



Department of
**Primary Industries and
Regional Development**

Mr Steve McCutcheon
Chair, Technical Advisory Committee
Review for the Australian Standards for Export of Livestock
GPO Box 858
CANBERRA ACT 2600

Dear Mr McCutcheon,

**REVIEW OF THE AUSTRALIAN STANDARDS FOR THE EXPORT OF LIVESTOCK –
STAGE 2: DRAFT REPORT**

The Department of Primary Industries and Regional Development (the Department) welcomes the opportunity to contribute to the Australian Standards for the Export of Livestock (ASE) Stage 2: Draft Report (the Draft Report). This submission draws upon the Department's submission of 19 September 2018 on Stage 2 – the Issues Paper.

Our comments focus on the recommendations in the Draft Report relating to sheep. The Department draws upon a review of scientific literature (Collins, Hampton, & Barnes, 2017) and observations of industry practices made by the Department's animal welfare inspectors at registered export premises, the Fremantle wharf and on live export vessels in port.

A number of issues of interest to the Department were outside the scope of the Draft Report, notably the arrangements for engagement of Australian Government Accredited Veterinarians and accredited stockpersons.

The Department supports many of the recommendations in the Draft Report but some significant concerns remain, in particular regarding the recommendations on stocking densities for sheep. These issues are discussed in the Attachment.

On p.65 of the Draft Report, the TAC states "the Regulator should be given some scope to approve exports that do not strictly tick every box in the standard." The Regulator is responsible to ensure that standards are enforced efficiently and effectively. The reason for facilitating exports that do not meet the standards is not clear to us.

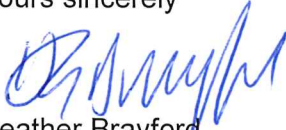
The Department recognises the importance placed on animal welfare by the general community. We welcome the commitment of DAWR to strengthen its regulatory practice and performance, and support the re-establishment of an Animal Welfare Branch to focus on standard setting and policy development.

The Western Australian Government supports continued livestock exports by exporters who have shown that they respect animal welfare standards. Those who do not follow the rules should not be allowed to continue operating.

It is essential that ASEL be modified to improve consistency with current scientific understanding of animal welfare, and that a more efficient and transparent system for regulation of the trade be introduced.

In summary, the Department considers that the Draft Report is a step in the right direction, but we urge the TAC to revisit the recommendations on stocking density and some other aspects of the Draft Report, as identified in the Attachment.

Yours sincerely



Heather Brayford
Deputy Director General
Sustainability and Biosecurity

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1. Stocking density

High stocking density is recognised as an important contributor to poor animal welfare outcomes in the live export context (Petherick et al., 2002; Caulfield et al. 2014; Rice et al., 2016), and via heat load (Petherick et al., 2009). The Technical Advisory Committee (TAC) acknowledges this in the statement “It is universally accepted that the amount of space provided to animals during periods of confinement is critically important for their health and welfare.”

The TAC states that “the current approach to stocking density on vessels has been to set a ‘base’ or ‘default’ space allowance, primarily to meet behavioural needs”. No scientific justification for this statement is provided. Despite various reviews of ASEL and its predecessors during the past 15 years (e.g. Keniry et al., 2003), the stocking densities in ASEL V2.3 do not yet have a clear scientific basis. The TAC writes: “Current space allowances in the standards (ASEL V2.3) appear to be based on 1978 Marine Standards specifications” – for which the origin and basis is unknown. Considering that millions of sheep have been exported and stocking density is very important to industry (ALEC, 2018), the “paucity of evidence regarding appropriate stocking density for ... livestock on-board vessels” cited in the Draft Report (p.31) is surprising.

The Draft Report states “Overall the literature review was unable to find a scientific study/ies that gave a definitive calculation for minimum space allowance on board a vessel.” The Department notes that many factors must be taken into account when considering the interaction of stocking density and animal welfare. It is probably unrealistic to expect that a definitive measure could be set in this context. The claimed ‘lack of scientific evidence’ seems to be part of the justification for making changes to stocking density less than the increases recommended in the McCarthy review (McCarthy, 2018).

Animal behaviour can be a useful indicator in assessing welfare, especially in environments where physiological assessments are impractical (Barnett and Hemsworth, 1990). An animal’s ability to express innate behaviours, when given the opportunity, can also be used as an indicator of welfare (Bracke and Hopster 2006). It is essential for animals on board a live export vessel to have adequate space to access feed and water. Adequate space will also provide animals the opportunity to express innate behaviours such as lying down.

In comparing confinement in sheds and on vessels, animals in the latter situation may be subject to additional sources of stress, including fatigue, heat/humidity, ammonia and disease, and must exert more physical effort to stay upright on a moving vessel. It could be argued that animals need more space on ships than in sheds, to allow them not only to lie down but also to stay on their feet in an unstable environment. It is therefore difficult to understand why the TAC recommended the allocation (for a 54 Kg sheep) of 0.417 m² on board vessels and 0.5m² at registered premises, given that most sheep spend more time on vessels than in registered premises.

In its 19 September 2018 submission, the Department argued for lower stocking densities on board vessels, and for basing the space allocation on the allometric principle. Increased space allocation reduces competition for feed and water, and allows social hierarchy to stabilise more rapidly leading to improved welfare (Ferguson and Lea, 2013). Providing adequate space is

also crucial to allow animals to put space between cohorts and change posture, and to increase surface area for heat loss (Collins et al, 2018).

The current allocation of space to a 54 Kg sheep on a vessel, based on ASEL v 2.3 is 0.333m², which equates to a k value of 0.024. The TAC noted that there were different views on the most appropriate k value. The industry (ALEC, 2018) argued for the lowest k value (0.027); the McCarthy report recommended $k = 0.033$; and the Department and some animal welfare organisations called for $k = 0.047$.

Table 1 shows the allocation of space for a 54 kg sheep using various k values.

k value	Space allowance (m ² /head)	Space increase over ASEL (%)
0.024	0.333 (ASEL)	0%
0.027	0.376	13%
0.030	0.417	25%
0.033	0.459	38%
0.047	0.654	96%

Table 1 - Minimum area/head in m² for a 54kg sheep using $A \text{ (m}^2\text{)} = k \times W^{0.66}$.

The approach to stocking density recommended by the TAC ($k = 0.030$) for the northern hemisphere winter would provide an increase in space of 0.08m² (from 0.333m² to 0.417m²) per sheep. The Department considers that the addition of less than one tenth of a square metre is not sufficient.

Whilst we acknowledge the need to consider economic and practical issues in any commercial livestock enterprise, including live export, compromises that result in standards below those recommended in the literature or by appointed reviewers should be supported with appropriate evidence. Without such justification, the decision is open to challenge and misinterpretation.

As a final point on stocking density, the reformatted ASEL requires “that the consignment be checked prior to departure to ensure that the livestock had been loaded in accordance with the load plan” (Draft Report p.28). State animal welfare inspectors do not have access to the load plan.

The Department encourages exporters to make the load plan available to State animal welfare inspectors at the time of loading.

2. Heat stress risk assessment model

The Department notes that both the McCarthy Report and the current Draft Report were undertaken as priority actions in light of public concern about the welfare of sheep exported to the Middle East in the northern summer. Heat stress is a key welfare issue.

In the discussion on stocking density, the TAC presents the Heat Stress Risk Assessment Model (HSRA) as offering a kind of animal welfare safeguard. Under point 3.2.4 of the Draft Report, the TAC explains that “Default space allowances (i.e. ASEL – our clarification) ... make provision for a normal range of climatic conditions but not, for example, exposure to periods of

high heat and humidity. The latter welfare risk factor is managed through the application of an HSRA”.

The relevance of the HSRA to stocking density is clear. As stated by the TAC “the recommendations in this part of the report (on stocking density – our clarification) are to be considered alongside recommendations that the (new) HSRA model be applied to all voyages crossing the equator (refer Section 4).”

The Department is not aware if the inputs to a specific HSRA or its results in relation to the numbers and weights of animals to be loaded on vessels, are conveyed to the Regulator. In the publicly available reports by DAWR on voyages with excess mortality, the relevance of the HSRA as a mitigating factor is unclear. Lacking information about the use and usefulness of HSRA to prevent excess mortalities, its value as a welfare safeguard would seem to be limited.

In connection with the numbers and weights of animals loaded, the Department notes that “the TAC supports the verification of livestock weights in determining stocking densities” and “Department officers should ensure a check of animal weights is undertaken ...at registered premises prior to loading.” (Draft Report, p.32). This does not appear as a recommendation of the Draft Report. Given that animal weight is a key factor in stocking density, the Department recommends that the verification of animal weights by the Regulator be included as a formal recommendation of the report. We also recommend the sharing of this information with animal welfare inspectors of the Department upon request.

3. Other issues

3.1 Pregnancy testing

With regard to the recommendation that all female sheep >40kg are scanned for pregnancy, the Department recommends that all female sheep, irrespective of weight, be scanned prior to being exported. A wide range of factors affect the reproductive potential of sheep and studies have shown that, while uncommon, ewes of various breeds have the potential to reproduce at weights less than 40kg (Ungerfeld, 2016; Foster et al., 1985). Given the welfare risks of lambs being born on a live export vessel, the Department recommends scanning of all female sheep prior to export.

3.2 Time off shears

As summarised in the Draft Report, some reports have shown that shearing may be an acute stressor (Sanger, 2011) while others suggest that it causes minimal behavioural change. The occurrence of shearing injuries, however, is a known fact and sending sheep with open wounds (even if superficial) into a contaminated environment presents a risk to animal welfare.

The TAC reported “Exporting immediately after shearing does carry some risks” and “an appropriate period of time should be provided ... to assist in managing this risk.” (Draft Report, p.14). The recommendation of ‘one clear day’ between shearing and loading for export is difficult to understand, as one day does not even provide for wound closure.

The Department recommends that if sheep are to be sheared at the registered premises, this should be done as soon as possible after arrival and a minimum period of 2 clear days provided before sheep are loaded for export.

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