

Place-value economic development in remote Queensland



Rural Economies
Centre of Excellence

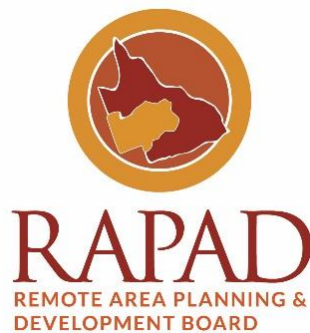
A case study of partnerships, collaboration and cooperation

Research Paper

Thea Voogt

This Research Paper is dedicated to the people who call Central West Queensland home.

It is a tribute to their resilience, innovation and strong sense of community. Above all, this Research Paper is a tribute to their love of country that remains stronger than the impact of even the longest drought cycle.



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-

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Acronyms

ABARES	Australian Bureau of Agricultural and Resource Economics and Sciences
ABS	Australian Bureau of Statistics
ARIA+	Accessibility and Remoteness Index of Australia
ASIC	Australian Securities and Investments Commission
LES	Longreach Wild Dog Exclusion Fence Scheme
LRC	Longreach Regional Council
QFPI	Queensland Feral Pest Initiative
QTC	Queensland Treasury Corporation
RAPAD	Central Western Remote Area Planning and Development Board
RAPADCS	RAPAD Cluster Fencing Grant Scheme

Key definition

Place-value economic development

Place-value economic development is a form of place-based development.

Place-value economic development places a particular community and the self-identified potential of that community and place (area) at the centre.

Place-value economic development results in cooperation-focused regional economic development strategies built around the unique value and potential of a place.

Executive summary

Place-value and ‘partnership, collaboration and cooperation’-focused development in remote areas

Place-based rural and regional development is an important and key strategy for building and sustaining regional communities in Australia.

The key foundational principle of contemporary regional development in Australia is ‘partnerships, collaboration and cooperation’ between the government, the private sector and communities. The involvement of a range of stakeholders in regional development processes means there is greater potential for community ‘ownership’ of infrastructure, growth and innovation projects, and of the pooling of resources to reach mutually beneficial outcomes.

Place-value economic development is a form of place-based development that places a particular community and the self-identified potential of that community and place (area) at the centre. Place-value economic development results in cooperation-focused regional economic development strategies built around the unique value and potential of a place.

This Research Paper uses the concept of ‘place-value economic development’ to illustrate the potential of a community-led, and government-supported, remote area economic development strategy that is conceptualised around the historical and inherent agricultural value of the sheep and wool industry in Central West Queensland. This place-value-focused strategy – ‘Bring back the sheep’ – relies on the participation of a range of stakeholders. In return, an even broader range of stakeholders stand to benefit.

The case studies

This Research Paper undertakes two case studies to explore different conceptions of partnerships, collaboration and cooperation in reference to the application of two policy tools – loans and grant funding – in very remote area development.

The setting of the case studies is the RAPAD region of Central West Queensland. The case studies are focused on the construction of exclusion fences as the essential element of the ‘Bring back the sheep’ economic development strategy. Wild dogs are pest animals and exclusion fences are an important tool in wild dog management. Exclusion fences are infrastructure that benefits landholders, communities and the government in the context of pest management.

The case studies are:

1. The loan-based Longreach Wild Dog Exclusion Fence Scheme (LES) and
2. The RAPAD Cluster Fencing Grant Scheme (RAPADCS).

The two exclusion fencing schemes employ different policy tools – a long term loan and grant funding respectively – to facilitate the construction of exclusion fences on privately owned land. Overall, the net cost to the government of using the policy tools are low, but both have the potential to deliver high returns in very remote communities.

The LES involves a long term, low interest rate loan from the Queensland Treasury Corporation to the Longreach Regional Council (LRC). The LRC uses the loan to build exclusion fences on private property and landholders repay the LRC over a twenty year period through special rates. In the RAPADCS, groups of landholders apply for grant funding that subsidises their cost of material to construct an exclusion fence over a cluster of participating properties. In many cases, landholders

build the fences themselves. Their in-kind contribution counts toward their own co-contribution, which is a requirement to participate in the scheme.

The LES and RAPADCS are characterised by a high level of cooperation between the state, local government, a regional body and landholders that extends to several areas:

- Funding
- Governance, accountability and reporting
- Pest management, and
- Facilitative infrastructure investments focused on region-wide economic growth.

The relevance of the case studies to other infrastructure investment projects

In order to find the most appropriate legal framework, financing alternative and business model for infrastructure investment projects that involve multiple stakeholders, it is important to understand:

- The nature of the infrastructure asset
- What the asset does, and
- Who benefits from the asset, both directly and indirectly.

Whether in reference to exclusion fencing or other infrastructure investment projects, an analysis of these factors provides a clear delineation between decision rights, ownership rights, ownership obligations and control rights in multi-stakeholder infrastructure investment projects, that:

- Are an indicator of the complexity of the arrangement between the parties
- Drives the choice of legal structure most suited to the investment
- Identifies the risks associated with the project from different perspectives
- Matches investments to returns.

The case studies consider the nature of exclusion fences as infrastructure assets, the funding models applied, and the level of practical, social and financial cooperation required to achieve the desired outcomes. Furthermore, the case studies provide insights into the role and efficacy of loans and co-funding grants in infrastructure investments in remote and very remote areas.

The systematic approach used to analyse the application of long term loans and grant funding as policy tools in the context of 'partnerships, collaboration and cooperation', serves as a blueprint for the assessment of government involvement in other privately-owned infrastructure investment projects that have the potential to drive economic growth in communities.

Key risk areas explored

The case studies identify and explore key risk areas of government-funded or government-facilitate infrastructure investments.

Firstly, the Research Paper analyses the **private benefits that arise from subsidised private infrastructure investments** that are the inevitable result of grant funding, and the **private benefits that arise from very long alternative payment terms to enable infrastructure investments**. The paper contrasts these private benefits with the net public benefits that arise from exclusion fences and assesses alternative strategies to deal with the private benefits that arise from the two schemes in the case studies.

Secondly, the Research Paper pinpoints the **financial risks** present in the two schemes and explains how existing regulatory processes are able to limit the **credit risk borne by local government authorities** when they act as funding agent between the state and private enterprise.

Thirdly, time plays an important role in the two case studies, and has different cost and time value of money implications for the different parties to the funding arrangement. The **systematic analysis of 'time' in each case study reveals the advantages and disadvantages of loans and grant funding** as policy tools.

The fourth key risk associated with fencing is **freeriding**. The case studies explore different forms of freeriding namely: freeriding in the construction of a fence; monitoring and maintenance freeriding; and differential payment-based freeriding. The paper points out that there are **extensive regulatory processes to deal with freeriding associated with dividing fences** and contrasts this position to the higher risk of freeriding that is present in other infrastructure investment projects such as those associated with telecommunication and energy.

The fifth important aspect of the Research Paper is the process required to **identify the most appropriate legal framework and business model for infrastructure investment projects that involve multiple stakeholders**. The paper illustrates how important it is to understand the nature of the asset, what it does, and who benefits from the asset, both directly and indirectly.

Key comparisons between the LES and RAPADCS

- The LES and RAPADCS both aim to facilitate place-value economic development in a very remote area of Queensland
- The time that it takes to construct an exclusion fence on one property (LES) is similar to the time it takes to construct an exclusion fence over more than one property, referred to as a cluster fence (RAPADCS)
- The term to repay the LES loan from the perspective of the LRC and participating graziers is 20 years. That is different to the cash flow timing in the RAPADCS, as the grant funds transfer to cluster participants conclude when the construction of the cluster fence is completed. In the event that participants in the RAPADCS require debt to fund their contribution to construct the fence, their own funding arrangement is a private matter
- Participants in the LES are liable for the full cost of the fence plus interest, repaid over a 20 year period. They benefit from the time value of money that reduces their overall cost
- Participants in the RAPADCS benefit from a lower cash outlay due to the grant funding that subsidises cost of the material required to construct the fence and because they participate in the construction of the fence and their in-kind contributions are recognised in the overall project proposal and budget
- The LES is not premised on cooperation between landholders. The requirement that RAPADCS participants must use one legal entity to access grant funding, facilitates and enforces cooperation between them
- The grant-funded RAPADCS results in the distribution of cash from the government to private landholders. There is no net cash outflow for the government in the LES
- There is no credit risk associated with the RAPADCS, except to the extent that individual landholders have to use debt funding to pay for some of the fence construction, but the risk is borne by financial institutions and not parties to the cluster arrangement

- The credit risk in the LES is borne by the LRC, but the risk is low as the LRC is a preferred creditor through the regulatory device that facilitates the special rates repayment scheme
- Partnerships, collaboration and cooperation are an essential part of both schemes and involve the government and landholders
- As long as participants pay their special rates in the LES, no private benefits arise in the hands of landholders, except that they benefit from the time value of money as they pay special rates over 20 years, and to the extent that the interest on the QTC loan to the LRC is low
- The grant funding in the RAPADCS reduces the landholder cost of constructing the cluster fence. In that way, private benefits accrue directly to landholders
- Grant funding may lead to increased spending on cluster fences and other infrastructure, due to the direct financial support that primary producers receive through grants.

Is there a clear winner?

The LES and RAPADCS illustrate how community-led and government-supported place-value economic development strategies and policy tools are able to operate effectively, using different conceptions of partnerships, collaboration and cooperation. Both schemes achieve the intended outcome, which is to construct exclusion fences on a large scale and over a relatively short timeframe to address the problem of wild dogs which in turn, has the potential to ‘Bring back the sheep’ to Central West Queensland. The ‘place value’ of this remote region is linked to the agricultural history and place-potential of sheep and wool industries.

The novel approaches taken in the LES are:

- The role of the LRC in using economies of scale to purchase fence construction material
- The manner in which the LRC’s credit risk is addressed through the regulatory device of special rates
- The long special rates repayment period of 20 years that results in a relatively low annual payback burden for graziers who may already have high debt, are destocked, and need time to build their flocks. In particular, grazier have no special rates payments for the first two years, and interest-only special rates for three years thereafter
- From a government perspective, the scheme entails a loan that is repaid in full, albeit over a long period and at a low interest rate.

The novel approaches taken in the RAPADCS are:

- The extent to which graziers quantify and place a value on their in-kind contributions to construct the fences themselves, to meet the co-contribution requirement to apply for grant funding which is aimed at meeting the majority of the costs of material
- The choice of the new separate legal entity that clusters use as the vehicle to facilitate the flow of grant funding. The choice of an incorporated association fits the very limited shared control and ownership rights present in cluster fences
- The requirement that clusters of graziers apply jointly for grant funding through a collaborating agency. Using this approach, the private benefits of grant funding that accrue to one grazier is moderated, and an additional governance layer is introduced to this form of state support.

The risks and burden associated with freeriding and fence maintenance are present in both schemes. However, the extensive regulatory processes to deal with disputes over dividing fences, and graziers’ practical experience with fence repair and maintenance act as counter balance.

1 Introduction

Regional Australia is key to the national economy through agriculture, forestry and fishing, mining, tourism, and gas and electricity generation. Regional Australia produces approximately 40 per cent of the national economic output. Its prosperity is fundamental to the retention of strong communities and to the functioning of cities.¹

There is no denying that regional Australia is sparsely populated compared to major cities. Melbourne and Sydney are home to about 40 per cent of Australia's population. Similarly, other capital cities continue to grow.² In Queensland, close on 83 per cent of the State's population live in major cities and inner regional areas.³

Regional development policy is characterised by the tension present in a multilayered governance hierarchy in which the three tiers of government play a complementary and competing role. Inevitably, regions compete for resources against densely populated cities. But allocating resources to regional Australia using a 'one-size-fits-all' approach is similarly ineffective due to the diversity of the regions themselves. Striking the right balance between distance and population size in regional development remains elusive.⁴

It is within this dynamic contemporary regional development context that this Research Paper considers the role of partnerships, collaboration and cooperation in infrastructure investment projects in very remote Central West Queensland. In particular, the paper uses the construction of exclusion fences for a case study approach to compare the role of two policy tools – loans and grant funding – in a community-focused economic development strategy that was formulated around the historic and inherent agricultural value of Central West Queensland: the sheep and wool industry.⁵

2 Place-based vs people-focused regional development

As is the case nationally, regional Queensland makes a significant contribution to the economic, social and environmental development of the State.⁶ The relative contribution of each part of regional Queensland is dependent upon a range of factors that include the availability of infrastructure, climatic conditions, industry focus and dependency, distance from major centres and the distribution and availability of human capital. These factors also play a role in the equitable allocation of Commonwealth and State resources and in policy development.

¹ House of Representatives Select Committee on Regional Development and Decentralisation, Parliament of Australia, *Regions at the Ready: Investing in Australia's Future* (Report, June 2018) xxv; Commonwealth, *Regions 2030: Unlocking Opportunity* (Report, 2017) 2; Commonwealth, *A Message from the Minister* (Regional Growth Fund Guidelines, 2018).

² House of Representatives Select Committee on Regional Development and Decentralisation, Parliament of Australia, *Regions at the Ready: Investing in Australia's Future* (Report, June 2018) iii.

³ See Table 1.

⁴ Commonwealth, *Regions 2030: Unlocking Opportunity* (Report, 2017) 2, 4; House of Representatives Select Committee on Regional Development and Decentralisation, Parliament of Australia, *Regions at the Ready: Investing in Australia's Future* (Report, June 2018) 17–18; 127–30; 137–8.

⁵ See, eg, Commonwealth, *Regions 2030: Unlocking Opportunity* (Report, 2017) 3; House of Representatives Select Committee on Regional Development and Decentralisation, Parliament of Australia, *Regions at the Ready: Investing in Australia's Future* (Report, June 2018) 19, 70–2.

⁶ Hurriyet Babacan and Allan Dale, 'Emerging Rural/Regional Policy considerations for Queensland' (Policy Development Paper, Rural Economies Centre of Excellence, February 2019) 2.

Spatial, or geographical economic and infrastructure developments (place-based) are often designed in reference to distance, to provide and maintain access to universal services such as roads, education, training, telecommunication systems and recreational facilities.⁷ Human capital-driven (people-focused) economic and infrastructure developments must, of necessity, consider population density quantitatively against some benchmark or comparison.

Place-based development is often regarded as a preferred option for regional development.⁸ Place-based rural and regional development is a key strategy for building and sustaining regional communities in Australia.⁹ Place-based and people-focused development have a symbiotic relationship. People-focused investments in capacity building through education, training and leadership development and investing in human capital through service delivery, help to ensure that communities remain in regional areas, but likely only when they are enabled to do so by the necessary infrastructure.¹⁰

There are also competing forces at play between place-based and people-focused resource allocation. While infrastructure investments are required to provide basic universal services for everyone, the cost of doing so in remote regions may not be equitable when viewed from the perspective of large populations that are concentrated in cities.¹¹ The argument that place-based regional development is more important than people-focused development because it has the potential to address congestion in cities (people-focused problems), is predicated on the belief that better infrastructure and access to services might encourage people and businesses to relocate to regions. Convincing businesses and individuals to relocate to remote and very remote regions is a different matter altogether.¹²

Research has shown that remote and very remote regions have unique challenges with economic and social viability, declining populations, and a lack of infrastructure and access to services. There is a high cost of doing business in remote regions and some evidence of a high cost of living.¹³ Albeit that the efficacy of these measures is questionable in the long run, tax law is often used as a policy tool to compensate businesses and individuals when they choose to be located in remote areas of Australia. For example, businesses are able to benefit from the creation of special economic zones and discounts or exemptions from payroll tax; individuals benefit from the zone tax offset and fringe benefits tax remote area concessions that are all currently under review.¹⁴

These targeted measures rely on measurable concepts of remoteness. In identifying emerging regional policy considerations for Queensland through the Rural Economies Centre of Excellence,

⁷ House of Representatives Select Committee on Regional Development and Decentralisation, Parliament of Australia, *Regions at the Ready: Investing in Australia's Future* (Report, June 2018) 127–8.

⁸ See, eg, Productivity Commission, *Remote Area Tax Concessions and Payments* (Draft Report, August 2019) 18, 108, 172–3; Fabrizio Barca, Philip McCann and Andrés Rodríguez-Pose, 'The Case for Regional Development Intervention: Place-Based versus Place-Neutral Approaches' (2012) 52(1) *Journal of Regional Science* 134, 139–40; Fabrizio Barca, *An Agenda for a Reformed Cohesion Policy: A Place-Based Approach to Meeting European Union Challenges and Expectations* (Independent Report, April 2009); World Bank, *Reshaping Economic Geography* (Report, 2009).

⁹ See, eg, House of Representatives Select Committee on Regional Development and Decentralisation, Parliament of Australia, *Regions at the Ready: Investing in Australia's Future* (Report, June 2018) 127; Commonwealth, *Building Stronger Regional Communities 2019-20* (Statement, 2 April 2019) 7, 51, 53, 146, 121.

¹⁰ House of Representatives Select Committee on Regional Development and Decentralisation, Parliament of Australia, *Regions at the Ready: Investing in Australia's Future* (Report, June 2018) 79–82.

¹¹ House of Representatives Select Committee on Regional Development and Decentralisation, Parliament of Australia, *Regions at the Ready: Investing in Australia's Future* (Report, June 2018) 79–82.

¹² House of Representatives Select Committee on Regional Development and Decentralisation, Parliament of Australia, *Regions at the Ready: Investing in Australia's Future* (Report, June 2018) 43.

¹³ See, eg, Productivity Commission, *Remote Area Tax Concessions and Payments* (Draft Report, August 2019) 83, 100; Commonwealth, *Australian Infrastructure Plan: Priorities and Reforms For Our Nation's Future* (Report, February 2016, Infrastructure Australia) 138; Hurriyet Babacan and Allan Dale, 'Emerging Rural/Regional Policy considerations for Queensland' (Policy Development Paper, Rural Economies Centre of Excellence, February 2019) 8; Sally Shortall and Margaret Alston, 'To Rural Proof or Not to Rural Proof: A Comparative Analysis' (2016) 44(1) *Politics & Policy* 35, 40, 45.

¹⁴ Productivity Commission, *Remote Area Tax Concessions and Payments* (Draft Report, August 2019) 18.

Babacan and Dale highlight the inconsistencies in, and the lack of one uniform definition, to distinguish between ‘rural’, ‘regional’ and ‘remote’.¹⁵

In this Research Paper, relative remoteness is important in order to understand the challenges that remote and very remote Queenslanders face.

3 Regional, rural and remote Queensland

The Australian Bureau of Statistics (ABS) uses five classifications of remoteness derived from the Accessibility and Remoteness Index of Australia (ARIA+): major cities, inner regional, outer regional, remote and very remote.¹⁶

This Research Paper adopts this classification to demonstrate aspects of remoteness in reference to Central West Queensland. The ‘remoteness distribution’ of areas across Australia (Figure 1),¹⁷ and Queensland (Figure 2),¹⁸ demonstrate large areas are considered very remote.

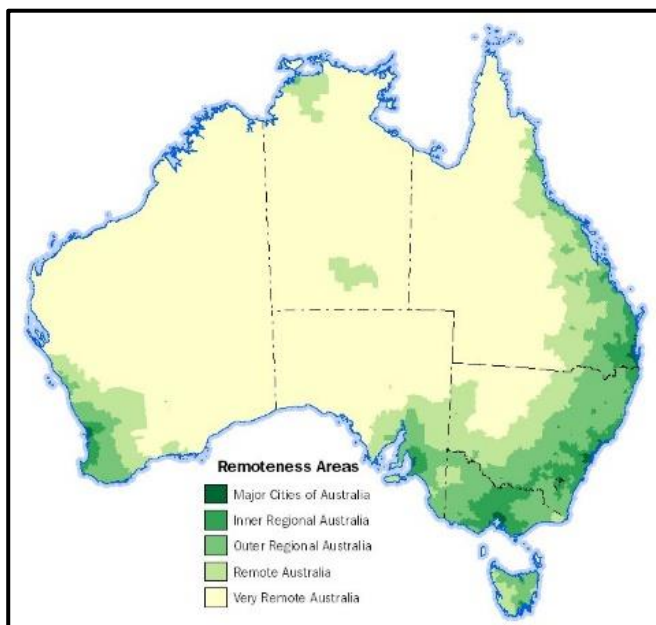


Figure 1 – Remoteness Areas Australia



Figure 2 – Remoteness Areas Queensland

Table 1 focuses on Queensland’s population distribution based on ‘remoteness’. This table includes data on the top five responses in percentage terms, of the industries that individuals are employed in. In remote and very remote areas of Queensland, employment in the beef cattle industry and in the public sector and local government dominate.

¹⁵ See, eg Hurriyet Babacan and Allan Dale, ‘Emerging Rural/Regional Policy considerations for Queensland’ (Policy Development Paper, Rural Economies Centre of Excellence, February 2019) 4, 8–10; Sally Shortall and Margaret Alston, ‘To Rural Proof or Not to Rural Proof: A Comparative Analysis’ (2016) 44(1) *Politics & Policy* 35, 40.

¹⁶ Australian Bureau of Statistics, *Australian Statistical Geography Standard (ASGS): Volume 5 – Remoteness Structure* (Catalogue No 1270.0.55.005, July 2016).

¹⁷ Australian Bureau of Statistics, *The Australian Statistical Geography Standard (ASGS) Remoteness Structure* (15 March 2018).

¹⁸ Queensland Government, ‘Queensland Health Rural and Remote Areas’ (Web page, 1 June 2014) <<https://www.health.qld.gov.au/mass/subsidy-schemes/rural-remote>>.

Reflecting on Figure 2 and Table 1, remote and very remote areas of Queensland are very large geographically, but population numbers are very low. In total, only 2.6 per cent of the population of Queensland live in remote and very remote areas. The practical reality of distance means that the necessary infrastructure to provide basic services such as access to schools, cannot always be shared between or centralised in country towns in remote and very remote areas. Place-based infrastructure investments to provide a universal suite of basic services across all remote and very remote areas of Queensland are thus caught up in the complex web of scarce resources, overlapping responsibilities between the three tiers of government, and rising community expectations in both cities and sparsely populated areas.

	Australia	Queensland	Very remote	Remote	Outer regional	Inner regional	Major cities
Population size	23,401,886	4,703,197	52,725	71,329	667,634	941,836	2,957,011
% of total population		100%	1.1%	1.5%	14.2%	20.0%	62.9%
Median weekly household income	\$1,438	\$1,402	\$1,179	\$1,417	\$1,281	\$1,172	\$1,516
Top 5 responses – industry of employment							
Accommodation	1.1%	1.4%		4.5%	2.3%		
Aged Care Residential Services	2.0%	1.9%				2.5%	
Bauxite Mining		10.0%	4.0%				
Beef Cattle Farming	0.4%	0.8%	14.8%	10.4%			
Cafes and Restaurants	2.2%	2.5%					2.6%
Coal Mining	0.4%	1.2%		6.2%	3.3%		
Copper Ore Mining	0.1%	0.1%		5.6%			
Hospitals (except Psychiatric)	3.9%	4.3%	4.9%		4.2%	4.0%	4.4%
Local Government Administration	1.3%	1.4%	9.7%				
Primary Education	2.2%	2.5%	3.7%	3.4%	2.9%	3.1%	2.3%
Secondary Education	1.7%	1.7%				2.3%	
Supermarket and Grocery Stores	2.4%	2.4%			2.7%	2.7%	2.3%
Takeaway Food Services	1.8%	2.0%					2.0%

Table 1 – Queensland population and industry of employment by Remoteness Area

The simple fact is that infrastructure investments measured on a per capita basis, will always reveal paradoxical inequities: it is too large when compared to cities, but never enough. It is submitted that new infrastructure investments in remote and very remote areas, which are meant to drive economic prosperity cannot be justified unless the expenditure is relatively small and the returns sufficiently high in reference to a particular place or community, or unless the economic outcomes are scalable to larger centres or more people without significant further investment.

4 Contemporary regional development thinking

The difficult balancing act between the allocation of scarce resources and community expectations is thus a tale of compromise, or perhaps (cynically) mere acceptance. In order to reach a compromise, stakeholders should participate in the process. In order to accept a compromise, stakeholders should have sufficient information to understand the position.

It is set against this backdrop, that this Research Paper focuses on the key foundational principle of contemporary regional development in Australia, which is 'partnerships, collaboration and cooperation' between the government, the private sector and communities. The involvement of a range of stakeholders in regional development processes means there is greater potential for community 'ownership' of infrastructure, growth and innovation projects, and of the pooling of resources to reach mutually beneficial outcomes.¹⁹

This Research Paper explores a community-led partnership-approach to development in remote and very remote areas that simultaneously forces and allows a community the freedom to define the particular value that is associated with 'their place'. In doing so, the place-based value acts as the springboard for growth and innovation with the support/backing of the community.

Partnerships, collaboration and cooperation have different meanings in general, and in a regional development context. They do not necessarily imply that decisions or control rights are shared. But it is fair to assume that each party will seek to achieve their own specific goals. As a result, each of them will have to weigh up the extent to which they are willing to compromise and give up some of their decision or control rights, or may find that they are in a position to obtain new decision-, control- or ownership-rights through the process.

For example, in a regional development context, it may be entirely reasonable for the state to retain virtually all control and ownership rights over large key infrastructure projects. On the other hand, policy initiatives that rely on the actions of communities or individuals to plan and execute projects, may require nothing more from the state than clear governance and accountability processes and some form of facilitative funding. In the case of low cost projects aimed at addressing place-specific needs, problems or opportunities, it is submitted that there is merit in allowing communities and local government authorities the freedom to develop projects to suit their particular needs with little government intervention. Doing so gives voice to the value inherent in that particular place or community. What may be regarded as very low state expenditure in reference to the overall size of federal and state budgets, may constitute significant funding for remote and very remote communities if the funds address targeted problems, provide universal access to infrastructure and services, leverage the value proposition in a place, or assist in some way to address the increasing financial vulnerability of rural and remote councils.²⁰

Partnership-, collaboration- and cooperation-based regional development approaches that recognise that remote communities and their economic circumstances differ,²¹ have the potential to identify projects with high returns for communities, but not necessarily high overall costs for the state. State involvement could entail governance and oversight to ensure accountability, leaving remote communities free to forge local partnerships to solve localised mutual problems, drawing from the inherent value in a particular place.

This Research Paper uses a case study approach to compare two different policy tools in a community-focused economic development strategy that was formulated in reference to the

¹⁹ House of Representatives Select Committee on Regional Development and Decentralisation, Parliament of Australia, *Regions at the Ready: Investing in Australia's Future* (Report, June 2018) 19, 70–2; Commonwealth, *Regions 2030: Unlocking Opportunity* (Report, 2017) 3.

²⁰ AEC, *Assessment of the Financial Vulnerability of Rural and Remote Queensland Councils* (Report, September 2018) 6–11.

²¹ Productivity Commission, *Remote Area Tax Concessions and Payments* (Draft Report, August 2019) 7, 100.

historical and inherent agricultural place-value of a very remote area of Queensland. This strategy relies on the construction of new privately-owned infrastructure in the form of exclusion fencing, funded predominantly by landholders and facilitated by the state through the policy tools of a loan and grant funding.

5 Purpose of the case studies

The research undertakes two case studies on the construction of exclusion fences:

- The loan-based Longreach Wild Dog Exclusion Fence Scheme (LES) and
- The RAPAD Cluster Fencing Grant Scheme (RAPADCS).

The purpose of the case studies is to analyse different conceptions of partnerships, collaboration and cooperation in reference to the application of two policy tools – loans and grant funding – in very remote area development in Queensland. Both policy tools are used to facilitate the construction of privately-owned infrastructure as the centrepiece of a community-led economic development plan. Overall, the net cost to the government of using the policy tools are low, but both have the potential to deliver high returns for very remote communities.

The case studies:

- Examine external factors that may impact economic development
- Explain how the nature of infrastructure assets – what it does and what it is meant to achieve – plays a role in the practical application of partnership, cooperation and collaboration as the foundational principle of contemporary regional development
- Explore different strategies to deal with private benefits that arise from government-funded, or government-facilitated privately-owned infrastructure
- Contrast the management and financial risks borne by each of the parties to the loan and grant-funded infrastructure investment projects
- Compare the overall cost of new infrastructure investments using loans and grant funding
- Consider experiences of a business model that requires the establishment of a new legal entity to formalise a form of partnership, collaboration and cooperation
- Examine different conceptions of partnerships, collaboration, cooperation and ‘clustering’.

By considering the nature of an infrastructure asset and the funding model, and the appropriate level of practical, social and financial cooperation required to achieve the desired outcomes, the case studies provide insights into the role and efficacy of loans and co-funding grants in infrastructure investments in remote and very remote areas.

This systematic approach to analyse the application of policy tools in the context of ‘partnerships, collaboration and cooperation’, serves as a blueprint for the assessment of other privately-owned infrastructure investment projects that have the potential to drive economic growth in communities.

6 Understanding the setting of the case studies

Queensland is divided into nine regions, of which Central West Queensland is one.²² Central West Queensland is made up of a number of local government areas. Seven of these local government areas are grouped in what is commonly referred to as the RAPAD region.

RAPAD is the acronym for the Central Western Remote Area Planning and Development Board, an ASIC listed, not-for-profit, regional development organisation owned by and representing the:

- Barcaldine Regional Council
- Barcoo Shire Council
- Blackall-Tambo Regional Council
- Boulia Shire Council
- Diamantina Shire Council
- Longreach Regional Council and
- Winton Shire Council.²³

The RAPAD region makes up 23 per cent of the land area of Queensland, spanning 396,609 km² as depicted in Figure 3.

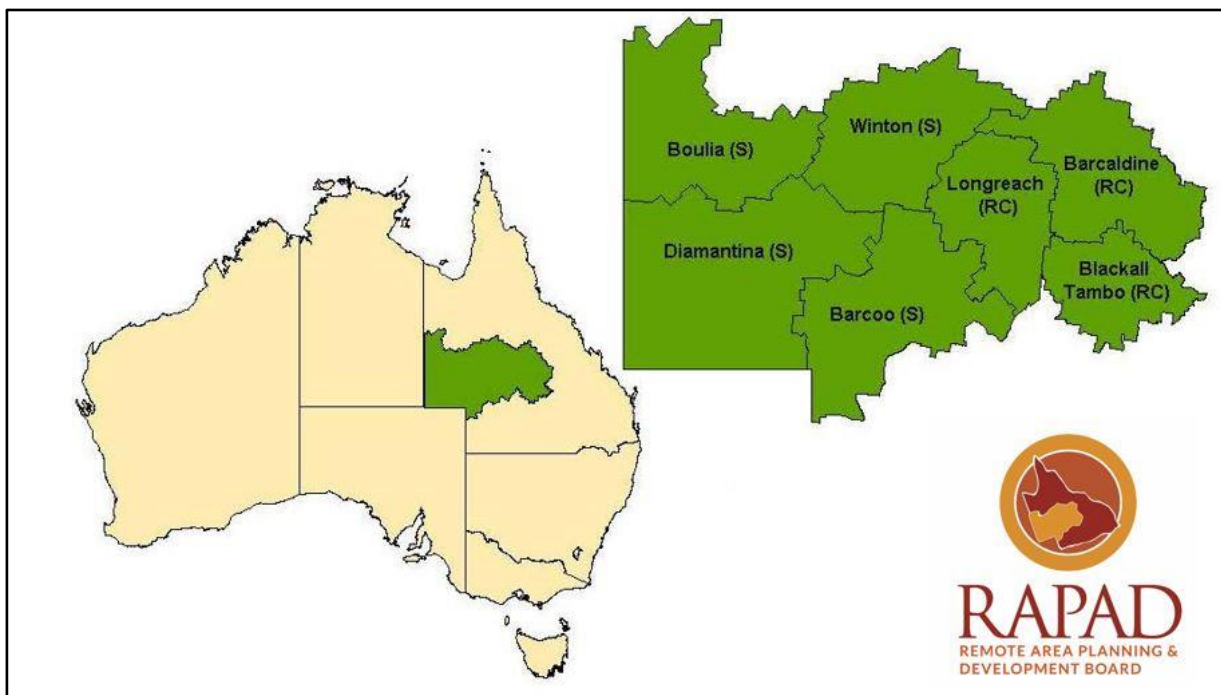


Figure 3 – The RAPAD region of Queensland

²² Queensland Government, 'Queensland Regions' (Web page, 8 May 2017) <<https://www.business.qld.gov.au/industries/invest/regional-opportunities/queensland-regions>>.

²³ RAPAD, *RAPAD Annual Report 2018 – 2019* (Report, 2019) 4–5.

The population of the RAPAD region stands at approximately 10 500. The distribution of the population and the top industries of employment across each of the seven local government areas are presented in Table 2.²⁴

	Barcardine Regional Council	Barcoo Shire Council	Blackall- Tambo Regional Council	Boulia Shire Council	Diamantina Shire Council	Longreach Regional Council	Winton Shire Council
Total population = 10,554							
Population size	2,865	272	1,903	429	291	3,660	1,134
Median weekly household income	\$1,149	\$1,187	\$978	\$1,271	\$1,767	\$1,276	\$1,067
Top 5 responses – industry of employment							
Accommodation		4.20%			6.90%		4.20%
Beef Cattle Farming	26.90%	38.20%	25.60%	59.60%	30.50%	6.90%	18.10%
Fuel Retailing					6.10%		
Hospitals (except Psychiatric)	5.80%		5.20%			5.80%	5.50%
Local Government Administration	5.80%	34.70%	10.40%	15.70%	26.70%	5.20%	13.40%
Primary Education		4.90%	3.10%	11.20%		3.10%	
Combined Primary and Secondary Education	4.10%						
Pubs, Taverns and Bars					5.30%		
Road and Bridge Construction	3.90%			4.50%			
Sheep-Beef Cattle Farming		3.50%					4.40%
Supermarket and Grocery Stores			3.10%	2.20%		3.30%	

Table 2 – RAPAD region population and industry of employment

²⁴ Australian Bureau of Statistics, *Winton (S)* (2016 Census QuickStat, Code LGA37400 (LGA), 23 October 2017); Australian Bureau of Statistics, *Longreach (R)* (2016 Census QuickStat, Code LGA34710 (LGA), 23 October 2017); Australian Bureau of Statistics, *Diamantina (S)* (2016 Census QuickStat, Code LGA32750 (LGA), 23 October 2017); Australian Bureau of Statistics, *Boulia (S)* (2016 Census QuickStat, Code LGA30900 (LGA), 23 October 2017); Australian Bureau of Statistics, *Blackall-Tambo (R)* (2016 Census QuickStat, Code LGA30760 (LGA), 23 October 2017); Australian Bureau of Statistics, *Barcoo (S)* (2016 Census QuickStat, Code LGA30450 (LGA), 23 October 2017); Australian Bureau of Statistics, *Barcardine (R)* (2016 Census QuickStat, Code LGA30410 (LGA), 23 October 2017).

These data presented in Table 2 reveal two key points:

- In terms of employment, the region relies on the beef industry and jobs in local government and government services, particularly in schools and hospitals
- None of the council areas have a population greater than 5,000. Therefore, there is no doubt that the entire region is classified as 'very remote'.

In reference to employment, the retention of decentralised government services in remote and very remote areas is a vexing question that is, in many ways, caught up in the place-based infrastructure development quagmire:

- Can it be justified to expend or remove resources to have government facilities and staff present in very remote areas where low numbers of people are present to access services?

Secondly, while employment in the beef cattle industry dominates, the sheep and wool industry has been part of the region since settlement.²⁵ Over time, there has been a shift away from sheep, to beef production in Central West Queensland, and to larger properties with fewer families. Between 1991 and 2018, sheep numbers in the Central West have declined from an estimated 2 million to 450,000.²⁶ The dramatic decline started in 1991 when the Australian wool reserve price scheme was abandoned, removing the floor price of wool. As a result of the release of accumulated stocks and other factors, the industry collapsed.²⁷ More recently, environmental factors – drought and wild dogs – have also contributed to a shift away from sheep.

The climate, geography and vegetation of traditional 'sheep country' around Barcaldine, Longreach and Blackall are however well-suited to sheep and wool production. Its place-value is linked to the agricultural history and place-potential of sheep and wool industries.

Using the 'value of a place' as an important contribution that a community can make to partnership, collaboration and cooperation-focused regional development, it is easy to see how the key economic development strategy that is currently employed in the RAPAD region, which is to 'Bring back the sheep', is focused on specific place-value.²⁸

'Bring back the sheep' is an integrated RAPAD region economic development strategy that has two main objectives. Firstly, job creation. Secondly, improvements in the profitability of local businesses in order to drive economic prosperity across the region.

The aspirational goals of the 'Bring back the sheep' strategy are to:

- Increase sheep numbers to 1 million over ten years
- Create more than 170 new jobs in the sheep industry
- Increase regional gross margin by more than \$13.6 million
- Increase wages generate directly from shearing and crutching by \$4.3 million.²⁹

²⁵ See, eg, Robert Mason and Rebecca Damjanovic, 'The Start of it All? Heritage, Labour and the Environment in Regional Queensland' (2018) 25(2) *Queensland Review* 208, 208–18.

²⁶ RAPAD, 'Part 1 The Challenge' (Web page) <<https://notjustafence.org/>>.

²⁷ See, eg, Malcolm Abbott. 'Market Support Schemes and Their Interaction: The Case of the Wool Industry' (2013) 52(3) *Agriculture Economics Association of South Africa* 63, 67–9.

²⁸ RAPAD, *RAPAD Annual Report 2018 – 2019* (Report, 2019) 2; AJ Brown and JA Bellamy, 'In the Shadow of Federalism: Dilemmas of Institutional Design in Australian Rural and Remote Regional Governance' (2001) 16(2) *Australasian Journal of Regional Studies* 151, 158.

²⁹ RAPAD, 'If RAPAD EOI Successful One Million Sheep Put Back Into the West' (Media Release, 17 August 2017); RAPAD, 'RAPAD Releases EOI to Capture Continues Fencing Demand in the Region' (Media Release, 22 May 2017).

6.1 Factors that impact economic development in Central West Queensland

There are two significant factors that impact the economic development of the sheep industry in Central West Queensland:

1. Drought and
2. Wild dogs.

The entire region has been drought declared since 2014. Drought is a key contributor to rural outmigration.³⁰ In the RAPAD region:³¹

Depopulation remains as the number one threat to the long term sustainability of all RAPAD communities and the industries they grow. As the population declines, so do services provided and as families with children leave town, lower numbers at the school mean fewer teachers are needed and if the teacher has children, more children leave, and so a negative social spiral starts. The flow-on effects are complex and intertwined, and once started, the momentum of a negative economic and social spiral is difficult to halt.

While families are exiting the region aged care participants are moving in. Community exit has the effect of enhancing an already increasingly ageing demographic, while the existing and emergent workforce recedes.

From 2011 to 2016, the population decline across the region, which can be attributed to the drought in large part, has been staggering. In the Longreach council area, the decrease was 13%; in Blackall-Tambo 15%; Barcoo shire 25%; and Winton 16%.³² The effects of the long and crippling drought has thus spilt over into all spheres of the community: cash poor graziers spend less and employ fewer people; small business' turnovers reduce with resultant job losses and cash flow pressures for business owners; people who live in the region are forced to earn income outside of the region; mental health concerns, particularly for farmers; fewer people to volunteer in the community; school communities shrink.

In so far as the drought is concerned, there is only one solution: it must rain in Central West Queensland.

7 Wild dogs in Queensland

The second environmental factor that plays a key role in agricultural prosperity in the region, is the presence of wild dogs, classified as a major pest. The livestock losses that primary producers suffer as a result of wild dog attacks, the cost of wild dog management on their properties, and the emotional impact of the constant threat of wild dogs on landholders and their families, are significant. While beef producers do suffer losses when calves are attacked, it is sheep producers who bear the brunt of the impact of wild dog predation, particularly during lambing season.³³

When compared to drought, wild dog predation is a more controllable risk with a range of short, medium and long term solutions. While a number of different techniques are available to manage

³⁰ RAPAD, *2016 RAPAD Annual Report* (Report, 2019) 4; Dana Kelly, 'Beyond the Dust: Impact of Drought on Town Businesses in Central West Queensland and Some Solutions' (Report, March 2018) 6, 8, 26.

³¹ RAPAD, Submission to Independent Panel (Qld), *Drought Program Review*, (19 October 2018) 5.

³² RAPAD, Submission to Independent Panel (Qld), *Drought Program Review*, (19 October 2018) 5.

³³ Bill Binks, Robert Kancans and Nyree Steneke, *Wild Dog Management 2010 to 2014: National Landholder Survey Results* (Report, ABARES, Project ON-00072 Wild Dog Management in Australia; Milestone 4000246-0070, June 2015) 1, 2, 3, 6, 27; Nyree Steekes, Rob Kancans and Bill Binks, *Pest Animal and Weed Management Survey* (Research Report, ABARES, Report 17.5, May 2017) 29.

the threat of wild dogs, exclusion fencing is the infrastructure foundation upon which the RAPAD region's integrated economic development strategy to 'Bring back the sheep' is built.

Wild dogs are a declared pest animal (class 2) and are thus covered by the Australian Pest Animal Strategy 2017–2027 that provides for best practice strategies to address the economic, environmental and social impact of pest animals. The strategy's policy foundations relevant to wild dogs are: proactive, continuous investment; strategic action, coordination and leadership by stakeholders; shared responsibility by landholders, the community, industry and government for prevention and management to be effective.³⁴

7.1 Exclusion fences as infrastructure

The World Bank views infrastructure as 'shorthand for policies and investments that are spatially connective'.³⁵ Gray describes infrastructure as 'the structural elements of the economy that provide basic services to industry and households', and go on to state that infrastructure can be categorised as economic infrastructure or social infrastructure. In defining economic infrastructure, Gray states that it usually forms part of a network, and is an input to production processes.³⁶

It is submitted that exclusion fences form part of a network of physical barriers used to protect large parts of public and private land against a pest. A cluster fence is an application of an exclusion fence that creates a physical barrier around a number of properties working together.

As large scale, multi-stakeholder, coordinated programs are needed to address the risk associated with wild dog predation, and due to the significant economic, social and environmental impact of wild dogs as pests, exclusion fences are thus regarded as infrastructure assets that have wide-ranging community benefits, even if the infrastructure itself is located on private land.

Exclusion fences are an important wild dog management technique in Queensland due to the size of individual properties. National landholder surveys about wild dog management reveal that the median size of properties in Queensland is 21,039 hectares (all properties, not only sheep-focused properties), compared to 4,639 hectares in South Australia and 1,092 hectares in New South Wales.³⁷ By way of example, the size of some of the properties that currently take part in the RAPAD cluster fencing grant scheme (one of the case studies in this Research Paper) is set out in Table 3.

The time involved in the management of wild dogs remains the largest prohibiting factor for landholders to effectively protect their properties. Distance extends the time it takes for a landholder to use other wild dog management techniques such as baiting, trapping and shooting over the length and breadth of their property. Exclusion fences solve that problem to a large extent if wild dogs are eradicated within enclosed areas.³⁸

³⁴ Commonwealth, *Australian Pest Animal Strategy 2017–2027* (Invasive Plants and Animals Committee, Department of Agriculture and Water Resources, 2017) 2, 3.

³⁵ World Bank, *Reshaping Economic Geography* (Report, 2009) 23.

³⁶ Harriet Gray, *Evolution of Infrastructure Regulation in Australia* (Australian Competition & Consumer Commission, Working Paper No. 1/July 2009, ACCC/AER Working Paper Series) 2.

³⁷ Bill Binks, Robert Kancans and Nyree Steneke, *Wild Dog Management 2010 to 2014: National Landholder Survey Results* (Report, Project ON-00072 Wild Dog Management in Australia; Milestone 4000246-0070, ABARES, June 2015) 10, 11.

³⁸ Bill Binks, Robert Kancans and Nyree Steneke, *Wild Dog Management 2010 to 2014: National Landholder Survey Results* (Report, Project ON-00072 Wild Dog Management in Australia; Milestone 4000246-0070, ABARES, June 2015) 25.

Number of landholders (LH) in the cluster	Size of the cluster (ha):	LH 1 (ha)	LH 2 (ha)	LH 3 (ha)	LH 4 (ha)	LH 5 (ha)
4	41,210	18,772	7,165	6,743	8,530	
4	39,016	11,574	7,133	6,296	14,097	
3	16,454	4,851	7,135	3,823		
3	78,117	10,900	25,169	41,700		
4	41,104	13,938	13,589	9,854	4,166	
5	47,232	13,267	22,178	5,845	2,999	5,839
3	31,969	11,263	9,940	10,786		

Table 3 – Examples of property sizes in the RAPAD cluster fencing scheme

While exclusion fences require sizeable upfront capital investments, the overall return on investment is regarded as high. Exclusion fences also have indirect benefits such as reducing emotional stress about farm business viability and workers' safety and reducing distress on the part of landholders who have to destroy mauled livestock.³⁹ More directly, if wool growers are able to assert better control over wild dogs on their properties, they will have better and more predictable productivity, in turn offering stable and predictable employment, and more cash to spend in their communities. Spending less time managing the threat of wild dogs, mean they have more time available for other areas of their farming operations.⁴⁰

Through two separate and differently structured exclusion fencing schemes, the RAPAD region aims to protect close on 2 million hectares from wild dog predation.⁴¹

Both schemes are important from a rural and regional development perspective in Queensland, as:

- The Queensland government provides the funding mechanisms for both schemes
- State and local governments have an important regulatory role to play in biosecurity, and wild dog management is a biosecurity matter
- For the most part, wild dogs impact privately held land. When government resources are used to address wild dog predation, private benefits arise in the hands of landholders
- The extent to which it is justified for the government to provide private benefits in order to address a national problem, creates questions of policy that ought to be settled before resources are allocated towards achieving this goal
- The sheer number of pests present in Australia, when coupled with limited government resources, necessitate a more strategic risk-based approach to pest management.⁴²

³⁹ See, eg, Bill Binks, Robert Kancans and Nyree Stenekes, *Wild Dog Management 2010 to 2014: National Landholder Survey Results* (Report, Project ON-00072 Wild Dog Management in Australia; Milestone 4000246-0070, ABARES, June 2015) 27.

⁴⁰ *Part 2 The Solution* (Web Page) <<https://notjustafence.org/>>.

⁴¹ RAPAD, *2016 RAPAD Annual Report* (Report, 2019) 11; Premier's Office (Qld), 'Longreach Exclusion Fencing to Review Sheep and Wool Industry' (Media Release, 1 December 2016).

⁴² Commonwealth, *National Framework for the Management of Established Pests and Disease of National Significance* (National Biosecurity Committee, 2016) 2–3.

7.2 Current wild dog responsibilities

In reference to the two case studies presented in this Research Paper, the respective wild dog-related responsibilities of landholders, the Queensland government and local governments are important. These are presented in Table 4 (author's interpretation). Reflecting on the results of the case studies, it is fair to say that both exclusion fencing schemes allow landholders, the Queensland government, RAPAD and the Longreach Regional Council to meet their respective responsibilities. The ways in which they cooperate to do so, are significant.

Landholders	Queensland government	Local governments
Control and manage established pest animals to mitigate, as necessary, the impacts on their own assets, or as required by regulation controls	Build coordination and collaboration in pest animal management at local, regional and state and territory levels	Exercise statutory duties to encourage responsible pest animal management
Take reasonable steps to minimise the impacts of established pest animals on other landholders, particularly through participation in programs of collective industry or community-led action, and on people and the broader environment	Encourage responsible pest animal management by providing a suitable institutional, legislative and regulatory framework; developing and implementing effective policies and programs, and where appropriate, providing positive support measures (not necessarily financial) to landholders	Manage pest animal problems on local government land in a responsible way, in co-operation with other landholders
Cooperate with and plan pest animal management activities jointly with neighbours, as well as state, territory and local governments, within a landscape scale/cross-tenure approach	Provide leadership, coordination and resources for research, evaluation, advisory services and education programs about pest animals	Assist with the coordination of community pest animal management programs
Apply knowledge and skills to improve pest animal management and understand the need to use multiple approaches (e.g. chemical, physical and biological) to prevent pest animals from adapting to existing	Encourage the development of effective pest animal management strategies at local, regional, state and territory and national scales	Support local initiatives and directions where they are representative of the Australian Pest Animal Strategy direction and regional and local priorities
	Provide support where there is sustained collective action to manage an established pest animal by an industry or community in their state or territory	Assist with data collection and information exchange
	Support the collection of pest animal data and information, that can be collated nationally	Develop and adopt 'Good Neighbour' policies, where appropriate, to help reduce the spread and impacts of high risk pest animal species

Table 4 – Responsibilities for wild dog management

7.3 The role of the Queensland Feral Pest Initiative (QFPI)

In Queensland, the Queensland Feral Pest Initiative (QFPI) is the vehicle for state support to regional communities for the construction of cluster fences and control of invasive plants and pest animals. The QFPI Oversight Group oversees the development and implementation of projects aimed at invasive plants and pest animal management, and comprise:

- AgForce
- Queensland Farmers Federation
- Local Government Association of Queensland
- NRM Regions Queensland
- Queensland Conservation Council
- Wildlife Preservation Society of Queensland
- Centre for Invasive Species Solutions
- Department of Agriculture and Fisheries (DAF)
- Department of Natural Resources, Mines and Energy (DNRME)
- Department of Environment and Science (DES).⁴³

Since 2015, the Queensland government has committed \$19.74 million for the construction of cluster fences on private property, and that amount is complemented with \$13 million from the Commonwealth. These funds are distributed through the QFPI. To date, three rounds of the QFPI cluster fencing scheme have been completed. The QFPI scheme is targeted at drought affected areas with sheep and wool producers and seeks to bring large numbers of sheep back to these areas. The rationale behind focusing cluster fencing on the sheep industry specifically, is that the sheep industry has strong economic multipliers with huge economic and social benefits.⁴⁴ The place-value associated with sheep and wool production is therefore relevant in the QFPI scheme and in the RAPAD region's 'Bring back the sheep' economic development strategy.

7.4 The cost of the wild dog problem

The QFPI's initiatives have clear funding implications for the State. It is one example of the way that wild dog predation has wide economic, social and environmental implications. Exactly how costly wild dog predation is for the Commonwealth, states and territories, local governments and landholders, is difficult to determine.

Wild dog management costs are not separated from other vertebrae initiatives in state expenditure, and the social costs and opportunity losses associated with the in-kind contribution that landholders make to manage the risk, are not recorded.⁴⁵ Similarly, data about tax deductible expenses that primary producers and primary production businesses incur to manage wild dogs are not recorded. Overall, it is estimated that invasive plants and pest animals cost Queensland

⁴³ Queensland Government, 'Queensland Feral Pest Initiative' (Web Page, 15 March 2019) <<https://www.daf.qld.gov.au/business-priorities/biosecurity/invasive-plants-animals/animals/qld-feral-pest-initiative>>.

⁴⁴ Department of Agriculture and Fisheries (QLD), *Queensland Feral Pest Initiative: Funding Round 3 Applicant Guidelines and How to Apply* (2018) 2.

⁴⁵ Santhi Wicks et al, 'An integrated assessment of the impact of wild dogs in Australia (Research Report no. 14.4, Department of Agriculture, ABARES, April 2014) 7; L Hewitt, *Major Economic Costs Associated with Wild Dogs in the Queensland Grazing Industry* (Report, AgForce, September 2009) 11.

over \$600 million annually in lost production and in pest management costs.⁴⁶ Research conducted by AgForce estimated that in 2008/09, wild dogs cost Queensland \$67 million,⁴⁷ as set out in Table 5.

Stakeholder	Cost category	\$
Queensland State Government	Department of Employment, Economic Development and Innovation Queensland Parks and Wildlife	\$1,754,000
Local and State governments	State Wild Dog Barrier Fence	\$1,870,316
Local government	Including bounties and management program	\$2,623,543
Sheep/goat producers	Livestock losses	\$16,950,000
	Wild dog management	\$2,248,642
Cattle producers	Calf livestock losses	\$22,840,000
	Product loss due to dog-bitten cattle (saleyards)	\$1,036,914
	Product loss due to dog-bitten cattle (processors)	\$1,031,441
	<i>Neospora caninum</i>	\$3,143,536
	Hydatids	\$2,057,685
	Wild dog management costs	\$11,460,498
Total		\$67,016,575

Table 5 – Cost of wild dogs in Queensland 2008/09

At a farm level, landholder surveys reveal that an average of close on \$20,000 and 77 person-days are spent annually per agricultural business on pest animal and weed management activities.⁴⁸ The Northern Territory Cattleman's Association estimate that wild dogs cost Northern Territory producers around \$60 million annually.⁴⁹

As depicted in Table 4, local government authorities stand under an obligation to actively manage pests. These actions have cost implications that require funding. In the case of Longreach, the Longreach Regional Council levies a 'Control of Pests Special Charge' on all rural land greater than 25 hectares of \$1.94 per hectare. The special charge is used to fund a coordinated wild dog baiting program on council and private land, which serves as another example of partnerships, collaboration and cooperation. The budgeted cost of the program for the 2019–20 year is \$352,000 derived from a list of 126 properties.⁵⁰ The total income from the Property Pest Management and Environmental Levy in the 2018–19 year was \$258,000, or around 2.5 per cent of all rates, levies and charges income for the year.⁵¹ Reflecting on all these data, wild dog predation has a direct economic impact on a range of stakeholders.

⁴⁶ Department of Agriculture and Fisheries (QLD), *Queensland Feral Pest Initiative: Funding Round 3 Applicant Guidelines and How to Apply* (2018) 2.

⁴⁷ L Hewitt, *Major Economic Costs Associated with Wild Dogs in the Queensland Grazing Industry* (Report, AgForce, September 2009) 19.

⁴⁸ Nyree Steekes, Rob Kancans and Bill Binks, *Pest Animal and Weed Management Survey* (Research Report 17.5, Australian Bureau of Agricultural and Resources Economic and Sciences, May 2017) 2.

⁴⁹ Courtney Fowler and Michelle Stanley, 'Wild Dog Numbers On the Rise and Costing Northern Cattle Producers Millions Each Year' *ABC Rural* (online at 9 April 2019) <<https://www.abc.net.au/news/rural/2019-04-09/wa-pastoralists-wild-dog-fight/10979476>>.

⁵⁰ Longreach Regional Council, *Budget 2019-2020* (Confirmed Minutes, Budget Meeting, 29 July 2019) 23–5.

⁵¹ Longreach Regional Council, *2018-2019 Annual Report* (Report) 59.

7.5 Addressing the private nature of wild dog management

The QFPI cluster fencing scheme and the Longreach Regional Council baiting program are examples where government funding is used to combat wild dogs on private property. This position raises the question of whether it is justified and equitable to do so. One argument in the affirmative is that wild dogs have significant negative economic implications for whole communities: the losses that graziers suffer affect their business viability that in turn decreases their spending in local economies, and smaller flocks mean fewer sustainable local jobs in categories such as shearing.

Another argument that justifies government spending on private properties, is that wild dogs roam. As a result, the efforts of one landholder to protect their property against attacks will be ineffective in reference to the larger surrounding geographical area, if dogs simply move to an adjoining property or onto public land.⁵²

Similarly, state and local government authorities employ a range of wild dog management techniques on public land to address the risk of wild dog predation. For example, the QFPI coordinates aerial baiting, on-ground baiting, trapping and funds trappers.⁵³ But if private landholders do not protect their properties at least to the same extent, then public monies spent to protect public land will have little effect.

Therefore, spending public monies to address the wild dog problem on privately-owned land is a sensible, effective and integrated solution that matches the roaming nature of this pest animal. The scale of public land that must be protected against wild dog predation in Central West Queensland is a lot smaller than the scale of private land. If scaled wild dog management outcomes are to be achieved, efforts must be directed at private land.

The national framework for the management of pests makes it clear that the policy approach to pest management is difficult because the affected assets are privately-owned. Any government-funded pest management on private land holds private benefits for the private landholder.⁵⁴ These private benefits are measurable. A simple record of changes in livestock losses as a result of government expenditure is a good starting point, together with cost savings if landholders do not have to incur the same or all of the pest management costs, and the economic advantages of increases in lambing and lamb survival rates.

To argue that state resources spent on techniques such as baiting and trapping leave no lasting benefit on private land, other than fewer wild dogs being present, may have some merit in the context of the price that a landholder may get when they sell their property. But it is an entirely different matter if the state provides funding for exclusion fences on private properties. Exclusion fences are capital in nature and enhance the value of private property beyond a reduction in wild dog numbers. Government-funded or facilitated exclusion fences that are constructed on private land, are private assets. It is the landholder that reaps the benefits in the long run, because the fence enhances the property value.

⁵² Santhi Wicks et al, *An integrated assessment of the impact of wild dogs in Australia* (Research Report, Report no. 14.4, Department of Agriculture, ABARES, April 2014) 43–4.

⁵³ Department of Agriculture and Fisheries (QLD), *Queensland Feral Pest Initiative: Funding Round 3 Applicant Guidelines and How to Apply* (2018) 2.

⁵⁴ Commonwealth, *National Framework for the Management of Established Pests and Disease of National Significance* (National Biosecurity Committee, 2016) 4, 6.

8 Co-investment strategies in wild dog prevention infrastructure

8.1 The QFPI Grant Scheme

The QFPI scheme referred to above, is a grant scheme that subsidises the cost of cluster fences on private land. Principle 8 of the Australian Pest Management Strategy states that the cost of pest animal management should be borne by those who benefit from its management. The private landholder benefits, and by implication, should pay. But the state also benefits as the roaming nature of wild dogs requires an integrated and geographically spread out response over public land and privately-owned land.

As a matter of principle, the Australian Pest Management Strategy states that governments may co-invest where there is a net public benefit from any such intervention.⁵⁵ The QFPI scheme is a co-investment grant scheme. The government's contribution to a cluster fence is capped at \$2,700 per kilometre,⁵⁶ budgeted to equate to about 35 per cent of the overall investment to construct the cluster fence.⁵⁷

In the case of the QFPI scheme, participation is limited to clusters of neighbouring graziers who work together to enclose their properties and apply for grant funding jointly. The private benefits that arise from the government's co-investment in the cluster fence are thus diluted by the participation of more than one landholder.⁵⁸ Leveraging grant funding or subsidies against more than one property therefore, holds important lessons and opportunities for other infrastructure projects that involve private ownership.

As to whether the scheme has a net public benefit, the QFPI scheme guidelines and extensive modelling by RAPAD present strong evidence of the region-wide potential of cluster fences over a five year period.

Therefore, the QFPI scheme:

- Uses grant funding as a policy tool to encourage landholders to engage with more long term capital intensive solutions to pest management
- Is premised on cooperation and collaboration between groups of landholders that reduce the criticism of individual private benefits that may arise from grant funding private assets
- Relies on significant private investment. The grant funding is insufficient to fund the construction cost of a fence. Landholders are required to make co-contributions roughly double that of the government, as discussed in detail as part of the case studies.

As a policy tool, the grant funding is effective in achieving place-value rural adjustment in Central West Queensland by returning large scale sheep and wool industries to the region.

Following on from the theme of this Research Paper that contemporary regional development involves partnerships, collaboration and cooperation, the QFPI scheme revolves around the economic development concept of a 'cluster' of grazier. As explained above, the grant scheme is premised on graziers with adjoining land working together to apply for funding to construct a fence

⁵⁵ Commonwealth, *Australian Pest Animal Strategy 2017–2027* (Invasive Plants and Animals Committee, Department of Agriculture and Water Resources, 2017) 3.

⁵⁶ Department of Agriculture and Fisheries (QLD), *Queensland Feral Pest Initiative: Funding Round 3 Applicant Guidelines and How to Apply* (2018) 10.

⁵⁷ See detailed analysis in Part 17 of this Research Paper.

⁵⁸ Department of Agriculture and Fisheries (QLD), *Queensland Feral Pest Initiative: Funding Round 3 Applicant Guidelines and How to Apply* (2018) 10.

to enclose their properties together. The QFPI scheme also uses a number of other conceptions of partnerships, collaboration and cooperation, articulated in the QFPI Round 3 Guidelines, examples of which are presented in Table 6.⁵⁹

Page number ⁶⁰	Form of partnerships, collaboration and cooperation
5, 12	Leveraging co-investment or co-contributions by landholders and the government in cash and in-kind (on the part of landholders)
5, 11	Projects must be developed on a regional basis, must prove outcomes at a regional level, as well as proof of regional acceptance and support for the scheme
5, 6, 7	Projects must include diverse stakeholders, which may include primary producers, local governments, regional groups, Landcare, wild dog committees, catchment management, local training and employment organisations, Indigenous groups, environmental organisations and other community groups
6	Applications must demonstrate the level of contributions from landholders, land managers, industry, local governments, local industry and other project partners including the ongoing level of stakeholder and public support
6	Applications must demonstrate how the project will be managed locally in the short-term and into the long-term to ensure outcomes are maintained
6	Applications should include significant participation of relevant local and regional stakeholders
10	Funding is limited to clusters

Table 6 – Partnerships, collaboration and cooperation in the QFPI grant scheme

8.2 Alternative strategies

Whether similar co-funded infrastructure development projects would be able to achieve the same neatly delineated outcomes to distinguish between private and public benefit would depend on the nature of the infrastructure, the extent of the private benefits, the presence of free riding, and how (and if) the public would derive direct benefits from the particular asset. For example, comparing the construction of a cluster fence to a telecommunication infrastructure asset such as a mobile telecommunication satellite base station, co-funded by a landholder and grant funding:

- That is connected to an open national telecommunications network
- Primarily purchased to provide reliable connectivity for agtech applications on the private property
- Located on private property, but close enough to public roads to facilitate access to the national telecommunications network for passers-by

there are distinct differences between the two outcomes.

These differences, detailed in Table 7, illustrate which type of infrastructure investments projects may be suitable for grant funding or grant co-funding: projects which do not require the ongoing intervention of another private sector participant, projects with quantifying freeriding.

⁵⁹ Department of Agriculture and Fisheries (QLD), *Queensland Feral Pest Initiative: Funding Round 3 Applicant Guidelines and How to Apply* (2018).

⁶⁰ Reference is to the page number in the QFPI Round 3 Guideline.

Cluster fence	Mobile satellite base station
The number of free riders is known, being landholders on neighbouring properties	The number of free riders is unknown, and may include individuals who do not reside in the area, and are merely passing through the area
There is a regulatory mechanism to deal with free riders in the form of the <i>Neighbourhood Disputes (Dividing Fences and Trees) Act 2011</i> (Qld)	The nature of telecommunication implies 'mass use' and cross-subsidisation of infrastructure costs. It is not possible for the landholder to identify who the free riders might be
Most graziers have the knowledge, skill and experience to construct fences	Telecommunication equipment is specialised and not the usual type of infrastructure or capital asset used as part of a grazing business
Fence maintenance does not require specialist knowledge and training	The maintenance of telecommunication is technical in nature
Long term asset with a longer life cycle	Shorter lifecycle, technology advances may require continuous upgrades
Is a standalone asset that fulfils a function on its own	Needs a connection to a national grid in order to operate. Neither the landholder nor the state owns or operates the relevant grid
Does not require the intervention of a service provider	Relies on a third party telecommunication provider to operate

Table 7 – Comparison of cluster fence and mobile satellite base station co-investments

The observations set out in Table 7 explain why infrastructure investments that relate to universal access to services such as telecommunication and energy require careful consideration of:

- The extent to which the government may have to fund ongoing maintenance if landholders don't, when communities or the general public rely on the infrastructure
- The extent to which landholders may seek commercial benefit from the infrastructure beyond their traditional or 'usual' business through models such as user-pay, in which event the private benefit to them may be too large to justify co-funding through grants
- The extent to which a commercial third party has to be a necessary participant, for the infrastructure to operate.

It may be that these type of infrastructure investments are more suited to traditional private-public-partnerships. Or, if the investments relate to basic services in a remote or very remote region that cannot be cross-subsidised through traditional private sector investments or private-public-partnerships, it may be better for a local government to invest in the project directly. An example of the latter, is the \$80,000 direct investment made by the Winton Shire council in two 4GX Satellite Small Cell systems from a national telecommunications company. The two systems were installed at Lark Quarry and Corfield, both remote tourist locations in the shire, to provide the community with mobile coverage and to serve the tourist route, as tourism is an important industry in the shire and region. The telecommunications company maintains and operates the two stations as part of their nation grid at no further charge to the Winton Shire Council, and enables connectivity for locals and tourists.⁶¹ The type of asset, the way it is used, and the user group, therefore fits with the ownership and funding model that involves only a local government and a large telecommunications provider, on commercial contract terms.

⁶¹ Women at the Well, 'Consultation Report: Realising the RAPAD Big Vision' (Report, RAPAD, June 2019) 12 <<https://www.rapad.com.au/assets/Uploads/Consultation-Report-WOW-Final-Realising-the-RAPAD-Big-Vision.pdf>>; Winton Shire Council, *4GX Satellite Small Cell Proposal* (Minutes, 24 May 2018) folio 16691.

8.3 Private benefit of a grant-funded exclusion fence

The QFPI cluster fencing scheme reduces the capital investment required by a group of graziers to construct a cluster fence by at least 35 percent as discussed later on in this Research Paper. The nature of this particular grant scheme reduces spending on the part of the graziers, and it provides them with private benefits.

It is entirely possible to remove the private benefits that arise from the grant funding by simply eliminating the grant altogether and replacing it with another form of funding support that does not involve a group of landholders working together. One option is to use government loan funding as the policy tool to encourage landholders to construct exclusion fences. Loans must be repaid. As long as a government loan is repaid, the private benefits from this funding source are neutral.

However, there are two significant problems in using government loan funding to build exclusion fences. Firstly, in reference to Central West Queensland, the protracted drought has placed graziers under significant cash flow and financial pressure. Many primary producers access Farm Household Allowances and concessional drought loans. It is likely that they will not qualify for new debt financing, even if there is every possibility that an exclusion fence will increase profitability. Their debt ratios are simply too high, and cash flow too low. Not having an exclusion fence on their property, means that wild dog management initiatives around their land will be less effective, which in turn, has a direct and negative impact on neighbouring graziers and on the state.

In response to these factors, the state can advance a loan directly to a grazier to build an exclusion fence. If the loan is made to a grazier in financial distress, there is a risk of default. If the state doesn't recover the debt, significant private benefits accrue to the landholder. From a policy perspective, the state must therefore consider its credit risk in order to deal with the private benefits that may arise from direct loans.

Secondly, the benefits associated with working together in groups to cooperate in different ways to address the risk of wild dog predation are lost when single graziers construct exclusion fences in isolation, as compared to cluster fences. Drawing on the central theme of this Research Paper – partnerships, collaboration and cooperation – policy solutions such as integrated community engagement and group-based learning go a long way to raise awareness of wild dog management strategies among graziers and to foster collaboration among graziers. Cluster fencing facilitates practical cooperation and cooperation.

Having said that, surveys of landowners about wild dog management reveal the significant presence of groups or syndicates without the requirement to cooperate formally. For example, in the 2017 Pest Animal and Weed Management Survey, 63.7% of those surveyed were in a group with a pest animal management plan and 51.8% in a group with a weed management plan.⁶² Another study, based on structured interviews with thirty representatives of wild dog management groups across Australia, revealed that most groups operate on an informal basis.⁶³ Therefore, by leveraging from these groups, and integrating the matters of mutual concern into more structured collaborative forums led locally or by State governments, would achieve the same collaborative benefits, but would require more active participation from different levels of government to implement than an approach that requires graziers to self-organise.

⁶² Nyree Stekees, Rob Kancans and Bill Binks, *Pest Animal and Weed Management Survey* (Research Report, ABARES, Report 17.5, May 2017) 38.

⁶³ Saan Ecker et al, *Participatory wild dog management: Views and Practices of Australian Wild Dog Management Groups* (Report, ABARES, Project ON-00072 Wild Dog Management in Australia, Milestone 4000246-0060, May 2015) 1.

9 An overview of the case studies

The remainder of this Research Paper is devoted to case studies of the two policy tools employed to facilitate the construction of exclusion fences in the RAPAD region – a long term loan and grant funding – and how these relate to contemporary regional development mantras of partnerships, collaboration and cooperation.

Within the context of the case studies, loans and grant funding may be regarded as instruments in short- and medium-term rural adjustment schemes, 'intended to induce the re-deployment of labour, movement out of an industry by some, usually smaller firms (farm businesses), and the business and/or physical restructuring of the remaining firms. An explicit goal of the programs is the creation of a sector in which most of the remaining firms operate efficiently and more importantly, self-sufficiently'.⁶⁴

Both the Longreach Wild Dog Exclusion Fence Scheme and the RAPAD Cluster Fencing Scheme are aimed at structural adjustments in the agriculture sector in Central West Queensland through a shift from cattle to sheep and wool production. Both schemes recognise the place-value of the sheep and wool industry in the region and serve as the catalyst for the region-wide economic development strategy 'Bring back the sheep', aimed at job creation and economic growth.

9.1 The loan-based Longreach Wild Dog Exclusion Fence Scheme (LES)

The Longreach Wild Dog Exclusion Fence Scheme (LES) demonstrates social innovation and partnerships in a very remote area. The vision for the LES came from a local grazier Mr John de Kloot.⁶⁵ The Longreach Regional Council (LRC) took up his idea, demonstrating place-value-focused leadership, to approach the Queensland Government with a business plan for an \$18 million, 20-year long term loan to fund the construction of exclusion fences on private property. The loan from the Queensland Treasury Corporation (QTC) to the LRC was approved on 1 December 2016.⁶⁶ The scheme commenced on 1 July 2017.⁶⁷ The LES is thus a citizen-inspired and local government-led program.⁶⁸

The LES is targeted at graziers who have been impacted by drought and wild dog predation and who are reluctant to take on further debt financing to construct exclusion fences on their properties. The purpose of the scheme is to make it possible for these graziers to access funding through the LRC to construct exclusion fences on their properties, and to operationalise the expense through their rates payable to the LRC. The LRC therefore acts as a funding agency for graziers, but bear the debt repayment risk associated with the loan. Participating landholders incur no debt financing, only the obligation to pay special rates associated with the construction of each fence.⁶⁹

Compared to a direct loan from the state to a landholder, the LES largely removes the Queensland government's risk in so far as private benefits to a landholder go if they default, as the LRC is responsible to repay the loan.

⁶⁴ Geoff Cockfield and Linda Botterill, 'Rural Adjustment Schemes: Juggling Politics, Welfare and Markets' (2006) 65(2) *Australian Journal of Public Administration* 70, 70.

⁶⁵ Longreach Regional Council, *Longreach Wild Dog Exclusion Fence Scheme* (Minutes, Ordinary Meeting, 8 December 2016) 5.

⁶⁶ Premier's Office (Qld), 'Longreach Exclusion Fencing to Review Sheep and Wool Industry' (Media Release, 1 December 2016).

⁶⁷ Longreach Regional Council, *Budget 2018-2019* (Unconfirmed Minutes, Budget Meeting, 5 July 2018) 110–11.

⁶⁸ Saan Ecker et al, *Participatory wild dog management: Views and Practices of Australian Wild Dog Management Groups* (Report, ABARES, Project ON-00072 Wild Dog Management in Australia, Milestone 4000246-0060, May 2015) 10.

⁶⁹ Andrew Perkins 'Fencing in Regional Economic Development' (Newsletter, Hall Chadwick Association, Autumn 2017) 3.

The aspirational goal of the LES is to stimulate the local economy by:

- Protecting a further 900,000 hectares, or 22 per cent of the Longreach region from wild dogs
- Increasing sheep numbers by 200,000 over five years (40% increase)
- Adding 130 jobs to the region – with a focus on shearing jobs – to expand the population by around 500.⁷⁰

The LES financing model was based on a regional infrastructure scheme applied to the rollout of electrification in regional areas in the 1960s and 1970s. Through that scheme, the cost of the regional SWER (single-wire earth return) lines was paid for by local councils and recovered through a special rate charge, thus enabling isolated landholders to move from diesel-generated to reliable energy without spending the upfront capital investment to do so.⁷¹

The LES is different from the QFPI grant scheme. It is not cluster-based, but still requires the enclosure of an area on a property or the entirety of a property. That said, there was no restriction in the LES to prevent groups of landholders from applying to this competitive scheme.

The LES entails the LRC funding the construction of an exclusion fence on the property of a successful applicant, with material that is sourced by the LRC to use economies of scale to lower procurement costs. Overall, the LES will cover the cost of 2,500 kilometres of exclusion fencing over 63 properties. From planning to execution, the overall cost of the plan increased from \$17,967,965 to \$18,603,225.⁷²

On completion, the exclusion fence constructed on each property is transferred to the landholder under a special rates agreement and the landholder effectively pays off the loan from the QTC to the LRC through the special rates (in addition to their normal rates). The LRC is able to impose a special rate on participating landholders through the regulatory mechanisms of the *Local Government Act 2009* (Qld),⁷³ and the *Local Government Regulation 2012* (Qld).⁷⁴

The special rate is imposed over a twenty year period, which is the same as the period of the QTC loan. The payback terms of the special rate mirror the timeline used to predict the aspirational growth in sheep numbers through the scheme, being five years. It takes time to restock and build flocks. On that basis, successful LES applicants make no special rate payments in year 1 and year 2, and interest-only special rate payments in years 3 to 5. Thereafter, principle and interest repayments are made over 15 years.⁷⁵

Several different aspects of the LES draw on regional policy mantras of partnerships, collaboration and cooperation: The LRC consulted widely with graziers and the community before applying for the loan. Hence, the LRC's business plan was based on the support and participation of 63 landholders. The LES is the outcome of an intensive discussion at council level regarding the most appropriate strategy that will make the greatest impact on the region's economy.⁷⁶ Through the scheme, landholders and the local government work together to collect data about wild dog management. All participants must provide MERI (Monitor, Evaluation, Reporting and Improvement) data. As a requirement of the scheme, all applicants must have submitted a Property Management Plan, which is a collation of a weed map and Property Pest Management

⁷⁰ Premier's Office (Qld), 'Longreach Exclusion Fencing to Review Sheep and Wool Industry' (Media Release, 1 December 2016); Andrew Perkins 'Fencing in Regional Economic Development' (Newsletter, Hall Chadwick Association, Autumn 2017) 3.

⁷¹ Andrew Perkins 'Fencing in Regional Economic Development' (Newsletter, Hall Chadwick Association, Autumn 2017) 3.

⁷² Premier's Office (Qld), 'Longreach Exclusion Fencing to Review Sheep and Wool Industry' (Media Release, 1 December 2016); Longreach Regional Council, *Budget 2018-2019* (Unconfirmed Minutes, Budget Meeting, 5 July 2018) 110–11.

⁷³ *Local Government Act 2009* (Qld) s 94.

⁷⁴ *Local Government Regulation 2012* (Qld) s 94.

⁷⁵ Andrew Perkins 'Fencing in Regional Economic Development' (Newsletter, Hall Chadwick Association, Autumn 2017) 3.

⁷⁶ Premier's Office (Qld), 'Longreach Exclusion Fencing to Review Sheep and Wool Industry' (Media Release, 1 December 2016); Longreach Regional Council, *Budget 2019-2020* (Confirmed Minutes, Budget Meeting, 29 July 2019) 1–2.

Plan. This serves as an instrument against which the LRC is able to meet its regulatory responsibilities for pest management as discussed in part 7 of this Research Paper.⁷⁷

9.2 The RAPAD Cluster Fencing Grant Scheme (RAPADCS)

The RAPAD Cluster Fencing Grant Scheme (RAPADCS) is administered through the QFPI grant scheme discussed in part 8 of this Research Paper.

RAPAD is the collaborating agency that acts as a conduit between the QFPI and clusters of landholders working together to apply for the grant funding to construct cluster fences. RAPAD has successfully applied for funding in all three rounds of the QFPI cluster fencing grant schemes from 2015 to 2019, receiving \$9.85 million in grant funding as follows:

- Round 1 \$5.25 million
- Round 2 \$2.1 million
- Round 3 \$2.5 million.⁷⁸

During Round 1 and Round 2 of the scheme, 23 clusters were approved for funding. The RAPADCS case study focuses on Round 1 and Round 2.

Across all three rounds, 138 landholders participated in the scheme, 3,376 kilometres were fenced, protecting 1.9 million hectares.⁷⁹

As a QFPI requirement, the RAPADCS was only open to groups of landholders who sought to enclose their adjoining properties or significant parts of their adjoining properties. **The exclusion fences constructed in the RAPADCS are therefore perimeter fences around clusters of properties working together.**

In accordance with the QFPI guidelines, the funding that RAPAD received had to be disbursed to one entity, and not to each participating landholder in a cluster. Therefore, the cluster had to reach an agreement about the legal vehicle or business structure most suited to this funding arrangement. Once the particular legal entity received the grant funding, the monies could be disbursed to each landholder to reimburse them for the cost of their fence construction to the extent of \$2,700 per kilometre of fence. A document analysis of all 23 the clusters in Round 1 and Round 2 confirmed that all of the clusters used an incorporated association, registered under the *Associations Incorporation Act 1981* (Qld).

⁷⁷ Longreach Regional Council, *Budget 2018-2019* (Unconfirmed Minutes, Budget Meeting, 5 July 2018) 64.

⁷⁸ RAPAD, 'RAPAD Queensland Feral Pest Initiative (QFPI) Cluster Fencing Project' (Web Page) <<https://www.rapad.com.au/programs-and-projects/qld-feral-pest-initiative/>>; RAPAD, *Queensland Feral Pest Initiative RAPAD Cluster Fencing Project Round 1: March 2016–April 2018* (Report, 2018) 3; RAPAD, *Queensland Feral Pest Initiative RAPAD Cluster Fencing Round 2: 01/02/17–01/02/19* (Final Report, 2019) 4.

⁷⁹ RAPAD, *RAPAD QFPI Rd 1 and 2 Cluster Fencing Project Summary* (Summary) 1; RAPAD, *RAPAD Annual Report 2018 – 2019* (Report, 2019) 11.

10 Understanding the nature of the fence

This Research Paper analyses different conceptions of partnerships, collaboration and cooperation in reference to two exclusion fencing schemes. However, the fences themselves, are unrelated to mutual ownership, or cooperative ownership, or any form of legal partnership, except to the extent that it is a 'dividing fence'.

It is submitted that in order to find the most appropriate legal framework and business model for infrastructure investment projects that involve multiple stakeholders, it is important to understand:

- The nature of the asset
- What the asset does, and
- Who benefits from the asset, both directly and indirectly.

Whether in reference to exclusion fencing or other infrastructure investment projects, an analysis of these factors provides a clear delineation between decision rights, ownership rights, ownership obligations and control rights in multi-stakeholder infrastructure investment projects, that:

- Are an indicator of the complexity of the arrangement between the parties
- Drives the choice of legal structure most suited to the investment
- Identifies the risks associated with the project from different perspectives
- Matches investment to return.

The analysis is particularly useful in infrastructure investment projects that involve private sector participation.

Private sector participants will seek reward. Their reward may entail ownership rights that may be realised at a later stage with a capital return. If their participation does not involve ownership rights over an asset, they will seek a different reward. Unless they are guaranteed a return for participating but holding no ownership rights, they would be unwilling to participate, except when their initial short term return is significant, or another party (typically the government) guarantees their entitlement to reward. By analysing the nature of the asset, what it does, and who benefits from it, these types of long term project risks will be identified and dealt with. All three factors will be discussed in turn in reference to the LES and RAPADCS.

10.1 The nature of the asset

In the case of the LES, the successful applicants are single graziers. The LES fences are constructed to enclose the outer perimeter of one particular property or part thereof. The exclusion fence is thus that participant's fence, constructed on their property. Alternatively, they share ownership of the fence with an adjoining owner if it is built on the boundary. But, in principle, the participant in the LES has ownership of the fence after completion. The fence enhances the value of their property, is affixed to the land through posts and, if adequately maintained, has a long effective life.

In the case of cluster fences constructed in the RAPADCS, each participating grazer takes responsibility to construct a part of the fence on their property. Their part of the cluster fence would link up with the same new fence on the property of a neighbour who is also a participant in the cluster. Except for a fence post where the two parts of their cluster fence connect, the two cluster participants do not share the fence. They each construct a part of a fence linked up to form the cluster area.

Therefore, in both the LES and RAPADCS, the exclusion fences are shared with adjoining neighbours who are not participants in the schemes. Therefore, the notion of a partnership, collaboration and cooperation does not extend to legal ownership of the exclusion fences in reference to the scheme participants.

As a result, it is not necessary to use a new or separate legal business structure to hold the exclusion fence. And as each of the participants in the respective schemes fund their own cost of their own fence, it is also not necessary to use a vehicle to pool their resources to construct the fence. Doing so would add an unnecessary layer of complexity.

It is only in reference to landholders on neighbouring properties who are *not* participants in the schemes that questions relevant to shared fences arise. To that extent, graziers who are not participants in the scheme may, in fact, be free riders who benefit from the construction of modern exclusion fences on their properties, without bearing any economic cost.

10.2 What the asset does

An exclusion fence does not generate any specific income. It has no direct production value, and cannot be directly associated with a particular item of trading stock or livestock. The fence is only associated with future lambing and lambing survival rate increases. The size of the property, quality of pastures, availability of water and existing numbers of livestock on each property are equally relevant factors. On the other hand, an exclusion fence is associated with savings gained from a reduction in stock losses and a reduction in money spent on pest management that may be easier to quantify.

As an exclusion fence does not generate a direct income stream, there is no merit in using a legal business structure such as a private company or partnership for the infrastructure investment project, as there is no income to distribute. It is only in reference to some of the ongoing costs to maintain the fence that costs may be shared. A complex legal arrangement or structure is not suited to the sharing of costs.

10.3 Who benefits from the asset, both directly and indirectly

The landholder who constructs the exclusion fence benefits from it. So too do landholders on adjoining properties or internally enclosed properties if there were to be any.

Freeriding associated with dividing fences is a common problem. But the important point is that freeriding related to the construction of an exclusion fence is entirely quantifiable and a regulatory process exists to deal with the matter of the costs associated with the fence, albeit that there is no guarantee that the costs will be shared.

In Queensland – as is the case in the other states and territories – there is broad recognition that fences and the cost of fences are prone to dispute and freeriding. The risk and cost of freeriding are thus known and quantifiable if the cost of the construction of a fence is known. The identity of fence free riders is also known, as they are the owners of the neighbouring property.

This position is different from freeriding that may be associated with telecommunication infrastructure such as satellite base stations that are connected to open telecommunication networks such as that described in Table 7. In that case, the number of passers-by who connect to the network asset is unknown. Their identities are unknown. As a result, there is little that may be done to get these free riders to pay their fair share, unless another party or service provider is

involved in the venture to identify all users, and users are otherwise bound to pay based on general use terms.

Freeriding associated with the construction cost of exclusion fences is neatly defined and dealt with from a regulatory perspective. In brief, the *Neighbourhood Disputes (Dividing Fences and Trees) Act 2011* (Qld) sets out the process that landowners should follow when they want to construct a dividing fence. In general, neighbours must contribute equally to the building and maintenance of a dividing fence.⁸⁰

A dividing fence means a 'common boundary of adjoining lands'.⁸¹ The cost of the fencing work to be shared between adjoining owners includes the design, construction, replacement, repair and maintenance.⁸² Adjoining owners are defined as 'the owners of land on either side of a common boundary'.⁸³ In the case of agricultural or pastoral land, adjoining ownership could also arise from an agreement between the landowners, or through a determination by Queensland Civil and Administrative Tribunal if it decides that the fence has been used as a dividing fence between two parcels of land.⁸⁴

If one of the property owners wish to construct a dividing fence at a standard greater than the standard for a sufficient dividing fence, that owner is generally solely responsible to pay to the extent that the cost exceeds a standard fence.⁸⁵ Therefore, as the cost of an exclusion fence exceeds the cost of a standard dividing fence, it may be that the participants in the LES or RAPADCS will be liable for the difference, keeping in mind that the adjoining landholder who shares the fence is not a participant in the scheme.

If an adjoining owner wants another adjoining owner to contribute to a dividing fence, they should give the other written notice,⁸⁶ accompanied by at least one written quote stating an estimate of the total cost.⁸⁷ Until there is an agreement between the parties, neither may carry out the fence work.⁸⁸ In the case of the RAPADCS, a document analysis of cluster documents for all 23 the clusters involved in Round 1 and Round 2 revealed that cluster participants gave notice to their neighbours and generally, adjoining owners made a contribution equal to at least their half of the cost of a standard fence.

Even if adjoining owners cannot agree, the landowner who wants to construct the fence is still free to do so, but only on their own property, not on the boundary. This decision has obvious cost implications, as they would have to pay for the full construction of the fence. But it may be that the particular common boundary is small enough, so that the total construction cost of that particular part of the fence situated on their side of the boundary, is smaller than the economic benefits arising from the fence over time, even if they have to pay for the fence themselves.

In the case of the RAPADCS, a different form of free riding is intrinsically and fundamentally part of each cluster fence. To the extent that the size of properties in a cluster differs, landholders contribute differentially for the construction of the fence, but proportional to the length of the fence on their property. Smaller landholders, or landholders who are responsible for shorter parts of the fence, therefore benefit indirectly from the larger parts of the fence they do not pay for.

⁸⁰ *Neighbourhood Disputes (Dividing Fences and Trees) Act 2011* (Qld) ss 7(2)(a), 21(1).

⁸¹ *Neighbourhood Disputes (Dividing Fences and Trees) Act 2011* (Qld) s 12(1).

⁸² *Neighbourhood Disputes (Dividing Fences and Trees) Act 2011* (Qld) s 16.

⁸³ *Neighbourhood Disputes (Dividing Fences and Trees) Act 2011* (Qld) s 15(1).

⁸⁴ *Neighbourhood Disputes (Dividing Fences and Trees) Act 2011* (Qld) s 15(2).

⁸⁵ *Neighbourhood Disputes (Dividing Fences and Trees) Act 2011* (Qld) s 21(2).

⁸⁶ *Neighbourhood Disputes (Dividing Fences and Trees) Act 2011* (Qld) s 30, div 2.

⁸⁷ *Neighbourhood Disputes (Dividing Fences and Trees) Act 2011* (Qld) s 31(3).

⁸⁸ *Neighbourhood Disputes (Dividing Fences and Trees) Act 2011* (Qld) s 31(7).

11 Sharing the maintenance burden

Generally speaking, all fences require maintenance. To the extent that a fence constitutes a dividing fence, maintenance costs ought to be shared,⁸⁹ failing which the dispute resolution process set out in the *Neighbourhood Disputes (Dividing Fences and Trees) Act 2011* (Qld) applies. As with the capital construction cost of an exclusion fence, it may be in the best interests of the party wishing to effect the repairs and maintenance to simply get on with it. It is likely that the integrity of the fence provides a degree of protection against wild dog predation that is quantifiable in terms of the expense to repair and maintain the fence, as well as in reference to livestock and lambing numbers.

In relation to the ongoing maintenance of the cluster fence, there is a risk of free riding among the participants in a cluster. Participants in a cluster fencing scheme have to rely on each other to:

1. Monitor the integrity of the fence
2. Maintain the fence.

Weaknesses in the fence on one property is a risk to the whole cluster. However, each part of the fence is situated on the land that belongs to a particular participant, and the remaining participants have no legal standing generally, to enter the property of a neighbour to monitor, maintain or repair the fence if that person fails to do so in the first instance.

To address this risk, some of the RAPADCS deeds of agreement entered into by cluster participants provide a mechanism that allows each of them reasonable access to the property of other participants if the latter fail to adequately maintain and repair the fence. Some agreements also provide for a particular process related to the monitoring of the fence as a whole, and others require the defaulting party to reimburse the others for the cost of the repairs and maintenance that they failed to do. In some of the clusters, the right to access a particular strip of land adjacent to and on the inside of the cluster to take corrective action if another cluster participant fails to do so, is present. This right is similar to the right of access that different tiers of government have to enter the property to maintain the 2,500 kilometre long government controlled barrier fence across several states. The *Biosecurity Act 2014* (Qld),⁹⁰ and the *Land Protection (Pest and Stock Route Management) Act 2002* (Qld),⁹¹ work together to ensure that the relevant authority is able to maintain the fence and clear 20 m either side, after obtaining written permission to do so from landholders, or giving written notice to enter their land.

Overall, there are inconsistencies and different approaches to the monitoring of the RAPAD cluster fences. These are summarised in Table 8.

The extent to which the monitoring of cluster fences are not regularised or dealt with in the deed agreements may not matter from a practical perspective, as long as the trust relationship between the parties is maintained and each of them takes reasonable steps to monitor the fence.

⁸⁹ *Neighbourhood Disputes (Dividing Fences and Trees) Act 2011* (Qld) s 16.

⁹⁰ *Biosecurity Act 2014* (Qld) s 91.

⁹¹ *Land Protection (Pest and Stock Route Management) Act 2002* (Qld) ss 51, 52.

	Number of clusters with the particular arrangement:
Total number of clusters	23
General obligation for members to monitor the fence	23
Members must check the fence	8
Specific procedures or timelines for members to check the fence:	
The group as a whole, once a year	1
One specific member must check the fence once fortnightly for the first 6 months, and then once a month for 12 months	2
Monthly and as soon as possible after every rain event, noting it is unclear whether this obligation rests upon one member, all individual members, or the group	2
At least monthly, noting it is unclear whether this obligation rests upon one member, all individual members, or the group	1
Once every 5 weeks, noting it is unclear whether this obligation rests upon one member, all individual members, or the group	1
The group as a whole, 2 or 3 times per year for the first year, and thereafter once a significant weather event occurs	1
The management committee of the incorporated association checks the fence:	
As a general obligation	1
As agreed upon between them	1
Once a year	1
Twice each year	3

Table 8 – Fence monitoring arrangements in clusters in the RAPADCS

Turning next to cluster fence repair arrangements: A document analysis of RAPADCS deed agreements revealed similar inconsistencies and various approaches summarised in Table 9.

From a practical perspective, regardless of the nature and extent of the contractual arrangement concerning repairs and maintenance, the time it takes to follow the notification process set out in the relevant agreements may be too long to address the immediate risk that wild dogs may enter the cluster area.

As most graziers have the skill and experience to construct and maintain fences, it may be that it is in their own interest and the interest of the cluster to simply get on with it and to repair the fence. Doing so is unlikely to be costly when compared to the construction cost of the cluster fence and to the cost of doing nothing to re-establish the integrity of the fence.

Thereafter, taking legal action to recoup money spent is always an option under the common law, and relevant to some of the deeds of agreement in the RAPADCS. But the cost of doing so is likely prohibitive and places the social construct of the cluster at risk.

Therefore, even in cluster fencing schemes that involve specific contractual arrangements between cluster participants, there is a monitoring and maintenance freeriding risk that has no regulatory solution.

	Number of clusters with the particular arrangement:
Total number of clusters	23
Agreements that provide for rectification of damage to the fence	21
When can a rectification notice be issued:	
Member fails to comply with maintenance obligations	20
When the management committee's annual inspection determines the fence is not in a proper condition	1
Who gives the rectification notice:	
Association	2
Association and remaining members/landowners	15
Management committee	1
How is the rectification notice given:	
Written	3
Not specifically specified, noting the general provision of notification in writing	18
How quickly should the fence be repaired or rectified:	
24 hours	14
3 days	1
30 days	1
Rectification process made in consultation with defaulting member/landowner	1
Who bears the costs of the repairs and related legal fees:	
To be at the cost of the defaulting member	17
Not specified	1
Access to land to repair a fence on another member's property:	
Agreements that provide for access to land for the purpose of rectification works	20
Agreements that do not provide for access to land for the purpose of rectification works	3
Immediate access to defaulting members land for rectification works without notice:	
2m within the relevant section of Cluster Fence	8
4m within the relevant section of Cluster Fence	1
10m within the relevant section of Cluster Fence	6
Access must be in consult with landowner	1
Association/other landholders have immediate access without notice in emergency and 24 hours' notice otherwise, to carry out maintenance	3
Access for the sole purpose of inspection/repairs with 24 hours' notice to a landholder	1

Table 9 – Repair arrangements in the RAPADCS

12 Case study 1: The relationship between the funding arrangement and the business model in the LES

The funding arrangement and business model of the LES and RAPADCS differ in a number of respects. The policy tool employed to fund exclusion fences in the LES is a long term loan. The funding model in the RAPADCS entails co-contributions from the state and participants, wherein the state's participation is to provide grant funding as the policy tool to achieve the objectives of a multi-property cluster fence. The time scales of the schemes are also different, as is the party who bears the credit risk.

12.1 Timing and the fixed term nature of the LES

The funding arrangement for the construction of the LES exclusion fences entails loan funding from the State to a local government authority, the LRC. The term of the loan is 20 years and the interest rate is fixed.

Landholders who participate in the scheme do not incur debt financing when they participate. Their obligation is a fixed special rates obligation, payable over 20 years, summarised in Table 10.⁹² Put differently, Table 10 sets out the relative size of the investment of each landholder in their exclusion fence.

PROPERTY REFERENCE	Interest only per year: Year 3, 4, 5	Principle and interest per year: Year 6 to 20	Total special rate: Year 1 to 20
A1667	\$4,949	\$10,825	\$177,215
A2009	\$658	\$1,438	\$23,549
A20166, A20159, A20175, A20164	\$9,251	\$20,234	\$331,264
A20162	\$5,494	\$12,017	\$196,733
A1886	\$2,604	\$5,696	\$93,246
A20120	\$811	\$1,773	\$29,029
A20174	\$1,958	\$4,283	\$70,114
A1875	\$3,868	\$8,460	\$138,498
A30177	\$6,489	\$14,193	\$232,361
A1634	\$2,725	\$5,959	\$97,564
A30443	\$3,907	\$8,545	\$139,894
A1635, A1631, A1633	\$4,055	\$8,868	\$145,190
A2149, A1899	\$2,752	\$6,019	\$98,535
A2178	\$1,820	\$3,980	\$65,160
A20161	\$2,485	\$5,436	\$89,004
A20157	\$10,548	\$23,072	\$377,724
A1686	\$956	\$2,092	\$34,245
A30226	\$2,667	\$5,834	\$95,517
A30220	\$3,019	\$6,604	\$108,120
A20150	\$2,155	\$4,717	\$77,223
A30209	\$3,250	\$7,108	\$116,367
A1849	\$4,425	\$9,679	\$158,465
A30351	\$842	\$1,841	\$30,146
A20138	\$4,396	\$9,616	\$157,436
A20158	\$3,231	\$7,066	\$115,689
A1676	\$8,818	\$19,287	\$315,751
A30236	\$454	\$994	\$16,272
A30196	\$2,170	\$4,747	\$77,720
A20176	\$5,776	\$12,633	\$206,828
A1692	\$3,587	\$7,845	\$128,437
A1891	\$12,882	\$28,177	\$461,296

⁹² Longreach Regional Council, *Budget 2019-2020* (Confirmed Minutes, Budget Meeting, 29 July 2019) 26–7.

A1700, A30427	\$2,948	\$6,448	\$105,564
A20118	\$3,132	\$6,850	\$112,139
A30243	\$2,480	\$5,425	\$88,815
A1715	\$363	\$795	\$13,008
A20132	\$3,594	\$7,861	\$128,692
A1695	\$7,430	\$16,252	\$266,067
A1694	\$6,225	\$13,615	\$222,905
A30353	\$7,453	\$16,303	\$266,902
A1935	\$10,883	\$23,696	\$388,085
A1726	\$4,570	\$9,996	\$163,644
A20139	\$12,738	\$27,862	\$456,145
A1881	\$4,615	\$10,095	\$165,267
A30297	\$9,288	\$20,317	\$332,613
A1609	\$8,610	\$18,833	\$308,332
A1886	\$2,432	\$5,320	\$87,102
A1912	\$3,787	\$8,283	\$135,602
A20219	\$3,173	\$6,941	\$113,632
A20141	\$7,253	\$15,865	\$259,738
A30223	\$5,109	\$11,174	\$182,939
A20151, A1666	\$9,984	\$21,838	\$357,527
A1888	\$2,402	\$5,254	\$86,023
A1928	\$1,263	\$2,762	\$45,225
A20133	\$536	\$1,173	\$19,204
A20117	\$346	\$756	\$12,383
A1930	\$3,128	\$6,842	\$112,020
TOTAL			\$8,834,164

Table 10 – Special rates payable for investment in cluster fences in the LES by property

The budgeted construction cost of the exclusion fences in the LES is \$8,000 per kilometre, of which \$4,500 relates to the cost of material that is sourced by the LRC.⁹³ It is not possible to determine how the actual cost of each fence compares to the budget, as no data are publicly available about the length and final cost of each fence.

What is known, is that the total dollar value of the special rates payable by each participant is a factor of the costs associated with the borrowings of the LRC, the purchase cost of the material and the sum needed to construct each fence. This sum varies depending on the type of pastures, presence of trees, weeds and water crossings, as well as sloping of the land. At the completion of each fence, the overall cost of the construction is known and the special rates obligation of each participant is calculated and fixed. In year 1 and 2, there are no special rate payments for any of the participants. In years 3, 4 and 5, only interest is payable (constituting 8.4 per cent of the total special rates value). This five year period coincides with the estimated time that it takes to show returns from an exclusion fence through an increase in sheep numbers as explained above. The remainder of principal and interest are then paid over 15 years.⁹⁴ The special rates commenced in the 2019–20 LRC financial year.⁹⁵

⁹³ Premier's Office (Qld), 'Longreach Exclusion Fencing to Review Sheep and Wool Industry' (Media Release, 1 December 2016); Longreach Regional Council, *Budget 2018-2019* (Unconfirmed Minutes, Budget Meeting, 5 July 2018) 110–11.

⁹⁴ Longreach Regional Council, *Budget 2019-2020* (Confirmed Minutes, Budget Meeting, 29 July 2019) 94.

⁹⁵ Longreach Regional Council, *2018-2019 Annual Report* (Report, 2019) 43.

To summarise, the loan repayment terms that the LRC must adhere to, and the special rates obligations of participating landholders are the same:

- Both entail a fixed obligation
- The underlying low interest rate in both are fixed and
- The payback periods are the same, being 20 years.

In reference to the comparison between the effective useful life of the fence and the period over which the landholder pays the special rates, there is more uncertainty. It may be that the exclusion fence is still in good order after 20 years, but that depends on a range of factors such as fence maintenance, floods and the number of water crossings.

Turning next to the respective sources of funding used to repay the loan and the special rates: The LRC has a fixed repayment obligation and uses fixed special rates income to service this obligation. Therefore, the financing and funding model of the LRC involve no additional funding requirements or timing differences that the council must fund as the net position of the LRC is relatively neutral at any point in time as long as participants pay their special rates.

Landowners are in a different position. The simple truth is that primary production income and cash flow varies generally, and more so under drought conditions and where graziers have de-stocked. The existence of an exclusion fence does not imply that income will flow from it, nor that the income that does flow as a result of the fence will be sufficient to pay the special rate. Therefore, **the LRC bears the credit risk associated with the loan**. It is the LRC that stands under an obligation to repay the QTC loan, irrespective of whether landholders pay their special rates. That said, the special rates are levied over a 20-year period, resulting in relatively low annual obligations as set out in Table 10, thus reducing the dollar value of any credit risk.

12.2 Credit risk

At first glance, it may appear that this risk is significant when it is considered that the LES is aimed at landholders who are reluctant to take on *more* debt financing due to the prevailing drought and the impact of the wild dog predation problem. Therefore, it is likely that financial institutions already hold mortgages over the properties where the exclusion fences are constructed. It is also likely that the financial position of these participants would preclude them from obtaining debt financing to construct the fence on their own.

The question then arises (particularly if a financial institution holds a mortgage over the property) what recourse there is for the LRC to recover any special rates owing to it if the landholder defaults. A failure to recover the rates is inequitable to other participants and to other ratepayers in the first instance. Secondly, it should be considered that the exclusion fence is essentially an immovable asset that has little value when it is removed from a property, other than scrap value. Removing the fence to recover unpaid special rates by selling it at scrap value also puts a new burden on the government to apply pest management measures to a previously protected piece of land.

But, in the case of the LES, the LRC is a preferred creditor, and first in line to recover any special rates owing to it, even before mortgage holders due to the operation of the *Local Government Act 2009* (Qld) and the *Local Government Regulation 2012* (Qld). Division 3 of the *Local Government Regulation 2012* (Qld) is concerned with the power of a local government to sell or acquire land for overdue rates or charges. Generally, once rates are overdue for three years, the local government may, by resolution, decide to sell the land, giving notice of intent to do so.⁹⁶ Properties are then

⁹⁶ *Local Government Regulation 2012* (Qld) s 140.

generally sold by auction. A reserve price is set, and if the reserve price is not achieved, the property will be sold to the highest bidder. If the highest bidder does not agree to purchase the land, then the land is taken to have been sold to the local government.⁹⁷

The proceeds of the sale must be used in the following order:⁹⁸

1. To pay the expenses of the sale
2. To pay any land taxes owing on the day of the sale
3. To pay overdue rates or charges for the land
4. To pay any registered encumbrances, other than State encumbrances, in order of their priority under the Land Title Act
5. To pay any body corporate fees that the owner of the land owed immediately before the sale
6. To pay the person who owned the land immediately before the sale.

Therefore, the LRC has a low credit risk due to the first right it has over the property in the event of default, and due to the relatively low dollar values of annual special rates.

The net result of the LES, as long as participants pay their special rates are that:

- The LES involves no net outflow for the State – it merely advances a loan and the loan is repaid
- The State earns a fixed return on investment in the form of interest
- There are no private benefits that arise in the hands of the participating graziers that is a cost to the government, as they pay for the fence in full
- The LRC has no net outflow of funds, except for the administration of the scheme
- Participating graziers are likely to reap economic benefits flowing from increases in sheep numbers and wool production
- The community benefits from the resultant economic growth potential and
- The scheme achieves pest management goals across the council area.

13 Case study 2: The relationship between the funding arrangement and the business model in the RAPADCS

The funding arrangement in the RAPADCS involves co-funding of a cluster fence. Based on cluster project budgets, the government contributes around 35 per cent of the cost of the fence through grant funding which is capped at \$2,700 per kilometre, and the remainder of the cost is borne by cluster participants. Using \$2,700 as an estimate of 35 per cent of the cost of a fence per kilometre, the budgeted total cost per kilometre for the QFPI scheme is \$7,714, which compares favourably to the \$8,000 per kilometre in the LES.

⁹⁷ *Local Government Regulation 2012 (Qld)* s 143.

⁹⁸ *Local Government Regulation 2012 (Qld)* s 146.

13.1 The flow of cash

In the RAPADCS, each cluster participant is responsible for their own construction costs in reference to their own part of the fence. To the extent that they have to pay for costs in cash, they have to make their own funding arrangements independent of the cluster scheme. Whether they self-fund the costs or use debt financing to do so involves the same decision process as with any other financing decision. Each participant's own funding arrangement requires no new business model and no new legal structure as each participant already operates a primary production business. Constructing the fence is a part of the ordinary business conducted by a primary producer. The time period over which each cluster participant will repay their debt financing, if they used any to construct the fence, varies depending on their own arrangements.

The flow of grant funding from the QFPI to each participating landholder occurs as follows:

1. QFPI grant funding flows to RAPAD in the form of a one-off cash payment that is equal to their total funding allocation
2. RAPAD makes the grant funding available to each cluster in four cash tranches equal to 50 percent (tranche 1), 20 percent (tranche 2 and 3) and 10 per cent of the capped grant funding contribution of \$2,700 per kilometre of cluster fencing constructed
3. The RAPAD distributions are made directly to a new legal entity set up for the cluster arrangement under the RAPADCS. As explained above, all of the clusters in Round 1 and Round 2 of the RAPADCS adopted incorporated associations for this purpose
4. The legal entity established specifically for purposes of the RAPADCS then reimburses participants their costs of material, grading etc., based on their actual costs incurred as evidenced by invoices, and capped at their relevant share of the grant funding received, based on the length of the section of the cluster fence they have to construct
5. As part of the governance and oversight role that RAPAD has, each cluster entity must submit copies of the relevant invoices for the costs incurred by the cluster participants and the reimbursements to RAPAD, as well as the number of hours that the landholder and their employees and subcontractors spent to construct the fence, which is classified as in-kind contributions to the construction of the fence. In turn, RAPAD uses these for governance and reporting purposes.

13.2 The establishment of a new separate legal entity

Part 10 of this Research Paper explained that, due to the nature of an exclusion fence, no sophisticated business model, business structure or separate legal entity is necessary to establish the fence or to operate one. Exclusion fences do not generate direct income. The ownership of an exclusion fence is not shared beyond the regulatory perspective of the 'dividing fence'. From the perspective of the allocation of ownership rights or entitlements, the requirement to establish a new legal entity to facilitate the flow of cash from the QFPI to landholders does not have any benefits.

But a new legal entity that binds landholders formally has other benefits for the Queensland government, RAPAD and landholders. From the perspective of the State, interposing a new legal entity between the QFPI and landholders addresses the criticism that the grant funding provides direct private benefits to individual landholders in the form of a cost saving for the construction of the fence. From RAPAD's perspective, dealing with one legal entity is administratively more efficient than it is to make separate reimbursements to individual landholders in a cluster. Conceptually the State government also achieves a higher degree of grant funding accountability and governance, and more effective pest management by requiring landholders to formalise their

arrangement through a new legal entity. The collective self-governance over the integrity and maintenance of the fence protects large areas of land more effectively against wild dog predation. In addition, as all of the legal entities applied in business structures in Australia require or imply member meetings, the personal landholder interaction that flows from that creates an environment in which they may share best practice pest management ideas.

In and of itself, the choice of an incorporated association in all of the clusters in Round 1 and Round 2 presents evidence that it is not necessary to establish a sophisticated legal structure to facilitate payments to landholders or for reporting and governance purposes. For the most part, participants only share:

- In the economic benefits of the cluster generally, which is difficult to predict, takes time to develop and is only relevant to each grazier business individually
- A reliance on each other to monitor, maintain and repair the fence and
- Experiences in managing the risk of wild dog predation.

Cluster participants share no assets or revenue; only the cost associated with the legal entity itself. For the most part, these are limited to public liability insurance.⁹⁹ The document analysis of the RAPADCS contractual arrangements revealed that none of the 23 clusters has a common pool to which participants contribute in so far as repairs to the fence go. Some of the cluster deeds of agreement include provisions for the pooling of cash on a fixed basis or in reference to the length of each landholders fence to pay for public liability insurance.

In summary, the incorporated associations act as a conduit for the grant funding, have the potential to bind landholders for governance purposes and enables the sharing of best practice. Beyond these matters, the other control rights and obligations associated with the cluster fence could have easily been dealt with in a contract between the participants without the need to incorporate an association. In fact, the comparison of the rules or constitution of each incorporated association and the deed of agreement between participants, revealed that cluster-specific control and management rights, and member obligations were set out in the deed of agreement between them. The rules or constitutions of each of the incorporated associations were generic in nature.

13.3 The features of an incorporated association

Nevertheless, the choice to use an incorporated association is still appropriate due to the limited ownership and entitlement rights that exist between the members. In Queensland, incorporated associations are registered under the *Associations Incorporation Act 1981* (Qld). Incorporated associations have a not-for-profit purpose,¹⁰⁰ and any remaining assets must be transferred to a similar entity at winding up.¹⁰¹

The overall cost to register an incorporated association is low compared to other legal entities.¹⁰² There are few constraints or limitations upon incorporated associations, bar the requirement that it must have seven members,¹⁰³ a management committee,¹⁰⁴ president and treasurer.¹⁰⁵ In reference to the way that the RAPADCS operate, there are few reporting and audit-related requirements that must be met, as all of the RAPADCS incorporated associations are classified as

⁹⁹ *Associations Incorporations Act 1981* (Qld), s 70.

¹⁰⁰ *Associations Incorporations Act 1981* (Qld), s 4.

¹⁰¹ *Associations Incorporations Act 1981* (Qld), s 92.

¹⁰² A fee of \$162.15 is payable as at December 2019.

¹⁰³ *Associations Incorporations Act 1981* (Qld), s 5.

¹⁰⁴ *Associations Incorporations Act 1981* (Qld), pt 7.

¹⁰⁵ *Associations Incorporations Act 1981* (Qld), s 8.

level 3 incorporated associations.¹⁰⁶ That means that there is an obligation upon the president and treasurer to sign a statement that the association keeps financial records ‘in a way that properly records the association’s income and expenditure and dealings with its assets and liabilities’,¹⁰⁷ and little more to comply with. For the most part, management rights and responsibilities in all of the RAPAD scheme clusters are focused on monitoring and maintaining the fence as summarised in Table 8 and 9.

13.4 The funding model

The key feature of the funding arrangement in the RAPADCS is the innovative way that the in-kind contributions of landholders are recognised in the project. Whereas the LRC facilitates the construction of exclusion fences in the LES, in part by procuring materials, landholders in the RAPADCS build the fences themselves to a large extent. As set out before, fencing is a normal part of most primary production businesses and an ongoing activity for graziers. The hours that landholders and their employees spend to construct a fence is a tangible and valuable contribution to the construction of a cluster fence.

The budgeted hours that landholders and their employees expected to spend to construct each part of the cluster fence was an important component in the assessment of each application. The rate applied to these hours were standardised across all applications and were based on independent calculations by an economist commissioned by RAPAD. At the conclusion of the fence construction, each landholder provided their and their employees’ actual hours to RAPAD for reporting purposes, as well as an estimate of other related hours.¹⁰⁸

On that basis, the in-kind contributions to the construction of each cluster fence comprise of:

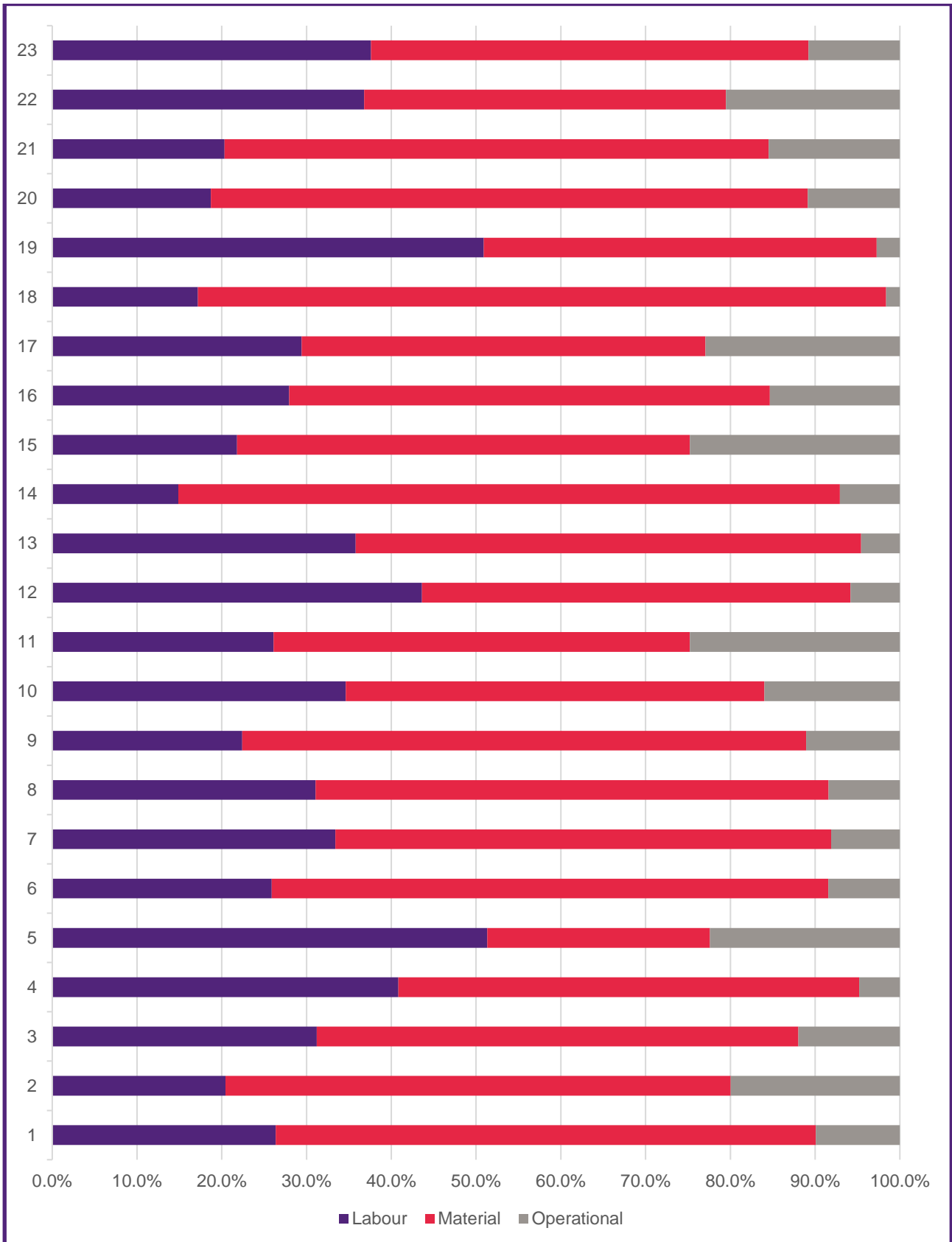
- Clearing, costed at \$150 per hour, classified as operational costs
- Grading, costed at \$80 per hour, classified as operational costs
- Landholder labour hours, costed at \$50 per hour, classified as labour costs
- Employee labour hours, costed at \$35 per hour, classified as labour costs
- External labour hours, costed at \$50 per hour, classified as labour costs
- Equipment charges, costed at \$100 per hour, classified as operational costs.

The cash component of the construction of each cluster fence references the cost of the material. Grant funding towards material costs was capped at \$2,700 per kilometre, and landholders had to fund the remainder. Overall, the dollar value of the in-kind contributions to the construction of the cluster fences is significant. Graph 1 presents the labour, material and operational cost components of each of the 23 cluster fences in Round 1 and Round 2 of the RAPADCS. Graph 2 presents a comparison of the relative cash contributions from landholders and grant funding towards the cost of the material.

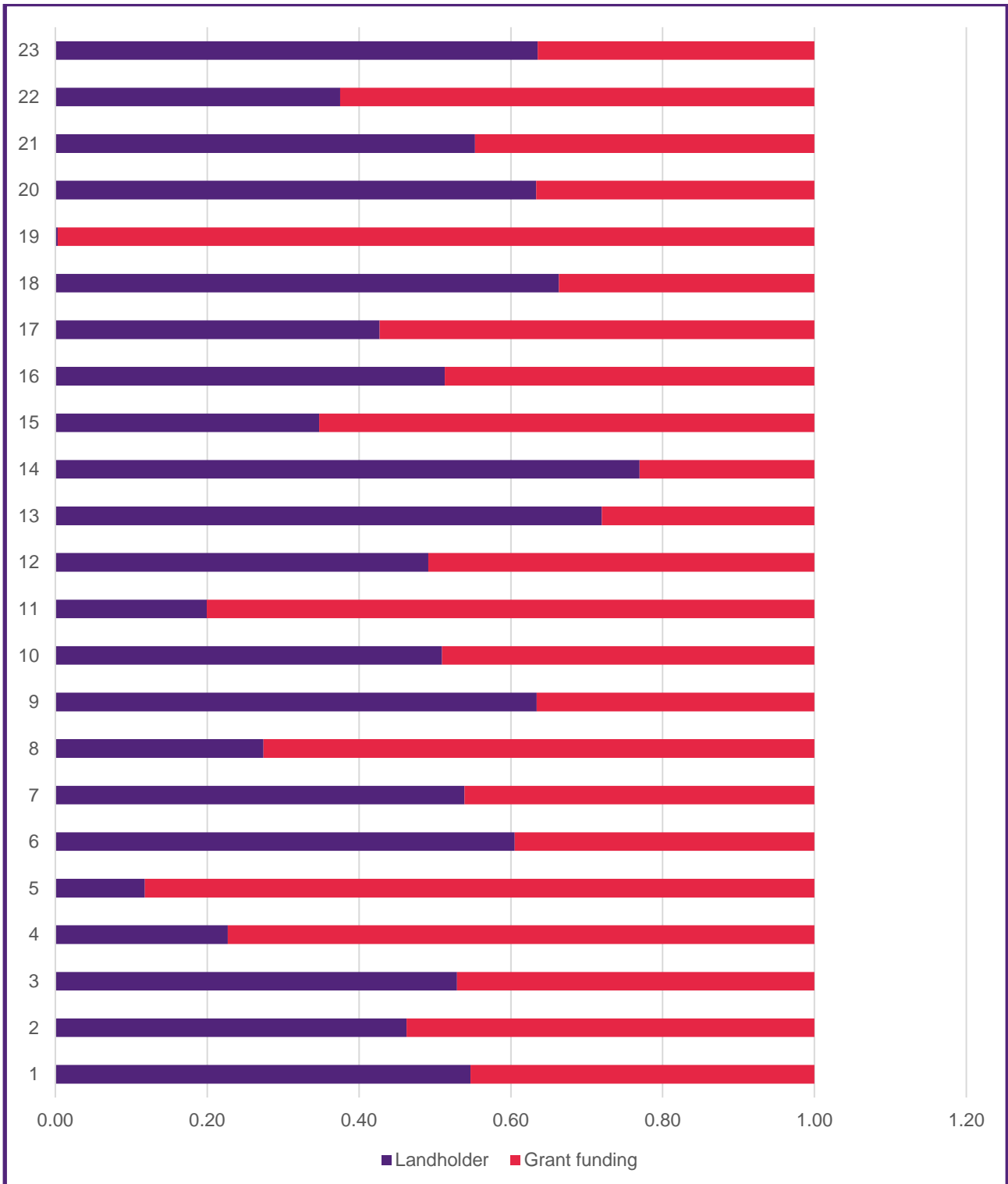
¹⁰⁶ *Associations Incorporations Act 1981* (Qld), s 59B.

¹⁰⁷ *Associations Incorporations Act 1981* (Qld), s 59B(2)(b)(ii).

¹⁰⁸ Email from Morgan Gronold to Thea Voogt, 9 December 2019.



Graph 1 – Cost composition of cluster fences by cluster in percentage terms



Graph 2 – Landholder and grant funding contribution towards material

Therefore, the main difference between the LES and the RAPADCS is the overall cash outflow of each participating landholder:

- Using the budgeted cost of \$8,000 per kilometre as a benchmark in the LES, landholders are liable to pay for the full cost through the special rates
- RAPADCS data reveal that landholders contributed significantly less cash to the construction of the cluster fences. Cash contributions for material across all 23 cluster totalled \$14,669,618 and the total length of cluster fences constructed totalled 2563 kilometres. On that basis, on average, landholder cash outflow per kilometre is estimated at \$5,723.

13.5 Clustering as an economic development tool in the RAPADCS

Porter is widely regarded as the pioneer of cluster theory.¹⁰⁹ Porter defines a cluster as a 'geographic concentration of interconnected companies and institutions in a particular field'.¹¹⁰ This definition fits the cluster arrangements in the RAPADCS.

Clustering relies on synergies between participants, creates the platform for them to share knowledge, information or resources for economic benefit, and often achieves economies of scale through cost reduction or collective bargaining. Clustering focuses on linkages and interdependencies between participants, fosters collaboration between them, but allow a degree of independence so that the competition between them continues. Clustering stimulates growth and innovation, the effects of which spill over to firms outside of the cluster.¹¹¹

There are broadly three different types of clustering: horizontal, vertical and diagonal clustering.

Horizontal clustering involves participation by firms in the same geographical location who have the same products or services and compete with each other. Their clustering advantages would depend on what they want to achieve. It may be that they want to share knowledge, use their collective bargaining power or buying power to increase sales, reduce costs or have access to more labour or infrastructure, which in turn, may hold cost savings advantages.¹¹² Primarily clusters in the RAPADCS share knowledge and work together to apply for grant funding.

Vertical clustering focuses on co-located firms in a particular industry supply chain with upstream or downstream advantages, depending on the position of a participant. Linkages in production, logistics and distribution, as well as co-sharing of infrastructure such as warehouses and trucks, is the driving force behind this form of clustering.¹¹³ Participation in the RAPADCS does not involve vertical clustering.

Diagonal clustering involves the concentration of complimentary or symbiotic firms with distinct products or services that will add value to each other. For example in the tourism industry, package deals sold to consumers, facilitated through clusters, benefit a range of participants who have non-competing products but add to the experience of consumers. The advantage to participants in this

¹⁰⁹ House of Representatives Select Committee on Regional Development and Decentralisation, Parliament of Australia, *Regions at the Ready: Investing in Australia's Future* (Report, June 2018) 61.

¹¹⁰ Michael E Porter, 'Clusters and the New Economics of Competition' (November-December 1998) *Harvard Business Review* 77, 78

¹¹¹ Michael E Porter, 'Clusters and the New Economics of Competition' (November-December 1998) *Harvard Business Review* 77, 78; Michael Enright and Brian H Roberts, 'Regional Clustering in Australia' (2011) 26 *Australian Journal of Management* 65, 66–7; Sidsel Grimstad and John Burgess, 'Environmental Sustainability and Competitive Advantage in a Wine Tourism Micro-cluster' (2014) 37(6) *Management Research Review* 553, 553–4; Fang Huang and John Rice, 'Does Open Innovation Work Better in Regional Clusters?' (2013) 19(1) *Australasian Journal of Regional Studies* 85, 87, 90, 92.

¹¹² Michael E Porter, 'Clusters and the New Economics of Competition' (November-December 1998) *Harvard Business Review* 77, 78; EJ Michael, 'Tourism Micro-clusters' (2003) 9(2) *Tourism Economics* 133, 138.

¹¹³ Sidsel Grimstad and John Burgess, 'Environmental Sustainability and Competitive Advantage in a Wine Tourism Micro-cluster' (2014) 37(6) *Management Research Review* 553, 559; EJ Michael, 'Tourism Micro-clusters' (2003) 9(2) *Tourism Economics* 133, 138.

form of clustering is collective marketing without product competition.¹¹⁴ None of the characteristics of diagonal clustering is present in the RAPADCS.

Much of Porter's work was focused on horizontal clustering. At the centre of his conception of clusters was the necessary tension between competition and collaboration. The competition between firms in the cluster increases productivity, drives direction and the pace of innovation that underpins growth and stimulates new business, broadly through peer pressure and constant comparison through information sharing. To a lesser extent, the social interaction of cluster participants in the RAPADCS when they share their experiences with wild dog management relates to this aspect of clustering.

Therefore, the 'cluster' concept used in Porter's conception of economic development is watered down in cluster fencing arrangements, as these involve little in the form of asset and revenue sharing.

14. Summary comparison of the main features of the two case studies

By way of conclusion, the LES and RAPADCS have facilitated the construction of significant exclusion fences in the RAPAD region, facilitated through two policy tools: a long term loan and grant funding. The LES and RAPADCS both facilitate place-value economic development in a very remote area of Queensland.

- The time that it takes to construct an exclusion fence is similar to the time it takes to construct a cluster fence
- The term to repay the LES loan from the perspective of the LRC and participating graziers is 20 years. That is different to the cash flow timing in the RAPADCS, as funds transfer to cluster participants conclude when the construction of the cluster fence is completed
- Participants in the LES are liable for the full cost of the fence, but over a 20-year period. They benefit from the time value of money that reduces their overall cost
- Participants in the RAPADCS benefit from a lower cash outlay as they participate in the construction of the fence. Their in-kind contributions are recognised in the overall project
- The LES is not premised on cooperation between landholders. The requirement that participants RAPADCS must use one legal entity to access grant funding facilitates cooperation between them
- The grant-funded RAPADCS results in the distribution of cash from the government to private landholders. There is no net cash outflow for the government in the LES
- There is no credit risk associated with the RAPADCS, except to the extent that individual landholders have to use debt funding to pay for some of the fence construction, but the risk is borne by financial institutions, not parties to the cluster arrangement or the state
- There is credit risk in the LES, borne by the LRC, but the risk is low
- Partnerships, collaboration and cooperation are an essential part of both schemes, and involve the government and landholders

¹¹⁴ EJ Michael, 'Tourism Micro-clusters' (2003) 9(2) *Tourism Economics* 133, 138–9.

- As long as participant pay their special rates in the LES, no private benefits arise in the hands of landholders, except that they benefit from the time value of money, as they pay special rates over 20 years and an implied low interest rate
- The grant funding in the RAPADCS reduces the cost of constructing the cluster fence in the RAPADCS. In that way, private benefits accrue directly to landholders as their capital outlay is lower.

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