



Goat Depot

Module 11 - Goat depots

Introduction

These guidelines have been developed with the input of goat depot operators and extensive consultation with the Australian goat industry. Their aim is to encourage best practice within the sector and to help ensure the continued growth of the industry.

What is a goat depot?

A depot is an essential tool in the Australian goat industry. Its main function is to consolidate significant numbers of goats for marketing purposes.

Goat depots vary in nature but can be broadly defined as:

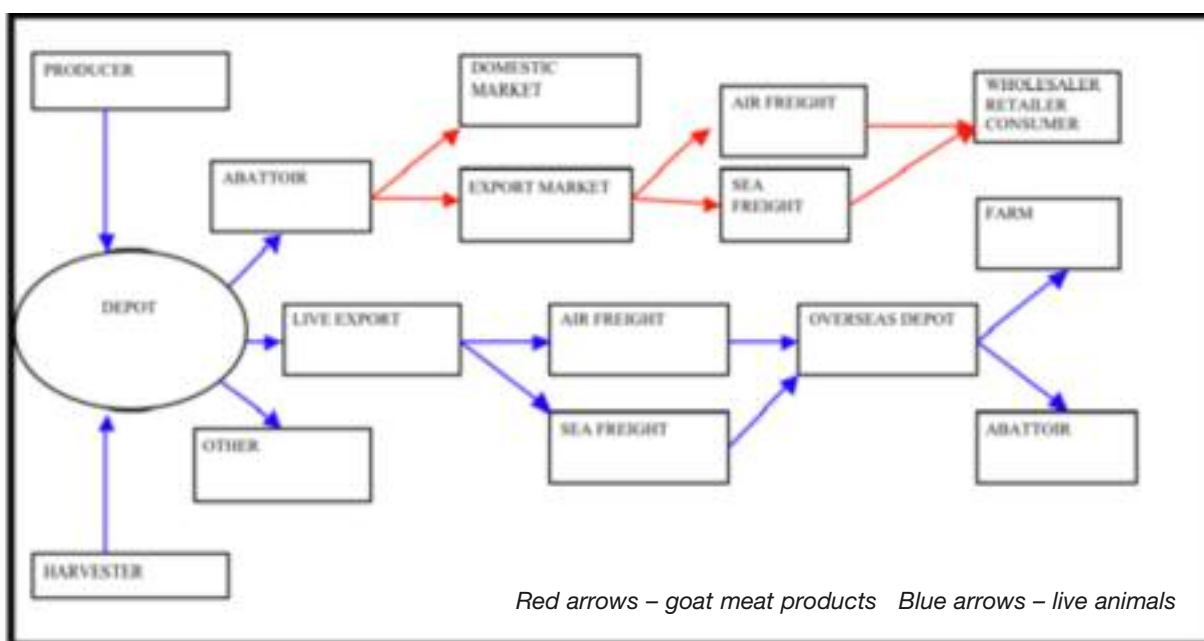
A holding area where goats are brought together or accumulated before they are transported for slaughter, export or distribution to other businesses.

A depot must be managed to include proper husbandry practices and provide adequate shelter, feed, water and good animal welfare.

It is likely that animals will only remain at the depot for a short time (four to ten days), however that is dependent on the market and the capability of the depot.

Given this definition, a depot may undertake the following:

- A depot does not farm goats but may be used to prepare animals to meet certain market requirements (specifications).
- A depot operator may arrange to harvest animals or buy them from producers, harvesters or other sources.



This flow chart shows the key position of a goat depot in the supply chain of the Australian goat livestock and meat products industry.

What to consider?

Three key factors are critical to the continued development of the Australian goat industry. These are also vital to the successful establishment and operation of a goat depot. These are:

- Economic sustainability
- Animal welfare
- Quarantine and animal health

This module considers each of these factors in the context of the day-to-day planning and operation of a goat depot.

The depot module has been developed from the collective experience and knowledge of goat industry members* across Australia and is presented under three broad headings:

- **Planning, design and construction**
- **Handling and husbandry**
- **Health, nutrition, and depot hygiene**

* Goat industry members include farmers, harvesters, graziers, transport operators, depot operators, processors and exporters who are engaged in the Australian goat industry and their support industries.

Depot planning, design and construction

What to do?

Economic sustainability	<ul style="list-style-type: none">• Depot profitability depends on efficiency of operation – maximise your efficiency.• Your depot planning will significantly impact upon the long-term profitability of your business – plan to succeed.• Depots should be a purely functional asset and be able to respond to market demand – maximise depot functionality.
Welfare considerations	<ul style="list-style-type: none">• The safety of people and animals at the depot is paramount – do not leave safety to chance.• Depot design and construction impacts on animal welfare – consider welfare in the design process.
Quarantine and health	<ul style="list-style-type: none">• Depot security is a key to maintaining biosecurity – make your facility intruder proof from unwanted animals and people.• Your clients along the supply chain demand healthy animals – manage the health risks.

How to do it?

Plan to succeed. The key issues identified above can be addressed through appropriate planning. Depot planning, design and construction is as critical to your success as business planning. See *Module 1 – Property planning pages 1-12 and Module 2 – Financial analysis pages 1-8.*

Depot operators need to understand that their business' profitability is driven by their capacity to generate net income on a consistent basis. Profitability can be expressed in a number of ways and this is covered in *Module 2 – Financial analysis pages 1-5 and Toolkit 2 pages 1-13.*

Business planning is particularly important in intensive farming situations, like goat depoting, and should document the nature of the business, the sales and marketing strategy, the financial background and a projected profit and loss statement.

Your business plan will help you identify and manage risk and assist you in developing measures to minimise risk. It will also assist you in communicating your ideas and goals to employees, stakeholders, your family and business partners. Refer to *Module 2 – Financial analysis pages 1-8* for more information.

In the depot situation **biosecurity** is the protection of the health of livestock by preventing the transmission of diseases through physical barriers and hygienic practices. It can also be described as the security process of preventing biological contamination on the farm. For further information see *Module 11 – Goat depots Toolkit 11 page 8*.

A depot may choose to maintain a goat flow chart (GFC) that identifies the characteristics of each mob held in the depot. This will assist in the development of a quality assurance system and reduce the number of unacceptable goats being included in consignments. Further, it will assist depots to deliver only goats that match buyer specifications. A GFC showing a record of goat movement through a depot can be found in *Module 11 – Goat depots Toolkit 11 page 13*.

Before considering the specifics of depot operation, it is critical that you establish who you will be supplying (ie what your market is) and what they require. Refer to *Module 8 – Marketing pages 1-8 and Toolkit 8 pages 4-6*.

Different markets have specific requirements (specifications) for goats and for pre-delivery management. You must be aware of these specifications.

The planning of the depot must also include any regulations, in place or planned by local, state or federal governments or authorities.

Once your objectives have been established, it is time to consider location, site selection, design and construction.

Location

The location of a depot is central to its viability.

- For practical purposes, your depot should be located within a reasonable distance of your suppliers and with good access to processing and export facilities or other market options.
- All weather access to the depot is critical to enable you to receive and dispatch goats according to your commitments in a timely fashion.
- Environmental considerations need to be part of the planning process. Working with your environment will help depot management, reduce your costs and protect your investment.

Site

How well you site the depot will directly affect your running costs.

- Understand your local weather pattern and remember that water quality and water flow are critical factors.
- Understand the basic qualities of the site's soil type and use the natural fall of land and existing ground features, including vegetation, to best advantage.
- A well drained and flood-free location is essential.
- When choosing the site, consider the position of the sun during the time of day that you are most likely to be working animals to make management easier.

- Make sure your design fits the purpose and management requirements of the facility.



This site in Western Australia has good drainage and weather protection for animals provided by natural ground features

Design

A well designed depot is essential for efficient operation and animal welfare.

- Goats are intelligent animals and you need to work with them. Goats like to move to high ground in any situation and will seek an exit to any enclosed area (eg a yard).
- Design the working area to incorporate shade and to allow ease of movement for stockmen while working. Ensure all drafting, loading and treatment races are wide (to account for varying animal sizes and for horns) and designed for efficient flow and handling. Both circular and bugle designs are ideal.
- Make sure you can adequately segregate your animals by size, weight, gender and other considerations such as market orders and transport demands.
- Design for an adequate number of holding areas (paddocks or yards) to ensure you will not overcrowd animals. This will be influenced by your planned capacity for goat numbers and the number of movements through the depot. Each holding area must be supplied with both water and feed.
- Yard design needs to include strongly built structures that are able to withstand pressure from animals. Minimise the number of corners in yards and paddocks to make it easy to work the animals.
- The design needs to minimise the affects of adverse weather including wind and excessive cold or heat. Design your depot to include sprinklers that can be used to suppress dust.
- Design paddocks to utilise land contours and natural vegetation for windbreaks and weather protection. Windbreaks can also be constructed from materials such as timber, tarps, iron, hay bales and tyres. Make sure that the vegetation is protected from excessive browsing by goats.
- The depot will require frequent (daily) monitoring by someone living close to or on-site. Remote sensor (camera) monitoring may be appropriate to assist depot operation and reinforce welfare considerations.
- Feed storage, quarantine and hospital pens, loading ramps, drafting facilities, laneways, feeding troughs, watering points, store rooms for vet drugs and chemicals, tools and equipment all need to be considered in depot design.
- Existing cattle and sheep yards can often be modified to be a suitable facility to use as a goat depot.

“A well designed set of yards, equipped with proper stock handling equipment, will improve efficiency of time, reduce costs and goat losses due to stress and improve operator safety”,

Rick Gates ‘Burndoo Station’, Wilcannia, NSW

- No fencing should be less than 1.2m in height. Electric fencing can be used successfully in some depot situations and may help reduce construction costs. More information on fencing can be seen in *Module 4 – Infrastructure pages 3-4*.

Construction

- Depot construction can use a combination of materials including weldmesh, ringlock, hinge joint, barbed or plain wire, steel or timber posts and flat or corrugated iron; depending on the needs for handling and holding.



Well-designed and constructed depot yards will improve efficiency and reduce stress

Handling and husbandry

What to do?

Economic sustainability	<ul style="list-style-type: none">• Appropriate handling and husbandry will deliver more goats to market in better condition – understand your goats.• All activity at the depot needs to be planned for optimum efficiency to enhance your profitability – work with your goats, not against them.
Welfare considerations	<ul style="list-style-type: none">• All husbandry activities must include decisions to maintain high standards of animal welfare – you need to understand stress indicators.• Correct feed rations and good quality water are essential to optimise animal performance – be aware of nutritional requirements.
Quarantine and health	<ul style="list-style-type: none">• Quarantine is about minimising risk – implement your own procedures to reduce the risk of introducing illness or disease into your depot.• All export markets have quarantine requirements – understand and keep current knowledge of your market’s quarantine requirements.

Depot operators and their staff must understand that transported goats may be stressed goats.

Consequently, it is essential that depot operators take responsibility for goat movements in and out of the depot and remove potential stressors. Operators are also responsible for understanding the acceptable time for animals to be off-feed and water when travelling.

Always communicate closely with the transport company to ensure that the movement of animals is carefully planned and controlled by experienced truck drivers.

Depot operators are advised to insist upon a minimum standard (specification) for goats arriving at a depot that acknowledges ‘fit to transport’ requirements. An acceptable specification might include details about gender, size, weight and condition.

Drafting and separating goats in secure yards is a key component of depot handling because it reduces competition for space, food and water. Done properly, this should also prevent bullying by the older and bigger bucks and dominance behavior between bucks and does. Successful drafting will reduce stress levels in the herd.

Density per pen of goats must be carefully monitored to ensure no over-crowding. For further information refer to *Module 11 – Goat depots Toolkit 11 page 4*.

Traceability is an important requirement in goat production. There is also a need to be able to quarantine goats and comply with government regulations. Depot operators need to be aware of their responsibilities in these areas and ensure that they are up-to-date with current state and federal regulations. For further information refer to *Module 11 – Goat depots Toolkit 11 page 2*.

How to do it?

Goat behaviour

- Successful handling of goats requires an understanding of the natural behaviour patterns of the animal. Goats are intelligent, inquisitive, agile, alert and have a nervous disposition.
- Low-stress stock handling strategies are critical, especially in an intensive depot environment.
- Goats will maintain better condition if their feed, water and shelter is adequate. By reducing the stress associated with high stocking density in a depot, it is likely that goats will utilise their feed more efficiently and suffer fewer health problems. For more information on the behaviour and handling of goats refer to *Module 6 – Husbandry pages 27-28*.

Unloading and loading

- Goats must have access to feed and water as soon as possible after unloading.

- Unloading goats after dark should be avoided as this can be stressful. Operators need to be sure that the water deprivation timeframe (time without water) has not been exceeded.
- Animals should be loaded as close to first light as practical, especially during summer, to minimise heat stress.
- Mature bucks and does should not be mixed together during transport to avoid dominance behaviour.
- Operators should neither underload nor overload animals; this is a joint responsibility between the depot manager (or their nominee) and the driver (the driver has the final word on whether the company will transport the animals). For additional information on the movement of goats as applied to different states, refer to *Module 3 – Industry obligations Toolkit 3 page 4*.

Loading Densities¹

Mean liveweight (kg)	Minimum floor area (m ² /hd)	Number head per 12.5m 2.4m deck
20	0.15	200
30	0.17	176
40	0.22	136
50	0.25	120
60	0.28	107

¹ The Australian Standards for the Export of Livestock – V2.1

Drafting

- Time in depot before drafting will depend on the next phase of the goat's movement to market or processing and necessary animal welfare factors. Draft on gender, size, weight and horns. Usually mobs of mixed goats are drafted on arrival at the depot.
- If young does arrive at the depot in an advanced state of pregnancy then kidding can cause problems and these animals will need to be separated. Operators should also isolate sick or injured animals.

Stress

- Goats are stressed by unusual activity. When animals arrive at the depot, allow them room to move in their new surroundings and give them time to become familiar with the depot. Try to maintain a routine and avoid unnecessary disturbance.

“If you wish to familiarise a mob of goats with your depot then allow them to run through the yards including the races used for treatment or drafting without ‘forcing’ them but allowing them to find their way under gentle pressure.”

Ian Firth ‘Oban’, Dirranbandi, Queensland

Quarantine requirements

- Overseas markets for live animals have specific requirements for import health conditions (protocols). These are managed by the Australian Quarantine and Inspection Service (AQIS) on behalf of the importing country. If you are intending to supply a particular live export market, it is advisable that you ensure that you comply with all importing

country and AQIS requirements before sourcing livestock. If you do not comply with the regulations, animals will not be exported. Operators not making themselves aware of the regulatory requirements can incur significant financial losses.

- Each export market has different regulations. Depot operators need to make themselves aware of these and keep up-to-date with any changes in regulations that may occur and affect their operations.
- AQIS requires strict compliance with regulations regarding movement of animals for export. These regulations address issues such as time off feed and water prior to transport and inspection requirements. For further information refer to *Module 11 – Goat depots Toolkit 11 pages 2-3*.

Record keeping and documentation

- All depots should have their own internal quality assurance (QA) system that can be used to monitor and record the movement, feeding and treatment of all goats. This should include information such as; date of movement, number of goats, gender, weights (if available), National Vendor Declaration (NVD) details, property identification code (PIC) or other unique identifying marks or numbers, vendor's details, agent's details, transaction date, animal rejections, animal condition scores, detail of injuries, records of all illness and treatments used.
- By keeping such records and maintaining a QA system, not only are you helping to ensure that your management system is sound, but you are also guarding against any possible disputes that may arise with other parties.

- Keeping accurate records of where animals have come from and where they are going is essential. The National Livestock Identification System (NLIS) and the National Vendor Declaration/Waybill (NVD) plays an important role in biosecurity, food safety and traceability and it is strongly advised that goats are not bought or sold without appropriate NLIS ear tags or fully completed NVD/Waybill. For further information see *Module 11 – Goat depots Toolkit 11 page 8*.
- NVDs are an industry and market driven requirement and their use is supported by the Agricultural Standards. It is an offence to provide information that is not correct. For further information regarding the use of NVDs refer to *Module 11 – Goat depots Toolkit 11 page 8*.
- The states and territories have differing regulations regarding documentation for the movement of animals. Operators will need to check with their local authorities for what applies in their state or territory.

Market specifications

- Make sure you understand the animal or meat product specification for each of your target markets and ensure that you prepare animals that the market requires. For further information refer to *Module 8 – Marketing*.

Handling equipment

- Having appropriate equipment in the yards makes work easier, quicker and safer. Safety for the animals and for the handlers is important. A range of handling equipment to assist depot operators is available. Some examples of handling equipment can be seen in *Module 4 – Infrastructure page 8*.



Appropriate handling equipment in the yards makes work easier, quicker and safer

Goat health, nutrition and depot hygiene

What to do?

Economic sustainability	<ul style="list-style-type: none">• Healthy animals are a key to profitability – monitor health on a regular and ongoing basis.• Nutrition is a key to profitable depot operation; well nourished animals mean more weight to sell – prepare a thoughtful feed budget using the most recent technical information available.
Welfare considerations	<ul style="list-style-type: none">• Managing depot hygiene helps maintain animal health which is central to good welfare practice – underpin your welfare activities with good depot hygiene.• Good nutrition is about understanding the optimum feed ration for your animals – know the value of the feed in nutritional terms and match this to the animal's requirements.
Quarantine and health	<ul style="list-style-type: none">• Unhealthy animals cannot be transported or exported, are unwanted in the supply chain and damage your reputation – manage goats to promote good health.• The quality of feed is critical – know the quality and source of the feedstuffs you use.

Goat depots nearly always rely on supplementary or full ration feeding. Consequently, it is important that enough of the right kind of feed be kept on hand to cater for immediate needs as well as extra provisions to meet requirements in the event of an emergency. Adequate supplies of cool and clean water are essential at all times.

Good animal health is particularly important in goat depot operation and this begins with good depot hygiene. As with all intensive production systems, health issues can quickly arise and escalate, presenting major animal welfare issues and leading to production losses. Being proactive rather than reactive in addressing animal health and depot hygiene can be the difference between success and failure.

How to do it?

While *Module 6 – Husbandry* provides general information relating to goat health and nutrition, the following aspects are particularly important to depots.

Stress

The management of stress is one of the most important factors in goat husbandry especially, in a depot. As has been noted elsewhere in this guide, the aim is to provide stress-free conditions for your animals.

Stress can result in reduced productive performance and even fatalities. Low-stress stock handling principles need to be practised. Such handling techniques often reduce stress on both the goats and the handlers. For further information refer to *Module 11 – Goat depots Toolkit 11 page 3*.

Goats are highly intelligent animals that tend to stress under changing conditions so it is advisable to maintain a constant environment within the depot.

Stressors that should be avoided include bad handling, poorly managed night-time work and inappropriate use of goads (ie jiggers and prodders). Further information about stress can be found in *Module 6 – Husbandry pages 6, 17, 27-28*.

“Stress in goats can result from an inadequate supply of good quality food and water and the vagaries of the weather (eg extreme temperatures without shade, or cold and wet conditions in depots or on transport).

To minimise stress it is important that sound animal husbandry practices are maintained.”

David Steadman, Perth, Western Australia

Food and feeding

The type of feed and the feeding environment are important to successful depot operation.

The feed formula used in depots should take into account the planned sale or market outcomes. For example, goats being prepared for live export should be backgrounded on the same feed formula they will be fed during transport and following arrival at the export market. This must at least meet the maintenance requirements of the individual animals.

Always feed in troughs or other feeders. These should be designed and positioned to prevent contamination with faeces or urine and must be cleaned regularly. Goats will not eat if the feeding area is contaminated and contamination can lead to the transmission of disease.

An important aim of the feeding regime is to avoid occurrence of diarrhea and stress ailments. Refer to *Module 11 – Goat depots Toolkit 11 page 5*.

Always be alert for shy-feeders. These should be isolated and treated; alternatively they could be sold off before they lose condition.

The export standards require that when feeding a ration there must be no less than 5cm space per head when trough feeding. For ad lib feeding, there must be no less than 3cm/hd. These measurements allow for session feeding where only some of the goats in a confined area are feeding at any one time. These regulations can also be used as a guide for depots handling animals that are for the Australian domestic market.²

For depot feeding of goats destined for export, regulations outline that during any or all of May, June, July, August, September and October, feeding must occur from fully sheltered feed troughs; with the exception of areas of Australia north of latitude 26°, south. Refer to *Module 11 – Goat depots Toolkit 11 page 5* and *Module 7 – Nutrition pages 1-14 Toolkit 7 pages 1-31*.

² Export Standards <http://www.daffa.gov.au/aqis/export>



Good animal health is particularly important in goat depot operations and this begins with good depot hygiene

Water

An adequate volume of good quality, clean, cool water in a good trough system must be available at all times. Automated systems are recommended to ensure a continual supply.

Drinking facilities must be cleaned on a regular basis as goats will not drink if troughs are contaminated with faeces or urine. For more information on water refer to *Module 7 – Nutrition pages 2-3* and *Module 4 – Infrastructure pages 4-6*.

Weather

Goats are susceptible to cold or wet weather and extreme heat. The provision of shelter from wind and rain, as well as shade and water to mitigate the effect of heat, are important aspects of depot management to promote good goat health. See *Module 6 – Husbandry*.

Disease management

Diseases such as respiratory illness pose a particular threat within a depot environment due to the intensive nature of production. Once an outbreak has occurred, controlling the spread of disease requires a quick

response, including the identification and quarantining of affected animals, to minimise production losses. See *Module 6 – Husbandry Toolkit 6 pages 3-15*.

Treatment and vaccination

Drenches are only likely to be necessary in depots if goats are held long-term or have been previously exposed to farmed operations.

Vaccinations are generally based on export health conditions (protocols) and are not usually needed or used for animals destined for the domestic market.

A major cost component in depot operation can be veterinarian fees, especially for depots focused on live export. You can minimise fees through good health and hygiene practices.

Always have adequate supplies of veterinary drugs and medicines available for illnesses and diseases likely to affect goats. When using drugs or medicines ensure that you take into consideration any withholding periods (WHP) or export slaughter intervals (ESI). See *Module 6 – Husbandry Toolkit 6 pages 12-14*.

Parasites

Goats should be monitored for evidence of both internal and external parasite infestation. Parasite treatment should be carried out immediately upon detection to minimise the spread of infection throughout the depot. Chemical treatments should be conducted in accordance with the chemical manufacturer's instructions, animal welfare codes and any chemical withholding periods (WHP).

Not all chemicals are registered for use on goats. Only use agricultural and veterinary chemicals which are registered with the Australian Pesticides and Veterinary Medicines Authority (APVMA) or for which there is a minor use permit for use on goats. A veterinarian may also be consulted for situations requiring the off-label use of chemicals. See *Module 9 - Parasite control* and *Module 6 – Husbandry Toolkit 6 page 6*.

Predation

Predators, such as wild dogs, dingoes, eagles, pigs and foxes, will access a depot area unless steps are taken to exclude them. For further information see *Module 6 – Husbandry pages 3-13*.

Housekeeping

Depots should be cleaned regularly to maintain a good level of hygiene. Special attention should be paid to feeding and watering points. Keep the yards as dry as possible and ensure adequate drainage.

Ensure the depot is clean before any new goats arrive. This will assist the control of disease. If practical, keep new arrivals separate from other goats for a day or two.

Animals that are brought to the depot direct from the rangelands (ie from the wild) generally do not exhibit signs of illness or suffer from worm burdens; however, these goats can also have reduced immunity once managed in a confined depot environment.

Dust can be minimised using sprinklers; however, care should be taken not to over water. In extreme conditions, dusty yards lead to eye problems in both animals and their handlers. The addition of hard aggregate on the ground (eg gravel or stones) could be a useful alternative, provided drainage is not affected.

Undertake daily health monitoring and isolate any sick or scouring animals. Scouring is a critical health factor and results in a loss of condition.

Injured or diseased goats should be humanely treated or destroyed. For methods of humane destruction, refer to *Module 11 – Goat depots Toolkit 11 page 6*. Remove and dispose of carcasses at the earliest possible occasion.

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Toolkit 11 – Goat depot

- Toolkit 11.1 Finding further information (page 2)
- Toolkit 11.2 Hints for managing goats in depots (page 4)
- Toolkit 11.3 Tips on feeding and health (page 5)
- Toolkit 11.4 Humane treatment of animals needing to be destroyed (page 6)
- Toolkit 11.5 Hints to help your business and avoid pitfalls (page 7)
- Toolkit 11.6 National Livestock Identification System (page 8)
- Toolkit 11.7 Depot designs – depot operator’s experiences (page 9)
- Toolkit 11.8 An example of documentation (page 13)

Case studies

- Case Study 1 Design and construct the depot to suit your needs
Rick and Jo Gates (page 14)
- Case Study 2 Goat management and protection using Marema dogs
Laurie and Rosemary Bere-Streeter (page 16)
- Case Study 3 Goats as part of a mixed farming enterprise
Ian and Julie Firth (page 18)

Tool 11.1

Finding further information

Useful contacts

Credible sources of information include:

- Departments of agriculture or primary industries – seek out goat specialists or experienced animal husbandry officers, some of them will have experience with the full range of goat industry issues.
- Private consultants – there are a small number of experienced animal consultants in Australia that have specialist expertise with goat husbandry and the commercial goat industry.
- Veterinarians – some vets have specialist knowledge of small ruminant animals. In addition, the Australian Sheep Veterinarians (ASV) is a special interest group from the Australian Veterinarian Association and is the peak body for advice on small ruminant health in Australia. The ASV has members who are willing to advise on goat health and management issues. Email aacv@ava.com.au for details.

References

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<http://www.mla.com.au/NR/rdonlyres/4E686A63-D59B-46D8-8EA3-225BA753ADE4/0/Fittoloadnational2006.pdf>

Australian model code of practice for the welfare of animals – the goat.
<http://www.publish.csiro.au/nid/22/pid/368.htm/>

Australian model code of practice for the welfare of animals – feral livestock animals.
<http://www.publish.csiro.au/nid/22/pid/370.htm>

Courses and workshops

Low Stress Stock Handling School
www.lss.net.au.

Websites

Refer to *Module 1 – Property planning Toolkit 1 page 5* for instructions on how to conduct an effective web search.

The following site provides information on many issues involving the goat industry:
Meat & Livestock Australia
www.mla.com.au

The following site provides information on the use of chemicals including minor use permits and withholding periods for chemical treatments:

Australian Pesticides and Veterinary Medicines Authority (APVMA)
www.apvma.gov.au

The following sites provide information on the export of live animals:

www.aqis.gov.au/animex/asp/home.asp

www.daff.gov.au/animal-plant-health/welfare/export-trade/

The following sites provide information on welfare issues:

Australian model code of practice for the welfare of animals – the goat.

www.publish.csiro.au/nid/22/pid/368.htm

Australian model code of practice for the welfare of animals – feral livestock animals.

www.publish.csiro.au/nid/22/pid/370.htm

The following sites provide information on biosecurity issues:

www.farmbiosecurity.com.au and
www.daff.gov.au/ba

The following sites provide information on most aspects of farming and animal health including regulations regarding different rules across the states of Australia:

Industry & Investment NSW
www.industry.nsw.gov.au

South Australia Research and Development Institute
www.sardi.sa.gov.au

Primary Industries and Resources of South Australia
www.pir.sa.gov.au

Department of Agriculture & Food, Western Australia
www.agric.wa.gov.au

Queensland Primary Industries and Fisheries
www.nt.gov.au

Department of Regional Development, Primart Industries, Fisheries and Resources
www.dpi.nt.gov.au

Department of Primary Industries, Parks, Water & Environment, Tasmania
ww.dpiw.tas.gov.au

Department of Primary Industries, Victoria
www.dpi.vic.gov.au

Animal Health Australia
www.animalhealthaustralia.com.au

Rural Industries Research and Development Corporation
www.rirdc.gov.au

Tool 11.2

Hints for managing goats in depots

Design and construction

- Portable panels are useful to test different configurations and ideas before you build permanent fencing.
- Weld mesh and netting should be used with caution as goats can become caught by their heads or horns and break legs in such structures. For further information see *Module 4 – Infrastructure page 4*.

Quarantine requirements

- Some prescribed goods (including live animals) intended for export must be prepared at registered premises. This means that your premises must be constructed, equipped and operate in an effective and hygienic manner and be approved by the Australian Quarantine and Inspection Service (AQIS). To register your premises, you must first submit an application form to AQIS, refer to the AQIS website:
www.aqis.gov.au/animex/asp/home.asp

Animal density

- Simple ‘rule of thumb’ calculations for how many goats can fit comfortably into different holding, loading or treatment and transport situations¹:

Holding yard density	1 goat/square metre
Forcing yard density	3 goats/square metre
Transport density*	5 goats/square metre

*This equates to 160 goats/deck for 12 metre crate for transport.

- The Model Code of Practice – The Goat, states that goats require – sufficient space to stand, turn around, stretch, lie down and move to feed and water.
- The Australian Standards for the Export of Livestock indicates the following space requirements²:

Goats (liveweight – 54kg) held in sheds for 10 days or more:

Pens for 8 hd = 0.9m²

Pens for 9-15 = 0.8m²

Pens for 16-30 = 0.6m²

Pens for 31+ = 0.5m²

Goats (liveweight – 54kg) held in sheds for less than 10 days:

Pens for 8 hd = 0.6m²

Pens for 9-15 = 0.53m²

Pens for 16-30 = 0.4m²

Pens for 31+ = 0.33m²

These can be used as a guide even though the reference relates to goats being housed in sheds.

¹ Wilson, T.S. and Browne, J. (1988). Yard design for goats. In “Australian Goat Notes”. Australian Cashmere Growers Association.

² The Australian Standard for the Export of Livestock Version 2.2.

Tool 11.3

Tips on feeding and health

Tim Johnson, Goat Industry Development Officer with the Department of Agriculture and Food in Western Australia, shares some of his experiences on maintaining health and hygiene at depots and providing basic good management.

Tim refers to research conducted by Western Australia's Department of Agriculture and Food during the 1990s³:

The final report concluded:

- Feedlot hygiene must be of the highest standard, thereby removing any risk of faecal contamination in the feed and water.
- The confinement period for live export goats be reduced from 21 days to 10 days.
- Rangeland goats with 8 adult incisor teeth should be excluded from export.
- Poor goats (body condition score 1)

should not be exported and need to be finished on high quality diet before being sent to any market.

- Goat behaviour is such that bucks should be drafted and maintained in groups according to body size and age.

Tim stresses that “considerable attention must be directed towards the composition of feed at the depot (the right balance of energy and protein in the ration offered to goats). Pellets fed to export goats need to be formulated for quality (same pellets as provided on the ship).”

An important aim of the feeding regime is to avoid occurrence of diarrhoea and stress ailments. This can be achieved by initially offering roughage (hay) with the concentrate diet (grain or pellets), then gradually reducing the hay component until the diet becomes solely based on pellets.

³ Hawkins, C. (1997) 'Development of management strategies to improve the live weight, survival and welfare of goats during export by sea.' Department of Agriculture and Food, Western Australia.

Tool 11.4

Humane treatment of animals that need to be destroyed

Sick, diseased or injured animals need to be assessed for priority treatment.

Treatment needs to be provided as soon as possible. If the judgement is made that treatment is not likely to return the animal to a healthy state or relieve its pain then humane destruction of the animal may be necessary. The local veterinarian could provide this service or the depot may choose to undertake this action.



Note: (A) indicates the frontal method and (B) indicates the poll method. The dots indicate the point of aim and the arrows indicate the direction of aim for the positions.

Recommended methods of humane destruction include⁴:

- i) for goats over six months old – firearm, captive bolt, lethal injection or bleeding-out.
- ii) for kids – firearm, captive bolt, lethal injection, bleeding-out or blunt trauma; however, blunt trauma should only be used when there is no other recommended option for humane destruction and can only be used on kids that are less than 24 hours old.

The poll method is the preferred method of humane destruction for goats (see figure).

A firearm should deliver at least the muzzle energy of a standard 0.22-long rifle cartridge.

If necessary, use of blunt trauma on newborn young of goats less than 24 hours old should be followed by bleeding-out or another technique while the animal is unconscious, to ensure death.

⁴ Standing Committee on Agriculture – Animal Health Committee, The Australian model code of practice for the welfare of animals – the goat. 1991 (2003 online). CSIRO.

Tool 11.5

Hints to help your business and avoid pitfalls

Do's	Don'ts
<ul style="list-style-type: none">• Successful depot operators build a good relationship along the supply chain and maintain profitability through the supply chain.• Always prepare animals the market wants.• Always use low-stress handling techniques.• Look after your staff and suppliers. Make them your responsibility and, when you get paid make sure they get paid regardless of any other considerations.• Maintain an internal QA system that includes good record keeping practices.• Develop a sound business plan with regular reviews and updates to reflect the current circumstances.• Do your best to understand the environment and climate and use this information to better depot operations.• Start your thinking at the market, not at the fence and work back from there. A well structured approach and business plan is vital.• Maintain your standards through good quality products and consistency of supply.• Depots need to be set up with a purpose in mind – that is, the depot must have a commercial orientation.• When making decisions, do not just think of the immediate situation, always plan for the future.	<ul style="list-style-type: none">• Do not buy goats without completed documentation (ie NVD* and NLIS*), especially through the saleyards.• Do not lose sight of commercial reality.• Do not ignore any animal welfare or health issues. Act quick to address any problems.• Do not undertake or support any activity that might lead to negative publicity for the goat industry.• Do not neglect any issues that might arise in regard to quarantine and biosecurity.• Do not forget to continue evaluating export risks and that of your buyer(s). This includes mode of payment, politics, exchange rates and sudden changes in import requirements.• Do not stop educating yourself about new technology and skills, measures to improve output and reduce costs and the means to keep your business strong when the economy gets tough.

* National Vendor Declaration. For further information see *Module 3 – Industry obligations Toolkit 3 page 9.*

* National Livestock Identification System. For further information see *Module 11 – Goat depots Toolkit 11 page 10.*

Tool 11.6

National Livestock Identification System (NLIS)

NLIS is Australia's system for the identification and tracing of goats for biosecurity, food safety, product integrity and market access purposes.

Throughout Australia, producers are required to know where the goats under their management have come from and where they are going.

This means:

- All managed goats must be identified with an NLIS ear tag before leaving their property – be they destined for a saleyard, abattoir, sale over-the-hooks (OTH) or another property with a different Property Identification Code.
- All transported goats, not just managed goats, must be accompanied by accurate and fully completed movement documents, generally a National Vendor Declaration (NVD).

There are some state-based exemptions or additional requirements for dairy goats, show goats and unmanaged (feral or rangeland) goats.

Contact your state department of primary industries or agriculture for specific requirements or visit:

www.mla.com.au/NLISforGoats

New South Wales

Industry & Investment NSW

Phone: 1300 720 405

www.industry.nsw.gov.au

Livestock Health and Pest Authority

www.lhpa.org.au

Tasmania

Department of Primary Industries & Water

Phone: 1300 368 550

www.dpiw.tas.gov.au

Northern Territory

Department of Regional Development,

Primary Industries, Fisheries and Resources

www.nt.gov.au

Victoria

Department of Primary Industries

Phone: 1800 678 779

www.dpi.vic.gov.au/nlis

Queensland

Queensland Primary Industries and Fisheries

Phone: 13 25 23

www.dpi.qld.gov.au/nlis

Western Australia

Department of Agriculture and Food

Phone: 08 9780 6100

www.agric.wa.gov.au/PC_91950.html?s=1001

South Australia

Primary Industries and Resources of South Australia

Phone: 1800 654 688

www.pir.sa.gov.au

NLIS Helpdesk: 1800 654 743

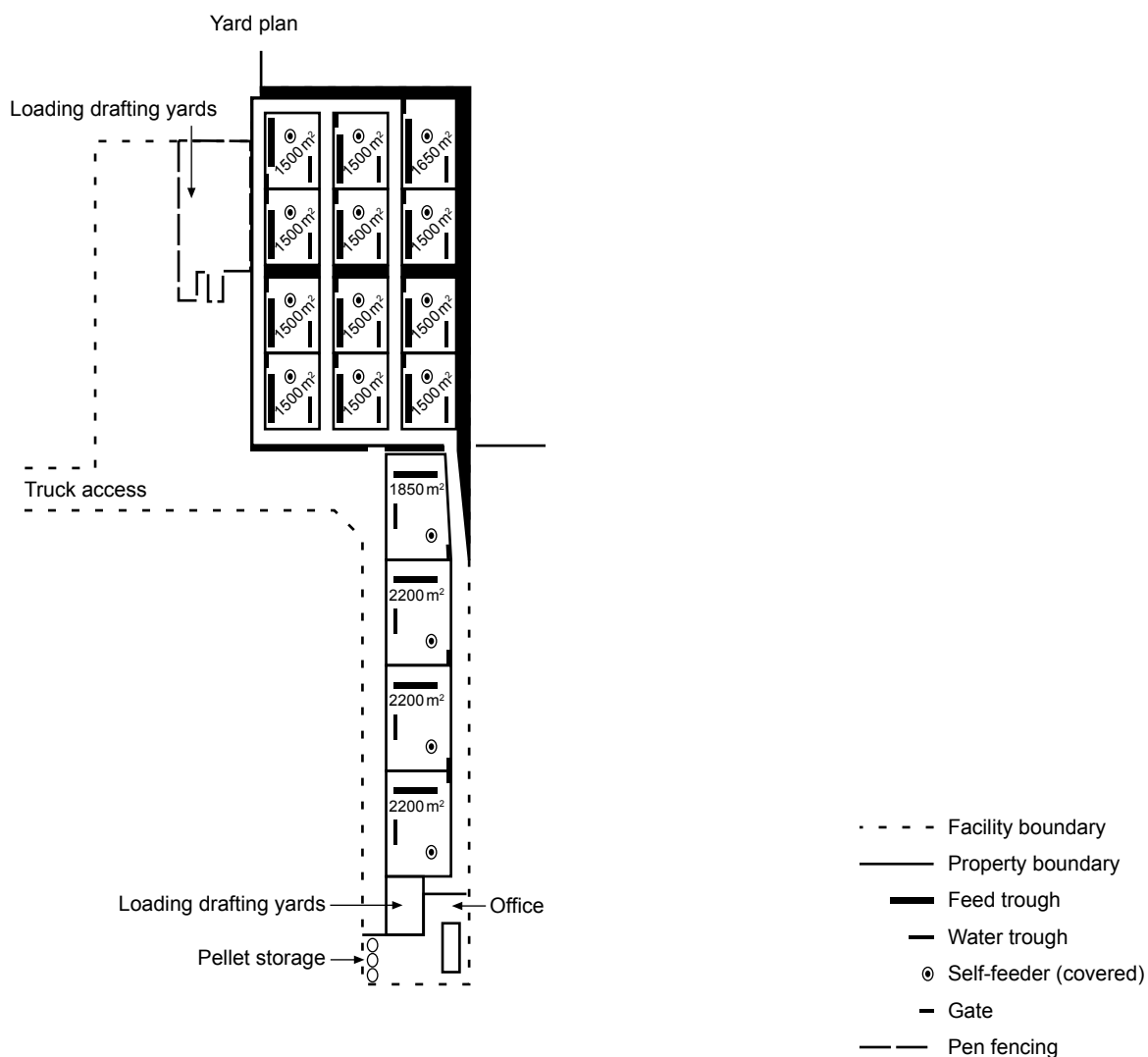
Email nlis.support@mla.com.au

Tool 11.7

Depot designs – Depot operator’s experiences:

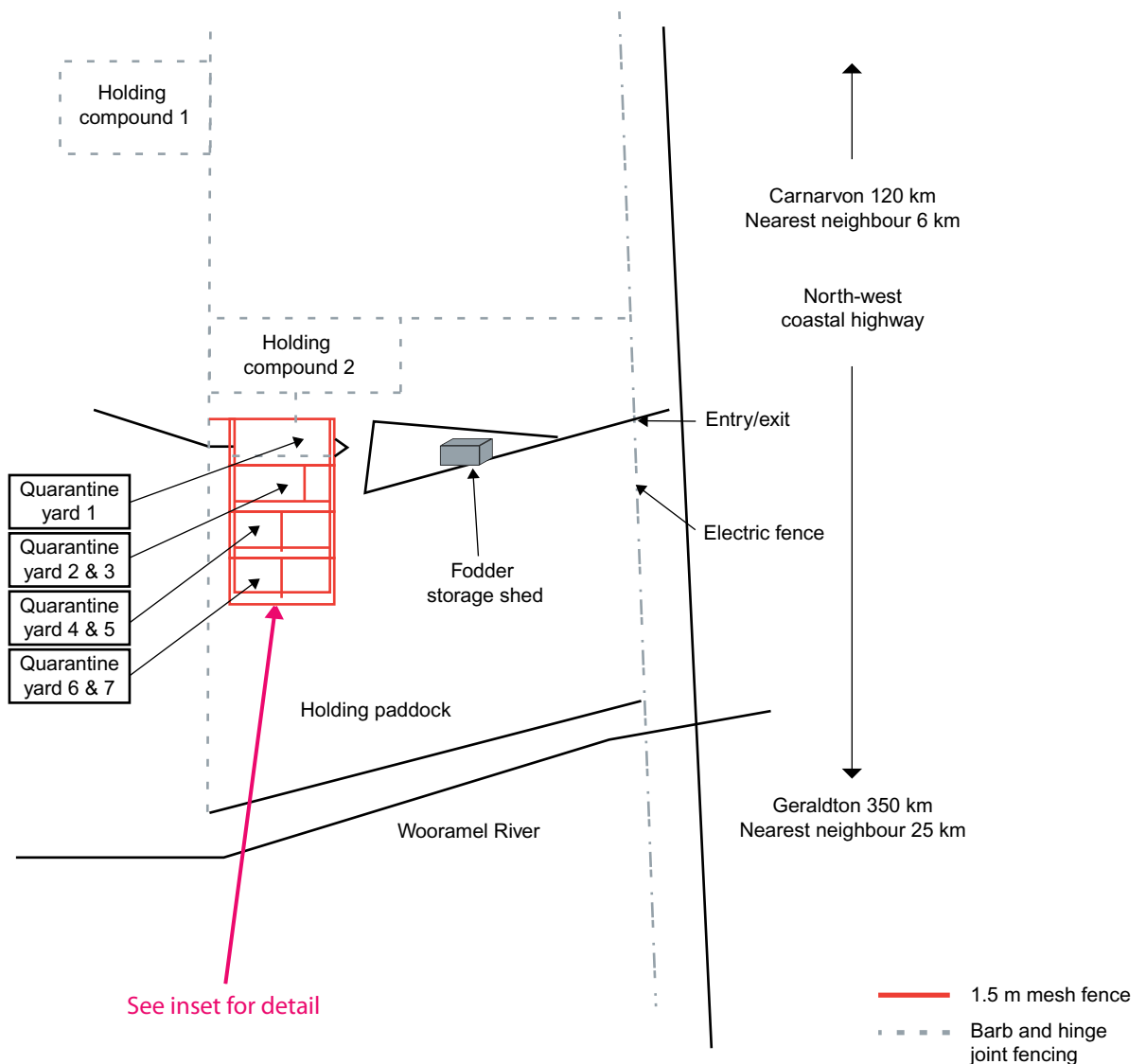
Depot 1: Gemma Cripps, Gladwyn Holding Yards, Geraldton, Western Australia

This depot design demonstrates the importance of planning and design in depot construction. A significant amount of time was spent before any actual construction was undertaken to ensure adequate holding areas were available and to ensure animals could be moved easily and efficiently.



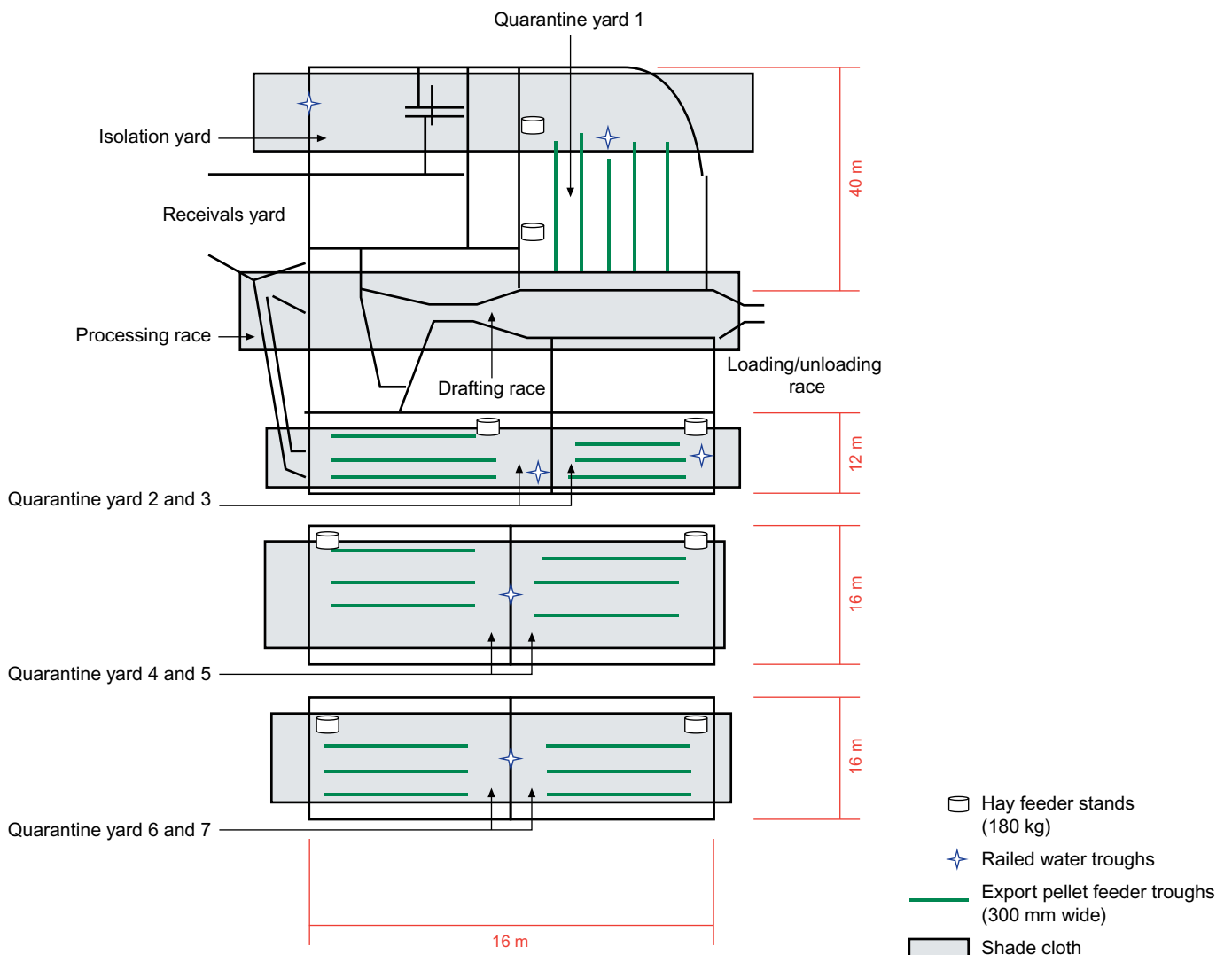
Depot 2: Justin Steadman, 'Wooramel Pastoral Company', Carnarvon, Western Australia

This depot highlights the importance of site and location when deciding where a depot should be built. Not only does it ensure adequate space for the efficient movement and loading of goats, but it also considers all weather access and access for large trucks. See over for detail.



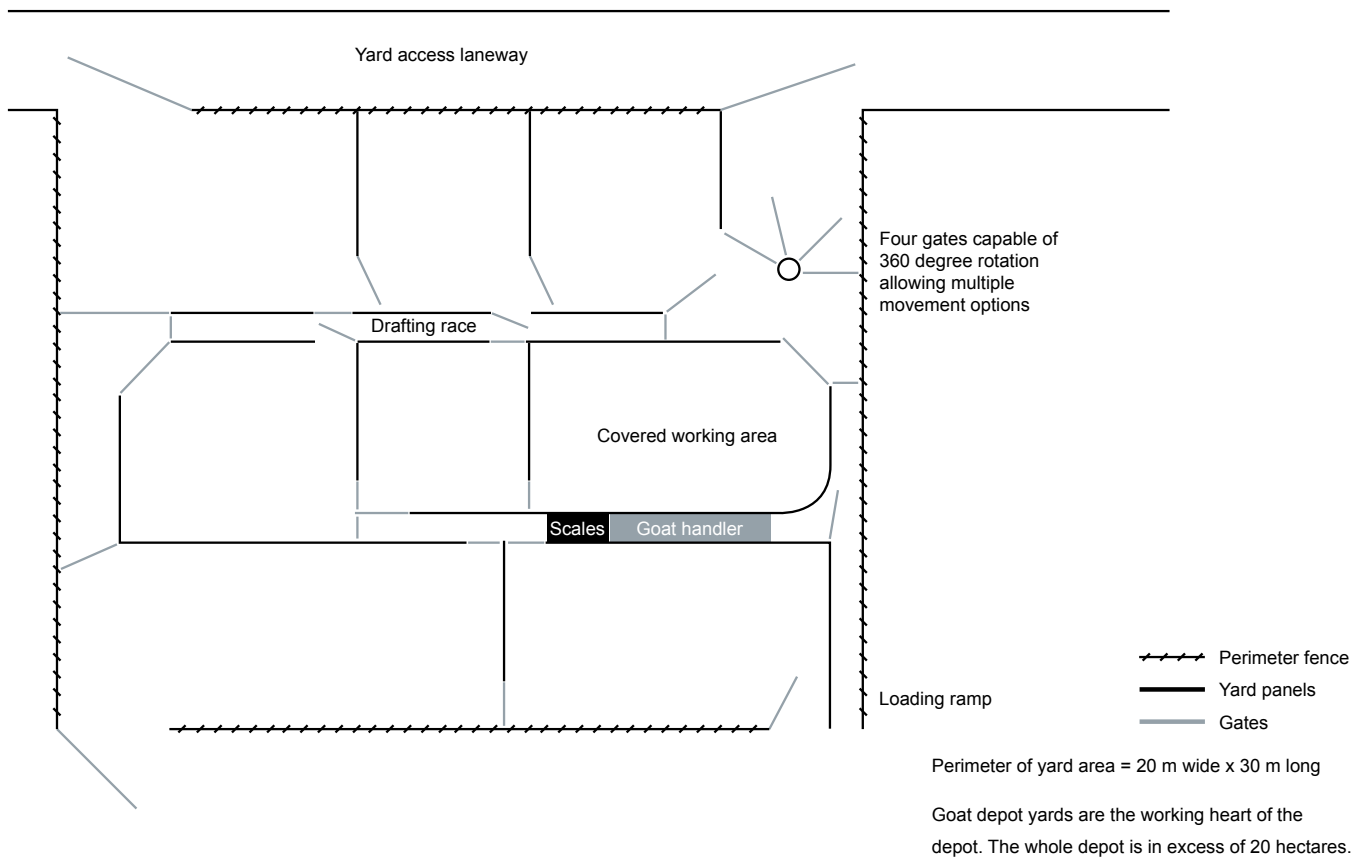
Depot 2: Justin Steadman, 'Wooramel Pastoral Company', Carnarvon, Western Australia

INSET



Depot 3: Laurie and Rosemary Bere-Streeter, 'Chevredor Boer Goats', Miles, Queensland

This depot design has evolved over time. As the business has grown so too has the goat depot. This highlights the importance of future planning when you are choosing your goat depot site and the importance of flexibility in your original design.



Tool 11.8

An example of documentation

Document 1: Goat Depot Flow Chart

A depot can maintain a goat flow chart (GFC) detailing each mob in the depot, their history and their future movement.

Sellers Details (incl PIC number)	Agents Details	NVD Details	Transport Into depot	Arrival Date	Number Gender Type Weight	Rejection Details Injuries	Condition Scores	P'dock No.	Feed	Illness	Treatments Used	Target Market	Live Target weight	Transport Out of Depot	Expected Date Out
Wiegga B. Nigt PIC: 12345678	Smith & Co	G0708	Doylee	10/02/00	30 crossbred small does	Nil	2	12	Hay	No	No	Dom Abb	32 kg	Doylee	15/02/00
Stobholm S. Brown PIC: 98765432	Johne	G0087	Doylee	15/02/00	10 bucks	1 Broken Leg	4	3	Mixt3	No	No	Malaysia	45 kg	Doylee	15/04/00
Dunecoo K. Nib PIC: 45600876	Smith & Co	G0876	Williams	20/02/00	155 mixed mob nannies & kids	Nil	2-4	15	Hay	No	No	Dom Abb	32 kg	Williams	25/02/00
Stanhope P. Relief PIC: 00088876	Johne	G4007	Williams	22/02/00	400 weathers	Nil	3	6	Hay	No	No	Dom Abb	32 kg	Williams	25/02/00
Dalby R. Man PIC: 44000008	N/A	G2234	Doylee	28/02/00	22 Bucks	Nil	4	4	Mix 1+	1 death	No	Malaysia	45 kg	Doylee	30/04/00

Case study

DESIGN AND CONSTRUCT THE DEPOT TO SUIT YOUR NEEDS

NAME:	Rick and Jo Gates
PROPERTY NAME:	'Burndoo Station'
PROPERTY LOCATION:	Wilcannia, New South Wales
PROPERTY SIZE:	25,000ha
NUMBER OF GOATS:	Turn off over 100,000 goats per year
MAIN GOAT ENTERPRISE:	Meat
TARGET MARKET:	Domestic and export

Rick and Jo Gates operate one of Australia's key commercial goat depots. Rick has built a set of yards designed to suit his purpose and the environment at Wilcannia. In light of his growing market, he plans to build another set of yards in the future. A well designed set of yards includes appropriate stock handling equipment that will improve efficiency and reduce losses due to stress.

Goats come from repeat suppliers who are situated within a 250km radius of his property. Rick and his customers have built good relationships over the years and this guarantees that he can consistently buy healthy rangeland goats.

Rick commented that one of the major reasons they are able to supply a high volume of goats to his markets every year is that they have adequate paddock space surrounding the depot. Further, by maintaining a good set of yards, working with the goats is made easier on him and the goats. Surplus stock are always kept handy to avoid supply shortages.

When asked to identify the key factors that contribute to an effective and efficient depot operation, Rick emphasised:

- A well designed and properly constructed set of yards – this makes the work quick and easy, causes less stress to animals and allows you to operate smoothly at full capacity.
- The yards should have all the necessary stock handling equipment that you might need.
- The 'Burndoo Station' set of yards has the capacity to handle up to 2,500 goats at any one time. Equipment required to handle a big number of animals over a short time includes:
 - Scales which can do group weighings of more than 30 goats;
 - Stock-lift handling machine which is used for tagging and earmarking and can handle more than 1,000 goats in an hour; and
 - Adjustable loading ramp that can wind up to each deck of the truck in a short time. This shortens the waiting time for trucks at the depot.

Time and money spent designing the depot and purchasing good equipment has been more than made up through improved efficiency and animal welfare.

Case study

GOAT MANAGEMENT AND PROTECTION USING MAREMA DOGS

NAME:	Laurie and Rosemary Bere-Streeter
PROPERTY NAME:	'Chevredor Boer Goats'
PROPERTY LOCATION:	Miles, Queensland
PROPERTY SIZE:	500ha
NUMBER OF GOATS:	2,500 head
MAIN GOAT ENTERPRISE:	Meat and dairy goats for export
TARGET MARKET:	Breeder goats for export

The Bere-Streeters' run a successful Boer stud and export purebred Boer and Boer cross goats to the Malaysian and the Philippines markets. They operate a depot which is also a pre-export quarantine facility licensed with AQIS. Laurie's philosophy is to maintain a quiet and healthy herd of goats with reduced stress levels. At the depot, goats are segregated in yards and adjacent paddocks under the various marketing groups and a specialist guard dog is allocated to look after them day and night. The dog permanently stays with the goats.

Laurie has a great depth of knowledge about goats and their behaviour, including how they react to things they like and to threats. Goats are sensitive and intelligent animals. Laurie commented; "As people in the goat business we must be smarter than our goats and we must think ahead of them all the time".

Laurie indicated that uncontrolled dogs can be the greatest threat to goats as they will flee or attempt to fight if a strange dog is threatening them. The smell and sight of dogs can separate the herd and distort their social order and this causes significant stress which may result in death.

According to Laurie, some dogs can, however, be trained to befriend and guard goats from threats including dingos, wild pigs, birds and other dogs. A breed that specialises in livestock herd protection is the Marema. Laurie cautioned that such dogs must not be introduced to a new mob of goats on their first day in a depot, there is a process to introduce specialist dogs to the goats.

Today the Bere-Streeters have 30 Marema dogs and each of them has a duty to the security of the goats and the property. The goats are happier seeing these dogs than any strangers.



Maremas



Boer goat and Marema

Case study

GOATS AS PART OF A MIXED FARMING ENTERPRISE

NAME:	Ian and Julie Firth
PROPERTY NAME:	'Oban'
PROPERTY LOCATION	Dirranbandi, Queensland
PROPERTY SIZE:	10,000ha
NUMBER OF GOATS:	1,200 breeding does
MAIN GOAT ENTERPRISE:	Production of meat goats
TARGET MARKET:	Meat for domestic or export markets

Ian and Julie Firth operate a mixed livestock enterprise comprising beef cattle and meat goats. These two activities allow for better utilisation of their grazing land and complement each other as sources of income. Ian said that he drafts saleable goats from his domesticated flock of rangeland and Boer goats. He also harvests goats from the wild when they are available and these supplement his flock's production.

Dual purpose yards for cattle and goats are not all that costly as long as you can change existing structures to suit your purpose. When he bought this property 10 years ago it had two different sets of yards; one was for sheep and the other was for cattle. The old sheep yards have been modified to handle goats by moving and increasing the height of some of the panels and by the addition of solid panels to encourage the goats to keep moving towards the end of the races and yards where they can see an exit. This is where drafting, tagging, drenching and other major husbandry activities are carried out.

The cattle yards are over 20 years old and well maintained. The steel cattle yards are used for loading and unloading both cattle and goats. Work has been done on the cattle yards to accommodate goats. This includes closing the gaps between the bottom railings on two holding pens and the forcing yard leading to the loading ramp. One notable feature about this cattle/goat yard is its capacity to withstand harsh animal treatment because of its solid structure.

The modifications to the cattle yards were achieved with minimal capital outlay and Ian believes they will last for many years.





Goat yards

