

Final report

Transport Hub: building and navigating the road ahead

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Abstract

Road transport is an integral part of grazing livestock operations, with around 40 million sheep, cattle and goats being transported annually in Australia. But transport exerts a number of stressors on livestock and requires careful management. Meat and Livestock Australia and the red meat industry recognise that transportation is also a social licence risk and commissioned a project to examine such risks and to develop recommendations to mitigate these. Two workshops were held in regional locations and involved all sectors of the supply chain from producers to supermarkets. Further consultation was undertaken directly with key industry stakeholders. The outcome of this consultation was an overwhelming sense that more needs to be done to alleviate the risks associated with transport and achieve better outcomes for animals and supply chain operators. The concept of a one-stop online transport hub was raised and generally supported by industry. The project then fleshed out what content the hub might include. While the concept of a hub gained significant traction, it alone was not the entire answer – a dedicated extension and adoption campaign would also be needed to raise awareness of the issue. The project also identified a number of recommendations in relation to gaps in our knowledge regarding transportation of livestock as well as the need for data collection of livestock movements.

Executive summary

Road transport is an integral part of grazing livestock operations, with around 40 million sheep, cattle and goats being transported annually in Australia. But transport exerts a number of stressors on livestock and animals need to be appropriately managed before, during and after transportation to achieve positive outcomes for all concerned.

Meat and Livestock Australia (MLA) and the red meat industry recognise that transportation is a social licence risk as well as potentially having a negative impact on animal well-being and product quality.

The objectives of this project were to deliver:

- Three well-facilitated workshops identifying the key components of a centralised livestock land transport hub¹;
- The key components of a centralised livestock land transport hub; and
- A final report on a centralised livestock land transport hub including recommendations to address any identified gaps.

The two regionally-based workshops involved all sectors of the supply chain from producers to supermarkets. Further consultation was undertaken directly with supply chain operatives through phone calls or videoconferencing. The outcome of this industry consultation was an overwhelming sense that more needs to be done to alleviate the risks associated with land transport and to drive better outcomes for animals and supply chain operators. A vision for the industry was developed:

By 2028, the Australian livestock industry will be characterised by all players knowing and acting on their responsibilities in respect to livestock transport, so as to achieve world class outcomes for animals and supply chain partners, with data to back it up.

The concept of a transport hub, to provide a one-stop online destination for resources that support the delivery of safe and humane transport outcomes, was raised and generally supported by industry. It seems clear that, while all of the information needed by supply chain participants to meet their obligations in respect to transport is available 'somewhere', it resides in multiple places and is not always easy to find or navigate. This is particularly true given the variation in regulations between jurisdictions. Also, some aspects of best practice in relation to transport – for example, how long to curfew livestock – are not clearly defined.

Upon entering the hub, users would have the option of nominating their role in the industry (e.g., producer, transporter, agent, saleyard operator, buyer) and/or their location of interest (state, territory, possibly region). They might also nominate the livestock species of interest (cattle, sheep, goats). These choices would lead to the tailoring of or signposting to content best suited to the user profile. Core and essential content would reside on the Transport Hub, but further detailed information would refer the user to other relevant websites and be accessed via links from the hub, where available and where the content is most likely to be kept current.

While the concept of a hub gained significant traction, it was not seen as being the entire answer – a dedicated extension campaign would also be needed to help raise awareness of fundamental transport-related issues that are already challenging or likely to challenge the livestock industry.

¹ This ended up being two workshops and considerable individual consultation.

The project also identified a number of recommendations in relation to livestock transport knowledge gaps. For example, the issues of curfewing, effluent management and meat quality are complex and require further consideration.

The recommendations of the project are that MLA should:

1. *Explore the opportunity to develop and invest in a transport program.*
2. *Consider the establishment of a transport hub to be the focal point of work in this area.*
3. *Implement a comprehensive extension and adoption program around transportation to drive behavioural change towards best practices.*
4. *Work with the livestock transport industry to collect livestock movement metrics to report in the Beef and Sheep Sustainability Frameworks.*
5. *Undertake further research into best practice curfewing under a range of scenarios.*

The benefits to industry of implementing these recommendations would be a proactive and continuous improvement focus on the transportation of livestock to achieve positive outcomes for animals and supply chain operators.

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1. Background

Road transport is an integral part of grazing livestock operations (as it is, indeed, in most parts of the world). As noted in the project terms of reference, around 40 million sheep, cattle and goats are transported annually in Australia, over a range of distances from short to very long. Transport enables the efficient allocation of livestock between enterprises and geographies including their delivery between properties, to and from saleyards, to feedlots, and to abattoirs.

Transport exerts a number of stressors on livestock. Because they are mostly unable to access feed or water for the period of yarding and movement, metabolic conditions and possible death are a risk if planning and preparation for the intended journey are poor. There are also risks from the physical confinement of animals in an environment of hard, moving surfaces. Pre-existing conditions such as lameness may be exacerbated and cause considerable discomfort to an animal. Overlaid upon these animal welfare concerns are human safety aspects (loader safety, driver fatigue, effluent spillage from trucks and so on) and food safety / quality considerations, where animals are being consigned to an abattoir.

Scrutiny of livestock transport is undoubtedly increasing. Live export has taken the headlines in this respect, but land transport is not exempt, and is a much more publicly visible sector domestically. It was noted that in a 2020 materiality assessment undertaken by the Beef Sustainability Framework, transport was rated in the top three for high importance. Recently, a report detailing more than 600 animal welfare incidents in 2020/21 was tabled in Federal Parliament. Many of these incidents related to the transport of animals that were unfit to load. Whilst 600 represents a very low proportion of animals transported in Australia, the absolute number is sufficient to arouse public concern.

Two challenges for the red meat industries in addressing the risks associated with land transport are the multiplicity of responsible players (producers, transporters, agents, abattoirs and so on) and the complex web of obligations applying to livestock transport. This project seeks to partially address both of these issues, by describing a platform to connect the various parties, to delineate their respective responsibilities and to provide a one-stop destination for resources that support the delivery of safe and humane transport outcomes.

The project will deliver a topic structure and identification of the sources of relevant information for the hub. It will also make recommendations for topics that require the revision of existing content or the development of new content.

2. Objectives

The objectives of this project were to deliver:

- Three well-facilitated workshops identifying the key components of a centralised livestock land transport hub;
- The key components of a centralised livestock land transport hub; and
- A final report on a centralised livestock land transport hub including recommendations to address any identified gaps.

3. Methodology

The project involved the following overlapping stages:

1. **Inception meeting with the project steering group.** A project steering group, comprising two MLA project managers and three members of the TruckSafe board, met with the consultants. This meeting confirmed the objectives, methodology and timeframes of the project, and provided the opportunity to start to identify key stakeholders and relevant sources of information.
2. **Selected stakeholder discussions.** MLA and the consultancy team contacted key individuals to gauge interest in the project, to identify other important participants, and to scope the design and conduct of two industry workshops (see below).
3. **Review of background documents.** The team reviewed key sources of information relevant to the project and developed a draft list of topics for the proposed hub. This background was important in designing the workshops and provided a starting point for the content recommended for the hub in this report. It included 'Is the animal fit to load?' and other MLA materials, the Ramp Standard, relevant animal welfare standards and guidelines, the Effluent Code, relevant Livestock Production Assurance modules, and state department of agriculture advisory materials.
4. **Workshops.** Two face-to-face 'Transport Muster' workshops were held: in Roma, Queensland, on the 20th of March 2023; and in Wagga Wagga, New South Wales, on the 12th of April 2023. Both workshops were held at the regional saleyards prior to sale day to facilitate attendance. The workshops were branded jointly by MLA and TruckSafe. A range of producers, saleyard operators, agents, transport operators, meat processors, feedlot operators, supermarkets and extension and research providers were invited to each workshop and there were approximately 30 attendees at Roma, 25 at Wagga. Unfortunately, comparatively few producers or agents participated, despite being invited.

A further workshop planned for Western Australia was shelved following local advice that direct engagement with a small number of key local stakeholders would be a better approach.

The purposes of the workshops were to gauge stakeholder buy-in for the hub, and input on the desired purpose and content of the hub and associated activities. The agenda for the Roma workshop (Wagga was almost identical) is provided in Appendix 1. Each workshop featured speakers who briefly introduced a range of perspectives on transport issues (MLA, the Australian Beef Sustainability Framework, transporters, feedlots, abattoirs, supermarkets, and agents). Each workshop ran for about four hours.

5. **Further stakeholder engagement.** Approximately 20 additional stakeholders were interviewed by telephone or videoconference. Amongst these were people who were unable to make either of the workshops but who wished to contribute their views, including a small group of producers and transporters from Western Australia. Separately, a briefing on the project targeted at peak industry bodies (including state farming organisations) was held by videoconference. There were eight attendees.

In addition, there was a two-hour virtual follow-up to the workshops, with all attendees from Roma and Wagga invited to participate. A summary of the findings from the workshops and proposed actions for the remainder of the project were presented and feedback sought.

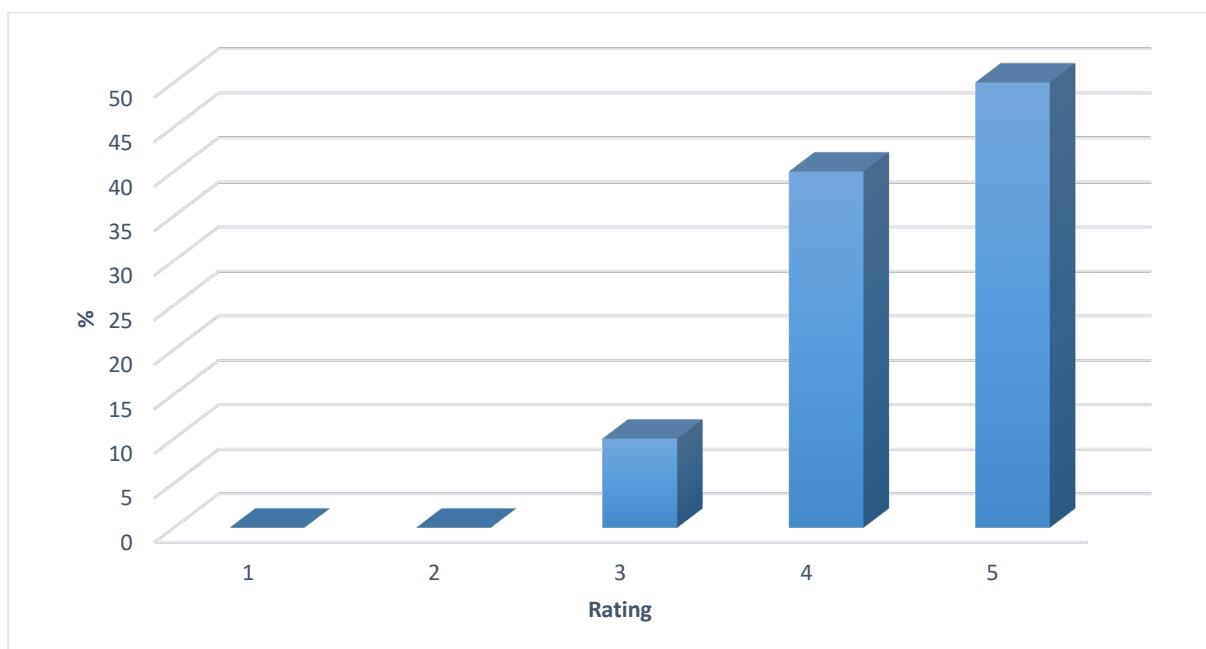
6. **Reporting to MLA.** Regular meetings between the consultancy team and MLA were held throughout the project. The project steering group also met following the completion of the workshops and interviews and considered progress to date.
7. **Compilation of content and development of plan.** Using the information gained from the workshops, interviews and various follow-up meetings, this report was prepared.

4. Findings from stakeholder engagement

4.1 Perception of the threat

There was strong and almost universal agreement among workshop attendees and interviewees that the animal welfare aspects of land transport of livestock pose a significant risk to the livestock industries. This is illustrated by the results of a poll conducted in each of the workshops, the aggregated results from which are shown in Figure 1.

Figure 1. Aggregated responses (n=51) to survey question from two workshops: *To what extent do you agree that animal welfare associated with land transport presents a risk to the livestock industry?* (1=very low risk, 5=very high risk)



Humane, safe transport is critical to the industry's social licence. Project participants spoke about the risks of a media story focusing only on examples of poor practice, or of further agitation by politicians from parties with anti-farming sentiments.

It must be acknowledged that this is not a particularly scientific finding, as attendees at the workshops were present because they believed transportation of livestock was a key issue for the industry to manage. Producers were also under-represented in the sample. However, the results demonstrate the depth of concern among some stakeholders that industry needs to address this risk.

Related sentiments were that the industry needs to be proactive in dealing with transport problems, rather than waiting for an issue to develop. It was noted that pressure to change is coming not just from the public and government, but also from retailers, abattoirs, and feedlots. Also, the threat does not arise solely from animal welfare concerns. Workplace health and safety (WHS) is another major and increasing risk. Current practices around some yards and loading ramps leave stockpeople and drivers at risk of injury or worse.

A further and significant problem is the industry's inability to objectively measure its performance in relation to transport. Developing appropriate metrics is a priority for the Australian Beef and Sheep Sustainability Frameworks. Performance measurement will not necessarily neutralise the threat (as shown by the experience with live sheep export) but it may assist the industry to counter non-evidence-based claims. It is noteworthy that MLA has recently received funding to explore the development of objective measures of livestock transportation performance.

4.2 A vision for livestock transport

Workshop participants were asked to describe what they would like livestock transport to look like in (say) 5 years' time. A composite of the sentiments expressed is as follows:

By 2028, the Australian livestock industry will be characterised by all players knowing and acting on their responsibilities in respect to livestock transport, so as to achieve very good outcomes for animals and supply chain partners with data to back it up.

The language used by people to describe this preferred future provides insights into perceived current weaknesses. Key adjectives included:

- Professional
- Complementary
- Accountable
- Connected
- Responsible
- Respectful
- Knowledgeable
- Skilled
- Integrity
- Communicative
- Cooperative
- Evidence-based
- Transparent
- United
- Informed
- Understood
- Trusted source
- Well-equipped

4.3 Facilitators / blockers of change

The workshops and interviews generated some valuable thoughts on the facilitators of industry practice change in respect to transport, and some of the blockers. These were:

Facilitators

- Pressure from customers and regulators (both from animal welfare and WHS perspectives);

- Better understanding of the implications of poor preparation for transport;
- Increased awareness of biosecurity;
- New ramp standard (also for sheep);
- Ready access to reliable information (e.g., a hub);
- Training programs; and
- Professional and accredited transport operators.

Blockers

- Lack of respect among producers and agents towards transporters and their importance;
- Large number of small, non-professional transporters including producer owner-operators;
- Perceived lack of incentives to improve preparation, facilities etc (e.g., only occasional use of loading ramps);
- System of payment on liveweight driving conflicting priorities, sometimes encouraging less than optimal preparation practices prior to transport to maximise liveweight and associated livestock price at destination;
- Mixed messages on curfews;
- Split responsibility between levels of government (e.g., for building effluent dumps);
- Lack of hard data on current performance;
- Inability to calculate the lost opportunity of not implementing best practice; and
- Drought conditions and movement of livestock.

These are useful insights, as they can be used in the design of not only the hub, but also a broader communications and extension program to accompany the hub, should it proceed.

4.4 Value / role of a hub

It seems clear that, while all of the information needed by supply chain participants to meet their obligations in respect to transport is available 'somewhere', it resides in multiple places and is not always easy to find or navigate. This is particularly true given the variation in regulations between jurisdictions. Also, some aspects of best practice in relation to transport – for example, how long to curfew livestock – are not clearly defined (see below). There was general agreement that a 'hub' would be a valuable facility and would help to address the welfare threat described in section 4.1.

Stakeholders were also strongly of the view that the existence of a hub would not be sufficient of itself to tackle the risks associated with transportation of livestock. Practice change is needed and will not simply happen because information is more accessible. However, a hub could be seen to address several of the qualities of the preferred future state described above – including 'knowledgeable', 'skilled', 'evidence-based', 'informed', and 'well-equipped'.

A transport hub might be considered as 'necessary but not sufficient' to drive practice change in the industry.

4.5 Knowledge gaps

There is a large body of existing knowledge on transporting livestock in a manner that is safe and humane and meets the requirements of all stakeholders (such as the delivery of an animal suitable

for slaughter). However, there are also some areas in which such knowledge is absent, incomplete or (at least) not sufficiently well packaged. These are:

- **Curfewing.** How long animals should be curfewed prior to transport is clearly a complex and multifactorial decision. Some of the factors that need to be taken into account (some of which are antagonistic) include species, class of stock, distance, duration, environmental conditions for the intended journey, feed they have come off, 'emptying out' and effluent management, maximising weight of livestock at slaughter, meat eating quality and Meat Standards Australia requirements etc.
- **Extreme events.** Lack of understanding of procedures for transporting livestock in extreme heat or cold events.
- **Objective measures of transport success.** As noted above (section 4.1), there are no whole-of-industry currently recorded metrics with which the industry can monitor and report its performance in respect to land transport.

4.6 Design and operation of a hub

Stakeholders emphasised that a hub needs to:

- Be co-branded with other parties (e.g., the Australian Trucking Association / TruckSafe, Australian Meat Industry Council (AMIC)) to ensure ownership by all stakeholder groups;
- Be clean and simple, and create the hook to look further;
- Be intuitive and easy to use / navigate (need for a decision matrix or pathway to help guide visitors to the right section);
- Be continually refreshed with new content, to ensure it remains a reliable source of information, and to keep people coming back;
- Contain links to more detailed information – it should not seek to carry everything as this will make it difficult to keep documents, programs etc up to date;
- Use lots of smart visual communication – videos etc;
- Incorporate incentives for change, without being alarmist (lost opportunity calculator); and
- Include links to training and solutions to problem areas (dark cutters, bruising etc.).

The hub does not need to cover everything in the initial stages – it can accumulate content gradually.

4.7 Hub content

A wide range of topics and sources were suggested for inclusion in the hub. These are included the recommendations below.

5. Recommendations for MLA

5.1 Hub structure

The design principles for the hub described in section 4.6 are highly relevant and should be front of mind.

We would envisage that:

- The hub would be co-branded by MLA, TruckSafe, Australian Meat Industry Council (AMIC), Australian Lot Feeders' Association (ALFA), Cattle Australia, Sheep Producers Australia (SPA), Goat Industry Council of Australia (GICA), Australian Livestock and Rural Transporters' Association (ALRTA), and potentially others. This would improve ownership among all parties and their respective memberships.
- Users would have the option, on entering the site, of nominating their role in the industry (e.g., producer, transporter, agent, saleyard operator, buyer etc.) and/or their location of interest (state, territory, possibly region). They could also nominate the livestock species of interest (cattle, sheep, goats). These choices would lead to the tailoring of or signposting to content best suited to the user profile. This does not mean that, for example, a grower would only see the content on animal welfare and loading – it will be important to convey the obligations of each participant in each part of the chain.
- Content would largely reside on other websites and be accessed via links from the hub, where available and where the content is most likely to be kept current (e.g., state-specific regulations). This will require frequent and thorough checking of the currency of links throughout the life of the hub. Some original content will be required to introduce material and provide context. At the same time, it will be important to ensure that visitors don't need to click through many pages to get the information they need.
- Information might be organised in a matrix arrangement of supply chain stage X topic, i.e., users could view animal welfare as a topic or learn about animal welfare considerations at loading, or in transport. Possible headings are listed in Table 1.

Table 1. Possible headings for supply chain stages and topics for the hub

Stages	Topics
<ul style="list-style-type: none"> • Animal preparation • Yard Preparation • Truck preparation • Loading • Transportation • Unloading 	<ul style="list-style-type: none"> • Animal health and wellbeing • Weaning management • Pre-transport feeding/preparation • Pre/handling and loading • Transportation – checks • Effluent management • Infrastructure • Workplace health and safety • Biosecurity • Transport regulations • Documentation • Training • Industry sustainability frameworks

Not all of this functionality may be achievable in the first version of the hub (see section 5.3).

5.2 Hub content

The hub could include any or all of the following elements. These are organised by topics below. The ‘front page’ of each topic would summarise key considerations: why the topic is important; benefits of ‘getting it right’ / implications of ‘getting it wrong’; and the steps to be taken to get it right. This introductory text would then lead into the links to sources of important information.

1. General (would be context-setting home page)
 - a. Why is responsible livestock transport so important? Suggest preparing a landing page explaining importance of:
 - i. Delivering animals in optimal condition (for slaughter, feedlot etc)
 - ii. Maintaining the industry’s social licence
 - iii. Legal and other risks to the operator of non-compliance with relevant regulations
 - b. Chain of responsibility – what is your role? – [Fit to load | Meat & Livestock Australia \(mla.com.au\)](#)
 - c. Why use a TruckSafe transporter? – [Is your livestock transporter Trucksafe? | Meat & Livestock Australia \(mla.com.au\)](#)
 - d. Podcasts and other general materials related to transport such as:
 - i. [‘Road Train Adventures’: Taking viewers along for the ride \(bigrigs.com.au\)](#)
 - ii. [Australian country music star’s new road safety message hits the right tune - Beef Central](#)
2. Animal health and wellbeing
 - a. ‘Is the Animal Fit to Load (FTL)?’ – already an MLA resource hub – [Fit to load | Meat & Livestock Australia \(mla.com.au\)](#)
 - i. Answers to FAQs
 - ii. FTL guide, video, checklist
 - iii. Case studies
 - b. Australian Animal Welfare Standards and Guidelines
 - i. Land Transport – [Land Transport : Animal Welfare Standards](#)
 - ii. Cattle – [Cattle : Animal Welfare Standards](#)
 - iii. Sheep – [Sheep : Animal Welfare Standards](#)
 - iv. Goats – [Goat : Animal Welfare Standards](#)
 - c. State / Territory specific animal welfare requirements / guidelines
 - i. QLD – [Animal welfare during transport | Business Queensland](#)
 - ii. NSW – [How to: Transport and sell livestock \(nsw.gov.au\)](#)
 - iii. VIC – [Agriculture Victoria](#)
 - iv. TAS – [Animal Welfare Standards – Land Transport of Livestock | Department of Natural Resources and Environment Tasmania \(nre.tas.gov.au\)](#)
 - v. SA – [Animal welfare – PIRSA](#)
 - vi. WA – [Animal Welfare: Livestock | Agriculture and Food](#)
 - vii. NT – [Livestock welfare and land transport standards | NT.GOV.AU](#)
 - d. Immune Ready – vaccination of store/feeder/breeder cattle to properly prepare for sale and transport – [Home – Immune Ready](#)
 - e. Withholding periods (WHP) and Export Slaughter Intervals (ESI) – [Safe and responsible animal treatments | Integrity Systems](#)

- f. Low-stress livestock handling – [Animal handling | Meat & Livestock Australia \(mla.com.au\)](#)
- g. Training
 - i. Feedlot TECH – Livestock Handling 5. Animal Wellbeing for Transport – [Livestock Handling – 5. Animal Wellbeing for Transport – Feedlot TECH](#)
 - ii. Livestock Production Assurance (LPA) – animal welfare training – [LPA Service Centre \(nlis.com.au\)](#)
 - iii. Rick Young (website available?)
 - iv. Low-stress stock handling, e.g., Low Stress Stockhandling (LSS), Stress Free Stockmanship – does MLA want to endorse particular providers?
3. Weaning management (should this be part of animal health and wellbeing?)
 - a. Advice – [Weaning | Meat & Livestock Australia \(mla.com.au\)](#)
 - b. [Elders Feeder Ready Program – Elders Feeder Ready Program](#)
4. Pre-transport feeding
 - a. Australian Animal Welfare Standards and Guidelines – Land Transport – [Land Transport : Animal Welfare Standards](#)
 - b. Curfewing – short duration lairage trial – [How effective effluent capture can help to maximise carcase weight | Meat & Livestock Australia \(mla.com.au\)](#)
 - c. Case study – preparation of cattle – [Preparation for transport locks in cattle condition | Meat & Livestock Australia \(mla.com.au\)](#)
5. Handling and loading
 - a. Australian Standard for Livestock Loading/Unloading Ramps and Forcing Pens (AS 5340:2020) – requires a short explanatory page and more detailed extension material because producers may not pay to download the Standard itself (could be based on [Ramps Guide – Australian Livestock & Rural Transporters Association \(alrta.org.au\)](#), or just link to it) and link to [AS 5340:2020 | Techstreet Store Australia](#) where it can be purchased
 - b. Guide for Safe Design of Livestock Loading Ramps and Forcing Yards (ALRTA) – [RL13654 ALRTA-Ramps-Guide-FINAL-WEB-13.8.15.pdf](#)
 - c. Fit to Load – cross-reference to 2a
 - d. Training
 - i. NSW Livestock Loading Scheme – [NSWLLS Driver Course | Transport for NSW](#)
6. Effluent management
 - a. Cross-reference to 4
 - b. Effluent Code – [Managing Effluent in the Livestock Supply Chain RICP \(nhvr.gov.au\)](#)
 - c. Case studies of effluent tanks etc
7. Workplace health and safety
 - a. General responsibilities / advice
 - i. [Working with animals | Safe Work Australia](#)
 - ii. [Home – Farmsafe](#)
 - b. State / Territory specific advice
 - i. QLD – [Animal handling | WorkSafe.qld.gov.au](#)
 - ii. NSW – [Working with livestock: Fact sheet | SafeWork NSW](#)
 - iii. VIC – [Livestock | WorkSafe Victoria](#)

- iv. SA – [Livestock handling guidelines | SafeWork SA](#)
 - v. WA – [SAFE FARMS |](#)
 - vi. NT –
 - c. Handling and loading – cross-reference to 5
- 8. Biosecurity
 - a. Livestock, Bulk and Rural Carriers glovebox guide on biosecurity, emergency animal diseases and preparing livestock for transport – [Biosecurity | LBRCA](#)
 - b. Farm Biosecurity website – [People, vehicles & equipment – Farm Biosecurity](#)
 - c. National Biosecurity (truck) Wash Standard – unable to find this on the web
 - d. Map of biosecurity (truck) wash facilities – unable to find this on the web
 - e. LPA biosecurity requirements – [Biosecurity | Integrity Systems](#)
- 9. Transport regulations and documentation
 - a. National Heavy Vehicle Regulations (NHVR)
 - b. State / Territory specific legal requirements
 - i. QLD
 - 1. [Legal requirements when transporting animals | Business Queensland](#)
 - ii. NSW
 - 1. [Livestock movements \(nsw.gov.au\)](#)
 - 2. [Transported Stock Statement \(TSS\): Questions and answers](#)
 - iii. VIC
 - 1. [Transporting livestock responsibilities and recommendations | Transport and care of livestock | Livestock health and welfare | Livestock and animals | Agriculture Victoria](#)
 - iv. TAS
 - 1. [Animal Welfare Standards – Land Transport of Livestock | Department of Natural Resources and Environment Tasmania \(nre.tas.gov.au\)](#)
 - v. SA
 - 1. [Moving cattle within South Australia – PIRSA](#)
 - 2. [Moving sheep and goats within South Australia – PIRSA](#)
 - vi. WA
 - 1. [Moving livestock in Western Australia | Agriculture and Food](#)
 - vii. NT
 - 1. [Livestock welfare and land transport standards | NT.GOV.AU](#)
 - c. Industry requirements
 - i. Integrity Systems Company (ISC) – [Preparing livestock for dispatch | Integrity Systems](#)
 - ii. ISC – [Livestock Movements | Integrity Systems](#)
- 10. Training
 - a. Cross reference to specific training programs listed above
 - b. Other general training
 - i. TruckSafe – [Home | TruckSafe AU](#)
 - ii. NHVR – [Training and support | NHVR](#)
- 11. Industry sustainability frameworks

- a. Australian Beef Sustainability Framework – [Home | The Australian Beef Sustainability Framework \(sustainableaustralianbeef.com.au\)](#)
 - b. Sheep Sustainability Framework – [Sheep Sustainability – Home | Sheep Sustainability \(sheepsustainabilityframework.com.au\)](#)
12. Links to other relevant organisations / resources
- a. TruckSafe – [Home | TruckSafe AU](#)
 - b. Livestock transporters' associations
 - i. National – ALRTA – [Australian Livestock & Rural Transporters Association – Representing hard-working road transport companies based in regional Australia \(alrta.org.au\)](#)
 - ii. State / territories
 - 1. QLD – LRFAQ – [LRFAQ – Livestock and Rural Transporters Association of Queensland](#)
 - 2. NSW – LBRCA – [LBRCA | Livestock, Bulk & Rural Carriers Association](#)
 - 3. VIC – LRTAV – [LRTAV – LIVESTOCK & RURAL TRANSPORTERS ASSOCIATION OF VICTORIA INC.](#)
 - 4. TAS – LTAT – [Livestock Transporters Association of Tasmania – Representing Livestock Transporters in Tasmania with advice, support, and a voice on industry issues \(lts.cloudaccess.host\)](#)
 - 5. SA – LRTASA – [LRTASA |](#)
 - 6. WA – LRTAWA – [Livestock and Rural Transport Association of WA \(Inc\) \(lrtawa.org.au\)](#)
 - 7. NT – ???
 - c. Livestock industry peak bodies
 - i. Cattle Australia – <https://cattleaustralia.com.au/>
 - ii. ALFA – [Australian Lot Feeders' Association | Grain Fed Beef \(feedlots.com.au\)](#)
 - iii. SPA – [Home | Sheep Producers](#)
 - iv. GICA – [GICA – Goat Industry Council of Australia](#)
 - v. AMIC – [Home – AMIC](#)
 - d. Australian Livestock and Property Agents Association – <http://www.alpa.net.au/>
 - e. Australian Livestock Markets Association – [Australian Livestock Markets Association – Saleyards and Lairages – ALMA \(australiansaleyards.com.au\)](#)
 - f. National Heavy Vehicle Regulator – [| NHVR](#)
 - g. NSW Local Land Services – [Home – Local Land Services \(nsw.gov.au\)](#)

5.3 Broader program strategy

The research conducted for this project indicated that there is scope for MLA to institute a dedicated program of work around land transport. The hub would be one project within the program. There are other research, development and extension (RD&E) activities that will be required to effect improvement in the way the industry manages its land transport.

5.3.1 Projects

A coordinated program might include the following projects:

Development, management, and communication of the Transport Hub

The hub is the appropriate starting point for MLA's activities in transport given the complex and fragmented nature of the knowledge base. Once a hub is developed and populated with content, it can be further built over time, provided the hub is actively managed to maintain its currency.

It has been suggested that the hub might initially be similar in design and functionality to MLA's feedbase hubs (e.g., soil health – [Kicking off with healthy, fertile soils | Meat & Livestock Australia \(mla.com.au\)](#)). These are relatively simple in structure and do not have the customisation and matrix functionality described in section 5.1. Later, the hub might move to a structure more similar to MLA's genetics hub ([MLA Genetics | Australian Genetics](#)). The development of a genetics-type hub is considerably more expensive and may need to be considered as a second-phase project, requiring additional specialist input and resources.

Extension and adoption project

MLA is developing a 'communication and extension' (C&E) plan for the hub. The C&E plan is intended to raise awareness of the hub and to encourage people to access it, but can be expected to have only a limited impact on actual behaviour. There may be value in scoping out a dedicated transport 'extension and adoption' (E&A) project, which would be more focused on effecting practice change, using the hub as a resource.

Best practice E&A initiatives are based on a systematic approach such as design thinking or social marketing. These frameworks include elements such as the specific behaviours the proponent is seeking to change; the facilitators and barriers to change; relevant target audience behaviours, experiences, beliefs and so on; segmentation of the target audience; and the mix of methods likely to achieve change (e.g., demonstration sites, workshops, webinars, training). Some of this information has been identified in this report but requires more in-depth consideration.

The project would also require a monitoring, evaluation and reporting (MER) framework that would nest within a broader MER framework for the MLA Program, were one to be established. This will require some thinking about the logic of the project and what data can feasibly be collected at each step in the logic. For example, the logic might be that a series of producer breakfasts providing a persuasive argument for best practice adoption, supported by the hub, will drive practice change. These breakfasts may be held in partnership with major buyers (Coles, Woolworths etc) and/or agents. A concise value proposition for producers and agents to attend will need to be developed.

The MER framework might include evaluation data from several points along this logic:

- Number of attendees (and businesses) at breakfasts;
- Changes in knowledge, attitudes, skills, and/or aspirations (KASA) from post-event surveys;
- Changes in key practices, possibly from follow-up surveys of attendees, or from MLA's biennial cattle and sheep producer surveys, or surveys of transporters;
- Changes in industry-level metrics of animal welfare, WHS or other outcomes (noting the difficulty in attributing these changes to the specific E&A project).

The idea of a survey of transporters may be worth further investigation. There are of course far fewer transport companies than there are producers, and the transport sector is quite concentrated. MLA could ask (say) the top ten transport companies to collect driver satisfaction, client or driver complaints, or other data that is feasible to collect.

Please note that this is purely illustrative and not a design recommendation. A design/scoping phase involving extensive discussion with stakeholders is needed before a coherent E&A project and accompanying MER framework could be proposed.

A transport E&A project need not involve an entirely new series of activities, instead existing activities of MLA and other organisations might be supplemented or adapted to include more transport content. The project would undoubtedly be best delivered in conjunction with TruckSafe and other partner organisations. This may involve the following:

- Participation in and agreement on the design of the project;
- Logos of all parties on extension materials, event collateral etc;
- Responsibilities of all partners in promotion of the project and recruitment of participants; and
- Financial or in-kind co-contributions to project resourcing.

The delivery project (as distinct from the scoping phase) is likely to require a significant investment over a period of 3 years or more.

Meta-analysis of curfew research and preparation of a decision-support tool

This current project has shown that there is a need to collate and synthesise the various pieces of research that have been done in this area, both to reduce confusion in the industry, and to show what knowledge gaps remain.

We understand that a meta-analysis is already underway using internal MLA resources. This work will form the basis for the development of a matrix or other form of decision support tool (lost opportunity tool) to assist industry players to identify the optimum curfew arrangements for a given consignment of stock.

Identification of land transport metrics

As noted earlier, MLA has recently received government funding for a project to develop land transport metrics for the Australian Beef and Sheep Sustainability Frameworks.

5.3.2 Timeline

The suggested timeline for the development of the hub is as follows:

- August 2023 – March 2024: build the hub. Incorporate curfew decision support tool when available. Complete metrics project. Budget-permitting, scope the E&A project.
- March 2024: launch the hub at the National Transport Conference in Toowoomba.
- July 2024 onwards: implement the E&A project.

6. Conclusion

6.1 Key findings

Safe, humane and efficient livestock transportation is critically important to the red meat industry and a more proactive management approach is warranted. The scope, nature and magnitude of the challenge at hand warrants MLA's consideration to explore the opportunity to develop a dedicated Livestock Transport Program or other body of work to increase focus in this critical segment of the

red meat supply chain. As part of this program, MLA should explore the development of an online 'Transport Hub' along the lines described in this report. A 'communication and extension' program should also be rolled out to re-emphasise best practice in the area as well as drawing attention to the benefits of the hub. Preferably, MLA should also scope and implement a more focused 'extension and adoption' program designed to drive behavioural change in respect to livestock transport. Finally, it's clear that not all is known in relation to best practice transportation of livestock. Further research is undoubtedly required in the areas of curfewing and objective measures of transportation.

6.2 Benefits to industry

The benefits to the red meat industry of improved performance in the livestock transport sector are many and include improved:

- Animal health and wellbeing;
- Outcomes for producers and service providers (especially transport operators), including better preparation of livestock for transport and safer working conditions;
- Growth and health performance of livestock at feedlots;
- Carcase yield and meat quality benefits at abattoirs; and
- Social licence and consumer sentiment.

7. Future research and recommendations

The recommendations of the project are that MLA should:

- 1. Explore the opportunity to develop and invest in a transport program.*
- 2. Consider the establishment of a transport hub to be the focal point of work in this area.*
- 3. Implement a comprehensive extension and adoption program around transportation to drive behavioural change towards best practices.*
- 4. Work with the livestock transport industry to collect livestock movement metrics to report in the Beef and Sheep Sustainability Frameworks.*
- 5. Undertake further research into best practice curfewing under a range of scenarios.*

8. References

References are listed in section 5.2.

9. Appendix

9.1 Agenda for Roma workshop

Roma Transport Muster

Roma Saleyards – Monday 20 March 2023

8.00 am	Tea / coffee, pies & sausage rolls	Facilitators
8.30 am	Meeting arrangements and objectives	Facilitators
8.35 am	Introductions	Facilitators
8.45 am	Australian Beef Sustainability Framework – what is it and how can it support the transport industry?	Jacob Betros, MLA
9.00 am	Transport hub – truck industry view; what is TruckSafe?	TruckSafe Directors
9.15 am	Supply chain perspective of transport issues	Australian Country Choice
9.30 am	Transport issues from a supermarket perspective	Woolworths
9.45 am	Why we need to get this right	North Australian Pastoral Company
<i>Slido question: How great are the risks from the animal welfare aspects of land transport to the livestock industry (rated 1 to 5)?</i>		
10.15 am	Transport industry vision – Where do we want to be in five years' time?	Facilitators
10.40 am	<i>Morning tea</i>	
<i>Slido question: What is the biggest challenge you face from an animal perspective in your role in the supply chain?</i>		
11.05 am	Small group session: What do we need to do to achieve the vision? How could an information hub help? What does a hub need to cover to be useful?	All
11.45 am	Reporting back	All
12.00 pm	Where are the gaps in our information – is R&D or extension needed?	Facilitators
<i>Slido question: What is the greatest gap we need to address?</i>		
12.50 pm	Closing comments from the group and next steps	Facilitators
1.00 pm	Close and lunch	