

INDUSTRY

ANIMAL WELFARE

STANDARDS



LIVESTOCK PROCESSING
ESTABLISHMENTS

PREPARING MEAT FOR HUMAN CONSUMPTION

SECOND EDITION
Reprinted

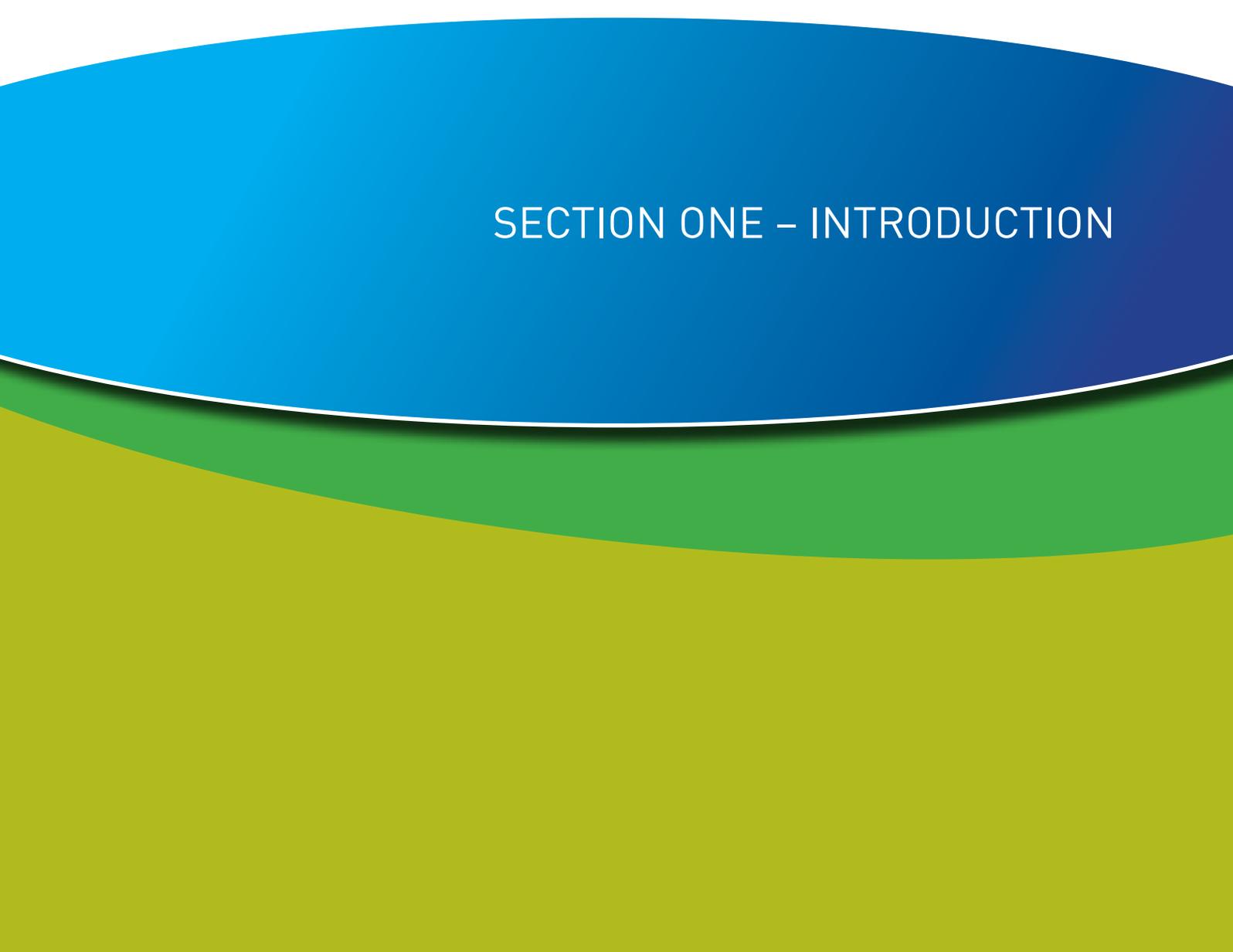
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Acronyms

In these Standards, the following acronyms are detailed;

AMIC	Australian Meat Industry Council
CSIRO	Commonwealth Scientific and Industrial Research Organisation.
GMP	Good Management Practice
HACCP	Hazard Analysis Critical Control Points
MLA	Meat and Livestock Australia
OIE	Office International des épizooties: World Organisation for Animal Health
SCARM	Standing Committee on Agriculture and Resource Management (Primary Industries Ministerial Council)
SOPs	Standard Operating Procedures
WI	Work Instructions



SECTION ONE – INTRODUCTION

Preface

These Industry Animal Welfare Standards for Livestock Processing Establishments ('*the Standards*') were developed to help fulfil the expectations of both the Australian meat processing industry and the community of high levels of quality assurance for the management of livestock at Australian livestock processing establishments.

Livestock processing establishments already address issues associated with food safety and meat quality using quality assurance systems. The addition of animal welfare principles to these systems has provided a more comprehensive approach and assists industry to continually improve and demonstrate animal welfare outcomes.

The Standards are intended for incorporation into existing livestock processing industry quality assurance programs and to provide support towards demonstrating existing regulatory requirements in the industry. The Standards provide information for all people responsible for the care and management of livestock at processing establishments.

The Standards include relevant provisions of the current Model Codes of Practice and the Australian Standards and Guidelines for the Welfare of Animals, together with targets and guidance from international and national guidelines and scientific evidence. The Standards also contain information to assist implementation, audit and verification.

The Standards were first developed in 2005 with the support of a national committee comprised of industry, science, policy, animal welfare, and other supply chain representatives. The Standards were subsequently reviewed in 2009 (*this edition*) utilising a similar process. The Australian Meat Industry Council (AMIC) has committed to undertaking regular review of these Standards.

Mission

The livestock processing industry's mission is to ensure that high standards of animal welfare are implemented, maintained and verified.

The livestock processing industry also aims to contribute towards continual improvement in animal welfare standards across the livestock supply chain.

Purpose

These Standards aim to:

- Clearly define animal welfare standards for incorporation into relevant industry quality assurance programs and Approved Arrangements.
- Promote the humane and considerate treatment of livestock at processing establishments
- Provide information to support good husbandry and management practices that deliver good animal welfare outcomes.
- Define duty of care and associated responsibilities for people managing livestock at processing establishments.
- Provide assurance to customers and the general community that effective animal welfare standards for the livestock processing industry are in place and demonstrated to be met.
- Support the existing standards and guidelines relating to practices in the livestock processing industry including:
 - AS 4696-2007 Australian Standard for the Hygienic Production and Transportation of Meat and Meat Products for Human Consumption (<http://www.publish.csiro.au/>).
 - The Australian Standards and Guidelines for the Welfare of Animals, where these apply to the livestock processing industry. Australian Standards and Guidelines for the

Welfare of Animals as endorsed by the Primary Industry Ministerial Council replace the existing and relevant Codes of Practice for the Welfare of Animals (<http://www.animalwelfarestandards.net.au/index.htm>).

- The Model Code of Practice for the Welfare of Animals at Livestock Slaughtering Establishments. SCARM Report 79 (<http://www.publish.csiro.au/>).
- Provide consistency with international guidelines, including the OIE Terrestrial Animal Health Code 2005: Guidelines for the Slaughter of Animals for Human Consumption. OIE World Organisation for Animal Health (<http://www.oie.int/>)
- Provide consistency with published commercial guidelines, for example the American Meat Institute Foundation's Good Management Practices for Animal Handling and Stunning, 2005 Edition (<http://www.amif.org/FactsandFigures/AMIF-animalwelfare1.htm>).

Scope

The Standards apply from the point of receipt at the livestock processing establishment to the point of slaughter¹.

These Standards apply to the major commercially farmed species (excluding poultry) including cattle and calves, sheep, pigs, deer, goats, buffalo and horses. These Standards, however, contain general principles that can be applied to other species and livestock processing enterprises.

These Standards make a significant contribution to whole of chain (birth to slaughter) animal welfare outcomes when:

- There is a requirement for livestock processors to include provisions for animal welfare in their contractual arrangements with suppliers of product and services.
- There is a requirement for feedback from processors to suppliers on compliance with required animal welfare outcomes.

¹ Appendix 3 defines the scope of these Standards in further detail.

² refer to 3.1 of the Australian Standard for the Hygienic Production and Transportation of Meat and Meat Products for Human Consumption.

- There is a legal responsibility to notify relevant authorities of any instances of animal cruelty.

Roles and responsibilities

A large number of providers are involved in the delivery of services to livestock processing establishments. These include livestock producers, agents, transport operators, feed suppliers and personnel operating at depots, scales, saleyards and feedlots.

All have a responsibility to ensure that animals are handled and managed in accordance with Australian welfare requirements. This is best achieved through a combination of industry quality assurance systems and compliance with legislation.

It is the responsibility of livestock processing establishments to ensure that:

- livestock managers are aware of their legal and moral responsibility to care for the welfare of animals under their control;
- all personnel handling livestock are competent;
- procedures are in place to ensure all personnel on the premises conduct their activities to minimise risks to animal welfare;
- feedback on adverse animal welfare outcomes is provided to suppliers and relevant regulatory authorities as required.

Livestock processing establishments have a responsibility to ensure animal welfare outcomes are of a high standard. This is achieved via incorporation of appropriate standards within the establishment's quality management system and/or Approved Arrangement which also includes:

- a demonstrated commitment by the proprietor to this objective;
- animal welfare considerations for daily management of livestock on the premises²;
- verification and review of all practices that impact on animal welfare;

- a requirement for feedback to suppliers (including transporters, feedlot personnel and farmers) on compliance with animal welfare outcomes.

Application

It is intended that these Standards be incorporated into livestock processing quality management system(s) and/or Approved Arrangements. The Standards are presented in 3 sections:

Section 1 of the Standards defines the 6 Standards, each with specific outcomes and principles which detail how the intended outcomes can be achieved.

These Standards and principles are the minimum requirements for animal welfare.

Section 2 and 3 of this document provide good management practices, targets, and example audit checklists in support of the Standards. It should be noted, however, that there may be other practices not described in this manual that can be applied to demonstrate the required outcomes of these Standards.

Section 3 of the Standards contains tabulated performance indicators which were developed for individual processing establishment implementation purposes. The performance indicator tables contain both targets and Good Management Practices (GMPs) to assist managers at processing establishments apply the standards in conjunction with other quality assurance activities.

This section is designed to assist individual plant personnel work through their Approved Arrangements/Quality Assurance programs and identify the required practices in detail and note where the relevant information, work instructions, standard operating procedures and records for each Standard are located. There may be other practices not described in this section that can be applied to demonstrate the required outcomes.

This section is not compulsory, it is for implementation purposes only.

The GMPs and targets provide detail on the activities that assist in meeting the standard and are based on the Australian Standards and Guidelines for the Welfare of Animals or equivalent Code of Practice(s), scientific literature, customer requirements and best industry practice guidelines.

These performance indicators are intended to assist with the development of:

- Standard Operating Procedures (SOPs);
- Work Instructions (WIs);
- Internal audit, monitoring and verification procedures;
- Staff training and induction procedures.

Section 4 contains a sample audit checklist. This checklist can be utilised for internal audit purposes to demonstrate and/or monitor compliance with the Standards or for other independent monitoring.

Equivalence

The Standards contain principles that describe how the intended outcomes can be achieved.

The Standards are supported by Section 3 of this document which contains good management practices and targets as a guide to 'what to aim for' when applying the Standards.

There are a number of practical methods that can be employed to demonstrate that the principles within the Standards are being met. Therefore, the principles outlined in the Standards do not preclude livestock processing establishments from utilising procedures or actions that differ from those described, provided it can be demonstrated that the outcomes are being met.

Summary of the Standards

Standard 1. Management procedures and planning

Standard Operating Procedures for the management of livestock are developed, implemented and include contingency procedures to prevent and mitigate possible risks to animal welfare.

Standard 2. Design and maintenance of facilities and equipment

Facilities and equipment are designed and maintained to ensure minimal interference or stress is incurred by livestock.

Standard 3. Staff competency

All personnel responsible for the handling of livestock are competent in their tasks consistent with the requirements of these Standards.

Standard 4. Management and humane destruction of weak, ill or injured livestock

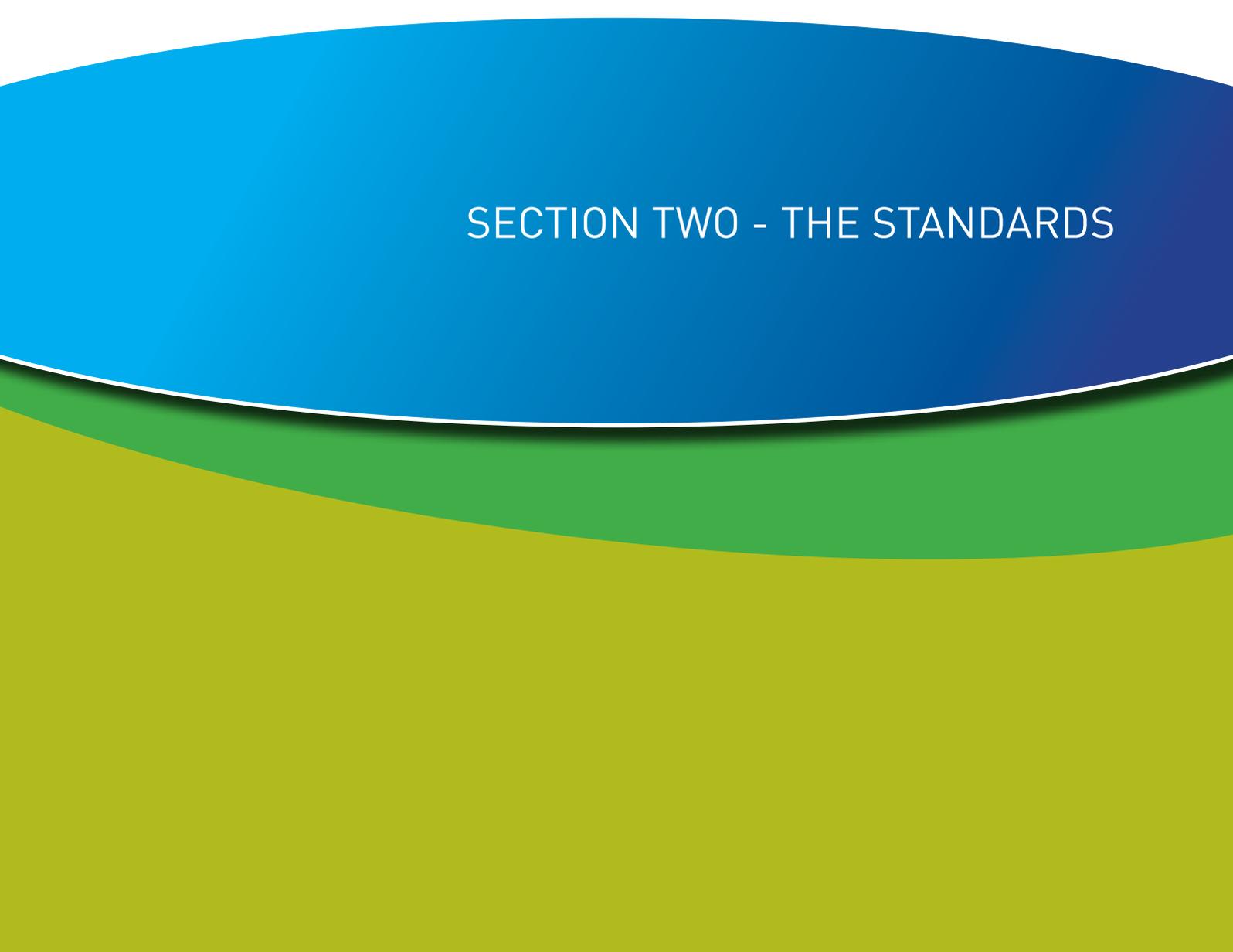
Weak, ill or injured livestock are identified and promptly treated in a humane manner.

Standard 5. Management of livestock to minimise stress and injuries

Livestock are routinely managed to minimise stress and injuries.

Standard 6. Humane slaughter procedures

Restraint, stunning and slaughter procedures are carried out in a humane and effective manner.



SECTION TWO - THE STANDARDS

Standard 1: Management procedures and planning

Outcome

Standard Operating Procedures for the management of livestock are developed, implemented and include contingency procedures to prevent and/or mitigate possible risks to animal welfare.

Principles

1. The policy objective for a livestock processing establishment includes animal welfare and a demonstrated commitment of the proprietor to this objective.
2. The Approved Arrangement required under clause 3.1 of the Australian Standard for the Hygienic Production and Transportation of Meat and Meat Products for Human Consumption includes animal welfare considerations for daily management of livestock on the premises.
3. Where livestock processing establishments are responsible for the scheduling of livestock transport, journeys are planned with consideration of:
 - the class and condition of livestock;
 - time off feed and water;
 - weather and road conditions; and
 - rest and spell stops.
4. Scheduling for slaughter takes into consideration:
 - the species, class and condition of livestock;
 - maximum allowable time off feed and water;
 - transport duration;
 - other requirements as relevant e.g. food safety.
5. Standard operating procedures are developed and implemented for livestock management tasks which include actions in the event of:
 - delays to scheduled slaughter;
 - equipment breakdown and power failure;
 - extremes of weather;
 - out of hours management of livestock;
 - industrial disputes.
6. Sufficient numbers of competent personnel are available or on-call to conduct designated tasks.
7. Contractual arrangements with suppliers³ include provisions regarding animal welfare and feedback on any adverse outcomes is provided accordingly.

³ Defined as producers, transporters, saleyard and/or feedlot personnel as may be relevant to the particular livestock consignment received.

Standard 2: Design and maintenance of facilities and equipment

Outcome

Facilities and equipment are designed and maintained to ensure minimal interference or stress is incurred by livestock.

Principles

1. Facilities and equipment are designed and maintained to ensure its effective operation and use and is appropriate for the species and class of livestock.
2. Facilities are free from protrusions and other objects that can cause injury, are clean and in good working order.
3. Design of facilities takes into account protecting animals from extremes of weather and provides effective ventilation.
4. Flooring in pens, laneways, races and ramps is constructed with materials that minimise slipping, falling and injury.
5. Lairage holding pens provide sufficient space for the number of livestock expected to be held at any one time.
6. Facilities are available to care for, or to segregate, weak, ill or injured animals.
7. Facilities for water are available and operational in all lairage holding pens.
8. Facilities for providing feed are available and operational as necessary.
9. Lighting is adequate and uniform across the lairage holding pens, ramps and raceways to aid animal movement and for the inspection of livestock.
10. Equipment for humane destruction is available, fully operational and appropriate for the species and class of livestock.
11. Equipment for humane destruction is cleaned, maintained, operated and stored in accordance with manufacturer's specifications.
12. Restraining equipment is designed and maintained to restrain animals effectively and with minimal stress.
13. Stunning equipment is fully operational and appropriate for the species and class of livestock.
14. Stunning equipment is tested, cleaned, maintained, operated and stored in accordance with manufacturer's specifications.
15. Back-up stunning equipment is available, fully operational and appropriate for the species being slaughtered.

Standard 3: Staff competency

Outcome

All personnel responsible for the handling of livestock are competent in their tasks consistent with the requirements of these Standards.

Principles

1. A system is in place which ensures that personnel handling livestock are regularly assessed as being competent in their specific tasks and records are kept accordingly.
2. Personnel undergoing training are monitored regularly by a competent person and/or are observed directly for tasks that are considered high risk to livestock welfare, until deemed competent⁴.
3. Personnel handling livestock on a daily basis regularly observe the animals and are competent to:
 - Identify abnormal animal behaviour, injuries or signs of stress in livestock; and
 - Take action when required to rectify a problem.
4. All personnel handling livestock are competent in the appropriate use of handling implements and/or dogs to move animals.
5. Personnel that are competent in the humane destruction of livestock are available and/or are able to be contacted for prompt action as required.
6. There is a system in place to ensure that personnel involved in humane destruction, stunning and slaughter are trained and competent in recognising the effectiveness of the procedure.

⁴ A person is deemed competent for a task when they can demonstrate current knowledge, skills, attitude and behaviour to undertake the task.

Standard 4: Management and humane destruction of weak, ill or injured livestock

Outcome

Weak, ill or injured livestock are identified and promptly treated in a humane manner.

Principles

1. Expectations for assuring that livestock are fit for the intended journey are communicated to livestock suppliers to minimise the risk of receiving weak, ill or injured livestock at the establishment.
2. Consignments of livestock are assessed upon arrival and weak, ill or injured livestock are identified and recorded.
3. Livestock identified to be weak, ill or injured or suffering from other ailments that impact on their welfare are assessed by a competent person and the appropriate action is promptly taken.
4. For animals identified for humane destruction or emergency slaughter, the procedure is promptly carried out using approved methods⁵.
5. Moribund animals are euthanased on the spot (prior to being moved) and without delay.
6. There is a procedure in place for recording and reporting on welfare incidents for feedback to suppliers⁶ and for the purposes of regular review of livestock welfare outcomes.

⁵ As defined in relevant State, Territory and Commonwealth legislation.

⁶ Defined as producers, livestock owners, livestock transporters, saleyard and/or feedlot personnel as may be relevant to the particular livestock consignment received.

Standard 5: Management of livestock to minimise stress and injuries

Outcome

Livestock are routinely managed to minimise stress and injuries.

Principles

1. Livestock are moved throughout the facility in a calm and quiet manner that minimises stress.
2. Livestock are segregated in pens in accordance with species (and class wherever possible).
3. Animals are penned with sufficient space to move freely, lie down and to access the watering facilities.
4. Action is taken to manage any aggressive behaviour between animals and minimise possible injury to livestock.
5. Livestock are regularly observed by personnel to identify abnormal livestock behaviour or appearance and the appropriate action is taken if welfare is actually or potentially compromised.
6. Implements used to handle livestock are appropriate for the species and are used judiciously to minimise stress and injury in livestock.
7. Dogs are trained, muzzled and supervised whilst working.
8. Dogs are kept away from the vicinity of livestock in holding facilities when not working.
9. Care is taken when washing animals with high-pressure hoses to avoid sensitive areas of the animals and to minimise cold stress.
10. Livestock not scheduled for slaughter within 24 hours of arrival at the establishment are provided appropriate feed.

Standard 6: Humane slaughter procedures

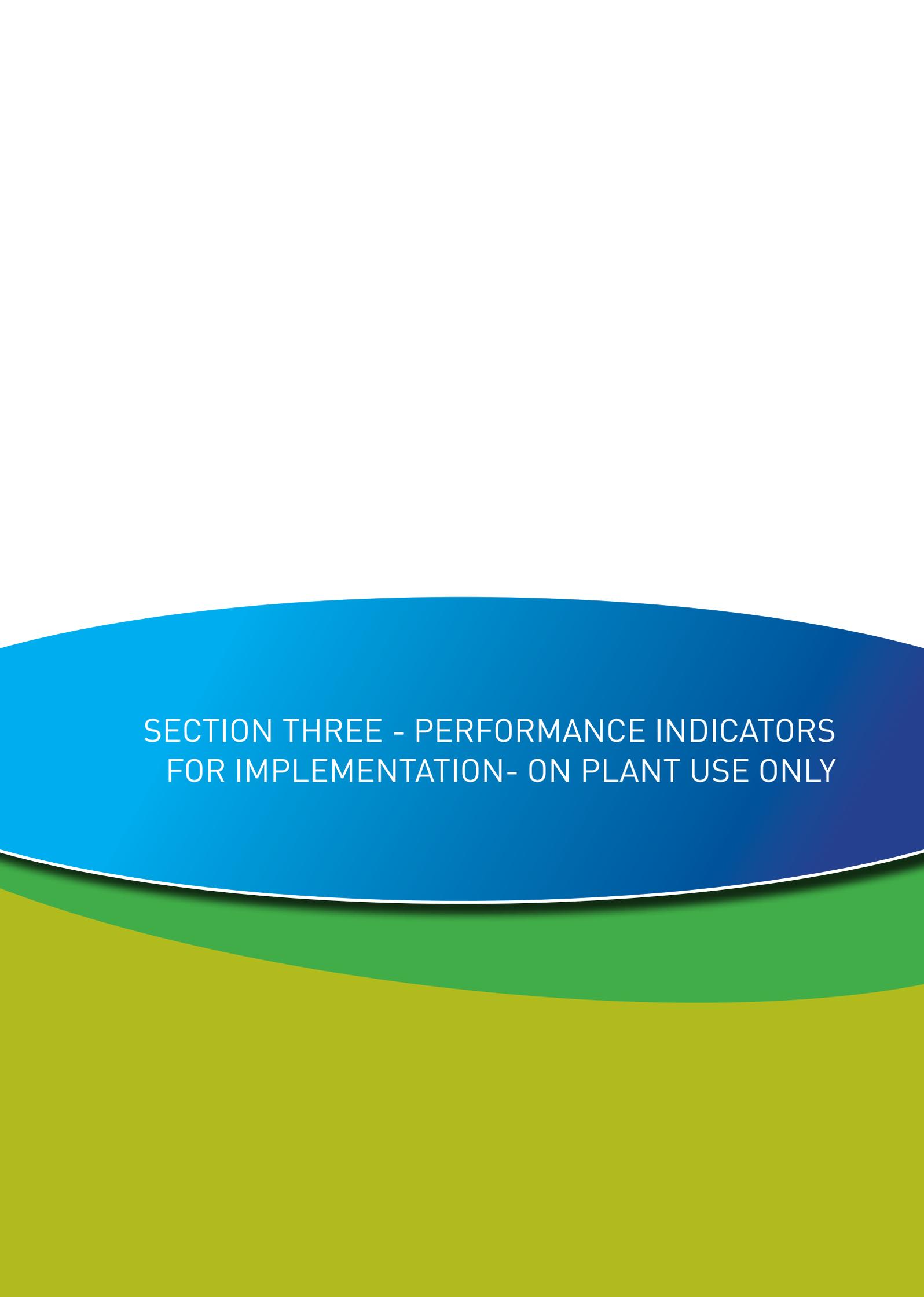
Outcome

Restraint, stunning and slaughter procedures are carried out in a humane and effective manner.

Principles

1. Livestock are effectively restrained with minimal stress and for minimal duration prior to stun.
2. Livestock are effectively stunned with appropriate equipment for the species and class of livestock.
3. Where reversible stunning is used, sticking is applied promptly and in a manner that ensures animals do not regain sensibility.
4. Animals must be effectively stunned before sticking commences⁷.
5. Procedures are in place to confirm that the animal has been effectively stunned and signs of insensibility are monitored to the point of death; corrective action is immediately taken as required.
6. The operation of stunning and associated procedures are designed and conducted to ensure that livestock are insensible when hoisted and will not regain sensibility on the bleed rail.
7. Dressing, excluding bleed out procedures, must not commence until the animal is confirmed to be dead.

⁷Unless otherwise approved by the relevant Commonwealth, State or Territory Controlling Authority responsible for the enforcement of the Australian Standard for the Hygienic Production and Transportation of Meat for Human Consumption, or equivalent regulations.



SECTION THREE - PERFORMANCE INDICATORS
FOR IMPLEMENTATION- ON PLANT USE ONLY

Performance Indicators for Standard 1

(Management Procedures and Planning)

Principle Reference	Principle	Target	Good Management Practice	Location (SOPs, Work, Instructions, Records) (Fill in details)															
P1.1	The policy objective for the company includes animal welfare and a demonstrated commitment of the proprietor to this objective	There is a policy statement for animal welfare included in the establishment's Approved Arrangements and/or QA documentation.	Refer to background information and rationale.																
P1.2	The establishment's quality assurance program (QA) and/or Approved Arrangements include animal welfare provisions relevant to the establishment	The establishment's QA and/or Approved Arrangements includes: <ul style="list-style-type: none"> Standard Operating Procedures outlining the management of livestock at the establishment, including during emergencies; Procedures for monitoring practices that impact on animal welfare; Annual review procedures. 	Animal welfare is included in the internal audit schedule and management review. Outcomes of the review are communicated to livestock suppliers (eg. transporters, producers).																
P1.3	Where livestock processing establishments are responsible for scheduling livestock transport, journeys are planned with consideration of: <ul style="list-style-type: none"> the class and condition of livestock; time off feed and water; weather and road conditions; and planned rest and spell stops 	All livestock Where transport of livestock is scheduled by the establishment, journeys are planned so as to not exceed the maximum times off water (below) <table border="1" data-bbox="630 1249 997 1774"> <thead> <tr> <th>Class of livestock</th> <th>Species</th> <th>Max time off water</th> </tr> </thead> <tbody> <tr> <td>Adult > 6 months</td> <td>Cattle, sheep, alpacas, camels, deer, goats</td> <td>48 hours</td> </tr> <tr> <td></td> <td>Pigs and horses</td> <td>24 hours</td> </tr> <tr> <td>Calves < 1 month</td> <td>Bobby calves</td> <td>18 hours</td> </tr> <tr> <td>Lambs < 4 months⁸</td> <td>Lambs</td> <td>28 hours</td> </tr> </tbody> </table> <p>For all other transport arrangements, feedback is provided to suppliers on the above as required⁹</p>	Class of livestock	Species	Max time off water	Adult > 6 months	Cattle, sheep, alpacas, camels, deer, goats	48 hours		Pigs and horses	24 hours	Calves < 1 month	Bobby calves	18 hours	Lambs < 4 months ⁸	Lambs	28 hours	For journeys planned and scheduled by other parties (eg. transporters) communication should occur between responsible parties to ensure: <ul style="list-style-type: none"> that the time livestock have been off water is reported for each consignment¹⁰; that the time off feed and water during transport is kept to a minimum; and that livestock conform to specifications otherwise action is taken to inform the supplier. 	
Class of livestock	Species	Max time off water																	
Adult > 6 months	Cattle, sheep, alpacas, camels, deer, goats	48 hours																	
	Pigs and horses	24 hours																	
Calves < 1 month	Bobby calves	18 hours																	
Lambs < 4 months ⁸	Lambs	28 hours																	

Performance Indicators for Standard 1

(Management Procedures and Planning)

P1.3 (Cont'd)		Bobby calves	<p>Where the transport of bobby calves is scheduled by the establishment, calves must:</p> <ul style="list-style-type: none"> • be prepared and transported to ensure delivery to the plant within 18 hours of last feed; • spend no more than 12 hours on transport vehicles; • have been fed within 6 hours of leaving the property of birth; • meet the specifications of the NVD, otherwise action is taken to inform the supplier accordingly. <p>For all other transport arrangements, feedback is provided on the above as required.</p>	<p>Processors provide feedback on the above accordingly.</p> <p>At all times, time off feed for livestock at the establishment is kept to a minimum, with consideration of food safety risks.</p> <p>Management procedures give attention to providing maximum opportunity for livestock to re-hydrate following transport.</p>	
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⁸ Note: For special consignments (e.g. sucker lambs) time off water and feed is kept to a minimum.

⁹ Note: For journeys that are scheduled under the direction of plant management, action is taken to determine the time that livestock were removed from water prior to loading. Time off water is measured from the time livestock are off water on the property of origin to the time they are provided water (e.g. at the saleyard and/or plant) for each individual journey.

¹⁰ Note: Livestock suppliers are responsible for communicating consignment related information including the time that livestock have been off feed and water. In the instance that this information is not available, records should be made.

Performance Indicators for Standard 1

(Management Procedures and Planning)

P1.4	<p>Scheduling for slaughter takes into consideration:</p> <ul style="list-style-type: none"> the species, class and condition of livestock; maximum allowable time off feed and water; transport duration; and other relevant requirements (e.g. food safety). 	All livestock	<p>Slaughter scheduling for livestock is determined on the basis of livestock condition, class and species, duration of transport and time off feed.</p> <p>Time off feed:</p> <p>Where livestock are not scheduled for slaughter within 24 hours of their arrival, appropriate feed is provided.</p>	<p>Livestock that have been transported longer distances and off feed for longer durations should be consigned for slaughter first.</p> <p>Where livestock may be weak, ill or injured or in less than optimal condition, standard ante-mortem procedures apply and action is taken to i) separate and treat the animal(s), ii) schedule emergency slaughter or iii) carry out humane destruction procedures as required. Note: Refer to standard 4.</p>	
P1.4 (Cont'd)		Bobby calves	<p>Bobby calves must:</p> <ul style="list-style-type: none"> meet the specifications of the NVD otherwise action is taken to inform the supplier accordingly. be slaughtered as soon as possible ex-consignment and as a minimum, within 30 hours of their last feed, otherwise fed¹¹. be given priority slaughter within the first processing shift following their arrival at the establishment. Note: Where an unexpected delay occurs, targets for time off food may be extended, provided that: <ul style="list-style-type: none"> calves are processed as soon as possible within the first processing shift the reason for the delay is recorded; corrective action is taken to avoid repeat occurrences <p>Carry over calves (defined as calves not slaughtered in the first shift), are scheduled for slaughter as soon as possible and fed in accordance with the targets above</p>	<p>Animal welfare is included in the internal audit schedule and management review.</p> <p>Outcomes of the review are communicated to livestock suppliers (eg. transporters, producers).</p>	

¹¹ Refer to Australian Standards and Guidelines for the Welfare of Animals – Land Transport www.animalwelfarestandards.com.au.

Performance Indicators for Standard 1

(Management Procedures and Planning)

P1.5	Standard Operating Procedures are developed and implemented for livestock management tasks	Standard Operating Procedures are available that detail actions for: <ul style="list-style-type: none"> delays in slaughter; equipment breakdown and power failure; extremes of weather; out of hours for the management of livestock; industrial disputes. 	Standard Operating Procedures detail: <ul style="list-style-type: none"> livestock management procedures in lairage; humane destruction; and stunning and slaughter practices. 	
P1.6	Sufficient numbers of competent personnel are available or on-call to conduct designated tasks	Current contact details of 'on-call' personnel are made available to livestock suppliers and transport operators for out of hours contact.	There are designated 'on call' personnel that are competent in humane destruction, providing veterinary assistance, obtaining feed and water or other action as necessary. Instructions are provided to livestock suppliers and transport operators arriving out of hours which detail: <ul style="list-style-type: none"> the pen(s) where livestock are to be placed; procedures for managing livestock; action in the event of an emergency e.g. contacting on-call personnel. 	
P1.7	Contractual arrangements with suppliers include provisions for animal welfare and feedback on any adverse outcomes is provided	Contractual arrangements with livestock suppliers detail: <ul style="list-style-type: none"> specifications for the expected fitness of livestock arriving at the establishment; the maximum time(s) off feed and water; and expectations in relation to livestock handling practices Feedback is provided to livestock suppliers on adverse animal welfare outcomes and/or non-conformances and recorded. In the instance that cruelty is observed, this is reported to the appropriate authority and recorded.	Where feedback has been provided to suppliers, records of this communication are kept. Steps are taken to ensure that any required corrective actions are completed accordingly. Where possible, livestock are sourced from accredited suppliers and transport operators ¹² .	

¹² Refer to the 'Background Information and Rationale' section of these Standards for further information on relevant accreditation programs across the supply chain.

Performance Indicators for Standard 2 (Design and Maintenance of Facilities and Equipment)

Principle Reference	Principle	Target	Good Management Practice	Location (SOPs, Work, Instructions, Records) (Fill in details)
P2.1	Facilities and equipment are designed and maintained to ensure their effective operation and use and are appropriate for the species and class of livestock	Facilities are in good working order.	Refer to background information and rationale.	
P2.2	Facilities are free from protrusions and other objects that can cause injury, are clean and in good working order	Livestock facilities are included in existing maintenance logs.	Injuries to stock as a result of facilities or handling are identified and recorded (e.g. condemnns, bruising, injuries). Where slaughter data indicates there might be a problem with facilities and/or handling, appropriate corrective or preventative action is taken to improve the facilities or provide feedback to livestock suppliers as may be necessary (e.g where the issue is identified to occur prior to arrival at the plant).	
P2.3	Design of facilities takes into account protecting animals from extremes of weather and provides effective ventilation	Facilities are free from any sharp protrusions that could cause injury to livestock.	Ventilation systems, where these apply (note: most lairages are open to air), are fully operational and effective in providing adequate air exchange for the age and number of animals being held ¹³ .	

¹³ Note: Lairages are kept clean and open to airflow, thus any possible risk in relation to ventilation although rare, would likely be to impact human welfare before livestock. Refer to Occupational Health and Safety Standard Operating Procedures for details on harmful gases as a result of ineffective ventilation in lairage.

Performance Indicators for Standard 2 (Design and Maintenance of Facilities and Equipment)

P2.4	Flooring in pens, laneways, races and ramps minimise slipping, falling and injury	<p>Lairage area flooring is kept clean to minimise livestock slipping or falling.</p> <p>A monitoring event (at least every 6 months) includes the assessment of slips and falls scored for 100 animals at the point of the unloading ramp, yards, crowd pen, lead up race, and stun box.</p> <ul style="list-style-type: none"> Slip or falls are marked per animal for 100 animals (for small plants this might be done over several consignments). If >3% of animals are observed to be slipping (loss of footing as a result of flooring, e.g. not due to behavioural contact with another animal), corrective action must be taken. If >1% of animals are observed to fall (body touches floor), corrective action must be taken. 	<p>Ramps to be designed for the particular species of livestock to walk unaided, without slipping or falling.</p> <p>Ramps do not contain slopes greater than 20 degrees.</p>	
P2.5	Lairage holding pens provide sufficient space for the number of livestock expected to be held at any one time	Livestock are penned at the appropriate densities, with space to move freely and access water.	Refer to stocking density scale in Appendix 6.	
P2.6	Facilities are available to care for, or to segregate weak, ill or injured animals	Separate holding pens are available to segregate, observe and treat any weak, ill or injured livestock.	Refer to background information and rationale.	
P2.7	Facilities for water are available and operational in all lairage holding pens	<p>Water is available in all pens where livestock are held.</p> <p>Livestock are observed to be able to access water easily.</p>	Refer to background information and rationale.	
P2.8	Facilities for providing feed are available and operational as necessary	<p>Feed and feeding facilities are available on site to feed livestock being held.</p> <p>Note: feeding facilities may include pasture/paddocks.</p>	A contingency arrangement is in place to obtain feed or feeding equipment as may be required.	

Performance Indicators for Standard 2 (Design and Maintenance of Facilities and Equipment)

P2.9	Lighting is adequate and uniform across the lairage holding pens, ramps and raceways to aid animal movement and for the inspection of livestock	Lighting is operational and provides even, uniform light without dark shadows. Lighting is sufficient for inspecting livestock and a portable lighting source is available for use as needed (e.g. clinical inspections).	If livestock are observed to be baulking at light spots or dark shadows, action should be taken to minimise these distractions in high traffic areas.	
P2.10	Equipment for humane destruction is available, fully operational and appropriate for the species and class of livestock	Humane destruction equipment (rifles/captive bolts) is available at the premises. Humane destruction equipment is maintained to manufacturer's instructions. Bullets and charges used are appropriate for the species/class of livestock to be destroyed.	Standard operating procedures should include which charges are to be used for each species/class of livestock. As a guide, for large livestock (bulls, rams, horses, pigs) a .22 magnum projectile and/or the green captive bolt charge (3 grain) should be used, for smaller livestock (calves, sheep, goats) a .22 long rifle/hollow point and red/purple (1.25-2.5 grain) charge should be used, depending on the exact size of the animal and the manufacturer's instructions for the equipment used.	
P2.11	Equipment for humane destruction is cleaned, maintained, operated and stored in accordance with manufacturer's specifications	Equipment for humane destruction is checked to be operational at the commencement of each shift. Equipment for humane destruction is cleaned before or after each shift and is stored in a clean, dry place.	Refer to manufacturer's instructions for further advice on the maintenance and operation of humane destruction equipment.	
P2.12	Restraining equipment is designed and maintained to restrain animals effectively with minimal stress	Measureables: <ul style="list-style-type: none"> Animals are able to physically enter the restrainer easily; Animals are effectively restrained, without falling or losing balance and cannot escape. Restraint enables the effective and accurate positioning of the stun apparatus without causing injury, pain or distress. No more than 5% of animals (cattle, pigs only) are observed to vocalise while in the restrainer (measure from the time where the restrainer takes hold). 	<ul style="list-style-type: none"> Restrainers should allow unimpeded access to the forehead of the animal by the person doing the stunning. The device must restrain the animal tightly enough to be held for stun but without excessive pressure that would cause discomfort. Restrainers should restrict movement of the animal without discomfort and prevent the animal moving sideways, forwards or backwards V-shape conveyors are a suitable design and dimension for complete restraint of the animal being carried. Knocking boxes are appropriate for the size of the animal. Knocking boxes allow for quick and full release of the animal (particularly the head if restrained) as soon as it has been stunned and access to the head of the animal if the animal has fallen. 	

Performance Indicators for Standard 2 (Design and Maintenance of Facilities and Equipment)

P2.13	Stunning and slaughter equipment is fully operational and appropriate for the species and class of livestock	All equipment used in stunning and slaughter is checked to ensure it is fully operational at the commencement of each shift. All stunning and slaughter equipment is maintained in accordance with manufacturer's instructions.	Stunning and slaughter equipment is designed, constructed and maintained in such a way as to avoid injury or unnecessary stress to the animals	
P2.14	Stunning and slaughter equipment is tested, cleaned, maintained, operated and stored in accordance with manufacturer's specifications	Captive bolt	Charges are appropriate for the species. Captive bolts and rifles are cleaned either prior to or following each shift (e.g. after use) to remove carbon deposits and maintain bolt velocity.	Charges are stored in a dry, secure place and separated into categories of strength and marked accordingly.
		Mechanical/ Concussion	Compressed air generators deliver the required pressure and the required air volume for an effective stun. Pressure at the header tank or gauge is checked before each shift ¹⁴ .	Refer to manufacturers instructions for further information.
		Carbon Dioxide	The chamber is equipped to measure and display the CO ₂ concentration and there should be a record of the time of exposure. Gas levels are observed regularly to ensure gas concentration remains at optimal limits and corrective actions are taken immediately if gas falls below required concentration.	The chamber is equipped with an audible (alarm) warning if the concentration of CO ₂ falls below the required concentration. The conveyor and the chamber are adequately lit to allow the animals to see their surroundings and enter the chamber. Where alarms sound (or the warning is observed), action is taken immediately to fix the problem.

¹⁴ Note: Generators run at around 80% of their capacity during normal production. Where possible, pressure gauges are installed and monitored.

Performance Indicators for Standard 2 (Design and Maintenance of Facilities and Equipment)

P2.14 (Cont'd)	Stunning and slaughter equipment is tested, cleaned, maintained, operated and stored in accordance with manufacturer's specifications	Electrical	<p>Equipment is tested daily using appropriate resistors or dummy loads to ensure power output / electrical continuity (eg. no leakage).</p> <p>The equipment incorporates a device which monitors and displays stunning currents.</p> <p>The stun should be monitored for the appropriate current level and stun duration¹⁵, and any fall below minimum levels should be automatically recorded and rectified.</p>	<p>Electrical stunning is maintained in accordance with manufacturer's specifications and kept clean to ensure the flow of current is optimal.</p> <p>The equipment should be fitted with a trigger to manually initiate the stun while the current flow should be automatically terminated.</p>	
		Knives	Knives are maintained, sharpened and cleaned in accordance with manufacturer's instructions.	Personnel involved in sticking procedures are trained and are competent in the use and maintenance of knives.	
P2.15	Back-up stunning equipment is available, fully operational and appropriate for the species being slaughtered	Back-up stunning equipment is checked to ensure its operation at the commencement of each shift.	<p><i>Captive bolts:</i> Where captive bolts are used as back-up apparatus, they should be re-loaded following each use to ensure they remain ready at hand as required throughout the shift, provided this is permitted under relevant OH&S standards and/or legislation.</p> <p><i>Electrical:</i> Where electrical stunning is used, it is good practice to have an alternative back up (eg. other than electrical tongs) in the event of power failure or other problem with the electrical stun apparatus. Alternatively, access to the humane destruction equipment used in lairage might be sufficient, provided the equipment can be accessed urgently.</p> <p>Note: Back up stunners are commonly used 1-2 per shift - it is best practice to ensure the animal is correctly stunned before releasing the animal from the restraint.</p>		

¹⁵ Note: The use of constant current stunning devices is recommended over constant voltage stunners.

Performance Indicators for Standard 3 (Staff Competency)

Principle Reference	Principle	Target	Good Management Practice	Location (SOPs, Work, Instructions, Records) (Fill in details)
P3.1	A system is in place which ensures that personnel handling livestock are regularly assessed as being competent in their specific tasks and records are kept accordingly	As part of the internal audit and management review process: <ul style="list-style-type: none"> staff competencies are checked to be authorised as current; staff training registers are maintained; ongoing training needs of staff are regularly identified. 	At least one stockhandler or supervisor has completed formal training in animal welfare e.g. Applicable units within the Mintrac Animal Welfare Skillset Package.	
P3.2	Personnel undergoing training are monitored regularly by a supervisor and are observed directly for specific tasks that are considered high risk in terms of livestock welfare, until deemed competent	Direct supervision of personnel by another competent person occurs for key tasks such as humane destruction, stunning and slaughter until competency is demonstrated ¹⁶ .	For other activities, staff may be monitored regularly. A person is deemed competent for a task when they can demonstrate current knowledge, skills, attitude and behaviour to undertake the task. Note: refer to definition of competency, appendix 4.	
P3.3	Personnel handling livestock on a daily basis regularly observe the animals and are competent to: <ul style="list-style-type: none"> identify abnormal behaviours, injuries and signs of stress in livestock take action when required to rectify a problem 	Personnel handling livestock are competent to: <ul style="list-style-type: none"> routinely inspect livestock; identify simple behavioural and physiological signs of stress, disease and injury; take action as necessary. 	The on-plant training procedures include instructions on the targets specified (left). For further information, contact the National Meat Industry Training Council.	
P3.4	All personnel handling livestock who use implements and/or dogs to move animals are competent in their appropriate use	Personnel handling livestock have undergone on the job training in the appropriate use of implements (by another competent person on the premises). Refer to 5.5 for further information. Where personnel are observed to be incorrectly handling livestock (refer to 5.5), corrective action is taken.	For other personnel (e.g. external suppliers, livestock transporters), management inform livestock suppliers of the appropriate standards and practices relating to livestock handling on the premises and feedback is provided accordingly.	

¹⁶ Note: A person is deemed competent for a task when they can demonstrate current knowledge, skills, attitude and behaviour to undertake the task.

Performance Indicators for Standard 3 (Staff Competency)

P3.5	Personnel that are competent in humane destruction are available and/or are able to be contacted for prompt action as required	There is at least one person recorded as competent in the approved methods for humane destruction ¹⁷ . Current contact details of 'on-call' personnel are available to livestock suppliers, contractors and staff as necessary.	Refer to background information and rationale.	
P3.6	There is a system in place to ensure that personnel involved in stunning and slaughter are trained and competent in recognising the effectiveness of the procedure (eg. signs of insensibility)	Personnel are trained and competent in recognising: <ul style="list-style-type: none"> • effectiveness of the stun; and • maintenance of insensibility from stun to stick. There should be at least two people that work in slaughter positions who are trained in recognising successful stun on the floor at all times.	For stunning and slaughter, there should be several points where signs of insensibility are checked depending on plant design and personnel access. Signs of insensibility for each of the various types of stunning apparatus are included in Standard Operating Procedures. These signs are detailed in Appendix 5.	

¹⁷ For approved methods, refer to Appendix 5.

Performance Indicators for Standard 4

(Management and Humane Destruction of Weak, Ill or Injured Livestock)

Principle Reference	Principle	Target	Good Management Practice	Location (SOPs, Work, Instructions, Records) (Fill in details)
P4.1, P4.6	Expectations for assuring that livestock are fit for the intended journey are communicated to livestock suppliers to minimise the risk of receiving weak, ill or injured livestock at the establishment	<p>The establishment advises livestock suppliers of:</p> <ul style="list-style-type: none"> the plant's expectations for assessing the 'fitness' of livestock to be loaded; associated legal requirements¹⁸ for the loading and transport of livestock; any livestock that do not conform to specifications, any adverse animal welfare outcomes. 	<p>The internal audit and management review process includes review of any welfare incidents or issues relating to livestock being received at the establishment.</p> <p>Feedback on consignments received in relation to the provisions below is provided to suppliers.</p> <p>Livestock are considered fit for the intended journey¹⁹ when animals are:</p> <ul style="list-style-type: none"> able to walk on their own, bearing weight on all legs; not emaciated, dehydrated or showing signs of severe injury or distress; not suffering any condition likely to cause increased pain or distress during transport; known not to be, or visually assessed to be within 2 weeks of parturition, unless the water-deprivation time and journey is less than 4 hours duration to another property, in accordance with the requirements of state and territory legislation; meet the specifications relevant for the consignment eg. NVD requirements 	
P4.2, P4.3 (and 5.5)	<p>Consignments of livestock are assessed upon arrival and any weak, ill or injured animals are identified and recorded</p> <p>Livestock identified to be weak, ill or injured are assessed by a competent person and the appropriate action is promptly taken</p>	<p>Procedures are in place for inspecting livestock at receipt and during ante-mortem to identify any weak, ill, injured or diseased livestock.</p> <p>Inspection and ante-mortem procedures are in place to ensure that any weak, ill, injured or diseased livestock are identified.</p> <p>Livestock identified as weak, ill or injured are assessed by a competent person and action is taken accordingly (refer to GMP).</p>	<p>Records are kept of any weak, ill or injured animals arriving at the plant.</p> <p>Livestock in holding pens are observed daily to ensure that any animal that is weak, ill or injured is identified and action is taken.</p> <p>Depending on the condition of the animal and other requirements such as food safety, animals that are weak, ill or injured are:</p> <ul style="list-style-type: none"> Segregated in a separate pen for rest and recovery, assessment, feed or treatment²⁰; Humanely destroyed; Placed in line for casualty slaughter; Placed in line for emergency (immediate) slaughter (where the animal passes the requirements for processing). 	

¹⁸ Refer to the Australian Standards and Guidelines for the Welfare of Animals – Land Transport, for further information.

¹⁹ For further information, refer to the Meat and Livestock 'Fit to Load Guide' and the Australian Livestock Transport/Department of Primary Industries 'Livestock Handling Fast Facts Guide'.

²⁰ Note: Segregation will apply to animals deemed 'suspect' that require a more detailed ante-mortem inspection.

Performance Indicators for Standard 4

(Management and Humane Destruction of Weak, Ill or Injured Livestock)

<p>P4.4 and P4.5</p>	<p>For animals requiring humane destruction or emergency slaughter, the procedure is promptly carried out using the approved methods</p>	<p>Moribund animals must be humanely destroyed on the spot and without delay. (Moribund means an animal with little chance of recovery).</p> <p>Approved methods of humane destruction are observed.</p> <p>Immediate follow-up action must be taken to ensure death if any signs of return to sensibility are observed.</p>		
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Performance Indicators for Standard 5 (Management of Livestock to Minimise Stress and Injuries)

Principle Reference	Principle	Target	Good Management Practice	Location (SOPs, Work, Instructions, Records) (Fill in details)
5.1	Livestock are moved throughout the facility in a calm and quiet manner that minimises stress	Livestock with no room to move should not be forced, continually prodded with an electric prod or pushed.	<p>Livestock should be handled carefully and with patience, to avoid excitement, aggression and injury. Yelling, noise making or sudden movements around livestock are avoided. Good stockhandling techniques apply – use of the animal's flight zone and point of balance, the handlers voice, body position and careful use of aids such as flappers/noise makers as an extension of the arm.</p> <p>Examination of facilities should occur if livestock are identified to have difficulty, are baulking, handling by stockpeople is excessive or livestock are observed to be regularly slipping and falling in particular areas. Removing items causing baulking/stress (ie flapping items, hoses, boards, covering drains) may assist handling.</p> <p>To measure vocalisations, observe 100 animals across the lead up race to the restrainer (section the areas off and score a % of the 100 animals in each section).</p> <p>Score an animal as a vocaliser if it makes any audible vocalisation. Each animal is scored on a yes/no basis (e.g. vocaliser or non-vocaliser) in relation to a handling or facility intervention.</p> <p>For each animal (100) mark: X = non-vocaliser, P= vocalised to an electric prod, S= vocalised at stun, F= vocalised due to fall/slip, R= vocalised due to excessive pressure from restraint) from the point at the lead up race to knocking box/restrainer. No more than 3% cattle and 10% pigs should be observed to vocalise for the 100 measured regardless of cause. The causes will assist the establishment in making any required changes in the event vocalisation scores are high.</p> <p>Note: animals in lairage or holding pens/ raceways that are not being handled should not count as a score. Animals that vocalise in the yards are not scored.</p> <p>Vocalisations to be monitored as part of every internal audit.</p>	

Performance Indicators for Standard 5 (Management of Livestock to Minimise Stress and Injuries)

5.2	Livestock are segregated in pens in accordance with species	Livestock that are weak, ill or injured are penned separately.	Livestock of different species, size, age and class and with different characteristics (eg. horns, different sizes) should be segregated accordingly.						
5.3	Livestock are penned with sufficient space to move freely, lie down and access water facilities	Livestock are able to: <ul style="list-style-type: none"> • move without restriction, • lie down as necessary, • access water without any difficulty. 	Refer to stocking density scale in Appendix 6.						
5.4 Note: 5.5 covered above in Std 4	Steps are taken to manage any aggressive or unfamiliar animals that may fight in pens	Where aggression between animals is observed and likely to cause injury, action is taken to manage or separate aggressive animals ²¹ .	Mixing of unfamiliar groups and aggressive livestock is avoided.						
5.6, 5.7, 5.8	<p>Implements used to aid the handling of livestock are appropriate for the species and are used judiciously to minimise stress and injury in livestock</p> <p>Where dogs are used to aid moving livestock, they are trained, muzzled and supervised whilst working.</p>	<table border="1"> <tr> <td>Electric prodders</td> <td> <p>Electric prodders are 'fit for purpose' and used appropriately when moving livestock. Electric prodders are not used:</p> <ul style="list-style-type: none"> • on animals < 3 months of age, • on sensitive areas of the animal's body (eyes, ears, nose, anus, etc). <p>Electric prod use is monitored as part of the internal audit procedure</p> </td> <td> <p>The use of other driving aids is recommended, provided these are used appropriately, and in a manner that encourages movement without causing injury. Examples of appropriate implements include "flappers", boards, and rattlers.</p> <p>To measure prod use, observe 100 animals and record prod use (e.g. mark for each animal: X = moved quietly without an electric prod, P = electric prod) from the point at the lead up race to knocking box/restrainer. No more than 25% of the 100 animals are observed to be prodded.</p> <p>Note: only score per animal when the animal is touched with the electric prod. An animal is scored as either prodded or not prodded, regardless of whether prodder is turned on (charged) or not.</p> </td> </tr> <tr> <td>Dogs</td> <td> <p>Dogs are well trained, muzzled and supervised when working with livestock. Dogs are not to be used</p> <ul style="list-style-type: none"> • on any animal <3 months of age • on cattle, pigs or horses. </td> <td> <p>Dogs should be kept away from the vicinity of livestock when not working.</p> <p>Well trained dogs may be used to aid in moving sheep.</p> </td> </tr> </table>	Electric prodders	<p>Electric prodders are 'fit for purpose' and used appropriately when moving livestock. Electric prodders are not used:</p> <ul style="list-style-type: none"> • on animals < 3 months of age, • on sensitive areas of the animal's body (eyes, ears, nose, anus, etc). <p>Electric prod use is monitored as part of the internal audit procedure</p>	<p>The use of other driving aids is recommended, provided these are used appropriately, and in a manner that encourages movement without causing injury. Examples of appropriate implements include "flappers", boards, and rattlers.</p> <p>To measure prod use, observe 100 animals and record prod use (e.g. mark for each animal: X = moved quietly without an electric prod, P = electric prod) from the point at the lead up race to knocking box/restrainer. No more than 25% of the 100 animals are observed to be prodded.</p> <p>Note: only score per animal when the animal is touched with the electric prod. An animal is scored as either prodded or not prodded, regardless of whether prodder is turned on (charged) or not.</p>	Dogs	<p>Dogs are well trained, muzzled and supervised when working with livestock. Dogs are not to be used</p> <ul style="list-style-type: none"> • on any animal <3 months of age • on cattle, pigs or horses. 	<p>Dogs should be kept away from the vicinity of livestock when not working.</p> <p>Well trained dogs may be used to aid in moving sheep.</p>	
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Dogs	<p>Dogs are well trained, muzzled and supervised when working with livestock. Dogs are not to be used</p> <ul style="list-style-type: none"> • on any animal <3 months of age • on cattle, pigs or horses. 	<p>Dogs should be kept away from the vicinity of livestock when not working.</p> <p>Well trained dogs may be used to aid in moving sheep.</p>							

²¹ Note: The suitability of management actions will vary depending on species and circumstance (e.g. may include placing the aggressive male with females or in another pen with more space and less aggressive males), as in some instances, separating one animal (the aggressor) can result in the animal becoming further stressed.

Performance Indicators for Standard 5 (Management of Livestock to Minimise Stress and Injuries)

5.9	Care is taken when washing animals with high pressure hoses to avoid sensitive areas of the animal and avoid cold stress	Constant washing in extremely cold weather should be kept to the minimum required to meet food safety regulations. Following washing, livestock should be kept in a sheltered area so as to avoid windchill.	Livestock are observed in automatic wash bays to ensure that the wash pressure is not causing distress. Care is taken when manually pressure washing livestock to avoid sensitive areas and cold stress and feedback on the cleanliness of livestock is provided to suppliers so as to ensure washing is kept to the minimum required under food safety regulations	
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Performance Indicators for Standard 6

(Humane Slaughter Procedures)

Principle Reference	Principle	Target		Good Management Practice	Location (SOPs, Work, Instructions, Records) (Fill in details)
P6.1	Livestock are restrained effectively with minimal stress and for minimal duration prior to stun	<p>Animals should only be allowed to enter the restrainer if they are to be stunned without delay.</p> <p>Animals do not remain in the restrainer during shift breaks.</p>		<p>Care should be taken to ensure animals enter the restrainer with minimal stress.</p> <p>For knocking boxes, careful management of the boom gate is important to avoid stress and bruising.</p> <p>For conveyors, careful placement of animals with enough space between them on the belt to ensure that their heads are raised at the time they reach the stun operator will ensure easier positioning of tongs for the stun.</p>	
P6.2	Livestock are effectively stunned with appropriate equipment for the species and class of livestock	Cartridge driven captive bolt guns	<p>Captive bolt cartridges are appropriate for the class of livestock to be stunned.</p> <p>Correct stun on first shot to be observed for a minimum of 95% animals²² otherwise corrective action should be taken. Any less than 100% insensibility on the bleed rail constitutes a failure.</p>	The animal should be restrained in such a way that it allows the operator easy access to the head for positioning of the gun.	
		Pneumatic captive bolt guns	Should be operated at the pressure levels specified by the manufacturer.	Refer to manufacturer's instructions for further information on pressure levels.	
		Controlled Atmosphere (CO ₂) stunning	<p>CO₂ concentration should be greater or equal to 90% by volume²³.</p> <p>After entering the stunning chamber the animals should be conveyed to the point of maximum concentration of the gas without delay.</p> <p>Pigs should be exposed to CO₂ for a minimum of 100s seconds.</p>	Note: Variations in CO ₂ concentration and stun duration times may be acceptable following a monitoring/verification procedure that demonstrates effective stun.	

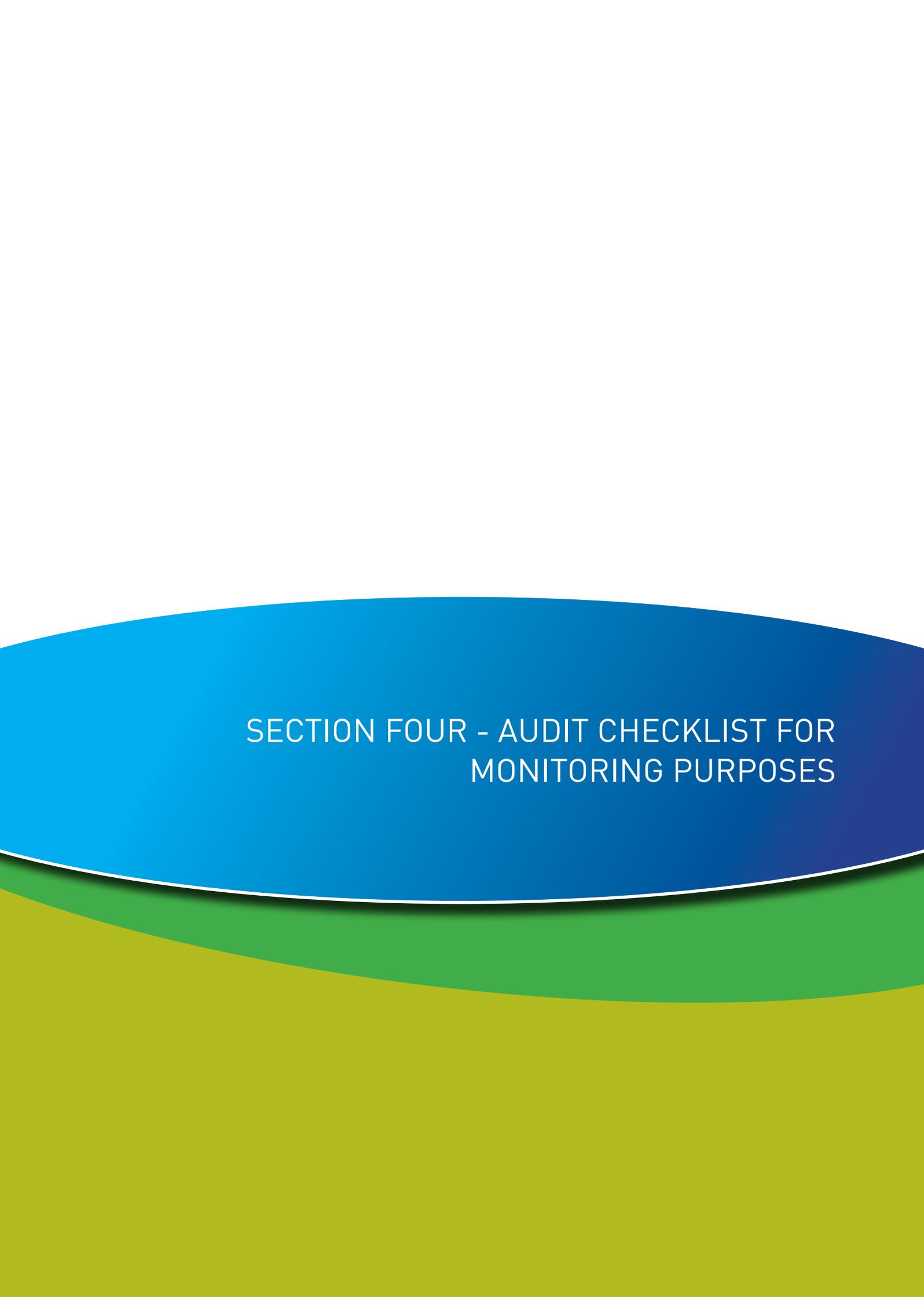
²² 5% variation on the efficiency of the first shot placement is permissible (misfiring, ineffective restraint etc) however in all circumstances back-up equipment is applied prior to the release of the animal from the restrainer (refer to target 2.15 above). No less than 100% insensibility on the bleed rail is acceptable.

²³ For gaseous mixtures, CO₂ should be no less than 80% by volume. Note: At present the most common agent used for this type of stunning is CO₂. Other gas mixtures may be used in the future.

Performance Indicators for Standard 6 (Humane Slaughter Procedures)

P6.2 (Cont'd)		Electrical stunning	<p>The device (tongs) should be applied to the animal so that it spans the brain.</p> <p>Correct placement of tongs is observed for at least 98% of animals. Less than 1% of animals should be observed to vocalise due to energising of the electrode before firm positioning.</p> <p>The stunning equipment should be provided with adequate power to continuously achieve the minimum current levels recommended for stunning:</p> <p>Cattle – 1.5A, Calves – 1.0A, Pigs – 1.3A, Sheep and Goats – 1.0A, Lambs 1.0A.</p> <p>Minimum stun duration should be 3 seconds.</p>	<p>Electrode devices need to be positioned close to the brain ie. over the eyes and in front of the ears.</p> <p>The application of electrical currents which bypass the brain is unacceptable unless the animal has been stunned.</p> <p>Appropriate measures should be taken to ensure efficient electrical conductivity e.g. removing excess wool, wetting the skin at the point of contact.</p>									
6.3	Where reversible stunning is used, sticking must be applied promptly and in a manner that ensures animals do not gain sensibility	There must be a monitoring procedure in place to ensure that animals do not regain consciousness ²⁴ and that corrective action is promptly taken as required.	<p>After a reversible stun all animals should be bled effectively by either cutting both carotid arteries or cutting the vessels from which they arise (eg. thoracic stick). A thoracic stick can be carried out following a carotid artery cut.</p> <p>After the head-only electrical stunning of cattle (all ages) it is necessary to follow up a neck cut with a thoracic stick because the blood loss from the neck cut alone is not sufficient to ensure the animal does not regain consciousness.</p> <table border="1"> <thead> <tr> <th>Stunning method</th> <th>Maximum interval for commencement of bleeding</th> </tr> </thead> <tbody> <tr> <td>Head-only electrical stun</td> <td>Calves – 10 seconds Sheep – 25 seconds Cattle – 20 seconds Pigs – 20 seconds</td> </tr> <tr> <td>CO₂ (pigs)</td> <td>60 seconds (after leaving the chamber)</td> </tr> <tr> <td>Non-penetrating captive bolt (concussion stun)</td> <td>30 seconds</td> </tr> </tbody> </table>	Stunning method	Maximum interval for commencement of bleeding	Head-only electrical stun	Calves – 10 seconds Sheep – 25 seconds Cattle – 20 seconds Pigs – 20 seconds	CO ₂ (pigs)	60 seconds (after leaving the chamber)	Non-penetrating captive bolt (concussion stun)	30 seconds		
Stunning method	Maximum interval for commencement of bleeding												
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6.4	Procedures are in place to confirm that the animal has been effectively stunned and signs of insensibility are monitored to the point of death: corrective action is immediately taken where required	There must be a monitoring procedure in place to ensure that animals do not regain consciousness and that corrective action is promptly taken as required.	<p>Following correct sticking procedure, there are no sensible animals on the bleed rail.</p> <p>Regular checks should be done to ensure animals do not regain consciousness after they have been stunned.</p> <p>If there are signs of consciousness the animal should be immediately re-stunned using the appropriate back-up equipment and corrective action taken accordingly.</p>										

²⁴ Note: While stun to stick intervals are less critical for irreversible stunning methods, they should be kept to the minimum practical and procedures should remain in place to ensure animals do not regain consciousness.



SECTION FOUR - AUDIT CHECKLIST FOR
MONITORING PURPOSES

AUDIT CHECKLIST

Principle Reference	Principle	Target	Yes	No	N/A														
P1.2	Does the establishment's quality assurance program (QA) and/or Approved Arrangements include animal welfare provisions relevant to the establishment?	<p>The establishment's QA and/or Approved Arrangements includes:</p> <ul style="list-style-type: none"> • Standard Operating Procedures outlining the management of livestock at the establishment, including during emergencies; • Procedures for monitoring practices that impact on animal welfare; • Annual review procedures. 																	
P1.3	Where the transport of livestock is <u>scheduled by the establishment</u> , were journeys planned so as to not exceed the maximum times off water ²⁵ ?	<table border="1"> <thead> <tr> <th>Class of livestock</th> <th>Species</th> <th>Max time off water</th> </tr> </thead> <tbody> <tr> <td rowspan="2">Adult > 6 months</td> <td>Cattle, sheep, alpacas, camels, deer, goats</td> <td>48 hours</td> </tr> <tr> <td>Pigs and horses</td> <td>24 hours</td> </tr> <tr> <td>Calves < 1 month</td> <td>Bobby calves</td> <td>18 hours</td> </tr> <tr> <td>Lambs < 4 months²⁶</td> <td>Lambs</td> <td>28 hours</td> </tr> </tbody> </table> <p>Where the processing establishment is not directly responsible for the scheduling, transport and/or consigning of livestock feedback is provided on any adverse outcomes or non-conformances to the supplier.</p>	Class of livestock	Species	Max time off water	Adult > 6 months	Cattle, sheep, alpacas, camels, deer, goats	48 hours	Pigs and horses	24 hours	Calves < 1 month	Bobby calves	18 hours	Lambs < 4 months ²⁶	Lambs	28 hours			
Class of livestock	Species	Max time off water																	
Adult > 6 months	Cattle, sheep, alpacas, camels, deer, goats	48 hours																	
	Pigs and horses	24 hours																	
Calves < 1 month	Bobby calves	18 hours																	
Lambs < 4 months ²⁶	Lambs	28 hours																	
P1.3	Where the transport of bobby calves is <u>scheduled by the establishment</u> , are calves: <ul style="list-style-type: none"> • prepared and transported to ensure delivery to the plant within 18 hours of last feed?; • on transport vehicles for no more than 12 hours?; • fed within 6 hours of leaving the property of birth?; • consigned in accordance with the specifications of the NVD? 	<p>Corrective action is taken accordingly.</p> <p>Note: Where the processor is not responsible for the scheduling, transport and consigning of calves: feedback is provided on any adverse outcomes and/or non-conformances to the supplier.</p>																	

²⁵ Note: For journeys that are scheduled under the direction of plant management, action is taken to determine the time that livestock were removed from water prior to loading. Time off water is measured from the time livestock are off water on the property of origin to the time they are provided water (e.g. at the saleyard and/or plant) for each individual journey.

²⁶ Note: For special consignments (e.g. sucker lambs) time off water and feed is kept to a minimum.

AUDIT CHECKLIST

P1.4	Is the slaughter schedule developed with consideration of livestock condition, class and species, duration of transport and time off feed?	All livestock	<p>Livestock that have been transported longer distances and off feed longer durations are consigned for slaughter first.</p> <p>Time off feed:</p> <p>Where livestock are not scheduled for slaughter within 24 hours of their arrival, appropriate feed is provided.</p>			
		Bobby calves	<p>Bobby calves must:</p> <ul style="list-style-type: none"> • meet the specifications of the NVD otherwise action is taken to inform the supplier accordingly. • be slaughtered as soon as possible ex-consignment and as a minimum, within 30 hours of their last feed, otherwise fed²⁷. • be given priority slaughter within the first processing shift following their arrival at the establishment. Note: Where an unexpected delay occurs, targets for time off food may be extended, provided that: <ul style="list-style-type: none"> • calves are processed as soon as possible within the first processing shift • the reason for the delay is recorded • corrective action is taken to avoid repeat occurrences <p>Carry over calves (defined as calves not slaughtered in the first shift), are scheduled for slaughter as soon as possible and fed in accordance with the targets above</p>			

²⁷ Refer to Australian Standards and Guidelines for the Welfare of Animals – Land Transport www.animalwelfarestandards.com.au.

AUDIT CHECKLIST

Principle Reference	Principle	Target	Yes	No	N/A
P1.5	Standard operating procedures are developed and implemented for livestock management tasks	Standard Operating Procedures are available that detail actions for: <ul style="list-style-type: none"> delays in slaughter equipment breakdown and power failure extremes of weather; out of hours for the management of livestock industrial disputes 			
P1.6	Are sufficient numbers of competent personnel are available or on-call to conduct designated tasks?	Current contact details of 'on-call' personnel are made available to livestock suppliers and transport operators for out of hours contact.			
P1.7	Do contractual arrangements with suppliers include provisions for animal welfare? Is feedback provided to suppliers on any adverse outcomes?	Contractual arrangements with livestock suppliers detail: <ul style="list-style-type: none"> specifications for the expected fitness of livestock arriving at the establishment the maximum time(s) off feed and water and expectations in relation to livestock handling practices 			
P2.1	Are facilities clean and in good working order?	Facilities are in good working order. Livestock facilities are included in existing maintenance logs.			
P2.2	Are facilities free from protrusions and other objects that can cause injury?	Facilities are free from any sharp protrusions that could cause injury to livestock.			
P2.4	Is flooring designed to minimise slipping, falling and injury?	Lairage area flooring is kept clean to minimise livestock slipping or falling. Internal audit includes measuring slips and falls. Score 100 animals from the crowd pen, lead-up race and stunning box (measure a % of 100 animals in each section) and mark X = no slipping or falling, F = fell, S = slip. No more than 3% of animals are observed to be slipping (for 100 animals), otherwise corrective action is taken. No more than 1% of animals are observed to fall (body touches floor), otherwise corrective action is taken.			
P2.5	Do lairage holding pens provide sufficient space for the number of livestock expected to be held at any one time?	Livestock are penned with space to move freely and access water. Livestock are not held constantly (unless moving through the facility) in raceways.			
P2.6	Are facilities are available to care for, or to segregate weak, ill or injured animals?	Observation of hospital pens or similar.			

AUDIT CHECKLIST

P2.7	Are facilities for water available and operational in all lairage holding pens?	Water is available in all pens where livestock are held. Livestock are observed to be able to access water easily.			
P2.8	Are facilities for providing feed available and operational as necessary?	Feed and feeding facilities are available on site to feed livestock being held. Note: feeding facilities may include pasture/paddocks.			
P2.9	Is lighting adequate and (uniform) across the lairage holding pens, ramps and raceways?	Lighting is operational Lighting provides even, uniform light without dark shadows. Lighting is sufficient for inspecting livestock and a portable lighting source is available for use as needed (e.g. clinical inspections).			
P2.10	Is equipment for humane destruction available, fully operational and appropriate for the species and class of livestock?	Humane destruction equipment (rifles/captive bolts) is available at the premises. Humane destruction equipment is maintained to manufacturer's instructions. Bullets and charges used are appropriate for the species/class of livestock to be destroyed.			
P2.11	Is equipment for humane destruction cleaned, maintained, operated and stored in accordance with manufacturer's specifications?	Equipment for humane destruction is checked to be operational at the commencement of each shift. Equipment for humane destruction is cleaned before or after each shift and is stored in a clean, dry place.			

²⁷ Refer to Australian Standards and Guidelines for the Welfare of Animals – Land Transport www.animalwelfarestandards.com.au.

AUDIT CHECKLIST

Principle Reference	Principle	Target	Yes	No	N/A
P2.12	Does restraining equipment restrain animals effectively with minimal stress?	<p>Measurables:</p> <ul style="list-style-type: none"> Animals are able to physically enter the restrainer easily Animals are effectively restrained, without falling or losing balance and cannot escape Restraint enables the effective and accurate positioning of the stun apparatus No more than 5% of animals (cattle, pigs only) are observed to vocalise while in the restrainer (measure from the time where the restrainer takes hold), otherwise corrective action is taken accordingly 			
P2.13	Is slaughter equipment operational and appropriate for the species and class of livestock?	<p>All equipment used in stunning and slaughter is checked to ensure it is fully operational at the commencement of each shift.</p> <p>All stunning and slaughter equipment is maintained in accordance with manufacturer's instructions.</p>			
P2.14	Is slaughter equipment tested, cleaned, maintained, operated and stored in accordance with manufacturer's specifications?	<p>Captive bolt</p> <p>Charges are appropriate for the species.</p> <p>Captive bolts and rifles are cleaned either prior to or following each shift (e.g. after use) to remove carbon deposits and maintain bolt velocity.</p>			
		<p>Mechanical/ Concussion</p> <p>Compressed air generators deliver the required pressure and the required air volume for an effective stun.</p> <p>Pressure at the header tank or gauge is checked before each shift²⁸.</p>			
		<p>Carbon Dioxide</p> <p>The chamber is equipped to measure and display the CO₂ concentration and there should be a record of the time of exposure.</p>			
		<p>Electrical</p> <p>Equipment is tested daily using appropriate resistors or dummy loads to ensure power output / electrical continuity (eg. no leakage).</p> <p>The equipment incorporates a device which monitors and displays stunning currents.</p> <p>The stun should be monitored for the appropriate current level and stun duration²⁹ and any fall below minimum levels should be automatically recorded and rectified.</p>			
		<p>Knives</p> <p>Knives are maintained, sharpened and cleaned in accordance with manufacturer's instructions.</p>			

²⁸ Note: Generators run at around 80% of their capacity during normal production. Where possible, pressure gauges are installed and monitored.

²⁹ Note: The use of constant current stunning devices is recommended over constant voltage stunners.

AUDIT CHECKLIST

P2.15	Is back-up stunning equipment available, fully operational and appropriate for the species being slaughtered?	Back-up stunning equipment is checked to ensure its effective operation at the commencement of each shift.			
P3.1	<p>As part of the internal audit and management review process:</p> <ul style="list-style-type: none"> • Are staff competencies checked to be authorised as current? • Are staff training registers maintained? • Are the ongoing training needs of staff regularly identified? 				

AUDIT CHECKLIST

Principle Reference	Principle	Target	Yes	No	N/A
P3.3	Are personnel handling livestock on a daily basis regularly competent to: <ul style="list-style-type: none"> • identify abnormal behaviours, injuries and signs of stress in livestock? • take action when required to rectify a problem? 	Personnel handling livestock are competent to: <ul style="list-style-type: none"> • routinely inspect livestock; • identify simple behavioural and physiological signs of stress, disease and injury; • take action as necessary. 			
P3.4	Are personnel handling livestock who use implements and/or dogs to move animals competent in their appropriate use?	Personnel handling livestock have undergone on the job training in the appropriate use of implements (by another competent person on the premises). Refer to 5.5 for further information.			
P3.5	Are personnel that are competent in humane destruction available and/or are able to be contacted for prompt action as required?	There is at least one person recorded as competent in the approved methods for humane destruction ³⁰ . Current contact details of 'on-call' personnel are available to livestock suppliers, contractors and staff as necessary.			
P3.6	Are personnel involved in stunning and slaughter competent in recognising the effectiveness of the procedure (eg. signs of insensibility)?	Personnel are trained and competent in recognising: <ul style="list-style-type: none"> • effectiveness of the stun and • maintenance of insensibility from stun to stick. There should be at least two people that work in slaughter positions who are trained in recognising successful stun on the floor at all times.			
P4.1, P4.6	Are expectations for assuring that livestock are fit for the intended journey are communicated to livestock suppliers?	The establishment advises livestock suppliers of: <ul style="list-style-type: none"> • the plant's expectations for assessing the 'fitness' of livestock to be loaded • associated legal requirements³¹ for the loading and transport of livestock • any livestock that do not conform to specifications • any adverse animal welfare outcomes 			
P4.2, P4.3 (and 5.5)	Are consignments of livestock assessed and any weak, ill or injured animals identified and recorded?	Records are kept of any weak, ill or injured animals arriving at the plant. Inspection and ante-mortem procedures are in place to ensure that any weak, ill, injured or diseased livestock are identified.			

³⁰ For approved methods, refer to Appendix 5.

³¹ Refer to the Australian Standards and Guidelines for the Welfare of Animals – Land Transport, for further information.

AUDIT CHECKLIST

P4.2, P4.3 (and 5.5)	Are livestock identified to be weak, ill or injured assessed by a competent person and the appropriate action promptly taken?			
P4.4 and P4.5	For animals requiring humane destruction or emergency slaughter, is the procedure promptly carried out using the approved methods?	<p>Moribund animals must be humanely destroyed on the spot and without delay³².</p> <p>Approved methods of humane destruction are observed.</p> <p>Immediate follow-up action must be taken to ensure death if any signs of return to sensibility are observed.</p>		

³² As far as practicable.

AUDIT CHECKLIST

Principle Reference	Principle	Target	Yes	No	N/A
5.1	Are livestock moved throughout the facility in a calm and quiet manner that minimises stress?	<p>Vocalisations to be monitored as part of every internal audit.</p> <p>To measure vocalisations, observe 100 animals across the lead up race to the restrainer (section the areas off and score a % of the 100 animals in each section). Score an animal as a vocaliser if it makes any audible vocalisation. Each animal is scored on a yes/no basis (e.g. vocaliser or non-vocaliser) in relation to a handling or facility intervention. For each animal (100) mark: X = non-vocaliser, P= vocalised to an electric prod, S= vocalised at stun, F= vocalised due to fall/slip, R= vocalised due to excessive pressure from restraint] from the point at the lead up race to knocking box/restrainer. No more than 3% cattle and 10% pigs should be vocalising for the 100 measured regardless of cause. The causes will assist the establishment in making any required changes in the event vocalisation scores are high.</p>			
5.2	Are livestock segregated in pens in accordance with species and class?	Livestock that are weak, ill or injured are penned separately.			
5.3	Are livestock penned with sufficient space to move freely, lie down and access water facilities?	<p>Livestock are able to:</p> <ul style="list-style-type: none"> • move without restriction, • lie down as necessary, • access water without any difficulty. 			
5.6, 5.7, 5.8	<p>Are implements used to aid the handling of livestock appropriate for the species and are used judiciously to minimise stress and injury in livestock?</p> <p>Are dogs used to aid moving livestock trained, muzzled and supervised whilst working?</p>	<p>Electric prodders</p> <p>Electric prodders are 'fit for purpose' and used appropriately when moving livestock. Electric prodders are not used:</p> <ul style="list-style-type: none"> • on genital, anal or facial areas • on livestock under three months old • on livestock that are unable to move away • excessively on an animal. <p>As part of each internal audit, Prod use is measured. To measure prod use, observe 100 animals and record prod use – each animal is scored either as prodded or not prodded (e.g. mark for each animal: X = moved quietly without an electric prod, P = electric prod) from the point at the lead up race to knocking box/restrainer. No more than 25% of the 100 animals should be prodded³³.</p>			
		<p>Dogs</p> <p>Dogs are well trained, muzzled and supervised when working with livestock. Dogs are not to be used</p> <ul style="list-style-type: none"> • on any animal less than 3 months of age • on cattle, pigs or horses. 			

³³ Note: only score per animal when the animal is touched with the electric prod. An animal is scored as either prodded or not prodded, regardless of whether prodder is turned on (charged) or not.

AUDIT CHECKLIST

Principle Reference	Principle	Target		Yes	No	N/A
P6.2	Are livestock effectively stunned with appropriate equipment?	Cartridge driven captive bolt guns	<p>Captive bolt cartridges are appropriate for the class of livestock to be stunned.</p> <p>As part of internal audit, % correctly stunned on 1st shot is measured. Correct stun on first shot to be observed for a minimum of 95% animals³⁴ otherwise corrective action should be taken. Percentage of cattle stunned correctly on the first shot. Must be 95% or better for a minimum acceptable score. Missed cattle must be restunned immediately. 99% to 100% is excellent. Any less than 100% insensibility on the bleed rail constitutes a failure.</p>			
		Pneumatic captive bolt guns	Should be operated at the pressure levels specified by the manufacturer.			
		Controlled Atmosphere (CO ₂) stunning	<p>CO₂ concentration should be greater or equal to 90% by volume³⁵.</p> <p>After entering the stunning chamber the animals should be conveyed to the point of maximum concentration of the gas without delay.</p> <p>Pigs should be exposed to CO₂ for a minimum of 100s seconds. Note: Variations in CO₂ concentration and stun duration times may be acceptable following a monitoring/verification procedure that demonstrates effective stun.</p>			
		Electrical stunning	<p>The device (tongs) should be applied to the animal so that it spans the brain.</p> <p>Correct placement of tongs is observed for at least 98% of animals. No more than 1% of animals are observed to be vocalising due to energising of the electrode before firm positioning.</p> <p>The stunning equipment should be provided with adequate power to continuously achieve the minimum current levels recommended for stunning:</p> <p>Cattle – 1.5A, Calves – 1.0A, Pigs – 1.3A, Sheep and Goats – 1.0A, Lambs 1.0A.</p> <p>Minimum stun duration should be 3 seconds.</p>			

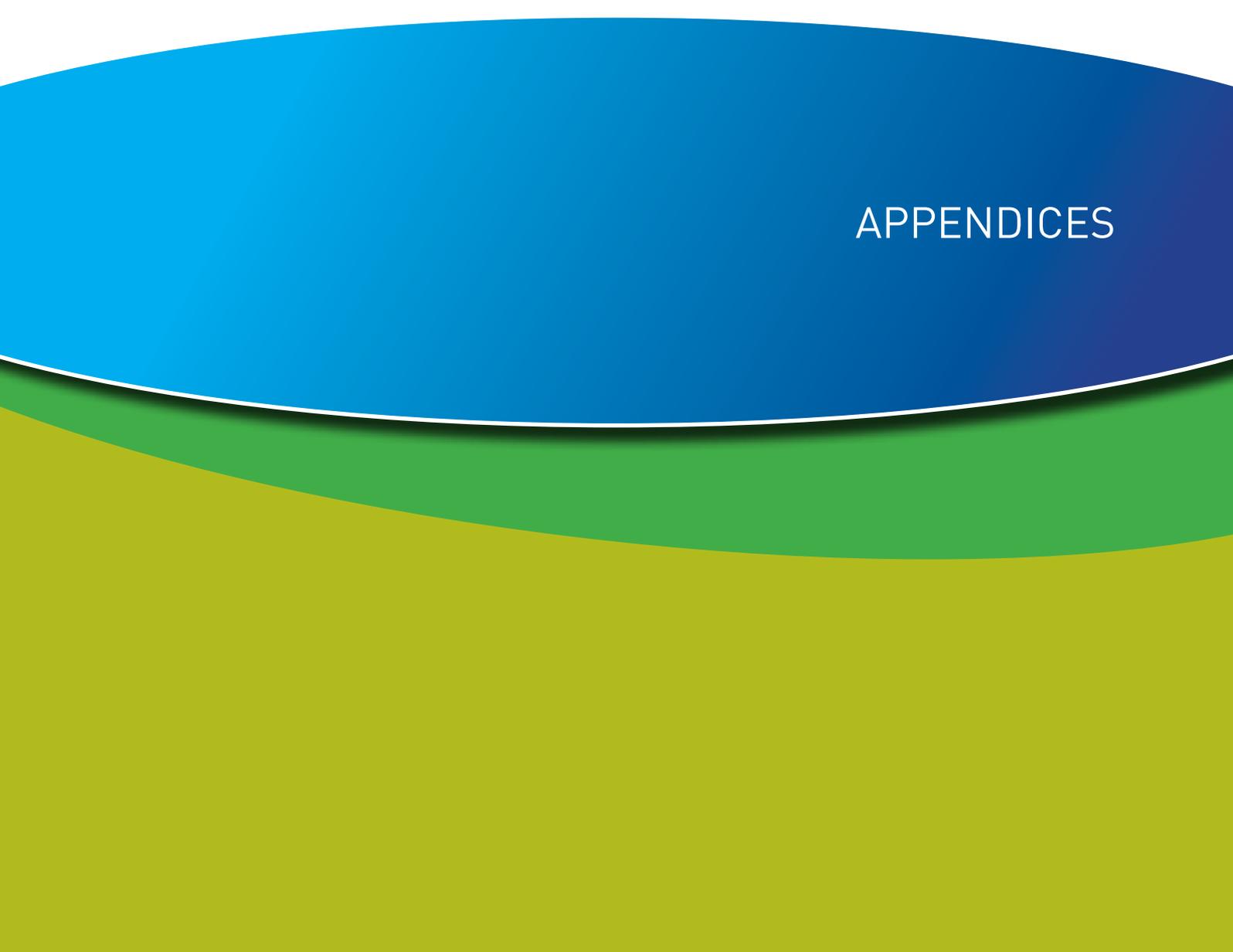
³⁴ Note: Generators run at around 80% of their capacity during normal production. Where possible, pressure gauges are installed and monitored.

³⁵ Note: The use of constant current stunning devices is recommended over constant voltage stunners.

AUDIT CHECKLIST

6.3	Where reversible stunning is used, is sticking applied promptly and in a manner that ensures animals do not gain sensibility?	There must be a monitoring procedure in place to ensure that animals do not regain consciousness ³⁶ and that corrective action is promptly taken as required. Any less than 100% insensibility on the bleed rail constitutes a failure (refer to signs in Appendix 5).			
6.4	Are procedures in place to confirm that the animal has been effectively stunned?	There must be a monitoring procedure in place to ensure that animals do not regain consciousness and that corrective action is promptly taken as required. Any less than 100% insensibility on the bleed rail constitutes a failure (refer to signs in Appendix 5).			
6.4 (b)	Are signs of insensibility monitored to the point of death and corrective action immediately taken where required?				

³⁶ Note: While stun to stick intervals are less critical for irreversible stunning methods, they should be kept to the minimum practical and procedures should remain in place to ensure animals do not regain consciousness



APPENDICES

Appendix 1: Australian Standard

All Australian Livestock Processing Establishments that produce meat for human consumption are required to comply with the requirements specified in The Australian Standard for the Hygienic Production and Transportation of Meat and Meat Products for Human Consumption (AS 4696:2007).

The Standard requires establishments to develop and implement an *Approved Arrangement* which covers the practices and procedures for the production of meat for human consumption and is underpinned by a Hazard Analysis Critical Control Points (HACCP) based process control framework.

The Approved Arrangement must also document management and production practices including:

- The policy objectives of the establishment.
- The organisational structure, the provision of resources and the provision and training of personnel.
- That a system is in place to verify that the undertakings made by the establishment are met and the results of the verification activities are documented.
- That corrective and preventative measures are implemented should undertakings not be met.
- That internal audit and management reviews are undertaken.

The 'Industry Animal Welfare Standards for Livestock Processing Establishments Preparing Meat for Human Consumption' are implemented by establishments via incorporation into the operational framework established by the 'Approved Arrangement'.

Appendix 2: The management group

The Standards (2005) were developed by a management group comprised of representatives from the following organisations (in alphabetical order):

- Animal Welfare Science Centre
- Animals Australia
- AUS-MEAT Limited
- Australian Livestock Transport Association
- Australian Meat Industry Council
- Australian Pork Limited
- Australian Quarantine Inspection Service
- Coles Supermarkets Pty Ltd
- Dairy Australia
- Meat and Livestock Australia
- Queensland Department of Primary Industries
- Queensland Rail
- Royal Society for the Prevention of Cruelty to Animals Victoria
- Victorian Department of Primary Industries
- Woolworths Limited.

Corresponding member

- Dr. Temple Grandin, University of Colorado
- Australian Wool Innovation

The Standards (2009) were reviewed with input from representatives of the following organisations (in alphabetical order):

- Animal Welfare Science Centre
- Animals Australia
- AUS-MEAT Limited

- Australian Livestock Transport Association
- Australian Meat Industry Council
- Australian Quarantine Inspection Service
- Coles Supermarkets Pty Ltd
- Meat and Livestock Australia
- Victorian Department of Primary Industries
- Woolworths Limited

Corresponding member

- Dr. Temple Grandin, University of Colorado

Appendix 3: Flow diagram of animal welfare considerations

■ All Represents indirect or secondary responsibilities for the livestock processing industry

■ Represents direct responsibilities for the livestock processing industry

Process	Step	Welfare considerations
Farm/saleyard	1.	<ul style="list-style-type: none"> • Fitness and health of stock selected for transport • Design and maintenance of holding and loading facilities • Animal handling • Demonstrated staff competencies
Transport	2.	<ul style="list-style-type: none"> • Fitness of stock for transport • Vehicle design, cleanliness, maintenance and condition • Stocking density • Time off feed and water • Transport duration • Surveillance of livestock • Handling livestock at rest stops or depots during the journey • Contingencies for emergencies • Humane destruction during transport • Demonstrated staff competencies
Arrival of stock and unloading	3.	<ul style="list-style-type: none"> • Planning and scheduling for slaughter • Unloading of livestock at the plant • Identification and treatment of weak, ill or injured stock upon arrival • Humane destruction upon arrival • Facilities for unloading • Operation, maintenance and cleaning of facilities and equipment • Demonstrated staff competencies
Lairage and holding areas	4.	<ul style="list-style-type: none"> • Access to water • Stocking density • Shelter • Mixing, aggression and animal behaviour • Surveillance of livestock and ante-mortem inspections • Provision of feed for livestock to be held • Humane destruction • Animal cleanliness • Maintenance and design of facilities • Operation, maintenance and cleaning of facilities and equipment • Contingencies for daily management and emergencies • Demonstrated staff competencies
Movement to the slaughter floor	5.	<ul style="list-style-type: none"> • Operation, maintenance and cleaning of facilities and equipment • Handling and drafting of animals • Animal behaviour • Demonstrated staff competencies
Stunning	6.	<ul style="list-style-type: none"> • Operation, maintenance and cleaning of facilities and equipment for stunning and restraint • Effective stunning • Contingencies including back-up stunning • Demonstrated staff competencies
Slaughter	7.	<ul style="list-style-type: none"> • Effective and humane slaughter procedures • Maintenance and design of slaughter equipment and facilities • Contingencies for emergencies • Feedback on carcass quality • Demonstrated staff competencies

Appendix 4: Definitions

In these Standards, unless the contrary appears;

Process	Welfare considerations
Approved Arrangement	Means, when used in relation to a provision of this standard, the quality assurance arrangement for the business that is approved by the controlling authority. The requirements that comprise the approved arrangement are set out in the Australian Standard for the Hygienic Production and Transportation of Meat for Human Consumption or equivalent Standards ³⁷ .
Bobby calves	For the purposes of these Standards means bovine animals under 6 weeks of age, weighing less than 80kg and a dairy bred/cross bred calf.
Calves	For the purposes of these Standards, means young bovine animals, up to 150 kg hot standard carcass weight.
Class	In reference to livestock, means a group ('class') of animals defined by their age, size, or sex. Lactating livestock with young at foot are considered a single 'class'.
Competency	A person is deemed competent for a task when they can demonstrate current knowledge, skills, attitude and behaviour to undertake the task. Note: Evidence of competency is considered to include 1) on-the-job training (including induction training) for the tasks required, 2) demonstration of relevant/previous experience, 3) formal or recognised training, 4) records of training/supervision and/or sign off by supervisor.
Construction	Includes the design, layout, installation, assembly of the premises, equipment and vehicles and the materials of which they are made.
Controlling authority	Means the Commonwealth, State or Territory authority that is responsible for the enforcement of the Australian Standard for the Hygienic production and Transportation of Meat for Human Consumption or equivalent Standard.
Dressing	Means the progressive separation of the body of an animal into a carcass (or sides of a carcass), offal and inedible material ² .
Emergency slaughter	Means slaughter by necessity of any animal that: a) has recently suffered traumatic injury or is affected or suspected of being affected by a disease or other abnormality; and b) is in pain or is likely to deteriorate unless it is killed immediately. ²
Epileptiform seizure	Epileptiform seizures exhibited by stunned animals means no feeling of pain or sensation as the animals are in a state of unconsciousness.
Extremes of weather	Temperature and climatic conditions that individually or in combination, are likely predispose to livestock to heat or cold stress. 'Extremes' of weather can include heavy rain, hail, snow, chilling wind and high heat, all of which can lead to conditions of heat or cold stress in livestock, particularly livestock unaccustomed to these conditions or that are compromised (eg. young, weak or ill animals).
Hoisting	Means the process of shackling and transferring the animal or animal carcass to the bleed rail.
Humane destruction	Actions undertaken to euthanase an animal which result in immediate loss of consciousness and death of the animal without pain or distress.

³⁷ AQIS definition for purposes of Approved Arrangements, 2009.

³⁸ State Food Authorities for domestic processing establishments and the Australian Quarantine Inspection Service for export processing establishments.

Appendix 4: Definitions

In these Standards, unless the contrary appears;

Process	Welfare considerations
Livestock Processing Establishment	Means premises used for the slaughter of livestock and production of meat or meat products for human consumption.
Moribund	Defined as an animal that is on the point of death, with little chance of recovery.
Stunning Reversible	The stunning of an animal where the animal may regain consciousness unless effectively bled out to cause its death.
Stunning Irreversible	The stunning of an animal where there is no possibility of the animal regaining consciousness.
Slaughter	Means the killing of an animal and includes stunning, sticking and bleeding.
Sticking	Means the severing of blood vessels to induce effective bleeding. ²
Stress	A response by animals that activates their (behavioural, physiological and/or psychological) coping mechanisms.
Stun to stick interval	The time interval between the procedures of stunning and sticking.
Stunning	Means the procedure for rendering an animal unconscious and insensible to pain. ²
Sucker lamb	A lamb that has not been weaned, and/or is predominantly fed on its mother's milk.

Appendix 5: Signs of successful stun

Mechanical stunning (captive bolt/pneumatic/rifle):

- Animal should collapse immediately;
- No rhythmic breathing;
- Body and muscles become rigid;
- No attempt at raising the head;
- Ears relaxed and drooping;
- Eyes have a glazed expression;
- Tongue is loose and flaccid;
- Corneal (eye) reflex is absent.
- No spontaneous eye blinking.

CO₂-stunning:

- No spontaneous eye blinking;
- No righting reflex;
- No response to stimulus (eg. Pinching the nose);
- Legs might kick, but head and neck should be floppy;
- Tongue should hang and be limp.

Electrical stunning (head-only and head to back)

- Animal collapses immediately;
- Phases of an epileptiform seizure develop once current stops;
 - o Phase 1: Tonic stage (animal is rigid, legs flex immediately).
 - o Phase 2: Clonic stage (leg paddling movements for approx 15-45s).
 - o Phase 3: Quiet stage (animal is still before first signs of recovery appear in the instance the stun is not successful).
 - Eye reflexes or movements cannot be used at this stage to assess the effectiveness of the stun.

- Normal rhythmic breathing is absent (observe flanks).
- Gasping (breathing in without breathing out) sometimes occurs.
- No spontaneous eye blinking

Appendix 6: Stocking densities for livestock in lairage

The following densities provide guidance for penning livestock:

Pigs		Cattle		Sheep	
Weight (kg)	Area (range, m ² per head)	Weight (kg)	Area (range, m ² per head)	Weight (kg)	Area (range, m ² per head)
30-50	0.26-0.42	30-50	0.21-0.35	30-50	0.21-0.32
50-80	0.42-0.55	50-100	0.35-0.58	50-100	0.32-0.54
80-100	0.55-0.64	100-150	0.58-0.80	100-150	0.54-0.71
100-120	0.64-0.73	150-200	0.80-0.97	150+	0.71-0.90
120-140	0.73-0.78	200-300	0.97-1.26		
140-160	0.78-0.85	300-400	1.26-1.51		
160-200	0.85-0.97	400-500	1.51-1.74		
		500-600	1.74-1.96		
		600-700	1.96-2.16		
		700+	2.16-2.26		

Appendix 7: Monitoring procedures

Score 100 cattle/pigs in plants with line speeds over 100 animals/hour. For smaller plants, score 50.

Electric prodder use

For pigs and cattle, the percentage prods per animal may be monitored to identify handling problems and possible meat quality impacts.

- During the internal audit, measure prod use by observing 100 animals and recording each animal either as prodded or not prodded. Note: only score per animal when the animal is touched with the electric prod. An animal is scored as either prodded or not prodded, regardless of whether prodder is turned on (charged) or not.
- Mark for each animal: X = moved quietly without an electric prod, P = electric prod.
- Observe the animals from the point at the lead up race to knocking box/restrainer.
- No more than 25% of the 100 animals are observed to be prodded.

X = moved quietly without an electric prod	_____ Percent electric prodding
P = electric prod	_____ Percent balking
A = used an abusive method such as hitting hard with a stick	
B = electric prodded because the animal backed up and balked.	
This indicates a facility problem.	

Animal # 1__2__3__4__5__6__7__8__9__10__1
 1__12__13__14__15__16__17__18__19__20__2
 1__22__23__24__25__26__27__28__29__30__3
 1__32__33__34__35__36__37__38__39__40__4
 1__42__43__44__45__46__47__48__49__50__5
 1__52__53__54__55__56__57__58__59__60__6
 1__62__63__64__65__66__67__68__69__70__7
 1__72__73__74__75__76__77__78__79__80__8
 1__82__83__84__85__86__87__88__89__90__9
 1__92__93__94__95__96__97__98__99__100__

Slips and falls

For pigs and cattle, the percentage slips and falls may be monitored to identify handling and facility problems.

- Score 100 animals from the crowd pen, lead-up race and stunning box (measure a % of 100 animals in each section)
- Mark X = no slipping or falling, F = fell, S = slip.
- No more than 3% of animals are observed to be slipping (for 100 animals).
- No more than 1% of animals are observed to fall (body touches floor).
 - o If the targets are exceeded, corrective action is taken accordingly.
- Note that slight slipping often occurs in stunning boxes and it makes the animal agitated and difficult to stun. Slight slipping should be noted where possible.

X = no slipping or falling	_____ Percent falling
F = fell	_____ Percent slipping
S = slip	
Where did slipping and falling occur?	

Animal # 1_2_3_4_5_6_7_8_9_10_1
 1_12_13_14_15_16_17_18_19_20_2
 1_22_23_24_25_26_27_28_29_30_3
 1_32_33_34_35_36_37_38_39_40_4
 1_42_43_44_45_46_47_48_49_50_5
 1_52_53_54_55_56_57_58_59_60_6
 1_62_63_64_65_66_67_68_69_70_7
 1_72_73_74_75_76_77_78_79_80_8
 1_82_83_84_85_86_87_88_89_90_9
 1_92_93_94_95_96_97_98_99_100_

Vocalisation

Vocalisations can be measured for cattle and pigs to identify possible stressors and handling/facility problems, both of which will impact meat quality.

- To measure vocalisations, observe 100 animals across the lead up race to the restrainer (section the areas off and score a % of the 100 animals in each section).
- Score an animal as a vocaliser if it makes any audible vocalisation.
- Each animal is scored on a yes/no basis (e.g. vocaliser or non-vocaliser) but only for 'squeals' (e.g. not grunts and wuffs) in relation to a handling or facility intervention.
- For each animal (100) mark:
 - o X = non-vocaliser,
 - o P= vocalised to an electric prod,
 - o S= vocalised at stun,
 - o F= vocalised due to fall/slip,
 - o R= vocalised due to excessive pressure from restraint
- from the point at the lead up race to knocking box/restrainer.
- No more than 3% cattle and 10% pigs are observed to vocalise for the 100 measured regardless of cause.
- The causes will assist the establishment in making any required changes in the event vocalisation scores are high.

- Note: animals in lairage or holding pens/raceways that are not being handled should not count as a score. Animals that vocalise in the yards are not scored.
- Vocalisations to be monitored as part of every internal audit.

Note: Pigs may also be scored for the entire lairage area/handling area or alternatively across the entire stunning area.

Stand near the stunner entrance when doing this score. Excellent is 50% time quiet. Minimum acceptance score is 25% of the time quiet.

Reasons for Vocalisation	
X = non-vocaliser	_____ Percent vocalising
P = prod	
S = stun	
F = fall or slipping	
R = excessive pressure from restraint	

Animal # 1_2_3_4_5_6_7_8_9_10_1
 1_12_13_14_15_16_17_18_19_20_2
 1_22_23_24_25_26_27_28_29_30_3
 1_32_33_34_35_36_37_38_39_40_4
 1_42_43_44_45_46_47_48_49_50_5
 1_52_53_54_55_56_57_58_59_60_6
 1_62_63_64_65_66_67_68_69_70_7
 1_72_73_74_75_76_77_78_79_80_8
 1_82_83_84_85_86_87_88_89_90_9
 1_92_93_94_95_96_97_98_99_100_

Correct stun first shot – Cattle

- Correct stun on first shot to be observed for a minimum of 95% animals otherwise corrective action should be taken.
- Any less than 100% insensibility on the bleed rail constitutes a failure.

- Note: A 5% variation on the efficiency of the first shot placement is permissible (misfiring, ineffective restraint etc) however in all circumstances back-up equipment is applied prior to the release of the animal from the restrainer (refer to target 2.15 above).
- Percentage of cattle stunned correctly on the first shot must be 95% or better for a minimum acceptable score. Missed cattle must be restunned immediately. 99% to 100% is excellent.

X = stunned correctly	_____ Percent stunned correctly
G = stunning failed due to lack of gun maintenance	_____ Percent poor aim
A = missed stun due to poor aim	_____ Percent poor maintenance

Animal # 1__2__3__4__5__6__7__8__9__10__1
 1__12__13__14__15__16__17__18__19__20__2
 1__22__23__24__25__26__27__28__29__30__3
 1__32__33__34__35__36__37__38__39__40__4
 1__42__43__44__45__46__47__48__49__50__5
 1__52__53__54__55__56__57__58__59__60__6
 1__62__63__64__65__66__67__68__69__70__7
 1__72__73__74__75__76__77__78__79__80__8
 1__82__83__84__85__86__87__88__89__90__9
 1__92__93__94__95__96__97__98__99__100__

Bleed rail – Cattle

Percentage of cattle insensible on the bleed rail. Audit- 100% insensibility to pass the audit.

X = completely insensible	
E = eye moves when touched	_____ Percent insensible
BL = blinking	

RB = rhythmic breathing	
VO = vocalisation no matter how small (moo or bellow)	
RR = righting reflex - animal attempts to lift head while hanging on the rail	

Animal # 1__2__3__4__5__6__7__8__9__10__1
 1__12__13__14__15__16__17__18__19__20__2
 1__22__23__24__25__26__27__28__29__30__3
 1__32__33__34__35__36__37__38__39__40__4
 1__42__43__44__45__46__47__48__49__50__5
 1__52__53__54__55__56__57__58__59__60__6
 1__62__63__64__65__66__67__68__69__70__7
 1__72__73__74__75__76__77__78__79__80__8
 1__82__83__84__85__86__87__88__89__90__9
 1__92__93__94__95__96__97__98__99__100__

Tong placement – Pigs

Percentage of pigs with correct electrode placement can be measured. The current must pass through the brain. Must be 99% or better. Do not apply this monitoring procedure if CO₂ is used.

X = electrode placed correctly	
W = wrong placement	_____ Percent correct placement

Animal # 1__2__3__4__5__6__7__8__9__10__1
 1__12__13__14__15__16__17__18__19__20__2
 1__22__23__24__25__26__27__28__29__30__3
 1__32__33__34__35__36__37__38__39__40__4
 1__42__43__44__45__46__47__48__49__50__5
 1__52__53__54__55__56__57__58__59__60__6
 1__62__63__64__65__66__67__68__69__70__7
 1__72__73__74__75__76__77__78__79__80__8
 1__82__83__84__85__86__87__88__89__90__9
 1__92__93__94__95__96__97__98__99__100__

Standards for Objective Numerical Percentage Scores

	Actual %	Min. Passing Score	Excellent	Final Score
1. Percentage stunned correctly with one shot		95%	99%	
2. Percentage rendered completely insensible prior to being hung on the bleed rail		100%	100%	
3. Percentage of animals prodded with an electric prod		25%	5%	
4a. Percentage slip		3%	0%	
4b. Percentage fall		1%	0%	
5. Percentage vocalising		3% cattle 5% pigs	1%	

