

Information Supplement

Consultation Regulatory Impact Statement – Livestock Brands and Earmarks

November 2022



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Contents

Pur	rpose of this document	4
1.	History of the brands system and brands legislation	
2.	Traceability and the development of the NLIS system	
3.	Industry context	7
4.	Brands and earmarks in other jurisdictions	8
5.	Administration of brands and earmarks	g
6.	The need for cost recovery	12
7.	Fees under either option	12
8.	Further information on some costs and benefits of branding	14
Att	achment 1 - Description of brand series	21
Att	achment 2 - Examples of three-piece brands and earmarks	22
Att	achment 3 - Example of symbol brands and syntax	23
Att	achment 4 – QPS Case Studies	23
Att	achment 5 - Registered cattle earmark districts	26

Purpose of this document

The purpose of this document is to provide additional information and context to the Consultation Regulatory Impact Statement – livestock brands and earmarks (RIS). This document needs to be read in conjunction with the RIS.

Although the RIS should be referred to for full detail of the options, the main options presented in the RIS are summarised here for ease of reference as follows:

1. Option 1: Status quo with renewal fees retaining the current legislative requirements for branding (the status quo) with the addition of a renewal fee.

Under this option, the current legislation requirements would generally remain in place other than the introduction of a renewal fee (and associated provisions for debts due if the renewal fee was not paid). That is, the branding of relevant cattle and pigs would remain mandatory.

- 2. Option 2: Giving owners choice about branding cattle and pigs under a streamlined system with renewal fees. There are two sub-options in relation to this approach:
 - 2A Giving owners the option of an exemption from mandatory branding cattle or pigs (choice to opt-out).
 - 2B Giving owners the option of voluntary branding of cattle or pigs (choice to opt-in).

The only difference between the sub-options under Option 2 is whether branding of cattle and pigs is mandatory with an 'opt-out' provided, or voluntary with owners able to 'opt-in' to branding. Either option does not preclude any new market entrant from branding.

Pig owners would continue to be required to either brand pigs over 30kg or use National Livestock Identification System (NLIS) tags in order to comply with NLIS requirements under the Biosecurity Act 2014, and the vast majority of pig owners may continue to choose to use brands for commercial reasons.

Under either sub-option, a range of new streamlining features would be available. These include things such as:

- Being able to register a symbol brand or earmark without also having to own a threepiece brand.
- Dispensing with earmark districts (and potentially registration of earmarks altogether if desired).
- Freeing up brands for re-issue through earlier cancellation provisions for those not doing timely brands returns or by those not willing to pay the new annual renewal fees.
- Removal of compliance and checking obligations for those in the supply chain system.

Branding of horses, sheep, goats, and camels would remain voluntary under all options.

Fees are proposed to change under all options. There would be a renewal fee introduced under all options.

1. History of the brands system and brands legislation

Identification of livestock by the application of unique markings to resolve ownership disputes and as a tool for stock theft investigations, has been a longstanding practice in Queensland. Queensland's current livestock brands registration system originated in the *Brands Act 1872*, when inspectors of brands were appointed.

The "A" series, which was the first series of brands, consisted of 18,750 brands. The "B" series was introduced on 1 March 1882. By 1915, brands registration had grown, which resulted in the *Brands Act 1915* being introduced to consolidate a range of provisions. There are now eight series of brands in Queensland.

An outline of the historical series is shown in Attachment 1 with Attachments 2 and 3 providing examples of brands, earmarks, and symbols.

Despite changes in Queensland, animal industry structures, practices, and technology - Queensland's brands legislation has not been comprehensively reviewed since 1979, when mandatory pig branding was introduced.

As a result, the brands and earmarking system does not provide a contemporary regulatory model.

Summary of brands legislation history:

- 1872—introduction of a *Brands Act 1872* to provide a system for proof of ownership and the detection and conviction of horse and cattle thieves in Queensland
- 1876—introduction of the Sheep Brands Act 1876
- 1890—sheep branding provisions were moved to the Diseases in Sheep Act 1867
- 1915—commencement of the Brands Act 1915. This Act consolidated and amended other laws relating to marks and brands on stock, including those for sheep; the Act applies to all livestock—horses, cattle, camels, sheep and goats (and other members of these 'families')
- 1974—introduction of mandatory branding of cattle when offered for sale
- 1979—introduction of mandatory branding of pigs when offered for sale.

2. Traceability and the development of the NLIS system

Surveys in the 1960s indicated that at abattoirs, less than 40 percent of the brands on cattle were able to be read. This failing led to the introduction of the tail tag system.

The NLIS was developed in 1999 to enhance Australia's ability to trace cattle during disease and food incidents. The purpose of the NLIS is to support detection, control, and eradication of notifiable diseases. Mandatory NLIS identification and reporting was phased in through legislation over a two-year period from 1 July 2005.

The NLIS combines three elements to enable the lifetime traceability of animals:

- an animal identifier (a visual or electronic ear tag or other 'approved device')
- identification of a physical location by means of a Property Identification Code (PIC)
- a web-accessible database to store and correlate animal movement data and associated details.

As relevant animals are bought, sold, and moved along the supply chain, they must be tagged with an NLIS-accredited tag or approved device. For cattle, individual identification devices are required while mob-based identification is currently required for sheep and goats. The identifiers must not be

¹ Telegraph page 5 24/12/1915

removed until slaughter. Each movement livestock make to a location with a different PIC is recorded centrally on the NLIS database which can be accessed by people with NLIS accounts.

For pigs, a similar system called PigPass operates i.e. an identifier is given to a pig and its movement is traceable from PIC to PIC. Unlike the NLIS system for cattle, PigPass allows pigs to be identified with either a slap brand or tag for traceability. Industry and markets prefer the slap brand on both sides of the carcass as it is more cost effective than a tag and helps identify the carcass even when split for sale. As a result, brands now have relevance for traceability purposes for pigs in these circumstances (but only because of the PigPass system). Tags are likely to be used mostly by hobby farmers, with the number of hobby farmers continually increasing.

History of traceability requirements:

- 1960s—PIC and bovine Brucellosis and Tuberculosis Eradication Campaign
- 1976—introduction of tail tags for tracing movement of cattle, and disease management
- 1999— NLIS was introduced for cattle in Victoria (Queensland in mid-2000s)
- 2009—NLIS expanded to include sheep and goats (sheep previously had NFIS National Flock Identification Scheme)
- 2016—new biosecurity laws commence (*Biosecurity Act 2014*); introduction of RBE (Registered Biosecurity Entity); Stock Act 1915 repealed (no longer mandatory to record brands on a movement record/waybill)
- 2018—PigPass introduced (pig version of NLIS and National Vendor Declarations or NVDs)

Every few years, Australian agencies simulate outbreaks to test for biosecurity preparedness. These are colloquially referred to as 'cow catcher' and 'sheep catcher' exercises.

The exercises involve agricultural agencies in each state and territory, where staff are tasked with tracing livestock from a variety of farms, feedlots, saleyards, abattoirs, and pre-export facilities back to the properties the relevant animals had spent time on during their lifetime. The cowcatcher exercises show that the NLIS system is operating at around 98 percent efficiency on the tracing of cattle within 24 hours of notification of an emergency animal disease. While sometimes NLIS tags can fall off (or be removed), none of the exercises have ever utilised brands data.

Australian jurisdictions are all currently looking at improving traceability outcomes through the introduction of mandatory requirements for individual electronic identification devices (EIDs) to be fitted for individual sheep and goats. The Integrity Systems Company (ISC) who runs the NLIS system is also promoting the electronic National Vendor declaration (e-NVD) system to bring livestock closer to 'real time' traceability.

Into the future, supply chains continue to look to new technologies for traceability. Imperatives such as market access or supply chain efficiency gains or consumer's desire to know how their food was made or sourced are now also a significant traceability driver.

A range of new technologies could service both biosecurity and provenance needs. These include different biological technologies (e.g. DNA sampling, CrispR DNA embedding of origin information, isotope tracing), GIS data technologies (e.g. Internet of Things (IoT) devices, smart tags, Artificial Intelligence facial recognition of individual cattle etc) and various data standards (such as the GS1 standard used in the food chain).

3. Industry context

The following information focuses on those sectors where branding is mandatory - for sale of cattle over 100kg and pigs over 30kg (with certain exceptions outlined in the RIS).

From March 2021 to March 2022, there were 3,514,600 cattle and calves slaughtered and 1,296,300 pigs slaughtered in Queensland².

Cattle

As of the 2020-21 financial year, Queensland had approximately 10.6 million head of beef cattle comprising around 48 percent of the nation's herd of 22 million head of cattle³.

Queensland has two dominant production systems. The north of the state is dominated by cattle breeding operations, with a particular emphasis on live export and preparing cattle for entering fattening systems. Intensive cattle production systems tend to operate in southern Queensland with a greater emphasis on fattening systems and meat processing.

Given the size and scale of the Queensland industry, and the nature of the vast and remote terrain that is common to many large-scale producers (particularly in the north) the experience regarding brands in jurisdictions in southern Australia is not directly applicable to Queensland.

Table 1 Queensland supply chain area information - 2018

Area	Region	Farms (Approx.)	Average area (ha)	Proportion of beef cattle herd
Northern	Cape York and Gulf	78	177,832	6%
	Central North	581	43,719	16%
Central	West and South West	359	118,769	13%
	Central West	605	16,817	9%
Southern	Eastern Darling Downs	857	1,851	3%
	Southern Inland	2,962	5,608	34%
	Southern Coastal	2,298	2,982	15%
	Northern Coastal	3,465	3,465	3%

Source: 2-qld-beef-supply-chain.pdf (publications.qld.gov.au)

Queensland's cattle industry is dominated by family businesses with several large fully integrated corporate operators. Anecdotally, branding is of higher importance to family-owned businesses, and producers are likely to be strongly supportive of an ongoing regulatory based system.

Feed lotting is a key component of the Queensland beef cattle supply chain. Feedlots tend to be run as standalone operations, they also often form a key component of an integrated production system, both with breeding and processing.

Pigs

Like the rest of Australia, Queensland's produced pork products are mostly consumed domestically, but some are exported. Queensland has around 31 percent of the national pig herd, equating to

² ABS data on livestock products

³ Agricultural Commodities, Australia, 2020-21 financial year | Australian Bureau of Statistics (abs.gov.au)

82,351 breeding sows. Approximately half of the piggeries are relatively small, niche producers, with the other half supplying around 90 percent of the breeder pig population⁴.

Pig production is for the most part vertically integrated through the supply chain, with little to no change of ownership for most pigs prior to entering the food supply. This is with exception of backyard pig producers, who pose a greater biosecurity risk.

The distribution of the pig herd within Queensland is centred within three regions: Condamine (46.1 percent), Burnett Mary (21.1 percent) and Murray Darling Basin (27.5 percent), with these three regions accounting for nearly 95 percent of the total pig herd within the state⁵. In the 12 months to March 2022, there were 1,296,300 pigs slaughtered in Queensland⁶.

4. Brands and earmarks in other jurisdictions

Queensland and Northern Territory are the last two jurisdictions to mandate brands in Australia, with other states having either moved to:

- complete deregulation
- · administratively based brands systems with no legislative backing, or
- or adopted a legislative system with optional participation (voluntary branding).

Table 2 Summary of other jurisdictions

Provides a breakdown of what occurs in each of the other Australian jurisdictions along with an outline of the fees and charges applicable in other jurisdictions.

Jurisdiction	System in place	Applicable fees (current as April 2022)
Western Australia	Voluntary / optional system. Legislation in place, administered by government.	Application - \$76.50 Renewal - \$76.50 Transfer - \$76.50
New South Wales	Voluntary / optional system. Deregulated and devolved to local land services.	Ceased charging fees in early 2021.
ACT	Voluntary / optional system. Brands are listed as one of a number of approved marks and tags.	No new brands or earmark applications registered in the last 5 years.
South Australia	Voluntary / optional system. South Australia maintains the option of branding and other forms of identification, but this was completely deregulated at the end of 2015.	No new brands applications being received. Earmark registration now done through PIC registration process. PIC registration – \$93.00 every 2 years
Victoria	Victoria does not recommend branding in its Livestock Disease Control Regulation, although the possibility of catering to branding is included in the <i>Livestock Disease Control Act</i> 1994.	PIC register – contains NLIS registration and registration for pig slap brands Non approved / non legislated brands not recorded PIC registration – free
Northern Territory	Mandates the use of a brand marking for sale or movement of cattle (among other livestock)	 Three-piece brand - \$124.00 Symbol brand - \$124.00 Earmark - \$93.00 Transfer of a brand - \$62.00

⁴ Queensland pig industry | Department of Agriculture and Fisheries, Queensland (daf.qld.gov.au)

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⁵ See page 14 <u>APLStateofIndustry-Report.pdf</u> (australianpork.com.au)

⁶ ABS data on livestock products.

		Replacement of certificate - \$62.00NT Brand search - \$45.00
Tasmania	Mandates the use of a body tattoo of pigs before sale or slaughter. Mandates earmarking of sheep and cattle before they reach six months of age. Sheep and cattle body branding or tags and horse body branding are voluntary.	 Application to register brand / earmark / tattoo / tag - \$44.55 Transfer - \$44.55

Alberta model

There are also other models worldwide where private industry-based companies are delegated the Minister's power to administer a regulatory brands system, backed by government legislation.

For example, industry owned company, Livestock Identification Services Ltd, in Alberta Canada is delegated the power to run and cost recover fees for operation of the brands registry.

5. Administration of brands and earmarks

Transactions

As at February 2022, there were approximately 103,706 brands and marks on issue as shown by Figure 1.

The main administrative tasks associated with administration of the brands registration system is processing of new brand and earmark applications and conducting transfers of current brands and earmarks. Table 4 below provides an indication of the annual numbers of new applications (1558); transfers (305); and brands returns (117,142) conducted by the Department of Agriculture and Fisheries (DAF) in the 2021-22 financial year and the level of fees for those applications.

The demand for brands services remains relatively static across time. Table 4 below demonstrates the number of applications processed from 2015 – 2020.

Despite the removal of the mandatory requirement to brand during COVID-19 for workplace health and safety reasons, the number of brands applications remained reasonably consistent during 2020-21.

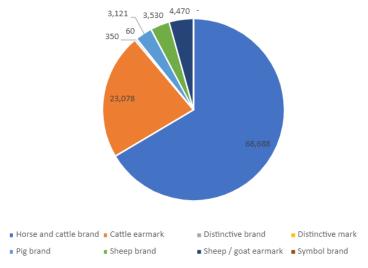


Figure 1: Proportion of marking types

Table 3 Applications profile 2021-22

Application type	Number of transactions	Current Fee
New three piece	914	\$ 113.88
New cattle earmark	307	\$ 113.88
New sheep brand	47	\$ 123.56
New sheep/ goat earmark	59	\$ 113.88

New pig	47	\$ 54.74
New symbol	184	\$ 330.31
Transfers (no-pig)	300	\$ 54.74
Transfers (pig)	5	\$ 54.74
Brand return	117,142	\$ 0

Table 4 All processed brand applications, 2015 – 2020

Year	Applications processed
2015	1875
2016	1976
2017	1758
2018	2348
2019	1580
2020	1129

Current information technology system

An information technology system known as the Brands Registration System (BRS) is currently used to administer the brands and earmarking system. The BRS has three interfaces:

- 1. A system for web-based public searching (i.e. brands owners, public and members of what was the Queensland Stock and Rural Crime Investigation Squad).
- 2. A system (called iBrands) used by DAF including the call centre, counter staff and DAF's Licensing Transaction Unit.
- 3. An internal system which houses the main information which feeds into both of the systems above.

The BRS perpetuates complicated business processes which has contributed to significant administration inefficiencies.

For example, to process a registration of a new brand on a single application involves approximately 51 steps which can take about two and a half hours. This includes applicant validity checks, manual property searches and uniqueness searches. Today, many of these functions could be automated.

The software platform (Access Database and image files) are complex to maintain - the brand return function is especially problematic. As a result, there is a high staff/resource cost in processing of new applications and maintaining existing data. The system also has very low capacity for customer self-service.

From a client perspective, the brands registration system is not user-friendly. For example, if a user searches for a brand and there are no search results returned, this would indicate the brand is available. However, this result means the brand is unavailable.

Staffing requirements

Processing brands transactions is slow and laborious for staff, as the majority of tasks are undertaken in either a paper-based environment or a system where activity has to be cross checked manually.

Table 6 provides an estimate of the time it takes brands staff to process different application types and a high-level forecast of what timeframes might be able to be achieved should the reform process move ahead with a new IT system in place⁷.

Currently, staffing costs are a major contributor to the overall cost of the service. Brands administration is directly supported by approximately 5.5 Full-Time Equivalent (FTEs) staff within DAF. This includes:

- A Registrar of Brands who is statutorily responsible for maintaining the brands register.
- A portion of the staff within the Licensing Transaction Unit (LTU).
- A portion of the time of staff within the Department's Animal Biosecurity and Welfare unit.

This does not include additional support from DAF's Customer and Business Services (e.g. customer enquiries etc), Queensland Shared Services (for receipting, refunds etc) and Information Technology Partners for hosting and support of supporting systems (see below).

Table 5 Time currently taken to process brand related transactions

Transaction	Estimate of current time taken to process	Forecast time with a new system
Cattle symbol brand registration	1 hour to 2.5 hours	45 minutes
Sheep/Goat paint/fire symbol brand	1 hour 15 minutes	45 minutes
Three-piece brand registration	45 minutes to 2 hours	30 minutes
Cattle earmark registration	45 minutes to 2.5 hours	25 minutes
Sheep/Goat fire/paint brand registration	1 hour	30 minutes
Sheep earmark registration	1 hour	25 minutes
Transfer of cattle brand registration	30 minutes	25 minutes
Pig brand application	20 to 30 minutes	25 minutes
Transfer cattle three piece/earmark and symbol brand	45 minutes to 1 hour	25 minutes
Transfer sheep earmark	30 minutes	25 minutes
Transfer pig brand	20 to 30 minutes	25 minutes
Transfer sheep/sheep symbol brand	20 to 30 minutes	25 minutes

Not included in the above:

• The time spent processing brands returns required annually under the Act.

• The time spent following up on non-compliance with the brand return requirements. Issuing and following up on show cause notices where a bran return has not been completed for at least three years. As at July 2022, there were 24,201three-piece horse and cattle brands (or 22 percent of the total brands and marks on issue) that have not been returned for at least three years.

⁷ The estimates are for both options – but a post implementation monitoring of time will need to be undertaken as its unclear as yet how much automation might be able to be achieved to replace what is likely to be a slightly greater amount of time for Option 1 because it does not contain some of the refinements offered in Option 2.

6. The need for cost recovery

Currently, approximately 11 percent of the cost of providing the brands and earmarks service is covered by the associated fees. This level of cost recovery is sitting far below what is required by Queensland Treasury's Principles for Fees and Charges⁸ which provides that:

- Those individuals and groups who benefit from the provision of a good, product or service should pay for it.
- Fees or charges applied by the department for the provision of the services should reflect full cost recovery.
- Full cost recovery should represent an efficient cost.
- Competition margins only apply where an alternate provider is available.
- The administrative costs of revenue collection should not be more than the revenue collected.

The policy provides that where there is a direct benefit from the provision of a service, those benefiting from the service should pay for it. This is supported by Section 18 of the Financial and Performance Management Standard 2009 which provides that, in deciding charges for goods and services, departments and statutory bodies must have regard to the full cost of providing the goods or services. Unless the government has made a deliberate decision otherwise, fees or charges applied by departments and statutory bodies for the provision of goods and services will reflect full cost recovery.

Under the government's policy, the department may charge less than full cost recovery (i.e., subsidise) for a particular good or service when a lower charge is considered appropriate. This occurs, for example, where provision of a service occasions 'spill over' benefits to the broader community beyond those accruing to the direct user of the service.

Given that traceability benefits for biosecurity purposes have been replaced by the NLIS and brands now simply provides a statutory basis for stockowners to identify stock as their property, it is considered that this service is predominantly a private benefit.

7. Fees under either option

Table 3 in the RIS contains information on fees that are likely to be introduced for either Option 1 or Option 2 (either 2A or 2B) to meet Queensland Government cost recovery policies. This section provides some basic information about the methodology used for developing the fee estimates and underlying assumptions used.

It is noted that fees under either option are considerably different to other jurisdictions. Each jurisdiction's costs will be different based on the model that they have put in place, their policy in relation to full cost recovery and the state of the IT systems used to administer the brands system.

Input costs

System build

As outlined in the RIS, the estimated cost of the information system build will be around \$1-2 million. For the purpose of this estimate, a figure of \$1.5 million is assumed. The costings assume that this amount will be amortised over a five-year period. This estimate will depend upon the changes to the legislation as a result of the final chosen option, and the design of the IT system - the delivery option, user requirements obtained through the business user requirement stages (particularly the level of automation desired) and user acceptance testing stages.

⁸ Queensland Treasury, Principles for Fees and Charges, August 2022 available at https://treasury.govnet.qld.gov.au/wp-content/uploads/principles-for-fees-and-charges.pdf

Ongoing system costs

There are ongoing costs for hosting, licensing and support for an IT system. An allowance has been made for continuous improvement and platform management. The total annual ongoing system costs, including a contingency, are assumed to be around \$800,000.

Ongoing staffing levels

The RIS outlines the FTEs used currently. It is anticipated that around one FTE should be able to be saved through the reforms under either option. The total ongoing annual staffing costs are assumed to be around \$360,000. It is anticipated that Option 2 would require slightly less staffing, particularly in relation to checking new earmark applications.

Corporate multiplier

A costing multiplier is a tool used extensively by many organisations to calculate the full cost of goods or services. The costing multiplier for each government department will be different as it is based on the relationship between direct labour and the overhead cost of the organisation. There are different multipliers used for labour (direct and indirect) and other sorts of overheads (e.g. indirect expenses, overheads, corporate services etc). DAF's ordinary cost multiplier has been applied as per the table below:

Table 6: DAF multiplier

After application of the corporate multiplier, the final total to be recovered is approximately \$2.12 million.

Methodology

The fee estimator used is not a time cost model.

Multiplier Components	Fac	Factor	
Direct labour		1	
Direct labour on-costs		0.26	
Overheads	'		
Indirect expenses within business groups	0.12		
Overhead costs within business groups	0.65		
Departmental overhead costs	0.35		
Corporate Services, ITP and the ODG	0.39		
Overhead sub-total		1.51	
Total Multiplier		2.77	

The total cost anticipated for the

arrangements of approximately \$2.12 million is apportioned between the services based on the percentage of applications and the relative time taken to process the applications.

The relative time weighting represents how much more time one type of application takes to be dealt with compared to the easiest and quickest type of application. It was assumed that a renewal would take around 5 minutes and would be the easiest and quickest application type to process. Each other application type was relatively weighted compared to it. The relative weights used for the different kinds of applications are shown below.

Table 7 Forecast time and relative weighting

Application type	Forecast length of time	Relative time weighting
New three-piece brand	30	6.0
New cattle earmark	25	5.0
New sheep brand	30	6.0
New sheep/goat earmark	25	5.0
New pig	25	5.0
New symbol	45	9.0
Transfers (non pig)	25	5.0
Transfers (pig)	25	5.0
Renewal yearly	5	1.0

Sensitivity

DAF has done some preliminary sensitivity testing to establish whether the fee structure significantly changes with a drop in participation in the system.

- Participation in the branding system: The fees are not highly sensitive to changes in the level of participation. For example, if participation dropped to 70 percent under the voluntary model, the fees are not significantly affected.
- **Time forecast assumptions:** If the forecast length of time for renewals increases, the renewal fee increases and application fees for other transactions decrease. However, the fixed costs are a large portion of the total cost.

Because system costs are amortised over five years, there would need to be a large underestimate in the cost of the IT system to result in significant changes to the fees. The fees are, however, more sensitive to ongoing system costs so keeping these costs as low as possible will be appropriately weighted in assessment of the design options for the IT system.

Review

As none of the costs and time weightings associated with the new processes can be known with certainty, DAF will need to revise the assumptions based on the future regulatory model chosen and during development of the system. Should there be a significant departure from the fee ranges estimated in this RIS, further stakeholder consultation may be needed before they were introduced.

8. Further information on some costs and benefits of branding

Cost-benefit analysis (CBA) is used to assess the relative merits of the options by, as the name implies, assessing all the costs and benefits of each option. While sometimes called economic analysis, CBA does not just consider economic costs and benefits – as social and environmental benefits are also included.

CBA is conducted on a social basis, that is, costs and benefits to all members of society are included, although distributional implications are also distinguished. The analysis below considers costs and benefits accruing to a range of stakeholders including the Queensland community, livestock owners who prefer not to brand, livestock owners who prefer to brand, processors and government.

The information included in this section is intended to be a supplement to the CBA included in the RIS. This section does not include information on all the costs and benefits noted in the RIS.

Community

Biosecurity benefits

As outlined in the RIS, branding does not provide any direct biosecurity benefits.

Animal welfare impacts

As outlined in the RIS there animal welfare impacts of branding and earmarking, but these can be mitigated with pain relief. Option 2 offers the greater animal welfare benefits (particularly sub-option 2B) because it may result in fewer animals being branded. The amount cannot be quantified because that will be determined by the number of owners that opt out of branding which is unknown.

Taxpayer subsidies

As outlined in the RIS, the net cost to government of maintaining a status quo is \$1.97 million, while the current level of taxpayer subsidy for running brands is roughly 89 percent of its cost. Under either Option 1 or either variant of Option 2 (because the information systems will require upgrade no matter what), this situation will be improved for general taxpayers as both options involve setting fees to full cost recovery in accordance with Queensland Government policy (see the section in the RIS on fees for further details).

Livestock owners who prefer to brand

Livestock theft

Branding provides benefits for livestock owners in that it may deter theft or help in the recovery of stolen animals. Several case studies in Attachment 4 illustrate this. Media reports suggest stock theft cost producers some \$2 million per year in Queensland⁹. This estimate is based on 2000 head of cattle being reported each year (as opposed to reported offence numbers), noting that this will vary significantly depending on the number taken in each incident and the market value of cattle at the time of theft¹⁰.

QPS have expressed a concern that removing mandatory branding may lead to increased rates of stock theft. They have also raised issues that if livestock producers opt-out of the system, it may increase disputes between neighbours in the event of missing stock

However, it is noted:

- While many livestock owners choose to brand at the time of weaning, not all cattle or pigs are currently branded. Currently (and under Option 1 in the RIS), animals may not be branded as they aren't being sold or they don't meet the weight requirements.
- Producers can mitigate the risk of stock theft by continuing to brand, as well as taking other steps such as maintaining fences and farm security and regularly mustering.
- Stock theft occurrences are significantly less common than general crime noting that stock theft does tend to be underreported (with NSW surveys indicting that livestock theft is only likely to be reported 44 percent of the time)¹¹.

At this stage it is unclear how many producers would opt out of branding given the chance. The consultation will offer an opportunity to obtain information and the Western Australian experience in introducing voluntary branding would be instructive.

A streamlined system giving producers or livestock owners choice or allowing for self-exclusion could result in less branding of animals than before.

⁹ South Burnett Times, *The 'rampant' crime costing Australians millions*, 1 September 2016, https://www.southburnetttimes.com.au/news/the-silent-crime-costing-australians-millions/3084478/ September 2022.

¹⁰ The average cost of a beef cattle in 2022 is \$2000 per head as estimated by QPS.

¹¹ Crime is rife on farms yet reporting remains stubbornly low. Here's how new initiatives are making progress (theconversation.com) Published: April 7, 2021

Queensland Stock Animals reported stolen per year

6000

6000

4243

4013

4013

1914

1000

1344

1000

1344

1000

2018

807

701

74 70 17 1

Figure 2 Queensland Stock Animals Reported Stolen per year – 2018 to 2022¹²

On-farm benefits

Livestock producers may benefit from brands in the following ways:

• Assisting producers to distinguish their livestock from others' on-farm e.g. when cattle cograze on the same property or in sale yards.

■ Cattle ■ Goat ■ Horse ■ Sheep ■ Swine

- Assisting producers to age cattle which can add value at sale.
- · As an object of cultural or family significance.
- Promoting their particular brand as a mark of the value or quality of a rural business and/or its production, or other reasons.
- Seen as being an easy, low tech, "permanent" means of identifying livestock compared to other methods such as ear tags.

Conversely it should be recognised that there are no failsafe methods of "labelling" or identifying livestock for the following reasons:

- Poor branding technique means that many brands are illegible or botched. Poorly applied or illegible brands having been observed in more than 50 percent of cattle at saleyards.¹³
- Cross brands (where applied) are often illegible.
- Some breeds do not brand well breeds such highland and belted Galloway are particularly susceptible to poor branding, due to their long/shaggy coats.
- Cattle can be illegally cross branded, altered or defaced. It is noted that there are offense provisions under the *Brands Act 1915* which address these issues.

Brands and earmarks access

Livestock owners who prefer to brand may benefit from Option 2 by gaining greater access to brands of their choice through the revised cancellation arrangements. This may allow more brands to be available and used, discouraging frivolous applications for brands not used.

People seeking new symbol brands would benefit from Option 2 because they will no longer be required to have a three-piece brand to obtain a symbol brand under that option.

¹² Source: QPS

¹³ Visual inspections were undertaken of 3 103 cattle by Biosecurity Queensland officers at the saleyards at Moreton, Silverdale, Warwick, Toowoomba and Dalby between 22 May and 28 May 2018 to assess compliance. The inspections revealed that with the exception of Warwick saleyards, less than 50 percent of all cattle were clearly branded. In Toowoomba and Moreton, 59 percent and 39 percent respectively of cattle were not visibly branded. In Silverdale 46 percent of cattle were poorly branded (the brand was not completely legible). Even at Warwick saleyards, 28 percent of cattle were either not visibly branded or poorly branded.

The benefits and costs for producers in removing earmark districts are likely to be relatively insignificant because there are relatively few applications for earmarks, but they could be significant for individual producers. Earmark districts are shown in Attachment 5. If these districts are removed, there would be some producers who are saved the burden of having to apply for a new earmark when they move district while others may be frustrated by having a producer in the same district using the same earmark. The consultation on the RIS provides an opportunity for stakeholders to clarify the potential impacts of removing earmark districts under Option 2.

Costs of branding

There will be other costs associated with branding and the brands registration system but most of these costs are unavoidable under the current system (such as government fees) and will be almost the same for producers who continue to choose to brand regardless of the option chosen.

Livestock owners who prefer not to brand

Under Option 1, producers or livestock owners will incur the below costs. All future renewal costs can be avoided under Option 2 – but sub-option 2A will require positive steps be taken to avoid chose costs, whereas Option 2B will make opt out automatic if the annual renewal fee isn't paid.

Labour costs

Branding costs producers in time. The annual cost of mandatory branding to producers will be dependent on their herd size and the proportion that use freeze branding compared to hot iron branding. The figures used here are for freeze branding¹⁴. Some of the input costs could be used also for hot iron branding, but the labour cost should be reduced because hot iron branding is much quicker.

Angus Australia has estimated that 15 animals can be freeze branded per hour assuming reasonable facilities and two people. The assumption for the cost estimate presented here is that a farm hand average wage per hour in Queensland is around 29.47^{16} x 2 = 59 for labour costs per hour.

The Australian Competition and Consumer Commission has indicated that the average herd size for the beef cattle industry was around 1,576 per farm¹⁷. The size of an average dairy farm in Australia (who are more likely to freeze brand) is around 261 head.¹⁸ As an indicator, the labour costs for freeze branding an average size herd could be around \$6,198 for producers who have an average sized herd (1576 cattle /15 animals per hour x \$59 labour rate for two people). For a dairy farm, this would be \$1,026.60 (261 cattle/ 15 animals per hour x \$59 labour rate for two people).

Extrapolating these figures out to the whole of Queensland isn't likely to be a useful exercise as it is understood that hot iron branding is the predominant practice in most industry due to its speed as a hot iron brand can be applied in a few seconds with many more cattle per hour being able to be branded.

Pain reduction

Under current legislative requirements, cattle must be branded prior to being sold or slaughtered. Pain reduction methods for branding can add \$1 - \$1.50 per head to the cost of branding; the lower of

facts#:~:text=The%20average%20size%20of%20a,to%20261%20cows%20in%202017.

¹⁴ See <u>How practical is freeze branding for large commercial beef herds? - Beef Central</u> accessed on 22nd September 2022

¹⁵ www.angusaustralia.com.au/breeding/general -articles/ freezbranding/ accessed on 27 March 2022

https://au.indeed.com./career/farm-worker salaries/ Queensland accessed on 22nd September 2022

¹⁷ See <u>ACCC Cattle and beef market studyFinal report.pdf</u> accessed on 22nd September 2022

¹⁸ See www.dairy.edu.au/resources/information-resource/dairy-farm-

these figures, across 3.4 million cattle (assumed annual cattle slaughtering), could cost between \$3.4 to \$5.1 million annually¹⁹. However, pain reduction is not widely used.

Branding paraphernalia

Branding irons cost around \$120 per set²⁰ which, applied to many head over a period of years, could be considered a "negligible" cost to producers. For freeze branding, Beef Central notes costs of around \$4.50 per animal to have liquid nitrogen applied and \$6.50 - \$7 for dry ice²¹. Other negligible costs for paraphernalia may apply (e.g. gloves, clippers, pacifier etc).

Registration costs

Under Option 2, producers or livestock owners who do not wish to brand can avoid the registration cost associated with branding (including any new renewal fees which might be introduced). The RIS contains information on current fees.

Livestock supply chain

Compliance

One significant market operator has provided DAF with a detailed estimated of what it costs to comply with the legislation. In summary, it claims that compliance costs are the equivalent of some 34 cents per head. Across annual cattle slaughtering of 3.4 million head across the State, this would be a cost of \$1.2 million. It is noted that the costs incurred by this one large firm and provided as a case study below are not necessarily indicative of compliance costs for the broader industry and are provided for illustration purposes only.

Case study - as provided by a large firm

The numbers in the following have been rounded and multiplied by a standard factor to protect the identity of the firm concerned. All the ratios are as supplied.

- Transacts approximately 300 cattle per day or 70,000 per year
- From 2,500 distinct PICs => an average of 29 animals per property
- Number of brands per lot ranges from zero to 100, with an average of over 10 brands per lot purchased
- 1,100 brand mixes on site at any time
- Compliance means manually recording brands in each lot into a brands book not possible to do electronically (brands do not appear on a QWERTY keyboard)²²
- Traceability lost at this point where a brand appears more than once in a lot
- Problem of transcription errors even if brand clearly legible
- Brand then verbally described in National Vendor Description (NVD) Dispatch form
- If 20 minutes per PIC, implies over 800 hours per year. At \$30/hour this implies a cost of \$24,000, or 34c/head.

Hide values

According to Meat and Livestock Australia (MLA)²³, hide damage at the branding site decreases the value of a tanned hide. As hides are a byproduct, the incidence of this cost would largely be borne by processors rather than producers.

¹⁹ See <u>Pain relief production extension | Meat & Livestock Australia (mla.com.au)</u> accessed on 22nd September 2022 ²⁰ http://lhbrandingirons.com/

²¹ How practical is freeze branding for large commercial beef herds? - Beef Central accessed on 22nd September 2022

²² Compliance requirements for supply chain operators such as feedlots) are legislated for in the *Biosecurity Act 2014* – which is likely to require consequential amendment should the Brands Act be reformed.

²³ https://www.mla.com.au/research-and-development/animal-health-welfare-and-biosecurity/husbandry/branding/

Hides are the most valuable by-product from beef cattle, therefore defects such as branding marks, can result in significant devaluation. Whilst the hide market remains subdued, the current demand for supply is met largely by Queensland, making the hide industry relatively important to Queensland.

Queensland has a high share of the national hide exports (49 percent of the national total by weight over the 11 years to 2021-22) reflecting its share of the Australian cattle industry generally. However, the prices Queensland receives for those hide exports are significantly lower than those in other States – 14 percent lower on average over the past 11 years. This is equivalent to an average of \$27 million per year – that is, if Queensland had received the same prices for hide exports as the other States, then export revenue would have been, on average, \$27 million higher than it actually was. This difference is likely to reflect, in part, the greater incidence of branding in Queensland. Mandatory branding therefore creates an opportunity cost i.e. lost potential income) for processors. This opportunity cost is likely to be reduced if fewer cattle are branded.



Figure 3 Queensland's comparative make-up of the Australian export market

Table 8 Hide exports \$AUD²⁴

Year	Qld	Percent change	Australia	Percent change	Qld percent
2012–13	206,311,640	24.0%	434,361,758	17.5%	47.5%
2013–14	276,087,325	33.8%	597,272,567	37.5%	46.2%
2014–15	280,659,770	1.7%	628,920,227	5.3%	44.6%
2015–16	219,300,136	-21.9%	494,421,583	-21.4%	44.4%
2016–17	179,984,568	-17.9%	391,622,150	-20.8%	46.0%
2017–18	177,421,564	-1.4%	384,328,296	-1.9%	46.2%
2018–19	115,887,069	-34.7%	282,930,475	-26.4%	41.0%
2019–20	88,609,689	-23.5%	220,741,632	-22.0%	40.1%
2020–21	64,465,278	-27.2%	163,517,114	-25.9%	39.4%
2021–22	105,192,362	63.2%	223,372,593	36.6%	47.1%
Source: Australian Bureau of Statistics SITCs 21121 and 21129.					

²⁴ https://www.ggso.gld.gov.au/statistics/theme/economy/international-trade/exports

Government

The status quo costs government about \$1.7 million per annum. Details about the cost of the current system are outlined in the fees section above.

As both options for future regulation fully cost recover, there is minimal difference between them on this basis, other to the extent that one of the options required more FTEs. In that regard Option 2 is likely to perform marginally better as it would free up one FTE to work on actual biosecurity matters).

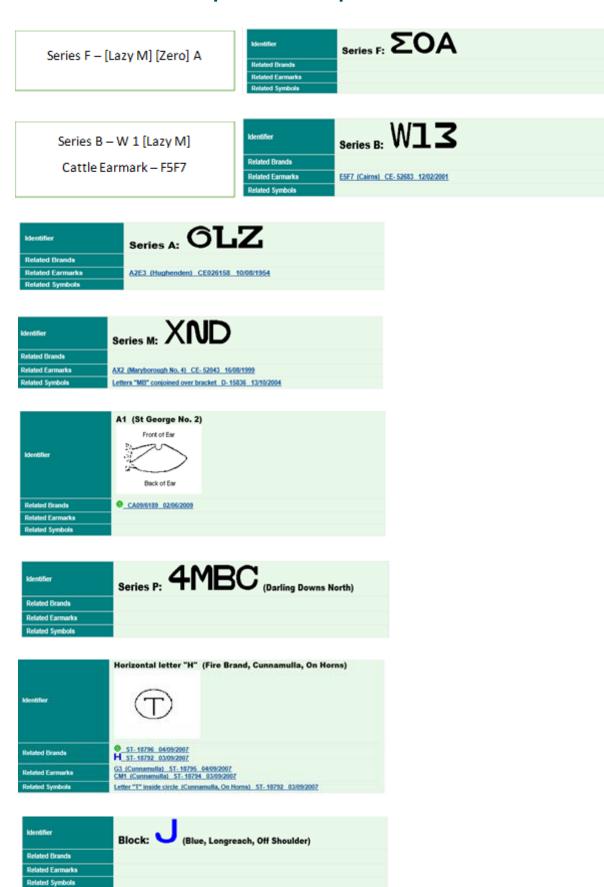
There would, however, be other costs and benefits as outlined below:

- Investigation costs QPS may spend more time or resources in dealing with stock theft if NLIS tags are absent and the brands participation rate drops. QPS will need to use other methods to identify livestock ownership (e.g. DNA testing).
- Local governments can assist in locating stray livestock. With reduced branding participation, local governments may spend more time trying to reconcile lost stock if NLIS tags are absent and the brands participation rate drops.

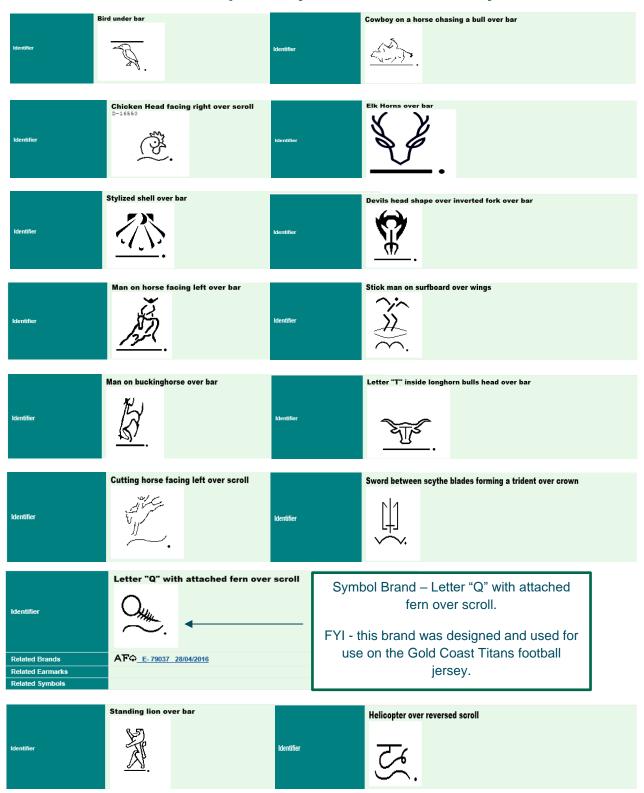
Attachment 1 - Description of brand series

Series	Description and arrangement	Brand components or shapes	Example
Α	Consists of 2 block letters and 1 numeral, all in upright position.	ABCDEFGHJKLMN@PQ RSTUVWXYZ 6123456789	зак
В	Consists of 2 letters and 1 numeral, with the second letter falling to the right.	ABCDEFGHJKLMNPQRST UVWYZ 0123456789	3Qਨ
С	Consists of 2 script letters and 1 numeral, all in the upright position.	ABCDEF SHIKLMN OPLR LIVWXY3 0123456789	3 S.K
F	Consists of two letters and 1 numeral, with the first letter falling to the left.	The same as for series B: ABCDEFGHJKLMNPQRST UVWYZ 0123456789	сзк
G	Consists of 2 letters and 1 device or 1 letter, 1 numeral and 1 device.	The same as those for series A, plus the devices ♠, ♥,♠ and ✝. However: • use the letter ✗ instead of the letter ✗ • do not use the letter ❷ or the numeral ❻.	♦GK or ♦3K
Н	Consists of 2 letters and 1 device or 1 letter, 1 numeral and 1 device	The same as those for series A letters, plus the devices	13K ∘ 13K ⊢ 3K
M	Consists of 3 block letters all in the upright position	The same as those for series A. However: • use the letter X instead of the letter X. • do not use the letters and T.	ak×

Attachment 2 - Examples of three-piece brands and earmarks



Attachment 3 - Example of symbol brands and syntax



Attachment 4 – QPS Case Studies

Ma	Dussia	Count requilte
No 1.	Offender stelle 21 cattle including 0 head from neighbouring	Court results Mental Health Tribunal
	Offender stole 21 cattle including 9 head from neighbouring property. Cattle sold through Blackall Saleyards reidentified with other NLIS tags. Cattle identified by utilising the Brands Database and establishing the cattle belonged to neighbouring holding. Identification through permanent brand and earmark.	
2.	Defendant stole numerous cattle including 3 bullocks from victim. 3 bullocks were clearly branded and earmarked. Cattle had been moved from various properties and when located the NLIS were missing. Identification of the cattle could only be made by brand and earmark however NLIS reports were utilised to trace the cattle to the victim's property prior to theft.	Offender deceased prior to trial.
3.	Offender stole over 200 head of cattle from neighbouring properties. Stolen cattle sold and some held for breeding. All NLIS tags removed and stolen cattle identification via brands, earmarks and DNA analysis. Brands database utilised extensively to identify livestock with permanent markings.	Convicted and sentenced to 2 years 3 months imprisonment. Restitution \$237, 611. Relinquished 109 head to victims.
4.	Two offenders charged with Criminal Code suspicion of stealing stock. Investigations identified 21 unbranded cattle in possession of both. Lack of brands and lack of compliance with biosecurity obligations created strong prosecution. The lack of brands on the cattle in possession of offenders assisted in proving investigators suspicion that they were stolen.	Both offenders entered plea of guilty, fined \$6,825 each (\$13,650), cattle forfeited to the crown.
5.	A three-year investigation into the large-scale theft of cattle from property North of Richmond. Offenders charged with the theft of 800+ cleanskin weaners. Second offender charged with the theft of 300+ cleanskin	Offender 1-Trial in June 2021 Cairns. 3 years 9-month imprisonment. Offender 2 Entered
	weaners. Witness accounts of unbranded stock being moved from the property alerted suspicion. Photograph of unbranded stock in truck taken from helicopter convinced jury.	plea of guilty and 06/04/2021, to be sentenced 12/07/2021.
6.	Offender stole 6 head of cattle. Cattle were butchered, the hides and offal dumped in bushland at Hatton Vale. MOCS (Rural) examination revealed NLIS tags had been removed. Brands identified and matched to victim. Subsequent search warrant resulted in seizure of truck, panels and cash.	Court Results- 6month Disqualified Driver Licence, \$2,460 restitution, \$6,000 fine.
7.	Offender shot and killed five head of cattle at Gregors Creek after they strayed onto his Lucerne crop. Police responded to shots fired job, identified shot cattle without NLIS tags. MOCS (Rural) examinations identified two different brands, matched back to owners of cattle on agistment on neighbouring property, confirming ownership. Offender charged with two unlawfully Kill animal and one weapons act offence.	Court results- 6 months good behaviour, \$500 fine
8.	Complainant identified via NLIS notification that one of his cattle had been sold at Beaudesert sales without his consent. MOCS (Rural) attended and inspected all cattle purchased by witness from Beaudesert Sale on that date. Identified via brands that one additional beast from mob belonged to victim and had had its NLIS tags changed. Offender located and charged with stock stealing. Two cattle recovered.	Court Results- \$800 fine, \$900 restitution.
9.	Offender stole 46 head of cattle which had come from neighbouring properties. Investigators were able to track cattle sold by offender to several feedlots and private properties. Original NLIS tags removed and offender tags placed in stock.	Convicted and sentenced to 18 months imprisonment. Ordered to pay \$43,000.00 Restitution.

Original owners of cattle identified through brands on the cattle which were not cross branded by Victim. 10. Offender unlawfully took 24 brahman cows and calves from a Fined \$1000 and neighbouring paddock and sent them to the Gympie Regional ordered to pay \$997 Council Pound. The Cattle were clearly branded and the owner restitution. was identified directly from brands. Cattle returned to neighbour and offender charged with Fraud relating to stock. 11. Biloela, a large number of cattle were found to be on the Offender 1 property without consent. Charges 5 x Responsible person Resulted in the muster of property and the impoundment of fail to give prescribed 172 head of cattle to the Banana Shire Council Pound Yards information 3 x Fail to complete Investigations resulted in a number of cattle identified through movement record brands relating to three (3) stock steal complainants. (Convicted & fined \$2,000) Of the 179 cattle, only 105 had NLIS devices fitted which were registered to 20 different Qld properties. 1 x Earmarking unbranded cattle Checks of the brands/cross brands and earmarks were made to identify ownership of the cattle. This assisted the (Convicted & fined investigations greatly and contact was made with these \$250) persons to establish offences committed. Offender 2 (Also as a result of the brands detected and inquiries resulting Charges in the majority of these cattle lawfully purchased and owned by 1 x Stealing animals the offenders, an impoundment fee of \$30,067.70 was paid to that is stock (Convicted have the lawfully owned cattle released from the council & fined \$5,000 + \$5,500 pound) restitution) 1 x Stealing animals that is stock (Convicted & fined \$1,000) 1 x Stealing animals that is stock (Convicted & fined \$1.000) 10 x Responsible person fail to give prescribed information 2 x Fail to complete movement record (Convicted & fined \$5,000) 1 x Earmarking unbranded cattle (Convicted & fined \$500) Offender unlawfully used 8 branded cows from a neighbouring 1 x Unlawful use of property to steal 5 of their cleanskin calves. Offender stock (Convicted & transported the 8 cows 24klms away and dumped them on a sentenced 1-month secluded gazetted road while he kept the calves on his own imprisonment) property. These cows were identified by their brands as proof of ownership by the victim and the cleanskin calves were DNA 1 x Stock Stealing matched back to the cows. One of the 8 cows was branded (Convicted & sentenced with offenders' brand as she was accidently dumped by him 3 -months with the rest of the cows making a direct link to the offender. If imprisonment) the cows were not branded, the witness who located them on the gazetted road would not have been able to identify the 1 x Suspicion of stock

owner and the offence would have been undetected.

Furthermore, a prosecution would not have commenced

steal (Convicted &

	against the offender as victim did not have the parentage of the	sentenced 1 -month
	cows to DNA them back to his herd.	imprisonment)
13.	Emerald Saleyards - inspected a consignment of 42 cattle offered up for sale by offender.	6 x Stealing animal that is stock 3 x Suspicion of stealing stock
	Identified several discrepancies with these cattle relating to different brands and ear marks	1 x Attempted fraud 1 x Illegal branding
	When interviewed offender stated the cattle had just turned up at his place.	1 x Restrictions on removing permanent tag
	The defendant stated he was selling all his cattle from his property and had yarded them days earlier and had branded them all with his brand and pulled all previous tags from their ears including any NLIS tags and put his NLIS tags in.	1 x Fail to ensure cattle travelled bear permanent tag 1 x Restrictions on applying permanent
	Police seized 13 head of cattle from the consignment, and from the original brands and earmarks identified 7 stock steal complainants.	tags 1 x Entering false or misleading information on a waybill 1 x Fail to ensure cattle first travelled from place of birth bear permanent tag (Convicted & sentenced 6 -months imprisonment + 18
14.	Caretaker stole 2 x stock horse both branded. Photographs of	months' probation) Offender charges: 2 x
14.	the horses clearly showing the brands used during an EROI negating identification defence. This resulted in an early plea of guilty.	Stock steal. Fined \$8200.
15.	Offending person was the neighbour of victim. Stole branded cows and calves. Offender cross branded the cattle before they were located at offender's address. Stolen cattle had NLIS tags and management tags removed. This matter resulted in an early plea of guilty due to the cattle being branded.	Offender charges: Stock steal, Illegal branding, removing NLIS devices. 9 month probation – fined \$400.
16.	Caretaker stole a number of unbranded calves (80) and branded them and sold them as his own. NLIS devices were not lawfully applied and used to attempt to disguise the offence. Cattle located and identified by brand as converted to own use.	Offender charges: 5 x stock steal, 30 suspicion of stock steal - fined \$14000
17.	Offender stole 15 head from neighbour. This offence was only discovered due to Brands. Complainant had a registered brand (+VN) and Offenders wife registered a brand (+VM). Offender then commenced to steal cattle from complainant and use a No. 1 brand to change the "N" to an "M" This offence would not have been identified had brands not been mandatory. The brands were integral part of the successful prosecution.	Offender pleaded guilty to stealing 15 head of cattle.
18.	Offender put cattle into the Dingo Park Feedlot. One brand was recognised by a feedlot worker and believed to be suspicious. MOCS rural were called and due to the brands on cattle, 14 head were recovered belonging to seven different victims. This offence would have gone undetected and most likely escalated had the Brands system not been in place	Plea of guilty.

Attachment 5 - Registered cattle earmark districts

Queensland is divided into registered cattle earmark districts. Earmarks may only be used within the district they are registered.

