



Australian Government
Department of Agriculture,
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Australian Standards for the Export of Livestock 4.0: review of penning requirements in registered establishments



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Department of Agriculture, Fisheries and Forestry
GPO Box 858 Canberra ACT 2601
Telephone 1800 900 090
Web agriculture.gov.au

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Acknowledgement of Country

We acknowledge the continuous connection of First Nations Traditional Owners and Custodians to the lands, seas and waters of Australia. We recognise their care for and cultivation of Country. We pay respect to Elders past and present, and recognise their knowledge and contribution to the productivity, innovation and sustainability of Australia's agriculture, fisheries and forestry industries.

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Introduction

Standard 3.1.16 of the Australian Standards for the Export of Livestock (ASEL) sets out requirements for the penning of livestock in a registered establishment. The intent of standard 3.1.16 is to effectively manage the risk of aggression, dominance and related injury for animals penned together in a registered establishment.

The Department of Agriculture, Fisheries and Forestry has undertaken a review of ASEL penning requirements in registered establishments. This addresses stakeholder feedback that current penning requirements may result in adverse animal welfare outcomes for cattle due to overhandling and redrafting of livestock out of their existing social groups. Stakeholders state this ‘stirs up the mob’, resulting in an increased risk of injury, stress and aggression between unfamiliar livestock as they re-establish social hierarchies. In addition, the mixing of animals into new social groups (commingling) can increase exposure to novel pathogens resulting in an increased risk of diseases such as bovine respiratory disease. Stakeholders raised concerns that the penning requirements in standard 3.1.16 are overly restrictive and do not appropriately balance the welfare risks of mixing animals of different weight and sex (including entire and desexed animals) with the health and welfare risks of handling events and commingling.

Many stakeholders stated that the penning requirements in registered establishments were overly complex and confusing, and required clarification and simplification. Stakeholders were confused with the definitions of ‘immature animal’ and ‘mature animal’, and the term ‘socialised in the source mob’. They state that these terms are difficult and impractical to apply and are open to inconsistent interpretation.

The review of penning requirements in registered establishments also aligns with the Inspector-General of Live Animal Exports (2020) [Implementation of Moss Review recommendations: review report 2020/02](#), which recommended ASEL is regularly reviewed to accommodate changes in science and evidence and to allow consideration of matters raised by industry.

To better understand the impact of ASEL penning requirements in registered establishments, we:

- reviewed available scientific literature and other research
- analysed data on the incidence of aggression and bullying in registered establishments and on vessels
- reviewed stakeholder feedback
- undertook internal and external consultation, including site visits to several registered establishments for targeted, face-to-face engagement.

Key findings from these activities are presented in this paper.

Scientific literature and other research

Studies identified during our literature review primarily focused on feedlot systems internationally and in Australia. A registered establishment is likely to have many environmental similarities to a typical Australian feedlot.

Studies identified broad consensus that cattle are social herd animals that when grouped together, establish a hierarchy with the social rank largely predicted by breed, age and body weight/size (Hubbard et al. 2021, Huxley 2010, DPI 2025). Social order is typically established and maintained by aggressive and dominant behaviours (e.g. mounting, head butting and fighting).

Multiple studies identified commingling as a critical stressor in feedlot-style systems:

- Cusack (2023) found that commingling may reduce the effectiveness of the immune system which can allow opportunistic infection of the lower airways and lead to the development of bovine respiratory disease.
- Hubbard et al. (2021) found that socially mixed cattle demonstrated behavioural changes including increased aggression and less time resting.
- Fleming et al. (2020) found mixing cattle can contribute to outbreaks of bovine respiratory disease on live export vessels with rapid spread of pathogens amongst livestock from different origins.

Other studies identified that commingling can cause 'resource defence' where cattle with lower social status may experience poor welfare associated with limited access to food and water (Daigle et al. 2023). Most literature stated that the impacts of social mixing are typically transitory, and once social order has been re-established in a mixed group, the prevalence of aggressive or dominant interactions generally subsides. Studies estimate it typically takes between 3 and 15 days for a social hierarchy to form and for dominant behaviours to stabilise (Daigle et al. 2023, Grant and Albright 2001).

Data analysis

To assess the effectiveness and appropriateness of ASEL's penning requirements, we reviewed data on the health and welfare outcomes for cattle penned together at registered establishments and on vessels. We analysed data reported in LIVEXCollect (LXC) and Tracking for Certification for Export (TRACE) for all cattle exports for a 3-year period from 2 November 2020 to 1 December 2023. This covered 498 voyages comprising 549 consignments to 3 destination regions (Southeast Asia, East Asia and the Middle East). A detailed analysis of health and welfare outcomes in registered establishments was not possible due to reporting limitations.

We screened reports for explicit statements of aggression and bullying, and for key search words describing injuries or health and welfare issues that may be suggestive of (but not necessarily conclusive of) aggression and bullying. Key search words included 'weak', 'skinny', 'shy feeder', 'injury', 'lameness', 'smothered', and 'misadventure'.

Findings from data analysis indicated that:

- there were no reports of mortality in registered establishments due to aggression or bullying, commingling or the mixing of immature bulls and steers
- reports of aggression and bullying on vessels were rare
 - where aggression was reported, it was unclear whether it related to heifers, bulls or steers
- the variable quality of reporting meant it was not possible to make definitive conclusions on the
 - causes and rates of illness or other health and welfare issues related to penning in registered establishments and on vessels
 - number of bulls that were ‘immature’ and whether they were mixed with steers.

Independent observer report findings

Observers travelled on 23 voyages during the period of this analysis. On several occasions the observer noted that in some pens, livestock exceeded the pen average weight by more than 50 kg, but that on each occasion this was rectified during the voyage by redistributing animals into different pens. No observers reported aggression or bullying among immature bulls or steers due to penning in accordance with ASEL.

Stakeholder engagement

The department undertook targeted engagement with stakeholders who raised penning requirements in registered establishments as a matter to consider. This included site visits to several registered establishments to view the operational aspects of ASEL penning requirements. This enabled the department to develop an understanding of where problems lie and to consider solutions that improve the practicality of the requirements while maintaining positive animal welfare outcomes. During these visits, departmental officers engaged in consultation with registered establishment operators, producers, departmental regional veterinary officers (RVOs), accredited veterinarians, stock persons and exporters.

Findings from site visits include:

- broad consensus among stakeholders that current penning requirements in registered establishments negatively impact animal welfare due to overhandling, increased stress and increased risk of injury
- stakeholders find standard 3.1.16 overly complex and confusing, particularly around the definition of ‘immature animal’ and use of the term ‘socialised in the source mob’
 - stakeholders state these terms are difficult and impractical to apply and open to inconsistent interpretation
 - stakeholders also state that identifying an ‘immature animal’ can pose a risk of injury to people handling livestock – for example, if manually palpating the scrotum to identify descended testes.

Rationale for proposed amendments

The proposed changes to standard 3.1.16 address stakeholder feedback, which identified that current penning requirements in registered establishments:

- may result in adverse animal welfare outcomes for cattle due to overhandling and redrafting of livestock out of their existing social groups
- were overly complex and required clarification and simplification.

In developing the proposed amendments, we considered available science and research, observations of operational practices, feedback from internal and external stakeholders, information gained during site visits and findings from data analysis. Overall, findings from the analysis of available data did not identify significant or systemic impacts on animal health and welfare due to current penning requirements, noting reporting limitations.

The proposed amendments aim to manage the risk of aggression and injury in animals penned together in a registered establishment by implementing management strategies, such as weight range limits for animals penned together, and continuing to apply mitigation measures such as:

- the existing rejection criteria, which require the rejection of animals displaying aggressive behaviour
- management procedures required in heavy cattle management plans during pre-export preparation.

The proposed amendments allow for greater flexibility around penning of livestock in registered establishments by balancing the best animal health and welfare outcomes with management practices that reduce handling events and the mixing of unfamiliar livestock. The proposed amendments also aim to improve the practicality of the standard by removing ambiguous content and enhancing the clarity and enforceability of the standard.

The proposed change applies to animals between 200 kg and 500 kg in a registered establishment and allows animals to be penned together, provided the weight of each animal in a pen does not vary from the pen average weight by more than 50 kg. This reflects standard 5.3.1(b), which outlines penning requirements for animals on vessels. Targeted consultation indicated that many stakeholders already choose to pen animals in registered establishments based on this 100 kg average weight range limit for operational reasons, and in preparation for penning on vessels. Penning of animals within a weight range limit is likely to minimise the impact of aggression and injury in animals penned together in registered establishments.

The proposed removal of the definition of ‘immature animal’ addresses stakeholder feedback from multiple sources that the definition is confusing, impractical to regulate and open to inconsistent interpretation. The definition was introduced in ASEL 3.2 in November 2021 to clarify which animals can be penned together, because ‘immature animals’ are generally deemed to pose a lower risk of aggression compared to mature animals. We propose managing the risk of aggression and injury in animals penned together in registered establishments by introducing a weight range limit for penned

animals and by applying the existing rejection criteria, which require that animals displaying aggressive behaviour are rejected from the consignment.

With the proposed changes to standard 3.1.16 and to definitions, the associated policy document [Penning of immature bulls and steers under ASEL](#) would become redundant and will be removed.

The proposed revised definition of ‘class’ more closely aligns with the typical industry definition used – for example, in the Australian Animal Welfare Standards and Guidelines (DAFF 2025) and the Industry Animal Welfare Standards (AMIC 2009). The proposed revised definition also better reflects the way the word ‘class’ is currently used throughout ASEL. The current definition of ‘class’ was introduced in ASEL 3.0 to align with the new definition introduced in the Export Control (Animals) Rules 2021, which defines class based on end use (feeder livestock, slaughter livestock, or livestock other than feeder livestock or slaughter livestock). There will be no change to the definition of ‘class’ in the Export Control (Animals) Rules 2021.

The requirement that animals of different health status must be kept separate will be retained to ensure that the revised definition of ‘class’ does not impact health status or importing country requirements. For example, this means feeder animals must not be penned with breeder animals.

Proposed amendments

Remove definition of ‘immature animal’

The definition of ‘immature animal’ is proposed to be removed.

Revise definition of ‘class’

The proposed definition of ‘class’ in Table 1 more closely aligns with the typical industry meaning and better reflects the meaning of ‘class’ as it is currently used in ASEL.

Table 1 Existing and proposed definitions of ‘class’

ASEL 3.3 version	Proposed ASEL 4.0 version
‘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.	‘Class’ means the group of a livestock species defined by age, size, sex and/or pregnancy status.

Amend standard 3.1.16

Table 2 compares the existing penning requirements with the proposed amendments for ASEL 4.0.

Table 2 Existing and proposed penning requirements in registered establishments

ASEL 3.3 version	Proposed ASEL 4.0 version
<p>3.1.16 Livestock must be penned so that:</p> <ul style="list-style-type: none"> 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: <ul style="list-style-type: none"> i) ewe and wether lambs, ii) entire and spayed female livestock, iii) ≤500 kg and >500 kg 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. 	<p>3.1.16 Livestock must be penned so that:</p> <ul style="list-style-type: none"> a) different species are not mixed in a single pen, and b) different classes of animals are not mixed in a single pen, except the following animals, which may be penned together: <ul style="list-style-type: none"> i) ewe and wether lambs ii) cattle or buffalo (weighing between 200 kg and 500 kg), provided the weight of each animal in a single pen does not vary from the pen average weight by more than 50 kg iii) heavy cattle or buffalo if penned according to the weight categories in the exporter's approved heavy management plan, and c) animals covered under different management plans are not mixed in a single pen, except: <ul style="list-style-type: none"> i) cattle or buffalo ≤500 kg and >500 kg, 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 the exporter's approved heavy management plan, or ii) if the different management plans apply to all animals in the pen (e.g. heavy cattle with long horns), and the largest space requirement is applied to all animals in the pen, and d) animals of different health status are kept separated.

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