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Improving the profitable and sustainable management of rangeland goats in South Australia

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Abstract

Rangeland goats are a declared pest species in South Australia and are not recognised as an approved livestock species on SA Pastoral Lease areas under current legislation, regulations and Government policies. The annual supply of rangeland goats for sale and slaughter in South Australia is characterised by large fluctuations in numbers, quality and size presenting issues for processors and reduced returns at the farm gate. In this report legislation, regulations and current policies that influence the profitable production of rangeland goat meat in South Australia are identified, reviewed and discussed in the context of rangeland goat capture, holding, handling and transportation for commercial purposes.

This report recommends modification to government policy and legislation to facilitate improved management of rangeland goats and their impacts by:

- above all, ensuring that rangeland biodiversity and sustainable pastoral production are improved through better management of rangeland goat impacts;
- allowing for the development of infrastructure better suited to the management and utilisation of rangeland goats;
- clarifying legal ownership of rangeland goats and better defining responsibilities for their management;
- permitting the sustainable farming and husbandry of rangeland goats where suitable infrastructure, monitoring and planning is in place on Pastoral Lease areas.

MLA and the Australian goat industry would sincerely like to thank those who contributed to the development of this report.

Executive summary

This investigation and report was undertaken on behalf of the Australian goat industry to identify impediments to rangeland goat meat production and supply in South Australia. The review of legislation, regulations and policies resulted in the identification of several specific requirements in terms of the holding and non-release of rangeland goats that impose constraints on landholders with consequential negative impacts to the goat meat industry. The defined “pest status” and lack of clarity regarding rangeland goat ownership have further implications for profitable production and animal welfare outcomes.

Current legislation, regulations and policies relating to the management of natural resources in South Australia seek removal or eradication of rangeland goats, however numbers continue to increase over time and presumably, so do the impacts. While the overall intent of the regulatory environment aims for improved environmental outcomes, it is evident that these outcomes are unlikely to occur given the historic and current trend. In addition, the existing regulatory framework does not provide landholders on Pastoral Lease areas with the flexibility to maximise the profitable production of rangeland goat meat, or to manage rangeland goats and their impacts in an effective, efficient and sustainable manner.

These outcomes are therefore of little advantage for the protection of vegetation and other natural resource assets impacted by uncontrolled grazing, or for landholders seeking to profitably and sustainably manage their enterprises.

This paper recommends changes to legislation and regulations be made to:

- Provide greater incentive for landholders: to take ownership of rangeland goats; to construct infrastructure suitable for containing (or excluding) rangeland goats and; to transition rangeland goats into managed herds.
- Improve the quantity, quality and consistency of goat meat derived from SA rangelands.
- Ensure better animal welfare outcomes for marketable and unmarketable animals.
- Assist in managing total grazing pressure through improved rangeland goat management
- Recognise rangeland goats as a resource that must be managed appropriately in line with other livestock, rather than as a pest to be opportunistically harvested without regard to animal welfare or sustainable land management outcomes.

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1. Background

The Australian goat meat industry was valued at \$145.8 million in 2012/13, with live goat exports providing an additional \$9.65 million. SA supplied 15% of goat meat exports but 32% of live goat exports in 2013/14, with the SA goat industry valued at \$21.9 million in 2012/13 (MLA, 2013). About 95% of South Australian goat meat production is sourced from rangeland goat enterprises (A. Scott, pers. comms. 2014).

Rangeland goat meat is defined for the purposes of this report as goat meat derived from unmarked goats captured live on Pastoral Lease (PL), Perpetual Pastoral Lease (PPL) and Freehold (FH) properties across the South Australian rangelands (see Figure 1). Rangeland goats that are unmarked (no brand or ear tag) are also referred to as “feral” and/or “unmanaged” goats under various legislation, regulations, and Government agency/Natural Resource Management Board policy documents.

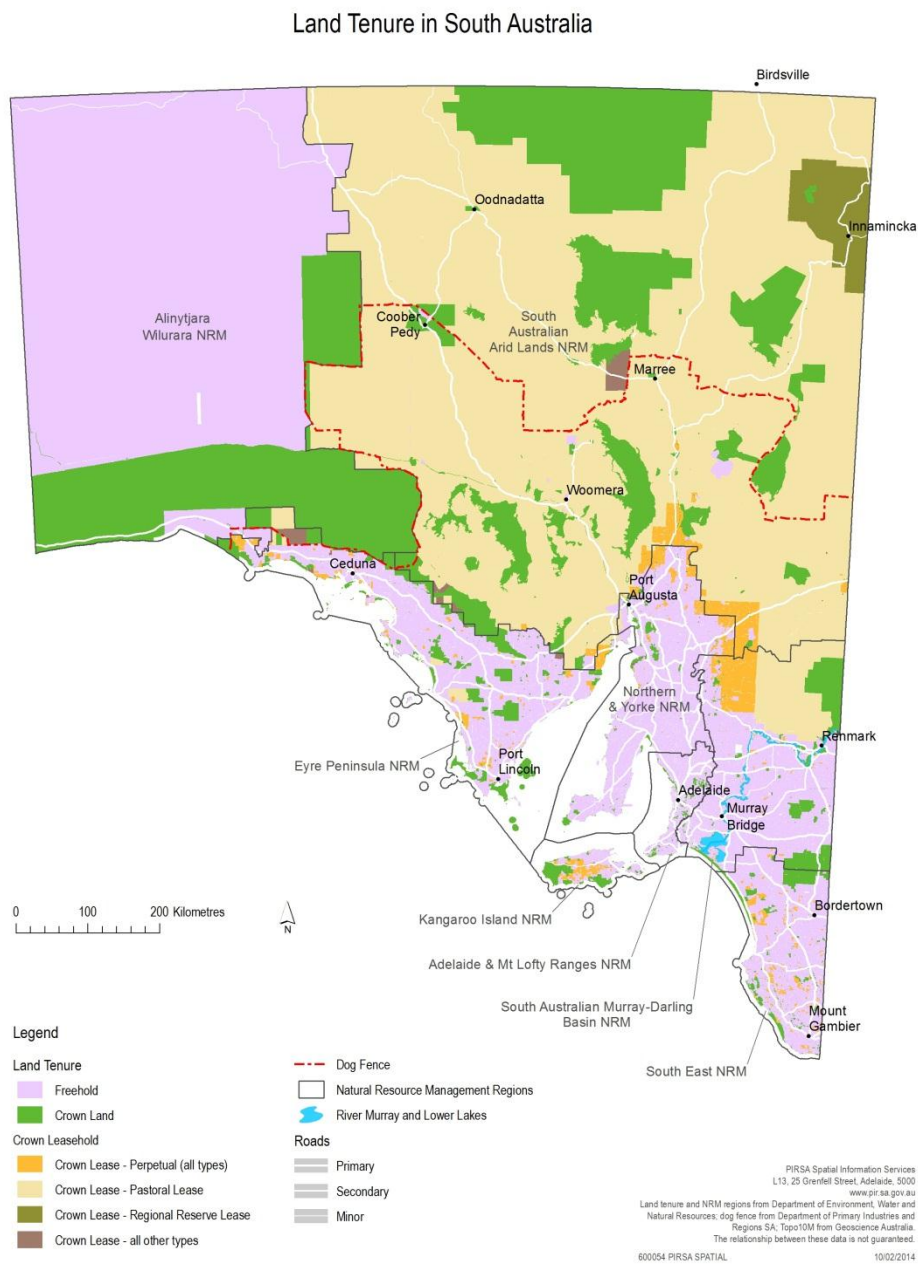


Figure 1. Land tenure areas of South Australia

Commercial removal activities of rangeland goats greatly exceed culling activities in South Australia. In 2012 the rangeland goat population in SA was estimated to exceed 390,000, with commercial utilisation accounting for the removal of over 200,000 goats from rangeland areas, worth a farm-gate value of approximately \$6 mil during 2012-13 (A. Scott, pers. comms. 2014). Generally, SA rangeland goats are received during the summer period when prices are usually lower as a result of over-supply and the condition of SA goats is poorer (A. Scott, pers. comms. 2014). This reflects the use of trap yards on waters and the holding of trapped or mustered rangeland goats in confined areas during summer when climatic conditions in South Australia are hot and dry. Supply of rangeland goats to SA abattoirs during cooler months when prices are generally higher is very limited.

Where the grading of rangeland goats occurs through depots, the provision of consistent weight categories to abattoirs can be facilitated assisting processing and product grading. Several stakeholders indicated however, that direct supply to abattoir from the farm gate was preferable as it reduced the transit time and weight loss associated with removal of rangeland goats from rangeland areas to confined area depots. According to A. Scott, (pers. comms. 2014) over 80% of rangeland goats are received by abattoirs directly from the farm gate in mixed age, sex, size and condition consignments with the balance received by depots.

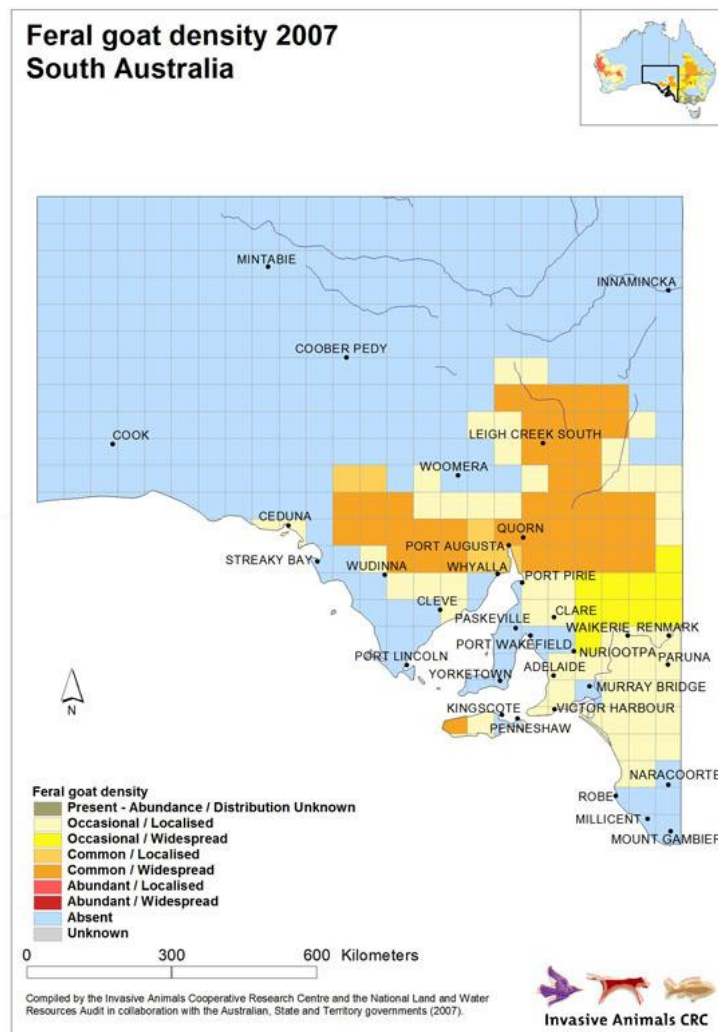


Figure 2. Range and density of rangeland goats in South Australia in 2007

Rangeland goats are highly mobile with few barriers to their movement, whether natural or man-made. The distribution of rangeland goats in South Australia extends from the Gawler Ranges in the west to the unfenced New South Wales and Victoria borders in the east, and from the Dog Fence in the north to the Upper South East in the south, with the highest densities present in the SA Murray Darling Basin, Northern & Yorke and SA Arid Lands Natural Resource Management Regions (Fig. 2). Rangeland goats are considered unlikely to persist in areas where wild dogs are present, or to encroach on areas where “goat proof” fences are constructed and maintained to preclude entry. Rangeland goats are known to be common in western New South Wales and are able to move between jurisdictions in this region.

Key legislation that influences or potentially influences the production of rangeland goat meat includes the Natural Resources Management Act 2004 (SA), Pastoral Land Management and Conservation Act 1989 (SA), The Native Vegetation Act 1991 (SA), Livestock Act 1997 (SA) and the EPBC Act 1999 (National). Other legislation that may directly or indirectly influence the profitability of rangeland goat meat includes the Animal Welfare Act 1985 (SA) and the National Parks and Wildlife Act, 1972 (SA).

Government policies are developed to guide the drafting of new legislation and to provide a framework to assist in the interpretation and application of existing legislation. In relation to rangeland goat management in South Australia, policies have been developed at the State, Agency and Regional levels to assist in informing decision-making where a number of Acts and associated regulations may apply. In 2005 the SA Minister for Environment and Conservation adopted the *Policy Relating to Feral Goats* with the stated objectives; “to protect the environment from damage caused by feral and escaped domestic goats; to protect primary producers from other hazards occasioned by feral and escaped domestic goats; to ensure that redomesticated goats are properly confined and do not escape; and to minimise the cost to the domestic goat industry of implementing these objectives” (Anon, 2005). Additionally, regional Natural Resource Management Boards (NRMB’s) have developed regional policies relating to minimum fencing standards for the holding of domestic goats and for minimising the impacts of rangeland goats to NRM environmental assets. Under the NRM Act there are specific requirements for the management of pest animals and also general statutory requirements for the management of natural resources across the State.

Actions undertaken by landholders in relation to the management of rangeland goats and goat numbers is therefore determined by a combination of legislation and regulations, State and Regional policies, land tenure, location of the property, vegetation and seasonal conditions (eg condition/abundance of vegetation and availability of water), market value, abattoir supply chain capacity and other factors. A range of stakeholders (including industry members and government employees) were consulted in the development of this paper with discussion focusing on the legislation, regulations and government policy that are perceived to currently limit or inhibit the profitable production of rangeland goat meat. The stakeholders consulted are listed in Appendix 2.

2. Project objectives

- 1) Conduct a review of legislation and policies impacting supply of rangeland goat meat and the collection, holding and disposal of rangeland goats in SA.
- 2) To work with the goat industry and Government stakeholders to find ways to improve the profitability and welfare outcomes for rangeland goats in SA yet meet the natural resource management needs of the Acts.
- 3) Develop a case for SA Pastoral Board consideration to alter the key regulations that limit the farming of goats in the rangelands.

3. Methodology

A desktop review of legislation, regulations and policies was undertaken to identify those of relevance to rangeland goat meat supply in South Australia and to inform the description of the regulatory situation in SA. Each relevant section was then briefly discussed in relation to rangeland goat capture, holding and supply.

Discussions were held with key government officials including those within Biosecurity SA, PIRSA Livestock, the SA Pastoral Board and relevant Natural Resource Management Boards and industry representatives to ensure all relevant legislation had been included and to seek comment on aspects presumed to be impacting profitability.

Comments were then sought on the draft report circulated to industry and government stakeholders (including the SA Pastoral Board). Meetings were attended with Natural Resource Management Board Operations Managers and the SA Pastoral Board to discuss possible changes to the legislation that could assist industry while meeting sustainable environmental and production objectives.

Changes to key regulations that limit the farming of goats in the rangelands were discussed face to face with Pastoral Board members and articulated in this paper in terms of recommendations for improving the supply, animal welfare and production outcomes. Specific policy changes are considered on a case by case basis by the Pastoral Board on application by pastoral lease landholders. To assist landholders in applying for policy changes in relation to the holding of rangeland goats, a hypothetical submission to the Pastoral Board was developed for inclusion as an appendix in this paper.

4. Results

The following sections of this report indicate the regulatory aspects in South Australia that limit the profitable production of rangeland goat meat. Work undertaken with goat industry representatives and government stakeholders clarified suggested approaches to improve the profitability of rangeland goat removal and the welfare outcomes for rangeland goats in SA while meeting the natural resource management needs of the regulatory framework. The discussion provides a logical assessment of existing constraints and the conclusion presents suggested changes to the regulatory framework to improve the quality and quantity of rangeland goat supply. A hypothetical application to the SA Pastoral Board is provided (see Appendix 3) to assist producers to address current requirements of the regulatory framework while improving the potential to better manage the impacts of rangeland goats while allowing for the implementation of improved animal husbandry to increase the supply of quality animals to meet market demand.

5. Legislative framework

This section discusses key Acts and Regulations relevant to rangeland goat management in South Australia, and their application in relation to tenure type.

5.1 Natural Resources Management Act 2004

The NRM Act applies to the whole of the State and has specific application for the management of pest animals (including goats). The rangeland (feral) goat is listed as a 'declared species' (Class 14) and as such the following sections of the Act apply:

- Section 179: Offence to release animals or plants.

- Section 182 (3): Owner of land to take action to destroy or control animals or plants.
- Section 183: Requirement to implement an action plan. This section relates to goats as a feral animal and the requirement of the landholder to control the feral population residing on their land.

In addition, Chapter 2, Part 2, 9 (2)(a) refers to the general statutory responsibility of persons in relation to the management of natural resources and “the need to act responsibly in relation to the management of natural resources ...”. All landholders are responsible for any unacceptable impacts caused by goats.

5.2 Natural Resources Management (General) Regulations 2005

Division 2 (Control measures) of the NRM Regulations Act 2005 applies to all areas of the State and details prescribed measures for control of goats other than on off-shore islands etc. They are:

- (2) A deer or goat on land owned or occupied by the owner of the deer or goat, or on land
 - with the consent of the owner or occupier of the land, must be—
 - (a) secured or confined; and
 - (b) permanently identified, in a manner determined by the Chief Officer.
- (3) Subject to subregulation (4) and regulation 28, a deer or goat on land without the consent of the owner or occupier of the land must—
 - (a) be captured and removed from the land within 6 weeks after capture; or
 - (b) be destroyed.
- (4) An owner of land is not required to capture a deer or goat if, by reason of the terrain inhabited by the deer or goat or any other circumstance, capture is impossible.

The implications for the profitable production of rangeland goat meat are:

- An objective of this Act is to see feral goats removed from the landscape, either by culling or by muster for sale and slaughter, or through transition of unmanaged to managed status.
- As young or other unmarketable goats cannot be legally released, the landholder or operator must either:
 - euthanize them;
 - find an alternative market for these animals;
 - transition them to a managed goat status on non PL tenure areas, or
 - retain them under Permit on PL tenure areas following approval of a management plan as required by the Native Vegetation Council and the Pastoral Board under the Native Vegetation Act.

Implications include reduced marketable goat availability as a result of goat herd reduction over time, the cost of euthanizing and carcass disposal, or the cost of undertaking market research and transportation.

As landholders are legally obligated to control rangeland goats and their impacts, and not to release goats, conceivably they may need to invest in sufficient infrastructure to contain, destroy (and dispose of carcasses), preclude or manage these animals or be subject to fines for breaching obligations under the NRM Act. This raises questions regarding expectations and potential compliance actions instigated by NRM Boards on landholders who, for example, may wish to reduce impacts by imposing management of rangeland goats (such as by building goat proof fences to manage grazing pressure), or who may be exposed to greater impacts from goats than other landholders primarily due to the location of the

property or the uncontrollable actions or movement of the goats. Associated costs and risks are therefore implicit for landholders who are subject to the impacts or required management of rangeland goats.

Landholders who muster or trap rangeland goats are often unaware of how many animals they are likely to capture. This can constitute a risk in terms of adequately preparing for the holding, feeding and watering, transportation or disposal of captured animals within the 6 week maximum holding period. In the absence of adequate infrastructure for the holding and handling of captive goats, landholders may inadvertently face additional risks in terms of meeting Animal Welfare and Occupational Health and Safety requirements. Associated costs and risks are therefore implicit for landholders who are subject to the impacts or required management of rangeland goats.

5.3 Pastoral Land Management and Conservation Act 1989

This legislation provides for the management and conservation of pastoral land (land comprised in a pastoral lease granted over Crown land for pastoral purposes).

Specifically, the Sections of the Pastoral Act that apply to rangeland goats are:

- Section 4(b)(ii): Objects of this Act - to provide for the prevention of degradation of the land and its indigenous plant and animal life.
- Section 22(1) Conditions of pastoral leases:
 - (b) land management conditions providing for;
 - (i) the lessee's obligation not to pasture (as part of a commercial enterprise under the lease) any species of animal on the land other than the species specified in the lease, except with the prior approval of the Board.

A condition of the granting of a pastoral lease is that the lessee must use reasonable means to keep the land free from vertebrate pests to the satisfaction of the Minister or the Pastoral Board. Prior approval by the Board is required if a lessee intends to pasture (as part of a commercial enterprise under the lease) any species of animal on the land other than the species specified in the lease. The only species generally permitted under existing pastoral leases are sheep and cattle.

As no PL holdings have the required SA Pastoral Board approvals to farm goats, interested leaseholders cannot easily engage in the production or indefinite holding of rangeland goats. Leaseholders are however, permitted to hold goats on an area not greater than 10 ha for a period of up to 6 weeks and approval may be sought for the holding of rangeland goats on an area greater than 10 ha and/or for a period exceeding 6 weeks on a case by case basis. Approvals granted by the Pastoral Board under this policy also constitute an approval to clear native vegetation under Regulation 5(1)(z)(h) of the Native Vegetation Regulations 2003 under the Native Vegetation Act 1991 for which an exemption must be obtained.

Implications of the Pastoral Act on the profitable production of rangeland goat meat on PL tenure areas:

The constraints for holding rangeland goats (on 10 ha or less for up to 6 weeks) may limit the profitable production of rangeland goat meat, as leaseholders;

1. cannot legally hold captive goats until market prices are attractive to the seller;
2. legally grow out captive underage/sized goats to profitable/marketable weight categories;
3. cannot effectively manage the impacts to vegetation and parasite pressure in holding areas;

4. have limited incentive to grade animals for processing resulting in the transportation of all age and sex combinations with further implications for animal welfare and devaluation of animals sent for sale and slaughter;
5. must accept greater mortality rates and reduced animal welfare where goats are held in confined areas at high density; and

The above constraints result in general weight loss of saleable animals inadvertently reducing their market value.

Additional issues include:

- The inability of landholders to transition rangeland goats into managed herds on PL properties results in the lack of adoption of quality assurance, herd improvement and animal husbandry processes. Therefore, best practice approaches for livestock production cannot be adhered to.
- The ability of rangeland goats to enter or leave properties 'at will' presents landholders with significant difficulties as they seek to manage total grazing pressure and sustainable production targets. Risks such as disease transmission and weed control are additional concerns. Current pastoral legislation and policies reduce incentive for landholders to invest in infrastructure on PL areas to improve profitable production of rangeland goat meat (e.g. fences, trap yards and yards to contain, capture or exclude goats, and for general handling and management).
- Additional time and cost of "red tape" and fees associated with seeking approval to hold goats on areas greater than 10ha or for longer than 6 weeks through the process outlined by the Pastoral Board further reduces incentives for the profitable production of rangeland goat meat on PL areas.

5.4 The Native Vegetation Act 1991

This legislation applies to all of the State and considers a change in the manner of grazing by domestic stock as clearance. Clearance of native vegetation by grazing is primarily covered under Section 27(2)-(6) and application for consent to clear vegetation under Sections 28 (1)-(7) and 29 (1)-(17).

Of particular relevance to vegetation clearance through grazing by goats is Section 29:

- Subject to this section, in deciding whether to consent to an application to clear native vegetation, the Council—
 - (a) must have regard to the principles of clearance of native vegetation so far as they are relevant to that decision; and
 - (b) must not make a decision that is seriously at variance with those principles.
- (2) When determining an application to clear native vegetation in order to facilitate the management of other native vegetation, the Council must, in exercising its limited discretion under subsection (1), have regard to the applicant's desire to facilitate the management of that other vegetation.
- (3) When determining an application to clear native vegetation that is growing or is situated on land that forms part of a property that is used for the business of primary production, the Council must, in exercising its limited discretion under subsection (1), have regard to the applicant's desire to operate the business as efficiently as possible.
- (4) The Council may give its consent to clearance of native vegetation that is in contravention of subsection (1)(b) if
 - (a) the vegetation comprises one or more isolated plants; and
 - (b) the applicant is engaged in the business of primary production; and
 - (c) in the opinion of the Council, the retention of that plant, or those plants, would put the applicant to unreasonable expense in carrying on that business

or would result in an unreasonable reduction of potential income from that business.

- (4a) The Council may give its consent to the clearance of native vegetation that is in contravention of subsection (1)(b) if:
 - (b) the Council is satisfied
 - (i) that a significant environmental benefit, which outweighs the value of retaining the vegetation, is to be achieved through the imposition of conditions and the taking of other action by the applicant; and
 - (ii) that the particular circumstances justify the giving of consent.
- (5) The Council must, before giving its consent, consult the regional NRM board for the NRM region where the native vegetation is situated and have regard to the board's recommendations (if any) in relation to the application.
- (6) Where native vegetation that is the subject of an application for the Council's consent to clear under this Division is on pastoral land, the Council must, before giving its consent, consult the Pastoral Board and have regard to the Board's recommendations (if any) in relation to the application.
- (8) Where the Pastoral Board has been consulted by the Council under subsection (6), the board may request the owner of the land to submit to it a property plan under the Pastoral Land Management and Conservation Act 1989
- (9) Section 41(10) of the Pastoral Land Management Act

Therefore an application for clearance on PL tenure would need to be approved by the Native Vegetation Council before domestic goats can be introduced. This is in addition to the conditions of pastoral lease.

The Native Vegetation Council can grant an Exemption (give consent) to clear native vegetation by changed grazing practices, such as using goats, under Part 2 Section 5 in the Native Vegetation Regulations. Here, Section 5 (1)zh allows for clearance by grazing domestic stock on PL, with specific conditions which are reasonable and expected. The principal obstruction however lies with the required approval of a Management Plan by the Pastoral Board and the Native Vegetation Council (a Management Plan must accompany the Landholder's Application to clear native vegetation). Section 28 describes (in part) the information required in the Management Plan.

As per the Native Vegetation Regulations Part 2, Section 5(1)(zh)(ii)(C), both the Native Vegetation Council and the Pastoral Board will be looking for evidence that the Management Plan can result in a significant environmental benefit for the native vegetation on the land, Ref: NVA 1991 Part 5, Div 1, Sec 28(3)(b)(ii)(A). Here exists the principal difficulty in getting approval from both the Pastoral Board and the Native Vegetation Council for the transition to a managed goat environment. Research is required to provide conclusive evidence to the Pastoral Board and Native Vegetation Council that a significant environmental benefit can be achieved through the Management Plan.

The implications for the profitable production of rangeland goat meat are:

- Considering the implications of S29 (2) and S29 (3), a primary producer may be able to argue that they want to better manage the total grazing pressure on native vegetation by managing goats, or that existing legislative constraints to manage goats in a better way may be impacting on their business efficiency.
- The additional time and cost of research required to prove the relative impact of goats to vegetation (within various land systems) as a pastoral animal compared with alternative approved species (cattle and sheep).

- Additional time and cost of “red tape” and fees associated with submitting an application for vegetation clearance through the process outlined by the SA Native Vegetation Council;

5.5 Livestock Act 1997

The Livestock Act 1997 applies to the whole of the State. There is a requirement under the Act Part 3 Division 1- Keeping livestock that relates to rangeland goat management. Section 17: (1) states *A person must not keep livestock of a prescribed class unless the person is registered under this Part.* This includes goats.

Additionally there is a requirement under the new Livestock Regulations 2013 Part 2- Division 1 Section 61-PIDs:

- Subregulation (1) (b) for managed goats to have a permanent identification device (PID) attached to an ear of the animal, and;
- Subregulation (2) The owner or person responsible for the management of an animal must not bring the animal into the State or remove the animal from land on which it has been pastured, however;
- Subregulation (3): Subregulation (2) does not apply to an rangeland goat that is-
 - (a) captured; and
 - (b) pastured on land for a period not exceeding 6 weeks; and
 - (c) consigned from the land to an abattoir for slaughter and over-the-hooks sale. There is no requirement for goats sent directly to abattoir from land on which it was pastured to be marked.

The implications for the profitable production of rangeland goat meat are:

- Managed (domesticated) goats on PPL and FH areas must be clearly marked adding to the animal husbandry requirements and costs, but protecting the ownership of those goats.
- Rangeland goats on PL cannot be marked to protect ownership unless these animals are moved to a tenure where goats are acceptable.
- A lack of clarity regarding ‘ownership’ of rangeland goats as a pastoral animal (with status determined by tenure type, or managed status) impacts community and landholder attitudes to land management requirements, animal welfare and herd management for sustainable and profitable production. In this scenario, it is possible that landholders will seek to opportunistically exploit large rangeland herds rather than to manage smaller numbers of domesticated animals to the detriment of the natural resource base, animal welfare and potentially marketability.

5.6 Environment Protection and Biodiversity Conservation Act 1999

The EPBC Act is the Australian Government’s central piece of environmental legislation and applies nationally. Competition and land degradation by feral goats is listed as a key threatening process under the *Commonwealth Environment Protection and Biodiversity Conservation Act 1999*. Under the EPBC Act, a Threat Abatement Plan (TAP) for Competition and Land Degradation by Feral Goats (Commonwealth of Australia, 2007) has been developed. The TAP aims to reduce the impact of feral goats on conservation values.

The implications for the profitable production of rangeland goat meat are:

- Applications to run goats will not be approved for areas that are likely to contain threatened species or ecological communities. The existence of threatened species or communities elsewhere on the proposed property or on the neighbouring properties would result in the application being referred to a panel comprising

representatives of South Australian Arid Lands Natural Resources Management Board, Department of Environment and Natural Resources and the Pastoral Board and will be assessed by that panel with recommendations to the Pastoral Board on a case-by case basis.

- As the intent of the EPBC Act is to protect environmental assets, uncontrolled grazing by goats clearly presents a risk to the protection of species listed under this Act. With the current lack of incentive to build infrastructure on PL areas, there is reduced scope for landholders to implement effective management of rangeland goats and therefore to protect important environmental assets that may be present on their properties.

5.7 National Parks and Wildlife Act 1972

This legislation provides for the management of reserves and conservation of wildlife. It requires the control of vermin and exotic animals as an objective of management of reserves s. 37(1)(e). Authorities in South Australia regularly undertake removal activities (muster and cull) to reduce the numbers and impacts of goats on Parks and Reserves. This may be done in partnership with adjacent landholders to improve cost efficiencies and removal outcomes over larger areas.

The implications for the profitable production of rangeland goat meat are:

- Cull activities potentially reduce the number of goats available for commercial purposes on adjacent pastoral properties.
- Contributes to ongoing recognition of rangeland goats as a pest, rather than a resource that may be appropriately managed for improved environmental, social and economic outcomes

5.8 Animal Welfare Act 1985

This legislation provides for the promotion of animal welfare and other purposes. Part 3 s. 13 (1-3) specifically relates to the ill treatment of animals, including s.13 3(b)(i-iv) (see Appendix 1). Under this Act the ill treatment or neglect of animals Animal Welfare Regulations 2012 s. 57 relate specifically to the transportation of goats.

The implications for the profitable production of rangeland goat meat are:

- The lack of clarity regarding formal ownership of rangeland goats may diminish the level of actual or perceived responsibility of landholders for the maintenance of animal welfare under the Animal Welfare Act 1985.
- Penalties that may be imposed under this Act provide added risk for landholders who seek commercial utilisation of rangeland goats, particularly where goats are of mixed age, size and sex, and during summer months when heat stress is more likely. Furthermore, the risk of animal welfare breaches and associated negative publicity could potentially cause the closure of an industry that is currently accounting for the removal of large numbers of rangeland goats from the landscape, reduced employment and reduced export and domestic income.

5.9 SA Government Policy Relating to Rangeland Goat Meat Production

This section provides an overview of current policies for the application of legislation and regulations to meet the stated objectives.

1) South Australian State Policy for Goat Management (2005)

Landholders are responsible for the satisfactory control of the numbers of feral goats on their properties. Goat owners must not release goats or allow them to escape. All kids born must be identified with a National Livestock Identification System (NLIS) breeder tag before leaving the property of birth and all properties running sheep or farmed goats require a Property Identification Code (PIC).

The implications for the profitable production of rangeland goat meat are:

- Only the non-release section of this policy applies in PL areas, however this requirement aims to ensure that sustainable harvest of rangeland goats cannot be implemented. This means that unmarketable goats must be euthanized if a market option cannot be found.
- The requirement to mark kids is only relevant on tenures where goats are an approved livestock species.

2) Pastoral Land Management Board Policy Statement

Policy N^o: 9
Title: Feral Goat Control
Amended: 2004

The combined impact of all grazing animals will be considered in the determination of the numbers of domestic stock that may be carried on a pastoral lease or portion thereof. Total eradication of feral goats on pastoral land will be pursued.

The implications for the profitable production of rangeland goat meat are:

- By measuring the impacts of total grazing pressure in ascertaining the numbers of domestic stock that can be carried, the inherent incentive is for landholders to keep goat numbers down, to ensure the total stocking rate of approved livestock species can be carried. If a conservative stocking rate has been set or low numbers of approved livestock are present, then goat numbers will need to be significant (particularly in average to above average seasons) to result in a destocking order.

3) SAMDB NRM Risk Management – Rangeland Goats

The SAMDB NRM Board risk management guidelines, as identified in the approved NRM Plan for goats, indicates that they should be a “managed pest animal population”. The aim of managing a pest animal population in this context is to reduce the overall economic, environmental and/or social impacts of the pest animal species through targeted management. This will be achieved through;

- Research and develop integrated pest animal management (IPM) packages for the species. Including cultural, chemical and biological control where feasible.
- Promote IPM packages to landholders.
- Monitor decrease in pest animal impacts with improved management.
- Identify key sites/assets in the rangelands and ensure adequate resourcing to manage the pest animal species.

The implications for the profitable production of rangeland goat meat are:

- This policy shows a less aspirational approach to rangeland goat management and is more aligned with commercial use
- The consideration of chemical and biological control methods is of potential concern from an industry and humaneness perspective,
- The promotion of IPM packages to landholders is positive if the promotion of commercial options is included and supported as part of those packages

Some elements of current Government and NRM policy appear out of step with practical requirements and are contradictory. For example, the SAMDB Risk Management approach is to “Manage” the pest animal population, whereas the Pastoral Land Management Board policy aims for total eradication. While landholder engagement and cooperation are implicit requirements to achieving policy outcomes, current legislation does not provide for production outcomes as an incentive to allow landholders to manage rangeland goats in a commercially viable manner.

Goat numbers fluctuate markedly according to aerial survey data undertaken (primarily to monitor kangaroo populations) across rangeland areas of SA. Generally goat numbers tend to decrease when prices are high and increase when prices are low. It could be argued that this is an indicator of the “value” of commercial removal for achieving environmental outcomes. Harvesting is known to account for ~90+% of total annual removal effort but aerial culls will always be required in some inaccessible areas.

5.10 Stakeholder Engagement

Select goat industry stakeholders were consulted during the preparation of this report and some were subsequently asked to comment on the draft document. Following the return of initial comments and the inclusion of resulting changes, the document was more broadly circulated for comment. This final document addresses all relevant comments received.

Formal landholder comment was limited, possibly relating to the concerns of pastoral lease landholders that their support for changes to legislation, and the SA Pastoral Act in particular, may not be viewed favourably by the SA Pastoral Board. While official comment from rangeland producers was limited, there was clearly broad support for the MLA approach to question the appropriateness of existing legislation, regulations and policies regarding the management of rangeland goats as a pest species in SA. Government agency representatives were willing to discuss various aspects of the legislative and policy framework and the application of these towards the management of rangeland goats, however, they were constrained by the SA Public Service Code of Conduct in relation to providing critical comment. A very limited number of processors and buyers of rangeland goats are present in South Australia, however, they were forthcoming regarding their perceptions of opportunities and constraints to improving the supply and marketability of rangeland goat meat.

While remaining a contentious issue, it was unanimously agreed by all stakeholders that the effective management of rangeland goats is crucial to ensuring the protection of the land resource base for sustainable production and environmental outcomes.

6. Discussion

The profitable production of rangeland goat meat in South Australia is determined by many factors, some of which have cause or effect determined by legislation, regulations and policies, while others do not. The following key limiting factors to the profitable production of rangeland goat meat in South Australia have been identified by goat industry stakeholders and agency personnel, including some identified linkages to relevant legislation.

Key limiting factors to the profitable production of rangeland goat meat in SA include:

1. The lack of flexibility for PL landholders to profitably supply a greater number of rangeland goats;
 - 1.1. To meet market specifications.
 - 1.2. When sale prices are elevated.

Constraint 1: The lack of flexibility to hold goats on pastoral leasehold land in excess of 6 weeks (Pastoral Act/Native Vegetation Acts);

- To enable the farming of goats on PL areas;
- To enable underage/sized animals to be grown to profitable/marketable weight categories;
- To enable goats to be held until market prices are attractive to the seller;
- To enable small numbers to be collected until cost-effective transportation of marketable animals can be achieved;
- To enable separation of rangeland goats into size/sex categories to improve transportation, animal welfare and processing outcomes;
- To enable herd improvement, quality assurance and improved husbandry to be implemented.

Constraint 2: The carrying capacity of land systems determines permissible pasture utilisation (Pastoral/Native Vegetation/NRM Acts);

- The stocking rate of permitted livestock species is determined by the Pastoral Board on the basis of land system, historical stocking rates for that property, and vegetation condition as determined by seasonal climatic conditions and total grazing pressure.

Constraint 3: The availability of surface water and artificial waters impacts the total area available for grazing and the effectiveness of trap yards for the capture of rangeland goats.

Constraint 4: The limited total area of land well suited to and available for rangeland goat production, as goats are not endorsed as a suitable rangeland pastoral species on PL areas (Pastoral /Native Vegetation Acts).

2. A shortage of appropriate existing infrastructure on-farm (ie trap yards, fences and yards) capable of capturing, holding or preventing the exit or entry of rangeland goats;
 - 2.1. hereby reducing livestock and land management options (Pastoral/Native Vegetation/NRM Acts);
 - 2.2. reduced managed herd husbandry;
 - 2.3. increasing managed herd establishment and management costs where improved or additional infrastructure requirements occur.
3. Socio-economic factors including but not limited to;
 - 3.1. Poorly defined cost/benefit and impacts of managed goat production as compared to other livestock species;

3.2. The lack of promotion of potential beneficial aspects of managed goat production, including:

- Goats utilised for summer weed control (particularly in cropping areas); (Implications for reducing; chemical trespass, herbicide resistance and chemical misuse). Note, these aspects are covered under best practice production guidelines (see GRDC and AHRI info sheets and the SA Agricultural and Veterinary Chemicals Control of Use Act)
- Potentially improved (ie less impacts to specific vegetation species) utilisation of vegetation when co-grazed at appropriate stocking densities with other livestock such as sheep and cattle (implications for meeting objectives of the EPBC, Pastoral, Native Vegetation and NRM Acts);
- Reduction of environmental impacts resulting from the transition to managed rangeland goat herds and controlled stocking rates. Rangeland goats are known to congregate in some areas or at some times of the year (eg where seasonal conditions ensure goats require access to man-made or natural waters, or where preferred native forage species are grazed detrimentally); (Implications for Native Vegetation, EPBC and NRM Acts)
- Unquantified economic/environmental/social benefits (or otherwise) of producing rangeland goats as compared to alternative livestock species.

3.3. Lack of knowledge and skills regarding rangeland goat production and management and negative landholder/community sentiment towards aspects of rangeland goat production and management such as:

- The additional expense of goat proof fencing requirements;
- Landholders and staff who are inexperienced in rangeland goat management and handling may not be well placed to implement best practice approaches. As a result, fail to fully meet animal welfare and goat meat industry supply requirements (Animal Welfare Act);
- Recognition of environmental/production/infrastructure impacts (implications for Native Vegetation and NRM Acts);
- Animal welfare concerns where free ranging goats are introduced to unsegregated captive environments and the duration of road transportation, particularly for unweaned goats or those >19 weeks pregnant (Animal Welfare Act);
- Heightened risk of workplace injury (OHS&W);
- Threat of Q Fever and other transmissible diseases potentially present in the rangeland goat population (Livestock Act/Quarantine and Human Health);
- Goat meat is not eaten in large quantities in Australia;
- Goats smell! (EPA).

4. The legal status of rangeland goats, ownership and responsibility for animal welfare and impacts

Whether a feral goat is “managed” or “unmanaged” is an interesting issue. According to the Australian Wildlife Management Society position statement on the management of feral goats, where landholders consider feral goats to be a resource, the goat should be seen as livestock and landowners must take responsibility for their management and its consequences. The rules for managing livestock, such as maximum stocking rates, should apply, and adverse effects on neighbours should be eliminated.

Further, there is some implied ownership through the law. The law of property in wild animals divides animals into two classes: *ferae naturae* and *mansuetae naturae*. Animals *ferae naturae* are those 'usually found at liberty', though they may be 'sometimes tamed and confined by the art and industry of man'. There exist four categories of animals *ferae naturae*, the strongest is *per industriam*. Animals *mansuetae naturae* are such animals as we generally see taken and are therefore seldom, if ever, found wandering at large (chooks, sheep, etc). In some instances an animal considered by the law as *mansuetae naturae*, such as goats, which have reverted to a wild state, will be considered *ferae naturae* for the purposes of allocating property. It could be argued that feral goats are owned *per industriam* by landholders, particularly if they are utilised as a resource on a regular basis, and are therefore already a managed animal. Technically however this might only apply if the goats couldn't breach perimeter fences easily (Ha 2008).

A person can claim qualified property in an animal *ferae naturae per industriam* by making the wild animal 'tame by art, industry and education'; or by so confining them within his own immediate power, that they cannot escape and use their natural liberty. Keeping an animal *ferae naturae* in captivity, or otherwise having possession of an animal *ferae naturae* has been deemed to give the keeper a qualified property right, but some trouble and expense must be exerted by the person (e.g. fencing, goat-proof or otherwise would be debateable). Therefore, allowing the numbers of wild animals to naturally increase on one's land, with minimal trouble, expense or industry exerted by the landholder, would not accord that landholder qualified property *per industriam* of those wild animals (Ha 2008).

The legal status of rangeland goats is not totally clear and may be subject to interpretation and debate. Where existing property infrastructure such as artificial waters, fences and yards provide varying degrees of 'control' of these goats, such as in PL areas where the infrastructure has been established for the management of other livestock species, such debate may be indeterminate until sufficient precedent has been established via legal process.

For the purpose of this report it is assumed that:

- Rangeland goats are not legally 'owned' by the landholder. They remain ownerless until someone takes control of them (eg by mustering or holding) thereby transitioning the goat or goat herd from an "unmanaged" to a "managed" situation. This has implications for landholders accepting responsibility for the welfare of rangeland goats or the removal of goats within the allowed time period.
- Rangeland goats are known to cause damage to infrastructure such as fences and watering points, and uncontrolled numbers can have detrimental impacts on the quality and quantity of vegetation biomass available to other livestock, and cause soil erosion.
- The legal requirement not to release rangeland goats results in landholders having to euthanize unmarketable goats, or to illegally release. All other rangeland goats will be sent off property for sale and slaughter.

7. Conclusion

The commercial utilisation of rangeland goats in South Australia is seriously constrained by existing legislation, regulations and government policies. These constraints primarily relate to limitations of actions that can be undertaken with regard to rangeland goats, such as the non-release of unmarketable animals, time and area constraints for the holding of captured animals, and the definition of 'ownership' of goats.

While rangeland goats are recognised more as a pest than a resource, there remains an inherent disincentive for implementation of animal husbandry to underpin sustainable production outcomes such as herd improvement, managed stocking rates and therefore, impact reduction to infrastructure and the environment. The limited opportunity for PL landholders to officially hold rangeland goats indefinitely prior to sale or to grade animals for sale and slaughter causes difficulties for processors and reduced returns for landholders, with inherent additional animal welfare risks and reduced quality assurance for consumers.

These outcomes are therefore of little advantage for the protection of vegetation and other natural resource assets impacted by uncontrolled grazing, or for landholders seeking to profitably and sustainably manage their enterprises.

Therefore in light of these issues, changes to legislation and/or regulations are required to:

- Provide greater incentive for landholders: to take ownership of rangeland goats; to construct infrastructure suitable for containing (or excluding) goats and; to transition "unmanaged" rangeland goats into "managed" herds.
- Improve the quantity, quality and consistency of goat meat derived from SA rangelands
- Ensure better animal welfare outcomes for marketable and unmarketable animals.
- Recognise rangeland goats as a resource that must be managed appropriately in line with other livestock, rather than as a pest to be opportunistically harvested without regard to animal welfare or sustainable land management outcomes.
- Allow the trial production of rangeland goats at predetermined stocking rates in appropriately fenced areas across land systems while monitoring impacts to vegetation, soils and property infrastructure.

Pastoral Leaseholders who wish to approach the SA Pastoral Board to seek an exemption from the regulations under the Pastoral Land Management and Conservation Act 1989 (such as the holding of rangeland goats for more than 6 weeks or on an area of greater than 10ha) will need to put forward a compelling case to do so. The Board is only likely to approve such applications where it is clear that impacts to vegetation will be reduced. The attached *Hypothetical Application to SA Pastoral Board for the Holding/Farming of Goats* (see Appendix 3) may provide assistance to those wishing to seek exemption; however, the Board will assess applications on a case by case basis. Alternatively, interested landholders could form an association or lobby group to seek wholesale changes to legislation, regulations and government policies.

8. References

Anon (2005) *South Australian Policy relating to Feral Goats*. Adopted by the Minister for Environment and Conservation, Government of South Australia.

Anon, 2007 Threat Abatement Plan (TAP) for Competition and Land Degradation by Feral Goats; Commonwealth of Australia, 2007
<http://www.environment.gov.au/resource/competition-and-land-degradation-unmanaged-goats>

Ha, L. (2008). Who owns wild camels? Proprietary interest in camels in a wild harvest environment. Honours Thesis, University of New England, Armidale, Australia.

Meat and Livestock Australia (2013). Fast Facts 2013 Australia's goat meat industry.
<http://www.mla.com.au/Cattle-sheep-and-goat-industries/Industry-overview/Goats>

Personal Communications

Mr Gerald Martin – Meat & Livestock Australia Ltd

Mr Brian Menzel – Owner Menzel's Meats Pty Ltd, Kapunda SA

Mr Alec Scott – Thomas Foods International Pty Ltd

9. Appendices

Appendix 1

Animal Welfare Act 1985

Part 3—Animal welfare offences

13—Ill treatment of animals

- (1) If—
- (a) a person ill treats an animal; and
 - (b) the ill treatment causes the death of, or serious harm to, the animal; and
 - (c) the person intends to cause, or is reckless about causing, the death of, or serious harm to, the animal,
- the person is guilty of an offence.
- Maximum penalty: \$50 000 or imprisonment for 4 years.
- (2) A person who ill treats an animal is guilty of an offence.
- Maximum penalty: \$20 000 or imprisonment for 2 years.
- (3) Without limiting the generality of subsection (1) or (2), a person ill treats an animal if the person—
- (a) intentionally, unreasonably or recklessly causes the animal unnecessary harm; or
 - (b) being the owner of the animal—
 - (i) fails to provide it with appropriate, and adequate, food, water, living conditions (whether temporary or permanent) or exercise; or
 - (ii) fails to take reasonable steps to mitigate harm suffered by the animal; or
 - (iii) abandons the animal; or
 - (iv) neglects the animal so as to cause it harm; or
 - (c) having caused the animal harm (not being an animal of which that person is the owner), fails to take reasonable steps to mitigate the harm; or
 - (d) uses the animal in an organised animal fight; or
 - (e) releases the animal from captivity for the purpose of it then being hunted or killed; or
 - (f) causes the animal to be killed or injured by another animal; or
 - (g) kills the animal in a manner that causes the animal unnecessary pain; or
 - (h) unless the animal is unconscious, kills the animal by a method that does not cause death to occur as rapidly as possible; or
 - (i) carries out a medical or surgical procedure on the animal in contravention of the regulations; or
 - (j) ill treats the animal in any other manner prescribed by the regulations for the purposes of this section.
- (4) A person charged with an offence against subsection (1) (the **aggravated offence**) may be convicted of an offence against subsection (2) (the **lesser offence**) if the court is not satisfied that the aggravated offence has been established beyond reasonable doubt but is satisfied that the lesser offence has been so established.
- (5) It is a defence to a charge of an offence against subsection (2) if the defendant proves that the offence did not result from any failure on the part of the defendant to take reasonable care to avoid the commission of the offence.

(6) In this section—

cause—a person's act or omission causes the death of, or harm to, an animal if the act or omission substantially contributes to the death or harm.

44—Regulations

- (1) The Governor may make such regulations as are contemplated by, or as are necessary or expedient for the purposes of, this Act.
- (2) Without limiting the generality of subsection (1), the regulations may—
 - (a) regulate the slaughtering, trapping, snaring, catching, poisoning, caging or confining of animals;
 - (b) regulate medical or surgical procedures in relation to animals;
 - (c) require a person to hold a certificate or other authorisation for specified purposes and provide for the issuing and cancellation of certificates and authorisations by the Minister, a specified body or a person or body approved by the Minister;
 - (d) regulate—
 - (i) the hiring out of animals; or
 - (ii) the boarding of animals; or
 - (iii) the sale of animals; or
 - (iv) the transport of animals; or
 - (v) the husbandry of animals; or
 - (vi) the use of animals for entertainment;
 - (e) prescribe the form of any notice, application, permit, licence or other document given, made or granted under this Act;
 - (f) prescribe fees in respect of anything to be done under this Act;
 - (g) exempt, conditionally or unconditionally, any person or class of persons or any animal or class of animals from any provision of this Act;
 - (h) impose fines, not exceeding \$5 000, for offences against the regulations;
 - (i) fix expiation fees, not exceeding \$315, for alleged offences against the regulations.
- (3) The regulations may incorporate (with or without modification) or operate by reference to any code of practice relating to animals as in force at a particular time or as amended from time to time by the authority responsible for its publication.
- (4) A regulation under this Act may be of general or limited application according to—
 - (a) the classes of persons or animals; or
 - (b) the circumstances; or
 - (c) any other specified factor,to which the regulation is expressed to apply.
- (5) The regulations may leave a matter or thing to be determined, dispensed with, regulated or prohibited according to the discretion of the Minister, either generally or in a particular case or class of cases.

Animal Welfare Regulations 2012

57—Goats

When transporting goats—

- (a) the journey time for the class of goat listed in column 1 of the table set out in this regulation, must not exceed the period of time specified in column 2 of the table with respect to that class; and
- (b) the maximum time off water for the class of goat listed in column 1 of the table set out in this regulation, is the period of time specified in column 3 of the table with respect to that class; and
- (c) the minimum spell duration for the class of goat listed in column 1 of the table set out in this regulation, is the period of time specified in column 4 of the table with respect to that class.

Class of goat	Journey time (hours)	Maximum time off water (hours)	Minimum spell duration (hours)
Goats known or visually assessed to be between 14 and 19 weeks pregnant (inclusive)	24	24	12
Goats known or visually assessed to be more than 19 weeks pregnant	4	4	24
Lactating goats travelling with dependent young	28	28	12
Goats less than 6 months of age	28	28	12
Any other goat not referred to above	48	48	36

Appendix 2

Stakeholders contacted

Ms Pauline Crawford – Pastoralist
Mr Robert Henzel – Former Biosecurity SA goat expert (retired)
Mr Peter Lauderbach – Landholder and industry member
Mr Gerald Martin – Meat & Livestock Australia Ltd
Mr Brian Menzel – Owner Menzel's Meats Pty Ltd, Kapunda SA
Mr Peter Mitchelmore – Operations Manager Natural Resources SA Murray-Darling Basin
Mr Steven Obst – Owner Pualco Pastoral Co. (SA Goat depot, buyer and seller)
Mr Greg Patrick – Operations Manager SA Natural Resources Arid Lands
Ms Elena Petrenas – PIRSA Biosecurity SA
Mr David Setchell – Project Coordinator, Riverland Biosphere project
Mr Alec Scott – Thomas Foods International Pty Ltd
Mr Chris Turner – SA Pastoral Board
Mr Mark Williams – PIRSA Biosecurity SA

Appendix 3

Hypothetical Application to SA Pastoral Board for the Holding/Farming of Goats

Purpose of application: Holding and farming of domestic goats

Hypothetical property name: Capricopia Station

Property location: North East District, SA

NRM Region: MBDNRM or SAAL NRMB

Property size: 820 km²

Background information

The following “Application to SA Pastoral Board for the Holding/Farming of Goats” has been developed as a hypothetical example to assist future leaseholders on Pastoral lease areas of SA to apply to hold or farm rangeland goats. As of March 2014, goats were not officially endorsed as a livestock species for pastoral lease areas of South Australia. Concurrently, the unmanaged rangeland goat population continues to grow in many areas south of the dog fence with inevitable impacts of uncontrolled grazing to native vegetation, damage to infrastructure, depletion of livestock water resources and additional risks to landholders ranging from biosecurity and livestock diseases to breaches of lease conditions and legislative responsibilities.

Capricopia is a hypothetical property situated within the Murray Darling Depression land system (South Olary Plain). This area is characterized by low hills (NW corner), and plains

(majority of property). The major vegetation present on the hills are mallee box, ruby saltbush, curry bush, clammy daisy bush, rock nightshade; on the plains black oak, bullock bush, sandalwood, bladder saltbush, sennas, mulga, bluebush; and on floodout areas and along drainage lines river red gums, river box, blackbush, saltbush, elegant wattle, mallee box, neverfail, and spotted emubush.

The Capricopia climate is characterised by hot to very hot, dry summers and cool to mild, dry winters. Rainfall is low and unreliable with some infrequent heavy falls and no apparent seasonality. Average annual rainfall is 210 mm but is rarely “average”. Defined drainage lines are scarce on Capricopia, with no major water courses present. Four minor drainage lines (approx. 1.5 metres w x 0.5m deep) are present and cross the property boundary on the western and southern boundaries. Groundwater of reasonable quality is sourced from 2 bores in the NW portion of the property and utilised for stock in the NW paddocks and for domestic supply at the homestead. Dams are the major source of water on the plains and constitute the main livestock supply when holding water. Livestock are moved back to the western paddocks during extended dry periods.

Capricopia is currently authorised to run 6,000 sheep (12/km²) and 120 cattle and this stocking rate has proven sustainable across most years, except during extended drought. Rabbits, goats and kangaroos are often present in significant numbers, with control of these species occurring annually. For example, approximately 600 kangaroos were culled by a roo shooter in 2013/14. Rabbit numbers are currently reduced as a result of calici virus, however there remains about 10-15 active warrens/km². Kangaroo numbers fluctuate with seasonal conditions (increasing in good seasons), and sometimes outnumber the livestock. Currently kangaroo numbers are moderate.

Apart from limited available surface and ground water, the management of goats, kangaroos, wild dogs and foxes, weeds and woody shrub increase present the greatest challenges to livestock and land management on Capricopia. The ongoing influx of unmanaged rangeland goats presents both an opportunity and a cost. Goat sales earned us a farm gate value of about \$150,000 in 2013/14 (~\$30/head) but are difficult to manage as they can get through most existing fences, deplete dam water and often arrive in large numbers when conditions are hot and dry. Capricopia does not use trap yards due to the high numbers of goats that often congregate within short time periods. Musters for sale and slaughter are undertaken when staff resources and sufficient goat numbers are available to muster and load B-Double units. Goat numbers are never certain until the muster is well underway and existing holding yards (modified portable sheep panels) are not well suited to the task or to our workers safety. Purpose built facilities are required for handling and drafting large numbers of rangeland goats.

The grazing impact is significant, particularly in the NE of the property where large numbers of goats tend to enter the property and hang on NE dam in summer until the water has gone. Mustering cannot always be undertaken when large numbers are present; however, approximately 5,200 were removed over the last 12 months with the majority moved during December –February period.

Capricopia has established photo points in each paddock and these have been positioned to include indicator species such as Santalum, Pittosporum and Atriplex spp. Photos are collected quarterly with photo records extending back to 2012.

Seek permission to hold/farm goats

The ongoing management of goats is key to the long-term sustainability of Capricopia. This property is well suited to rangeland goat production and has proven to be a destination of choice for thousands of free roaming rangeland goats for decades. We need to upgrade fences in some areas (particularly the northern and North East paddock boundary fence) to prevent goats accessing NE dam from neighbouring properties. Such a fence would also assist us to muster goats out of NE and adjoining paddocks for subsequent sale and slaughter or selection into our proposed breeding program. It will also allow more water to be retained for sheep and cattle and to reduce the total grazing pressure in NE paddock and adjacent paddocks. Preliminary discussions with our northern neighbour have resulted in general agreement regarding the need to upgrade the shared boundary fence and will improve the capacity of both properties to manage the rangeland goats.

In addition, permission is sought to upgrade the fences in the NW to create a goat proof holding area (~10 ha) adjacent to the drafting and loading facilities, a larger “holding paddock” (~150 km²) to enable the holding of large numbers of mustered rangeland goats for short periods before we draft off saleable animals into the holding paddock, and a “breeder paddock” (~140 km²). The construction of a breeder paddock will allow for the development of an improved bloodline, and to rear young unmarketable goats to be able to increase supply of higher quality produce. Breeder paddock will sustainably carry 500 nanny’s and 500 kids.

We propose to install new fences upgraded to prefabricated 8.90.30 ringlock with top plain wire and bottom barb to a total height of 1.1 - 1.2 m. Welded steel end assemblies will be used throughout. Where minor drainage lines must be traversed, permanent weldmesh barriers or swinging ringlock gates will be erected across the floodway to contain captive goats in a flow event. Figure one provides a property map of Capricopia identifying fences and facilities to be upgraded for the holding and farming of rangeland goats.

Fast facts:

- Large numbers of unmanaged rangeland (feral) goats enter Capricopia on a regular basis and must be cost-effectively managed (ie sent off for sale and slaughter)
- Grazing impacts are evident and require fences of sufficient standard to preclude or contain unmanaged rangeland goats
- Water management is an issue for the sustainable management of all livestock species
- Vegetation management is dependent on total grazing management and is monitored via established photo points in each paddock.

Justification for development proposed:

- Upgraded fences in some areas will facilitate exclusion, capture, holding and farming of goats
- The development of purpose built paddocks are required to contain large numbers of unmanaged rangeland goats (short term), to hold goats drafted for sale (short term), and to develop a farmed breeder herd (long term)
- Improved economic outcomes through sale of rangeland goats when market prices are elevated, increased total sales of rangeland goats, and better utilisation of waters thereby increasing production of sheep and cattle enterprises

- Improved environmental outcomes through reduced grazing pressure by reducing the impact of unmanaged rangeland goats
- Improved WHS for workers handling rangeland goats through development of purpose built facilities
- Improved animal welfare through transportation of consistent age, weight, sex rangeland goats for sale and slaughter

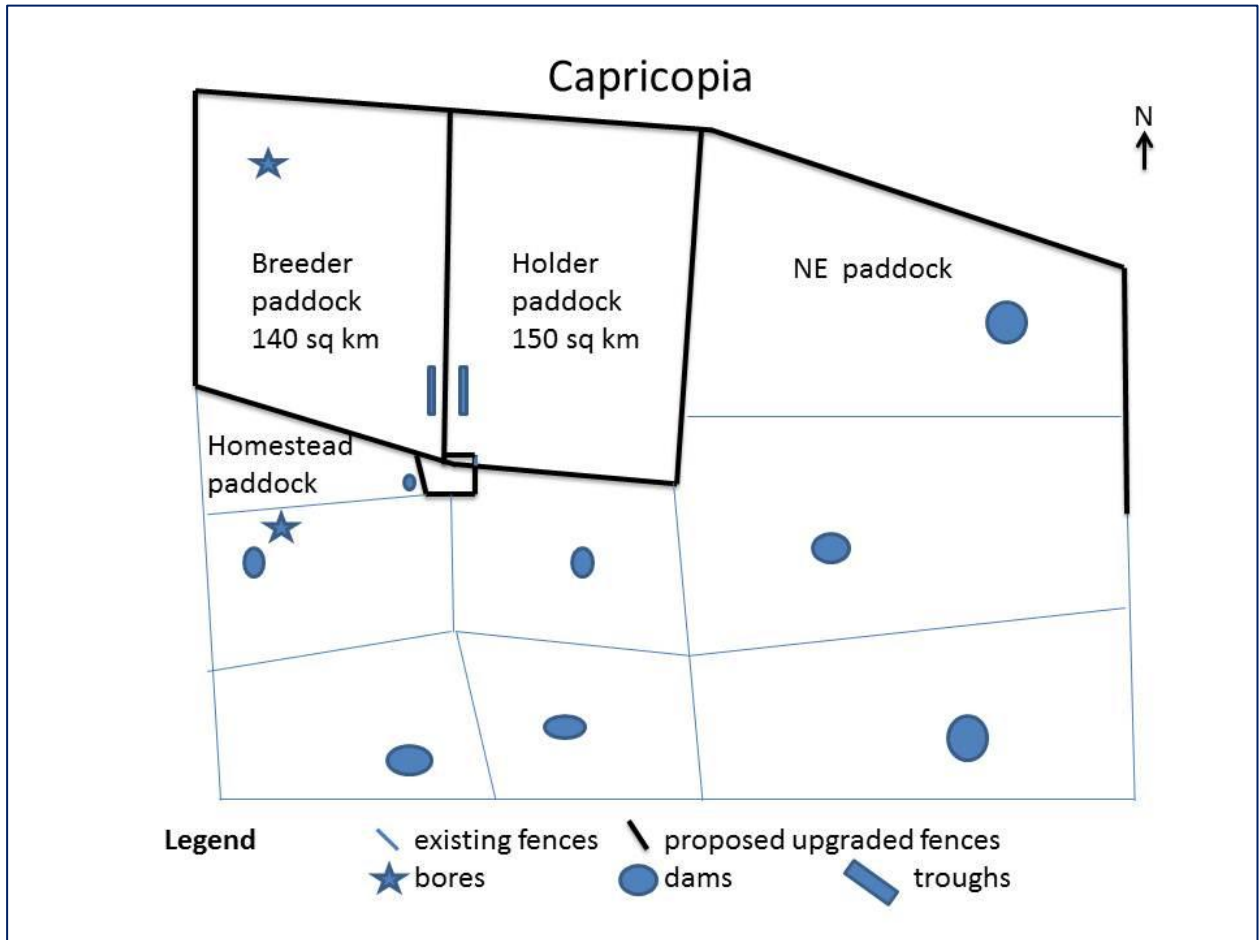


Figure 1 Map of Capricopia indicating proposed development