

CHAPTER THIRTEEN

VALUE CREATION AND SHARING ASSESSMENT



CHAPTER 13

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CHAPTER SUMMARY AND CONCLUSIONS:

- In accordance with Australian Government requirements regarding the investigation of value capture as a means of alternative funding for infrastructure projects, the CRR Detailed Business Case 2016 explored a broad range of value capture scenarios. While the CRR Project presents real opportunity for value creation through urban revitalisation, the Queensland Government's commitment to fully fund the CRR Project is not contingent on funding from alternative mechanisms including value capture.
- A value creation and sharing assessment identified the beneficiary groups and benefits of the CRR Project, and considered value sharing mechanisms that may be appropriate for the CRR Project.
- International case studies suggest there is no consistent application of mechanisms, or level of funding generated from, value sharing. Domestically, the use of value sharing to fund large public/heavy rail transport infrastructure projects is limited.
- Value sharing investigations focussed on beneficiaries in and around CRR station precincts, the CBD and near the CBD.
- The CRR Project will give rise to property development opportunities above and around CRR stations, as well as within broader precincts across the SEQ transit network. These opportunities continue to be investigated.
- The Cross River Rail Delivery Authority (CRRDA) is currently developing strategies to facilitate economic development for community purposes within CRR Priority Development Areas around station precincts. Value uplift to government-owned land within these precincts presents a potential opportunity to contribute to project funding.

13.1 Purpose and Overview of this Chapter

This purpose of this chapter is to identify and assess the opportunities for value sharing (or value capture) and alternative funding that could contribute to financing the up-front or ongoing costs of the CRR Project. This chapter:

- analyses the context and need for value sharing as a funding source for infrastructure project delivery, including the current policy context and precedent projects that have utilised value sharing
- identifies the key beneficiaries of, and broadly the benefits delivered by, investment in the CRR Project
- discusses the potential for both real estate-based and economic tax uplift that could occur as a result of investing in the CRR Project
- considers the potential for development above and around new CRR stations, as well as other economic development opportunities.

This chapter draws on information contained in Chapter 6: Project Benefits and Chapter 7: Economic Analysis.



13.2 Value Sharing Context

In an environment where the fiscal capacity of governments is constrained, funding large infrastructure projects via traditional sources (direct government contributions and user charges such as fares or tolls) can only be part of the solution. Increasingly, governments have looked to value sharing (also known as value capture) mechanisms to provide additional sources of funding.

Value sharing identifies the beneficiaries of the infrastructure investment and seeks to monetise a share of the benefit delivered. This monetisation can occur either passively through existing tax frameworks or more actively via the utilisation of mechanisms.

Value sharing mechanisms can either generate funding up-front, defraying part of the up-front capital outlay, or on an ongoing basis, which can assist in repaying any financing raised to undertake the project (e.g. funding ongoing public private partnership availability payments).

The premise of value sharing derives from international and domestic research demonstrating the nexus between improved transport accessibility and amenity, and the positive effect on real estate values and the wider economy from productivity improvements and agglomeration economies (i.e. clustering benefits).

As a transformative, city-shaping infrastructure project, the CRR Project generates benefits across greater Brisbane and SEQ.

In accordance with Australian Government requirements regarding the investigation of value capture as a means of alternative funding for infrastructure projects, the CRR Detailed Business Case 2016 explored a broad range of precinct-based value sharing mechanisms and region-wide value sharing mechanisms.

Precedent project analysis shows that land-use changes can enhance the benefits generated by investments in transit amenity and accessibility. This can occur through amendments to land-use planning frameworks that:

- encourage the formation and growth of economic or knowledge clusters (for example, through amendments that facilitate certain uses being prioritised around transit nodes)
- support improvements in job accessibility (for example, through uplift in the density of residential development around transit nodes).

Government can further stimulate the generation of benefits by:

- releasing underutilised government-owned land parcels to facilitate the outcomes envisioned for each transit node
- catalysing investment in preferred uses by either underpinning demand – to convert opportunities into projects – or through policies that encourage the emergence of preferred uses (e.g. by providing incentives to locate in these locations).

This framework is set out in Figure 13.1.



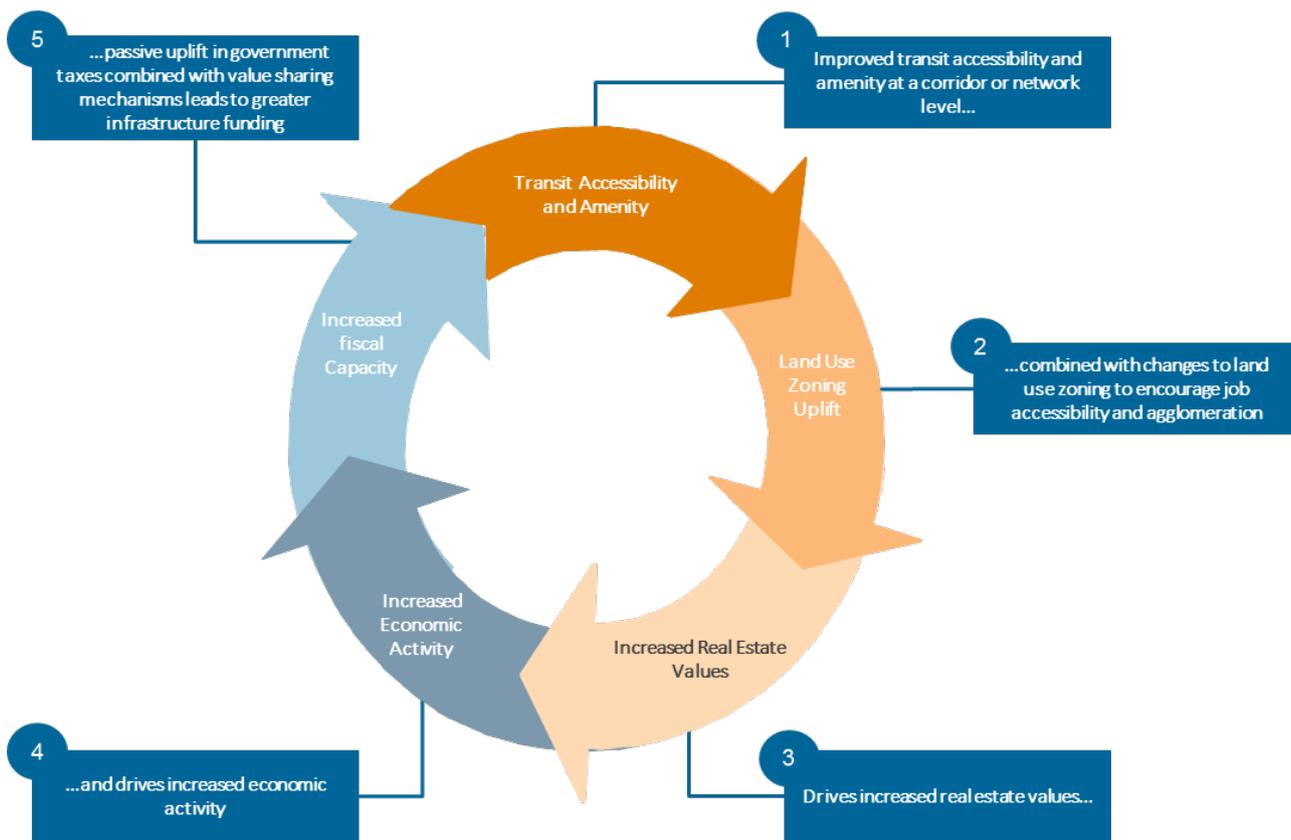


Figure 13.1: Value Creation and Sharing Overview

While the CRR Project presents real opportunity for value creation through urban revitalisation, the Queensland Government's commitment to fully fund the CRR Project is not contingent on funding from alternative mechanisms including value capture.

13.3 Strategic Policy Context

Policy announcements regarding infrastructure in Australia have focused on the obligation of governments to explore alternative sources of funding through value sharing.

13.3.1 Australian Government

13.3.1.1 Infrastructure Financing Principles

The Australian Government has released its principles for infrastructure funding and financing. The principles aim to ensure the cost of transport projects is shared fairly between those who benefit the most from the projects and the broader Australian community, and signal a move towards cost-reflective pricing. The principles also aim to optimise public investment in transport projects through private partnerships and innovative financing. They indicate that funding shares from federal and state governments should be determined after taking into account contributions made by beneficiaries.

13.3.1.2 Australian Infrastructure Plan

Infrastructure Australia's recently released Australian Infrastructure Plan 2016 notes a greater reliance on value sharing to diversify the sources of funding to deliver Australia's infrastructure pipeline. The plan encourages government to consider road pricing, increased user fares for public transport and to ensure that value sharing opportunities are identified and implemented early in planning processes.



13.3.1.3 Smart Cities Plan

Setting out the Australian Government's vision for cities, the Smart Cities Plan highlights the importance of developing cities as knowledge-based centres with good access to jobs, affordable housing and a healthy environment. Three key initiatives outlined in the plan include:

1. providing \$50 million to fund infrastructure planning for major infrastructure projects including urban rail
2. establishing an infrastructure financing unit to broker investment in infrastructure via innovative financing solutions
3. inviting state and territory governments to partner with the Australian Government on City Deals.

City Deals is the initiative most relevant to the CRR Project given this project has potential to be transformational at a city-region level through its impact on urban form and the public transport system. The Smart Cities Plan is limited in detail regarding how City Deals would operate, noting only the following:

- Funding will be linked to reform and actions at the state and local level. These actions will be negotiated on a case-by-case basis.
- City Deals can be precinct, network, city or region-wide.
- City Deals will be structured around priorities that focus on economic growth, job creation, housing affordability and environmental outcomes.

13.3.1.4 Using value capture to help deliver major land transport infrastructure

In November 2016, the Australian Government released a discussion paper outlining a range of value capture approaches for the purpose of seeking feedback on how the Australian Government could use its various policy and funding levers to stimulate the use of value capture in the development and delivery of transport infrastructure.

The paper sets out evidence of the relationship between transport infrastructure and the benefits that flow from it, before turning to a consideration of different mechanisms to implement value capture. The following common value capture mechanisms are identified: user charges; sale of land, air rights or development rights; direct (public) or joint (public-private) development; private development of public infrastructure; developer contributions or charges, voluntary planning agreements; rezoning; taxation or rates 'automatic' uplift; payments in lieu of taxes (PILOTs); rates or property-based tax levy, benefit areas or betterment levy; sales tax levy; payroll tax levy; parking levy; and registration and fuel charges levy.

13.3.1.5 Capturing Value – Advice on making value capture work in Australia

In December 2016, Infrastructure Australia launched an advisory paper *Capturing Value: Advice on making value capture work in Australia*. In the advisory paper, Infrastructure Australia notes that value capture should be regularly considered for all public infrastructure projects, but it is important to be realistic about the role it can play in funding the infrastructure we need.

The advisory paper provides guidance to governments and the private sector on how value capture can be applied in the Australian context, noting that each value capture mechanisms has its own benefits, risks and implications for project funding and the economy more broadly. The paper examines the following types of existing and potential forms of value capture: betterment levies; developer charges; leveraging government land; taxes on property transactions; and taxes on land value.



13.3.1.6 Inquiry into the role of transport connectivity on stimulating development and economic activity

In November 2016, the Australian Government's Standing Committee on Infrastructure, Transport and Cities presented a report ("Harnessing Value, Delivering Infrastructure") of their findings following an inquiry that focused on the imbalance of settlement and its consequences, the deficit of infrastructure in the country's major cities and resulting congestion; the constriction on growth that these cities produce through lack of long term planning and timely construction of infrastructure; and the decline of the regions and lack of economic opportunity. The Committee focused their investigations on: the benefits of transport connectivity; the economic benefits of improved transport connectivity (especially through value creation and uplift); the role of government in coordinating improved transport connectivity and the role of value capture and other economic instruments in delivering transport infrastructure.

Among other matters, the Committee findings indicated that:

- The creation of new transport corridors and nodes has the dual advantage of allowing more efficient use of constrained urban space (densification and urban regeneration) while offering the opportunity to create value and use that value to pay for the development of public transport – value capture.

Planning transport without reference to land use and vice versa inevitably leads to sub-optimal outcomes. Integrated planning has significant benefits, not least of which is matching transport to land use in a way that optimises both, thereby increasing returns on investment to benefit landowners, developers and governments

13.3.2 Queensland Government – State Infrastructure Plan and Value Sharing

The Queensland Government's State Infrastructure Plan (SIP), released in March 2016, outlines the intention of the Queensland Government to 'explore the most cost effective funding and financing options available'.

Analysis of the value sharing options for the CRR Project has been informed by:

- key considerations in research papers on value sharing released by the Department of Infrastructure, Local Government and Planning
- current Queensland Government policy positions (e.g. restraining increases in public transport fares through the Fairer Fares package)

13.4 Value Sharing – Precedent Project Analysis

Various governments in Australia and internationally have used value sharing mechanisms to help fund transport infrastructure. Most examples of value sharing extending beyond property development at or around station precincts are from projects in the United Kingdom (UK) and United States (US).

In these examples, the project sponsors have typically focused on the following mechanisms:

- sale of development rights
- levies applied to areas receiving the benefit, typically on businesses or business activity at key rail station nodes
- direct contributions from developers where the transit is tied to urban renewal or land rezoning.

More recently, the UK's Crossrail 2 project has also proposed extending rates supplement levies to the general population.



Alternative financing – in the form of tax increment financing – has been used in some cases. This typically occurred in the US where there is a different devolution of taxation and revenue powers between municipal, state and federal governments. In these instances, repayment of the tax increment financing has typically been tied to the dedication of a business tax stream (e.g. sales, payroll or rates-based taxes). It is understood that in a number of instances, financiers have required tax increment financing bonds to be underwritten by the municipality issuing the bonds.

Examples where value sharing was used as a funding source reveal the following salient points:

- There is no one set level of funding that can be contributed by value sharing. However, precedent projects indicate the following:
 - Where there are significant urban renewal outcomes, 20 per cent to 25 per cent of funding was generated via contributions or levies that target development outcomes.
 - Where there are significant business benefits, 10 per cent to 30 per cent of funding was generated via levies on businesses or business properties.

As the base of a levy broadens, the nexus between benefit and charge reduces. That is, if a wide region is being charged, the benefits experienced will not be the same across the entire region – some will experience a minimal benefit, some a more significant benefit – however the charge will be the same regardless. An example is London's Crossrail, where 27 per cent of the project funding will be generated from a city-wide rates levy on commercial properties.

13.4.1 Case Studies

Crossrail and Crossrail 2

The Crossrail Project in London UK, is funding approximately 27 per cent of the total cost of the project through mechanisms which target London businesses, including business rate supplement (BRS), in the form of an additional levy on commercial property rates, on London businesses who stand to benefit from increased accessibility and reduced travel times across London.

In addition to the BRS, developer contributions make up a further significant proportion of project funding (eight per cent). This has included contributions from a number of private sector organisations such as the City of London Corporation (£200 million direct contribution), Heathrow Airport Holdings Ltd (£70 million), Canary Wharf Group (£150 million towards a new Canary Wharf Crossrail station) and Berkeley Homes who have agreed to construct a station box at Woolwich.

Crossrail has a very clear and quantifiable range of benefits, which are heavily promoted by the City of London. This is a critical factor in increasing public acceptability of value capture, and importantly, proving the nexus between project beneficiaries and mechanisms designed to capture some of the associated increased revenue attributable to the project.

Crossrail 2 is currently in the planning stage and is an extension of the original Crossrail line. The funding strategy contemplates extending the business rates levies implemented for Crossrail beyond the original funding period. This could raise a further £1.81 billion in revenue via business rates levies, plus an additional £0.99 billion through levies on residential dwellings across London. Together, these council rates levies are estimated to contribute 16 per cent of the total central cost estimate of the project.

Crossrail 2 has also contemplated raising public transit fares across the London rail network



The Denver Union Station (DUS)

The Denver Union Station (DUS) project in Colorado USA, used tax increment financing totalling approximately 60 per cent of the total cost to fund this US\$519 million PPP.

There were two main loans. The first loan of US\$145.6 million is to be repaid over 30 years via a 0.4 per cent 'sales and use tax' levy applied within special taxing districts established for the project. The repayment of this loan by RTD (Regional Transportation District, a government agency), was enabled by the issuing of a RTD bond secured by the gross sales tax revenue from the levy.

To repay the second US\$155 million loan, tax increment based on projected uplift in property values within the vicinity of the DUS has been pledged to DUSPA (Denver Union Station Project Authority) for 30 years. As the projected value uplift is speculative, in the event of a shortfall in the ability to service the debt, the City of Denver have confirmed that they will appropriate up to US\$8 million each year from city funds.

13.4.2 Value Sharing as a Funding Tool for Recent Australian Infrastructure Projects

Examples of value sharing to fund Australian rail infrastructure are limited compared to international examples.

Current projects such as Melbourne Metro have not articulated strategies for value sharing beyond the development of land above and around station precincts. However, the New South Wales (NSW) Government is understood to be considering a special infrastructure levy on residential and commercial properties for Parramatta Light Rail and, potentially, the extension of Sydney Metro. The NSW Government is still investigating the use of these levies, and the extent of funding they may contribute to their respective projects has not been confirmed.

Local governments in Australia have used value sharing techniques more than other levels of government. Examples include developer contributions to fund public infrastructure and special area levies and rates to fund investments in community and local business area infrastructure. Councils have also used community-wide charges to support investments in public infrastructure. An example is the Gold Coast City Council's (GCCC) City Transport Improvement Charge, which was used to fund the GCCC's contribution to the Gold Coast light rail, as well as other transport projects.

13.5 Key Beneficiaries and Benefits of the CRR Project

Property value uplift stimulated by investment in transport infrastructure has a significant body of empirical research proving its relationship. The mechanisms used to capture, or share in, revenue created by land value uplift are also well known. These include the sale of property development rights above and around stations, and hypothecation of ad valorem taxes associated with land value (e.g. rates, transfer duty and capital gains tax).

In addition to land value uplift, other benefits are directly associated with the investment in transport infrastructure. Some of the value created by these benefits could be shared and directed towards funding the CRR Project by implementing alternative funding mechanisms such as levies or taxes for beneficiary groups.

13.5.1 Key Beneficiaries of the CRR Project

The first step in identifying and developing value sharing mechanisms for the CRR Project, under the concept of 'beneficiary pays', is to identify the groups who will benefit and how the benefits will accrue. The beneficiaries of the CRR Project include:



- property owners whose property values are increased by improved transport access or through planning amendments to facilitate land-use outcomes
- public and private transport users who benefit from greater transport alternatives, increased service amenity, reduced travel times and reduced road network congestion
- business owners, where increased accessibility drives improved business revenues and a greater ability to attract or retain staff
- government, as a result of the increased economic activity and the land value uplift, which can generate substantial revenue uplift for all tiers of government.

In addition, the CRR Project will:

- deliver opportunities for property development above or adjacent to CRR stations (revenue from the sale of property development rights)
- stimulate development, and potentially regeneration, opportunities in and around both the CRR corridor and station precincts
- provide benefits to the Queensland Government and local government by avoiding or deferring other infrastructure investment.

Value sharing mechanisms and innovative funding approaches need to be evaluated for their appropriateness to particular infrastructure projects. Key considerations include:

- ensuring that public interest and equity aspects are addressed (e.g. proving the nexus between project benefits and the value sharing mechanism, capacity to pay and equitable allocation of funding responsibility)
- ensuring that the quantum of any value sharing is reflective of the benefits received.

13.5.2 Key Benefits of the CRR Project

The foundation for developing a value sharing strategy is to identify the benefits of the CRR Project for the key beneficiaries. Mechanisms to share in the value created can then be considered. The significant transport, economic and city-building benefits offered by the CRR Project are detailed in Chapter 6: Project Benefits.

13.5.2.1 Transport Benefits

The transport benefits include:

- better access to the inner city and CBD
- greater public transport use
- more frequent services for commuters
- reduced private vehicle demand and road congestion
- better access to rail.

Specific public transport benefits include:

- less crowding
- reduced waiting times



- less time spent travelling on public transport
- quicker walking times to stations
- more interchange opportunities.

13.5.2.2 Economic Benefits

Significant economic benefits associated with the CRR Project are relevant to the value sharing analysis. Within the Cost Benefit Analysis, outlined in Chapter 7: Economic Analysis, five categories of economic benefits were quantified:

- transport user benefits:
 - travel time and generalised cost savings, increased reliability, car transport time savings, car vehicle operating cost savings, truck – road freight savings, network resilience and station amenity
- crash savings:
 - cost savings including fatal, hospitalisation, minor injury and property damage
- environmental externalities:
 - cost savings including greenhouse gas emissions and noise
- residual value:
 - including transport, infrastructure and rollingstock
- farebox revenue:
 - incremental farebox revenue

Wider economic benefits (WEBs) were also considered. Benefits were assessed for three categories of WEBs:

- WB1: Agglomeration economies – positive externalities that result from increased density of economic activity, leading to increased productivity through input capture, knowledge spillover and output capture.
- WB2: Labour market deepening – refers to two direct impacts: increased labour supply and the move to more or less productive jobs (not quantified due to lack of land-use impacts).
- WB3: Output change in imperfectly competitive markets – reduced transport costs resulting in the optimal quantity of production for businesses in imperfectly competitive markets. The benefit is estimated as the increase in quantity supplied and the price-cost margin applicable to the sector.

These WEBs are relevant for the value sharing analysis as they indicate the economic benefits that will accrue to employers and businesses through the CRR Project.



13.5.2.3 Real Estate Value Uplift

Investment in mass transit networks, while reducing travel times and providing economic benefits to the wider community, also influences patterns of urban land use, development activity and property values. In the context of urban transit, numerous international studies have attempted to demonstrate that transit accessibility benefits are capitalised in property values.

The consensus among these studies is that property values are generally higher when there is both good proximity and accessibility to rail transit.

The CRR Project will introduce or enhance accessibility to rail transit for properties located near CRR stations as well as unlocking development capacity. Where coupled with commensurate and targeted changes to land use and development densities, there is opportunity for substantial value uplift to accrue to the properties within the vicinity of new stations.

International Research on the Impact of Transit on Land Values

Although studies tend to agree that proximity and accessibility to rail delivers value uplift to properties, international research demonstrates that this occurs to different degrees, with findings varying widely.

In a paper analysing 36 studies covering 40 rapid transit projects (Baker & Nunns, 2015), the range of property impact values was large, however, the uplift for most of the studies ranged between zero and 15 per cent. Regarding notable rail projects in the US and UK, the analysis identified the following uplift in land value:

- Dallas Area Rapid Transit – 18 per cent to 20 per cent
- MAX Light Rail, Portland – 10.6 per cent
- Hudson-Bergen Light Rail – 18.4 per cent
- Metra CRS, Chicago – 20 per cent
- Bay Area Rapid Transit, San Francisco – 15 per cent to 26 per cent
- London Crossrail – five per cent (construction period uplift only)
- Dublin Area Rapid Transit – seven per cent to eight per cent.

While the percentage uplift in land value varies widely across the body of available international research, it is evident that transit amenity adds value to surrounding land. More specifically, over the long-term, properties with high transit amenity enjoy higher average property growth rates. Furthermore, the research confirms that value uplift, if it is to occur, will typically be within 800 metres of new stations.



13.6 Uplift in Government Taxes and Government-Owned Land

Due to the expected uplift in economic activity and real estate values resulting from the CRR Project, some existing tax revenues are expected to experience an uplift, including:

- consumption-based taxes (i.e. the GST)
- income and corporate taxes
- real estate-based taxes including rates.

The extent of uplift from the CRR Project has been quantified through the application of a series of bespoke models and estimated at approximately \$4.8 billion (NPV) for a range of revenue streams raised by Federal, State and local governments.

The anticipated uplift in real estate values is also expected to increase the value of government-owned land in the CRR station precincts.

13.7 Land Development Value Sharing Opportunities

The CRR Project will require parcels of land to be acquired for construction of the tunnel, stations and supporting CRR infrastructure. There will be opportunities for new development above and around CRR stations, and on land acquired for the CRR Project that is surplus post-construction.

13.7.1 Development Opportunities on Surplus Construction Land

There are opportunities to develop key sites directly adjacent to, and around, CRR stations. Some of these locations will enable development to commence with CRR construction works; others will be more appropriately developed post-construction.

Each opportunity merits its own assessment to ensure the most appropriate development outcome is facilitated.

The property development rights above and around the stations are being considered in conjunction with CRR station infrastructure, particularly where there is significant design and construction interface with station infrastructure.

13.7.2 Facilitating Development of Surplus Underutilised Government-owned Land

The CRR Delivery Authority (CRRDA) is responsible for facilitating economic development and development for community purposes within CRR Priority Development Areas (PDA's).

The CRRDA is currently developing strategies to guide this activity, as well as identifying parcels of surplus or underutilised Government-owned land to inform this process.

13.8 Project Implementation Potential Funding Contributions

The Queensland Government has committed to fully fund the CRR Project. Therefore no new value sharing mechanisms are required to be further assessed for the project to proceed to procurement and delivery. However as discussed previously, value uplift of significant government land holdings at station precinct locations presents the opportunity to contribute funding to the CRR Project.

