294
205	1.007	255	1.163	305	1.308
210	1.023	260	1.178	310	1.323
215	1.039	265	1.193	315	1.337
220	1.055	270	1.207	320	1.351
225	1.070	275	1.222	325	1.364
230	1.086	280	1.237	330	1.378
235	1.102	285	1.251	335	1.392
240	1.117	290	1.266	340	1.406
245	1.132	295	1.280	345	1.419

Liveweight (kg)	Minimum pen area (m ² /head)	Liveweight (kg)	Minimum pen area (m ² /head)	Liveweight (kg)	Minimum pen area (m ² /head)
350	1.433	405	1.688	460	1.902
355	1.446	410	1.707	465	1.922
360	1.460	415	1.727	470	1.940
365	1.473	420	1.746	475	1.961
370	1.486	425	1.766	480	1.980
375	1.502	430	1.785	485	2.000
380	1.520	435	1.805	490	2.019
385	1.539	440	1.824	495	2.039
390	1.558	445	1.844	500	2.060
395	1.613	450	1.863		
400	1.668	455	1.883		

Table 11b Minimum pen space allocation for consignments of cattle loaded at a port south of latitude 26°S between 1 May and 31 October (inclusive) and the voyage crosses latitude 15°S – alternative

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	0.847	305	1.240	410	1.707
205	0.866	310	1.258	415	1.727
210	0.884	315	1.277	420	1.746
215	0.903	320	1.296	425	1.766
220	0.922	325	1.315	430	1.785
225	0.941	330	1.333	435	1.805
230	0.959	335	1.352	440	1.824
235	0.978	340	1.371	445	1.844
240	0.997	345	1.390	450	1.863
245	1.016	350	1.408	455	1.883
250	1.034	355	1.427	460	1.902
255	1.053	360	1.445	465	1.922
260	1.071	365	1.464	470	1.940
265	1.090	370	1.483	475	1.961
270	1.109	375	1.502	480	1.980
275	1.128	380	1.520	485	2.000
280	1.146	385	1.539	490	2.019
285	1.165	390	1.558	495	2.039
290	1.184	395	1.613	500	2.060
295	1.203	400	1.668		
300	1.221	405	1.688		

Consignments of cattle loaded at a port south of latitude 26°S, between 1 November to 30 April (inclusive) if the voyage crosses latitude 15°S, or all year if the voyage does not cross latitude 15°S

5.3.5 The minimum pen space allocation for consignments of cattle exported by sea that are loaded at a port south of latitude 26°S either between 1 November to 30 April (inclusive) if the voyage crosses latitude 15°S, or all year if the voyage does not cross latitude 15°S is contained in Table 12a. These pen space allocations apply unless an exporter is approved in writing under their approved arrangement to use the alternative pen space for cattle loaded at a port south of latitude 26°S, between 1 November and 30 April (inclusive) and the voyage crosses latitude 15°S, or all year if the voyage does not cross latitude 15°S. The alternative pen space allocation is contained in Table 12b. For weights between those shown in Table 12a or those shown in Table 12b, the minimum pen area per head must be calculated by linear interpolation.

Table 12a Minimum pen space allocation for consignments of cattle loaded at a port south of latitude 26°S, between 1 November to 30 April (inclusive) if the voyage crosses latitude 15°S, or all year for voyages that do not cross latitude 15°S – default

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	0.990	305	1.308	410	1.591
205	1.007	310	1.323	415	1.603
210	1.023	315	1.337	420	1.616
215	1.039	320	1.351	425	1.629
220	1.055	325	1.364	430	1.641
225	1.070	330	1.378	435	1.654
230	1.086	335	1.392	440	1.666
235	1.102	340	1.406	445	1.679
240	1.117	345	1.419	450	1.691
245	1.132	350	1.433	455	1.704
250	1.148	355	1.446	460	1.716
255	1.163	360	1.460	465	1.728
260	1.178	365	1.473	470	1.741
265	1.193	370	1.486	475	1.753
270	1.207	375	1.500	480	1.765
275	1.222	380	1.513	485	1.777
280	1.237	385	1.526	490	1.827
285	1.251	390	1.539	495	1.880
290	1.266	395	1.552	500	1.932
295	1.280	400	1.565		
300	1.294	405	1.578		

Table 12b Minimum pen space allocation for consignments of cattle loaded at a port south

of latitude 26°S, between 1 November to 30 April (inclusive) if the voyage crosses latitude 15°S, or all year for voyages that do not cross latitude 15°S – alternative

Liveweight (kg)	Minimum pen area (m²/head)	Liveweight (kg)	Minimum pen area (m²/head)	Liveweight (kg)	Minimum pen area (m²/head)
200	0.770	305	1.127	410	1.484
205	0.787	310	1.144	415	1.501
210	0.804	315	1.161	420	1.518
215	0.821	320	1.178	425	1.535
220	0.838	325	1.195	430	1.552
225	0.855	330	1.212	435	1.569
230	0.872	335	1.229	440	1.586
235	0.889	340	1.246	445	1.603
240	0.906	345	1.263	450	1.620
245	0.923	350	1.280	455	1.637
250	0.940	355	1.297	460	1.654
255	0.957	360	1.314	465	1.671
260	0.974	365	1.331	470	1.688
265	0.991	370	1.348	475	1.705
270	1.008	375	1.365	480	1.722
275	1.025	380	1.382	485	1.775
280	1.042	385	1.399	490	1.827
285	1.059	390	1.416	495	1.880
290	1.076	395	1.433	500	1.932
295	1.093	400	1.450		
300	1.110	405	1.467		

5.3.6 When calculating feed and water requirements, allowance must be made for, and cattle must be provided with:

- a) at least the quantity of feed shown in Table 13; and
- b) at least 12% of liveweight of water per head per voyage day.

Table 13 Feed requirements for cattle

Class of cattle	Minimum feed allowance/head/voyage day (% liveweight)
Cattle weighing less than 250kg	2.5
Breeding heifers with six or fewer permanent incisor teeth (regardless of pregnancy status)	2.5
Pregnant cows	2.5
Other classes of cattle	2.0

5.3.7 Feed loaded and provided to cattle exported on:

- a) short and long-haul voyages, must include at least 1% of the required feed as chaff and/or hay; and
- b) extended long-haul voyages where an exporter has approval under Standard 5.1.17 to export cattle on extended long-haul voyages, must include at least 2% of the required feed as chaff and/or hay.

5.3.8 In addition to standard 5.1.18, cattle exported on long and extended long haul voyages must be provided with additional sawdust, rice hulls or similar bedding material to be used exclusively for bedding at a rate of at least 7 tonnes or 25m³ for every 1,000m² of cattle pen space. This additional bedding requirement does not apply to cattle loaded from a port north of latitude 26°S and exported to South-East Asia.

5.3.9 The minimum veterinary medicines and equipment to be carried on the vessel are in Table 14. Additional veterinary medicines and equipment to be carried on voyages with pregnant cattle are in Table 15. Additional veterinary medicines and equipment may be necessary if there are other classes of cattle in the consignment.

Table 14 Minimum veterinary medicines and veterinary equipment for cattle

Category	Medicines and equipment (per 1,000 cattle)	Voyages of less than 10 days	Voyages of 10 days or more
Injectable antibiotics	¹ Penicillin (short acting)	15 cattle doses	30 cattle doses
	¹ Oxytetracycline (long acting) or equivalent	15 cattle doses	30 cattle doses
	¹ Antibiotic(s) appropriate for the treatment of bovine respiratory disease (may include Florfenicol, Tilmicosin, Tulathromycin, Tylosin)	15 cattle doses	30 cattle doses
Anti-inflammatory medicines	Dexadreson	15 cattle doses	30 cattle doses
	Flunixin or equivalent	15 cattle doses	30 cattle doses
	Topical wound treatment	Sufficient to treat 10 minor wounds	Sufficient to treat 20 minor wounds
	Pink eye treatment	10 tubes	1 box of 20 tubes
Sedative	Xylazine	5 cattle doses	10 cattle doses
Other equipment	Thermometers	3 per vessel	3 per vessel
	Needles (18 gauge, 1 ½ inch) or equivalent	1 box of 100	1 box of 100
	Hypodermic syringes	40 x 20mL, 10 x 5mL	40 x 20mL, 10 x 5mL
	Restraint equipment	Adjustable head bale (1 per vessel) should be included	Adjustable head bale (1 per vessel) should be included
		Rope halter (1 per vessel)	Rope halter (1 per vessel)
		Nose grip pliers (1 pair per vessel)	Nose grip pliers (1 pair per vessel)
	Post-mortem kit	2 post-mortem knives plus steel and sharpening stone per vessel	2 post-mortem knives plus steel and sharpening stone per vessel

Category	Medicines and equipment (per 1,000 cattle)	Voyages of less than 10 days	Voyages of 10 days or more
	Remotely triggered syringe device	1 syringe plus spare parts per vessel, plus 10 spare needles per 1,000 animals	1 syringe plus spare parts per vessel, plus 10 spare needles per 1,000 animals
	Captive-bolt gun	1 per vessel, plus 40 cartridges per 1,000 animals	1 per vessel, plus 40 cartridges per 1,000 animals

¹ Refer to veterinary advice and the Australian veterinary antimicrobial prescribing guidelines

Table 15 Additional minimum veterinary medicines and equipment for pregnant cattle

Medicines and equipment	Minimum requirement
Obstetrical lubricant	5 litres per 2,000 cattle
Calving ropes	1 set per vessel
Obstetrical gloves	1 box per vessel
Oxytocin	50 ml per 1,000 cattle
Additional chlorohexidine (or equivalent)	5 litres per vessel
Iodine (umbilical treatment)	1 litre per vessel
Uterine pessaries	10 per 2,000 cattle
Surgical equipment	Adequate to conduct a caesarean section

5.4 Goat loading and management requirements

5.4.1 The minimum pen space allocation for goats is contained in Table 16. These criteria apply to this allocation:

- where a curfew of more than 12 hours will be undertaken at the registered establishment prior to transport to the port of embarkation, a curfew factor of an additional 5% must be applied when calculating liveweight (cumulative with other additional space requirements and must be calculated first); and
- for weights between those shown in Table 16 the minimum pen area per head must be calculated by linear interpolation; and
- goats without horns may be mixed with goats with horns that do not exceed the conditions set out in Standard 1.6.8 d) i) and ii); and
- goats exported in accordance with a *long-horned livestock management plan* where the exporter has approval in writing by the department under Standard 1.6.8 d) must be allocated an additional 10% space.

Table 16 Minimum pen space allocation for goats exported by sea

Liveweight (kg)	Minimum pen area (m ² /head)		Liveweight (kg)	Minimum pen area (m ² /head)	
	Nov to Apr	May to Oct		Nov to Apr	May to Oct
24	0.244	0.269	27	0.264	0.291
25	0.251	0.276	28	0.271	0.298
26	0.258	0.283	29	0.277	0.305

Liveweight (kg)	Minimum pen area (m ² /head)		Liveweight (kg)	Minimum pen area (m ² /head)	
	Nov to Apr	May to Oct		Nov to Apr	May to Oct
30	0.283	0.311	52	0.407	0.448
31	0.289	0.318	53	0.412	0.453
32	0.295	0.325	54	0.417	0.459
33	0.302	0.332	55	0.422	0.465
34	0.308	0.338	56	0.427	0.470
35	0.313	0.345	57	0.433	0.476
36	0.319	0.351	58	0.438	0.481
37	0.325	0.358	59	0.442	0.487
38	0.331	0.364	60	0.447	0.492
39	0.337	0.370	61	0.452	0.498
40	0.342	0.377	62	0.457	0.503
41	0.348	0.383	63	0.462	0.508
42	0.354	0.389	64	0.467	0.514
43	0.359	0.395	65	0.472	0.519
44	0.365	0.401	66	0.476	0.524
45	0.370	0.407	67	0.481	0.529
46	0.375	0.413	68	0.486	0.535
47	0.381	0.419	69	0.491	0.540
48	0.386	0.425	70	0.495	0.545
49	0.391	0.431	75	0.518	0.570
50	0.397	0.436	80	0.541	0.595
51	0.402	0.442	90	0.585	0.658

5.4.2 Pellets used as the ration fed on the vessel must meet the nutritional specifications outlined in Table 17.

Table 17 Pellet composition for goats

Pellet composition	Specification
Moisture content	< 12%
Ash (as a percentage of dry matter)	< 13%
Crude protein (as a percentage of dry matter)	9% to 12%
Urea (as a percentage of dry matter)	< 1.2%
Acid detergent fibre (as a percentage of dry matter)	18% to 35%
Metabolisable energy	> 8.0 MJ/kg dry matter

5.4.3 When calculating feed and water requirements, allowance must be made for, and goats provided with:

- a) at least 3% of liveweight of feed per head per voyage day for young goats (up to and including 4 permanent incisor teeth); and

- b) at least 2% of liveweight of feed per head per voyage day for goats with more than 4 permanent incisor teeth; and
- c) at least 6 litres of water per head per voyage day for all goats.

5.4.4 The minimum veterinary medicines and equipment to be carried on the vessel is in Table 18. Additional veterinary medicines and equipment may be necessary if there are other classes of goat in the consignment (for example obstetrical supplies for pregnant animals).

Table 18 Minimum veterinary medicines and equipment for goats

Medicines and equipment (per 10,000 goats unless otherwise noted)	Minimum requirement
Penicillin (short acting)	10 goat doses
Oxytetracycline (long acting) or equivalent	10 goat doses
Flystrike dressing	Sufficient to treat 20 wounds
Pink eye treatment system (similar acting to Orbenin)	1 box of 20 tubes
Thermometers	3 per vessel
Needles (18 gauge, 1 ½ inch) 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 goats

5.5 Sheep loading and management requirements

5.5.1 The minimum pen space allocation for sheep is contained in Table 19. These criteria apply to this allocation:

- a) where a curfew of more than 12 hours will be undertaken at the registered establishment prior to transport to the port of embarkation, a curfew factor of an additional 5% must be applied when calculating liveweight (cumulative with other additional space requirements and must be calculated first); and
- b) for weights between those shown in Table 19 the minimum pen area per head must be calculated by linear interpolation; and
- c) [deleted]
- d) sheep without horns may be mixed with sheep with horns up to 1 curl in length; and
- e) sheep with horns must be allocated an additional 10% space.

Table 19 Minimum pen space allocation for sheep exported by sea

Liveweight (kg)	Minimum pen area (m²/head)		Liveweight (kg)	Minimum pen area (m²/head)	
	Nov to Apr	May to Oct		Nov to Apr	May to Oct
32	0.295	0.325	35	0.313	0.345
33	0.302	0.332	36	0.319	0.351
34	0.308	0.338	37	0.325	0.358

Liveweight (kg)	Minimum pen area (m ² /head)		Liveweight (kg)	Minimum pen area (m ² /head)	
	Nov to Apr	May to Oct		Nov to Apr	May to Oct
38	0.331	0.364	56	0.427	0.470
39	0.337	0.370	57	0.433	0.476
40	0.342	0.377	58	0.438	0.481
41	0.348	0.383	59	0.442	0.487
42	0.354	0.389	60	0.447	0.492
43	0.359	0.395	61	0.452	0.498
44	0.365	0.401	62	0.457	0.503
45	0.370	0.407	63	0.462	0.508
46	0.375	0.413	64	0.467	0.514
47	0.381	0.419	65	0.472	0.519
48	0.386	0.425	66	0.476	0.524
49	0.391	0.431	67	0.481	0.529
50	0.397	0.436	68	0.486	0.535
51	0.402	0.442	69	0.491	0.540
52	0.407	0.448	70	0.495	0.545
53	0.412	0.453	75	0.518	0.570
54	0.417	0.459	80	0.541	0.595
55	0.422	0.465	90	0.585	0.658

5.5.2 Pellets used as the ration fed on the vessel must meet the nutritional specifications outlined in Table 20.

Table 20 Pellet composition for sheep

Pellet composition	Specification
Moisture content	< 12%
Ash (as a percentage of dry matter)	< 13%
Crude protein (as a percentage of dry matter)	9% to 12%
Urea (as a percentage of dry matter)	< 1.2%
Acid detergent fibre (as a percentage of dry matter)	18% to 35%
Metabolisable energy	> 8.0MJ/kg dry matter

5.5.3 When calculating feed and water requirements for sheep, allowance must be made for, and sheep provided with:

- a) at least 3% of liveweight of feed per head per voyage day for young sheep (up to and including 4 permanent incisor teeth); or
- b) at least 2% of liveweight of feed per head per voyage day for sheep with more than 4 permanent incisor teeth; and
- c) at least 6 litres of water per head per voyage day for all sheep.

5.5.4 The minimum veterinary medicines and equipment to be carried on the vessel for sheep is in Table 21. Additional veterinary medicines and equipment may be necessary if there are other classes of sheep in the consignment (for example obstetrical supplies for pregnant animals).

Table 21 Minimum veterinary medicines and equipment for sheep

Medicines and equipment (per 10,000 sheep unless otherwise noted)	Minimum requirement
Penicillin (short acting)	10 sheep doses
Oxytetracycline (long acting) or equivalent	10 sheep doses
Flystrike dressing	Sufficient to treat 20 wounds
Pink eye treatment system (similar acting to Orbenin)	1 box of 20 tubes
Thermometers	3 per vessel
Needles (18 gauge, 1 ½ inch) or equivalent	100
Hypodermic syringes	10 x 20mL, 2 x 5mL
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 sheep

5.6 Monitoring and reporting requirements

5.6.1 During the voyage, a meeting must be held at least daily to discuss all issues relating to the health and welfare of the livestock. The meeting must at least include the master of the vessel and/or the master's representative, accredited stockperson(s) and if on board, the AAV.

5.6.2 Livestock and livestock services on the vessel must be regularly inspected (at minimum once every day and once every night of the voyage) to ensure that the health and welfare of the livestock are maintained while on the vessel. This must include:

- a) systematic inspection of livestock to assess their health and welfare; and
- b) monitoring and maintenance of feed and/or water supply systems to ensure they are in good working order; and
- c) checking pen space allocation and making adjustments as required; and
- d) monitoring and maintenance of ventilation to promote optimal thermoregulation of the livestock; and
- e) monitoring and maintenance of pen and deck conditions. Washing down of decks should be carried out regularly where appropriate for the species, and disposal of faeces and litter must be carried out in a manner that minimises impacts on the health and welfare of livestock.

5.6.3 Any livestock identified as being sick or injured during the voyage (including during loading and unloading) must:

- a) be promptly assessed and treated; and
- b) be transferred to a hospital pen, if required; or

- c) if necessary, be euthanased humanely and promptly by a method approved under the national animal welfare standards and guidelines or model codes of practice. The carcasses of any dead livestock must be disposed of in accordance with the requirements of Annex V of MARPOL 73/78.

5.6.4 Records must be kept by the exporter as outlined in Standard 1.1.8.

5.6.5 If a notifiable incident occurs at any time, the exporter must notify the department as soon as possible and within 12 hours. For the export of livestock by sea, a notifiable incident includes, but is not limited to:

- a) unloading any livestock from a vessel into an Australian jurisdiction without prior written approval from the department;
- b) partial or full disablement of ventilation, feeding and/or watering systems on a vessel carrying livestock, which has the potential to cause a serious adverse effect on animal health or welfare;
- c) vessels that are having or likely to have shortage of feed and/or water supply;
- d) the maximum water deprivation times equal to those set out in the Land Transport Standards are exceeded;
- e) disablement of a vessel carrying livestock, such that assistance is required for return to a port;
- f) loss of a vessel (a marine casualty of a vessel) carrying livestock;
- g) an act of terrorism or piracy;
- h) diagnosis or reasonable suspicion of an emergency disease (that is a disease exotic to Australia, or a new form of disease that is endemic to Australia, or a disease that is significant to trade) in a consignment of livestock;
- i) a mortality rate during a voyage that is equal to, or greater than, the notifiable mortality level (in Table 22);
- j) [deleted]
- k) rejection of livestock at an overseas port or by an importing country government;
- l) any other incident that has the potential to cause a serious adverse effect on animal health or welfare.

In relation to a notifiable incident involving a mortality rate equal to or greater than the notifiable mortality level listed in Table 22, the notification must include a written report that contains:

- m) details of the mortalities (the number, species, pen location, suspected cause, the animal's identification, any treatments administered prior to death); and
- n) factors that may have contributed to the mortalities; and
- o) the current location of the vessel and, if appropriate, its destination and estimated time of arrival; and
- p) actions being taken by the exporter, accredited stockpersons, AAV and/or master of the vessel to prevent or reduce the likelihood of further mortalities during the voyage.

Table 22 Average daily mortality rate and notifiable mortality level for livestock transported by sea

Species	Average daily mortality rate	Mortality rate per voyage
Buffalo	0.025%	0.5% or 3 animals, whichever is greater
Cattle	0.025%	0.5% or 3 animals, whichever is greater
Goat	0.05%	1% or 3 animals, whichever is greater
Sheep	0.05%	1% or 3 animals, whichever is greater

5.6.6 The exporter must ensure that an AAV, or accredited stockperson if there is no AAV on board, provides a daily report on the health and welfare of the livestock and conditions on board the vessel to the department within 24 hours of the reporting day, commencing on the day the first animal is loaded and until the last animal is unloaded for:

- a) long and extended long-haul voyages; and
- b) voyages that include buffalo and/or goats; and
- c) voyages using the alternative pen space allocations in Table 10a, Table 10b, Table 11b and/or Table 12b.

5.6.7 The daily report must be in the form provided on the department's website and include all information required in the form.

5.6.8 Regardless of the voyage duration, the exporter must ensure that the AAV, or the accredited stockperson if there is no AAV on board, provides an end-of-voyage report to the department within 5 days of completion of unloading at the final port of disembarkation.

Standard 6 Air transport of livestock

Standard 6 covers the standards that relate to the sourcing, preparation, land transport and export of livestock by air. Please see Standards 1, 2, 3, 4 and 5 for the standards that relate to the export of livestock by sea.

6.1 General and all species requirements

6.1.1 Livestock sourced for export must meet all relevant animal health and welfare requirements under state and territory legislation and relevant requirements under national animal welfare standards and guidelines, and model codes of practice.

6.1.2 Livestock sourced for export must meet importing country requirements.

6.1.3 Livestock sourced for export must be:

- a) identified in accordance with state and territory and NLIS requirements; and
- b) be traceable to the property of source; and
- c) accompanied by a correctly completed and signed movement records such as NVDs/waybills; and
- d) individually identified where testing, including pregnancy testing, is required during preparation, excluding feeder/slaughter sheep and goats where the pregnancy testing certification may identify animals to a mob-based level; and
- e) accompanied by any test results, including all pregnancy testing and spay declarations where applicable. Laboratory test results must be linked to the PIC from where the animal was sampled and the NLIS tag number of the animal where individual identification is required by state or territory legislation.

6.1.4 Livestock sourced for export and intended for human consumption must comply with Australian food safety requirements, including standards for chemical residues or environmental contaminants.

6.1.5 Livestock must not be sourced for export or exported unless dehorning and tipping wounds are fully healed prior to any transport.

6.1.6 Livestock must not be sourced for export or exported unless they have been inspected by a competent stock handler and do not show signs consistent with the rejection criteria specified in Table 23, or any other condition that could cause the animal's health or welfare to decline during export preparation or transport. Livestock that become sick, injured or show signs consistent with the rejection criteria at any stage of export preparation must be removed from the consignment, and arrangements must be made for their prompt and humane handling, care, treatment, euthanasia and/or disposal, in compliance with all relevant and applicable legislation.

Table 23 Rejection criteria for all species by air

Category	Rejection criteria
General requirements	<ul style="list-style-type: none"> • Failure to meet importing country requirements including sex or breed if specified. • Pregnancy status not confirmed as appropriate for export • Viral diseases such as scabby mouth or infectious bovine rhinotracheitis • Animals displaying clinical signs of infectious or contagious disease or of external parasites • Animals showing signs of injury such as but not limited to fractures or swelling • Evidence of imminent parturition
Systemic conditions	<ul style="list-style-type: none"> • Body condition score not appropriate for export (such as emaciated or over-fat) • Anorexia (inappetence or 'shy feeders') • Uncoordinated, collapsed, weak • Unwell, lethargic, dehydrated • Ill-thrift
Gastrointestinal system	<ul style="list-style-type: none"> • Dysentery or profuse diarrhoea • Bloat
Musculoskeletal system	<ul style="list-style-type: none"> • Abnormal gait or lameness of any kind • Abnormal soft tissue or bony swellings
Nervous system	<ul style="list-style-type: none"> • Nervous symptoms such as head tilt, circling, incoordination • Abnormal or aggressive behaviour/intractable or violent
External/skin	<ul style="list-style-type: none"> • Generalised papillomatosis or generalised ringworm or dermatophilosis • Generalised and extensive buffalo fly lesions • Generalised skin disease or infection • External skin cancer • Lacerations that penetrate the full thickness of the dermis or are likely to affect the health or welfare of the animal • Discharging wounds or abscesses • Cutaneous myiasis (flystrike) • Balanitis (pizzle rot in sheep) • Blood/abnormal discharge from reproductive tract (vulva/prepuce) • Visible external parasites
Head	<ul style="list-style-type: none"> • Blindness in 1 or both eyes • Cancer eye • Keratoconjunctivitis (pink eye) • Excessive salivation • Nasal discharge consistent with signs of a contagious or infectious disease • Coughing consistent with signs of a contagious or infectious disease • Respiratory distress-difficulty breathing • Sharp horns • Horns causing damage to the head or eyes • Bleeding horn stumps or broken antlers • Horns longer than appropriate for export • Scabby mouth
Other	<ul style="list-style-type: none"> • Groups of animals with unusual mortalities • Disparities in sex, size, weight or age that could cause an issue with the health or welfare of the animals (redraft animals in this case)

6.1.7 The land transport of livestock must meet the Land Transport Standards as well as any relevant animal health and welfare and road transport requirements under state and territory legislation and relevant requirements under national animal welfare standards and guidelines, and model codes of practice.

- a) Well-trained dogs may be used to help with the loading and unloading of livestock (other than camelids and deer). Dogs must be muzzled. The number of dogs used should be the minimum necessary to complete the task. Working dogs must not be transported in the same pen as livestock.

6.1.8 The land transport of livestock must meet any importing country requirements for the land transport phases in the export supply chain.

6.1.9 The maximum water deprivation time and minimum rest times specified for each species and class of animal equal to those set out in the Land Transport Standards must be adhered to. Water deprivation time begins at the time animals are curfewed prior to transport to the airport and calculations must include the time until the point animals are provided water again. Exporters must have a plan for managing water deprivation time and keep records (expected and actual water deprivation time) for at least 2 years after the date of export.

6.1.10 Where a period of pre-export quarantine or isolation is required by the importing country, animals forming the consignment must at all times be physically isolated to prevent contact with all other animals as per the importing country requirements, including if the other animals are destined for the same export market but in a different consignment, an alternative export market, or domestic use.

6.1.11 For livestock that are en route or at the airport but required to return to an approved premise or other premises:

- a) in addition to any requirements under the Land Transport Standards:
 - i. if the journey from premises departure to premise return exceeds 6 hours, the livestock must be unloaded, fed, watered, and rested for a minimum of 12 hours prior to being reloaded for transport; or
 - ii. if the journey from premises departure to premise return exceeds 12 hours, the livestock must be unloaded, fed, watered, and rested for a minimum of 24 hours prior to being reloaded for transport; and
- b) the exporter must keep records of animal movements, time off food and water, and rest periods, and retain these for at least 2 years after the date of export.

6.1.12 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 management and welfare needs are addressed.

6.1.13 Livestock exported by air must be exported in compliance with the IATA Live Animal Regulations. Where there is a variance between the IATA Live Animal Regulations and these standards, ASEL applies.

6.1.14 When calculating pen space allocation and penning livestock:

- a) accurate final weights of livestock must be obtained in view of the weight limitations imposed by the load capabilities of the aircraft and the space required per animal; and
- b) where the number of animals per crate calculated is not a whole number, decimal point 4 and below must be rounded down. Decimal point 5 and above can be rounded up if the resulting space allocation does not exceed a 5% decrease from minimum requirements; and
- c) the livestock must be able to stand normally, and once lying down should be able to regain their feet unaided and without undue interference from other animals; and
- d) when livestock stand normally, no part of the animal's body (including horns) must touch any overhead part of the crate including any supporting crossbars; and
- e) expected ambient temperatures and ventilation capacity at loading, transits, transhipments and unloading must be taken into account; and
- f) livestock must be penned with animals of the same species, class, sex and of a similar weight (note: castrated males may be penned with females however entire males must be penned separately); and
- g) where animals of unequal size are placed in the same crate, the crate must be divided so that they are penned separately; and
- h) where the total air export journey time scheduled is greater than 24 hours, the pen area per head must be increased by 10% (not cumulative with other requirements in Standards 6.2 to 6.10); and
- i) when livestock are loaded with mixed cargo in aircraft lower holds, the pen area must be increased by 10% (cumulative with other requirements in Standards 6.2 to 6.10).

6.1.15 Pen space allocation and penning arrangements must conform to Standard 6.1.14 and the relevant species specifications in Standards 6.2 to 6.10 and with any relevant requirements, and applicable legislation. The exporter must comply with directions from an authorised officer in relation to pen space allocation to remove an animal or animals from a crate to ensure animal health and welfare and compliance with these standards.

Other requirements

6.1.16 Livestock that are declared to be pregnant must not be tendered for transport to the airport unless accompanied by a veterinary certificate certifying that the animal is fit to travel and there is no evidence of imminent parturition at the time of loading for transport.

6.1.17 Livestock must not be exported with young at foot, unless otherwise provided in a *livestock with young at foot management plan* approved in writing by the department.

6.1.18 Livestock must not be exported:

- a) within 5 days of giving birth; or
- b) more than 5 days but less than 15 days of giving birth, unless otherwise provided in a *livestock that have recently given birth management plan* approved in writing by the department.

6.1.19 Female livestock must not be treated with a prostaglandin drug:

- a) within the 60 day period prior to 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; nor
- b) within 14 days prior to export.

6.1.20 Miniature breeds of livestock and other light weight breeds that do not meet minimum liveweight requirements, must not be sourced for export or exported unless otherwise provided in a *miniature or light weight breed livestock management plan* approved in writing by the department.

6.1.21 Animal records must be kept by the exporter, from the time of sourcing of livestock to their disembarkation in the importing country, and retained for at least 2 years after the date of export. These records must include details of:

- a) the animal's identification in accordance with state and territory and NLIS requirements including:
 - i) all management procedures relevant to export preparation, such as disease testing, pregnancy testing and shearing, and date(s) undertaken; and
 - ii) all veterinary medicines and agricultural chemicals used to vaccinate, treat or otherwise prepare the animal (including species, treatment date(s), trade name or active ingredient, batch number, and if used according to manufacturer's directions. If not used according to manufacturer's directions, the dose administered is to be included); and
- b) any mortality, sickness, injury or other signs consistent with the rejection criteria found, and where applicable, actions taken to remove rejected animals from the consignment, and the animal's handling, care, treatment, euthanasia and/or disposal; and
- c) inspections by veterinarians or competent stock handlers of livestock health, welfare and appropriateness for export; and
- d) all other information required to demonstrate compliance with relevant ASEL standards.

6.1.22 Veterinary medicines, chemicals and equipment must be stored and used according to any applicable veterinary directions and/or manufacturers' recommendations.

6.1.23 Prior to aircraft departure, the exporter must notify the airline and confirm they will notify the captain of the aircraft of the species, location, quantity, any special requirements and any aspect of preparation of the livestock for export that might affect their health or welfare, including ventilation requirements, during flight and any transit stops if relevant.

6.1.24 Unless the exporter has approval under Standard 6.1.25, on flights where livestock are accessible during the flight, a competent stock handler who is employed or contracted by the exporter must accompany consignments to oversee the welfare of the livestock during the flight. Compliance with this standard will be delayed until further notice by the department.

6.1.25 An exporter may apply for an alternative arrangement to Standard 6.1.24 when providing a NOI under the *Export Control Act 2020* and the *Export Control (Animals) Rules 2021*. The alternative arrangement may be approved where the Secretary, or delegate, is satisfied that the international transport arrangements for the livestock are adequate for their health and welfare.

6.1.26 Livestock must be checked by a competent stock handler appointed by the exporter to ensure they remain healthy and fit to travel for all flights:

- a) at the last reasonable opportunity before departure of the aircraft; and
- b) if there is a competent stock handler travelling on the flight, and where feasible:
 - i) within 60 minutes of commencement of the flight; and
 - ii) at least every 3 hours during the flight; and
- c) at the first reasonable opportunity after landing, including during transit/transshipment stops; and
- d) at the last reasonable opportunity before departure during any transit/transshipment stops.

6.1.27 Any livestock for export identified prior, during, or immediately after transport by air as being distressed or injured must, where feasible:

- a) be given prompt treatment; and/or
- b) be euthanased without delay as necessary; and
- c) arrangements must be made to remove or separate sick or dead livestock from pens carrying multiple animals in transit. If animals need to be unloaded, arrangements must be made to ensure the health and welfare of the animals.

6.1.28 Feed and water must be provided to livestock while in transit if climatic conditions, species, class of livestock or total air export journey time warrant.

6.1.29 Contingency plans, including details for contacting the exporter, must be prepared in writing for each consignment that address:

- a) unavailability of the aircraft to be used for the air transportation; and
- b) mechanical breakdown, including partial or full disablement of the ventilation system; and
- c) rejection of the consignment, by the importing country; and
- d) diversion and landing at a location different from the intended transit stop(s) or destination and how the welfare of animals will be overseen; and
- e) euthanasia on board the aircraft if livestock are accessible and it is safe to do so, or as soon as possible after unloading from the aircraft.

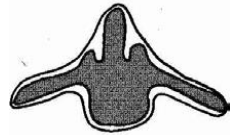
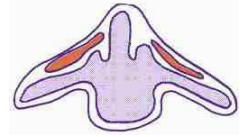

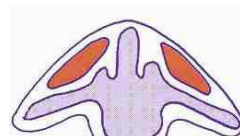
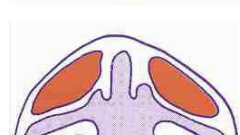
6.1.30 The ventilation and temperature in the livestock hold must be adequate to maintain the health and welfare of the livestock at all times while livestock are in the aircraft.

6.2 Alpaca requirements

6.2.1 Alpacas must not be sourced for export or exported unless they have a liveweight of 20kg or more and are at least 3 months old.

6.2.2 Alpacas must not be sourced for export or exported unless they have been assessed by a competent stock handler against the alpaca body condition scoring in Table 24 and have a body condition score of 2 or more but less than 4 (on a scale of 1 to 5).

Table 24 Alpaca body condition score

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 ribs. 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 convex between spine and ribs, the top of the back feels flat. You cannot feel backbone or ribs, brisket wobbles when touched.	

Source: Australian Alpaca Association

Figure 3 Visual aid for assisting with body condition scoring of alpacas



Source: Australian Alpaca Association

Figure 3 is an example of how to body score an alpaca by placing your hand on the backbone, just forward of the pelvic area (toward the last of the ribs).

6.2.3 Female alpacas sourced for export as feeder or slaughter animals must be pregnancy tested using ultrasound within 30 days prior to export, by a registered veterinarian with demonstrable current experience in camelid pregnancy diagnosis, who must certify in writing that the animal is not detectably pregnant. The certification must include the certifier's name, veterinary registration number, statement of experience, signature, the animal's identification and the date of the procedure.

6.2.4 Female alpacas sourced for export as breeder animals must:

- a) be pregnancy tested using ultrasound foetal measurement by a registered veterinarian with demonstrable current experience in camelid pregnancy diagnosis; and

- b) be certified in writing by the testing veterinarian as either not detectably pregnant or pregnant and if pregnant include the number of days pregnant. The certification must include the certifier's name, veterinary registration number, statement of experience, signature, the individual identification number of the animal and the date of the procedure. Certification is valid for 60 days for not detectably pregnant alpaca, from the date of the procedure; and
- c) be not more than 227 days pregnant at the scheduled date of export, unless otherwise provided in a *last third of pregnancy management plan* approved in writing by the department.

6.2.5 Alpacas must be penned in accordance with the minimum aircraft crate pen area requirements shown in Table 25. For weights between those shown in Table 25, the minimum pen area per head must be calculated by linear interpolation.

6.2.6 When calculating pen allocation, the pen area per head must be increased by 10% for alpacas with more than 25mm of wool.

6.2.7 Alpacas must have enough space to be able to cush during transport; that is sit with their legs folded underneath them.

Table 25 Minimum aircraft crate pen area for alpacas exported by air

Liveweight (kg)	Minimum pen area (m ² /head)
20	0.238
30	0.311
40	0.377
50	0.436
60	0.492
70	0.545
80	0.595

6.3 Buffalo requirements

6.3.1 Buffalo must have been weaned at least 14 days prior to sourcing for export, unless the exporter has approval under Standard 6.1.17 to export livestock with young at foot.






6.3.2 Buffalo must not be sourced for export unless they have become conditioned to being handled and to eating and drinking from troughs for a minimum of 21 days.

6.3.3 Buffalo sourced for export must have an individual liveweight of between 150kg and 650kg (inclusive). Animals outside these weights must not be sourced for export or exported, unless:

- a) for buffalo less than 150kg, the exporter has approval under Standard 6.1.20 to export miniature or light weight breed livestock; or
- b) for buffalo more than 650kg, otherwise provided in a *heavy buffalo management plan* approved in writing by the department.

6.3.4 Buffalo must not be sourced for export or exported unless they have been assessed by a competent stock handler against the buffalo body condition scoring in Table 26 and have a body condition score of 2 or more but less than 5 (on a scale of 1 to 5).

Table 26 Buffalo body condition score

Score 1 to 5 for export purposes	Description	P8 fat mm thickness	Loin surface	Illustration of vertical section of the loin region between spinous and transverse processes
1	Emaciated; very weak – extreme muscle wastage. All bones highly visible. Skin 'draped' over skeleton. Unsteady gait.	0	Severely concave	
2	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	
3	Store; (average) good muscle definition, with fat starting to be deposited, rib outlines disappearing, hook and pin bones still defined.	1 to 4	Level, even slope	
4	Prime; quite even and smooth over whole backline. Muscling becoming more convex due to fat deposition.	5 to 35	Moderately convex	
5	Overfat; usually only mature cows can achieve this condition. Bulbous fat deposits both sides of tail head. Pin and hook bones not discernible.	>36	Severely convex, crease/dip along spine	

Source: NT Buffalo Industry Council Inc.

6.3.5 Female buffalo sourced for export as feeder or slaughter animals must be:

- a) be accompanied by a spay declaration from the owner or manager of the premises where the procedure was performed including name, contact information and signature, that certifies that the animal has been spayed not less than 30 days prior to export using the Willis dropped ovary technique and includes the animal's individual NLIS identification number and date of the procedure; or
- b) be accompanied by a spay declaration from the owner or manager of the premises where the procedure was performed including name, contact information and signature, that certifies that the animal has been spayed not less than 280 days prior to export and includes the animal's individual NLIS identification number and date of the procedure; or
- c) be pregnancy tested using manual palpation, approved blood test, or if the animal is too small to be manually palpated safely, ultrasound within 30 days prior to export, by a registered veterinarian who must certify in writing that the animal is not detectably pregnant. The certification must include the certifier's name, registration number and

signature, and the animal's individual NLIS identification number and the date of the procedure.

6.3.6 Female buffalo sourced for export as breeder animals must be no more than 220 days pregnant at the scheduled date of export, unless otherwise provided in the *last third of pregnancy management plan* approved in writing by the department, and must be pregnancy tested:

- a) by a registered veterinarian using an approved blood test; and
 - i) if the test result is negative, be certified in writing as not detectably pregnant; or
 - ii) if the test result is positive, undergo testing as per b) or c) below; or
- b) by a registered veterinarian that attests to current experience and competency in buffalo pregnancy diagnosis, using manual palpation; and
 - i) if the test result is negative, be certified in writing as not detectably pregnant; or
 - ii) if the test result is positive, be certified in writing as pregnant with number of days pregnant stated; or
- c) by a registered veterinarian that is accredited under the PREgCHECK (NCPD) Scheme if the animal is too small to be manually palpated safely, using ultrasound; and
 - i) if the test result is negative, be certified in writing as not detectably pregnant; or
 - ii) if the test result is positive, be certified in writing as pregnant with number of days pregnant stated; and
- d) with the certification stating the animal's individual NLIS identification number and date of the procedure, the certifier's name, registration number and signature, their PREgCHECK accreditation number and a statement of their accreditation if ultrasound is used, and the animal's individual NLIS identification number. Certification is valid for 60 days for not detectably pregnant buffalo, from the date of the procedure.

6.3.7 Buffalo with horns must only be sourced for export or exported if they have:

- a) blunt horns; and
- b) horns that are less than the spread of the ears, unless otherwise provided in a *long-horned livestock management plan* approved in writing by the department.

6.3.8 Buffalo must be penned in accordance with the minimum aircraft crate pen area requirements shown in Table 27. For weights between those shown in Table 27, the minimum pen area per head must be calculated by linear interpolation.

6.3.9 When calculating pen space allocation, the pen area per head must be increased by 10% for buffalo with horns less than the spread of the ears.

Table 27 Minimum aircraft crate pen area for buffalo exported by air

Liveweight (kg)	Minimum pen area (m ² /head)	Liveweight (kg)	Minimum pen area (m ² /head)	Liveweight (kg)	Minimum pen area (m ² /head)
150	0.54	170	0.58	190	0.62
160	0.56	180	0.60	200	0.64

Liveweight (kg)	Minimum pen area (m ² /head)	Liveweight (kg)	Minimum pen area (m ² /head)	Liveweight (kg)	Minimum pen area (m ² /head)
210	0.66	360	0.98	510	1.29
220	0.68	370	1.00	520	1.31
230	0.70	380	1.02	530	1.34
240	0.72	390	1.04	540	1.36
250	0.74	400	1.06	550	1.38
260	0.76	410	1.08	560	1.40
270	0.78	420	1.10	570	1.42
280	0.80	430	1.12	580	1.44
290	0.82	440	1.15	590	1.46
300	0.84	450	1.17	600	1.48
310	0.87	460	1.19	610	1.50
320	0.89	470	1.21	620	1.53
330	0.91	480	1.23	630	1.55
340	0.93	490	1.25	640	1.57
350	0.95	500	1.27	650	1.59



6.4 Camel requirements

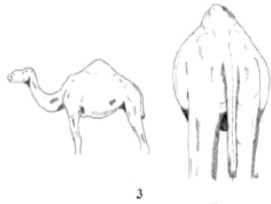
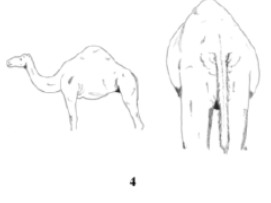
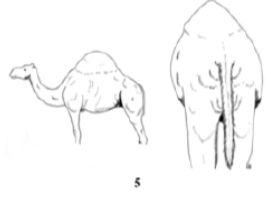
6.4.1 Camels must not be sourced for export unless they have become conditioned to being handled and to eating and drinking from troughs for a minimum of 14 days.

6.4.2 Male camels that are more than 5 years of age and are in rut must not be exported in the period 1 May and 30 September (inclusive).

6.4.3 Camels must not be sourced for export or exported unless they have been assessed by a competent stock handler against the camel body condition scoring in Table 28 and have a body condition score of 2 or more but less than 4 (on a scale of 1 to 5).

Table 28 Camel body condition score

Score	Description	Illustration
1	Little or no fat in the hump sac; hump hairy and may be leaning to one side; ischium, tuber coxae, shoulder, spinous and transverse processes of vertebrae very prominent; recto-genital zone very deep; hollow of flank very visible.	 <p style="text-align: center;">Note 1</p>
2	Hump with moderate development rising 5% higher than chest depth, but may also be leaning to one side; ischium, tuber coxae, shoulder, spinous and transverse processes of vertebrae prominent; recto-genital zone deep; hollow of flank visible.	 <p style="text-align: center;">2</p>

Score	Description	Illustration
3	Hump with good development and rising to 10% higher than chest depth. Hump is still sculptured inwards on both sides and still fits over the chest and abdominal area; ischium, tuber coxae, shoulder, spinous and transverse processes of vertebrae slightly prominent; recto-genital zone shallow; hollow of flank not visible.	
4	Hump fully developed and rising to 15% higher than chest depth. Hump rounded outwards on both sides and runs from the shoulder to the rump; ischium, tuber coxae, shoulder, spinous and transverse processes of vertebrae not visible; recto-genital zone full of fat; hollow of flank not visible.	
5	Hump overextended and rising more than 15% higher than chest, or so full that it is rounded on the sides like a semicircle; ischium, tuber coxae, shoulder, spinous and transverse processes of vertebrae covered in fat; recto-genital zone bulging; ribs hollow of flank not visible.	

Source: The Central Australian Camel Industry Assoc. Inc.

6.4.4 Female camels sourced for export as feeder or slaughter animals must be pregnancy tested using ultrasound within 30 days prior to export, by a registered veterinarian with demonstrable current experience in camelid pregnancy diagnosis, who must certify in writing that the animal is not detectably pregnant. The certification must include the certifier's name, veterinary registration number, statement of experience, signature, the animal's identification and the date of the procedure.

6.4.5 Female camels sourced for export as breeder animals must:

- a) be pregnancy tested using ultrasound foetal measurement by a registered veterinarian with demonstrable current experience in camelid pregnancy diagnosis;
- b) be certified in writing by the testing veterinarian as either not detectably pregnant or pregnant and if pregnant include the number of days pregnant. The certification must include the certifier's name, veterinary registration number, statement of experience, signature, the individual identification number of the animal and the date of the procedure. Certification is valid for 60 days for not detectably pregnant camels, from the date of the procedure; and
- c) be no more than 250 days pregnant at the scheduled date of export, unless otherwise provided in a *last third of pregnancy management plan* approved in writing by the department.

6.4.6 Camels sourced for export must meet transport and shipping height requirements of the intended transport, meaning that camels standing normally do not touch any overhead structures.

6.4.7 Trained camels must be penned individually for air transport. Wild-caught camels are best transported in groups in pens such as cattle pens. Use of cattle pens must be limited to camels under 300kg liveweight.

6.4.8 Camels over 300kg must not be sourced for export or exported unless otherwise provided in a *camels over 300kg management plan* approved in writing by the department.

6.5 Cattle requirements

6.5.1 Cattle must have been weaned at least 14 days prior to sourcing for export, unless the exporter has approval under Standard 6.1.17 to export livestock with young at foot.

6.5.2 Cattle sourced for export must have an individual liveweight of between 150kg and 650kg (inclusive). Animals outside these weights must not be sourced for export or exported, unless:

- a) for cattle less than 150kg, the exporter has approval under Standard 6.1.20 to export miniature or light weight breed livestock; or
- b) for cattle more than 650kg, otherwise provided in a *heavy cattle management plan* approved in writing by the department.

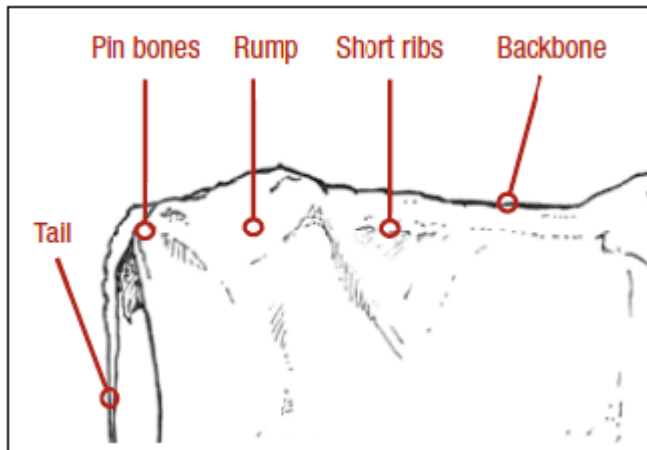
6.5.3 Cattle must not be sourced for export or exported unless they have been assessed by a competent stock handler against the non-dairy breed cattle body condition scoring in Table 29 or dairy breed cattle body condition scoring in Figure 5 and have a body condition score of:

- a) for non-dairy breed cattle, 2 or more but less than 5 (on a scale of 0 to 5); and
- b) for dairy breed cattle, 3.5 or more but less than 5.5 (on a scale of 1 to 8).

Table 29 Non-dairy breed cattle body condition score

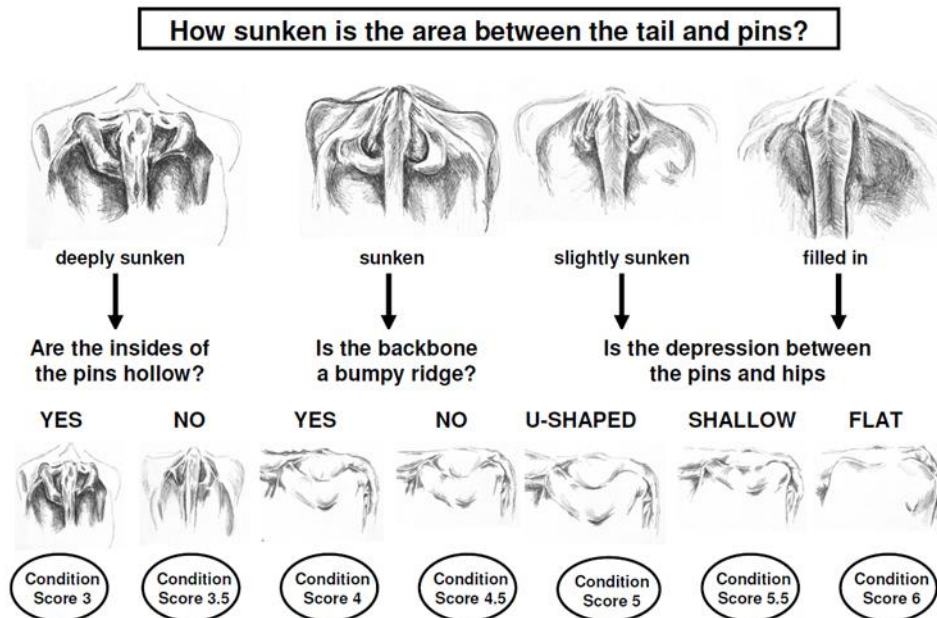
Score	Description
0	Severely emaciated
1	The individual bones are sharp to the touch, with no fat at the head of the tail. Hip bones and ribs are prominent.
2	The individual bones can be felt easily, but feel rounded rather than sharp. There is some tissue cover around the tail head. Individual ribs are no longer visually obvious.
3	The short ribs can be felt only with firm thumb pressure. Areas either side of the tail head have fat cover that can be felt easily.
4	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	The bone structure of the animal is no longer noticeable and the tail head is almost completely buried in fatty tissue.

Figure 4 Visual aid for assisting with body condition scoring of non-dairy breed cattle



Source: Cattle Council of Australia

Figure 5 Dairy breed cattle body condition score (diagram shows 3 to 6 on scale of 1 to 8)



Source: DEPI (Vic)

6.5.4 Female cattle sourced for export as feeder or slaughter animals must:

- a) be accompanied by a vendor spay declaration from the owner or manager of the premises where the procedure was performed including name, contact information and signature, that certifies that the animal has been spayed not less than 30 days prior to export using the Willis dropped ovary technique and includes the animal's individual NLIS identification number and date of the procedure; or
- b) be accompanied by a vendor spay declaration from the owner or manager of the premises where the procedure was performed including name, contact information and signature, that certifies that the animal has been spayed not less than 280 days prior to export and includes the animal's individual NLIS identification number and date of the procedure; or

- c) be pregnancy tested using manual palpation, approved blood test, or if the animal is too small to be manually palpated safely, ultrasound within 30 days prior to export, by a registered veterinarian who must certify in writing that the animal is not detectably pregnant. The certification must include the certifier's name, registration number and signature, and the animal's individual NLIS identification number and the date of the procedure.

6.5.5 Female cattle sourced for export as breeder animals must be no more than 190 days pregnant at the scheduled date of export, unless otherwise provided in a *last third of pregnancy management plan* approved in writing by the department, and must be pregnancy tested:

- a) by a registered veterinarian using an approved blood test; and
 - i) if the test result is negative, be certified in writing as not detectably pregnant; or
 - ii) if the test result is positive, undergo testing as per b) or c) below; or
- b) by a registered veterinarian that attests to current experience and competency in cattle pregnancy diagnosis, using manual palpation; and
 - i) if the test result is negative, be certified in writing as not detectably pregnant; or
 - ii) if the test result is positive, be certified in writing as pregnant with number of days pregnant stated; or
- c) by a registered veterinarian that is accredited under the PREgCHECK (NCPD) Scheme if the animal is too small to be manually palpated safely, using ultrasound; and
 - i) if the test result is negative, be certified in writing as not detectably pregnant; or
 - ii) if the test result is positive, be certified in writing as pregnant with number of days pregnant stated; and
- d) with the certification stating the animal's individual NLIS identification number and date of the procedure, the certifier's name, registration number and signature, their PREgCHECK accreditation number and a statement of their accreditation if ultrasound is used, and the animal's individual NLIS identification number. Certification is valid for 60 days for not detectably pregnant cattle, from the date of the procedure.

6.5.6 Unless otherwise provided in a *long-horned livestock management plan* approved in writing by the department, cattle with horns must only be sourced for export or exported if the:

- a) solid the non-vascular tip has been removed to a diameter of 3cm (or less if the horn vasculature does not allow) and horns have a blunt horn end; and
- b) horns are no longer than 12cm in length at the time of export.

6.5.7 Cattle must be penned in accordance with the minimum aircraft crate pen area requirements shown in Table 30. For weights between those shown in Table 30, the minimum pen area per head must be calculated by linear interpolation.

6.5.8 When calculating pen space allocation, the pen area per head must be increased by 10% for cattle with horns.

Table 30 Minimum aircraft crate pen area for cattle exported by air

Liveweight (kg)	Minimum pen area (m ² /head)	Liveweight (kg)	Minimum pen area (m ² /head)	Liveweight (kg)	Minimum pen area (m ² /head)
150	0.54	320	0.89	490	1.25
160	0.56	330	0.91	500	1.27
170	0.58	340	0.93	510	1.29
180	0.60	350	0.95	520	1.31
190	0.62	360	0.98	530	1.34
200	0.64	370	1.00	540	1.36
210	0.66	380	1.02	550	1.38
220	0.68	390	1.04	560	1.40
230	0.70	400	1.06	570	1.42
240	0.72	410	1.08	580	1.44
250	0.74	420	1.10	590	1.46
260	0.76	430	1.12	600	1.48
270	0.78	440	1.15	610	1.50
280	0.80	450	1.17	620	1.53
290	0.82	460	1.19	630	1.55
300	0.84	470	1.21	640	1.57
310	0.87	480	1.23	650	1.59

6.6 Deer requirements

6.6.1 Deer must not be sourced for export if they are less than 6 months old, unless otherwise provided in a *deer under 6 months of age management plan* approved in writing by the department.

6.6.2 Deer must not be sourced for export unless they have become conditioned to being handled and to eating and drinking from troughs for a minimum of 21 days.

6.6.3 Deer must have been weaned for at least 8 weeks prior to sourcing for export, unless the exporter has approval under Standard 6.1.17 to export livestock with young at foot.

6.6.4 Male deer must only be sourced for export or exported if they:

- a) are not in velvet; or
- b) are not in the first 2 weeks after velvetting; or
- c) have had antlers removed leaving only buttons and wounds have healed; and
- d) are outside the roar and rut periods if over 1 year of age.

6.6.5 Deer must not be sourced for export or exported unless they have been assessed by a competent stock handler against the deer body condition scoring in Table 31 and have a body condition score of 2 or more but less than 4 (on a scale of 1 to 5).

Table 31 Deer body condition score

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	Over-fat—over-fat (excessive trimming required)	Pelvis concealed by fat, spine hard to palpate	Very convex

Source: Rural Industries Research and Development Corporation (now known as AgriFutures Australia)

6.6.6 Female deer sourced for export as feeder or slaughter animals must be pregnancy tested using ultrasound within 30 days prior to export, by a competent pregnancy tester, and certified in writing by the tester as not detectably pregnant. The certification must include the certifier's name, veterinary registration number or attestation to experience and skill in pregnancy testing of deer, signature, the animal's identification and the date of the procedure.

6.6.7 Female deer sourced for export as breeder animals must be:

- a) pregnancy tested using ultrasound foetal measurement by a competent pregnancy tester; and
- b) certified in writing by the competent pregnancy tester as either not detectably pregnant or pregnant and if pregnant include the number of days pregnant. The certification must include the certifier's name, veterinary registration number or attestation to experience and skill in pregnancy testing of deer, signature, the individual identification number of the animal and date of the procedure. Certification is valid for 60 days for not detectably pregnant deer, from the date of the procedure; and
- c) no more than 155 days pregnant at the scheduled date of export for red, sambar, chital, hog, fallow or sika breed deer, unless otherwise provided in a *last third of pregnancy management plan* approved in writing by the department; or
- d) no more than 160 days pregnant at the scheduled date of export for rusa and wapiti/elk breed deer, unless otherwise provided in a *last third of pregnancy management plan* approved in writing by the department.

6.6.8 Floor space must be adequate to allow deer to lie down during transport.

6.6.9 Deer must be penned in accordance with the minimum aircraft crate pen area requirement shown in Table 32. For weights between those shown in Table 32, the minimum pen area per head must be calculated by linear interpolation.

Table 32 Minimum aircraft crate pen area of deer exported by air

Liveweight (kg)	Minimum pen area (m ² /head)	Liveweight (kg)	Minimum pen area (m ² /head)	Liveweight (kg)	Minimum pen area (m ² /head)
20	0.13	24	0.15	28	0.17
22	0.14	26	0.16	30	0.18

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

6.7 Goat requirements

6.7.1 Goats must have been weaned at least 14 days prior to sourcing for export, unless the exporter has approval under Standard 6.1.17 to export livestock with young at foot.

6.7.2 Goats must not be sourced for export unless they have become conditioned to being handled and to eating and drinking from troughs for a minimum of 21 days.

6.7.3 Goats must not be sourced for export or exported unless they have a liveweight of more than 14kg. Goats less than this weight must not be sourced for export or exported, unless the exporter has approval under Standard 6.1.20 to export miniature or light weight breed livestock.

6.7.4 Goats must not be sourced for export or exported unless they have been assessed by a competent stock handler against the goat body condition scoring in Table 33, and have a body condition score of 2 or more but less than 4 (on a scale of 1 to 5).

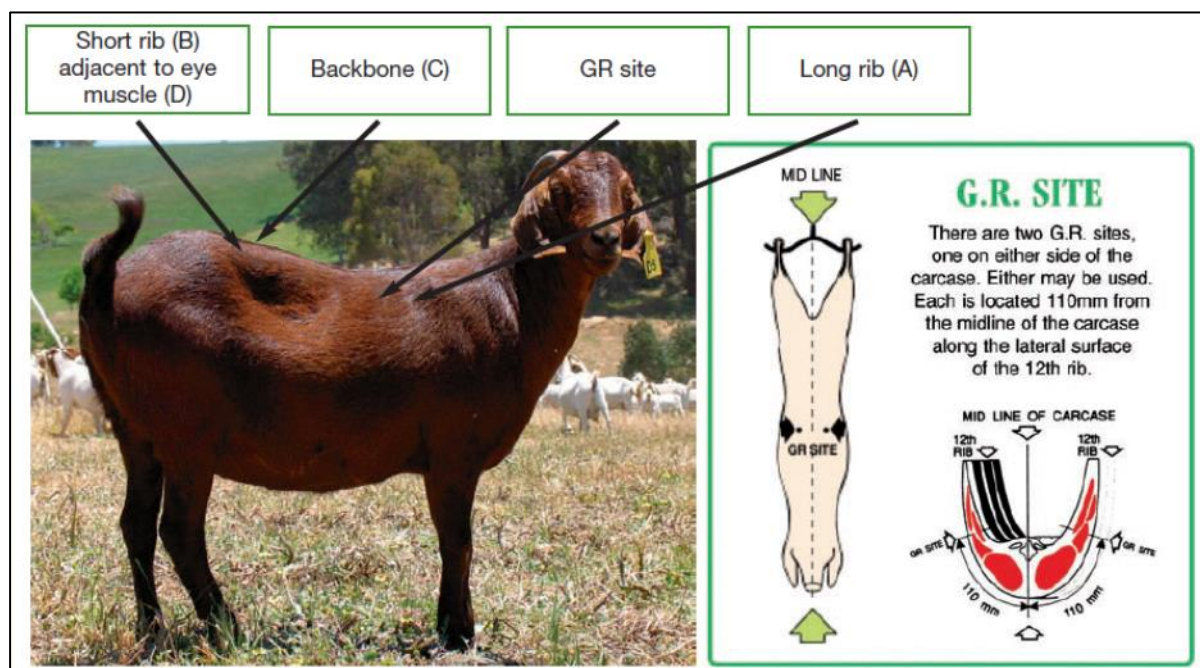
Table 33 Goat body condition score

Score	Long ribs (A)	Short ribs (B)	Backbone (C)	Eye muscle (D)
1	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 dishd.

Score	Long ribs (A)	Short ribs (B)	Backbone (C)	Eye muscle (D)
2	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	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	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	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.

Source: Greenwood et al., 2001

Figure 6 Visual aid for assisting with body condition scoring of goats



Source: AUS-MEAT

6.7.5 Female goats sourced for export as feeder or slaughter animals must be individually pregnancy tested using ultrasound within 30 days prior to export, by a competent pregnancy tester who must certify in writing that the animals are not detectably pregnant. The certification must include the certifier's name, veterinary registration number or attestation to experience

and skill in pregnancy testing of goats, signature, the mob's identification and the date of the procedure.

6.7.6 Female goats sourced for export as breeder animals must:

- a) be pregnancy tested using ultrasound foetal measurement by a competent pregnancy tester; and
- b) be certified in writing by the competent pregnancy tester as either not detectably pregnant or pregnant and if pregnant include the number of days pregnant. The certification must include the certifier's name, veterinary registration number or attestation to experience and skill in pregnancy testing of goats, signature, the individual identification number of the animal and the date of the procedure. Certification is valid for 60 days for not detectably pregnant goats, from the date of procedure; and
- c) be no more than 100 days pregnant at the scheduled date of export, unless otherwise provided in a *last third of pregnancy management plan* approved in writing by the department.

6.7.7 Goats with horns must only be sourced for export or exported if:

- a) the horns would not cause damage to the head or eyes of the animal or other animals; and
- b) the horns would not endanger other animals during transport; and
- c) the horns would not restrict access to feed or water during transport; and
- d) unless otherwise provided in a *long-horned livestock management plan* approved in writing by the department, the horns:
 - i) are no longer than 22cm with tips that are no more than 20cm apart; or
 - ii) have tips that are further than 20cm apart, but the horns are no longer than 15cm and are blunt.

6.7.8 Goats must be penned in accordance with the minimum aircraft crate pen area requirements shown in Table 34. For weights between those shown in Table 34, the minimum pen area per head must be calculated by linear interpolation.

6.7.9 When calculating pen space allocation, the pen area per head must be increased by 10%:

- a) for goats with more than 25mm of hair (not cumulative with b)); and
- b) for goats with horns in excess of Standard 6.7.7 d) (not cumulative with a)). These goats are to be penned separately.

Table 34 Minimum aircraft crate pen area for goat exported by air

Liveweight (kg)	Minimum pen area (m ² /head)	Liveweight (kg)	Minimum pen area (m ² /head)	Liveweight (kg)	Minimum pen area (m ² /head)
15	0.093	20	0.117	25	0.141
16	0.098	21	0.122	26	0.146
17	0.103	22	0.127	27	0.151
18	0.107	23	0.131	28	0.155
19	0.112	24	0.136	29	0.160

Liveweight (kg)	Minimum pen area (m ² /head)	Liveweight (kg)	Minimum pen area (m ² /head)	Liveweight (kg)	Minimum pen area (m ² /head)
30	0.165	42	0.223	54	0.280
31	0.170	43	0.227	55	0.285
32	0.175	44	0.232	60	0.309
33	0.179	45	0.237	65	0.333
34	0.184	46	0.242	70	0.357
35	0.189	47	0.247	75	0.381
36	0.194	48	0.251	80	0.405
37	0.199	49	0.256	85	0.429
38	0.203	50	0.261	90	0.453
39	0.208	51	0.266	95	0.477
40	0.213	52	0.271	100	0.501
41	0.218	53	0.275		

6.8 Llama requirements

6.8.1 Llama must not be sourced for export or exported unless otherwise provided in a *llama by air management plan* approved in writing by the department.



6.9 Sheep requirements




6.9.1 Sheep must have been weaned at least 14 days prior to sourcing for export, unless the exporter has approval under Standard 6.1.17 to export livestock with young at foot.

6.9.2 Sheep must not be sourced for export or exported unless they have a liveweight of more than 20kg. Sheep less than this weight must not be sourced for export or exported, unless the exporter has approval under Standard 6.1.20 to export miniature or light weight breed livestock.

6.9.3 Sheep must not be sourced for export or exported unless they have been assessed by a competent stock handler against the sheep body condition scoring in Table 35 and have a body condition score of 2 or more but less than 4 (on a scale of 1 to 5).

Table 35 Sheep body condition score

Score	Backbone	Short ribs	Illustration
1	The bones form a sharp narrow ridge. Each vertebra can be easily felt as a bone under the skin. There is only a very small eye muscle. The sheep is quite thin (virtually unsaleable).	The ends of the short ribs are very obvious. It is easy to feel the squarish shape of the ends. Using fingers spread 1 cm apart, it feels like the fingernail under the skin with practically no covering.	<p>Condition Score 1</p> 
2	The bones form a narrow ridge but the points are rounded with muscle. It is easy to press between each bone. There is a reasonable eye muscle. Store condition ideal for wethers and lean meat.	The ends of the short ribs are rounded but it is easy to press between them. Using fingers spread 0.5 cm apart, the ends feel rounded like finger ends. They are covered with flesh but it is easy to press under and between them.	<p>Condition Score 2</p> 

Score	Backbone	Short ribs	Illustration
3	The vertebrae are only slightly elevated above a full eye muscle. It is possible to feel each rounded bone but not to press between them. Forward store condition ideal for most lamb markets now. No excess fat.	The ends of the short ribs are well rounded and filled in with muscle. Using 4 fingers pressed tightly together, it is possible to feel the rounded ends but not between them. They are well covered and filled in with muscle.	<p>Condition Score 3</p> 
4	It is possible to feel most vertebrae with pressure. The back bone is a smooth slightly raised ridge above full eye muscles and the skin floats over it.	It is only possible to feel or sense 1 or 2 short ribs and only possible to press under them with difficulty. It feels like the side of the palm, where maybe one end can just be sensed.	<p>Condition Score 4</p> 
5	The spine may only be felt (if at all) by pressing down firmly between the fat covered eye muscles. A bustle of fat may appear over the tail (wasteful and uneconomic).	It is virtually impossible to feel under the ends as the triangle formed by the long ribs and hip bone is filled with meat and fat. The short rib ends cannot be felt.	<p>Condition Score 5</p> 

Source: Lifetime Wool

6.9.4 Female sheep with a weight of 40kg or more, and all female fat-tailed sheep, sourced for export as feeder or slaughter animals must be individually pregnancy tested using ultrasound within 30 days prior to export, by a competent pregnancy tester who must certify in writing that the animals are not detectably pregnant. The certification must include the certifier's name, veterinary registration number or attestation to experience and skill in pregnancy testing of sheep, signature, the mob's identification, and the date of the procedure.

6.9.5 Female sheep sourced for export as breeder animals must:

- a) be pregnancy tested using ultrasound foetal measurement by a competent pregnancy tester; and
- b) be certified in writing by the competent pregnancy tester as either not detectably pregnant or pregnant and if pregnant include the number of days pregnant. The certification must include the certifier's name, veterinary registration number or attestation to experience and skill in pregnancy testing of sheep, signature, the individual identification number of the animal and the date of the procedure. Certification is valid for 60 days for not detectably pregnant sheep, from the date of the procedure; and
- c) be no more than 100 days pregnant at the scheduled date of export, unless otherwise provided in a *last third of pregnancy management plan* approved in writing by the department.

6.9.6 Sheep with horns must only be sourced for export or exported if the horns:

- a) would not cause damage to the head or eyes of the animal or other animals; and
- b) would not endanger other animals during transport; and

- c) would not restrict access to feed or water during transport; and
- d) are no longer than 1 full curl, unless otherwise provided in a *long-horned livestock management plan* approved in writing by the department.

6.9.7 Sheep must be penned in accordance with the minimum aircraft crate pen area requirements shown in Table 36. For weights between those shown in Table 36, the minimum pen area per head must be calculated by linear interpolation.

6.9.8 When calculating pen space allocation, the pen area per head must be increased by 10%:

- a) for sheep with horns (not cumulative with b)); and
- b) for sheep with more than 25mm of wool or hair (not cumulative with a)).

Table 36 Minimum aircraft crate pen area for sheep exported by air

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

6.10 [deleted]

6.11 Monitoring and reporting requirements

6.11.1 If a notifiable incident occurs at any time, the exporter must notify the department as soon as possible and within 12 hours. For the export of livestock by air, a notifiable incident includes, but is not limited to:

- a) the loss of aircraft;

- b) the aircraft having to return to Australia or having an unplanned/unscheduled stop;
- c) partial or full disablement of ventilation systems on an aircraft carrying livestock which has the potential to cause a serious adverse effect on animal health or welfare;
- d) rejection of livestock at an overseas airport or by an importing country government;
- e) a mortality rate equal to, or greater than, the notifiable mortality level (in Table 37);
- f) the maximum water deprivation times equal to those set out in the Land Transport Standards are exceeded;
- g) any other incident that has the potential to cause a serious adverse effect on animal health or welfare.

In relation to a notifiable incident involving a mortality rate equal to or greater than the notifiable mortality level listed in Table 37, the notification must include a written report that contains:

- h) details of the mortalities (the number, species, crate location, suspected cause, the animal's identification, any treatments administered prior to death); and
- i) factors that may have contributed to the mortalities; and
- j) the location of the aircraft at the time of the incident and, if appropriate, its intended destination and estimated date and time of arrival.

Table 37 Notifiable mortality level for livestock transported by air

Species	Mortality rate per flight
Buffalo	0.5% or 3 animals, whichever is greater
Camelids	1% or 3 animals, whichever is greater
Cattle	0.5% or 3 animals, whichever is greater
Deer	1% or 3 animals, whichever is greater
Goat	1% or 3 animals, whichever is greater
Sheep	1% or 3 animals, whichever is greater

6.11.2 The exporter must provide an end of journey report to the department within 5 days of completion of unloading at the final airport of disembarkation. The end-of-journey report must be in a form provided on the department's website and include all information required in the form.

Appendix A: Pastoral zones

Western Australia

The local government areas within the Western Australian pastoral zone are: Ashburton, Kalgoorlie-Boulder, Broome, Carnarvon, Coolgardie, Cue, Dundas, East Pilbara, Exmouth, Halls Creek, Kalgoorlie, Laverton, Leonora, Mount Magnet, Meekatharra, Menzies, Murchison, Roebourne, Sandstone, Shark Bay, Upper Gascoyne, West Kimberley, Wiluna, Wyndham-East Kimberley, Yalgoo and Yilgarn.

New South Wales

The local government areas within the New South Wales pastoral zone are: Balranald, Bourke, Brewarrina, Broken Hill, Central Darling, Cobar, Wentworth. The New South Wales pastoral zone also includes Unincorporated Far West.

South Australia

The local government areas within the South Australia pastoral zone are: Anangu Pitjantjatjara Yankunytjatjara, Coober Pedy, Flinders Ranges, Maralinga Tjarutja, Orroroo/Carrieton, Port Augusta, Roxby Downs, and Whyalla. The South Australian pastoral zone also includes Unincorporated West Coast, Unincorporated Whyalla, Unincorporated Pirie, Unincorporated Flinders Ranges, Unincorporated Far North.

Queensland and the Northern Territory

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

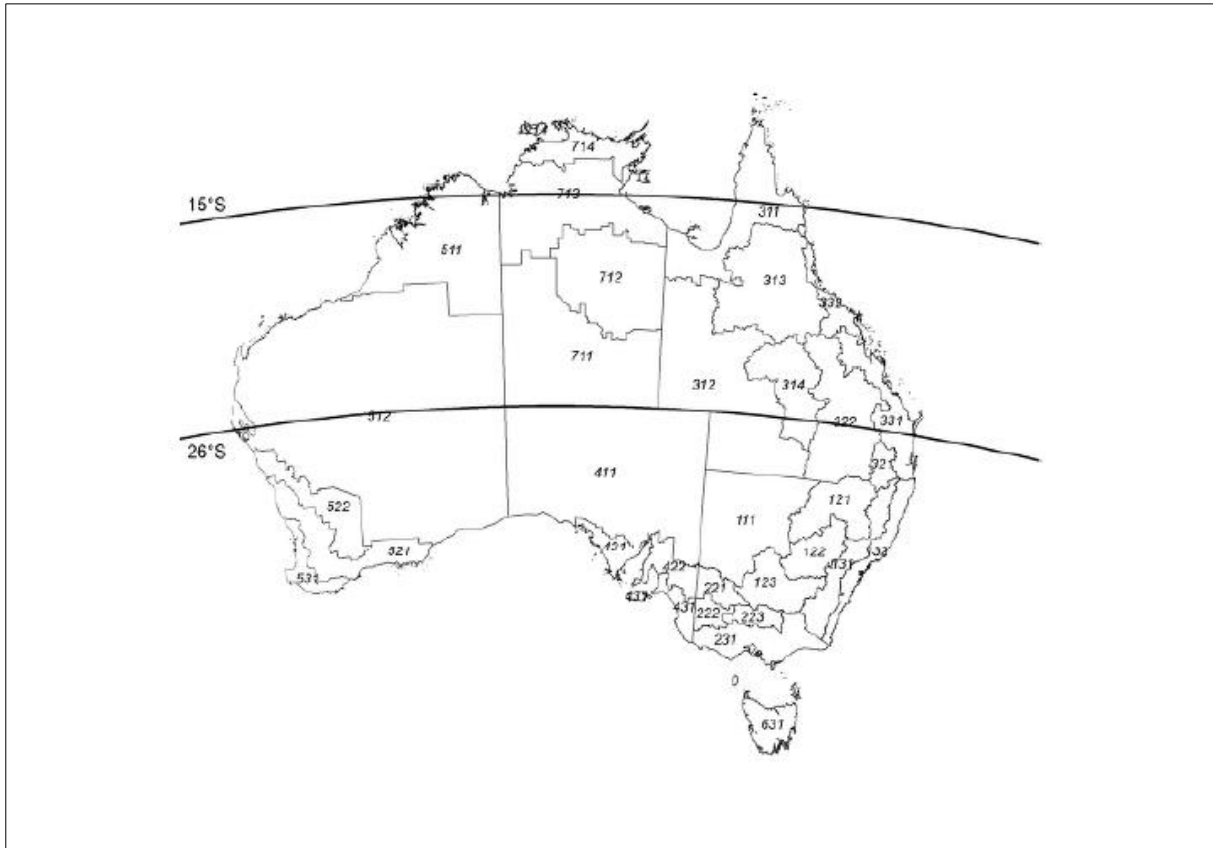
Tasmania and Australian Capital Territory

All of Tasmania and the Australian Capital Territory are not considered to be within the pastoral zone for the purposes of the standards.

Appendix B: 15°S and 26°S parallels

This image depicts where the 15°S and 26°S parallels cross Australia to assist with export requirements.

Map 1 15°S and 26°S parallels



Source: ABARES

Appendix C: Portable livestock units

Certain criteria apply if a vessel that is not permanently equipped for the carriage of livestock is to be used and is equipped with portable livestock units (PLUs).

- a) The PLUs must not:
 - i) be used on voyages of more than 10 voyage days; or
 - ii) be used to transport livestock if, for the route in question, there is a regular service of vessels that are permanently equipped for the carriage of livestock, and have valid ACCLs; or
 - iii) number more than 5 per voyage, not including 1 additional empty PLU for use as a hospital or isolation area as identified in the exporters' approved arrangement; or
 - iv) be stacked on top of each other or stowed in a position that prevents direct access to the PLU.
- b) The PLUs must:
 - i) be placed and secured in accordance with Marine Order 43; and
 - ii) have non-slip and non-abrasive surfaces. This may be achieved through the use of bedding material suitable for the class and species of livestock to be transported; and
 - iii) allow space in accordance with Standard 5, with an additional 15% space allocation to account for:
 - (i) species and class; and
 - (ii) size and body condition; and
 - (iii) wool or hair length; and
 - (iv) horn status; and
 - (v) predicted climatic conditions; and
 - (vi) design and capacity of the PLU.
 - iv) be adequately equipped to provide shelter and shade such as shade-cloth and tarpaulins. The accredited stockperson or AAV must take action before or during adverse weather conditions to minimise the risk to the health and welfare of livestock.
 - v) be supplied with bedding material that:
 - (i) minimises abrasions, lameness, pugging, faecal coating and ammonia production; and
 - (ii) is replaced if soiled, as necessary, subject to type and species; and
 - (iii) is monitored daily to consistency and depth; and
 - (iv) is appropriate to mitigate risks to animal health and welfare; and
 - (v) for cattle, is applied at a minimum of 4kg per m² before loading and consists of kiln-dried sawdust/shavings or equivalent.

- vi) be supplied with feed and water that:
 - (i) has adequate storage space
 - (ii) is sufficiently protected from weather
 - (iii) is managed in accordance with Standard 5, and Marine Order 43.
- vii) comply with the requirements of Marine Order 43 for any division within a PLU.
- c) The vessel must:
 - i) have adequate capacity to desalinate water or sufficient water storage on board
 - ii) have a hospital or isolation area available as a means of segregating livestock if required. This must be clearly stated in the exporter's approved arrangement and can be constructed using:
 - (i) divider rails, or
 - (ii) an additional empty PLU and the equipment or facilities required to move livestock safely between PLUs. If an additional empty PLU is used as the means of segregating livestock, details of trained livestock that are capable of being 'led' between PLUs, or of a sheep trolley or portable panels, must be included within the consignment inventory.
 - iii) carry veterinary equipment including medicines, instruments and stores sufficient for the species and number of livestock carried. The minimum veterinary equipment requirements contained in species specific Standards 5.2 to 5.5 should be observed. However, number of doses required for PLUs can be calculated proportionally to the number of animals being exported.

Document Control

The Australian Standards for the Export of Livestock is maintained by the Department of Agriculture, Water and the Environment.

Version	Date of issue	Reason for Change
3.0	November 2020	To implement the recommendations of the 2018/19 ASEL reviews.
3.1	March 2021	Incorporating changes in line with the new export legislation.
3.2	November 2021	2021 update to the standards to clarify requirements and reduce ambiguity.