

Replacement of Boyanup Saleyards
Final report

October 2017

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Glossary

Acronym	Full name
ABS	Australian Bureau of Statistics
ABARES	Australian Bureau of Agriculture and Resource Economics and Sciences
ACCC	Australian Competition and Consumer Commission
EVAO	Estimated value of agricultural operations
NRMR	Natural resource management region
PIC	Property Identification Code
SA2	Statistical Area 2 (a spatial unit of the ABS)
SA4	Statistical Area 4 (a spatial unit of the ABS)
WALSA	Western Australian Livestock Salesman's Association
WAMIA	Western Australia Meat Industry Authority

Executive summary

Deloitte Access Economics (Deloitte) has been engaged by the Western Australian Meat Industry Authority (WAMIA) to assess the future need for a livestock facility in the South West of Western Australia to replace the Boyanup saleyards. The current Boyanup saleyard is old and in need of investment if it is to meet current and future standards (such as animal welfare). Its age and location close to residential areas limits its further development and, in 2022, the lease on the site will expire and is not expected to be renewed.

To assist in answering the question around the need to replace the Boyanup saleyard, WAMIA, under the direction for the Minister for Agriculture, has posed five key research questions of Deloitte:

1. In 2022 when the lease on the existing Boyanup saleyards expires, is there likely to be a need for a replacement saleyards/livestock handling facility in the South West given current industry trends and technological changes?
2. If there is a need for a facility, what features and/or requirements does the facility need?
3. If there is a need for a facility, what locations are considered to be most suitable against the features and/or requirements identified above and why?
4. If there is not predicted to be a need for a new facility, what happens to the livestock originating in the South West?
5. What role can the Muchea Livestock Centre play, if any, in mitigating the need for a replacement facility?

Of the above, Question 1 is a central question with Questions 4 and 5 assisting to answer this by posing the 'counterfactual' of not replacing Boyanup.

Questions 2 and 3 investigate the required features and potential locations assuming a replacement facility is needed.

Our assessment of the five questions has been informed by stakeholder consultation, desktop research of public and private datasets, and spatial and economic analysis.

Overall conclusion on need to replace Boyanup (Questions 1, 4 & 5)

Our analysis indicates that there is a need for a replacement saleyard in the South West, in the sense that there will be ongoing demand for a saleyard in the region. The key evidence supporting this view includes:

- **The closure of Boyanup creates an instant market for a new facility**, with an existing catchment of committed saleyard users.
- **An increasing trend of demand for Boyanup** over the past 15 years despite a declining South West herd.
- **The predominance of small producers in the South West that have a strong reliance on the Boyanup saleyards.** Most primary producers in the South West operate small beef cattle herds – the median number of cattle sold by Boyanup users was 21 over the period 2015 to 2017.
- **Saleyards are the most suited selling method for smaller producers** with other selling methods (direct selling, online auctions and 'over the hooks' sales) tending to be favoured by larger producers.

- The Boyanup saleyard also **plays an important role in the movement and aggregation of store and weaner cattle** within the region. Alternative selling methods (with the exception of online auctions) are less effective for these sale categories.
- In the event Boyanup is not replaced, **average distances to South West producers' nearest saleyards would more than double** from the current 70 kilometres to 150 kilometres, which would be more than most other primary producers in the broader region (Muchea 129km and Mt Barker 95km).
- **The increase in transport costs would have detrimental impact on buyers and sellers alike.** The cost of transporting cattle this additional distance would be in the order of between \$11 and \$17.50 per head for many current Boyanup users, which could make transport of the small lots they typically sell unviable. Across the volume of cattle currently sold through Boyanup Saleyards this would equate to additional transport costs in the order of \$1.2 million per annum.
- The overwhelming view expressed by stakeholders in consultation was that there is a need to replace Boyanup and that, without a replacement facility, the increased distance and transport costs to access the next nearest saleyard would have a detrimental impact on the South West cattle industry.

However, there are several trends that are likely to reduce the need for a replacement facility in the future:

- **The beef cattle herd in the South West has been declining relatively steadily over nearly a decade.** In 2016 the herd numbered 314,029 head, down from 430,749 in 2008 – a decrease of 27%. Over the same period the herd in the rest of Western Australia decreased by less than 1% (and was in fact larger in many of the intervening years). If the decline in the size of the South west beef cattle herd continues it will reduce demand for a replacement saleyard. Meanwhile, the residential population of the South West has grown at a faster rate than the WA average between 2011 and 2016.
- **There is a general trend towards alternative selling methods over time.** Improvements in these methods may make them more attractive to smaller producers.

Having identified the need for a replacement facility, this does not necessarily imply that a new facility should be built. By focussing on need – that is, demand – this report explicitly only considers the *benefits* of a new facility. It says nothing of the *costs* (i.e. the capital and operating costs of a new facility or indeed the cost savings associated with higher throughput of the alternative saleyards). Ultimately, a decision on whether to build should be based on the economic viability of a replacement through detailed cost benefit analysis.

The optimal location of a replacement saleyard (Question 3)

Assuming a replacement saleyard is needed, the primary criteria for determining the best location for a replacement saleyard in the South West is the minimisation of transport distances for users. To answer this question we performed spatial analysis of the South West beef cattle herd.

Our analysis found that the Donnybrook-Balingup Statistical Area Level 2 (SA2)¹ (slightly south-east of Boyanup) was the optimal region from a *seller* transport distance perspective. A replacement saleyard in this area would actually slightly reduce average travel distances for primary producers, from 70 kilometres (currently) to 66 kilometres. From a *buyer* perspective, the optimal location would be further north than the Donnybrook-Balingup SA2.

From stakeholder consultations, the two key locations mentioned most often were the Kemerton Industrial Park and Gwindinup (a disused mineral sands quarry). Gwindinup is the site closest to

¹ SA2s are a spatial unit within the ABS Australian Statistical Geography Standard, intended to delimit a community that interacts together socially and economically. SA2 populations generally range from 3,000 to 25,000 persons.

the Donnybrook-Balingup SA2. There are, however, many potentially suitable sites in the South West. Any prospective sites would need to be subject to a detailed site assessment.

Key features of a replacement facility (Question 2)

Health and safety regulations, community expectations and technology have all changed significantly since Boyanup Saleyards was built, and they will continue to change. A replacement facility needs to be fit for purpose now, but also for two to three decades.

Design that takes appropriate consideration of animal welfare, especially in relation to roofing and flooring, is important to stakeholders. Design of receival, holding and exit facilities needs to take into account both animal welfare and operational health and safety needs of handlers (for example, through the use of gates with positive locks and safety chains).

Any new facility should also have automated tracking and tagging technology. These are now an important part of livestock marketing and Australia's biosecurity system, and can improve saleyard efficiency. Ideally, the ability to livestream auctions would be available, broadening the market and improving market transparency, but there can be cost and infrastructure constraints to this feature.

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1 Introduction

The Boyanup Saleyards have been in operation since 1961 on Crown land that has been vested with the Shire of Capel, and now has throughput of around 60,000 cattle annually. It is one of the three major cattle saleyards in Western Australia, along with Muchea and Mount Barker. There is also a further sheep saleyard at Katanning.

The Saleyards are close to the centre of Boyanup, backing onto the rear of buildings along the main street, and the 2006 *State Saleyard Strategy* found that Boyanup Saleyards' age, design and location prohibit any long term development of [the site]². The Shire of Capel intends not to renew the lease of the site to the Saleyard's operator, and instead develop the site for housing and/or other urban uses.²

The Western Australian Meat Industry Authority (WAMIA), which has responsibility to advise the Minister for Agriculture and Food in relation to the future requirements for saleyards, commissioned Deloitte Access Economics to assess the need for a livestock facility to replace Boyanup Saleyards and, if there is a need, what is required and where it should be located.

The Terms of Reference for this engagement poses the following questions:

- In 2022 when the lease on the existing Boyanup saleyards expires, is there likely to be a need for a replacement saleyards/livestock handling facility in the South West given current industry trends (for example direct sale) and technologically disruptive changes (for example online auction sales)?
- If there is a need for a facility, what features and/or requirements does the facility need?
- If there is a need for a facility, what locations are considered to be most suitable against the features and/or requirements identified above and why?
- If there is not predicted to be a need for a new facility, what happens to the livestock originating in the South West?
- What role can the Muchea Livestock Centre play, if any, in mitigating the need for a replacement facility?

These questions have been answered through consultation with local stakeholders as well as desktop research and spatial and economic analysis. This has included analysis of the South West's beef cattle supply chain from producers through to processors, the location of buyers and sellers utilising Boyanup Saleyards, travel costs, the future of the region's beef cattle industry, evolving methods of sale in the sector, and information on the needs of modern saleyards.

The rest of this report is structured as follows:

- **Chapter 2** provides contextual information on the West Australian, and the South West beef cattle industry.
- **Chapter 3** addresses the question of whether there is a need to replace Boyanup Saleyards when it closes in 2022.
- **Chapter 4** addresses the question of where, if a replacement facility is needed, it should be located.
- **Chapter 5** assesses what the impact would be of not replacing the Boyanup Saleyards, including what role the Muchea Livestock Centre could play.
- **Chapter 6** summarises the requirements of modern saleyard facilities to ensure they are compliant, efficient, meet community expectations and are future-proof.
- **Appendix A** details the stakeholder consultation that has been conducted as part of this engagement.

² The operator of the Boyanup Saleyards is the Western Australian Livestock Salesman's Association (WALSA), which is a joint venture between Elders and Landmark (two of the major livestock agents operating in the region (and Australia-wide)).

2 The South West cattle industry

This chapter provides a high level overview of the West Australian and South West beef cattle industry. The purpose of this is to provide contextual information of relevance to the analysis and information presented throughout the rest of the report. Information is provided on the following aspects of the South West (and in parts Western Australian) beef cattle sector:

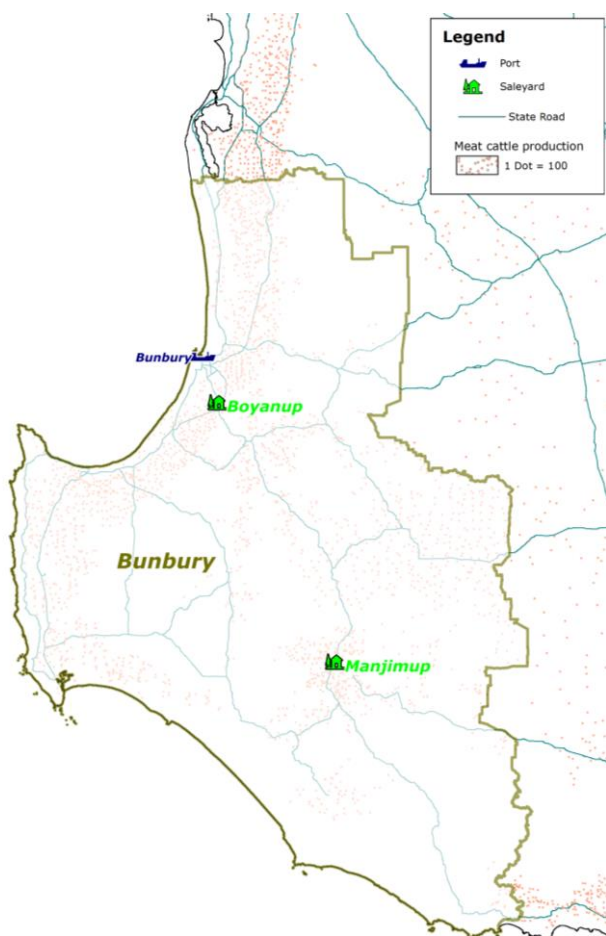
- the producer population and herd distribution (section 2.1);
- saleyards (section 2.2);
- processing facilities (section 2.3);
- feedlots (section 2.4); and
- live cattle exports (section 2.5).

2.1 Producers and herd distribution

The Western Australian beef cattle producers generated around \$857 million in slaughter sales in 2015-16. The state has a beef cattle herd of approximately 1.9 million head, distributed across approximately 2,600 properties (ABS, 2017a).

Despite representing only 12% of the state's cattle herd, South-West WA (shown in the map below as Bunbury SA4) represents approximately one-third of the state's cattle producing farms. This reflects the smaller size of farms in the region – both in terms of their size and the value of output.

Figure 2.1 South West WA (Bunbury SA4)



Source: ABS (2012)

Beef cattle represents a larger share of agricultural output in the higher-rainfall South West region than it does in the state overall, particularly in major grain producing areas. As the largest grain-producing state, cattle (and other livestock industries) represent a smaller share of agricultural output.

Table 2.1 Overview of the South West and Western Australian beef cattle industry, 2016

	South West WA ³	Western Australia
Number of producers	837	2,552
Total beef cattle herd	230,499	1,878,471
Average herd size	275	769
Value of cattle/calves sold for slaughter	\$123.7m	\$857m
Cattle/calves as a percentage of total value of agricultural production	14.8%	10.5%

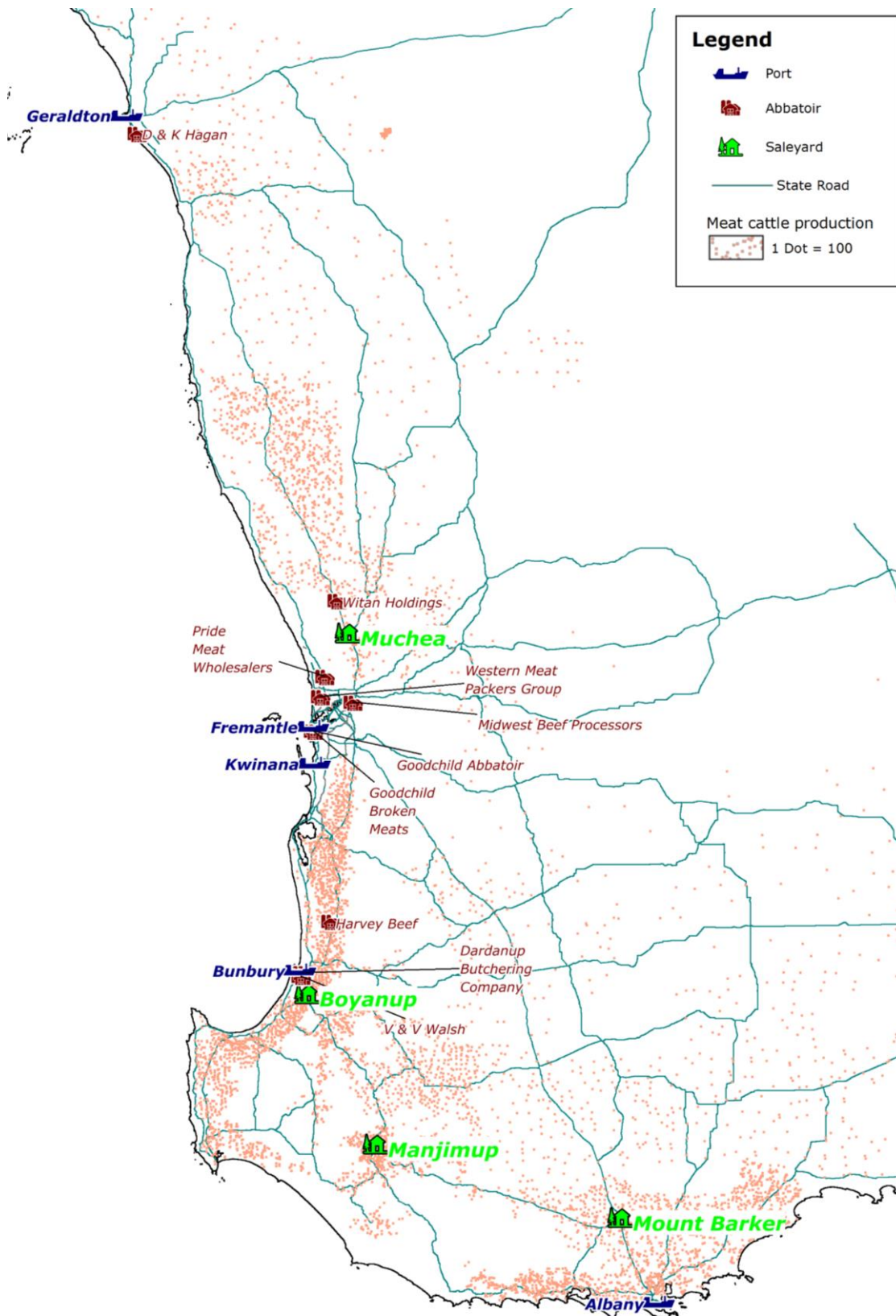
Source: ABS (2017a, 2017b).

Figure 2.2 below displays the distribution of Western Australia's beef cattle herd across the state, as well as some infrastructure along the beef value chain that supports the industry, notably the saleyards, abattoirs and ports.

Trends in the South West and WA industry over time are discussed in subsequent chapters.

³ 2016 figures only apply to producers with an estimated value of agricultural operations (EVAO) over \$40,000, so under-state the total South West beef cattle herd size and number of producers, but over-state the average herd size. Industry trends are discussed further in section 3.1.

Figure 2.2 The South West and surrounding regions cattle industry



Source: ABS (2012), 121.0, AUS-MEAT (2017).

Note: Beef cattle have been distributed evenly around the agricultural land of each SA2. The map does not reflect the property level distribution of cattle. Each dot represents 100 head of cattle within each SA2.

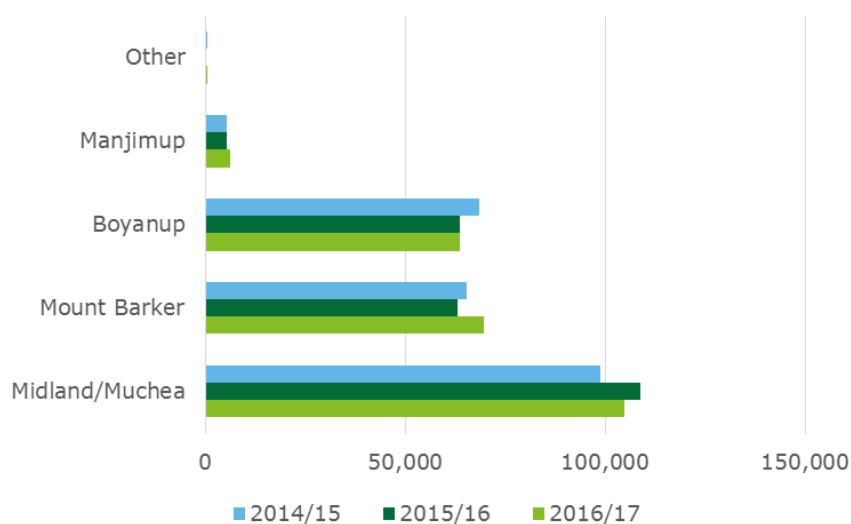
2.2 Saleyards

There are three major cattle saleyards operating in Western Australia:

- **Muchea** – The Muchea Livestock Centre is owned and operated by Western Australian Meat Industry Authority (WAMIA). It has an annual throughput of around 100,000 cattle and 600,000 sheep⁴. It is a newer facility, having replaced the Midlands saleyard in 2010. Since its relocation from Midland there has been some decline in cattle numbers handled by WAMIA at Muchea, which coincides with an increase in cattle throughput at Boyanup. Muchea usually holds trade auctions twice per week – one day each for sheep and cattle.
- **Mount Barker** – The Mount Barker Regional Saleyards are owned and operated by the Shire of Plantagenet. The facility has a throughput of around 65,000 head annually⁵, which is approximately the same throughput as Boyanup. It is an MSA-accredited facility and complies with all Worksafe and Animal Welfare regulations. Trade auctions are held once a week for most of the year, and 2 days per week between December and February.
- **Boyanup** – Located near Bunbury, this saleyard is currently Crown land vested in the Shire of Capel. The Shire leases the land to the WALSA, who own the infrastructure on the land and operate the saleyard. This is a different arrangement to other saleyards, which are typically owned and operated by local or State Government entities. Boyanup has had a relatively steady throughput of around 65,000 head annually. Boyanup typically holds trade auctions once per week, although sometimes auctions are held more frequently.

There are also other small Shire-owned saleyards that are used occasionally, however these smaller and older facilities generally do not meet all OH&S and animal welfare standards. Manjimup is the most notable of these. The saleyard has a very low throughput of cattle (less than 10,000 head annually) relative to the state's three major saleyards.

Chart 2.1 Cattle throughput by West Australian saleyard, 2015-16



Source: WAMIA (2017).

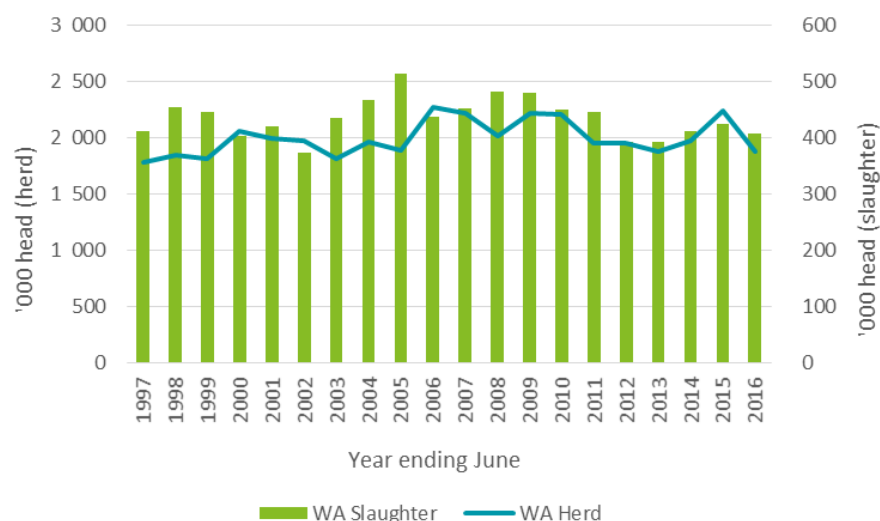
⁴ WAMIA (2017).

⁵ WAMIA (2017).

2.3 Processing

Each year, around 400,000 to 500,000 head of cattle are slaughtered in WA processing facilities (see chart below). Slaughter numbers vary from one year to the next, depending on a number of factors including seasonal conditions, availability of cattle and beef prices. Reflecting this, the herd size also varies year on year, but since 1997 has ranged between 1.8 million and 2.3 million head.

Chart 2.2 WA slaughter numbers and herd size, 1997 to 2016



Source: ABS (2017c), ABARES (2016).

WA has 12 privately owned beef processing plants (including abattoirs and boning rooms), with five facilities with accreditation for international export. The largest of these are located in the South-West region.⁶

Table 2.2 Accredited beef abattoirs and boning rooms, WA

Name	Location
D & K Hagan	Greenough
Dardanup Butchering Company	Picton
Goodchild broken meats	Hamilton Hill
Goodchild Abattoir	Australind
Harvey Beef	Harvey
Midwest Beef Processors	Hazelmere
Pride Meat Wholesalers	Wangara
Western Meat Packers Group	Osborne Park
Western Meat Packers Group	Cowaramup
V & V Walsh	Bunbury
Witan Holdings	Gingin
Woolworths Bunbury Meat Centre	Bunbury

Source: AUS-MEAT (2017).

⁶ Department of Primary Industries and Regional Development (2017).

Of these, the largest participants operating in the South West beef industry are:

- **Harvey Beef** – is a major processor/exporter in Harvey. Harvey Beef processes cattle for Coles, as well as pursuing export markets in China. As at 2014, it was the only South West WA processor with accreditation for China.
- **Western Meat Packers Group** – Western Meat Packers is a major beef cattle processor, engaged in exports, and is accredited to export to North America, Japan, Korea, South East Asia and the Middle East (amongst other regions). WMP is located in Osborne Park in Perth.
- **V&V Walsh** – located in Bunbury, V&V Walsh processes up to 400 head of cattle per day, with the ability to bone and process 300 beef carcasses per day. V&V Walsh is a major cattle processor that provides kill services for Woolworths and Australian Organic (mainly sheep but also cattle). In 2012, Woolworths opened the Bunbury Meat Centre, which is attached to the V&V Walsh abattoir (Cattle, 2012).
- **Goodchild** – has a processing capacity of 150 cattle per day and 1,000 lambs/ sheep per day. Goodchild supplies Coles and has a service kill facility, with a focus on the domestic market. Goodchild has an abattoir in Australind, and a boning room facility in Hamilton Hill.

2.4 Feedlots

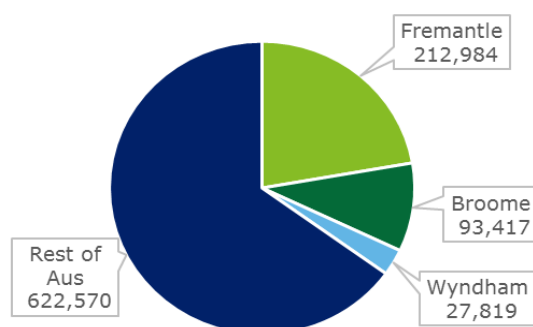
Western Australia's feedlot sector has the capacity to feed over 100,000 head of cattle at any given time, and potentially up to 400,000 cattle in a given year (Department of Primary Industries and Regional Development, 2017). WA produces more grain than any other state, giving WA feedlots the relative advantage over eastern states of having abundant sources of grain and fodder within a shorter distance (lowering transport costs).⁷

2.5 Live cattle exports

As well as processing cattle to produce beef and beef products, the West Australian cattle industry also export a significant number of cattle live for fattening and/or slaughter overseas each year.

The majority of live cattle are exported through Fremantle in the state's South-West. Cattle exported from Fremantle are largely destined for the Middle East and North Africa. Many cattle producers in Northern WA (Kimberley, Pilbara and Gascoyne–Murchison regions) send cattle south to areas with good feed to grow out for export through southern ports (Deards et al., 2014).

Chart 2.3 Live cattle exports, by Port, 2016



Source: ABS (2017d).

⁷ There is no comprehensive list of WA feedlots as this data is not publicly available.

3 Is there a need to replace Boyanup Saleyards

This chapter addresses the question of whether there is a need to replace Boyanup Saleyards. To answer this question, research has been undertaken into three distinct topics which all provide information on the demand for a saleyard facility in the South West:

- the South West Cattle industry and how it has changed over time (section 3.1);
- the use of Boyanup Saleyards over time (section 3.2); and
- South West beef cattle producers' reliance on saleyards (3.3).

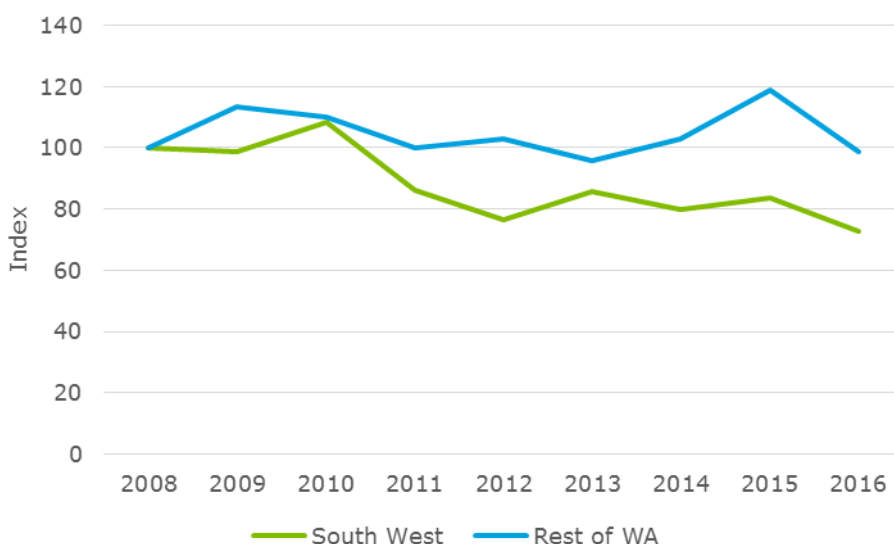
Consultation with local stakeholders has also addressed the question of whether there is a need to replace the Boyanup Saleyards. The findings of this consultation are included in Section 3.4.

Findings in relation to whether there is a need to replace Boyanup are in Section 3.5.

3.1 Trends in the South West beef cattle sector

The South West cattle herd has been declining relatively consistently since 2008 (the earliest year for which data are available) (see Chart 3.1). Within the South West Natural Resource Management Region (NRMR) the beef cattle herd decreased from 430,749 in 2008 to 314,029 in 2016 – a 27% decline. In the same period, the herd in the rest of Western Australia remained relatively stable (it was 1% lower in 2016 than 2008).⁸

Chart 3.1 South West NRMR cattle herd



Source: ABS (2017a, 2016, 2015, 2014, 2013, 2012, 2011, 2010, 2009).

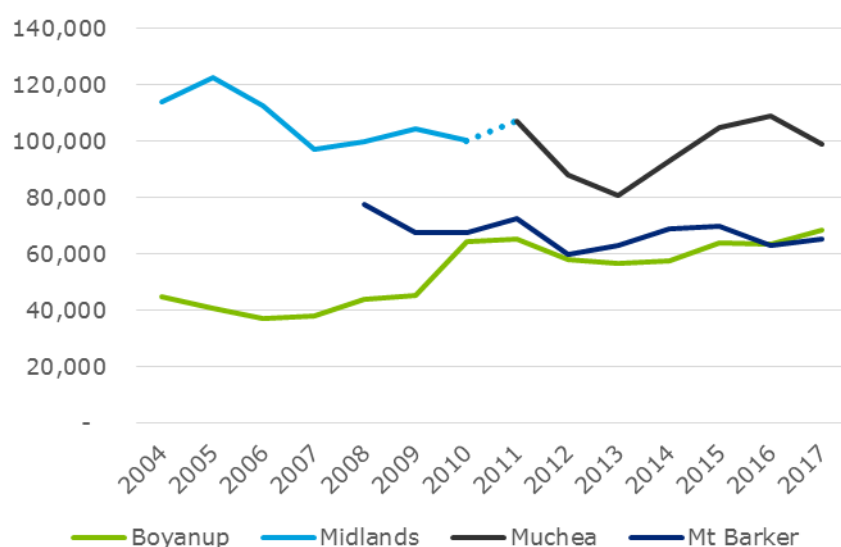
⁸ Note that the data referred to here, and displayed in Chart 3.1, relates to the South West NRMR, the spatial boundaries of which differ slightly from the South West SA4. NRMR data has been presented in this section because it provides the longest time series of data relating to cattle in the region surrounding Boyanup Saleyards. Later in the report, the Bunbury SA4 is used as the spatial unit to describe the South West because the SA4 represents the current statistical geography used by the ABS, and encompasses the spatial units used to conduct spatial optimisation modelling, SA2s.

The number of producers in the South West NRMR halved between 2008 and 2015, from 2,268 to 1,105.⁹ The rest of Western Australia also saw a reduction in the number of beef cattle producers, from 2,604 to 1,447 – a decline of 46%. This decline in cattle numbers (and producers) coincides with significant growth in the residential population of the South-West. Between 2011 and 2016, the population of the region grew by 10.2% to 180,142, growing faster than the rest of Western Australia (8.6%) (ABS, 2017e).

3.2 The use of Boyanup Saleyards over time

Despite the declining herd in the South West, the number of cattle sold through Boyanup has, for the most part, increased or remained stable over the last 13 years (see Chart 3.2). Throughput increased by around 50% from 2003-04 to 2016-17. During this time, Boyanup's catchment area expanded when the Midlands saleyard relocated north to Muchea in 2011. In the same period throughput has declined at Midlands/Muchea by around 20%, and throughput at Mount Barker has also shown a declining trend since 2007-08 (earliest available data).

Chart 3.2 Number of cattle sold through Boyanup and nearby saleyards



Source: WAMIA (2017).

3.3 South West beef cattle producers' reliance on saleyards

Data is not directly available on the percentage of cattle that South West producers sell through Boyanup or other saleyards. However, data on the size of South West beef cattle businesses (section 3.3.1), the use of saleyards by producers of different sizes (section 3.3.2), and the number of cattle sellers typically sell at Boyanup (section 3.3.3) have been compiled to provide evidence on South West beef cattle producers' reliance on Boyanup Saleyards.

3.3.1 The size of South West beef cattle enterprises

ABS data indicates that the average beef cattle herd in the South West in 2016 was 275 head (ABS, 2017a). This figure, however, is very likely an *over-estimate* of the average herd size of many Boyanup users because it only includes producers with an estimated value of agricultural operations (EVAO) over \$40,000. Data that breaks down the South West beef cattle producer population by EVAO suggests that many producers operate herds far smaller than 275.

The herd size for producers with EVAO \$5,000 to \$40,000 averaged only 57 from 2011 to 2015, whereas the average over the same period for producers with EVAO greater than \$40,000 was 281. These smaller producers made up 44% of the producer population, on average, from 2011, but

⁹ The change from 2008 to 2015 is quoted, rather than to 2016, because farms with EVAO less than \$40,000 are not included in the 2016 data published by the ABS, but are included in all previous years.

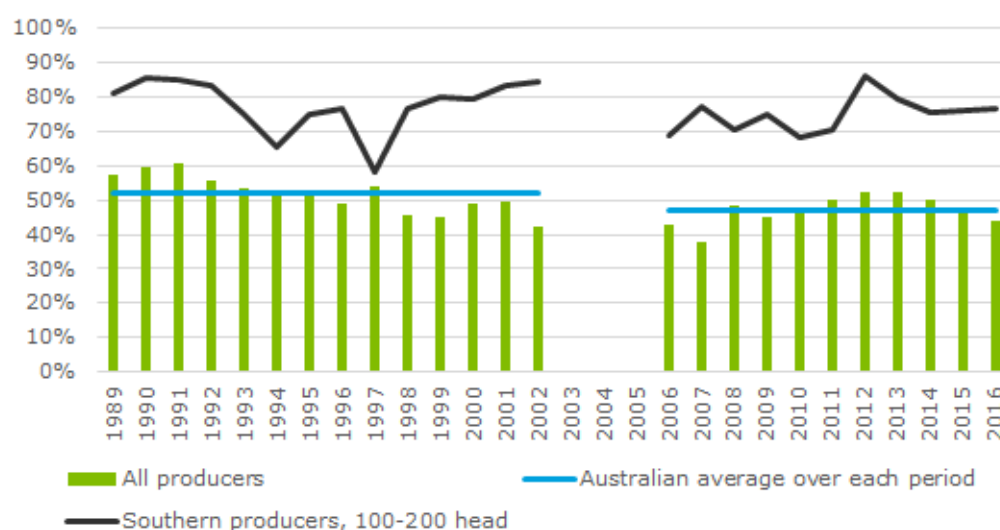
carried only 14% of the region’s beef cattle herd. Conversely, producers with EVAO greater than \$40,000 made up 56% of the producer population but carried 86% of the total herd.¹⁰

3.3.2 Use of saleyards by producers of different size

While there has been a trend away from the use of saleyards across the cattle industry in recent decades, smaller producers continue to rely on them (see Chart 3.3). From 1989 to 2002, 52% of all cattle sold in Australia were sold through saleyards. Between 2006 and 2016, this declined to 47% of all sales (Data is not available for 2003-2005).

Smaller, southern producers (which includes many of the producers in the South West)¹¹ continue to sell most of their cattle through saleyards. In 2016 southern producers carrying 100-200 head used saleyards for 77% of their sales – the same percentage sold through saleyards on average over the whole period 1989 to 2016. Note that this data does not capture producers with *less than* 100 head – if it did, the percentage of cattle sold at auction would very likely be higher for these producers.

Chart 3.3 Cattle sold by auction



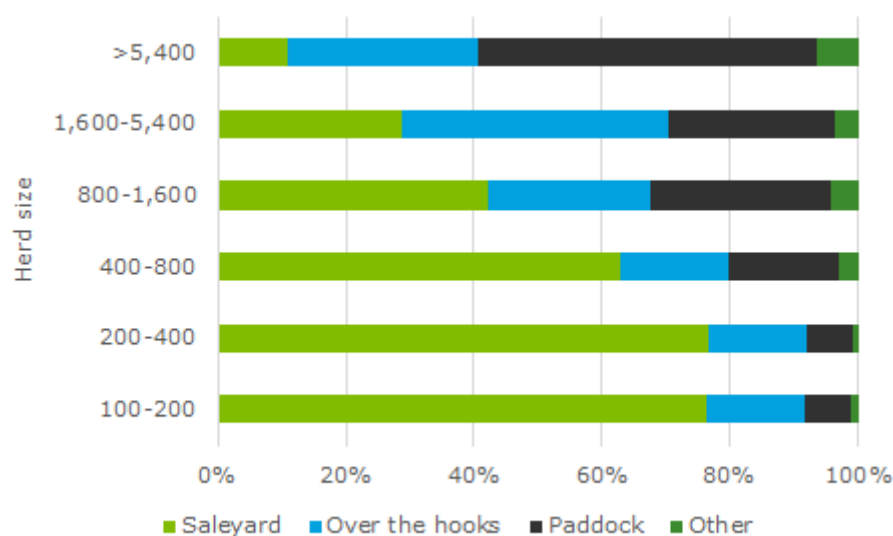
Source: Department of Agriculture and Water Resources (2017).

Larger producers now sell most of their cattle either over the hooks, or through paddock sales (see Chart 3.4). In Chart 3.4 ‘other’ sales include online auctions – cattle bought and sold this way still represent a small share of total sales. Producers with herds between 100 and 400 head only sold, on average, 1% of their cattle using ‘other’ methods of sale.

¹⁰ After 2015 the ABS does not report on producers with EVAO less than \$40,000, making these comparisons impossible.

¹¹ The southern beef production zone includes New South Wales and the Australian Capital Territory, Victoria, Tasmania, South Australia and southern Western Australia.

Chart 3.4 Method of sale by herd size, 2016



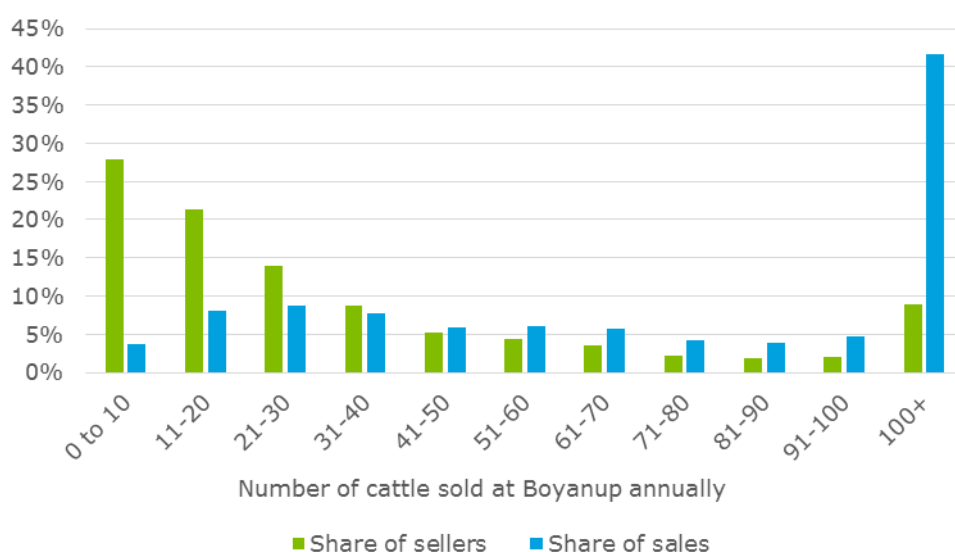
Source: Department of Agriculture and Water Resources (2017).

3.3.3 The profile of Boyanup users

Most primary producers using Boyanup Saleyards have relatively small beef cattle enterprises. This is clear from data on the number of cattle they sell at Boyanup Saleyards, and data on producers in the South West, which indicates that there is a relatively large and growing number of 'lifestyle' farms in the region.

Three quarters of all sellers at Boyanup Saleyards sold no more than 46 cattle annually from 2015 to 2017, and 49% of sellers sold 20 or fewer cattle there annually (see Chart 3.5). At the same time, these sellers only accounted for only 12% of total throughput. The 9% of sellers who sold over 100 cattle annually from 2015 to 2017 provided 42% of the throughput of Boyanup Saleyards.

Chart 3.5 Distribution of Boyanup Saleyards sellers, 2015 to 2017



Source: WAMIA (2017).

A lifestyle farm is a typically smaller rural property which does not represent the primary source of income for its owners, and farmers in the South West region draw a larger percentage of their total income from off-farm employment or business activities than any other region in the state – 13% in 2016 (ABS, 2017a). This figure excludes farming operations with EVAO less than \$40,000, so would almost certainly be higher if the entire population of South West beef cattle producers were included.

The proportion of producers in the South West NRMR with EVAO of over \$40,000 declined from 64% to 52% between 2011 and 2015 (the only years for which this data is available). In the rest of Western Australia, the percentage of producers with EVAO over \$40,000 was 74% in 2011, and 74% in 2015 (though it did vary over the period) (ABS, 2017a, 2012).

This means that around half of the beef cattle producers in the South West generate less income from their farming operations than the cut-off used to define a farm business by the ABS and the Australian Bureau of Agricultural and Resource Economics and Sciences.

3.4 Stakeholder views

Among stakeholders that were consulted through individual interviews and the Boyanup public workshops, there was widespread support for a cattle saleyard in the South West. A summary of the key 'general' reasons provided for this were that:

- **The demand for saleyards in the region is strong and growing.** Some stakeholders commented at the public workshops that the throughput of Boyanup saleyards was strong and growing. They also mentioned that over the last 10-15 years, many smaller saleyards have closed which has meant a stronger reliance on Boyanup.
- **Without a saleyard in the South West, the distance to the nearest saleyard (either Muchea or Mt Barker) is cost prohibitive for producers as transport distances increase dramatically** – This was a point reiterated by the range of stakeholder groups consulted with. A specific point mentioned by smaller producers in the public workshops was that many producers self-transport their cattle using small trucks and trailers. This is only feasible to do over short distances from both a cost and animal welfare perspective. It was also mentioned that larger trucks would be necessary to transport longer distances, and that these larger trucks could not access many farms in the region.
- **Alternative selling methods** (such as paddock sales, online auctions and over the hooks sales) are suited to larger producers and have some other drawbacks, such as that they lack market price transparency.
- **Saleyards are important for selling store cattle and weaners.** Stakeholders considered that there is very little direct selling of store cattle and weaners from farms meaning saleyards have an important role to play.
- **Saleyards are important for the efficient aggregation and transition of cattle within the region.** Several stakeholders noted the trend towards smaller farm sizes and hence herd sizes leading to smaller deliveries to saleyards. It was therefore seen that saleyards provide an important point for aggregation of cattle for sale. Furthermore, in the event of no replacement saleyard, cattle would have to travel a long distance to be sold only to travel a long distance back to the buyer location – which is typically another producer in the South West region or a processor in the South West region (as many key processors are located in the South West in locations such as Bunbury and Harvey). This level of movement for cattle was not seen as cost effective for buyers and sellers alike and not optimal from an animal welfare perspective.
- **Saleyards are an important for social connection point for producers.** Many stakeholders commented that saleyards are an important focal point for the community and a key aspect in contributing to the mental health of producers.
- **The alternative saleyard of Muchea cannot handle the current load of throughput.** A common view of stakeholders was that Muchea cannot handle the current load of cattle

and would not be able to handle the increased load that would come from the South West. It was mentioned that there are regular rejections of cattle at Muchea due to capacity constraints on sale days.

3.5 Summary of findings

The question of whether there is a need to replace Boyanup Saleyards when it closes has been assessed using multiple streams of research, including analysis of trends in the South West Cattle industry and producer characteristics, the profile of Boyanup users, data on South West producers and their use of saleyards (Section 3.2) and consultation with local stakeholders (section 3.3).

Beef cattle producers in the South West are highly reliant on the Boyanup Saleyards for their cattle marketing. They are, mostly, small producers, who typically use saleyards to sell most of their cattle. Demand for Boyanup is strong and potentially even growing from an analysis of throughput.

This finding does not, in itself, necessarily imply that a replacement saleyard should be built. For one thing, it appears that the region's beef cattle industry is declining over time, which would tend to reduce total demand at a replacement saleyard, which would need to operate for many years beyond 2022 when Boyanup Saleyards closes.

Furthermore, answering the question of whether or not a replacement saleyard should be built depends on who would be funding its construction, and would need to take into account the benefits and costs of the project that they deem relevant. These would, in turn, depend (at a minimum) on where the facility would be located and what features it would have. These topics are discussed in the following chapters.

4 Where should a replacement saleyard be located

If Boyanup is to be replaced in South West WA, the location of the site will be an important consideration, with implication for both buyers and sellers. Spatial optimisation modelling has been undertaken to find where a Boyanup Saleyard replacement should be located. This chapter includes the following information;

- description of the spatial modelling methodology used to determine the optimal location of a replacement saleyard (section 4.1);
- description of the how the Boyanup Saleyards catchment area has been defined for the purposes of the analysis (section 4.2);
- the results of the spatial optimisation modelling (section 4.3); and
- the views of local stakeholders in relation to replacement locations (section 4.4).

Section 4.3 summarises the findings in relation to where a replacement saleyard should be located, taking into consideration the spatial optimisation modelling and stakeholder views.

4.1 Methodology

Like a lot of physical infrastructure, business (cattle buyers and sellers) that are located closer to the infrastructure will benefit more than those that are located further away. Being located in a central area for both buyers and sellers will ultimately create the greatest benefit for the region overall, and generate a more sustainable level of throughput.

The spatial optimisation performed to answer the question of where a replacement saleyard should be located has been calculated by finding a location that would minimise the distances travelled by sellers. Seller locations are proxied by the SA2-level distribution of the South West cattle herd, with travel distances between these SA2s and saleyards calculated 'as the crow flies'.

However, proximity to buyers and sellers is not the sole consideration in choosing where to locate a replacement saleyard. Any site chosen for a replacement saleyard will need to be sufficiently large, have adequate transport access, meet buffer distance requirements for neighbouring properties, and have access to supporting infrastructure (e.g. utilities, water, and telecommunications). These considerations were reflected by consulted stakeholders, discussed in section 4.5.

4.2 Defining the catchment area

The two maps on the following pages show the location of buyers and sellers that used Boyanup Saleyards in 2016-17. They demonstrate that Boyanup has a relatively large catchment spanning across South-West WA.

Figure 4.1 displays the location of sellers. The red dots correspond to localities (towns, regional centres) where sellers are located, while the size of the dot represents the number of cattle sold through Boyanup.

Unsurprisingly, the largest selling localities are concentrated around Boyanup. Moving further from Boyanup, the number of cattle sold becomes gradually smaller.

Figure 4.1 Seller locations – Boyanup Saleyards, 2016-17

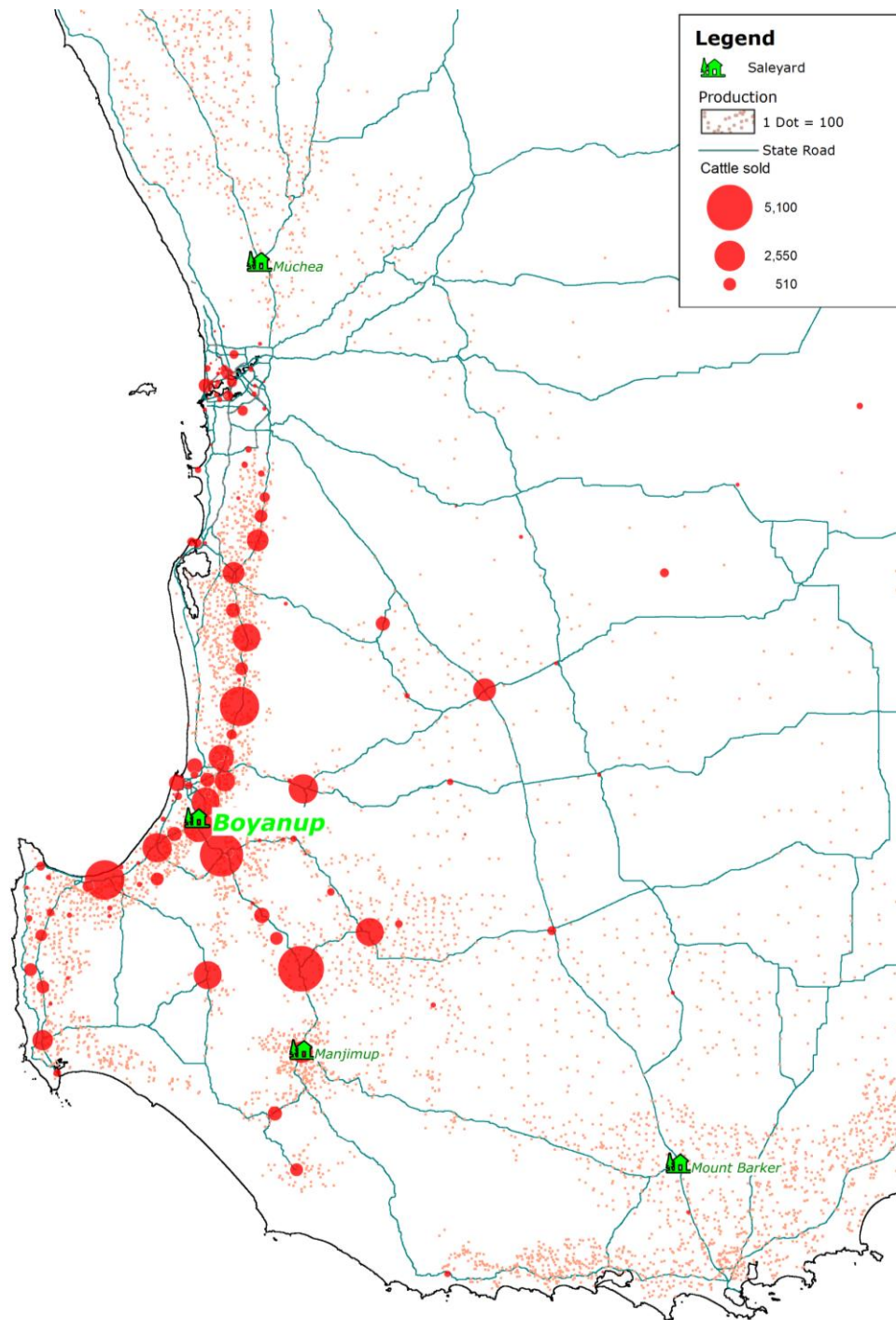
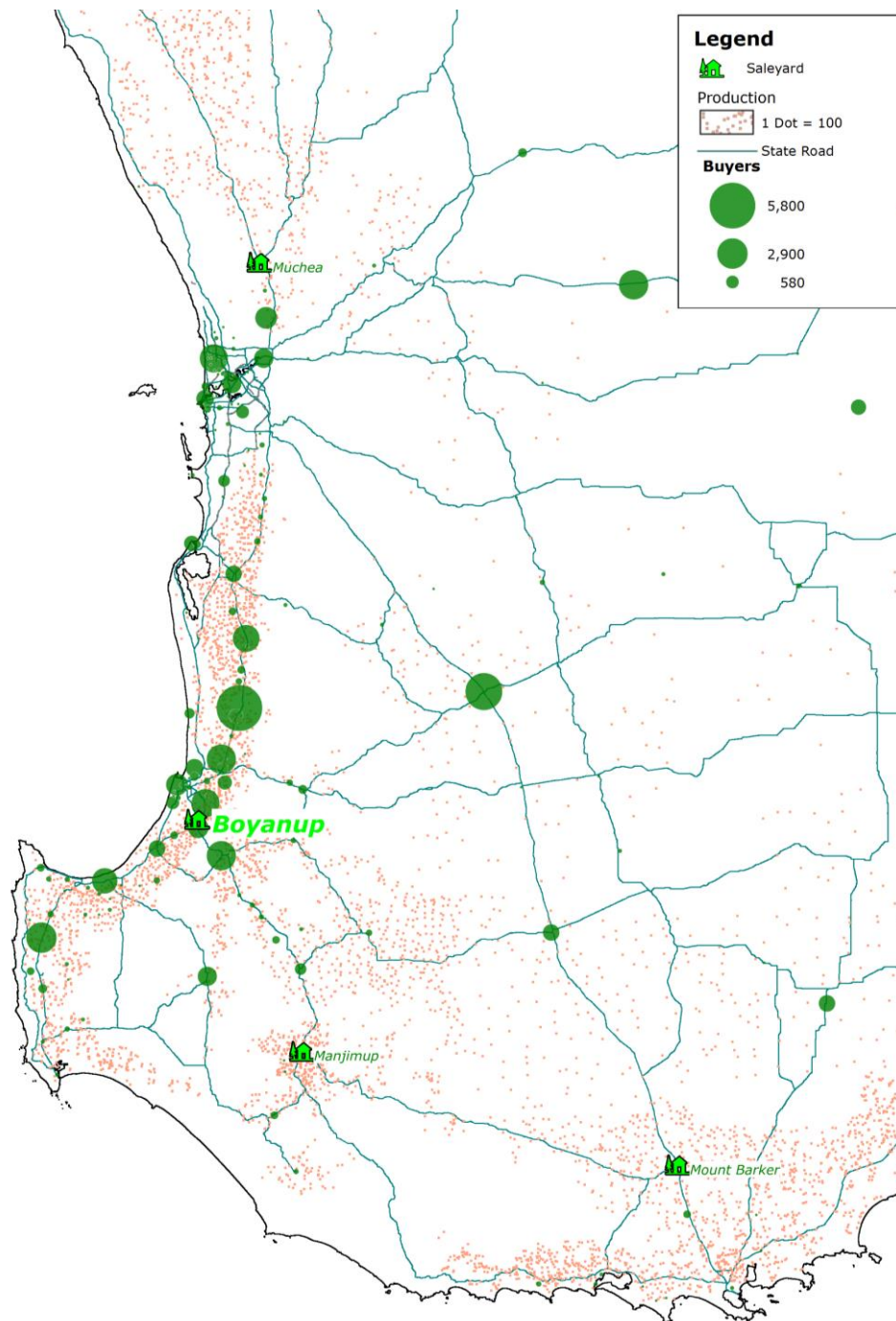


Figure 4.2 displays the location of buyers. The green dots correspond to localities (towns, regional centres) where cattle buyers are located – while the size of the dot represents the number of cattle bought at Boyanup.

In contrast to seller regions, which are distributed around Boyanup, the majority of cattle (approximately two-thirds) are being purchased by businesses located north of Boyanup. This largely reflects the distribution of the region’s major abattoirs and saleyards, which are located north of Boyanup around the Bunbury, Harvey and Greater Perth areas.

Figure 4.2 Buyer locations – Boyanup Saleyards, 2016-17

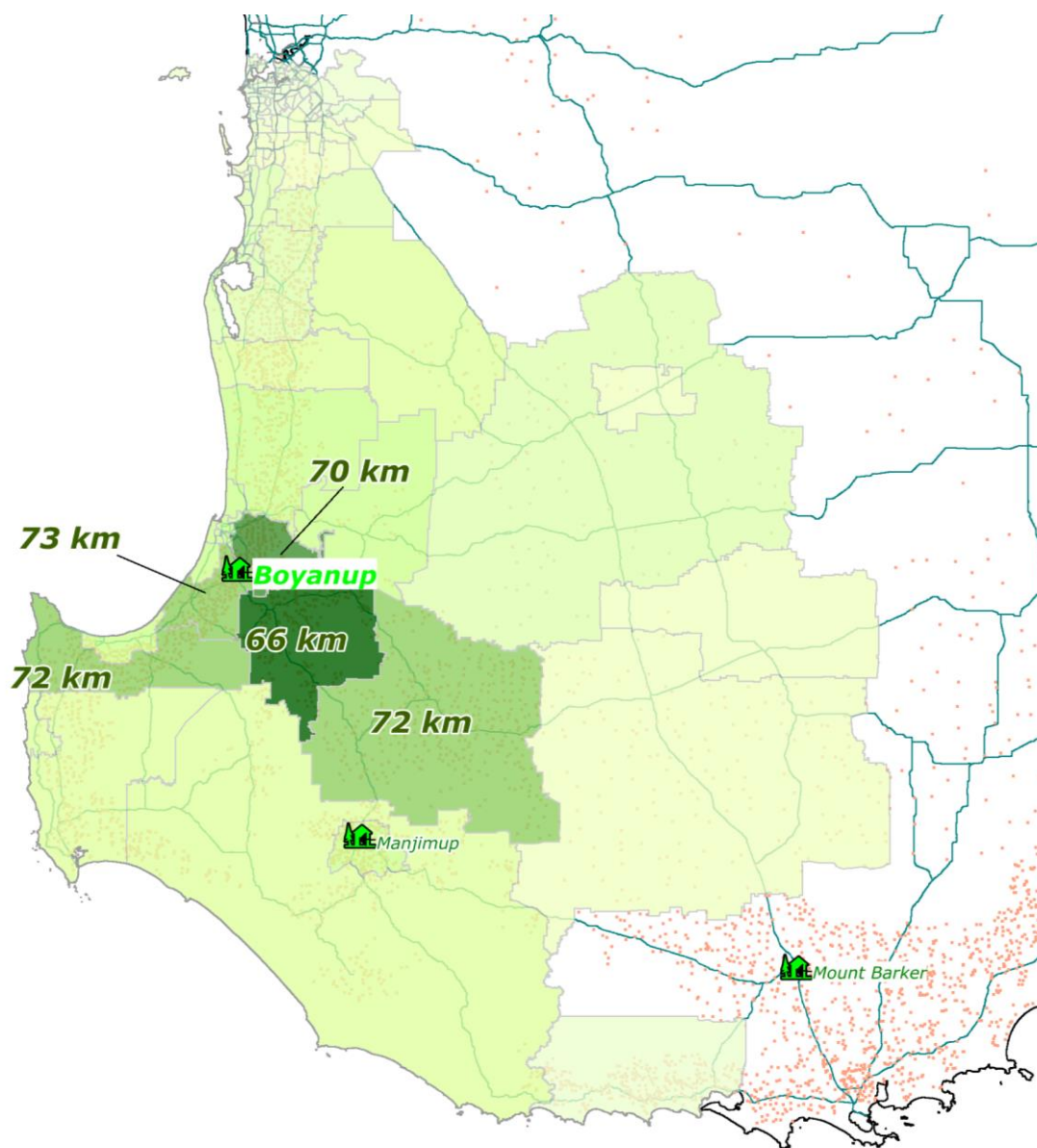


4.3 Results

Based on the distribution of buyers and sellers (Figures 4.1 and 4.2), the broad catchment area of the Boyanup saleyard is shown in Figure 4.3 (the green shaded area). This area is relatively large – spanning from Perth in the north, to near Albany in the south and to Katanning to east. This represents the SA2 regions.

Our analysis shows that, if Boyanup were to close, and a replacement saleyard was opened up in **Donnybrook-Balingup SA2**, this average distance (to nearest saleyard) would fall from 70 kilometres to approximately 66 kilometres. This indicates that if, from the perspective of producers, the saleyard were to ‘move’ slightly south and inland from Boyanup, the average distance between cattle and their nearest saleyard would decrease.

Figure 4.3 Average producer travel distances associated with alternative saleyard locations, South West WA



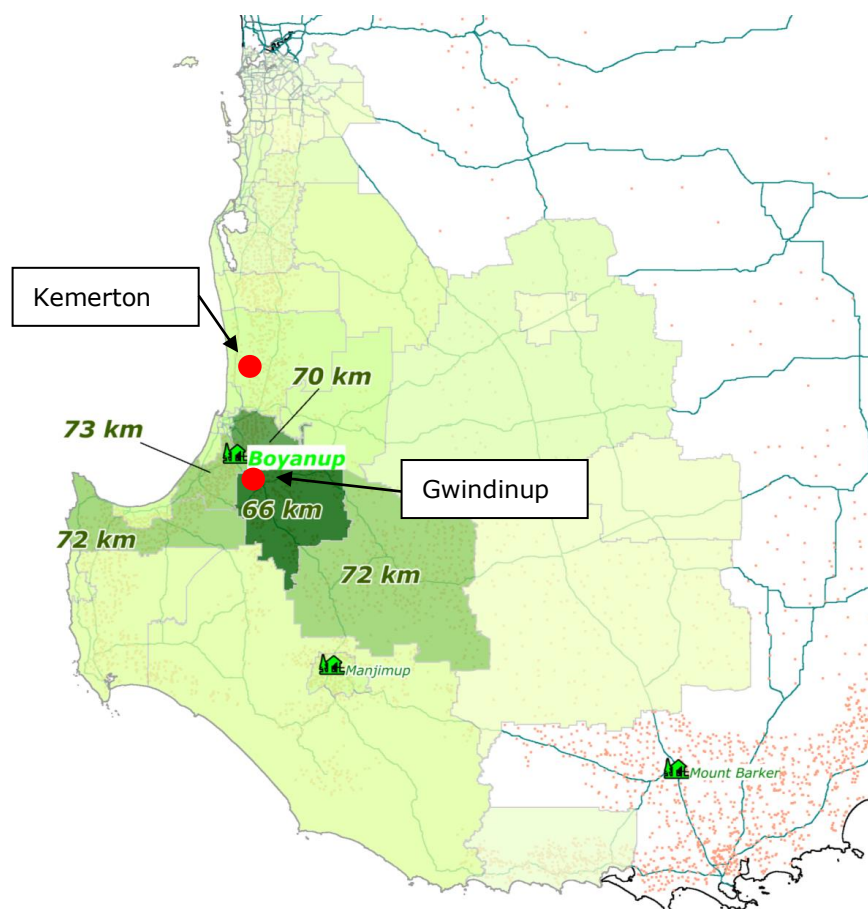
4.4 Stakeholder views

Among stakeholders, there were a variety of views on a suitable replacement location. Some stakeholders had strong views of a particular site or sub-region, while others were simply of the view that it needs to be somewhere in the South West.

At the public workshops, the view was supported that the replacement facility should be in a central location to cattle buyers and sellers and that this should be informed by the data. Most believed that the current Boyanup site was very central. The view was expressed that moving the saleyards further north would disadvantage producers south and west of Boyanup.

Through the one-one-one consultations, two particular sites were raised the most frequently. These sites were Kemerton Industrial Park and Gwindinup (a disused mineral sands quarry within the Shire of Capel). While the public workshops acknowledged these two sites as possibilities they were not discussed in great detail.

Figure 4.4 Location of proposed sites identified through consultation



There was a view expressed at one of the public workshops (which was mostly supported) that there were many other possible locations within the South West even if these had not yet been specifically identified. With respect to the two most mentioned potential sites, a summary of the pros and cons for these (as raised in consultations) are provided in the tables below.

Table 4.1 Kemerton Industrial Park – Feedback from consultations

Pros	Cons
<ul style="list-style-type: none"> Location in the buffer zone – but cannot compromise industries in the core of the industrial area Better proximity to abattoirs and feedlots since most of them are north of Boyanup Good road access for restricted access vehicles (RAV) from all areas Able to establish the required 1 to 2 kilometres buffer zone More accessible for cattle movements from northern and eastern areas of the South West Close proximity to water, power and gas supplies 	<ul style="list-style-type: none"> Subject to Harvey Shire planning schemes. A structure plan and scheme amendments were completed last year May need a clearing permit as there is a mix of cleared and uncleared land in the buffer Some concerns around proximity with heavy industry with respect to animal welfare and OH&S issues Less accessible for the smaller South West farmers south of Boyanup, in particular who use smaller trucks to transport cattle.

Table 4.2 Gwindinup – Feedback from consultations

Pros	Cons
<ul style="list-style-type: none"> • Central to the South West cattle industry • More accessible to small producers transporting up to 20 cattle at a time • Buffer zone distance of 1 kilometres from nearby residences meets EPA standard • Extensive cleared land area with room for holding yards etc. • Suitable re-purpose of site from disused mine site 	<ul style="list-style-type: none"> • Road access limited – for example large RAV trucks prohibited under current arrangements • Problem of additional truck movements through Boyanup • Some potential for contamination – would require a site assessment

4.5 Summary of findings

The broad catchment of Boyanup Saleyards currently spans a large area – extending from Perth in north to near Albany in the south and Katanning to the east.

Currently, with Boyanup still in operation, the average distance from primary cattle producers in the catchment area to their nearest cattle saleyard (weighted by number of cattle) is 70 kilometres, as the crow flies.

Our analysis indicates that ‘relocating’ Boyanup saleyards to a slightly more south and inland location would reduce the average distance between primary cattle producers (cattle sellers) and their nearest saleyard.

However, the same is not true for cattle-purchasing businesses – including abattoirs and feedlots as well as farms. Our analysis spatial analysis indicates that, of the 64,000 cattle purchased in 2016-17, around two-thirds of them moved to a location north of Boyanup, mostly remaining in relatively coastal areas rather than moving inland. Therefore, from the perspective of buyers, average travel distances would be shortened by re-locating to a more northern location.

Feedback received from consultations reflects this. While views differed over which site would be most ideal for its replacement, most workshop participants and others that were consulted were of the view that Boyanup was a relatively central location, and while a move north may benefit buyers, sellers would, on the whole, benefit more from keeping the saleyard in its current position or relocating it slightly south.

5 The impact of not replacing Boyanup

This chapter examines what the likely impact would be if no replacement saleyard was opened in South West WA. This has required articulating possible scenarios for what would occur if Boyanup Saleyards are not replaced. Three possibilities have been analysed:

- buying or selling cattle at a different saleyard (section 5.1);
- using alternative methods of sale/purchase (section 5.2); and
- structural adjustment (section 5.3).

A series of research questions have been addressed under each of these options, including how likely they are to occur. Potential impacts on travel costs are explicitly addressed in section 5.2.

Section 5.4 presents stakeholder views on what the impact of not replacing Boyanup would be.

Section 4.3 summarises the findings in relation to what the impact of not replacing would be, taking into consideration the spatial optimisation modelling and stakeholder views.

5.1 Buying or selling cattle at a different saleyard

The topics that have been addressed in relation to the option of buying and selling cattle at a different saleyard are:

- how likely this is to occur (section 5.1.1)
- how much of Boyanup Saleyards' current throughput would the remaining saleyards have to absorb (5.1.2);
- potential impacts on travel costs (section 5.1.3); and
- comparison of the distance travelled by Boyanup users now and if Boyanup Saleyards are not replaced to the distances travelled by users of other saleyards in the region (section 5.1.4).

5.1.1 How likely this is to occur?

While it is difficult to say definitively how likely producers and other businesses are to buy or sell cattle at a different saleyard, there are a certain factors which suggest that this is the most likely outcome for South West cattle producers:

1. Beef cattle farmers with smaller herds, which are typical of South West WA, have continued to be highly reliant on saleyards for selling cattle over the last 25 years (see Chart 3.3).
2. While transport costs would increase, carriers could establish services to minimise the impact on South West producers that wish to transport their stock to alternative saleyards. In other areas of Australia where saleyards have consolidated, stock 'consolidation hubs' (for transport) have been opened so that smaller lots of stock can be transport in an economical cost, reducing the per-head-per-kilometre transport costs (Australian Competition and Consumer Commission (ACCC), 2017).

5.1.2 Which other saleyards would absorb increased demand?

For most beef cattle producers in the South West catchment, the nearest saleyard is currently Boyanup, but for some, it is Muchea or Mount Barker.

If Boyanup was to close, the nearest saleyard (excluding Manjimup) for the majority of beef cattle farmers in the catchment would be Muchea. This reflects the following:

1. An estimated 76% of the beef herd (within Boyanup's current catchment) is located closer to Muchea than Mount Barker.

2. If farms in the South West opt to sell cattle through Mount Barker, it would result in the cattle being further away from most of the cattle supply chain infrastructure (feedlots, abattoirs and major ports), as well as the largest domestic market (see Figure 5.1.) The direction of the supply chain therefore dictates that finished cattle would be more likely to be sold through Muchea than Mt Barker, even in some cases where Mount Barker was closer for producers.

It is therefore likely that the share of all cattle destined for Muchea will be at least as high, or higher, than the 76% than the proximity analysis suggests.

Our analysis indicates that, for those producers which decide to use an alternative saleyard, rather than an alternative sales method, the majority of cattle would be transported to Muchea. WAMIA has determined that Muchea saleyards would have the capacity to accommodate the current throughput of Boyanup, should no replacement saleyards be opened in the South West.

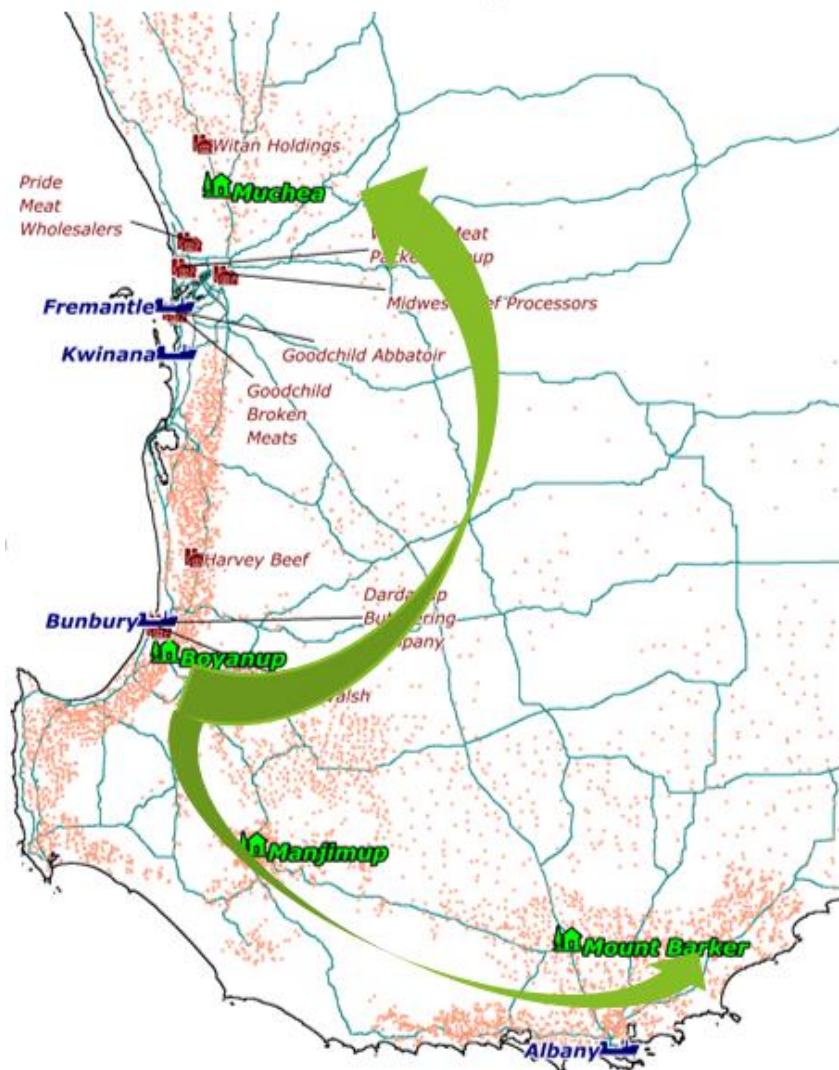
WAMIA conducts public trade cattle auctions once a week (on average) at Muchea. Public sheep auctions are also conducted once per week. On non-auction days (as well as auction days), WAMIA provides other services at the saleyard, including private weighing of cattle, pregnancy testing and cattle scanning.

Muchea has a daily auction capacity of approximately 3,000 cattle (although, there have been three occasions since July 2014 when sales have exceeded 3,000). On average, the number of trade cattle and calves sold at Muchea on any given auction day is around 2,000 (between July 2014 and June 2017), indicating that there is some latent capacity for greater cattle throughput with the existing number of scheduled sale days.

Given that auctions are only held twice per week at Muchea (one for cattle and one for sheep), and given that it has an existing annual throughput in excess of 100,000 cattle, which is considerably higher than that of Boyanup, Muchea would be able to fully absorb the additional 65,000 cattle sold through Boyanup each year if the number of cattle auctions increases.

While WAMIA, and existing auction data, suggests the required level of capacity exists, this is not the view shared by most stakeholders consulted with, including some that are regular users of Muchea. A summary of the feedback from consultations is that there are significant design and operating flaws at Muchea which limit the speed at which cattle can move through the saleyards.

Figure 5.1 Map of South West with major abattoir and feedlot locations



5.1.3 Potential impacts on transport costs

While Boyanup remains open, beef producers in the South-West catchment are located, on average, 70km from their nearest saleyard. Should Boyanup close, cattle producers in the South-West catchment would be 150km from their nearest remaining saleyard. For cattle farmers located south west of Bunbury, the nearest saleyard could be up to 300km away¹².

Consultation with a South West cattle transport company has provided information on the costs that producers face when transporting cattle. This information is presented in Table 5.1, and is based on the cost of transporting a 300kg store animal. For larger animals, the cost would be higher, and the inverse also holds true. The data is presented for 70km (the current average distance to nearest saleyard for South-West producers), 150km (the average distance for the same producers if Boyanup were to close), and 300km journeys (the upper-bound estimate of transport costs for South-West producers, if Boyanup were to close).

¹² The distances calculated throughout this chapter are measured 'as the crow flies', and should therefore be treated as a lower-bound

The results show that there are, clearly, advantages to selling cattle in larger lots, with the per head cost declining by 70% moving from a small truck to a 3 deck B/train (on average across the three distance categories).

Table 5.1 Cost of transporting cattle in the South West (\$/head)

	70km	150km	300km
14 on a small truck (bobtail)	\$22.50	\$40	\$75
35 on a truck and trailer	\$12	\$23	\$45
65 on a two deck semi-trailer	\$8	\$15	\$26
100 on a 3 deck B/train	\$7	\$13	\$20

Source: Personal communication with a South-West transport company.

Across the 2014-15, 2016-16 and 2016-17 financial years, the median number of cattle sold throughout the year by each producer who sold any cattle at the Boyanup saleyards was 21. If it is assumed that these cattle are transported on small trucks at a cost of \$22.50/head, this would amount to a total cost of \$472.50 annually.¹³

In terms of the additional travel costs that would be incurred by buyers and sellers if Boyanup is not replaced, we have estimated this using the following methodology and assumptions:

- The additional costs experienced by sellers are calculated assuming that producers, on average, have to transport cattle 150km rather than 70km, with the costs per head for each trip length drawn from the figures in Table 5.1. It is assumed that sellers selling 1-40 cattle annually use small trucks, sellers selling 41-80 cattle annually use truck and trailer combinations; sellers selling 81-100 cattle annually use two deck semi-trailers; and sellers selling 100 or more cattle annually use 3 deck B/trains. No inflation has been applied to the prices per head in Table 5.1 (even though these travel costs would be incurred at least five years into the future).
- The additional costs experienced by buyers are calculated assuming that producers, on average, have to travel an additional 69km, with the cost per head of this additional travel calculated based on the cost of transport per head of cattle per kilometre implied by the 70km and 150km cost per head for each class of vehicle provided in Table 5.1. The average additional distance travelled has been calculated based on the location of businesses buying cattle at Boyanup Saleyards from 2015 to 2017, as indicated by their property identification code (PIC).¹⁴ It is assumed that buyers use the same type of vehicles as sellers for the same total numbers of cattle bought (buyers buying over 100 cattle annually use 3 deck B/trains, etc.).
- To calculate the additional travel distance for buyers, it has been assumed that cattle are offered for sale based on producers in the South West offering their cattle for sale at the closest of either Muchea or Mount Barker. As noted above, 76% of the herd is located closer to Muchea. It has been assumed that buyers would purchase from their closest of the two remaining saleyards, but no more than 76% of purchases can occur there, so some are forced to use the saleyard that is not closest to them.

¹³ In reality, small producers often transport their own cattle, so do not pay these financial costs, and if 21 cattle are brought in multiple lots (including at least one less than 14), the per-head cost could be greater than \$22.50. The calculations here are intended to be broad in nature.

¹⁴ It is known that PICs do not necessarily indicate where cattle are transported to. Some PICs are associated with, for example, producers who also operate feedlots, which cattle would be transported to after purchase at Boyanup. This is a limitation of the data, but does not make the travel cost analysis without merit.

The figures in Table 5.2 present the results of this analysis. Annually, sellers and buyers could potentially face increased costs in the order of \$680,000 and \$544,000, respectively. The total additional travel costs incurred therefore would be around \$1.2 million.

Table 5.2 Annual additional travel costs without Boyanup saleyards

Sellers	\$681,796
Buyers	\$544,421
Total	\$1,226,217

Source: Consultation on travel costs, WAMIA (2017), DAE calculations.

These calculations are highly assumption driven, but they are based on: real data on travel costs per head for different distances in the South West; the distances between sellers and Boyanup, and distances between buyers and sellers and Muchea and Mount Barker; and the historical throughput of Boyanup.

In reality, there would likely be significant behavioural change if Boyanup were to close and not be replaced. As discussed further in sections 5.3.2 and 5.3.3, buyers and sellers could use alternative selling methods, and some producers may simply find it unviable to continue their beef cattle enterprise.

A potential change that would occur is for smaller producers to aggregate their lots for transport to Muchea or Mount Barker. This would likely be necessary because it is barely economic (if at all) to transport small lots of cattle 150km. Aggregation would likely need to occur at a centralised location, because many properties are unsuitable for large vehicles.

5.1.4 Comparison of producer distances from saleyards

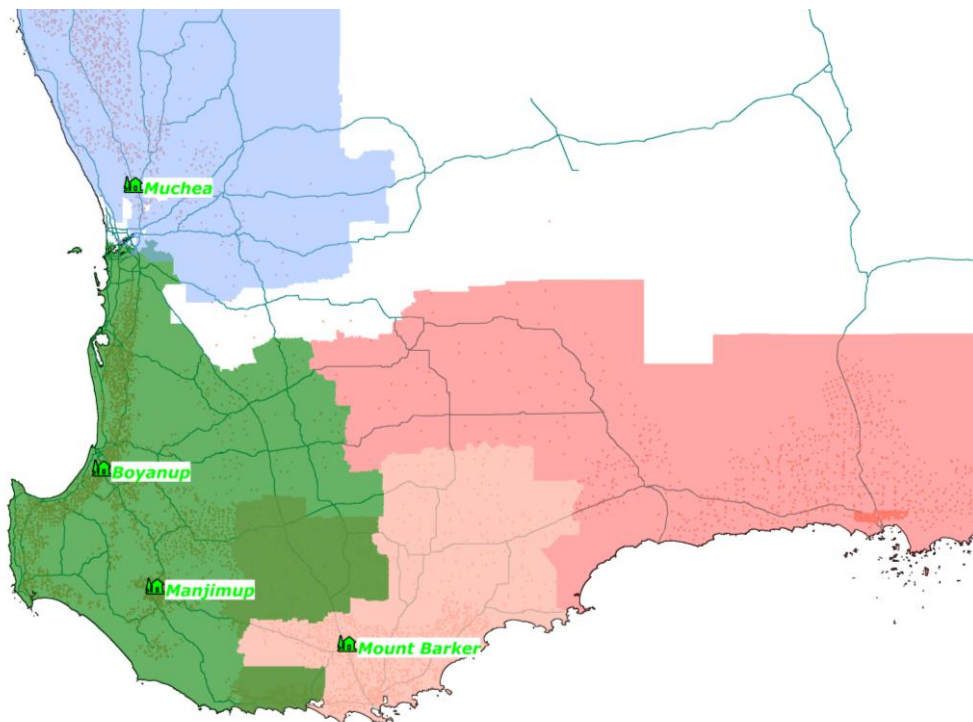
As was noted in Chapter 4, the average distance between producers in the Boyanup Saleyards catchment area and the facility is 70km. It is useful to examine how this compares to other producers in the state as a type of benchmark. Spatial analysis has been conducted to determine, for each of the other major saleyards in Western Australia (Muchea and Mount Barker), how close producers in their catchment area typically have to travel.

Figure 5.2 below shows the estimated catchment areas of Boyanup Saleyards, Muchea, and Mount Barker. The Boyanup Saleyards catchment was defined first, based on the location of sellers using the facility over the period 2015 to 2017. Then, the straight line distance between each SA2 and both Muchea and Mount Barker was calculated, and it was then assumed that cattle in each SA2 would be sold at the closest saleyard. The number of cattle in each SA2, based on 2011 Agricultural Census data, was used to calculate the weighted average distance travelled by sellers to their closest saleyard.

The blue area is the region for which Muchea is the closest saleyard. Areas to the north have been excluded from the analysis.

The peach area (both light and dark) is the region for which Mount Barker is the closest saleyard. Most of the cattle for which Mount Barker is the closest saleyard are located in the areas immediately surrounding the saleyards, and these are a lighter shade – this may be referred to as the primary Mount Barker catchment. The total peach coloured area encompasses the whole Mount Barker catchment. Blank spaces within each catchment, and beyond their borders in inland, are areas where cattle production does not occur.

Figure 5.2 Catchment areas for major Western Australia saleyards



Source: Deloitte Access Economics.

Table 5.3 presents the results of the spatial analysis. Producers in Muchea’s catchment travel the furthest, on average, at 129km. Sellers in the primary Mount Barker catchment only travel 22km on average, but the distance for Mount Barker increases significantly to 95km when more distance sellers (indicated by the dark peach areas in Figure 5.2) are included.

Currently, Boyanup sellers travel, on average, 70km to the saleyard – less than Muchea sellers, but more than most Mount Barker users. As discussed above, if the Boyanup Saleyard were to close and not be replaced, producers would need to transport cattle 150km to their nearest saleyard, on average. This would clearly be the greatest average distance experienced by producers in region considered.

Table 5.3 Distance to saleyards for Western Australia producers

Saleyard	Weighted average distance to saleyard for producers
Boyanup	70km
Muchea	129km
Mount Barker – primary	22km
Mount Barker – whole	95km

Source: Deloitte Access Economics.

5.2 Using alternative methods of sale/purchase

Another option for Boyanup's users, should the saleyard close, would be to adopt a different selling method than what already exists. The table below describes the selling methods currently available to cattle producers and/or feedlots.

Table 5.4 Livestock selling methods

Selling method	Description
Saleyard auctions, prime (c/kg)	A physical auction, conducted at a saleyard, for stock that are considered 'well-finished' enough to be ready for slaughter (known as prime stock). This type of cattle has adequate fat cover and general body shape and composition.
Saleyard auctions, store (\$/kg)	A physical auction, conducted at a saleyard, where cattle are bought and sold, typically either for breeding or future finishing.
Over the hooks (OTH)	Refers to the marketing of cattle directly from the farm to an abattoir. Following the slaughter and trimming, the carcass is graded by a processor employee using both standard industry grading and specific proprietary grading standards. The price the seller receives depends on the carcass weight and grade. The seller generally pays for the animal's transport from the farm to the abattoir, and the grazer generally gets paid within a 7 to 14 period.
Paddock sales	The sale of cattle on-farm, either direct to a lot-feeder, processor, backgrounder or re-stocker (direct sales), or through an agent.
Online Auction	An electronic online auction for the sale of livestock by description. This method combines the key features of the saleyard system and allows direct consignment to the abattoir or buyer.
Producer Alliances	A group of producers working together to service market place requirements.
Forward contracts	These are arrangements to supply cattle of a specified quality and number, to a buyer, at a given time for an agreed price.
Farmer direct sales	Beef consumers buy beef directly from farmers, such as through farmer's markets or online sales.

While farmers are aware of alternative selling methods, our analysis (outlined in Chapter 3) found that smaller farms tend to opt to use saleyards over direct selling, over-the-hooks or online auctions platforms. In the immediate future, if Boyanup were to close, the most likely outcome is that farmers opt to use other saleyards located elsewhere in the state. However, for some small farmers, the closure of Boyanup may result in them adopting these direct or online selling methods.

By 2022, when Boyanup saleyards are scheduled to close, online auctions and/or other online selling platforms are likely to represent a greater share of cattle sales than they do today. Like other online platforms that connect buyers and sellers (e.g. Uber and AirBnB), AuctionsPlus has the potential to further increase its market share.

Stakeholder views indicate that there are significant barriers for smaller producers when considering non-saleyard selling methods. It was the view of most stakeholders that these were more suited to larger producers than smaller producers and that producers would receive lower prices from these sale methods than they would at the saleyard.

According to stakeholders:

- For **direct sales (paddock sales) and contracts**, stakeholders advised that this method required larger numbers of cattle in order to enter into agreements with processors and other buyers. The South West is characterised by smaller producers.
- For **online auctions**, it was considered difficult to sell and buy smaller lots of cattle and their use was considered spasmodic as there is not enough users and therefore competition. A further critique was that online selling systems only work when the market is buoyant and they tend to “follow” the saleyard market with prices in line with saleyard auction results.
- For **“over the hooks”** sales, this is only an option for fattened cattle sales and not for store cattle. Over the hooks sales is also seen as a risky option for producers, as the price is paid on meat grade after slaughter.

5.3 Structural adjustment

For smaller producers operating on smaller margins – the closure of Boyanup would be relatively more costly. As already outlined, costs (per head) are higher when transporting smaller lots. According to feedback from consultations, this may cause some farmers to drop-out of the cattle industry (either opting for other farming or other activities, or selling agricultural land).

Structural adjustment will occur in the South West Cattle industry over time, independent of Boyanup’s closure. Market forces will influence how land is used in particular areas, and how businesses are structured. This is not only true of the cattle industry, but other industries.

Australia-wide, there has been a trend towards consolidation of farmland, which has seen a greater share of agricultural production attributable to fewer farms.

In South West WA, there has also been a trend towards more land being used for lifestyle farming (see Section 3.1). Over time, this trend is expected to continue.

If Boyanup were to close, it is likely that structural trends would be more pronounced, or occur more rapidly than they otherwise would. This is because, without a local saleyard, some beef farmers may no longer find it profitable to operate at the same (smaller) scale, or at all.

It is also likely that other non-farming businesses located near Boyanup would be impacted by its closure. The types of businesses impacted could include transporters, livestock agents, feedlots and livestock service businesses (e.g. testing, veterinarian services).

5.4 Stakeholder views

The broad stakeholder view was that the impact of there being no replacement saleyard was that it would be detrimental to the South West cattle industry. The main reason is that it will add costs to producers and erode already small margins from having to transport longer distances or engage in more costly selling methods. This would translate into some businesses becoming unviable. Some stakeholders in the workshops mentioned the flow on effect of a closure on communities and jobs. At the second public workshop, this question was given short consideration as the prevailing view was that the option of not having a saleyard in the South West is not on the table.

5.5 Summary of findings

This chapter examines what likely impact would be if there was to be no replacement saleyard opened in South West WA. When faced with the prospect of having no cattle saleyard in the South West, users face one of three broad options.

Option 1: Sell/buy cattle at a different saleyard;

Option 2: Choose an alternative selling/buying method;

Option 3: Close, re-structure or relocate business.

The main impact of closing (and not replacing) Boyanup would be the additional transport costs that South West users would incur when buying and selling livestock, either at alternative saleyards

or by alternative methods. For some businesses (farms and other businesses) that are not able to continue to operate profitably, or are unwilling to travel the extra distance, they may exit the cattle industry or look to relocate.

With regards to **Option 1**, our analysis indicates that the average distance from farm to the *nearest* saleyard for South-West producers would increase from approximately 70km to 150km (as the crow flies) as a result of Boyanup's closure. For those located south of Boyanup, the distance to the nearest saleyard would increase to as much as 300km (or, in some cases, even more).

If this were to occur, travel costs for sellers would, on average, increase by between \$17.50/head and \$7/head, depending on the vehicle configuration used. Most sellers would likely experience an increase in the order of \$17.50 because most sellers sell in small lots.

Taking into consideration the additional distances that would have to be travelled by both sellers and buyers, total travel costs could increase by an estimated \$1.2 million annually. Around \$680,000 of these costs would be incurred by sellers in the transport of cattle to alternative saleyards, and around \$540,000 by buyers. The higher cost experienced by sellers is driven by both their location, and the fact that cattle are transported to the saleyards in smaller lots than when they leave the saleyards.

Note that, given the distances calculated here are measured 'as the crow flies', these estimates should be treated as a lower-bound, since the distance 'by road' will be, in all cases, further.

It is likely that producers will consider selling through **Option 2** if alternative selling methods are more profitable than selling at a further saleyard. This is particularly true for producers who, after Boyanup closes, would have to travel further to the nearest saleyard than the abattoir or feedlot. For those businesses who are smaller and/or operating on smaller margins, **Option 3** would be a more likely outcome.

The view among members of industry is that a decision to not replace Boyanup would be detrimental to the industry, with flow-on effects to the local community. The main reason is that it will add costs to producers and erode already small margins from having to transport longer distances or engage in other, more costly selling methods. This would translate into some businesses becoming unviable.

6 Features of a modern saleyard

If a replacement saleyard is built, it needs to be designed in a way that makes it fit for purpose for two to three decades. Health and safety regulations, community expectations and technology have all changed significantly since most existing saleyards, including Boyanup, were originally constructed (and they will continue to change). This chapter considers the features that would be required for any replacement saleyard to be compliant, efficient and compatible with new technology, both now and in the future.

Four distinct topics in relation to saleyard features are discussed in this chapter:

- occupational health and safety and environmental impacts (section 6.1);
- animal welfare (section 6.2);
- efficiency (section 6.2); and
- enabling new technology (section 6.4).

Section 6.5 presents stakeholder views on what features are needed in any replacement facility.

Section 6.6 summarises the findings in relation the features of a future saleyard in the South West, taking into consideration research and stakeholder views.

6.1 Occupational health and safety and environmental impacts

Modern saleyards tend to include a number of features beyond standard safety practices. These features broadly address the impact of the saleyard on its surrounds and the safety of workers and animals in the facility.

6.1.1 Biosecurity

Modern saleyards have biosecurity facilities that are available for use 24/7. These include multiple truck washes (depending on the size of the facility), stock wash-down facilities and potential additions such as cattle tick clearance facilities. These facilities protect the health of the cattle being sold, the surrounding environment and integrity of the Western Australian cattle industry as a whole.

6.1.2 Noise

The materials and design of a saleyard can impact on the level of noise. Noise levels can be managed through the selection of noise-reducing materials, design and the use of machinery. This may include non-reflective material used in the construction of walls, and gate designs that shut silently. Reducing noise from a saleyard is beneficial to both animal and community welfare if the saleyard is located near an urban area. Similarly, dust that tends to be exacerbated by a saleyard can be minimised through selection of flooring material and routine application of water.

6.1.3 Roofing and other features

Other saleyard features that tend to be upgraded include roofing to provide better protection from the elements (for both animals and handlers), and the installation of gates with positive locks and safety chains to improve safety for personnel.

6.2 Animal welfare

Building and operating a saleyard that maintains good animal welfare practices will not only help to ensure that the saleyard meets community expectations in future, but also can help to improve the quality of meat.

Meat Standards Australia guidelines indicate that, in order for meat to be of premium quality, *"Cattle must be raised with good nutrition, a minimum of stress and be well managed during mustering and transportation to ensure they arrive for processing in top condition"* (MLA, 2014).

In WA, animal welfare standards are outlined by the ***Code of practice for animals at saleyards in Western Australia***, (Department of Local Government and Regional Development, 2003). The Code provides guidance as to how all stock handlers can minimise stress in all livestock at saleyards.

6.2.1 Floors and surfaces

Soft flooring material, that is suitable for animals to stand on for longer periods of time, are a feature more typical of modern saleyards. Older saleyards tend to have concrete floors. Relative to concrete, soft floors are more comfortable for animals to stand on for extended periods of time, less prone to slipping and are more noise absorbent. It is undesirable for animals to be kept on concrete for prolonged periods, and any concrete floors should have non-slip surfaces (Department of Local Government and Regional Development, 2003).

Other surfaces within the saleyard can also be designed to minimise harm to animals. For example, the use of curves instead of corners, rounded posts, and touch sensitive and soft gates. Internal walls of ramps should be sheeted, smooth and high enough so that animals cannot be disturbed by activities outside the ramp and will not injure themselves.

6.2.2 Water and feed

It is a requirement in modern saleyards that all pens have water troughs and be capable of providing feed to animals. Typically, smaller water troughs are preferable as they are more hygienic.

6.2.3 Lighting and ventilation

Suitable lighting, minimising shadows and dark areas, is also beneficial to the welfare of animals, particularly where they are loaded and unloaded. Proper ventilation and temperature management are also important considerations.

6.3 Efficiency

There has been a trend in Australia towards fewer, larger-sized saleyards that operate more efficiently than smaller saleyards. Larger saleyards are able to process stock at a lower cost, and can attract more buyers and sellers than smaller saleyards (ACCC, 2017). However, given that Boyanup typically attracts smaller sellers, and does not attract large volumes of cattle (compared to Muchea, or some larger saleyards in other states), some of the benefits of a larger saleyard may not justify the cost to build them.

The most efficient (and safest) saleyards tend to be those that minimise operator contact with animals. This can be enabled by new technologies (discussed in the next section), as well as through efficient saleyard design. Examples of design features typical in larger, modern saleyards include ramps that cater for the loading and unloading of various trucks (including side-loading).

Overhead walkways for operators and buyers/sellers are also commonplace, as they minimise human contact with animals.

Other aspects of the saleyard can be designed such that they enable new and efficient technologies. For example, single-width ramps are more compatible with technology that identifies individual cattle.

6.4 Enabling new Technology

There are two main technologies that are starting to be rolled out at saleyards across the country. The first is the automatic tagging and tracking of individual animals, the second is the onset of livestreaming and online bidding.

6.4.1 Livestock tagging and tracking

Automatic tagging and tracking systems for individual animals can save significant time, since in some older saleyards this remains a manual task. Fully automated systems include both an infrastructure and software component, and are being tested and rolled out in Australian saleyards.

In Victoria, the Government is supporting saleyards (through grants) to develop operational plans and preparing inventories of hardware and software required to support their tag scanning and data management systems.

6.4.2 Livestreaming

As online buying and selling becomes more common across industries, it is important that online sales are considered at any new saleyards being constructed. The livestreaming of cattle auctions enables livestock to be viewed on the internet in real-time.

This technology is being driven by Livestock Exchange and Elite Livestock Auctions, and some saleyards have been testing livestreamed auctions since early 2016. Livestreaming is used in conjunction with a platform for online bidding, which broadens the base of potential buyers by allowing them to bid from off-site.

AuctionIT, developed by Livestock Exchange, allows buyers to access cattle without having to travel and for producers to be able to watch sales live and to see how their cattle have sold. Under this system, each sale is streamed by an operator carrying a Go Pro camera linked to a tablet with a wireless network card.

However, a common issue for many saleyards seeking to adopt online bidding in conjunction with livestreaming is the poor quality of internet connection available in many regional areas, which may disrupt the live connection. Another common issue for online bidders is managing transport, which can be more difficult to arrange remotely.

6.5 Feedback from consultation

Stakeholders at the public workshops recommended that there be appropriate consideration given to the design of the saleyards and that the people that use the saleyards should be the ones that design it. It was mentioned on a number of occasions that the Muchea saleyard was not well designed, and it was important that the "mistakes" at Muchea not be repeated. With regards to potential models, Mt Barker and Katanning were mentioned as operating well as were some in the eastern states.

There were a number of features, requirements or considerations that were mentioned by stakeholders. A view supported at the workshops was that the saleyards need to be modern to last well into the future.

For the most part, there were not strongly opposing views on saleyard features. Some stakeholders highlighted features that others did not and vice versa. The most commonly mentioned design features or requirements from stakeholders included:

- Animal welfare requirements. This includes roofing (also allows effluent to be better managed, and can be used for water collection) and soft flooring (such as saw dust, woodchips, rubber matting). Also mentioned was gate design and railings and water and feed troughs at the correct heights.
- Properly designed receival, holding and exit facilities. This includes weighing facilities – pre and post auction
- OH&S considerations
- Good road and truck access, with room for unloading and turning
- Holding yards, quarantine yards and transit holding paddocks
- Buffer zone to protect the integrity of the facility into the future

- Built with the view to expand in the future or retrofit for changing requirements
- Social infrastructure such as offices, café/canteen and banking facilities.
- Special sales facility – such as a central ring facility for bull sales
- Truckwash facilities with adequate water pressure and effluent disposal.
- Two deck loading ramps
- Potential to make suitable for multi-species such as cattle, sheep, goats, alpacas etc. (although it was suggested this could be costly)
- Co-location with transport logistics and agri-services industries

6.6 Summary of findings

Certain design features are considered necessary in a modern saleyard. These include basic upgrades of the facilities to ensure that a minimum level of OH&S and animal welfare are met. Older saleyards were often designed and built when regulations and guidelines protecting animal welfare were less strict, meaning that they may require extensive renovations to reach current standards.

Beyond these, features that enable technological upgrades that improve efficiency and market access. Some recent technological advances that are being applied to livestock sales also have implications for saleyard facilities.

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Appendix A Industry consultation

A.1. Summary of individual stakeholder consultations

The following is a summary of stakeholder views across key themes.

1. The need to replace Boyanup

- Widespread agreement there is a need for a cattle saleyard in the South West
- Shire of Capel does not intend to renew Boyanup lease beyond 2022. The site is zoned for future residential development
- The Boyanup saleyards are ageing and probably do not meet current animal welfare and OH&S standards
- Some problems with light and noise, although there were only a few complaints from nearby residents
- In addition, they do not reflect modern standards and best practice in terms of animal movement
- There is no buffer zone, current requirements at least 1000m all around
- Lack of holding yards
- Truck access and turnaround limited
- Cannot be expanded on current site because of urban development and current requirements for a buffer zone
- Not open to all agents, although it was suggested there is not room for more agents
- Effluent disposal is an issue – lack of a truckwash facility

2. Alternative selling methods

- Three methods of selling:
 - Saleyard auction – price discovery – set the tone of the market
 - Preferred to on-line auctions, particularly in less buoyant market times
 - Provides an outlet for cattle passed in by AuctionsPlus
 - Play a bigger role in the trading of store cattle for finishing and the aggregation of weaners
 - Direct contracting – farm gate delivery – accounts for a large proportion of sales
 - Preferred by processors buying finished slaughter ready cattle
 - On-line auctions using mainly AuctionsPlus
 - Tends to follow the market
 - Operate best when the market is buoyant
 - Difficult to sell small lots
 - Its use is spasmodic as there is not enough competition

3. Key design/infrastructure features that would be necessary in a replacement saleyards

- Cattle flow – saleyard design
- Weighing facilities – pre and post auction
- Use of modern technology
- Soft floors – saw dust, woodchips, rubber matting
- Roofing – allows effluent to be better managed, and can be used for water collection
- Effluent disposal
- Water and feed supply to pens and holding paddocks

- Truckwash facilities with adequate water pressure and effluent disposal
- Good truck access with room for unloading and turning
- Two deck loading ramps
- Transit holding paddocks
- Must meet current animal welfare standards
- Maybe dedicated sheep yards be included, although it was suggested this could be costly
- An adequately funded maintenance program
- A facility to allow private weighing of cattle outside sales – a public weighbridge capable of taking a semi-trailer
- Supporting infrastructure (e.g. office facilities, café, banking facilities)
- Co-location with transport logistics and agri-services industries
- Katanning and Mt Barker saleyards provide useful models

4. Suitable locations and why

- Kemerton industrial park
 - Location in the buffer zone – but cannot compromise industries in the core of the industrial area
 - Proximity to abattoirs
 - Good road access for restricted access vehicles (RAV) from all areas
 - Able to establish the required 1 to 2 km buffer zone
 - Subject to Harvey Shire planning schemes. A structure plan and scheme amendments were completed last year
 - More accessible for cattle movements from northern and eastern areas of the South West
 - Most of the feedlots are north of Boyanup
 - May need a clearing permit as there is a mix of cleared and uncleared land in the buffer
 - Close proximity to water, power and gas supplies
- Gwindinup
 - Central to the South West cattle industry
 - More accessible to small producers transporting up to 20 cattle at a time
 - Buffer zone okay
 - Road access limited
 - Large RAV trucks prohibited under current arrangements
 - Need for road upgrades for larger trucks
 - Problem of additional truck movements through Boyanup

5. What would happen in the event there was no Boyanup?

- Producers would be forced to use Muchea or Mt Barker and incur additional transport costs
- May lead to an increase in direct selling and on-line auctions
- Would be more costly for small producers. Some may drop out of the industry
- Potential economic and social impact on the region – saleyards have a social contribution

6. The role that Muchea or Mt Barker could play in the event there was no Boyanup

- They could both take the majority of cattle currently going to Boyanup
 - There are constraints on the number of cattle these saleyards can take per day (e.g. Muchea 3,000 head)
- Manjimup may take more cattle as well
- It is becoming increasingly difficult to drive through the Middle Swan area to access Muchea. This situation could worsen.

7. Who should own and operate a new saleyard

- An operating model for the new saleyards should be developed prior to construction, so when they are built, how they will operate will be known
- Government should provide funding and own the yards but not necessarily build the yards
- Government should not operate the yards. Even if government owned - should be leased to private operator
- Local government ownership and operation should be considered
- Concern that private ownership would force up the cost of selling
- Should be open to all agents
- Need increased utilisation and greater competition. Government cannot offer commercial incentives

A.2. Summary of public workshops – 13-14 September 2017

Two workshops were held in Boyanup on 13-14 September 2017. The first workshop was attended by 42 industry representatives, including producers and agents, and the second had an attendance of 58. A small number attended both workshops.

There was concern expressed that the invitation letter was not distributed widely enough, meaning some people were not aware of the workshops.

There were also queries about the study process, why both workshops were held in Boyanup and whether the report would be made available to the workshop participants and more widely.

After those issues were answered, the meetings worked through the five questions.

First Workshop – 13 September 2017

Q1. In 2022 when the lease on the existing Boyanup saleyards expires, is there likely to be a need for a replacement saleyards/livestock handling facility in the South West given current industry trends and technological changes?

There was unanimous agreement that there is a need for new saleyards in the South West.

The lack of a saleyards would harm small producers in the South West.

- Trend towards smaller farm sizes and hence herd sizes leading to smaller deliveries to saleyards, which provide an important point for aggregation of cattle for sale
- Boyanup has survived closure while a number of saleyards in the South West have closed
- Demand for saleyards in the region is likely to continue
- The auction system sets the price with on-line auctions and direct selling following
- Muchea cannot handle what it has got.
 - There are regular rejections of cattle at Muchea
 - Need to extend the number of sale days
 - Uncertainty about the number of cattle coming from the north
 - Boyanup saleyards take the pressure off Muchea
- Saleyards also important for the aggregation and transition of cattle.

Q2. If there is a need for a facility, what features and/or requirements does the facility need?

- Animal welfare is a key issue – mandatory requirements
- Holding yards
- Water supplies
- Buffer zone to protect the integrity of the facility into the future
- Should be situated in a rural environment where the community likes them to be there
- Special sales facility
- Office facilities
- Canteen
- Able to be expanded
- Open to all agents

- Properly designed receival, holding and exit facilities
- Roofing
- Soft flooring
- Good road access.

Q3. If there is a need for a facility, what locations are considered to be most suitable against the features and/or requirements identified above and why?

- Gwindinup and Kemerton were the two sites discussed, although it was suggested other sites may also be suitable
- There was a view that in locating the saleyards it is important to take into account where the buyers are located as well as the sellers
- There was some concern about location of the saleyards in the Kemerton buffer zone – animal and OH&S issues
- Moving the saleyards further north would disadvantage producers south and west of Boyanup.
- The Manjimup saleyards are inadequate and could not handle more cattle
- Need route from Boyanup to Kemerton
- Problem of small trucks travelling to Kemerton

Q4. If the need for a new saleyards is not predicted, what happens to the livestock originating in the South West?

- One view was that the question was not applicable as there is a need for the saleyards in the South West
- Manjimup cattle would probably go to Mt Barker as Manjimup could not handle more cattle
- 50% cattle currently goes through the saleyards
- Some stock would go to Muchea
- Stock would spend more time on trucks – an animal welfare issue
- More on-line/direct sales, which could disadvantage producers through lower prices

Q5. What role can the Muchea Livestock Centre play, if any, in mitigating the need for a replacement facility?

- It was acknowledged that some cattle would have to go to Muchea
- There were concerns expressed Muchea would not be able to handle more cattle
- Could be animal welfare issues around transport distances – some cattle would go to Muchea for sale and then return to feedlots in the South West. This is not cost efficient
- More difficult for small producers with small numbers of cattle – there would be a need for aggregation at the farm gate

Second Workshop – 14 September

Many of the points raised in this second workshop were similar to those from the previous day. All comments put forward on day two are listed below in order to have a complete record.

Q1. In 2022 when the lease on the existing Boyanup saleyards expires, is there likely to be a need for a replacement saleyards/livestock handling facility in the South West given current industry trends and technological changes?

- As at the first workshop there was well-nigh unanimous agreement that there is a need for new saleyards in the South West and that the lack of a saleyards would harm small producers in the South West.
- Why is the question about the need for saleyards in the South West even being asked when we look at what is happening in the eastern states where saleyards are flourishing.
- The South West is being increasingly sub-divided, hence more vendors but smaller herd size – not suitable for on-line sales. Most cattle are sold by locals and bought by locals – except for animals sold for slaughter or for live export. Therefore, saleyards are necessary.

- A lot of cattle purchased at the Boyanup saleyards are sold direct to feedlotters and processors. Boyanup is well situated for this market.
- There are also spin-off economic and social benefits associated with saleyards, especially in relation to men's health – getting farmers off the farm.

Q2. If there is a need for a facility, what features and/or requirements does the facility need?

- There was broad agreement as to the range of features a new saleyard should have, as expressed at the previous day's workshop.
- There was a brief discussion around do they need advanced saleyards – or simply something like they have at present. This was disputed by others who argued they need state of the art saleyards. Saleyards need to be modern to last 20-30 years. This later view was ultimately supported.
- The new saleyards should be co-located with other support facilities. Ensure in the planning process that space is allowed for a truckwash, better access for trucks, holding yards, quarantine yards, offices, support industries including possibly, an abattoir. The facility needs to allow for expansion.
- The new yards should have a central ring selling facility for bull sales.
- Thought should be given to the new facility being multi-species – cattle, sheep, goats, alpacas etc.
- Lessons should be learned from successful yards in the Eastern States.
- Need greater emphasis on animal welfare and OH&S in the new saleyards.

Q3. If there is a need for a facility, what locations are considered to be most suitable against the features and/or requirements identified above and why?

- A number of sites were discussed - two sites at Gwindinup, Kemerton, around Picton/Waterloo, but the preferred site is around Boyanup - Gwindinup rather than Kemerton.
- This area is considered the geographical centre of the SW cattle industry
- It was acknowledged that significant upgrading of roads would be essential
- There are a lot of cattle travelling on small trucks, and taking small truckloads to Kemerton would have a detrimental impact on margins.

Q4. If the need for a new saleyards is not predicted, what happens to the livestock originating in the South West?

- This question was given short attention as the prevailing view was that the option of not having yards is not on the table.
- Without the saleyards there would be an 'overwhelming' loss of jobs, as small producers may drop out of the market
- A saleyard further north is not suitable to producers in the southern region but of necessity would have to be utilised. Manjimup is also not suitable.

Q5. What role can the Muchea Livestock Centre play, if any, in mitigating the need for a replacement facility?

- Muchea was not seen as playing much of a role as a replacement facility as it provides a suitable saleyard essentially for producers north of Pinjarra.
- Can't take small trucks to Muchea profitably
- Also, there are problems with large trucks of mixed cattle aggregated by a number of pickups at the farm gates, as small properties are not designed to take large trucks/road trains plus the long trip to Muchea gives rise to issues with animal welfare.
- All this makes movement of cattle to Muchea more difficult.
- It was further commented Muchea does not work efficiently – need the ability to move cattle through quickly. OH&S is also an issue at Muchea.
- Need to learn lessons from Muchea.

General Comments not relating to specific questions

- Politicians are not interested, difficult to get meetings with them.

- There are problems around biosecurity and competing with the rest of the world.
- The new saleyards should be up and running before the closure of the existing facilities in 2022.
- The concept of a South West Red Meat Precinct was raised.
- Suggested that the Minister should meet with producers.
- The South West Blueprint of 2014 mentioned saleyards would be constructed within three years.
- The Shire President said the Shire does receive some complaints about the existing yards.
- It was indicated that the new saleyards are part of government policy but without funding in the current budget and forward estimates.

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