Improving the welfare of horses during land transport

Consultation Regulation Impact Statement (RIS)
OBPR ID: 01097

Prepared by the Queensland Department of Agriculture and Fisheries on behalf of the national Animal Welfare Task Group

Queensland Government

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Background

The prevention of poor horse welfare outcomes during land transport requires increased attention and action by regulators and stakeholders. Transport can be stressful for horses. Traumatic injuries, respiratory problems, colic, thermal discomfort, laminitis and behavioural issues are common transport-related welfare concerns (Raidal, et al., 1997; Padalino, 2017). Transportation fear appears to be innate in horses (Lee, et al., 2001). The unique needs of horses[1] compound their high risk of injury or illness during transport[2].

Welfare issues during transport are evidenced by incidents noted by the Martin Inquiry (Martin & Reid, 2020), investigated by authorities, highlighted by the Australian Veterinary Association[3], and self-reported by horse owners and transporters (Padalino, et al., 2016).

The *Australian Animal Welfare Standards and Guidelines — Land Transport of Livestock 2012*[4] (the standards and guidelines) provide a basis for developing and implementing consistent animal welfare legislation and enforcement across Australia for the land transport of livestock[5]. The current standards and guidelines are based on scientific knowledge, best practice and community expectations existing at the time they were developed (i.e., in the years leading up to their endorsement in 2012).

While the standards and guidelines are generally applied well, and in some cases exceeded, by many people who transport horses, problems have been identified with the standards. Since the standards and guidelines were finalised in 2012, the scientific understanding of horse welfare and physiology has progressed. The Martin Inquiry also identified that implementation of the existing standards through Queensland's legislation was not achieving a reasonable balance between the welfare of horses and the interests of those transporting them.

In February 2020, the Agriculture Ministers' Forum tasked the national Animal Welfare Task Group (AWTG) to review the standards and guidelines for the suitability of horse welfare[6].

Consultation RIS

This consultation regulation impact statement (CRIS) has been prepared by the Queensland Department of Agriculture and Fisheries (DAF) on behalf of the national AWTG[7] to consult with stakeholders, the community, and state and territory government agencies on the benefits and impacts of proposed options to improve poor horse welfare during land transport.

The CRIS presents three policy options to address this problem, informed by consultation during 2021 (see section 5.2). A decision about the most appropriate option will be made after the consultation phase under this CRIS.

[1] Explored further in Appendix 4.
[2] For example, as evidenced in animal welfare investigations completed by government animal welfare agencies.
[3] Australian Veterinary Association submission to the *Land transport of horses - Consultation paper* in March 2021.
[4] View the current standards and guidelines for horse land transport at animalwelfarestandards.net.au
[5] Land transport is defined as transport by road, rail and vehicle onboard a ship. It includes mustering and assembly processes, handling and waiting periods prior to loading, loading, journey duration, travel conditions, spelling periods and unloading, and holding time.
[6] Other livestock species covered under the standards and guidelines were not included in this review and will be covered in a future review of the standards and guidelines.
[7] The AWTG consists of representatives from the Commonwealth and all State Territory governments. The AWTG reports to the Agriculture Senior Officials' Committee. The AWTG works with stakeholders to develop and implement nationally consistent standards and guidelines for livestock animal welfare.

The options are evaluated against the following objectives to address the problem:

- to achieve a more reasonable balance between the welfare of the horses being transported and the interests of the persons transporting them; and
- to reflect recent advances in scientific understanding of horse welfare and physiology, taking into account the practical expertise of those who work with horses on a daily basis.

The equine (or horse) industry includes many and varied interest groups who may be impacted by changes to land transport requirements. The following stakeholder groups are targeted for this consultation based on their insights, experience, and likely interest in proposed changes:

- anyone who transports a horse
- horse owners
- racing industry participants and racing authorities
- leisure and recreation horse users and representative bodies
- horse breeders and representative bodies
- horse sellers/saleyards and representative bodies
- horse processing facilities and representative bodies
- commercial horse/livestock transporters and representative bodies
- government animal welfare agencies (i.e., as the regulators and those that manage feral horse and donkey control programs)
- veterinarians and representative bodies
- animal welfare organisations
- equine scientific experts.

Any member of the general public may also provide feedback.

While every effort has been taken to obtain reliable data to assess the impacts for each option, there is a significant gap in data for horse transport activities in Australia (e.g., number of journeys by activity type, per year). Stakeholders are strongly encouraged to provide any relevant data or information. Questions are included throughout this CRIS in green boxes to help stakeholders provide feedback.

Next steps

This CRIS will be released for public consultation from Friday 16 September 2022 to Friday 28 October 2022. All feedback received during this period will be considered before the AWTG develops a Decision Regulatory Impact Statement (decision RIS) to reflect the outcome of stakeholder consultation from the CRIS. The decision RIS will set out an analysis of the available costs, benefits and impacts of options for change. The purpose of a decision RIS is to ensure the impact of any proposed change is transparent to decision makers and to the general public.

The decision RIS will be submitted to the Australian Government Office of Best Practice Regulation (OBPR) for assessment. The decision RIS must be assessed as adequate prior to the decision RIS being used to inform any major policy decision made by state, territory, and Commonwealth governments.

After the decision has been made public, the OBPR will publish the decision RIS on its website, along with the OBPR assessment of compliance with the regulatory impact assessment requirements as set out in OBPR's *Regulatory Impact Analysis Guide for Ministers' Meetings and National Standard Setting Bodies* (May 2021).

Make a submission

This CRIS encourages individuals and organisations to make submissions regarding the impact of the three policy options outlined in section 3 of this document. The AWTG is seeking to collect evidence and factual data on the impact of each option on you, your organisation, the community, and importantly, on horse welfare.

A submission template is available online (daf.engagementhub.com.au/horse-land-transport) to help you prepare your submission.

You can submit your feedback by either:

Uploading a written submission online at daf.engagementhub.com.au/horse-land-transport as one file in either of these formats:

- Microsoft Word Document (DOC/DOCX).
- PDF.

OR

Mailing a submission to:

Manager, Animal Welfare Program
Biosecurity Queensland, Department of Agriculture and Fisheries
GPO Box 46
Brisbane QLD 4001

Please include in your submission your:

- name
- title
- contact address
- email, if applicable
- telephone number
- organisation, if applicable.

In making a submission, please provide:

- evidence, references, and data to support your statements; and
- a copy or link to any supporting evidence relevant to your submission, if applicable.

Submissions close midnight Friday 28 October 2022.

For more information, contact: AnimalWelfareProgram@daf.qld.gov.au

The AWTG will respect any request for confidentiality. Please mark your submission as confidential if you wish this to be the case. The AWTG may need to incorporate de-identified general evidence in the subsequent decision RIS to support consideration of a final policy recommendation to the Australian Government.

Questions to consider in your submission

Questions are included throughout this CRIS in green boxes to help stakeholders provide feedback. Your response to these questions will help the AWTG to prepare the decision RIS. We encourage you to answer these questions in your submission, using quantitative data and realistic estimates of any costs wherever possible.

NOTE: You are **strongly encouraged** to provide any relevant data, statistics, or useful information relating to transport activities, (e.g., typical journey time, distances travelled, and current practices) to assist in the evaluation of options.

Privacy statement

This privacy statement applies to anyone who provides feedback as part of the consultation process. The Queensland Department of Agriculture and Fisheries (DAF) is collecting personal information from you, including your name, email address, phone number, geographic location and commentary or opinion, for the purpose of the CRIS for improving horse welfare during land transport.

Information gathered will inform development of policy and legislative proposals. As part of the consultation process, DAF may need to share consultation feedback with other state, territory and Commonwealth government agencies. Information may be included in regulatory impact assessment reports, for example to the Australian Government Office of Best Practice Regulation. Information (including stakeholder names but excluding contact and personal details) may be compiled into a public report to summarise the consultation process.

Engagement Hub (online consultation platform used by DAF)

DAF collects your information to register you as a user on DAF's Engagement Hub. All data is maintained in our Customer Relationship Management system hosted on the Engagement Hub site. We register you to facilitate your input to the consultation process, and so we can contact you about the results of the process and invite you to participate in future online surveys and activities. Your participation in any activity is voluntary. If you do not wish to receive further communication and engagement, you can unsubscribe from the site at any time via the link provided in the registration email.

For more information on the Engagement Hub and how it is used by DAF, please read the privacy statement at: https://daf.engagementhub.com.au/privacy-policy.

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Introduction

Horse transport in Australia

Horses are transported more often than any other type of livestock (Friend, 2001). They are moved for many reasons including breeding, veterinary care, sales, recreation, competition, racing, and slaughter. Horses may be transported by their owners or handlers in private vehicles, or may be moved by commercial transporters, often over great distances. For example, a commercial horse transporter in Queensland moves horses between the Gold Coast, Sydney, Melbourne, and Adelaide two to five times per week.

There are an estimated 400,000 horse owners in Australia, however few horse owners derive significant income from horse ownership, with most economic benefits flowing to businesses that service the equine industry, and as revenue to the gambling industry (Smyth & Dagley, 2015).

Collectively, the equine industry is thought to generate close to $10 billion annually in Australia (estimate adjusted for inflation from 2001 figures) (Gordon, 2001). Although racing and associated activities (e.g., breeding and wagering) contribute a little over half of this amount, horse businesses, equestrian events, breeding, husbandry, and transport are also substantial industries in themselves.

There are estimated to be more than 300 different equine industry organisations in Australia (Smyth & Dagley, 2015). There is no national database that tracks the movement of horses. As a result, very scant data is available on the total number of horse transport movements in Australia in any year.

For racing, annual reports by state and territory racing authorities indicate that there are over 4,000 thoroughbred and harness race meetings held in Australia each year. Assuming an average of 50 horses require transport to and from each meeting, this implies (conservatively) 400,000 mostly short-distance horse movements occur per year for racing related activities.

A key factor that often determines the nature of the travel and the horse's welfare is the destination or reason for travel. For example, thoroughbred horses commonly travel long distances to races, studs, and spelling facilities. These animals are considered 'valuable' and are usually afforded optimum care to ensure they are not injured or unduly stressed during the journey (Martin & Reid, 2020). On the other hand, many horses that are at the end of their career, (whether it be sport, leisure, or work), or are considered 'low value', are often sold on, and/or sent to slaughter using bulk-loaded livestock crates not specifically designed for horses.

There are key welfare considerations (Broom, 2008) and economic costs related to horse transport (Gordon, 2001). Striving for best practice standards for horse transport, with welfare as the primary consideration regardless of a horse's value, is important for regulators, equine industry participants, the community, and of course the animals themselves.

Unique needs of horses to ensure their welfare during transport

Horses are fear and flight animals. They have highly developed sight, smell, hearing, and touch senses (McBane, 2012). The flight response in horses to unfamiliar humans, confinement, and handling (i.e., during transport) caused by overstimulation of their senses can lead to traumatic injuries and poor welfare outcomes (Weeks, et al., 2012; Martin & Reid, 2020).

The transport process can introduce stressors for horses, including handling, isolation from familiar physical and social environments, loading and unloading, confinement, vibration, noise, movement, changes in temperature and humidity, inadequate ventilation and deprivation of food and water (Waran, 1993).

Transportation fear appears to be innate in horses (Lee, et al., 2001). It brings on typical fight or flight behaviours and other common signs of activation of the sympathetic nervous system, such as increased defecation and sweating (Moberg & Mench, 2000). Transport stress should be considered as a multi-faceted physical and emotional status, where much energy is expended by the horse in responding to stimuli (Padalino, 2017). To reduce the risk of injury and illness, understanding the horse's unique welfare needs is essential.

The thermal comfort of a horse during transport is an important consideration in the Australian context. Australia's variable but predominantly hot and dry climate means that horses are often transported in conditions that increase their risk of heat stress. A horse's respiratory health is at risk during transport due to factors including air quality, the horse's head position, journey duration, and pre-existing health conditions.

Water and feeding are also important. Inadequate water intake and sweating during travel may result in colic, dehydration, and potentially other health problems requiring veterinary intervention. Similarly, if feed is withheld for a significant period, gastric acid can cause ulcers in the stomach. Finally, the transport process can be disruptive to a horse's sleep patterns because of the reluctance or inability for a horse to lay down during transport. Sleep deprivation causes changes in a range of cognitive, emotional, and physiological states, and increased levels of anxiety and aggression. The unique welfare needs of horses are discussed in more detail in Appendix 4.

Consultation questions

1. **Do you agree that horses have unique needs in relation to being transported in Australia?** (Yes/No and comments)

2. **Can you identify any other needs of horses that are relevant to transport?** (Yes/No and comments)

Current regulatory framework in Australia

The *Australian Animal Welfare Standards and Guidelines — Land Transport of Livestock*[8] (the standards and guidelines) were endorsed by all state, territory and Commonwealth Agriculture Ministers in 2012. The standards and guidelines are not mandatory but provide the basis for developing and implementing nationally consistent legislation and enforcement across Australia. The standards and guidelines are one component of a long-term strategy of successive Australian governments to provide national standards to promote consistent animal welfare legislation in Australia.

Generally, the standards are adopted as mandatory requirements in state and territory legislation, either by direct transcription into regulations or by reference in regulations as a compulsory standard, or they may be referred to as voluntary standards (which compliance with may be used as a defence in court proceedings).

The guidelines are voluntary. They are not legislated but may be used by governments and industry to inform the development of best practice guidance material.

The standards and guidelines are composed of two parts:

- Part A contains general standards and guidelines that apply to land transport of all livestock.
- Part B contains standards and guidelines specific to the species being transported.

[8] Access the standards and guidelines at animalwelfarestandards.net.au.

Part B8 applies to the transport of 'horses' which includes all *Equus caballus* (horses) or *Equus asinus* (donkeys) and their hybrids. 'Land transport' is defined as transport by road, rail, and vehicle onboard a ship. It includes mustering and assembly processes, handling and waiting periods prior to loading, loading, journey duration, travel conditions, spelling periods, and unloading and holding time. The standards and guidelines have been implemented in each state and territory as described in Appendix 5.

1. The problem

1.1 Poor horse welfare outcomes during land transport – the issues

The prevention of poor horse welfare outcomes during land transport requires increased attention and action by regulators and stakeholders. Transportation fear appears to be innate in horses (Lee, et al., 2001). The unique needs of horses[9] compound their high risk of injury or illness during transport[10].

Horse welfare issues during transport were brought to the attention of regulators, stakeholders and the community after the ABC's *7.30* program 'The Final Race' aired in October 2019. Footage of horses, including retired thoroughbred and standardbred horses, being cruelly treated at a Queensland abattoir raised serious questions about the welfare and management of horses, including their transport across Australia.

Problems are evidenced by data on animal welfare incidents reported to Biosecurity Queensland (the state government agency responsible for animal welfare in Queensland) involving horses which have arrived at a Queensland export abattoir. These incidents often relate to horses that have been transported loose in the back of a truck or trailer, and as a result, have sustained serious injuries or are dead at the time of unloading.

Other incidents have involved horses arriving in poor condition, are bilaterally blind, or have been poorly loaded in a way that has caused fighting and subsequent injury during the journey. For example, feral horses have been loaded with domestic horses with no segregation, for transport to slaughter establishments, resulting in poor animal welfare outcomes. A case in 2018 saw six feral horses loaded with 30 domesticated horses from Victoria. On arrival at a Queensland export abattoir, up to 30 hours later, two horses were severely injured, and one was dead, apparently due to kicks by brumbies mixed with domestic horses in the truck. In 2018, 16 polo horses died in a transport vehicle during a journey across Bass Strait, apparently from asphyxiation.

According to the Australian Veterinary Association[11], experienced Australian equine veterinarians have identified several significant risk factors and conditions which influence the health and welfare of horses during transport, including:

- physiological stress and social anxieties due to close confinement in unfamiliar surroundings and in unfamiliar social groups, excessive noises and unfamiliar smells
- injuries, like lacerations, fractures, abrasions or contusions
- muscular problems including tying up, muscle soreness and muscle stiffness
- heat stress and heat stroke evidenced by raised core body temperature, elevated rectal temperature >38.5°C, sweating, dehydration and lethargy
- gastrointestinal problems such as oesophageal obstruction, gastric ulceration, colonic faecal compaction, diarrhoea, colic or enterocolitis

[9] Explored further in Appendix 4.
[10] For example, as evidenced in animal welfare investigations completed by government animal welfare agencies.
[11] Australian Veterinary Association submission to the *Land transport of horses - Consultation paper* in March 2021.

- respiratory problems including nasal discharge, coughing, inflammation and infection of the upper and/or lower respiratory tract or pleuro-pneumonia
- death, where horses are found dead or are required to be humanely euthanased as a result of transport.

Poor welfare outcomes for horses have been observed in some small sectors of industry associated with so-called 'lower value' horses. There is a portion of the industry that appears to prioritise profit over horse welfare, (particularly in the sector that transports horses to slaughter) and fails to meet even the existing standards. However, it is not only 'low value' horses that have suffered from transport-related problems. There are also transporters who, while they value their horses highly, are regularly engaging in risky transport practices but may not yet have experienced a significant problem or faced compliance action.

A survey of 797 professional and amateur participants in thoroughbred and standardbred racing, equestrian sport, endurance racing, horse breeding, and recreational non-competitive sectors of the equine industry who transport horses at least monthly, was conducted in 2015 (Padalino, et al., 2016). All states and territories were represented, and a statistical power analysis showed this was more than adequate to provide a representative sample of Australians who care for horses. Around 30% (241) of respondents reported having experienced transport-related issues. Traumatic injuries were the most prevalent transport-related problem reported in this survey, with an incidence of 45%.The incidence of transport-related diarrhoea was 20%, heat stroke 10.5%, muscular problems 13%, and colic 10.3% The incidence of pneumonia associated with transport was 9.2%. The incidence of transport-related laminitis was 2.9%.

Another study conducted in south-eastern Australia found that one in four respondents reported an incident where horses were injured during transport, often related to 'fight or flight' behaviours (Noble, et al., 2013).

Transporting horses, including over long distances, can result in good welfare outcomes when practices align with agreed welfare standards, (e.g., a company specialising in long distance transport experienced a low occurrence of transport problems (3%) while complying with the current standards) (Padalino, 2017).

Still, problems do exist with the standards themselves, as recent research shows. A study has identified an association between the occurrence of transport-related health problems and journey duration with the likelihood of developing respiratory or gastrointestinal problems, and dying or being euthanased being found to be higher on journeys of longer than 24 hours compared with journeys of less than 8 hours (Padalino, et al., 2017).This led the authors to suggest the need to decrease the maximum journey time currently permitted by the standards (i.e., currently 12 or 24 hours depending on the class of horse, and up to 36 hours in certain circumstances).

Other research has shown that horses that have a wide bay of 1.9m^2 are better able to balance, minimising the implications of transport on behaviour, health and welfare (Padalino & Raidal, 2020), but the standards set a minimum of 1.2m^2. The standards also do not require feeding or watering before transport and set a maximum time off water of 24 hours. This is at odds with research findings that demonstrate that restricting hay and water prior to transport should be avoided (Padalino, et al., 2016).

Further problems with the standards and guidelines have been identified through inquiries and consultation processes. For example, the Martin Inquiry found that the Queensland Code of Practice for the Transport of Livestock, which is consistent with the standards, does not sufficiently address the specific needs of horses during transportation, which leaves much of

the decision-making relating to the type of vehicle in which a horse travels, the stocking density, the types of horses that should travel together and whether there should be barriers between horses in a truck or trailer, to the transport operator (Martin & Reid, 2020). The Martin Inquiry also found that decisions made by transport operators in relation to these issues are not necessarily made with the welfare of the animal in mind (Martin & Reid, 2020). In addition, consultation undertaken in 2021 (see Consultation to date, section 5.2) confirmed that only a minority of stakeholders consider that the current standards and guidelines are adequate to address the welfare of horses during transport. Multiple issues were raised and suggestions made, with support given for many of the proposals for amendments to the standards and guidelines presented during the consultation.

Consultation question

3. **Do you agree there are animal welfare issues for horses during transport in Australia?** (Yes/No and comments)

4. **Do you think there are other issues that haven't been mentioned?** (Yes/No and comments)

5. **Do you have data or other information that supports or does not support the issues outlined in section 1 above?** (Yes/No. If yes, please provide details).

1.2 Defining and valuing animal welfare

The World Organisation for Animal Health (WOAH as of May 2022, previously OIE) guiding principles for animal welfare note that there is a critical relationship between animal health and animal welfare (WOAH, 2021). The WOAH defines animal welfare as:

> *… the physical and mental state of an animal in relation to the conditions in which it lives and dies.*

Further, WOAH specifies that an animal experiences good welfare if it:

> *…is healthy, comfortable, well nourished, safe, is not suffering from unpleasant states such as pain, fear and distress, and is able to express behaviours that are important for its physical and mental state.*
>
> *Good animal welfare requires disease prevention and appropriate veterinary care, shelter, management and nutrition, a stimulating and safe environment, humane handling and humane slaughter or killing. While animal welfare refers to the state of the animal, the treatment that an animal receives is covered by other terms such as animal care, animal husbandry, and humane treatment.*

The internationally recognised 'Five Freedoms' of animal welfare provide valuable guidance in recognising and assessing an animal's welfare. They are: freedom from hunger, thirst and malnutrition; freedom from fear and distress; freedom from physical and thermal discomfort; freedom from pain, injury and disease, and freedom to express normal patterns of behaviour.

In 1994 the Five Freedoms were reformulated into the 'Five Domains' model of animal welfare (Mellor & Reid, 1994) which places greater emphasis on the mental state of an animal and acknowledges that for each physical aspect that is affected, there are likely associated emotion or subjective experiences that affect welfare. This is useful in demonstrating that an animal's emotional needs are equally as important as its physical needs, and the importance for animals to be exposed to or engage in activities which provide positive experiences.

There are various ways of measuring animal welfare (including health, behaviour, and physiological responses). However, the financial benefits or value of improving animal welfare

can be difficult to measure, quantify, or express. A small number of economic studies have attempted to do so, showing that the benefit to welfare often exceeds the costs of regulation (Taylor & Signal, 2009; Bennett & Blaney, 2003; Zhao & Wu, 2011), although these studies do not directly relate to horse transport in Australia.

Financial considerations associated with horse ownership are complex, and the 'value' of a horse to a person will be influenced by combinations of factors such as:

- costs of breeding and raising a horse
- cost of purchasing a horse
- age, health, appearance
- how long a horse is kept for before sale or death
- intended use of a horse
- success (e.g., in racing or breeding)
- cost of alternatives (e.g., horse vs quad bike)
- emotional attachment.

This leads to a similar complexity when it comes to evaluating the 'cost' of the problem, with the above factors compounded by matters such as:

- the degree to which a specific welfare impact during transport manifests in that horse and whether multiple welfare issues arise in a journey
- the cost of subsequent treatment and how effective it is.

Although it is challenging to quantify the value of improving animal welfare for horses being transported, McInerney (2016) suggested that the key question is not 'what does welfare improvement cost?' but 'what is animal welfare worth?'

The Australian community has shown that it values animal welfare and can exert influence in driving changes to welfare outcomes (Coleman, 2018). Research by Futureye explored societal expectations about farm animal welfare and the adequacy of regulation. Australia's view on animal care and protection is well developed, informed by contemporary scientific knowledge and practice. An appropriate level of regulation to serve animals and their welfare is expected by the community. Futureye's results demonstrate the community's understanding or awareness of animal sentience and related capabilities has increased in recent decades (Futureye, 2018).

Public perceptions of the welfare of horses during transport are not as well understood. Although Futureye's report did not explore horse transport specifically, livestock transport in general was raised as a key area of concern by participants in the focus groups engaged during the research. Overcrowding and withholding of food and water from animals for long periods of time during land transport are topics the public is aware of and concerned about (Futureye, 2018). A study which explored attitudes towards the livestock industry and industry practices found approximately 24% of the general public have low trust in workers involved in livestock land transport (Coleman, et al., 2014).

Community concerns and behaviours impact broadly on an industry's 'social licence'. This refers to the indirect process by which a community gives an industry endorsement to conduct its current activities. Social licence is an important issue for the natural resource industry (especially mining) and is of increasing importance to animal use industries (Hampton, et al., 2020). Improving animal welfare outcomes can mitigate the risk to the viability of the 'social licence' in many animal use industries (Futureye, 2018).

For example, in the last decade or so, risks to the social licence of the Australian horse racing industry have been discussed (McGreevy & McManus, 2017). The Australian racing industry

contributes around $9.5 billion annually and employs approximately 75,000 Australians (Racing Australia, 2020). Racehorses travel frequently during their racing career and after they are retired. Concerns were raised in the Martin Inquiry about the transport of thoroughbred and standardbred horses to slaughter in bulk livestock crates. Improving the standards for horse transport may help community confidence that welfare issues are being addressed and help maintain the social licence of the racing industry.

In the same way, the social licence of other parts of the equine industry that involve horse transport, such as breeding, rodeos, equestrian, campdraft, endurance, polo, and slaughter, may also be positively influenced.

In addition, the Futureye research identified the potential for improved psychological wellbeing of the Australian community due to increased confidence that our animals are being treated humanely.

Horses are valued companions to many people, This is generally impossible to assign a dollar figure to, with perhaps rare exceptions, for example, when they are used as therapy animals and are compared to other methods to address the same health issues.

Consultation questions

6. **Do you think that the welfare of horses during transport is valued?** (Yes/No and comments)

7. **Do you think the issues identified in section 1 of the CRIS are sufficient to justify revising the standards for horse welfare during transport?** (Yes/No and comments)

8. **Which of the issues in sections 1.1 and 1.2 do you think pose the greatest concern for the welfare of horses being transported?** (Why and comments)

9. **Are there costs (financial or otherwise) if horses are not transported appropriately?** (Yes/No and comments)

1.3 What has been done to date

Since the adoption of the standards and guidelines in 2012, and the subsequent incorporation of the standards into state and territory legislation (Appendix 5), there has been limited focussed attention on reviewing the standards and guidelines relating to the land transport of horses.

The Queensland Government responded with in-principle support of the Martin Inquiry's recommendation for amendments to be made to the Queensland Code of Practice for the Land Transport of Livestock (the Code of Practice). The amendments were to achieve a more reasonable balance between the welfare of the horses being transported and the interests of the persons transporting them. However, Queensland's Code of Practice is based on the national standards and guidelines. Recognising the need for national consistency, the Queensland Government committed to actively supporting a review of the standards and guidelines focussing only on the welfare of horses. In February 2020, the Agriculture Ministers' Forum agreed that Queensland would lead a review of the standards and guidelines for the suitability for horses. In June 2020, the Animal Welfare Task Group (AWTG)[12] commenced work on the review.

[12] The AWTG consists of representatives from the Commonwealth and all State Territory governments. AWTG reports to the Agriculture Senior Officials' Committee. AWTG work with stakeholders to develop and implement nationally consistent standards and guidelines for farm animal welfare.

The AWTG reviewed recent research and current international standards and legislation, produced a Consultation paper[13] and conducted additional consultation (see section 5.2 for more information), which led to revised proposals underlying Options 2 and 3 of this CRIS.

Consultation question

10. Do you think horse transporters are voluntarily exceeding the current national welfare standards? (Yes/No and comments)

2. The need for government intervention

2.1 Government capacity to intervene successfully

The state and territory governments set and enforce animal welfare standards through the administration of state and territory legislation for animal welfare and the prevention of animal cruelty. Government animal welfare agencies also have a key role in the education of the community about animal welfare obligations. These responsibilities are supported by governments having the necessary legislative authority and organisational resources to intervene when required.

The Australian Animal Welfare Standards and Guidelines aim to harmonise and streamline livestock welfare legislation in Australia, ensuring that it results in improved welfare outcomes, and is practical for industry. They underpin access to domestic and overseas markets and reinforce Australia's commitment to advancing meaningful and effective positive animal welfare outcomes.

Current legislative requirements for the land transport of horses in the respective Australian states and territories are based on the nationally agreed standards and guidelines. The AWTG has the task of revising the existing regulatory requirements to ensure that the welfare of horses during transport meets the ever-evolving community expectations and scientific understanding in a nationally consistent and enforceable manner.

The Federal Government is viewed by the community as being responsible for driving consistent animal welfare standards across Australia and ensuring that no state has a competitive advantage over another (Futureye, 2018).

2.2 Alternatives to government action

The Australian general public's view on animal care and protection is well developed, informed by modern scientific knowledge and practice (Futureye, 2018). Australians, by and large, expect an appropriate level of regulation by governments to safeguard animal welfare.

An alternative to government action is allowing industry to improve the welfare of horses during transport through an industry-led self-regulation process, where industry sets and enforces its own rules.

The option of an industry-led self-regulation process presents challenges for a number of reasons as outlined below.

- Consultation to date has not suggested any part of the equine industry is prepared to develop a self-regulation process for horse land transport, and this was not raised by any industry group as an option.
- It is unlikely to address the problems associated with land transport for horses in a consistent or reliable manner. Given the diverse circumstances of horse transport in

[13] View a copy of the February 2021 Consultation paper on the AWTG website: https://www.awe.gov.au/agriculture-land/animal/welfare/awtg

Australia, there is no single organisation that would be well-placed to oversee a self-regulation or co-regulation solution.
- It would be complex to establish given the variability and diversity of the equine industry and would incur significant costs to the industry to develop, implement, maintain, and enforce.
- Self-regulation would be inconsistent with the existing model of animal welfare regulation by governments in Australia, which is generally based on nationally agreed standards and guidelines implemented by state and territory law. This model covers many areas of animal welfare beyond the land transport of horses.

Consultation question

11. Should industry set and enforce their own rules for the welfare of horses during transport? Why or why not? (Yes/No and comments)

2.3 Objectives of government action

The primary objectives of government action under this CRIS are to prevent horse welfare issues during horse land transport in a way that:

- achieves a more reasonable balance between the welfare of the horses being transported and the interests of the persons transporting them; and
- reflects recent advances in scientific understanding of horse welfare and physiology, taking into account the practical expertise of those who work with horses on a daily basis.

2.4 Constraints and barriers to achieving objectives

There are several constraints and barriers that may affect the delivery of the objectives including: data and knowledge deficits; the diversity of the equine industry; negative attitudes towards regulation; lack of recognition of the importance of welfare; and lack of awareness of regulatory requirements.

Data and knowledge deficits

The availability of data and information on horse transport activities in Australia is limited. Recognising there is currently no reporting process or collection of horse movement data across all horse activities (e.g., from sport to slaughter), this CRIS seeks to gather key information to refine the policy options and better understand the potential benefits and impacts.

Stakeholders are strongly encouraged to provide data and examples of their activities in their submissions to help ensure any future policy change is based on robust, and where possible, quantitative analysis.

Diversity of stakeholders

The diversity of stakeholders within horse ownership and the equine industry as a whole presents challenges for policy development, as many conflicting stakeholder views must be weighed and balanced. Even within the equine industry, there are many different perspectives, experiences and circumstances associated with horse transport. There are long-standing ideas about horse handling and health that are not all aligned with contemporary science. The welfare of horses is also of interest to many not directly involved with horse ownership or the equine industry. The financial value of the so-called 'lower value' horses, (i.e., those at the end of their career or otherwise unwanted) may be considered as creating a barrier for change as there may be an actual or perceived loss in profitability when transporting these horses under higher standards.

3. Policy options

This CRIS presents three policy options to address horse welfare issues during land transport.

Option 1 – Do nothing (maintain the status quo)

This option would result in the current standards and guidelines being maintained without any change or intervention by governments, including without any additional education or engagement.

Option 2 – Enhance the existing non-mandatory guidelines (non-regulatory approach)

This option would result in the current standards being retained with the addition of new/revised non-mandatory guidelines. This option would encourage practice above the minimum mandatory requirements as set out in the current standards.

Implementation of this option would involve government-led promotion of the guidelines through printed and digital guidance material, and provision of information by government staff during compliance, outreach and stakeholder engagement activities. Implementation would not require legislative change, as the current standards are already implemented in state and territory legislation.

Revised guidelines would target the following areas:

- provision of water, feed, and rest during the journey
- record keeping
- segregation of certain animals during transport
- removal of hind shoes in certain situations
- space allowance
- use of restraints
- bedding and flooring
- multi-deck trailers
- fitness for the intended journey
- mitigating welfare risks in extreme temperatures.

Appendix 1 presents proposed amendments to the current standards and guidelines. Under Option 2, all proposed changes to standards and guidelines outlined in Appendix 1 would be made as guidelines. Note that:

- existing standards will continue to be mandatory and enforceable
- existing and new guidelines will be voluntary and not enforceable.

Option 3 – Revised mandatory standards, and non-mandatory guidelines (regulatory approach)

Option 3 would result in the adoption of a package of amendments to the current standards and guidelines as presented in Appendix 1. Implementation would include the adoption of the revised and new standards through amendments to state and territory animal welfare legislation.

The guidelines would continue to be non-mandatory.

Implementation of this option would also include government-led education regarding both the new mandatory requirements and the better practice as reflected in the guidelines. This would occur through printed and digital guidance material and provision of information by government staff during compliance, outreach and stakeholder engagement activities.

Revised standards and guidelines would target the same areas as under Option 2, being:

- provision of water, feed, and rest during the journey
- record keeping
- segregation of certain animals during transport
- removal of hind shoes in certain situations
- space allowance
- use of restraints
- bedding and flooring
- multi-deck trailers
- fitness for the intended journey
- mitigating welfare risks in extreme temperatures.

Under Option 3, the revised standards would be enforceable once they were incorporated into state and territory legislation.

Consultation question

12. Can you identify any other options that would address the problem discussed in section 1? (Yes/No and comments)

4. Benefits and impacts

This section outlines some of the benefits, and financial and regulatory impacts (impacts), for each of the three options and seeks feedback about the benefits and impacts.

4.1 Option 1 – Do nothing (maintain the *status quo*)

This option would not impose any additional regulatory burden or costs to people transporting horses but would not address the issues outlined in section 1 of this CRIS. It would also not achieve a more reasonable balance between the welfare of horses being transported and the interests of the persons transporting them, because neither the horses' physiological needs (and recent scientific knowledge) or the insights and expertise of horse stakeholders would be addressed.

Benefits and impacts

Table 1 - Evaluation of benefits and impacts for Option 1

Benefits	No changes required by horse transporters and government, and no additional regulatory burden.
Impacts	*Animal welfare* • The problems outlined in section 1 regarding the welfare of transported horses are not addressed. *Equine industry stakeholders* • There would be no additional burden placed on stakeholders, however, a *status quo* approach would result in missed opportunities to prevent or reduce the financial costs to horse owners resulting from treatment of transport stress-related injury, illness, or death. *Governments* • A *status quo* approach may lead to inconsistent achievement of the policy objective across Australia. Inaction may result in one or more jurisdictions acting independently to amend their legislation to

	address the identified horse welfare issues. This would be an unsatisfactory outcome for stakeholders that transport horses between jurisdictions as inconsistent policies create differing requirements and compliance challenges

Consultation questions

13. **Do you think there would be a net benefit to the welfare of horses under Option 1?** (Yes/No and comments)

14. **Do you think Option 1 is better than Options 2 or 3?** (Yes/No and comments)

4.2 Option 2 – Enhance existing non-mandatory guidelines (non-regulatory approach)

Many people who transport horses are very knowledgeable about horse handling and have substantial experience. They may also be interested in new information that may benefit their horse's welfare. However, there is evidence (Padalino, 2017) to suggest there is a lack of knowledge among stakeholders (e.g., horse owners and the equine industries generally) about the current standards and guidelines. This means that education will be key to ensuring the success of Option 2, both by increasing awareness and understanding of the existing standards, and the proposed revised guidelines.

Recognising the diversity of the equine industry and difficulties of reaching all affected stakeholders, this approach could not be considered as a 'one-size-fits-all' approach. It would be resource intensive for governments to work with many equine industry and transport groups, and the success would be influenced by the degree to which these groups were willing and able to assist in disseminating information and adopting the guidelines into practice.

Compared to Option 1, Option 2 could be expected to deliver greater improvements to horse welfare during transport if there is greater awareness and voluntary adoption of the new guidelines. Although non-mandatory, the revised guidelines would inform people about what is a 'better practice' than the current minimum mandatory standards provide. This option would reflect recent advances in scientific understanding of horse welfare and physiology, taking into account the practical expertise of those who work with horses on a daily basis.

However, operators may not widely adopt this better practice, because there are no consequences for ignoring guidelines. This option would be less likely to be effective in achieving a more reasonable balance between the welfare of the horses being transported and the interests of the persons transporting them.

Benefits and impacts

Table 2 - Evaluation of benefits and impacts for Option 2

Benefits	No changes required by horse transporters and government, and no additional regulatory burden. *Animal welfare* • Potentially reduced risk of stress, illness and injury for transported horses, particularly over long distances. • Better alignment of practice and the standards and guidelines to current scientific knowledge about a horses' basic needs around water, feed and rest. • Benefits proportional to how well the guidelines are followed.

Impacts	*Animal welfare* • The problem outlined in section 1 of this CRIS regarding the welfare of transported horses is likely to remain to some extent, as uptake of the guidelines may not be wide spread. *Equine industry stakeholders* • There would be no additional burden imposed on stakeholders, as the guidelines are non-mandatory. *Governments* • Equal impact to Option 3, as both options involve government-led promotion of the guidelines.

Consultation questions

15. **Do you think there would be a net benefit to the welfare of horses during transport under Option 2?** (Yes/No and comments)

16. **Is Option 2 better than Options 1 and 3? Why or why not?**

Please provide data or dollar values to support your answers if possible.

4.3 Option 3 – New and revised mandatory standards, and non-mandatory guidelines (regulatory approach)

Option 3 proposes amendments to the current standards and guidelines. Appendix 1 represents a combination of the proposed amendments, and the current standards and guidelines, so that the amendments can be compared with the current standards and guidelines.

The proposed amendments are based on current scientific knowledge and in parts, reflect equivalent international standards. They also reflect the feedback received from equine and transport stakeholders that were engaged in February 2021 (see Appendices 2 and 3).

Option 3 would also include similar implementation activities to those described in Option 2. This includes government-led education regarding both new requirements and the better practice reflected in the guidelines through printed and digital guidance material and provision of information by government staff during compliance, outreach and stakeholder engagement activities.

How Option 3 addresses the objectives

The proposals under Option 3 have significant animal welfare benefits as they include mandatory requirements which align more closely to contemporary scientific knowledge about horse needs with respect to feed, water and rest, sufficient space, and other factors to reduce stress and the risk of illness and injury during transport. Consultation to date indicates most proposals would be reasonably practical to implement for most stakeholders, on most journeys.

General benefits and costs for Option 3

There are significant benefits for animal welfare under a regulatory approach. The establishment of contemporary and practical welfare standards is expected by the broader

community (Futureye, 2018). A review and update of the standards is expected to instil confidence in the general public and support a social licence to operate for the industries concerned with respect to horse transport. In some circumstances, this social licence to operate takes the form of market access, which can be dependent on demonstrating adequate standards of animal welfare. Further, regulatory standards apply to all businesses, removing the competitive advantage for businesses who elect to not comply. A regulatory approach can promote these benefits more consistently, rather than leaving such matters to individual participants in a voluntary approach.

The existing inspectorate in each jurisdiction will continue to be responsible for enforcement, and it is not expected that additional capacity will be needed beyond that required for the current standards. The activities remain the same – following up complaints or reports about transport-related issues with horses, inspections, investigations, directions and prosecutions.

Specific benefits and impacts of option 3

Tables 1 to 10 in the following sections indicate the benefits and impacts of specific aspects of the proposed changes to the standards and guidelines.

4.3.1 Provision of water, feed and rest during the journey

The current standards allow a horse to go without water (referred to as 'time off water') for up to 24 hours before a spell period is required. This is out of step with current scientific evidence about the need for regular provision of feed, water and rest to horses (see Appendix 4 for more information).

This proposal would reduce the maximum journey time[14] to:

- 12 hours before a spell of eight hours for horses over six months old
- eight hours journey time before 12 hours spell for lactating mares, foals less than six months old, and mares more than seven and a half months pregnant

It will also require that horses be checked and offered food and water at the latest opportunity before the journey, and at the earliest opportunity after the journey. A limited exemption would be provided for journeys across Bass Strait, where it is impossible to realistically limit the journey time to the proposed limits.

The exception would apply if:

- the vehicle has adequate provision for feeding and watering during the journey; and
- the horses are checked and offered food and water at the latest reasonable opportunity before embarking, and at the earliest opportunity after disembarking; and
- a spell of at least the minimum duration specified is provided no more than two hours after disembarking.

How the proposal addresses the objectives

The proposal for water, feed, and rest will achieve a more reasonable balance between the welfare of the horses being transported and the interests of the persons transporting them, and reflect recent advances in scientific understanding of horse welfare and physiology. For example, the proposal takes into account the insights of equine industry stakeholders about

[14] The current standards and guidelines define 'journey time' as *"the period of time commencing when the loading of livestock in a container or on a vehicle for a journey starts and finishing when the unloading of livestock at a destination is completed"* (see also Appendix 7).

what is practical, and balances this with scientifically derived information regarding a horse's needs for feed, water, and rest to avoid undue stress and illness during transport.

Table 3 - Evaluation of benefits and impacts for proposed changes to provision of water, feed, and rest

Benefits	*Animal welfare* • Better alignment to current scientific knowledge about a horse's basic needs regarding water, feed and rest. • Reduced risk of stress, illness and injury for transported horses, particularly over long distances. • Supporting guidelines (non-mandatory) provide additional guidance for stakeholders in ensuring welfare on journeys over four and eight hours. *Alignment to international standards* • In Europe and the United States, horses must be provided with feed and water every eight hours and 12 hours, respectively. *Simplification of requirements* • For stakeholders, maximum journey time is more intuitive and considerably simpler to calculate than the current concept of 'time off water'. See Appendix 6 for a comparison. • Laws that are hard to understand lead to administrative and legal costs (Office of Parliamentary Counsel, 1993)**,** and the simpler approach will have the benefit of avoiding these costs while making it easier for stakeholders to meet welfare requirements.
Impacts	*Equine industry stakeholders* • Stakeholders associated with journeys over 12 hours may need to change current practices. Feedback from stakeholders to date indicates such journeys represent a small proportion of total horse movements each year in Australia (noting that total horse movements are unknown). • Racing Australia, Racing Queensland and Harness Racing Australia could not provide data on typical journeys to events (e.g., race meetings and training) prior to release of this CRIS. • The cost of treating illness as a result of food and water being withheld during transport can be high. For example, treatment of simple medical colic can cost from $500 to $800, depending on evaluation and analgesics required. More complex medical colic can cost $3,000-$5,000 to treat. Surgical colic can cost upwards of $15,000. Costs also depend on the time of day and how much travel is required for the veterinarian (Equine Veterinarians Australia, pers. comms. March 2021). • Financial losses associated with the death of a horse resulting from illness or injury are difficult to estimate as it depends on the type of horse lost, and whether it is valued as a companion or is subject to sale or slaughter. *Transport industry* • The Australian Livestock and Regional Transporters Association indicated a 12-hour journey time would align well with existing Basic Fatigue Management standards for solo drivers under the National Heavy Vehicle national law.

- Impacts may be greater for journeys involving two-up drivers, as no driver rest period is required, and transport is continuous.

Bass Strait journeys

- Journeys across the Bass Strait typically last 12 hours and the new standard would be difficult to comply with in the absence of the proposed exception. There may be an impact on current journey patterns, including where and when feed, water and spells are provided.
- Existing regulations under the *Navigation Act 2012* (Cth) already require a vehicle containing livestock carried on a vessel to have adequate provision for feeding and watering.
- Victorian and Tasmanian animal welfare agencies indicate that impacts are more likely to occur for journeys to Victoria, where a spell may need to be arranged on the mainland rather than continuing the journey. Whereas in Tasmania, the final destination will generally be able to be reached within two hours.

4.3.2 Record keeping requirements

This proposal would introduce a new standard that requires a written record of:

- time of last access to water, rest, and food; and
- start and finishing travel times.

Records would be required to be kept for 12 months after the journey. No specific form for this record would be prescribed. The person transporting the horse/s can decide how and where to keep the record, but it would need to contain specified information and be made available for inspection when required.

Two sub-options for record keeping are being evaluated under this CRIS:

- Sub-option A: Record keeping is required for all journey types.
- Sub-option B: Record keeping is only required for commercial, multi-stage (i.e., where horse/s change custody), interstate journeys, and journeys delivering to a saleyard or slaughter facility.

How the proposal addresses the objectives

The proposal for record keeping would achieve a more reasonable balance between the welfare of the horses being transported and the interests of the persons transporting them by facilitating better tracking of journey time, and the provision of sufficient feed, water, and rest to horses. This proposal would support the enforcement of the proposal outlined above on feed, water, and rest.

Table 4 - Evaluation of benefits and impacts for proposed record keeping requirements

Benefits	*Animal welfare* • Records kept would support the standards proposed for journey time (see section 4.3.1 above) and verify that the maximum journey time is not exceeded, overall benefitting the welfare of the horse/s transported. • The records will also inform the next person in the transport chain so that they know when they are obligated to provide water, rest and feed.

Administrative benefits

- Good recordkeeping can help a business demonstrate they have taken appropriate actions and avoid enforcement action.
- The proposal would allow transporters to decide how and where to keep the record, provided the record contains the required information set out in the standard.

Impacts

Anyone who transports a horse

- Sub-option A is expected to have a higher compliance cost due to affecting a greater number of businesses and individuals. Horse owners transporting for non-commercial purposes may find such a requirement onerous (e.g., Racing Queensland indicated some racehorses are transported on a daily basis for training, sometimes only travelling 10 minutes from home to the track, sometimes multiple times a day).
- Sub-option B would have lower compliance cost as the number of affected businesses and individuals is less, however it is more complex to define, legislatively draft and communicate.

It is difficult to estimate the true impacts of this proposal because of the lack of data on the number of horse movements in a year, compounded by uncertainty over the number of horse movements where the proposed requirement is already met for other purposes (e.g., in vehicle logs or biosecurity movement records).

Using the Australian Government Office of Best Practice Regulation's (OBPR) Regulatory Burden Measurement Framework (OBPR, 2021) allows some estimation of collective cost. For example, if under Sub-option A, 600,000 horse movements per year required one minute's worth of additional record keeping per movement, that is 10,000 hours, at a standard time cost (set by OBPR) of $73.05 per hour. This implies a cost of $730,500 collectively for the 600,000 horse movements. Sub-option B would be a fraction of the cost, proportional to the fraction of horse movements on interstate, commercial and multi-stage journeys compared to all journeys.

Existing records (e.g., national vendor declarations or biosecurity movement records) may already capture the required information, as may logbooks, diaries and notebooks.

Other stakeholders

- There is limited data available to reliably estimate other potential benefits and impacts for this proposal. Stakeholders who feel they may be impacted by the new requirements are strongly encouraged to specify possible benefits, impacts and concerns, with data to support their feedback.

Consultation question

17. Do you support sub-option A or B on record-keeping? Provide data or dollar values to support your answer if possible.

4.3.3 Segregation of certain animals during transport

This proposal would introduce:

- a standard prohibiting the transport of handled and unhandled horses without appropriate methods of segregation
- a standard prohibiting the transport of stallions and other horses without segregation, except for horses that are familiar with one another, including feral horse groups (currently a guideline)
- a standard requiring that stallions, unhandled horses, pregnant mares, mares with their foals, and animals with health conditions are segregated from other animals (currently a guideline).

Exceptions are proposed for when the animals have been raised in compatible groups, are accustomed to each other, where separation will cause distress, or where females are accompanied by dependent young. A complementary guideline would also recommend that segregation should allow social contact but prevent kicking, trampling, or biting, and that any means of segregating mares and foals should provide adequate protection from the risk of being trampled by the mare, while providing the opportunity for the foal to suckle.

The current terminology of 'broken' and 'unbroken' would be replaced with the terms 'handled' and 'unhandled', which are more relevant to a horse's willingness to be led onto a vehicle.

How the proposal addresses the objectives

The proposal for segregation would achieve a more reasonable balance between the welfare of the horses being transported and the interests of the persons transporting them. The insights of equine stakeholders and their experience in handling their own animals has been incorporated into the proposal to build in flexibility and allow users to make decisions about what works best for their circumstances, within the bounds of an outcomes-based standard. The proposal also reflects current scientific knowledge about the importance of separating unfamiliar horses to prevent stress and injury during transport.

Table 5 - Evaluation of benefits and impacts for proposed segregation of certain animals during transport

Benefits	*Animal welfare* • Isolating aggressive, hyperactive or vulnerable horses can help remaining horses in a group to experience less stress during transport and reduces injury risk (Calabrese & Friend, 2009; Weeks, et al., 2012)**.** • Mares with foals should not be grouped with other horses during transit as nursing mares often become aggressive. Foals can also become confused and attempt to suckle from the nearest inguinal region and be kicked in the process (Weeks, et al., 2012)**.** • A new supporting guideline (non-mandatory) would provide stakeholders with suggested ways to meet the standard. *Safety of handlers/transporters* • When horses are uneasy or fight during a journey, the safety of handlers may be put at risk *Alignment with international standards* • The proposed segregation standards are similar to that of the WOAH Terrestrial Animal Health Code (WOAH, 2011) and the European guidelines for horses destined for slaughter (European Commission, 2018).

Impacts

Equine industry and bulk transporters

- The mixing issue is primarily relevant to horses being transported to sale or slaughter in multipurpose livestock crates and boxes, where methods of segregation are limited or non-existent. These transporters would need to adapt their practices and vehicles (e.g., by incorporating dividers) and this could be a costly exercise. Some vehicles may no longer be appropriate for horse transport, effectively removing the value of these vehicles for this purpose (though they would still be useable for cattle transport).
- It is understood that most dedicated horse transport vehicles (e.g., floats and trailers used by sport and leisure horse users) already include methods of segregation (e.g., barriers or dividers). Several commercial livestock transporters also advised they already use trucks that have individual bays or dividers.
- Feedback to date indicates that segregation of vulnerable horse types is common (although not universal) practice. One rodeo operator advised they regularly transport stallions and mares together that are familiar with one another. Where stallions are familiar with the rest of the load, they could be loaded together under the proposed exception.
- The cost of treating injuries resulting from bites or kicks during transport can be high and depend upon the wound and nature of treatment required. For example, injuries requiring minimal intervention could cost around $600, while more serious intervention involving a joint or casting could cost upwards of $5,000. Costs are also dependent on the time of day and travel required by the veterinarian, the supply of medication and consumables, whether suturing or medical imaging is required (Equine Veterinarians Australia, pers. comms. March 2021).
- Financial losses associated with the death of a horse resulting from illness or injury are difficult to estimate as it depends on the type of horse lost, and whether it is valued as a companion or is subject to sale or slaughter.

Feral horse and donkey management

- Feedback from Biosecurity South Australia, NSW National Parks and Wildlife Service and Parks Victoria (regarding their feral horse and donkey management programs) indicates their practices are already consistent with the proposed exception to the standard as they allow the mob to be transported together to avoid additional stress and risk of injury.
- Biosecurity South Australia raised that during muster of feral horses, it may be difficult to identify lactating mares in the instance that the foal gets separated from the mother during the muster.

Other stakeholders

- There is limited data available to reliably estimate other potential benefits and impacts for this proposal. Stakeholders who feel they may be impacted by the new requirements are strongly encouraged to specify possible benefits, impacts and concerns, with data to support their feedback.

4.3.4 Removal of hind shoes in certain situations

This proposal would require the removal of hind shoes from horses which are travelling in a group in a vehicle without segregation to sale or slaughter. The purpose is to minimise the severity of injuries in the event that horses kick each other during the journey.

The proposal reflects experimental studies simulating horse kicks by shod and unshod horses, which demonstrate there is a higher probability of bone fracture and injury by hard materials, (e.g., steel and aluminium shoes), compared to softer materials (e.g., polyurethane shoes) or unshod hooves (Joss, et al., 2019; Sprick, et al., 2017).

How the proposal addresses the objectives

The proposal for hind shoe removal will achieve a more reasonable balance between the welfare of the horses being transported and the interests of the persons transporting them and will reflect recent advances in scientific understanding around the reduction of injury by unshod hooves.

Table 6 - Evaluation of benefits and impacts for proposed hind shoe removal standard

Benefits	*Animal welfare* • The proposed standard will reduce the impacts of kicking injuries in journeys to saleyards and slaughter establishments, where horses often travel unsegregated. • Initial consultation found that most stakeholders agreed with this proposal, with support centring on the reduced risks of injury. *Alignment with international standards* • The WOAH Terrestrial Animal Health Code (WOAH, 2011) recommends that if horses are to travel in groups, their shoes should be removed.
Impacts	*Transport to processing facilities* • The impact of this requirement is expected to be minimal, as transporters advised during consultation that slaughter facilities already require or at least prefer shoes to be removed. A Queensland export abattoir confirmed that it already recommends that wherever possible horses arrive unshod in its Horse Supplier Code of Practice for Welfare and Transport of Horses. *Private horse owners* • Racing Australia, Racing Queensland and Harness Racing Australia did not indicate any impacts would arise for the racing industry from this proposal as it is not targeted at these stakeholders. Similar feedback is anticipated from other private horse owners, including those in the leisure and competition sector. *Other stakeholders* • Consignors to saleyards may be impacted if they are not currently removing hind shoes before transport. There may be farrier costs to remove shoes if a person is not competent to do this themselves. • Stakeholders who feel they may be impacted by the new requirements are strongly encouraged to specify possible benefits, impacts and concerns with data to support their feedback.

4.3.5 Space allowance

Space allowance combines two aspects:

- the floor area available to the horse to stand or lie in (often referred to as loading density and expressed as *area m^2 per head*); and
- the height of the compartment in which the animal is carried (also referred to as vertical clearance or headroom).

This proposal would amend space allowance provisions to:

- Add a new standard to require that a person who uses a vehicle to transport horses ensures that all horses have sufficient space to maintain a comfortable standing position and balance. Generally, this would involve either allowing sufficient space so that each horse can stand with their legs slightly wider than their hips and shoulders for balance, (although padded stall walls are sometimes used for balance), with their head at a neutral relaxed position, and with enough space so that they are not constantly in contact with walls and ceiling.
- Add a new standard to require that a person who uses a vehicle to transport horses ensures all horses either have sufficient space to lower their head below wither height on the vehicle or be provided with an opportunity to lower their head below wither height at least every four hours during the journey.

The existing standard requiring a vertical clearance of at least 2.2 m between the livestock crate floor and overhead structures[15] would remain unchanged.

Complementary guidelines would recommend that horses have sufficient space to spread their legs wider than their body to help maintain balance. Guidelines would include increasing the recommended floor area per head. However careful consideration would need to be given to the size of individual horses being transported, segregation requirements, and configuration of the vehicle to ensure the standards are met.

How the proposal addresses the objectives

Space allowance is identified in the scientific literature as a key welfare consideration. As such the proposals address the objective of reflecting recent advances in scientific understanding of horse welfare and physiology, taking into account the practical expertise of those who work with horses on a daily basis. The proposals for space allowance will achieve a more reasonable balance between the welfare of the horses being transported and the interests of the persons transporting them.

Table 7 - Evaluation of benefits and impacts for proposed space allowance standards

Benefits	*Animal welfare* • By requiring that each individual horse has sufficient room on board to maintain a comfortable standing position and balance, the risk of stress and injury for each horse will be minimised. • Sufficient space allowance is also important for a horse's respiratory health[16]. Allowing space for a horse to periodically stretch its neck and head downward allows for clearance of its respiratory tract (Stull & Rodiek, 2002; Raidal, et al., 1996; Houpt & Wickens, 2019)**.** • Respiratory travel sickness is common among horses transported over long distances and is often attributed to horses being prevented from lowering their head and poor vehicle air quality (Raidal, et al., 1997). The

[15] This does not apply to horse floats and two-horse trailers, which must adhere to the general standard SA3.1v.
[16] Note similar issues relating to allowing a horse to lower its head are discussed for the use of restraints.

need for horses to lower their heads was also recognised by stakeholders during initial consultation.
- A new supporting guideline (non-mandatory) would provide stakeholders with suggested ways to meet the standard.

Flexibility for all horses and journey types
- Recognising the variety of circumstances under which horses are transported, and the variability in horse shape and size and vehicle design, the outcomes-based approach will allow horse transporters to adopt a suitable solution for their individual circumstances.

Impacts

Vehicle design
- There may be a compliance cost to any transporters needing to change the design of their vehicle to comply with the space allowance requirements; or to transport fewer horses. The extent of this cost is unknown, as it is not known how many horse movements would be affected.
- Additionally, assessment of impacts here is difficult as there are currently no minimum standards for the design and construction of horse transport vehicles, and no data on the number of vehicle designs that would be non-compliant with the proposed standards.

Horses transported in livestock crates
- It is likely that the highest risk to horse welfare from inadequate space allowance is in the transport to slaughter sector, where horses are frequently loaded at a high density into an open livestock crate.
- However, there is only anecdotal evidence and no quantitative data on the proportion of horses being transported using these vehicles that do not have sufficient room to stand comfortably, maintain their balance and lower their head below wither height.
- For commercial, bulk loaded horses, it is acknowledged that higher load densities are considered more economical for the transporter. There may be financial impacts if a transporter needs to reduce load densities to be compliant with the space allowance requirements.

Private horse owners
- The density of single stalled horses for recreation/racing is typically not an issue given they are transported in vessels suitable for small numbers of animals.
- However, members of the racing industry noted that in some floats, chest bars may prevent a horse from lowering its head. Where chest bars need to be moved, financial impacts may occur.
- Members of the racing industry also raised that the proposals may be problematic for commercial operators that utilise onboard feed and water systems, as these systems may prevent a horse from lowering its head.
- Additionally, stopping every four hours to unload horses and allow them to lower their heads may be more stressful for the horses than not stopping. Further, a veterinarian advised a brief stop at these intervals is unlikely to make any difference to respiratory system during a journey.

Government agencies
- NSW National Parks and Wildlife Service advised that in their feral horse and donkey management program, animals are transported in groups and not in individual bays in their vehicles.

- Care must be taken to have enough horses in the bay that they can maintain their balance versus the horses not being so tightly packed that they cannot move. The latter is what the proposed standards seek to prevent.

Other stakeholders

- There is limited data available to reliably estimate other potential benefits and impacts for this proposal. Stakeholders who feel they may be impacted by the new requirements are strongly encouraged to specify possible benefits, impacts and concerns with data to support their feedback.

4.3.6 Use of restraints

This proposal would introduce a new standard that a person who ties a horse to restrain it during transport must either:

(a) use a method of tying that allows the horse to lower their head below wither height on the vehicle, or
(b) untie or loosen the restraint every four hours to allow the horse to lower their head below wither height.

Note: This standard would not require a horse to be tied – it only applies if a horse is tied.

Introducing a standard that provides for the minimum requirements of restraints is considered important for the safety of horses during travel. Stakeholders agreed that the appropriate use of a restraint is important to prevent too little or too much rope from being used, (e.g., to reduce the risk of entangling or allowing the horse to rear up during transport).

This proposal would provide handlers and transporters with the flexibility to choose an appropriate method for horse/s and their individual circumstances, if they choose to use a restraint during transport.

How the proposal addresses the objectives

The proposed standard for the use of restraints reflects current scientific knowledge about the risks of inappropriate restraint causing respiratory illness in horses. In addition, consultation to date indicates stakeholders agree that the appropriate application of restraints is important. The insights of equine stakeholders and their experience in handling their own animals has been incorporated into the proposal to build in flexibility, and allows the users to make decisions about what restraint technique works best for their circumstances, within the bounds of an outcomes-based standard.

Table 8 - Evaluation of benefits and impacts for the proposed use of restraints standard

Benefits	*Animal Welfare* • Minimises the risk of restraint-related injury and respiratory issues. *Flexibility for stakeholders* • Handlers have the ability to choose an appropriate restraint method for horse/s and their individual circumstances.
Impacts	*Short journeys* • No impacts expected for journeys of less than four hours. *Longer journeys*

	• The standard could affect transporters on longer journeys who currently tie horses in a way that would not comply with the proposal. There could be practical implications for needing to break a journey to loosen restraints during rest stops, or unload horses to give them the opportunity to lower their heads every four hours. *Compliance costs* • The standard could incur minor costs to transporters in identifying and learning a suitable restraint alternative method to achieve compliance. • Longer or different ties may need to be purchased as a one-off cost. *Cost of treating respiratory/travel sickness* • Veterinary intervention for treatment of respiratory/travel sickness can be high. Travel sickness often requires a longer period of hospitalisation and repeat diagnostics (i.e., blood tests and thoracic ultrasound), incurring costs from $1,500 to upwards of $5,000 (Equine Veterinarians Australia, pers comms. March 2022).

4.3.7 Bedding and flooring

This proposal would add the option of low-dust absorbent bedding to the existing standard regarding the requirement for non-slip flooring in any vehicle with stalls and pens used to transport horses.

Recommendations regarding the characteristics bedding and flooring should have to optimise horse welfare would be included in a complementary guideline. Note: The existing guideline on other bedding and flooring characteristics is proposed to be retained.

How the proposal addresses the objectives

The proposal to add the option of low-dust absorbent bedding to the existing standard regarding the requirement for non-slip flooring in any vehicle with stalls and pens used to transport horses will achieve a more reasonable balance between the welfare of the horses being transported and the interests of the persons transporting them. The insights of equine stakeholders and their experience in handling their own animals obtained through consultation have been incorporated into the proposal to build in flexibility and allows the users to make decisions about what bedding materials work best for their circumstances, within the bounds of an outcomes-based standard. The proposal also reflects current scientific knowledge about the importance of dust-free bedding materials to prevent respiratory illness.

Table 9 - Evaluation of benefits and impacts for proposed changes to bedding and flooring

Benefits	*Animal Welfare* • Supports horse respiratory health and minimises the risk of transport-related illnesses. *Horse Transporters* • Provides flexibility in the choice of materials. i.e., adds an option for low-dust absorbent bedding to the existing requirement for non-slip flooring in the standard.
Impacts	• No impact and/or compliance costs to all stakeholder groups, as it is proposed to provide more flexibility in the standard, while the

	recommendations around bedding and flooring are in the non-mandatory guideline.

4.3.8 Multi-deck trailers

Space allowance is an important factor for a horse's comfort during transit. When a horse is comfortable it can be transported over a longer period without excessive stress. The dimensions of each deck of multi-deck trailers, which are designed for cattle that do not stand as tall as horses, do not allow sufficient vertical clearance for most equids.

This proposal would introduce a standard that a person must not transport horses in a multi-deck vehicle or trailer, except where only the lower deck is used, and the space allowance (including vertical clearance) standards are met.

It is not clear the extent to which equid species (including horses, donkeys, ponies and miniatures) are currently transported in multi-deck trailers in Australia. While one stakeholder claimed that donkeys are transported in double-deck trailers from the Northern Territory to knackeries in South-East Queensland and South Australia, a Queensland processing facility advised they are not currently receiving donkeys in multi-deck trailers. Also, there are no facilities in South Australia that currently process horses.

New South Wales prohibits transport of any equid in multi-deck trailers without exception under its *Prevention of Cruelty to Animals Act 1979*. The use of these trailers for horses is also prohibited in the parts of the United States and is planned for federal prohibition under the *Horse Transportation Safety Act of 2021* (United States 117th Congress, 2021). The use of multi-deck trailers is also not recommended in Europe (European Commission, 2018).

How the proposal addresses the objectives

The proposal to prohibit the use of multi-deck trailers would achieve a more reasonable balance between the welfare of the horses being transported and the interests of the persons transporting them. Primarily, this proposal aligns to current scientific knowledge about the importance of sufficient space allowance to prevent injury and illness in transported horses.

Table 10 - Evaluation of benefits and impacts for proposed changes to multi-deck trailers

Benefits	*Animal Welfare* • The standard would reduce stress and the risk of injury and physiological issues during transport. • Better aligns Australia with international animal welfare standards regarding the transport of equids in multi-deck trailers.
Impacts	*Bulk transports using multi-deck trailers* • The profitability of journeys currently reliant on multi-deck vehicles may be reduced, as fewer animals can be transported simultaneously. *Government agencies* • Consultation with government biosecurity and environment agencies through the National Biosecurity Committee Environment and Invasives Sub-Committee indicates that multi-deck trailers are not currently being used to transport feral equids. *Other stakeholders*

- The value of harvesting feral donkeys in the Northern Territory (NT) has been considered over many years but the practicalities and financial returns on harvest and processing have proved a deterrent (DPIR, 2016). It is unlikely that there is any significant impact on future opportunities.

4.3.9 Fit for the intended journey

Fit for the intended journey is an important consideration before transport even begins. Assessment of being fit for the intended journey requires consideration of a number of factors including:

- body condition; and
- lameness.

The age of a foal when it is transported is also important, as foals are vulnerable when young.

Body condition

A matrix for scoring body condition is already set out in the standards and guidelines under GB8.6. Currently GB8.6 guideline recommends that horses of 0 (very poor) or 1 (poor) condition not be transported, except under veterinary advice, and for the shortest distance necessary.

This proposal would introduce a standard requiring that a horse with a body condition score of 0 or 1, which cannot be treated or humanely euthanised *in situ*, must only be transported under advice from a veterinarian. Such advice would need to be in written form except where it is impractical to obtain timely written advice without compromising the horse's welfare, (e.g., when the horse needs to be transported urgently to safety or for emergency treatment). The exception would not allow transport to a sale or processing facility. In circumstances where low body condition horses do need to be transported, the proposed standard would allow for expert input by a veterinarian regarding how to best manage the journey for their welfare. Allowing the advice to be verbal rather than written, where it is impractical to obtain timely written advice, would avoid delay in a genuine emergency.

It is expected that, given the current guideline has been in place since 2012, and the slaughter of emaciated horses is less likely to be for economic purposes, the transport of poor and very poor body condition horses is infrequent.

In elevating the current guideline to a standard, the aim is to encourage humane euthanasia *in situ* as an alternative to transport to a slaughter facility, without restricting the necessary movement of horses for veterinary treatment or rehabilitation, (e.g., to agistment or sanctuary).

Lameness

A matrix for scoring lameness is already set out in the standards and guidelines in GB8.7. The current standard (SB8.6) requires that a person must not transport a horse with an equine lameness score of 4 or 5 unless veterinary advice is obtained.

This proposal would amend the standard so that a horse with a lameness score of 4 or 5, that cannot be treated or humanely destroyed *in situ,* must only be transported under advice from a veterinarian. Such advice would need to be in written form, except where it is impractical to obtain timely written advice without compromising the horse's welfare. The exception would not allow transport to a sale or processing facility.

As with low body condition animals, it is reasonable to assume that the movement of lame horses may be required in emergency situations. However, it is also desirable to discourage the transport of lame horses to sale or slaughter, even under veterinary advice. In circumstances where lame horses need to be transported, (e.g., for veterinary attention), the proposed standard would allow for expert input by a veterinarian regarding how to best manage the journey for their welfare.

The majority of stakeholders indicated support for the proposed amendments to these standards during the initial consultation period.

Minimum age of foals for transport

Foals are transported for a variety of different reasons, including traveling with the mare to a breeding farm, moving to new land after purchase, or traveling to a veterinarian due to illness or injury of the foal or mare. Currently the standards and guidelines do not specify the minimum age for a foal to be transported.

The risks of transporting foals with unhealed navels are high. Unhealed foal umbilical stumps /navels can be a potentially serious condition requiring careful veterinary assessment and potential intervention. Veterinary advice (Australian Veterinary Association, pers. comms. June 2021) on the issue of unhealed navels is outlined below.

- There are significant risks to the foal if it was to be transported with an unhealed umbilical stump/navel either less than or over 7 days old.
- Bacterial contamination of the stump can result in infections, (e.g., septicaemia or an infection within the foal's developing leg joints).
- It is important that the stump does not become injured whilst it is healing or become prematurely detached.
- A decision on whether to transport a foal with an unhealed umbilical stump/navel should only be made after careful veterinary examination and a risk assessment.

Provided the foal stays healthy and has received adequate colostrum intake from the mare in the first 24 hours and is suckling normally from the dam, the navel should heal, and the umbilical cord stump should dry and detach from the abdomen in approximately 1 month.

This proposal would introduce a new standard that would prohibit a person from transporting a foal with an unhealed umbilical stump, except where the person has obtained veterinary advice that recommends the foal be transported, and any special provisions for the foal's welfare during transport have been identified and taken into consideration. The WOAH Terrestrial Animal Health Code (WOAH, 2021) specifies criteria for unfit animals such as mares in an advanced state of pregnancy and new-born foals with unhealed umbilical cord, among others. The same is required in Canada (Government of Canada, 2021).

How the proposal addresses the objectives

The proposals for fitness for intended journey would achieve a more reasonable balance between the welfare of the horses being transported and the interests of the persons transporting them. It ensures that a horse that is unfit to be transported receives either appropriate treatment or a humane death in-situ, rather than being transported in pain or distress to sale or slaughter for the profit of the consigner. Emergency transport is incorporated into the proposed standard, with a reasonable qualifier that this is only undertaken with veterinary advice, and for the shortest distance necessary. Further, the proposal reflects current scientific understanding, particularly around the risks associated with transporting foals with unhealed navels.

Table 11 - Evaluation of benefits and impacts of proposed changes to fit for the intended journey

Benefits	*Animal welfare* • Transport exacerbates and prolongs the suffering of animals in poor condition. The standard would encourage action other than transport to slaughter or sale, such as de-stocking or moving horses to agistment before they become too poor to travel, whilst allowing for emergency transport where necessary and reasonable. • The proposed standard for foal transport would minimise the risk of injury in this class of horse and reflects international standards on this matter.
Impacts	• Costs for a veterinary consultation and/or euthanasia could be high, particularly in areas where veterinary services are limited. Compliance costs could however, be limited to the minimal time and expense of a phone call to a veterinarian, and in some cases the production by a veterinarian of written confirmation of their advice. Note: It is expected that currently, horse owners intending to transport a lame horse will already have made the decision in consultation with a veterinarian, (e.g., who may have advised transport for treatment). *Transport of new foals* • People who need to transport a foal with an unhealed navel would be impacted by the new standard given the requirement to seek veterinary advice before transport. However, the standard would allow transport under emergency situations, (e.g., where veterinary advice is to transport the foal for veterinary attention). • The costs of treating a foal with complications of an unhealed navel can be high, ranging from $1,500 to $5,000+, depending on the extent of infection. Intensive care for foals can be very costly, often requiring intense monitoring and supplementation of plasma and repeat blood testing (Equine Veterinarians Australia, pers. comms. March 2021). *Breeders* • Breeders considering sending a mare for foal heat service may need to seek veterinary advice on whether her foal is ready to travel. However, this requirement is not expected to be excessively burdensome in these scenarios, as breeders would usually have already engaged a veterinarian to scan the mare to check she is ready for service. *Costs of euthanasia* • The cost of euthanising a horse ($300 to $500) depends on the technique used (i.e., a firearm or captive bolt would be less than intravenous barbiturates). Evaluation of the horse to determine that euthanasia is required may increase the fees, as can veterinarian travel time. Disposal can increase the costs by $600 to $1,000 (Equine Veterinarians Australia, pers comms. March 2022).

4.3.10 Mitigating welfare risks in extreme temperatures

New standards are proposed that would require a person who transports horses to:

- take appropriate action to manage welfare risks associated with extremes of weather during all stages of transport; and
- take corrective action at the first reasonable opportunity where a horse is observed to be suffering from heat stress.

Consultation with stakeholders to date provided a very clear message that there is no 'one-size-fits-all' solution to managing the risks of extreme temperatures, (particularly extreme heat). This is because vehicles vary dramatically in design, and because Australia has a range of climatic conditions. Further, journeys vary in length, as do horses' individual tolerance to heat. To address these challenges, the proposal limits the mandatory requirement to a high-level obligation to consider and minimise risks and respond as soon as practicable to a horse suffering heat stress. This allows stakeholders the flexibility to comply in accordance with their individual circumstances.

In the majority of situations, horse transporters will already be managing the risks of extreme temperatures well. Consultation to date has demonstrated many are acutely aware of the hazards of transporting animals in Australia's harsh climatic conditions.

The new standards would ensure that the risks are clearly identified, and where a transporter blatantly neglects to take appropriate action in relation to heat stress, enforcement action can be taken.

New guidelines developed with input from the Australian Veterinary Association and Equine Veterinarians Australia would be provided on identifying high-risk conditions, (based on temperature and humidity), and a range of recommendations would be provided on appropriate actions to minimise the risk.

Bass Strait journeys

The risks of heat stress during a Bass Strait crossing can be compounded because of ventilation risks and the inability to check animals in the vehicle deck while the vessel is underway due to maritime safety requirements.

A new standard specifically for Bass Strait journeys would require that a person transporting horses across the Bass Strait must ensure the vehicle is adequately lit and ventilated. This proposal acknowledges the importance of adequate ventilation in safeguarding horse/s welfare on such vessels. It reinforces but does not increase existing requirements, as adequate ventilation and lighting is already required under Marine order 43—Cargo and cargo handling—livestock made under the *Navigation Act 2012* (Cth).

How the proposal addresses the objectives

The proposal reflects current scientific knowledge about the importance of thermal comfort in horses to prevent serious illness and death during transport. The insights of equine stakeholders and their experience in handling their own animals has been incorporated into the proposal to build in flexibility and allows the users to make decisions about what extreme temperature management approaches work best for their circumstances, within the bounds of an outcomes-based standard.

Table 12 - Evaluation of benefits and impacts for proposed changes to mitigating the welfare impacts in extreme temperatures

Benefits	*Animal Welfare*

	• Creating an overall standard requiring the management and prevention of welfare issues associated with extremes of weather in Australia will help avoid welfare issues, including those associated with heat stress. • Alignment with Commonwealth legislation which sets out the requirements for vessels carrying livestock. • Detailed supporting guideline (non-mandatory) provides practical advice to stakeholders in meeting the standard. *Stakeholders* • The guidelines will be valuable for education and awareness of heat stress for stakeholders. • Support and flexibility for stakeholders in making appropriate decisions to manage animals during high-risk extremes of weather. • Prevention of economic loss where unmanaged heat stress leads to horse illness or death.
Impacts	• Impacts are difficult to quantify, given the flexibility available to horse transporters to decide how to comply. *Costs of treating moderate or extreme heat stress* • Veterinary intervention for heat stress can be costly as it typically involves intravenous fluids and nasogastric tubing, various medications and surveillance. • Horses suffering heat stress can mimic signs of Hendra virus. In a non-Hendra vaccinated horse, Hendra exclusion and personal protection equipment are additional considerations. • Depending on what is required, and the veterinarian's travel costs, estimates range from $800 to $3,000 (Equine Veterinarians Australia, pers comms. March 2022).

Consultation questions

18. **If Option 3 were implemented, in what areas would you need to change your current practice to comply, and how would this affect your costs?**

19. **Do you think there would be a net benefit to the welfare of horses under Option 3** (Yes/No and comments)

20. **Is Option 3 better than Options 1 and 2? Why or why not?** (Yes/No and comments)

Please provide data or dollar values to support your answers if possible.

Option 3 as a holistic approach

The effect of transport stress on horses is complex, as individual horses can be affected by stressors in different ways and to different degrees. Therefore, adopting the whole package of amendments, rather than only adopting a few of the amendments proposed, would provide the highest overall benefit to the majority of horses transported in Australia.

However, some proposals are targeted through the provision of, or by preventing access to, exemptions. For example, an exemption for the maximum journey time is provided for journeys across Bass Strait, but there are conditions (see 4.3.1). Certain horses that would otherwise be

prohibited from transport may be allowed to travel on veterinary advice, but this is not available for journeys to sale or slaughter (see 4.3.9). In certain situations, small horses may be able to travel in multi-deck trailers (see 4.3.8).

Stakeholders are invited to comment whether further targeting is desirable, for example for journeys over a certain distance or time period, or for a particular purpose, or in a particular type of vehicle.

Consultation question

21. Should any proposals only apply to some journeys? For example, journeys:
- **over a certain distance or time period**
- **for a particular purpose**
- **in a particular type of vehicle?**

If yes, which journey and why? Are there any other journeys that have not been specified but should be subject to specific proposals?

5. Consultation

5.1 Consultation plan

The purpose of this consultation RIS is to seek feedback, data, and input from the equine industry, equestrian groups, the livestock transport industry, transport regulators, animal welfare groups, equine veterinarians, and other interested stakeholders across Australia, on the three options proposed to achieve improvement in the welfare of horses during land transport. This will provide valuable assistance in the qualitative and quantitative assessment of each option.

Acknowledging the gaps in the data able to be obtained to date, stakeholders are strongly encouraged to provide any relevant data, statistics, or useful information relating to transport activities, (e.g., typical journey time, distances travelled, current practices) in their submissions to assist in the evaluation of options.

All stakeholder feedback received during the consultation period for this CRIS will be considered before final policy recommendations are put to the Australian Government via the AWTG and Agriculture Ministers' Forum.

5.2 Consultation to date

The AWTG undertook targeted consultation in February 2021 with the equine industry and livestock transporter stakeholders. Stakeholders provided valuable feedback on how the standards and guidelines could be improved to better reflect horse welfare. The proposals in this CRIS are informed by that feedback.

Following the AWTG's review of the current standards and guidelines, on 24 February 2021 the AWTG released the Land transport of horses - Consultation paper[17] (the Consultation paper) for a period of five weeks to 244 identified stakeholders (Appendix 2) encompassing a range of interests including breeding, racing, sport and recreational groups, veterinarians, processing facilities, as well as transporters and transport regulators. Stakeholders were also encouraged to share the Consultation paper within their networks.

The Consultation paper was based on an AWTG review of research and current international standards and legislation from Europe, New Zealand, Canada, the United States, and the World Animal Health Organisation, as well as the Martin Inquiry findings and recommendations, and animal welfare inspections and investigations. It sought initial feedback

[17] Copy available at https://www.agriculture.gov.au/agriculture-land/animal/welfare/awtg

on proposed options to improve the standards and guidelines. Stakeholders were also asked to suggest any alternative options, as well as types of data the AWTG should collect to support its analysis of horse land transport.

Input was received from 85 stakeholder groups and individuals across Australia, which is summarised in Appendix 3.

The AWTG also sought feedback on the impacts of the proposals for feral horse and donkey management programs via the national Environment and Invasives Committee. Technical input from the Australian Veterinary Association was also sought on managing the risks of heat stress.

Stakeholder feedback received to date has been invaluable. The proposals presented in Option 3 of this CRIS have evolved significantly since those circulated in February 2021. For example, some proposals have been amended to better reflect the experience of the equine industry. Other proposals have been withdrawn due to a lack of support.

6. Best option

Below is a summary analysis of the options presented in this CRIS based on current evidence. Following consultation, this section will be further developed in the final decision RIS.

Although **Option 1** (to maintain the *status quo*) would not result in additional costs or regulatory burdens to any stakeholder group and would be the least complex option to implement out of the three options, it will not address the problem or achieve the policy objectives. It is also possible that doing nothing will lead to inconsistent achievement of the policy objective across Australia, i.e., one or more jurisdictions may eventually act independently to amend their legislation to address the identified horse welfare issues. This would not be preferable for stakeholders that transport horses between jurisdictions, as differing requirements could create compliance challenges.

Option 2 (a non-regulatory approach), involving the addition of new/revised non-mandatory guidelines, and enhanced education and extension to the equine industry on best practice, will partially address the policy objectives. While education may shift some in the industry towards better practices, it is less likely to be effective when outdated animal welfare ideas are embedded in the current standards.

Option 3 (a regulatory approach) is currently considered to be the most effective option to address the problem outlined in section 1 and meet the policy objectives by:

- achieving a more reasonable balance between the welfare of the horses being transported and the interests of the persons transporting them; and
- reflecting recent advances in scientific understanding of horse welfare and physiology, taking into account the practical expertise of those who work with horses on a daily basis.

7. Implementation and evaluation

Following consultation, this section will be further developed in the decision RIS to outline communication, implementation, and evaluation plans specifically tailored to the preferred option (as required).

Implementation considerations are likely to include the complexity and variety of the industry, the circumstances under which horses are transported, and the costs and timeframes for

appropriate commencement of the option, (e.g., whether some requirements need to be phased in over time or can be immediately introduced).

If Option 1 is endorsed by the Australian Government as the preferred option in the decision RIS, no action would be required.

If Option 2 is endorsed by the Australian Government as the preferred option, state and territory governments would lead the development of additional education, extension communication and engagement materials on best practice in close consultation with the equine industry, to reflect changes to the guidelines. Industry groups would be approached to provide input into the materials and support the dissemination of messages given their expertise and representation of relevant stakeholders.

Implementation challenges and risks associated with Option 2 include the need to consider how to ensure education and welfare materials are developed in a timely manner and to a standard that will be used effectively by the industry.

If Option 3 is endorsed by the Australian Government, a new version of the of the *Australian Animal Welfare Standards and Guidelines for the Land Transport of Livestock 2012* will be published incorporating the changes to the horse-specific standards and guidelines.

Implementation approaches in each jurisdiction, including whether to mandate the standards through legislation, will then be a matter for each state and territory government to determine.

Implementation challenges and risks associated with Option 3 include the need to ensure the national standards and guidelines, and subsequent legislation across jurisdictions, are developed fit for purpose in a timely manner, while avoiding significant disruption to businesses reliant on horse transport.

7.1 Evaluation strategy

Evaluation plans will be developed if either Option 2 or 3 are preferred and will describe how the performance of the chosen policy will be evaluated against its objectives during and after implementation.

7.2 Communications strategy

A communication strategy would be developed for Option 2 or 3 to facilitate and enhance engagement and communication with key stakeholders. This may include information sessions or forums, supporting materials, (e.g., web content, fact sheets, communications kits and media), and use of existing channels to deliver messages including to state and territory governments, industry associations and non-government bodies as necessary about the implementation and evaluation of the chosen option in future.

Closing remarks

There are key welfare considerations and economic costs related to horse transport. Striving for best practice standards for horse transport, with welfare as the primary consideration regardless of a horse's value, is important for regulators, equine industry participants, the community, and of course the animals themselves.

The AWTG thanks all stakeholders for their interest in this consultation opportunity and looks forward to receiving all feedback, the consideration of which will assist in achieving improvement of the welfare of horses during land transport.

Appendix 1: Draft standards and guidelines for consultation

The draft standards incorporating proposed amendments as outlined in Option 3 of the CRIS are presented here. Note, the numbering is different to the current standards and guidelines because of the insertion of new provisions.

The guidelines are not intended to be mandatory and are presented alongside the standards so they can be read in context of one another.

Proposed amendments to the guidelines are not subject to any regulatory impact assessment as they are not mandatory. However, feedback on the guidelines is welcome.

Blue shaded text indicates a changed provision.
Orange shaded text indicates a new provision.
Grey shaded text indicates minor editorial changes to the provision (no change to policy).
No shading indicates provision unchanged, apart from being renumbered.

B8 Specific requirements for the land transport of horses

Standards

General standards in Part A also apply to minimise the risk to the welfare of horses during transport.

SB8.1 A person in charge must ensure that:

a) journey time does not exceed the time periods given below for each class of horse; and
b) horses are checked and offered food and water at the latest reasonable opportunity before the journey, and at the earliest reasonable opportunity after the journey; and
c) a spell no shorter than the minimum spell duration given below is provided between journeys.

Condition b) added to ensure that the change from 'time of water' to 'journey time' does not result in an unlimited time off water (and feed). Similar condition added to SB8.3.

Class	Maximum journey time (hours)	Minimum spell duration (hours)
Horses over six months old	12	8
Foals less than six months old	8	12
Lactating mares	8	12
Mares known to be more than 7.5 months pregnant, excluding the last 4 weeks (see also SB8.2)	8	12

'Time off water' is replaced by 'journey time'. 'Journey time' is defined in the existing standards as *"The period of time commencing when the loading of livestock in a container or on a vehicle for a journey starts, and finishing when the unloading of livestock at a destination is completed."*

SB8.2 A person must only transport a mare in the last four weeks of pregnancy under veterinary advice, unless the journey time is less than four hours.

SB8.3 A person transporting horses across Bass Strait may extend journey time beyond the maximum journey time specified in SB8.1 only if:

a) the vehicle has adequate provision for feeding and watering during the journey; and
b) horses are checked and offered food and water at the latest reasonable opportunity before embarking, and at the earliest reasonable opportunity after disembarking; and
c) a spell of at least the minimum duration specified in SB8.1 is provided no more than two hours after disembarking.

SB8.4 A person must not transport a horse of an equine lameness score of four or five (see lameness score assessment table below) unless:

a) the horse cannot be fully diagnosed or effectively treated or humanely destroyed in situ; and
b) the transport destination is not a slaughter establishment; and
c) the transport is in accordance with advice that has been obtained from a veterinarian, recommending the horse be transported and identifying any special provisions for the horse's welfare during transport; and
d) veterinary advice obtained under c) is in writing except where it is impractical to obtain timely written advice without compromising the horse's welfare.

Renumbered, conditions (a-d) added and lameness table moved up from the guidelines.

Score	Equine Lameness assessment
0	Lameness not perceptible under any circumstances
1	Lameness difficult to observe, not consistently apparent regardless of circumstances (e.g., weight carrying, circling, inclines, hard surface)
2	Lameness difficult to observe at a walk to trot in a straight line (e.g., weight carrying, circling, inclines, hard surface)
3	Lameness consistently observable at a trot under all circumstances
4	Lameness obvious, marked nodding, hitching and/or shortened stride
5	Lameness obvious, minimal weight bearing in motion or rest, inability to move

Source: American Association of Equine Practitioners Scale of Lameness Grading (1984).

SB8.5 A person must not transport a horse of body condition score of 0 or 1 (see table below) unless:

a) the horse cannot be effectively treated or humanely destroyed in situ; and
b) the transport destination is not a slaughter establishment; and
c) the transport is in accordance with advice that has been obtained from a veterinarian, recommending the horse be transported and identifying any special provisions for the horse's welfare during transport; and
d) veterinary advice obtained under c) is in writing except where it is impractical to obtain timely written advice without compromising the horse's welfare.

New standard. Body condition score table moved up from the guidelines.

Body Condition Score		Description
0	Very poor	Very sunken rump, deep cavity under tail, skin tight over bones, very prominent backbone and pelvis, marked ewe
1	Poor	Sunken rump, cavity under tail, ribs clearly visible, prominent backbone and croup, ewe neck (narrow and slack)
2	Moderate	Flat rump either side of backbone, ribs just visible, narrow but firm neck, backbone well covered
3	Good	Rounded rump, ribs just covered but easily felt, no crest, firm
4	Fat	Rump well rounded, gutter along back, ribs and pelvis hard to feel, slight crest
5	Very fat	Very bulging rump, deep gutter along back, ribs buried, marked crest, fold and lumps of fat

Source: Carroll CL and Huntington PJ (1988). Body condition scoring and weight estimation of horses. Equine Veterinary Journal 20(1):41–45.

SB8.6 A person must not transport a foal with an unhealed umbilical stump except where the transport is in accordance with advice that has been obtained from a veterinarian recommending the horse be transported, and identifying any special provisions for the foal's welfare during transport.

SB8.7 A person who uses a vehicle to transport horses must ensure that all horses have sufficient space in the vehicle to maintain a comfortable standing position and balance.

SB8.8 A person who uses a vehicle to transport horses must ensure all horses either:

a) have sufficient space to lower their head below wither height on the vehicle, or
b) are provided with an opportunity to lower their head below wither height at least every four hours during the journey.

SB8.9 A person who uses a vehicle to transport horses must ensure there is a vertical clearance of at least 2.2 m between the livestock crate floor and overhead structures. This does not apply to horse floats and two-horse trailers, which must adhere to SA3.1 v).

SB8.10 A person who transports a foal with its mother for a journey time of more than five hours must provide sufficient space on the vehicle for the foal to suckle and lie down.

SB8.11 A person who uses a vehicle which has stalls and pens to transport horses must ensure that:

a) each horse stall or pen can be accessed easily for feeding, watering, and visual inspection; and
b) the vehicle contains nonslip flooring, or low-dust absorbent bedding; and
c) the vehicle has walls of sufficient strength to withstand horse activity.

Renumbered structure improved for readability. Option of low-dust absorbent bedding added.

SB8.12 A person who uses a vehicle which is fully enclosed and environmentally controlled must ensure the vehicle has effective airflow with equipment providing at least 12 air changes per hour.

SB8.13 A person must not transport unhandled horses and handled horses in the same vehicle without appropriate methods of segregation.

SB8.14 A person must not transport stallions with other horses in the same vehicle without appropriate methods of segregation.

SB8.15 A person must ensure pregnant mares, mares with their foals, and animals with health conditions are segregated from other animals during transport.

SB8.16 A person may transport horses other than in accordance with SB8.13, SB8.14 and SB8.15 if the horses:

a) have been raised in compatible groups, or
b) are accustomed to each other, or
c) where separation will cause distress, or
d) where females are accompanied by dependent young horses and foals.

New exception to new standards SB8.13, SB8.14 and SB8.15.

SB8.17 A person who transports horses must take appropriate action to manage welfare risks associated with extremes of weather during all stages of transport.

SB8.18 A person who transports horses must take corrective action at the first reasonable opportunity where a horse is observed to be suffering from heat stress.
Note: see guidelines GB8.30 to GB8.36 for guidance on signs of heat stress and suggested corrective actions to address heat stress.

SB8.19 A person transporting horses to a saleyard or slaughter establishment in a vehicle without segregation must ensure that the hind shoes are removed from each horse.

SB8.20 A person must not use an electric prodder on a horse during the transport process.

SB8.21 A person who ties a horse to restrain it during transport must either:
a) use a method of tying that allows the horse to lower their head below wither height on the vehicle, or
b) untie or loosen the restraint every four hours to allow the horse to lower their head below wither height.
Note: this standard does not require a horse to be tied – it only applies if a horse is tied.

SB8.22 A person must not use a dog to move a horse during the transport process.

SB8.23 A person transporting horses across Bass Strait must individually stall them, except for mares with foals at foot, which must be stalled together.

Aligns to Marine order 43—Cargo and cargo handling—livestock under the *Navigation Act 2012* (Cwlth).

SB8.24 A person transporting horses across Bass Strait must ensure the vehicle is adequately lit and ventilated.

SB8.25 A person must not transport horses in a multi-deck vehicle or trailer, except where only the lower deck is used. This standard does not affect the application of other standards.

SB8.26 A person transporting a horse must make a written record of:
a) the times the journey started and ended; and
b) the time of last access to water, rest, and food.

Two options for record keeping are being evaluated in the consultation RIS (i.e. to require record keeping for all journeys, or only for commercial, multi-stage journeys).

SB8.27 A person must keep a record made for the purpose of complying with SB8.26 for a minimum of 12 months after the journey.

Guidelines

General guidelines are also recommended in Part A to minimise the risk to the welfare of horses during transport.

Fitness

GB8.1 Additional considerations for horse welfare should be made for long-distance travel for:

- horses over six months old after six hours journey time
- lactating mares after four hours journey time
- foals under six months old after four hours journey time
- mares in the third trimester of pregnancy after four hours journey time
- horses not able to be regularly checked for long periods in transit, such as the Bass Strait crossing.

These considerations should include:

- that the horses are fit for the remainder of the intended journey;
- that prevailing or predicted weather conditions are favourable;
- additional spell times during the journey;
- a longer spell time at the end of the journey prior to either continuing the journey or commencing work, exercise or competition; and
- the recent management of the horses before first loading.

Times reduced to reflect the shorter overall maximum journey times in SB8.1.

GB8.2 Conditions that could adversely affect horse welfare during transport should be considered in the assessment of fitness for the intended journey, in consultation with a veterinarian. Such conditions might include any signs of colic, raised or lowered body temperature, lethargy, and profuse diarrhoea, disease, or wounds or abscesses. A decision to transport a horse with the above conditions should be made only after considering the welfare of the animal concerned and the treatment and management options.

Added recommendation that assessment should be made in consultation with a veterinarian.

GB8.3 During a journey over 4 hours, one or more water, feed, rest, and exercise stops should be provided where horses are unloaded from the vehicle. Circumstances will differ between journeys, and considerations should include:

- the availability of safe and suitable facilities;
- any biosecurity restrictions or risks;
- the likely tolerance of the horses for additional handling, unloading and reloading;
- the relative benefit of providing a rest stop compared to a shorter overall travel time; and
- weather conditions for the duration of the journey.

Exercise during water and rest stops was previously recommended under another guideline. Exercise is now incorporated in this new guideline.

GB8.4 For journeys expected to be longer than eight hours, automatic access to feed and water should be provided during the journey where this can be achieved safely. The design of on-board feeding and watering systems should consider:

- minimising the risk of injury from equipment;
- minimising the risk of slip hazards from spillage;
- providing access to feed or water to all horses on the vehicle; and
- managing urine and faeces.

GB8.5 Mares in the last month of pregnancy should not be transported unless the following steps are taken:

- water-deprivation time should not exceed five hours;
- feed and water should be provided immediately before loading and on unloading;
- additional space should be provided on the vehicle to enable the mare to lie down;
- the mare should be separated from other horses; and
- veterinary advice should be sought.

Note: SB8.2 requires that veterinary advice be sought for journeys for mares for four or more hours.

Editorial change; removed reference to 'veterinary advice' here, as it appears in the dot points below.

Note added to remind about SB8.2.

GB8.6 Mares that have given birth should not be transported within seven days of foaling except when under veterinary advice or travelling for treatment. In this case, adequate space for lying down, and bedding, feed and water should be provided. Horses should also be able to be inspected.

GB8.7 Recently weaned foals should be given access to water during a journey to reduce the risk of dehydration.

GB8.8 A horse with a lameness score of 4 or 5 (being transported in accordance with SB8.4) should only be transported for the shortest distance necessary.

GB8.9 A horse below a body condition score of 2 (being transported in accordance with SB8.5) should only be transported for the shortest distance necessary.

Editorial change to for consistency with new GB8.8.

GB8.10 Where advice is obtained from a veterinarian recommending the transport of a foal with an unhealed umbilical stump (in accordance with SB8.6), such advice should be in writing unless it is impractical in the circumstances.

Food and water

GB8.11 Adult horses should be fed and watered at floor level every five hours and as soon as possible after unloading, with a suitable quality and quantity of feed and water to minimise colic risk.

Loading density

General standards in Chapter 5 apply to horses to ensure that the loading density is appropriate and is managed to minimise the risk to the welfare of livestock.

GB8.12 The table below provides a guide to the minimum recommended space allowance, however careful consideration should be given to the size of individual horses being transported, segregation requirements, and configuration of the vehicle to ensure the standards (SB8.7 to SB8.10) are met.

Reworded to emphasise that these are only recommendations and may not result in the standards being met.

Class of livestock	Floor area (m2)/head)
Adult horses	At least 1.44
Horses 18–24 months	At least 1.2
Horses 12–18 months	At least 1.08
Horses 5–12 months	At least 0.84

The previous note for this table stated floor area 'may increase by up to 10% for adult horses and up to 20% for young horses'. Those extra allowances have been incorporated in the table. These are only guidelines, so no regulatory impact.

GB8.13 Horses should be provided with sufficient space to spread their legs wider than their body to maintain balance.

GB8.14 The number of bays provided on the vehicle should be selected according to the duration of travel; the airflow capacity of the vehicle; the size, class and condition of the horses; and whether feed and water is to be provided during the journey.

GB8.15 Mares with foals and young horses should be provided with adequate protection from the risk of being trampled by the mare, while providing the opportunity for the foal to suckle, either by means of removeable partitions or unloading rest stops. Note also SB8.15.

Amended guideline to include further detail about how to provide protection to foals from trampling while suckling.

Vehicle and facilities

GB8.16 Pens or stall partitions should be strong and safe, allow air flow and be removable if an animal collapses.

GB8.17 Stalls should be at least 700 mm wide and 2350 mm long to accommodate larger horses and those over 15 hands tall.

GB8.18 Walls should be padded or constructed using a suitable material to avoid rubbing or injury, from a level of 75 cm above the floor to a height level with the animal's back. Padding may be required to protect the animals' head.

GB8.19 Bows on body trucks and single-deck semitrailers should be at least 2 m high and padded to their full length to a thickness of two cm of soft material.

GB8.20 Horses may baulk from hollow sounds caused by walking on ramps. This can be alleviated by using matting or providing earth, sand or sawdust on the floor of the ramp and vehicle.

GB8.21 Bedding or flooring should:

- provide cushioning;
- provide drainage or absorbency, without becoming slippery;
- be clean and dry at the start of the journey, with appropriate maintenance during the journey to manage ammonia and prevent slip hazards; and
- be cleaned or replaced between horse consignments.

Amended guideline to include further detail about bedding and flooring. Current guideline (GB8.19) does not cover bedding considerations.

Two-horse trailers

GB8.22 Where a single horse is being transported in a two-horse trailer, the horse should be placed on the driver's side of the trailer or float.

GB8.23 Where two horses are travelling in a two-horse trailer, the larger or heavier horse should be penned on the driver's side.

Handling

General standards in Chapter 5 apply to horses to ensure that the loading density is appropriate and is managed to minimise the risk to the welfare of livestock.

GB8.24 Horses that are unfamiliar to each other may become aggressive or stressed during the journey and should be segregated. The group should be assessed before loading to determine likely aggressive behaviour and whether segregation is needed.

GB8.25 Where segregation is provided to meet SB8.13 or SB8.14, it should allow social contact between horses but prevent kicking, trampling, or biting.

GB8.26 Horses should not be routinely sedated for travel. If sedation is necessary, it should be administered by a veterinarian. Sedated horses should be stabilised if possible, segregated and not unduly affected by the motion of the vehicle. Action should be taken immediately on identifying a recumbent horse to separate it from other horses to avoid injury.

GB8.27 Fitted hoods, blinkers, knee or hock caps, pads and bandages may protect horses during transport.

Sentence about rugged horses moved to new section of the guideline on managing heat stress.

GB8.28 Manual lifting of foals is permitted for animals that may have difficulty in negotiating ramps.

GB8.29 Unhandled horses should be trained in basic handling practices before transport.

'Unbroken' changed to 'unhandled'.

Managing heat stress

GB8.30 Prior to undertaking a journey, an assessment of the heat stress risk for the entire length of the journey, should be undertaken. The assessment should consider the following factors:

- expected ambient temperatures and relative humidity (for example, the Temperature-Humidity Index [THI]. THI greater than 32 may be expected to increase the risk of heat stress);
- expected wind speeds and directions, which may mean conditions could change during the journey, and may influence the perceived temperature;
- amount of solar radiation (e.g., overcast vs sunny day);
- expected journey time;
- the type of vehicle used to transport the horses, including the vehicle's ventilation, insulation and materials;
- horse factors which may increase risk, including increased fat coverage, (higher body condition score), dehydration, nervous temperament, inability to sweat (anhidrosis), strenuous exercise before the journey; and
- loading factors which may increase risk, including higher loading density and reduced airflow around each horse.

GB8.31 When transporting horses in circumstances of high heat stress risk, the person in charge should consider implementing some or all of the following strategies to mitigate the risk of heat stress:

- delaying the journey until the heat stress risk has decreased
- providing access to water during the journey
- providing additional rest breaks
- increasing natural or mechanical ventilation to enhance air flow through the crate or vehicle
- providing appropriate shelter such as a tarpaulin or shade cloth.

GB8.32 Horses should be monitored for signs of heat stress, which include:

Early signs

- sweating (including anhidrosis, or inability to sweat)
- rapid shallow breathing
- flared nostrils
- a rectal temperature above 39.0 °C

Serious signs

- dark and/ or discoloured gums
- depressed or agitated and distressed appearance

Emergency signs

- stumbling, staggering or uncontrollable gait
- anxious, irrational, or erratic behaviour (lashing out with hind limbs)
- collapse followed by convulsions

GB8.33 If a horse is showing signs of heat stress during a journey, the following actions should be taken:

- the vehicle should be stopped;
- remove the horse from the vehicle (if possible);
- spray the horse's head, neck, back and rump with a steady stream of cool water (ice can be added);
- give the horse access to clean cool water;
- move the horse to a shady, breezy area (if possible); and
- seek veterinary attention if the horse is showing serious/emergency signs of heat stress.

Treatment should continue until the horse's body temperature returns to the normal range (38 +/- 0.5 ˚C).

Moved from Vehicle and Facilities section.

GB8.34 Where horses are rugged, airflow should be appropriate so that horses do not overheat and become dehydrated.

GB8.35 Effective airflow may reduce the impact of heat during transport and travel sickness in horses. A mechanical means of forcing air circulation should be installed for enclosed vehicles, unless vents provide effective natural airflow.

Moved from Vehicle and Facilities section, and reworded (editorial change only for clarity).

GB8.36 For controlled environment vehicles, temperature gauges and the airflow system should be checked before transport and every three hours during transport. Alarms or a monitoring system should be fitted to alert the driver to any problem.

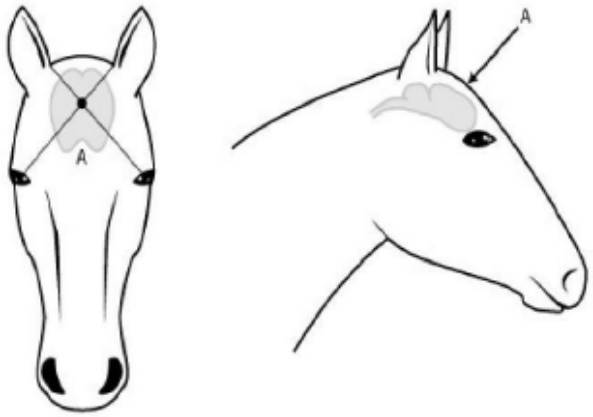
Moved from Vehicle and Facilities section.

Humane destruction

GB8.37 The recommended methods for humane destruction of horses over six months old and horses under six months old is a firearm aimed in the frontal position or lethal injection.

GB8.38 A rifle shot by the frontal method (see Figure B8.1) is the preferred method of humanely destroying horses. For adult horses, a rifle should deliver at least the muzzle energy of a standard 0.22 magnum cartridge. For foals, a rifle should deliver at least the muzzle energy of a standard 0.22-long rifle cartridge.

Figure B8.1 Humane destruction of horses using the frontal method



Note: (A) indicates the frontal method. The dot indicates the point of aim and the arrow indicates the direction of aim. The diagrams are representational and individual anatomical differences should be taken into account.

Changes to definitions

ventilation Passively or mechanically induced air movement sufficient to improve or maintain air quality, including to provide oxygen and remove excessive heat load and noxious gases.

New definition.

spell A spell is the provision of water, food and space to lie down to rest for the minimum time periods defined by standards for each species and class of animal and is a mandatory requirement when maximum journey time (for horses) or time off water (for other species) is reached before starting a further journey.

Words added (indicated in red) to reflect different approach for horses.

Water, food and space to lie down must be provided to all livestock, on a stationary vehicle or off a vehicle. Where animals are unloaded, a spell starts from the time all animals are unloaded and ends when animals are handled for reloading. Handling of animals should be kept to a minimum.

A spell may occur voluntarily before loading, mid-journey or at the completion of a journey.

Where livestock are spelled for 24 hours, any subsequent journey can be considered as a new water deprivation period.

A spell does not include time spent in curfew.

handled horse
A horse that is accustomed to human interaction and has at least a basic level of handling experience, including transport. Includes halter and saddle broken horses.

New definitions.

unhandled horse
A horse that is not accustomed to human interaction and has very limited or no handling experience, including transport. Includes unbroken horses and feral horses, (e.g., brumbies and donkeys).

Other changes

SA5.11 A person in charge must ensure that a dog that habitually bites deer, goats, ~~horses~~, pigs, poultry, sheep or emus and ostriches is muzzled if working these species.

'horses' removed to avoid any confusion regarding the use of dogs with horses, which is prohibited by SB8.22, regardless of whether they are muzzled or not.

Appendix 2: Stakeholders involved in consultation to date

List 1 – Stakeholders contacted to provide feedback during initial consultation on the *Land transport of horses - Consultation paper* on 24 February 2021

1. Animal Liberation Queensland
2. Royal Society for the Prevention of Cruelty to Animals (RSPCA) Queensland
3. Australian Veterinary Industry (AVA) Queensland Division
4. Queensland Veterinary Surgeons Board
5. Horse Biosecurity and Market Access Liaison Group (HBMALG)
6. Horse Transporter Pty
7. Burpengary Horse Transport
8. North Queensland Horse Transport
9. Sahara Pastoral
10. Brisbane Horse Transport
11. Ro's Horse Transport
12. Queensland Interstate Horse Transport (QIHT)
13. Gold Coast Horse Transport
14. Manuel Equine Transport
15. Dippy's Horse Transport
16. Rudd's Horse Transport
17. Goldners Horse Transport
18. Cedarspell Equine Services
19. MSD Transport Pty Ltd
20. Caloundra Livestock Transport
21. Camrandale Transport
22. Triangle Horse Sale South East Qld
23. BF Cross Transport
24. Livestock and Rural Transporters Association of Queensland (LRTAQ)
25. AgForce Queensland
26. Queensland Farmers' Federation
27. Meramist Abattoir
28. Rathdowney Knackery
29. Qld Chamber of Agricultural Societies
30. Racing Queensland
31. Thoroughbred Breeders Qld Association
32. Standardbred Association Queensland (SAQ)
33. Qld Endurance Riders Association
34. Breeders Owners Trainers and Reinspersons Association (BOTRA)
35. Queensland Racehorse Owners Association (QROA)
36. Donkey Society of Queensland
37. Equestrian Queensland
38. Queensland Polo Association
39. Queensland Polocrosse Association Inc.
40. Pony Club Queensland
41. Qld Horse Council (QHC)
42. Police Legislation Group (Qld)
43. Office of Racing
44. Department of Transport and Main Roads (TMR)
45. Local Government Association Queensland (LGAQ)
46. Racing NSW
47. Australian Turf Club
48. Harness Racing NSW
49. Equestrian NSW
50. NSW Farmers
51. NSW Polo Association
52. Jumping NSW (horse)
53. RSPCA NSW
54. Animal Welfare League NSW
55. NSW Police (Rural Crime Prevention Team)
56. Livestock, Bulk and Rural Carriers Association (LBRCA)
57. University of Sydney Faculty of Veterinary Science
58. Charles Sturt University School of Animal & Veterinary Sciences
59. NSW Local Land Services, Business Partner Animal Biosecurity and Welfare (Strategy and Engagement)
60. NSW DPI Agriculture - Livestock Systems
61. Equine International Airfreight
62. IRT Horse Transport (flights)
63. New Zealand Bloodstock (NZB)
64. Platinum Horse Transport
65. Reliable Horse Transport
66. Goldners Horse Transport
67. Sydney Horse Transport
68. Barry Flynn Horse Transport
69. Cabot Horse Transport
70. Connected Horse Transport
71. Cross Country Horse Transport
72. Don Robb Horse Transport
73. Jones Horse Transport
74. Magnificent Horse Transport
75. Maitland Horse Transport
76. Prestige Racehorse Transport
77. Scone Equine Transport
78. Southern Cross Horse Transport
79. Tamworth Horse Transport
80. Ultimate Horse Transport
81. Royal Society for the Prevention of Cruelty to Animals (RSPCA) Wester Australia
82. Racing and Wagering WA (RWWA)
83. WA Farmers (WAF)
84. Pastoralists and Graziers Association of WA (PGA)
85. Livestock and Rural Transport Association of WA (LRTAWA)
86. Murdoch University – School of Veterinary and Life Sciences
87. Kimberley Pilbara Cattlemen's Association (KPCA)
88. Australian Veterinary Association – WA Division
89. Equestrian WA (EWA)
90. Pony Club WA
91. Adult Riding Clubs Association of WA (ARCA)
92. Horse Riding Centres of WA
93. WA Horse Council
94. WA Police Force – Mounted Division
95. Livestock and Rural Transporters of Victoria
96. Livestock Saleyards Association of Victoria
97. Riding for the Disabled Association of Victoria
98. Victorian Farmers' Federation
99. Victorian Police Mounted Branch
100. Harness Racing Victoria Ltd
101. Office of Racing
102. Racing Victoria Ltd
103. Animal Liberation Victoria
104. Animal Welfare Advisory Committee (AWAC)
105. Animal Welfare Science Centre

106. Australian Veterinary Association - Victorian Branch
107. Project Hope Horse Welfare Victoria Inc.
108. Royal Society for the Prevention of Cruelty to Animals (RSPCA) Victoria
109. Thoroughbred Breeders Victoria
110. Australian Pony Stud Book Society Inc. (Victoria & Tasmania Branch)
111. Harness Breeders Victoria
112. Donkey Society of Victoria
113. The Victorian Arabian Horse Association Inc.
114. Victorian Pinto Society Inc.
115. Australian Carriage Driving Society - Victorian Branch Inc.
116. Harness Horse Society of Victoria
117. Equestrian Victoria
118. Horse Riding Clubs Association of Victoria
119. Polocrosse Association of Victoria Inc.
120. Pony Club Association of Victoria
121. Southern Campdraft Association
122. Standardbred Pleasure & Performance Horse Association of Victoria Inc.
123. Victorian Endurance Riders Association
124. Victorian Polo Club
125. Victorian Quarter Horse Association
126. Victorian Reining Horse Association of Victoria
127. Garry McPhee
128. Ron Woodall
129. Breez Horse Transport
130. Chevor Transport
131. Combined Horse Transport
132. Complete Horse Transport
133. East Coast Horse Transport Victoria
134. Equilink Horse Transport Services
135. GC Horse Transport
136. Condo's Horse Transport
137. Hanns Horse Transport
138. Horse Taxi Mornington
139. Kelly's Horse Transport
140. Lightning Horse transport
141. Matt Gobel Horse Transport
142. Prestige Horse Transport
143. Silverbird Animal Transport
144. South West Horse Transport
145. Western District Horse Transport
146. HorseSA
147. Office for Recreation, Sport and Racing
148. Department for Transport and Infrastructure
149. Champions Horse Transport
150. Victory Horse Transport Australia
151. Horseman Horse Floats
152. The Float Centre
153. Australian Campdraft Association
154. Northern Cowboy Association
155. Equestrian NT
156. Pony Club Association NT
157. NT Polocrosse Association
158. Top End Drum Runners
159. Riding for the Disables
160. Mounted Police
161. Australian Stock Horse Society NT
162. Thoroughbred Racing NT
163. Northern Territory Cattlemen's Association
164. NT Animal Welfare Advisory Committee
165. Charles Darwin University
166. Dr Ken Oliver (equine veterinarian)
167. Tasmanian Racing
168. Tasmanian Office of Racing Integrity
169. RSPCA Tasmania
170. Tasmanian Horse Transport
171. Legacy Equine Transport
172. RNV Horse Transport
173. Tasmanian Farmers and Graziers Association
174. Australian Maritime Safety Authority (AMSA)
175. Searoad Holdings
176. TT Line
177. Furneux Group Transport
178. Equestrian Tasmania
179. Pony Club of Tasmania
180. Tasmanian Equine Endurance Riders Association
181. Rodeo Tasmania
182. Tasmanian Polocrosse Association
183. RDA Tasmania
184. Northern Hunt Club
185. Tasmanian Breeders (TB and STB)
186. Animals Australia
187. Royal Society for the Prevention of Cruelty to Animals (RSPCA) Australia
188. Animal Health Australia (AHA)
189. Thoroughbred Welfare Initiative Thoroughbred Aftercare Welfare Working Group
190. Australian Trucking Association (ATA)
191. National Heavy Vehicle Regulator (NHVR)
192. Transport & Logistics Industry Skills Council
193. Hanns Horse Transport
194. Southern Cross Horse Transport
195. Sydney Horse Transport
196. Lynx Group Livestock Transport
197. Road Trains of Australia Pty Ltd
198. Ultimate Horse Transport
199. Australian Livestock and Rural Transporters Association (ALRTA)
200. National Farmers' Federation (NFF)
201. Australia Livestock and Property Agents Association (ALPA) Ltd
202. Australia Livestock Markets Association (ALMA)
203. The Australian Lot Feeders' Association (ALFA)
204. CSIRO
205. Racing Australia 205.Harness Racing Australia
206. Australian Trail Horse Riding Association
207. Australian Endurance Riders Association (AERA)
208. Australian Trainers Association (ATA)
209. Australian Stock Horse Society Ltd (ASHS)
210. Australian Quarter Horse Association (AQHA)
211. Australian Appaloosa Association (AAA)
212. Australian Hunter & Show Horse Association (AHSHA)
213. National Pleasure Horse Association (NPHA)
214. Affiliated Donkey Societies of Australia
215. Commonwealth Clydesdale Horse Society Australia
216. Circus Federation of Australia
217. Australian Horse Riding Centres NSW
218. Australian Warmblood Horse Association Ltd (AWHA)
219. Australian Bushmen's Campdraft and Rodeo Association (ABCRA)
220. Australian Polo Federation
221. National Campdraft Council of Australia (NCCA)
222. Australian Campdraft Association (ACA)
223. Pony Club Australia
224. Miniature Horse Association of Australia Inc (MHAA)
225. Agricultural Societies Council Horse Committee

226. National Rodeo Council of Australia
227. Australian Professional Rodeo Association
228. National Rodeo Association
229. Show Horse Council Australasia Inc
230. Australian Horse Industry Council (AHIC)
231. Polocrosse Association of Australia
232. Federal Department of Agriculture, Water and the Environment
233. Coalition for the Protection of Racehorses
234. People for the Ethical Treatment of Animals (PETA) Australia
235. Voiceless
236. Animals' Angels
237. Animal Care Australia (ACA)
238. The Animal Welfare Collaborative (TAWC)
239. Australian Meat Processor Corporation (AMPC)
240. Aus-Meat
241. Aus-Qual
242. MINTRAC
243. Zoo and Aquarium Association Australasia (ZAA)
244. Dr Barbara Padalino, University of Bologna, Italy.

List 2 – Stakeholders who provided feedback on the *Land transport of horses - Consultation paper* on 24 February 2021 (written submissions, meetings, workshops)

1. Animal Liberation Queensland
2. Royal Society for the Prevention of Cruelty to Animals (RSPCA) Qld
3. Australian Veterinary Industry (AVA) Queensland Division
4. Animal Welfare Advisory Board (AWAB)
5. Rudd's Horse Transport
6. Wild's Livestock Transport
7. Crane Livestock Transport
8. AgForce Queensland
9. Meramist Abattoir
10. Racing Queensland
11. Harness Racing Queensland
12. Donkey Society of Queensland
13. Lucies Haven Waler Horses & Teamster Donkeys
14. Equestrian Queensland
15. Pony Club Queensland
16. Queensland Racing Integrity Commission
17. Eddie Gill
18. Craiglea Stud
19. Ultimate Horse Transport
20. Platinum Horse Transport
21. NSW Police Force
22. NSW Animal Welfare Advisory Council (AWAC) member
23. NSW Animal Welfare Advisory Council (AWAC) member
24. NSW Animal Welfare Advisory Council (AWAC) member
25. Magnificent Horse Transport
26. Cooma Local Land Services
27. Thoroughbred Racing NT
28. NT Mounted Police
29. NT Cattlemen's Association
30. Australian Veterinary Association (AVA)
31. Equestrian WA (EWA)
32. Racing and Wagering WA (RWWA)
33. WA Horse Council.
34. Horse SA
35. TT Line/Spirit of Tasmania
36. Royal Society for the Prevention of Cruelty to Animals (RSPCA) TAS
37. Biosecurity Tasmania
38. Livestock and Rural Transporters of Victoria
39. Victorian Police Mounted Branch
40. Animal Welfare Science Centre
41. Project Hope Horse Welfare Victoria Inc.
42. RSPCA VIC
43. Gill Brothers Rodeo
44. Ron Woodall
45. Combined Horse Transport
46. Prestige Horse Transport
47. Australian Veterinary Association (VIC)
48. Animal Welfare Advisory Committee (VIC)
49. Liz Walker (Animal Welfare Advisory Committee (VIC))
50. Glenys Oogjes (Animal Welfare Advisory Committee (VIC))
51. Ellen Jongman (University of Melbourne)
52. Breez Horse Transport
53. Complete Horse Transport
54. Harness Breeders Victoria
55. East Coast Horse Transport
56. Polocrosse Association of Victoria Inc.
57. Pony Club Association of Victoria
58. Joseph Woodall and Sons (Woodall Rodeo Promotions)
59. Racing Victoria
60. Animals Australia
61. Coalition for the Protection of Racehorses
62. Animals Angels
63. Animal Care Australia (ACA)
64. Sentient
65. Royal Society for the Prevention of Cruelty to Animals (RSPCA) Australia
66. Animal Health Australia (AHA)
67. Equine Veterinarians Australia (EVA)
68. Thoroughbred Welfare Initiative Thoroughbred Aftercare Welfare Working Group
69. National Heavy Vehicle Regulator (NHVR)
70. Australian Livestock and Rural Transporters Association (ALRTA)
71. Cattle Council of Australia
72. Dr Barbara Padalino
73. Qld Chamber of Agricultural Societies
74. Harness Racing Australia
75. Australian Endurance Riders Association (AERA)
76. Australian Stock Horse Society Ltd (ASHS)
77. Australian Campdraft Association (ACA)
78. Pony Club Australia
79. Australian Horse Industry Council (AHIC)
80. Julie Fiedler
81. Meet Our Horse Meat
82. Australian Equire Unification Scheme
83. Stan Johnston
84. Pam Treeby
85. Arieon Equestrian

Appendix 3: Consultation outcomes from February 2021

Summary of feedback received during consultation on the Consultation paper released in February 2021[18].

Journey time/time off water

Stakeholders generally approached this topic as 'journey time' rather than 'time off water'. As well as being intuitive to stakeholders, 'journey' time is a more useful concept than 'time off water' because it captures rest as well as opportunity for feed and water. 'Journey time' is currently defined as 'the period of time commencing when the loading of livestock in a container or on a vehicle for a journey starts and finishing when the unloading of livestock at a destination is completed'. Recognising this, 'maximum time off water' has been replaced with 'maximum journey time' in the proposals.

There was no support among stakeholders for 36-hour journeys and there was virtually no support for journeys longer than 12 hours. Based on this feedback, a maximum journey time of 12 hours before a spell of eight hours for horses over six months old, and a maximum journey time of eight hours before a 12-hour spell for lactating mares, foals less than six months old, and mares more than seven and a half months pregnant is proposed.

While the proposed maximum journey time does not reflect European Standards or the majority of the scientific literature, the reduction of maximum journey time allowed is considered to be a significant improvement on the current standards and are achievable in Australian conditions. Additionally, the proposal aligns with the maximum period an individual heavy vehicle driver may work. After 12 hours the driver is required to rest for eight hours, and the horse is provided with a spell of eight hours.

Water and feed

There were a range of conflicting views on providing water and feed during a journey. For example, one stakeholder group commented that horses need to be fed more frequently than every eight hours to maintain gastrointestinal function, and that transporters routinely provide ad lib hay during a journey. Other stakeholders claimed that feeding or watering horses during transport can cause motion sickness, travel sickness and 'choke', while others routinely water without issue. Another group stated that feral donkeys and horses tolerate long periods without water. Some stakeholders commented on the likely increase in urine if horses were watered more frequently, with an associated risk of ammonia build-up and slip hazards.

There was little support for a proposed option (in the February 2021 consultation paper) to provide continuous on-board feed and water instead of stopping to provide feed and water. This was based on a range of concerns including injury and slip hazards, increased transport weight, and a lack of equipment on existing vehicles. The provision of on-board feed and water on journeys exceeding eight hours is now proposed as a guideline only and acknowledges that automatic feed and watering systems on board should only be used if safe for the animals and operation of the vehicle.

[18] View a copy of the February 2021 Consultation paper on the AWTG website: https://www.awe.gov.au/agriculture-land/animal/welfare/awtg

Rest

There was limited support for four hourly stops for water without unloading as proposed in the February 2021 consultation paper. In general, the following concerns were raised by stakeholders:

- Horses that are not used to regular stops can become agitated when the vehicle stops, as they may assume that they have arrived at the destination and behave as though they are ready to be unloaded.
- A 30-minute stop will not guarantee a horse will drink, or that all horses will be able to access limited water points.
- It is not desirable to lengthen overall journey time with regular stops. Some stakeholders made this comment in the interest of the horse, but there were also important operational considerations for transporters.

Stops where horses are unloaded for a rest after a greater time on the road were generally better supported by stakeholders. One stakeholder group recommended longer stops as the journey progressed, e.g., four hours stop after eight hours travel, six hours stop after 12 hours travel.

As noted above in relation to maximum journey time, the revised proposal now aligns with heavy vehicle driver rest periods.

Bass Strait journeys

Transporting horses on trucks on roll on/roll off seagoing vessels differs from most land transport situations. Key stakeholders in this transport area provided operational details for these journeys. The journey across Bass Strait typically lasts 12 hours, and access to vehicles and animals while a vessel is underway is rarely possible for safety reasons. However, existing regulations under the *Navigation Act 2012* (Cwlth) already require a vehicle containing livestock carried on a vessel to have adequate provision for feeding and watering (and ventilation).

In practical terms it will be difficult to comply with a 12-hour maximum journey time. It is therefore proposed to provide an exception to journey time for Bass Strait, requiring that horses be checked and offered food and water at the latest opportunity before loading onto the vessel, and at the earliest opportunity after unloading from the vessel, and that a spell is provided no more than two hours after disembarking.

The exception will depend on, among other things, the vehicle having adequate provision for feeding and watering that is consistent with existing *Navigation Act 2012* (Cwlth) requirements. ‘Adequate provision’ is not defined but would be supported by a new guideline which recommends that automatic access to feed and water be given on a journey longer than 8 hours.

Record keeping

The February 2021 consultation paper proposed that records be kept in relation to access to water for any journey. However, it became clear that access to feed and rest should also be recorded for effective compliance and enforcement.

Thirty submissions were received that contained feedback on the record keeping proposals. Some stakeholders considered that records should only be kept for longer journey time. However, logically it is necessary to record a start and finish time to determine whether a 'longer' journey time threshold had been reached.

Others suggested that current transport industry and National Heavy Vehicle Regulator logbook standards for rest stops are sufficient. Approximately half of the stakeholders who commented on the proposal suggested a special form be specified for journey records (e.g., a form similar to the National Vendor Declaration form). To minimise regulatory burden and avoid the need to maintain a form in legislation, the proposal allows transporters to decide how and where to keep the record, provided the record contains the required information set out in the standard. The record will need to be in a format that can be made available for inspection when required and provided to subsequent transporters (if any) and receivers, and must be retained for at least 12 months after the journey.

Segregation of animals

The February 2021 consultation paper's proposals to deal with the mixing of handled and unhandled horses were mostly supported or partially supported by stakeholders. This issue is mainly relevant to horses being transported to sale or slaughter in multipurpose livestock crates and boxes, where methods of segregation are limited or non-existent. Feedback indicated that most dedicated horse transport vehicles, (e.g., floats and trailers used by sport and leisure horse users), already include methods of segregation, (e.g., barriers or dividers). Several commercial livestock transporters also advised they already use trucks that have individual bays or dividers. Further, many do not load handled and unhandled horses given the safety risks to handlers and the animals.

Feedback indicated that exceptions to the proposals are needed for certain horse types.

- One rodeo operator shared that they have successfully transported stallions in the same group compartment with mares they are familiar with.
- Some stakeholders suggested an exemption for companion or coacher horses when transporting private leisure or sport horses.
- Some stakeholders said that handled horses can be beneficial in settling less handled horses.
- Brumbies (feral horses) are social and have strong hierarchical relationships within their groups. These groups are accustomed to living together and become distressed and agitated when separated.

Exceptions similar to the European standards are therefore proposed. The European standards do not apply "where the animals have been raised in compatible groups, are accustomed to each other, where separation will cause distress or where females are accompanied by dependent young".

Defining 'handled' and 'unhandled' horses

In the current standards and guidelines, the terms 'handled' and 'unhandled' are not used; instead, the terms 'broken' and 'unbroken' are used without definition. Previous discussions within AWTG determined that broken/unbroken were confusing terms and typically indicate whether a horse has been started under saddle, which is irrelevant in the context of the standards and guidelines as they cover all equids. A horse's willingness to be led onto a

vehicle is, however, related to whether they have been previously handled, even if only with a halter. Handled and unhandled will therefore replace the terms broken and unbroken and be properly defined in the standards and guidelines glossary.

Removal of hind shoes

The February 2021 consultation paper's proposal to elevate and amend current guideline GB8.27 was mostly supported by stakeholders in the first round of consultation. Supporters acknowledged the risk of kicking injuries in unsegregated groups of horses. These comments are consistent with recent experimental studies simulating horse kicks by shod and unshod horses (Joss, et al., 2019; Sprick, et al., 2017). The studies concluded there is a higher probability of bone fracture and injury by hard materials (e.g., steel and aluminium shoes) compared to softer materials (e.g., polyurethane shoes) or unshod hooves. Stakeholders queried if all shoes should be removed in these situations. Some commercial transporters noted that some abattoirs already require at least the hind shoes to be removed for transport but prefer all shoes to be removed. Removal of all shoes would be a convenience from a processing perspective rather than a significant benefit to welfare. The proposed standard is for the removal of hind shoes only, and where transport is to a saleyard or slaughter establishment in a vehicle where horses are not segregated.

Space allowance

The February 2021 consultation paper's proposals relating to space allowance received mixed feedback from stakeholders. The proposed space allowance dimensions were poorly supported. For example, several submissions called for length and width to be specified, rather than, or in addition to, minimum area per animal. The most common concern was that too much space would allow too much movement and risk the horse becoming stuck, cast or unable to use the walls for support. This concern was shared across a range of stakeholders including transporters, veterinary, sport and welfare organisations.

The revised space allowance proposals therefore do not specify area per animal, but instead require that all horses have sufficient space in the vehicle to maintain a comfortable standing position and balance. The existing guidelines on area per horse are being retained, but the recommended area (m^2/head) is being increased by 10% for adult horses and 20% for young horses.

Regarding vertical clearance, the proposal to specify 1.5 times the wither height of the tallest horse was not well-supported. Stakeholder concerns included:

- That the horse's ability to lower its head is more important for good respiratory health than the ability to raise its head.
- Stakeholders were not aware of any evidence that there are current welfare issues with vertical clearance.
- A belief that allowing a full range of motion is dangerous as the animal can rear up or become entangled.
- Difficulty in accommodating large horses in current floats and vehicles.
- Financial impacts of replacing or upgrading floats.

The existing standard that requires a vertical clearance of at least 2.2 m between the livestock crate floor and overhead structures will be retained (this does not apply to horse floats and two-horse trailers which must adhere to SA3.1v, i.e., any vehicle used to transport

livestock must have sufficient vertical clearance to minimise the risk of injury). In addition, a new standard will require all horses either to have sufficient space to lower their head below wither height on the vehicle or to be unloaded at least every four hours to allow for them to lower their head below wither height. The ability for a horse to lower its head at least every four hours was recognised by many stakeholders as being vital to maintain healthy respiratory function.

The February 2021 consultation paper's proposal to recommend space to lie down was supported by animal welfare organisations but were not supported by transporters and horse and racing industry stakeholders. Some stakeholders proposed that, for healthy adult horses, more frequent stops for rest would be better than providing space to lie down on a vehicle. There were a range of concerns raised, including:

- a horse lying down is at risk of being injured, trampled, trapped under a partition, tripping or kicking another horse, or becoming cast (being unable to rise)
- current floats cannot accommodate the extra space for horses to lie down
- that space to lie down (acknowledging the risks above) is only needed for foals, pregnant mares, or poor or sick horses
- a belief that lying down is unnecessary due to flight nature and/or ability of horses to sleep standing up.

In relation to the last point, scientific literature indicates that lying down at least for a proportion of a 24-hour period is essential for a horse's health and well-being. Studies on equine time budgets, indicate that horses spend 15% to 20% of their time lying in the late night/early morning, but during the remainder of the day, only 1% to 5% of their time lying. Rapid eye movement (REM)-sleep is part of a complete sleep cycle. It occurs only while the horse is lying due to its associated complete muscle relaxation. When horses don't lie down, REM-sleep cannot occur. If a horse falls into REM-sleep while standing it can collapse because of its relaxed muscles. Collapse can cause severe injuries and lack of sleep can cause behavioural problems.

The proposal to limit journey length to 12 hours means that most horses will not require space to lie down. However, on long journeys horses should be given opportunity to lie down (e.g., during a spell, or on board, if the vehicle is suitable).

The revised proposal only requires that foals have space to lie down. Mares being transported in their last four weeks of pregnancy or in the week post-partum, and sick or low body condition horses are also only permitted to be transported under veterinary advice. In these cases, a veterinarian may or may not specify space to lie down in their advice, depending on the circumstances.

Multi-deck trailers

The February 2021 consultation paper proposed to prohibit the transport of horses (including donkeys, ponies, and miniatures) in double-deck trailers. Recognising that there are some triple-deck trailers which are also unsuitable for horses, the proposal now relates to any 'multi-deck' trailer. The prohibition of multi-deck trailers will apply to all journeys.

A transport stakeholder commented that when horses travel in all levels of a multi-deck trailer, the horses on the lower deck generally become stressed. Another stakeholder cited a study (Stull, 1999) that found about three times the injury rates on double deck trailers

versus single-deck trailers. This study also showed that certain stress indicators were slightly lower in double deck trailers, but other factors (e.g., ventilation design of the single deck trailers and assembly conditions) were considered by the authors to contribute to stress. On balance it was considered that there are too many risks to the welfare of horses associated with transporting horses on multi- deck trailers to allow it to continue without restriction.

Recognising stakeholder comments that some smaller horses (e.g., donkeys, ponies and miniatures) may be able to stand comfortably in a multi-deck trailer, it is proposed to allow for horses to travel in multi-deck trailers if only the lower deck is used, and the space allowance (including vertical clearance) criteria are met. Note that in New South Wales, all transport of horses on multi-deck trailers is prohibited, without exception.

Bedding and flooring

The February 2021 consultation paper proposed to introduce a standard to require bedding on journeys of longer than 24 hours. A guideline recommending bedding be one centimetre thick for every 100 km of journey, and cleaned, replaced or refreshed at least every 24 hours was also proposed. The guideline proposed that bedding should be dry, clean and absorbent, and dust and splinter free (e.g., composed of soft wood shavings or straw).

Common concerns expressed by stakeholders on this issue included:

- the impact on air quality in terms of dust, ammonia and fungus and risks to horse respiratory health
- difficulties in cleaning and disposing of used bedding during a journey
- the potential for bedding to become slippery when saturated
- inadequate research to support prescriptive specifications.

A number of stakeholders stated a preference for non-slip rubber matting or other bedding or flooring materials with grip, absorbent, drainage and cushioning characteristics. Rubber matting appears to be widely used, particularly among racing transporters and in purpose-built horse trucks. There appeared to be good awareness among horse transporters of the hazards, and of factors that influence the choice of flooring and bedding.

Fitness for the intended journey

Stakeholders were largely supportive of the proposed standards for the transport of low body condition horses as presented in the February 2021 consultation paper. Some stakeholders suggested horses of body condition 0 or 1 should not be moved at all and instead be humanely euthanised on the property. This was balanced with other feedback about horses needing to be transported in emergency situations. Many stakeholders commented on the practicalities of obtaining written veterinarian advice, or that a veterinarian may not be immediately available, particularly in remote locations.

Recognising these concerns, the proposed standards will allow the transport of horses with a body condition score of 0 or 1 without written veterinary advice but only where it is impractical to obtain timely written advice without compromising the horse's welfare (e.g., when the horse needs to be transported urgently to safety or for emergency treatment). This exemption will not apply to horses being transported to a sale or processing facility. For foals with unhealed umbilical stumps, veterinary advice does not have to be in writing, although it will be recommended. In an enforcement scenario, if written advice was not obtained a

person in charge would need to substantiate that advice was obtained another way (for example by providing information on where/how they obtained advice, so that the inspector may follow up).

Lameness was not discussed in the consultation paper proposals, however some feedback on body condition proposals included that lame horses should only be transported as a last resort. As for poor body condition horses, the movement of lame animals may be required in emergency situations. Therefore, the same exceptions as those proposed for body condition are proposed for the lameness standard.

Mitigating risks of extreme temperatures

The February 2021 consultation paper's proposed guidelines for managing welfare risks associated with extremes of temperature were not well supported. Feedback included that the initial guidelines around assembling animals in conditions below 27 degrees Celsius and transport at night were impractical in the Australian climate and that humidity needs to be a consideration in any new standards or guidelines. The revised guideline proposals now better reflect the stakeholder feedback.

Use of restraints

The February 2021 consultation paper proposed to prohibit cross-tying because it prevents a horse from having a full range of head movement, potentially preventing healthy respiratory function. There was little support for the proposal, with a common view expressed that sometimes cross-tying to restrain horses is required for the safety of both horse and handler. Some stakeholders recommended a less prescriptive provision to allow owners the ability to address behavioural issues in some horses. Other stakeholders suggested that restraint should not prevent access to food and water or the lowering of the horse's head to maintain healthy respiratory function.

The revised proposal is therefore outcomes-based, meaning any form of appropriate restraint can still be used, provided they meet the specifications in the standard. This proposal complements and is consistent with the proposed standard to require sufficient space allowance for a horse to lower its head or be provided with the opportunity to do so.

Appendix 4: The unique welfare needs of horses

Minimising fear and stress

There can be unfamiliar sounds, smells, sights, and sensations during transport. Some horses will become more stressed than others. Indeed, horses that are accustomed to transport, (e.g., a thoroughbred transported regularly for race training and meetings), usually handle the activity without issue and display little to no signs of stress compared to a horse that is moved infrequently, or one that has had limited interaction with humans, such as a feral horse.

Stress is the body's response to a potentially threatening thing or situation (Golbidi, et al., 2015). There are many factors that may contribute to stress when horses are transported, such as the comfort or discomfort of the horse in a particular vehicle type, movement and noise, road conditions, confinement and available space, footing and balance issues, withholding of feed and/or water, as well as the prevailing environmental conditions.

Short term acute stress is that which is short lived (Ishizaka, et al., 2017). Exposure to an acute stressor may cause a variety of physiological stress responses, (e.g., increased heart rate, temperature, breathing rate and hormonal responses), and behavioural stress responses (e.g., baulking, rearing, kicking or biting).

Acute stress is not usually detrimental to a horse's welfare, though the sustained presence of a stressor, especially in situations that the horse is unable to predict or control, (e.g., a long journey), can cause chronic stress. The release of stress hormones during chronic stress in horses has been related to aggressive behaviour, inhibition of the immune system, and increased risks of stomach ulcers, colic, and diarrhoea (Malinowski, 2004).

Biting, kicking and fighting as a result of inter-horse aggression are major causes of injuries amongst unfamiliar horses that are loaded together (Grandin, et al., 1999). A survey of 63 loads of slaughter horses (including mixed handled and unhandled loads) in the United States found over 30% of horses arriving at a slaughter plant had obvious bite wounds, 8% had serious welfare problems and 13% were found to have bruised carcases, mostly attributed to kicks (Grandin, et al., 1998).

Thermal comfort and preventing heat stress

Thermal comfort (avoiding extreme cold or heat) is an important welfare consideration associated with the transport of horses. Australia's variable but predominantly hot and dry climate means that horses are often transported in conditions that increase their risk of heat stress.

The thermoneutral zone of a horse is on average considered to be between −1 °C and 24 °C and 5 °C and 25 °C (Morgan, 1998; Piggins & Phillips, 1992). As the environmental temperature exceeds the upper limit of an animal's thermoneutral zone, the animal must spend additional energy to regulate its temperature by sweating, increased peripheral circulation, and increased respiratory rate.

Heat evaporates from the skin through sweating under moderate environmental temperatures. In hot, humid temperatures, however, when the ambient temperature is the same or above the horse's body, a horse's normal cooling mechanisms become ineffective, and the horse can be at risk of dehydration and heat stress (Collins, et al., 2000; Anon, 2014).

The inside temperature of a horse transport vehicle can vary from the outside temperature by 5.1°C to 9.5°C (Purswell, et al., 2010). Recognising the sensitivities of a horse's

thermoregulation, the temperature, humidity, and ventilation conditions inside the vehicle are key factors influencing their welfare.

Respiratory health

Transportation can be particularly influential on a horse's respiratory system because of the changed ambient environment, (e.g., changes to air quality or increased dust), head position, journey duration, and pre-existing health conditions, among other factors (Hobo, et al., 1997). The resulting impacts are often referred to as transport-associated respiratory disease.

Respiratory risks during transport can be increased by poor bedding (e.g., dusty materials, like wood shavings) and poor indoor air quality (e.g., resulting from a lack of ventilation or soiled bedding). The concentration of ammonia and airborne particles, such as dust, mould and bacteria are of particular concern (Oikawa, et al., 2005).

Horses need to clear their respiratory tract (airways) of mucus secretions, dust, and other inhaled debris. When a horse can lower their head naturally, they can clear their airways more effectively. Studies have shown that horses which are confined and unable to lower their head have a higher degree of lower respiratory tract secretions. Debris and bacteria may accumulate, which can lead to pneumonia and other illness (Raidal, et al., 1996; Raidal, et al., 1997; Racklyeft & Love, 2000). The ability for a horse to lower its head properly during transport is an important welfare consideration.

When horses are transported for sport or leisure, they are often loaded into single stalls, with some form of restraint, while horses transported to slaughter are typically loaded loosely and in groups (Roy, et al., 2015; Friend, 2001). If a horse is restrained it should be tied in such a manner that it can readily raise and lower its head to reduce transport stress (R. Maxwell, as cited in Friend, 2001; Barbara Padalino, personal communication).

Head ties are typically used for safety reasons, for example, to prevent the horse from attempting to turn around and to aid handling. Handlers and horses have different preferences however horses can be less stressed when their heads are not tied during transport. If the horse is tied too tightly, if will prevent the horse from adopting the safest and most comfortable posture when the vehicle is in motion (Stull & Rodiek, 2002). Use of no restraint, or the use of a long rope, and positioning food at least at the knee level has been suggested to mitigate the risk of transport pneumonia (Oikawa, et al., 2005; Raidal, et al., 1996).

Water and feeding

Ensuring a horse is fed and watered sufficiently during a journey, (including before and after), is important for its welfare.

Horses need regular water for their health and wellbeing. The needs of individual horses vary, however, generally a horse will require between 10 and 30 litres of water daily, and these needs may increase three-fold for a working horse (Agriculture Victoria, 2021). Weather conditions, feed, pregnancy, lactation, size, and condition also influence a horse's water needs.

The current standards allow horses to go without water for up to 24 hours. Current scientific consensus is that horses should be provided with water during transport at least every two to four hours, particularly when ambient temperatures are high (Houpt & Lieb, 1993; Anon, 2014; Padalino, 2017).

Inadequate water intake can be compounded by sweating during travel and result in colic, dehydration, and potentially other health problems requiring veterinary intervention (Anon, 2014). For example, transporting horses for 24 hours in hot weather without water can result in an 8% drop in body weight, elevated body temperatures, and general debilitation (Weeks, et al., 2012).

Horses should have access to water at all times, however during the transport process this can be impractical, unsafe, or generally difficult to achieve. For example, there can be a delay before horses drink during watering breaks, or they drink very little, and they may refuse to drink from sources that are unfamiliar to them (Mars, et al., 1992).

Restriction of hay and water prior to transport has been linked to heat stroke in horses (Friend, 2000). Offering ad libitum water and hay before the journey can facilitate electrolyte balance and hydration, enabling the animal to better handle environmental conditions and stresses that could otherwise result in dehydration and electrolyte losses during transportation (Padalino, et al., 2016). Recent research in the Australian context has recommended that horses be provided with water every 2 to 4 hours (Padalino, 2017).

Equids (horses, donkeys, and mules) produce gastric acid continuously to deal with their habit of constant grazing. Chewing and swallowing activates saliva production, (an alkaline substance), which buffers gastric acid by increasing the pH of the stomach. If feed if withheld for a significant period of time, the gastric acid can cause ulcerations in the stomach (Andrews, et al., 2005).

Depending on the destination, horses may or may not have the opportunity to feed and drink while in transit. Sport horses transported to a race meeting are often allowed to feed on some hay, usually offered in a net, while slaughter horses are sometimes fasted to reduce the risk of soiling and subsequent meat contamination (Waran & Cuddeford, 1995).

Similar to water, providing feed during a journey can be complex. Horses always tend to reduce feed and water intake during the journey because they are less willing to eat and drink in unfamiliar space, (e.g., confined and isolated), stressful surroundings, and from unfamiliar sources (Kay & Hall, 2009; Mal, et al., 1991).

Some studies recommend avoiding giving feed (e.g., hay) in the vehicle as it affects the air quality and allergen exposure (Padalino, 2015). Others suggest familiar water and food be offered to the horses during the journey, or during planned rest periods to reduce transport stress and respiratory issues (Oikawa, et al., 2005). Irrespective of whether feed is provided during travel, weight loss is often documented after a journey because of a combination of reduced feed and water intake, increased energy expenditure, (e.g., from maintaining balance during the journey), and fluid loss through sweating (Smith, et al., 1996; Padalino, 2015; Waran, 1993).

Rest

Sleep is a critically important function for all mammals. Due to their large and flighty nature, horses sleep less than other mammal species (Siegel, 2005). The two primary sleep stages (Non-Rapid Eye Movement [NREM] and Rapid Eye Movement [REM]) control a range of physiological processes including neuroendocrine modulation, restorative functions, and memory consolidation (Toth, et al., 2013). Although the horse can achieve NREM sleep in both standing and laying positions, REM sleep, and in effect a complete sleep cycle, can only be effectively achieved while laying down because of the relaxation of the muscles that occurs within this sleep stage (Ruckebusch, et al., 1970).

Scientific literature indicates that lying down at least for a proportion of a 24-hour period is essential for a horse's health and well-being. Studies on equine time budgets, indicate that horses spend 15% to 20% of their time lying in the late night/early morning, but during the remainder of the day, only 1% to 5% of their time lying down (Heleski, et al., 2002).

The transport process can be disruptive to a horse's sleep patterns because of the reluctance or inability for a horse to lay down during transport which can have a negative effect on welfare because of the inability to achieve REM sleep. Sleep deprivation causes changes in a range of cognitive, emotional, and physiological states, increased levels of anxiety and aggression, and depletion of glycogen stores (Fuchs, et al., 2018), and so sufficient rest during a journey is key.

Appendix 5: Status of standards and guidelines as implemented in Commonwealth, state and territory legislation

Commonwealth

There is no national law covering the welfare of animals in Australia. The Australian Government has responsibility for trade and international agreements with respect to the welfare of animals involved in live export trade and animals processed at export abattoirs. The standards and guidelines are not implemented in any Commonwealth legislation.

State and territory

State and territory governments regulate, enforce or otherwise ensure animal welfare in their respective jurisdictions. Therefore, there are eight separate pieces of animal welfare legislation, all of which seek to prohibit animal cruelty and promote animal welfare within their respective jurisdictions. While the underlying purposes of the different state and territory laws are largely the same (and often based on the standards and guidelines, as summarised below) the implementation of the legislation varies by jurisdiction.

Summary of how the standards and guidelines are implemented in state and territory legislation

Jurisdiction	Implementation
Australian Capital Territory (ACT)	The land transport standards and guidelines were implemented in the ACT as a mandatory code of practice under the *Animal Welfare Act 1992* with effect from 18 May 2018. The ACT agrees that having nationally consistent legislation and documented minimum standards enforced across Australia is a positive step. Where Commonwealth and Territory legislation exists, the welfare of the stock should be the priority and higher standards should apply.
New South Wales	The Prevention of Cruelty to Animals (Land Transport of Livestock) Standards 2013 No 1 was implemented in June 2013. The Standards are listed in Schedule 1 of the *Prevention of Cruelty to Animals Regulation 2012* as relevant Standards under Part 4 of the Regulation. There are minor differences from the land transport standards and guidelines where there was pre-existing legislation – these are dealt with by the insertion of notes in the appropriate clause.
Northern Territory	In the Northern Territory, the land transport standards were adopted under the Livestock Regulations in January 2013. Compliance and enforcement activity is undertaken by the Department of Primary Industry and Resources Veterinary Officers and Livestock Biosecurity Officers. Adoption of revisions of the land transport standards are subject to legislative processes and timeframes.

Jurisdiction	Implementation
Queensland	Queensland regulated the Australian Animal Welfare Standards and Guidelines – Land Transport of Livestock as a compulsory requirement under the Animal Care and Protection Regulation in January 2014. Enforcement of these laws commenced from 1 August 2014.
South Australia	In South Australia, the Livestock Transport Standards and Guidelines came into effect in August 2012. The *Animal Welfare Regulations 2012* were remade on that date and included the Livestock Transport Standards written in a legally enforceable manner.
Tasmania	The Tasmanian Animal Welfare (Land Transport of Livestock) Regulations commenced in June 2013. The standards were adopted as regulations from the Australian Animal Welfare Standards and Guidelines for the Land Transport of Livestock.
Victoria	The Land Transport Standards are prescribed (5 March 2013) by reference into enforceable regulations under the *Victorian Livestock Management Act 2010*. The Act encourages livestock operators to demonstrate compliance with the Standards through participation in approved industry Quality Assurance programs.
Western Australia	On 3 October 2020, the *Animal Welfare (Transport, Saleyards and Depots) (Cattle and Sheep) Regulations 2020* (Transport Regulations) came into effect in Western Australia. The Transport Regulations implement the standards set out in the Land Transport Standards and Guidelines and the Saleyards and Depots Standards and Guidelines to the extent they relate to sheep and cattle. Consideration will be given to introducing regulations that apply to the remaining classes of livestock following the completion of regulations implementing the Standards and Guidelines for Sheep and Cattle. Western Australia has also adopted the Land Transport Standards and Guidelines as a code of practice under its *Animal Welfare Act 2002*. This means that, where a person has been charged with cruelty, compliance with the Land Transport Standards and Guidelines can be used as a defence to the charge and non-compliance must be taken into consideration by the court.

Appendix 6: Time off water vs. journey time

The current standard uses a concept of 'time off water' to limit the time a horse is deprived of water during transport. It is a complicated concept, requiring calculation of the period(s) that livestock do not have reasonable access to water (see table below). The calculation has five components, described in terms relevant to livestock in large numbers being transported commercially in semi-trailers and road trains to saleyards and abattoirs. It is less relevant to the majority of horse transport scenarios, which involve transport in small numbers of horses owned or well-known to the transporter, in small vehicles to stables, studs, sporting events and paddocks. While horses are transported in bulk livestock crates to saleyards and abattoirs, this is a relatively small sector.

Comparison of concepts 'time off water' and 'journey time' as defined in the glossary of the standards and guidelines

Time off water	Journey time
Is defined as: *The period of time for which livestock do not have reasonable access to water during the transport process.* Maximum time off water means the limit which cannot be exceeded. The minimum period to be recognised as reasonable access is four consecutive hours. If livestock are provided with access to water for less than four hours, their maximum allowable transportation time (time off water) is unchanged. If livestock provided with reasonable access to water for between four and 24 hours, the time for which such access was provided can be added to extend the total time of the trip if the livestock continue to meet the fitness requirements. If the livestock have a spell of the duration stated in the species requirements, the journey is deemed to be completed and another journey can be undertaken for the maximum time off water. Time off water is calculated by accumulating the following time periods where reasonable access to water does not occur: • the period of time the livestock are being assembled (where reasonable access to water is not provided); plus • the period of time the livestock are held in a livestock holding facility prior to loading (where reasonable access to water is not provided); plus • the period of time the livestock are being loaded (where reasonable access to water is not provided); plus • the period of time where the livestock are on a vehicle whether moving or stationary (where reasonable access to water is not provided); plus • the period of time the livestock are unloaded and held in a livestock handling facility during transit or at a destination until reasonable access to water is provided. Time off water has an equivalent meaning to water-deprivation time.	Is defined as: *The period of time commencing when the loading of livestock in a container or on a vehicle for a journey starts and finishing when the unloading of livestock at a destination is completed.*

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