

The following has been released in relation to a request for information relating to Tasmania's infrastructure plans.



Infrastructure
Australia

15 Year Infrastructure Plan Consultation: Suggested Reforms Template

Record 1

Name of reform	Enhanced recognition of the role of regional economies in Australia's national infrastructure system
Proponent agency	Tasmanian Government
Contact (name, position, email and phone)	Allan Garcia CEO, Infrastructure Tasmania Allan.Garcia@stategrowth.tas.gov.au (03) 6166 3285
Challenge potentially addressed by Reform	<p>Governance, Regional, Population</p> <p>The <i>Australian Infrastructure Audit</i> makes a number of observations relevant to regional economies, recognising -</p> <ul style="list-style-type: none"> the role regional economies can play in addressing Australia's infrastructure challenges, including offsetting demand pressures in larger, higher growth cities. The Audit identifies Hobart as one of the top 20 regions for infrastructure direct economic contribution by 2031. the need to further understand the relationship between infrastructure improvements, enhanced local service standards and regional growth. that most of the infrastructure Australia will need by 2031 has already been built, making maintenance and maximising the use of existing infrastructure assets, central to future infrastructure planning.
Impact of the challenge potentially addressed by Reform	<p>Infrastructure and services are critical to meeting the needs of a community, and contribute significantly to the overall attractiveness of a locality. The provision of high quality, sustainable and reliable infrastructure and services is a key component of broader population and economic growth strategies.</p> <p>Investing in regional centres has the potential to offset national infrastructure challenges, including congestion in our major capital cities, with significant benefits for both freight and passenger transport.</p> <p>Expanding the type of projects considered by IA will support greater alignment between IA's assessment framework and the mix of projects typically generated in regional economies.</p>
Relevant sector	Use an X to indicate the sector(s) that experience this challenge:
Energy	X
Telecoms	X
Transport	X
Water	X

Reform description	<p>This Reform focuses on the assessment and evaluation of infrastructure projects within regional economies.</p> <p>The Reform proposes a broader consideration of the type of investment required in regional economies, and recognition of the opportunities inherent in regional economies in terms of infrastructure planning and delivery. In relation to IA's assessment framework, the specific focus areas are -</p> <ul style="list-style-type: none"> Formal incorporation of packages of infrastructure projects that together meet IA's minimum project value threshold. Recognition of larger-scale renewal and maintenance proposals as alternatives to major infrastructure investment.
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Reform justification	<ul style="list-style-type: none"> • Support for research and pilot studies within regional centres. • Consideration of the broader economic growth benefits of infrastructure investment in regional economies.
	<p>The Tasmanian Government supports the focus of IA on nationally significant infrastructure, but notes the difficulties regional economies face in developing and progressing projects through this framework, which tends to focus on high-cost capital projects, underpinned by significant demand. As demand pressures in major metropolitan cities continue to grow, the tension within IA's assessment framework between the scale of infrastructure responses required in larger cities compared to regional centres, will increase.</p> <p>The <i>Australian Infrastructure Audit</i> recognises the importance of regional centres in offsetting national infrastructure challenges. Targeted and sustainable infrastructure investment in these centres forms part of the response, and should be considered in the evaluation of individual projects within regional economies.</p> <p>The review of the National Guidelines for Transport Systems Management (NGTSM) includes consideration of expanding the use of wider economic benefits (WEBs) for transport proposals. This further demonstrates that the role of infrastructure in regions may have a much broader reach than simply the immediate area, and may reduce inefficiencies elsewhere.</p> <p>With lower demand pressures, maintenance and renewal projects can form a viable infrastructure response, in place of major capital investment, within regional economies. The Tasmanian Government has proposed a smaller-scale bridge renewal project as part of this submission, which focuses on retaining and improving heavy vehicle access to regional freight routes through targeted bridge upgrades.</p> <p>The ability to submit packages of projects that in total meet IA's minimum project value threshold is also important. This recognises that the cost of many individual projects within regional economies can be lower, and that a package of projects, which together support a broader infrastructure outcome, can better reflect investment requirements.</p> <p>Support for targeted research within regional centres provides an effective way to better understand the broader issues facing Australia. The Tasmanian Government has identified two pilot projects as part of its submission to IA, both of which have potential application to other states -</p> <ul style="list-style-type: none"> • <i>Development of an integrated network to support heavy vehicle access and productivity.</i> This project targets heavy vehicle access across Tasmania's regional road network. The project will see the development of an integrated heavy vehicle network across state and local government roads, supported by targeted infrastructure investment and ongoing vehicle design solutions. The Government has worked extensively with industry and local government to match vehicle configurations and loads to pre-defined HPV networks. This has involved the identification of common vehicle types and loads, and a detailed review of bridge assets. A web-based viewer will provide industry with a comprehensive and accessible method to inform their route planning. • <i>Urban movement pilot, Greater Hobart.</i> The pilot study will use contemporary technology to collect, collate and analyse data using a methodology that is repeatable, cost and time efficient, and allows for the analysis of trends over time
Estimated timescales for the implementation of the reform	<p>Commencement over the short-term (i.e. 0-5 years).</p>
Research required to support the reform	<p>The initial focus is broader engagement with IA on the issues and opportunities identified within this Reform.</p> <p>Future research will depend on the final focus of the Reform.</p>
Research justification	<p>No research is immediately proposed.</p>
Estimated timescales to	<p>No research is immediately proposed.</p>

conduct the research

Other information



Assessment Framework Stage 1: Initiative Identification Template

Name of initiative	A sustainable road renewal program supporting a continued high level of heavy vehicle access and productivity
Proponent agency	Tasmanian Government
Contact (name, position, email and phone)	Allan Garcia CEO, Infrastructure Tasmania Allan.Garcia@stategrowth.tas.gov.au (03) 6166 3285
Submission approved by:	Tasmanian Government through Infrastructure Tasmania
Date of approval:	14 September 2015

1. Location of Initiative

The Initiative will be delivered on key regional and freight roads across Tasmania.

2. Description of Initiative

Tasmania's road network carries the majority of the State's freight, with the highest volumes on the Tasmanian Government-owned State Road Network. Local roads are critical for first and last mile access.

Many Tasmanian industries rely on regional and rural connections to move product to and from production and processing centres, or development sites. The high-growth, high-value agricultural sector, resource industries and broader land development sector, face particular constraints due to the dispersed nature of their road network use.

Many parts of Tasmania's road network have restricted access or are at risk of reduced access in the near future for high productivity (including PBS2, Concessional Mass Limit (CML), Higher Mass Limit (HML)) and Oversize/Overmass (OSOM) vehicles, based largely on the age and load bearing capability of bridge structures.

An inability to access, or efficiently access, Tasmania's road network impacts industry productivity, and increases the regulatory complexity of developing and using land.

The Tasmanian Government is seeking to maintain and expand access for high productivity and OSOM vehicles, based on more specifically defined, under notice or pre-approved road networks. This will be pursued through a combination of infrastructure and non-infrastructure solutions to address bridge load-bearing constraints impacting on network access. This includes the upgrade or replacement of high priority bridge structures based on the strategic significance of routes.

A significant amount of planning and consultation has been undertaken in support of this Initiative, including the detailed review of bridge capacity and condition across the State and local government road networks.

The Initiative targets improved access for high productivity and OSOM vehicles, recognising there is significant overlap in network constraints caused by the load-bearing capability of bridges.

Resources and future investment will support State-wide economic growth priorities, reflect freight demand and focus on upgrades that benefit both high productivity and OSOM vehicles.



The approach taken in this Initiative, which combines infrastructure and non-infrastructure solutions, industry consultation and an integrated approach across State and local roads, provides a useful model for application in other jurisdictions.

Table 1 outlines the key elements of the Initiative, including outcomes.

Table 1. Sustainable road renewal program, key elements, Tasmania

Heavy vehicle type	Supply chain demand	Measures	Deliverables	Program outcomes
High productivity vehicles	Key regional freight supply chains, particularly agriculture	Assessment of bridge condition Risk analysis and industry consultation to match vehicle designs to infrastructure standards Continued work with industry to identify vehicle design solutions to PBS Tier 2 and Tier 3 bridge network constraints Investment in bridge upgrade and replacement	Interactive heavy vehicle access map, identifying route consent by vehicle design 10-year bridge infrastructure investment programme <i>Reference Vehicle Guide</i> , based on common vehicle designs and loads	Sustainable program delivery through combined infrastructure investment and non-infrastructure solutions Certainty and transparency for industry regarding road network use and access Streamlined regulatory requirements
Oversize/Overmass vehicles	Facilitation of land development, focusing on development that stimulates and sustains regional economic growth and land use	Assessment of bridge condition Continue to develop standardised OSOM vehicle configurations and loads with industry Identification of pre-consented OSOM networks across both State and local government roads Investment in identified bridge upgrade and replacement	Risk framework to inform use of individual bridge structures	A single, integrated State and local government heavy vehicle freight network

3. Strategic Challenges relevant to the proposed initiative

Productivity	1	Governance	1
Population		Sustainability and Resilience	
Connectivity	1	Regional	1
Funding		Indigenous	
Competitive Markets	2	Best Practice	

Productivity: Improved access to Tasmania's road network will allow industry to determine the most efficient transport routes, and to optimise vehicle design in relation to the freight task.

Connectivity: The Initiative targets improved access to key freight routes, linking processing sites, production centres and major export ports.

Competitive Markets: Tasmania is reliant on trade with domestic and international markets. Efficient and productive freight supply chains and network access are critical to maintaining a competitive position within key export markets.



Regional: The Tasmanian Government's reform agenda includes an ambitious population growth strategy, economic growth and jobs creation. Transport infrastructure that delivers the necessary service standards is central to supporting these strategies.

4. Jurisdiction problem or opportunity addressed

Jurisdiction problem or opportunity addressed:

Improved heavy vehicle access and productivity based on targeted, sustainable infrastructure funding

Goal definition and problem / opportunity identification:

The following section addresses the identification, assessment and analysis of problems and opportunities in relation to this Initiative.

This Initiative targets improved access for higher productivity and OSOM vehicles across Tasmania's regional road network, in support of broader economic development and freight supply chain needs.

Bridge infrastructure is the key constraint affecting network access, and is the focus of the program.

1. Improved access for higher mass limit vehicles, supporting key regional freight supply chains

Freight demand

Agriculture comprises around 21 per cent of Tasmania's freight task in tonnage. The Tasmanian Government has forecast 4 per cent growth in the agricultural sector, with subsectors such as aquaculture and parts of the dairy sector, expected to grow at a higher rate. This rate of growth is above forecast general freight growth for Tasmania of just under 2 per cent.

The majority of the State's agricultural freight task involves the movement of commodities to and from farms, including vegetables, raw milk, live animals, and key inputs such as animal feed, fertilisers and pesticides. Higher-volume processed products include dairy, vegetables, meat, confectionery, and alcoholic beverages.

Tasmania's north-west region is the centre for agricultural production and processing, generating 55 per cent of Tasmania's total agriculture freight task, with a further 20 per cent transported to the region from the north and south for processing. The location of the State's major container ports at Burnie and Devonport also makes this region important for agricultural export and imports.

Significant freight growth is expected as a result of investment in irrigation schemes throughout the State. This is likely to see an intensification of activity on regional freight roads and key access points onto the main Burnie to Hobart freight corridor.

Vehicle access and network constraints

By tonnage, traffic volumes, and strategic land use connections, the road and rail networks between Burnie and Hobart are Tasmania's most significant freight corridor. The corridor connects major ports at Burnie and Devonport, key population and industrial centres, and major intermodal hubs at Brighton and Burnie Port. 65 per cent of Tasmania's land freight task travels on this corridor for at least part of its journey, and most major freight origins and destinations are located within 30 kilometres of the corridor.

The Burnie to Hobart corridor is the focus for investment in support of general freight growth and major step changes in vehicle productivity. The corridor will be developed to deliver the highest standard freight infrastructure and service levels. This corridor is the subject of a separate priority project submission to IA.

On connecting principal and key regional freight corridors, there will be a greater focus on a mix of infrastructure and non-infrastructure solutions to meet forecast freight demand. This approach reflects lower overall freight volumes, which may include shorter-term tasks and/or tasks that require access to part of a corridor only. Generally, bridge



strength is the key impediment on these corridors, and is the focus for cost-effective capital upgrades and innovation in vehicle design that deliver broader access benefits.

The Tasmanian Government continues to work with industry on specific developments and in specific locations to identify design solutions that meet the needs of users. For example, in the far north-west of Tasmania, a major dairying region, the Government has worked with the dairy industry to match vehicle designs to the existing load bearing capabilities of local bridges.

2. Improved access for OSOM vehicles, facilitating regional economic growth

Freight demand

OSOM vehicles are a key part of the land use and development process, across a broad range of economic activities. OSOM vehicles support resource-intensive industries, which are characterised by the movement of bulk freight and equipment across the State, as well as the general economic activity associated with land use and development. Access needs for OSOM vehicles are highly dispersed across the State.

Many Tasmanian industries require access to rural and remote locations for land use and development purposes. OSOM vehicles support activity in a wide range of sectors across regional areas, including mining, tourism, agriculture, forestry and construction sectors.

Vehicle access and network constraints

Attributes of a road network such as capacity, efficiency and reliability are important in terms of the quality and timeliness of access to support both development and use of land.

Class One Vehicles are often essential vehicles involved in land use and development. These vehicles fall into two broad categories -

- Special Purpose Vehicles (cranes, concrete pumps etc.; non-load carrying)
- OSOM Vehicles (low loader and other vehicles carrying large indivisible items; load carrying)

While local government roads are included in this process, local infrastructure has not always been appropriately assessed and risks are increasing due to increasing freight demand and aging infrastructure.

Under the Heavy Vehicle National Law (HVNL), the Tasmanian Government is transitioning to networks under notice (gazette) for OSOM vehicles, replacing an ineffectual permitting system. Given existing permits will expire by 31 December 2015, the Tasmanian Government has undertaken significant work to facilitate a smooth transition to new regulatory arrangements in 2016, with these arrangements supporting effective and appropriate access for OSOM vehicles informed by detailed analysis of potential bridge constraints.

The issues associated with the creation of gazetted networks include -

- age and strength of the bridge stock;
- limited local government resources and/or lack of funds to procure engineering resources from the private sector;
- infrastructure knowledge and capability gaps;
- geometry and road safety; and
- industry participation and knowledge base given limited prior engagement with the Class One vehicle industry.

5. Effectiveness of the initiative in addressing the jurisdiction problem / opportunity

This Initiative addresses bridge infrastructure constraints affecting heavy vehicle access on key freight routes. The program identifies and evaluates bridge infrastructure deficiencies, freight demand, vehicle configurations and risk profiles, to deliver sustainable network and task-based solutions. The program combines infrastructure and non-infrastructure responses. Both development and implementation of the program is based on close consultation with industry and local government.

The effectiveness of this Initiative is in its evidence-base, decision-making pathway and response options.



Options Generation is embedded in the development and delivery of this program. Meeting access needs through a combination of risk analysis focused on matching vehicle design to infrastructure, and infrastructure investment (upgrade and replacement) will be considered at a network level, for specific structures and for discrete tasks.

The Initiative is supported by the following activities -

Bridge condition assessment on State and local roads

The Tasmanian Government has undertaken a detailed assessment of bridge load bearing capacity and condition throughout the State, facilitated through a \$1.7 million funding commitment to assist local government in this task. This work will provide a significant evidence base to underpin this program, supporting the identification of priority upgrades and related timing.

In early 2014, an OSOM Industry Representative Group was established, and engagement with local government road managers commenced, as part of developing pre-approved networks.

The Tasmanian Government has undertaken a structured process to identify pre-consented networks for OSOM vehicles based on defined vehicle configurations and integration across State and local government roads. The networks are based on extensive consultation with industry to identify key vehicle configurations and loads (to ensure access isn't unnecessarily restricted for administrative reasons), and with local government on key local routes and local infrastructure.

Development of a Reference Vehicle Guide and web-based network viewer

A web-based, interactive viewer condenses this information into defined networks based on vehicle and load types, providing industry with an interactive tool that indicates where specific vehicles can travel, and under what, if any, conditions.

Work with industry to support continued improvements in vehicle design and innovation

Performance based standards continue to provide a cost-effective and sustainable solution to expanding network access, and addressing PBS Tier 2 and Tier 3 bridge limitations and associated risks through vehicle design forms a key part of this Initiative.

Recent experience has demonstrated that although often labour-intensive for asset owners, significant potential exists for both industry and governments to extract productivity and economic benefits through heavy vehicles that are designed to accommodate PBS Tier 2 and Tier 3 bridge constraints on specific routes. Currently, the Tasmanian Government works with industry on an as-needs basis to identify vehicle design solutions to identified bridge constraints, and the potential exists to expand a permit-based, non-infrastructure solution using PBS vehicles to support specific freight tasks on State and local government roads. However, this approach requires dedicated resources and road managers are currently poorly incentivised to expend scarce engineering resources to work with vehicle designers to the detail required, to extract maximum freight productivity from load-constrained bridge infrastructure.

Tasmanian Freight Survey

The Tasmanian Government's *Tasmanian Freight Survey*¹ has underpinned major freight planning and investment for over a decade, forming a key component of major infrastructure funding bids for both road and rail.

The Survey captures detailed freight movements across Tasmania's road and rail networks based on information direct from businesses. In 2011-12, around 150 companies participated in the Survey.

Information collected includes freight routes – including between and through major sea and air ports; between industrial areas and across road and rail network segments – freight tonnages; commodity type; and mode and vehicle type.

The Survey will support an understanding of freight volumes and commodity mix across Tasmania's regional road network, and over time, inform investment prioritisation under this program.

¹ www.stategrowth.tas.gov.au/infrastructure/freight/survey
Sustainable road renewal program - Tasmania



The Government will shortly commence a fifth Tasmanian Freight Survey.

Expected effectiveness of the proposed initiative in addressing the problem / opportunity of national significance²:

Rating of effectiveness:	+5	<p>This Initiative combines infrastructure and non-infrastructure solutions to address key bridge load-bearing constraints impacting on heavy vehicle network access.</p> <p>The Initiative draws on significant information and work undertaken by the Tasmanian Government, including in relation to bridge condition and vehicle design, and is supported by consultation with industry and local government.</p> <p>The Initiative will deliver an integrated and transparent heavy freight network that supports regional freight movements. It will also provide certainty and transparency to industry regarding road network use and access, based on both bridge condition and vehicle design.</p>
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6. Initiative fit within the broader system or network and any other key interdependencies

In relation to the State Road Network, this initiative forms part of the Tasmanian Government's *10 Year Infrastructure Investment Plan* (under development) and is consistent with the State Government's *State Road Infrastructure Service Policy*.

7. Initiative Alignment with jurisdiction plans or strategies

The Tasmanian Government will shortly release a draft *Tasmanian Integrated Freight Strategy* for public consultation. The draft Strategy focuses on challenges and opportunities in four key areas -

1. supporting service choice and competition across Bass Strait
2. efficient freight gateways
3. high-standard, responsive land freight connections
4. delivering a single, integrated freight system.

This Initiative is consistent with the directions and content of the draft Strategy, including the definition of a statewide freight hierarchy and clearly linking future road investment to freight supply chain and economic growth priorities.

At an operational level, this Initiative forms part of the Government's State Road policy, network planning and renewal program. Key related activities include -

- Progressing a more specific risk-based approach to bridge access assessments, including greater use of the PBS Scheme to increase productivity by optimising vehicle design to overcome bridge infrastructure limitations;
- A statewide survey of bridge structural limitations to inform the identification of key pinch points affecting heavy vehicle access;
- The development of service standards across the network, incorporating a range of customer performance measures (journey time reliability, safety, asset condition and connectivity);
- Future development of policies to support specific users of the system, including tourism, agriculture and general heavy freight;

² See detailed technical guidance for scoring guidelines
Sustainable road renewal program - Tasmania



- Planned annual reporting on network performance against service level standards; and
- Development of a *10 Year Infrastructure Investment Plan* for the State Road network.

8. Development stage

The following related actions are complete:

- Bridge infrastructure condition assessment
- Development of a *Reference Vehicle Guide*
- Web-based network viewer (initial version)
- Industry consultation on OSOM vehicles

9. Next Steps

Pre-consented networks for OSOM vehicles for State roads will be available by the beginning of 2016. It is hoped that the equivalent local government pre-consented networks will be available contemporaneously.

A *10 Year Infrastructure Investment Plan* for the State Road network will be released for public comment in early 2016. Investment requirements to maintain defined levels of service will include OSOM and high productivity vehicle networks will be incorporated and prioritised based on State-wide upgrade, renewal and maintenance priorities.

The Tasmanian Government will work with IA to progress development of this Initiative through IA's assessment framework.

10. Funding

This program is presented as an Initiative only at this stage.

While significant work has been undertaken to inform this program, the Tasmanian Government has not identified the final funding required to support delivery of the program. Final funding will focus on bridge upgrades and replacement.

The Initiative does not cover funding for upgrades that benefit a single user or development. The Tasmanian Government will address these requirements separately, as part of its broader economic development agenda.

Local government is a key component of this Initiative. Investment priorities under this Initiative would include both State and local government bridges.

Funding to pilot a specific Initiative to facilitate increased freight and industry productivity through overcoming bridge load-constraints with innovative heavy vehicle designs is also being sought. This work is currently being undertaken for State roads only in an ad-hoc manner as time permits. The pilot would involve a dedicated engineering resource to specifically work with asset managers and industry to overcome State and local government bridge load constraints using innovative vehicle design and network design concepts.

The Initiative will be developed as a package of projects that in total meets IA's minimum project threshold

11. Confidentiality

This submission does not contain any confidential information.

15 Year Infrastructure Plan Consultation: Suggested Reforms Template

Name of reform	<p>Responsive, evidence-based infrastructure planning, based on enhanced sharing of best practice approaches to -</p> <ol style="list-style-type: none">1. infrastructure data collection and analysis; and2. the infrastructure impacts of demographic change.
Proponent agency	Tasmanian Government
Contact (name, position, email and phone)	<p>Allan Garcia CEO, Infrastructure Tasmania Allan.Garcia@stategrowth.tas.gov.au (03) 6166 3285 I</p>
Challenge potentially addressed by Reform	<p>Governance, Population</p> <p>The <i>Australian Infrastructure Audit</i> 2015 highlights the importance of data, information and analysis to effective infrastructure planning and delivery.</p> <p>In the context of a broader infrastructure planning and decision-making framework, data and information supports:</p> <ul style="list-style-type: none">• the identification of demand for infrastructure, including trends over time;• an understanding of how infrastructure is used;• the development and evaluation of project business-cases; and• the measurement of infrastructure performance over time. <p>The Tasmanian Government recognises the importance of evidence-based infrastructure planning, and undertakes a range of data collection and analytical work to support infrastructure decision-making. In many cases, this process would be significantly strengthened and streamlined by the ability to more easily access and compare best practice approaches in other jurisdictions. It would also contribute to a more consistent approach to the planning, delivery and evaluation of infrastructure, across jurisdictions.</p> <p>Demographic changes, particularly an ageing population, will have a significant impact on infrastructure demand and use across Australia. Understanding how an ageing population affects the demand for, and use of, specific types of infrastructure at a state, regional and metropolitan level, is a key issue for all jurisdictions.</p>
Impact of the challenge potentially addressed by Reform	<p>The provision of infrastructure and supporting services is often a costly, long-term commitment. A lack of information on the scale and type of infrastructure required, where, and to what standard, can result in the over or under utilisation of assets and services; lack of investment co-ordination within and across infrastructure sectors; and the provision of infrastructure when alternative non-infrastructure solutions may meet all or part of the required demand.</p> <p>Infrastructure and services are key enablers of an individual's participation in employment, education and the broader community, and a significant contributor to overall quality of life. An ageing population will change the way individuals use and access infrastructure and services, and the type of infrastructure needed. This is a challenge facing all states, and is likely to become a key focus of infrastructure and service provision over the medium to long term.</p> <p>Access to best practice examples of planning and co-ordination will assist in ensuring all jurisdictions have the opportunity to understand the impact of an ageing population on infrastructure demand, and develop appropriate, targeted</p>

		measures that respond to broader demographic change and support the needs of individuals and communities.			
Relevant sector		<i>Use an X to indicate the sector(s) that experience this challenge:</i>			
Energy	X	Telecoms	X	Transport	X
				Water	X

Reform description	<p>Significant effort is expended by all states in developing an appropriate evidence-based to inform infrastructure planning, delivery and performance measurement. Data collection and analysis can be a highly intensive exercise. Identifying best practice methodologies and approaches can be complex and time consuming.</p> <p>This reform seeks to better coordinate the work, skills and experiences of individual states in relation to the following key areas:</p> <ol style="list-style-type: none"> 1. <i>Infrastructure data collection and analysis</i> 2. <i>Responding to the infrastructure impacts of demographic change</i> <p>The reform supports a more streamlined, informed and consistent approach across states.</p> <p>To support a more targeted application of the reform, it is suggested that urban transport could form the focus of both (1) and (2) above.</p>
Reform justification	<ol style="list-style-type: none"> 1. <i>Best practice in infrastructure data collection and analysis</i> <p>All states have undertaken significant work in relation to the collection, analysis and modelling of infrastructure data, however this work could be better shared across jurisdictions.</p> <p>Delivering cost-effective transport infrastructure and services that meet demand, is a key issue across Australia, particularly in larger cities.</p> <p>In the transport sector, examples of existing mechanisms to facilitate the sharing of best practice across jurisdictions, include in relation to -</p> <ul style="list-style-type: none"> • transport infrastructure corridor protection; • development of key freight route maps; • development of performance indicators for the road network; and • review of the <i>National Guidelines for Transport System Management</i>. <p>In the context of broader jurisdictional sharing of best practice that may have application in other states, the Tasmanian Government has identified the following potential initiatives -</p> <p><i>Tasmanian Freight Survey</i></p> <p>The Survey collects commodity-based data direct from businesses to inform a detailed understanding of heavy freight movements throughout the State, including freight origin and destination, route, volume and mode.</p> <p>The Survey is a significant input to the Government's freight planning, and has highlighted the value of business-derived data to transport planning. The Tasmanian Government is interested in the application of this approach to other parts of the transport sector.</p> <p><i>Development of an integrated network to support heavy vehicle access and productivity</i></p> <p>The Government has worked extensively with industry and local government to match vehicle configurations and loads to pre-defined HPV networks. This has involved the identification of common vehicle types and loads, and a detailed review of bridge assets. A web-based viewer will provide industry with a comprehensive and accessible method to inform their route planning.</p> <p><i>Urban movement pilot, Greater Hobart</i></p> <p>As part of its overall submission to IA, the Tasmanian Government has proposed an urban movement pilot study to better understand travel patterns across the Greater Hobart urban road network. The pilot study will use contemporary technology to collect, collate and analyse data using a methodology that is repeatable, cost and time efficient, and allows for the analysis of trends over time.</p>

	<p>The pilot is potentially transferrable to other urban areas.</p> <p><i>2. Implications of demographic change on infrastructure demand</i></p> <p>Understanding the specific implications of an ageing population on infrastructure and service demand, is key to developing targeted responses that meet the current and future needs of individual and communities.</p> <p>Tasmania's current population is around 515 000. Population projections recently undertaken by both the Australian Bureau of Statistics (ABS) and Tasmanian Department of Treasury and Finance forecast population decline for the State from around 2050s onwards. Tasmania is the only Australian state projected to experience population decline.</p> <p>Tasmania also has the oldest population in Australia, and one that is ageing faster than any other state. Based on current trends, by 2050 more than one in four Tasmanians will be aged 65 or older.</p> <p>The decentralised nature of Tasmania's population, which includes a higher proportion of people living in regional areas, presents an additional challenge in planning for an ageing population.</p> <p>Facilitating population growth is a key focus area of the Tasmanian Government, which has identified an ambitious population target for the State. Unlike some other Australian jurisdictions, Tasmania has no major constraints to supporting a larger population, with abundant land availability, existing high quality essential infrastructure, and urban transport capacity.</p> <p>Understanding the implications of an ageing profile for infrastructure and service demand is critical. A collaborative approach to sharing research, information and best practice approaches that improve understanding of the impacts of demographic change on infrastructure and services, and which support more effective responses, would be beneficial.</p> <p>Estimated timescales for the implementation of the reform</p> <p>Commencement over the short-term, consistent with the importance of data and analysis to effective infrastructure planning, and the immediate challenges of demographic change on long-term infrastructure planning.</p>
<p>Research required to support the reform</p> <p>Research justification</p> <p>Estimated timescales to conduct the research</p>	<p>Future research will depend on the final focus of the Reform.</p> <p>It is noted that the enhanced sharing of existing and planned work across States would of itself provide significant benefits.</p> <p>This submission provides a broad justification to address two key areas impacting on outcomes across infrastructure sectors -</p> <ul style="list-style-type: none"> • Data and information underpin sustainable and effective infrastructure planning and provision, informing the nature, type and timing of infrastructure delivery, and the overall need for an infrastructure response. • Population change, infrastructure and land use planning are inextricably linked and it is important to consider the effects of population change as part of broader infrastructure and land use planning decisions. <p>Consistent with the importance of this Reform, any supporting research should be undertaken in the short-term.</p>
<p>Other information</p>	

Tasmania's economic infrastructure investment and reform priorities

Tasmanian Government submission to
Infrastructure Australia

September 2015

OVERVIEW

As part of developing an *Australian Infrastructure Plan* (the Plan), Infrastructure Australia (IA) is seeking input from all states on their infrastructure reform and investment priorities across the transport, energy, water and telecommunications sectors.

The Plan will be completed by December 2015 and include recommendations on Australia's national infrastructure reform and investment priorities, together with an updated Infrastructure Priority List and supporting assessment methodology.

This submission provides the Tasmanian Government's input to the Plan.

The Tasmanian Government has developed a reform agenda for the State, which includes an ambitious population growth strategy; economic growth and job creation strategies; the establishment of key bodies to advise on, and facilitate, infrastructure investment; and major changes to Tasmania's land use planning system.

In May 2015, the Government established Infrastructure Tasmania (ITas) the State's first independent infrastructure advisory body. The Government has established a broad mandate for ITas that includes leadership of key policy initiatives, the development of whole-of-State project prioritisation and evaluation methodologies, and oversight of major infrastructure proposals in Tasmania.

Tasmania's economic infrastructure has undergone significant reform in recent years. This has included the creation of a single water and sewerage service delivery provider, and the successful delivery of commercial, producer-driven irrigation schemes throughout the state. The early roll-out of NBN in Tasmania is delivering improved connectivity to Tasmanian businesses and communities. Together with the energy sector, renewal and replacement of assets within these sectors will be user-funded over the longer term.

Significant opportunities remain in the transport sector, particularly freight and urban transport, and this sector forms the focus of the Government's submission in relation to investment priorities. The Government has also prioritised major capital investment in urban water and sewerage, reflecting the scale of works required in to address a backlog of compliance issues and deliver more efficient wastewater services.

Tasmania's investment and reform priorities have been developed with a focus on:

- a small number of high priority projects, reflecting the focus of Infrastructure Australia on nationally significant projects;
- Tasmania's transport sector, given reforms delivered in other sectors;
- opportunities to strengthen strategic and land use planning, consistent with the Tasmanian Government's focus on whole of state reforms in infrastructure policy, planning and advice, and in land use planning; and
- supporting an improved understanding and recognition of the role of regional economies within Australia's national infrastructure system.

A summary of Tasmania's infrastructure reform and investment priorities is included in Table I.

The Tasmanian Government looks forward to working with IA, through ITas, to progress its reform and investment priorities.

Table I. Tasmania's infrastructure reform and investment priorities

Priority infrastructure investment	
<ul style="list-style-type: none"> Burnie to Hobart freight corridor (<i>update</i>) 	<p>Future planning and capital investment in Tasmania's premier freight corridor between Burnie and Hobart.</p> <p>This investment will be informed by strategic planning in relation to:</p> <ul style="list-style-type: none"> an integrated corridor plan, focusing in particular on future road and rail investment; and future port planning in relation to both a consolidated domestic container port, and bulk freight. <p>The project builds on the significant investment already underway on the Midland Highway and on the strategic rail network.</p>
<ul style="list-style-type: none"> A sustainable road renewal program supporting improved access and productivity 	<p>Maintaining and expanding access for higher productivity vehicles and oversize, overmass vehicles based on defined networks across State and local government roads. Investment will respond to statewide economic growth priorities.</p>
<ul style="list-style-type: none"> New Bridgewater Bridge 	<p>Construction of a contemporary bridge adjacent to the existing Bridgewater Bridge and causeway. The Bridge is a critical link in Tasmania's freight and urban passenger system, but is close to the end of its design life and has high maintenance costs associated with its operation as a vertical lift bridge.</p> <p>The Tasmanian Government has undertaken significant planning and preparatory work on this project, including land acquisition. In progressing this project, the Government is seeking to undertake detailed planning in support of a cost-effective, final design solution.</p>
<ul style="list-style-type: none"> Greater Hobart urban movement pilot study 	<p>An analytically based urban movement pilot study focused on better understanding travel patterns in Greater Hobart. The pilot will use contemporary technology to collect, collate and analyse data to model current and future demand across the transport system.</p>
<ul style="list-style-type: none"> Urban and water sewerage rationalisation and consolidation 	<p>Investment to rationalise and increase the efficiency of sewerage assets to support economic growth and improved environmental outcomes</p>
Priority infrastructure reforms	
<ul style="list-style-type: none"> Funding for regional economic infrastructure 	<p>Increased focus on the role regional economies can play in offsetting national infrastructure challenges.</p> <p>In the context of IA's framework, this includes support for changes that better recognise:</p> <ul style="list-style-type: none"> the economic and community stimulus benefits associated with infrastructure investment in regional economies, supported by a more equitable incorporation of these benefits in IA's project assessment methodology; packages of projects at or close to a \$100 million threshold within IA's assessment framework; and the importance of renewal and maintenance projects within IA's assessment framework and broader capital investment programs.
<ul style="list-style-type: none"> Strengthened infrastructure and land use planning 	<ul style="list-style-type: none"> Improved sharing of best practice approaches to infrastructure data and analysis Implications of demographic change on infrastructure demand

STRATEGIC CONTEXT

I. A focus on economic, jobs and population growth

The Tasmanian Liberal Government was elected in 2014 on a platform of jobs and economic growth, underpinned by fiscal responsibility, targeted investment in social and economic infrastructure and services, and stable governance.

Recent economic indicators show the Government's policies are having a positive impact on the State, with the creation of 4 500 new jobs and a reduction in the State's unemployment rate; major increases in tourist visitation and expenditure; significant growth in the agricultural sector; and record business confidence.

The Tasmanian Government's vision for growth is supported by the Australian Government, notably through the establishment of the Joint Commonwealth and Tasmanian Economic Council (JCTEC). JCTEC comprises the highest level of representation at the state and commonwealth level, including the Prime Minister and Treasurer of Australia, the Premier and Treasurer of Tasmania, and leading business members. The Council is focused on identifying economic reforms and boosting Tasmania's economic growth and to date this has included through increasing investment in irrigation and supporting Tasmania's export industries by addressing their freight cost disadvantages.

The Tasmanian Government recently released the Tasmanian Energy Strategy, a 20-year plan to deliver customer-focused energy outcomes based on efficient supply and sustainable, long-term pricing. Over the next year, the Government will release additional strategies on freight, population and tourism supply, which will identify the Government's long-term objectives and priorities in each of these areas.

As an export-oriented state, efficient port, intermodal and land transport connections are critical to the ability of businesses to access, retain and grow markets. Secure, reliable and affordable renewable energy has been a cornerstone of economic development in Tasmania. Telecommunication networks drive business efficiency and innovation, and are an essential part of business supply chains and personal connectivity.

After significant reform, Tasmania's water and sewerage infrastructure and services are now consolidated under one entity, with services delivered under a user-pays model. Major irrigation schemes have delivered increased water volumes and improved water security to primary producers across Tasmania. These schemes are supporting new investment and the expansion of existing activities, driving higher volumes of agricultural exports and supporting crop diversification and the development of downstream products.

With a small population, currently facing modest population growth, Tasmania's infrastructure and services have few capacity issues. This is a significant strength for the State. Tasmania has low urban congestion, good transport accessibility, and secure energy and water supplies capable of meeting future demand.

Conversely, Tasmania's small population is highly dispersed and requires extensive infrastructure and service networks. The cost of providing and maintaining this infrastructure is high, across all sectors. Delivering efficient, fit for purpose transport networks, meeting minimum water and wastewater quality standards in rural areas, and addressing the availability and quality of broadband services, are key sectoral issues.

Tasmania's water and sewerage industry, while now comprising a single state-wide provider, has an infrastructure renewal and compliance backlog that requires major investment over the long term. Consolidation and rationalisation of services also has the capacity to deliver significant efficiency.

With low comparative demand, private sector investment in Tasmania's infrastructure is unlikely to play a major role in infrastructure funding and provision over the medium-term.

2. Land use planning reforms

The Tasmanian Government is committed to building a strong and competitive economy that is supported by a sensible and sustainable planning system.

The Government has established an independent planning reform taskforce, comprising planning experts, industry and local government representatives to guide the development of a single, state-wide Tasmanian Planning Scheme. The Scheme will focus on streamlined, consistent and simplified planning approval processes that deliver greater certainty to investors and the community.

The Scheme will be supported by specific statewide planning codes, and a major review of Tasmania's State Policies framework. It is anticipated these new policies will cover a range of matters to support the planning system, include principles to support economic development and the future needs of the community.

The Tasmanian Government plays a significant role in the provision of infrastructure across the State and planning arrangements can have a material impact on the Government's ability to deliver its infrastructure program on time, within budget, and as planned. The proposed land use planning reforms will also support improved infrastructure planning and delivery, together with improved coordination of land use and infrastructure planning.

3. A new framework for infrastructure planning

In May 2015, the Tasmanian Government established Infrastructure Tasmania (ITas) to lead best practice in the planning, evaluation and prioritisation of economic infrastructure in Tasmania. The creation of ITas represents a significant step forward for infrastructure planning in Tasmania, providing for the first time, an independent body to oversight, and advise on, major infrastructure policies, proposals and evaluation methodologies.

Key responsibilities include -

- development of a project pipeline and common project assessment methodology;
- coordination of all major funding submissions to the Australian and Tasmanian Governments, including across and within sectors; and
- the provision of independent advice on the benefits or need for specific infrastructure proposals, including the detailed review of major projects.

ITas recently released its forward work program for 2015-2016. Key initiatives include -

- release of a prioritised infrastructure project pipeline and supporting assessment methodology (a Tasmanian Infrastructure Priority List will be delivered by March 2016);
- release of a Tasmanian Integrated Freight Strategy;
- assessment and review of past reports on a potential Hobart light rail system, with recommendations on priority and future use of the rail corridor;
- detailed assessment and report on the design and funding requirements for a new Bridgewater Bridge; and
- oversight and monitoring of infrastructure investment on the Midland Highway.

RESPONSE TO THE *AUSTRALIAN INFRASTRUCTURE AUDIT*

In May 2015, IA released the first Australian Infrastructure Audit. The Audit outlines Australia's key infrastructure challenges and opportunities, and measures the economic contribution of individual sectors to the national and state economies. The Audit forms the evidence basis for an *Australian Infrastructure Plan*.

The Audit represents a comprehensive review of infrastructure performance nationally and across states, along with reform areas. The findings indicate that Australia's infrastructure challenges remain significant, and generally, reforms have failed to keep pace with infrastructure demand pressures, delivery or maintenance costs.

Generally, the Tasmanian Government supports the content and findings of the Audit, including as these relate to Tasmania. In relation to Tasmania, key observations include the:

- importance of urban transport to Tasmania;
- need for further major investment in urban sewerage infrastructure; and
- importance of the NBN to improving broadband access and services, across the State.

The Government notes that the total and proportional allocation of direct economic contribution across the State's infrastructure sectors appears appropriate, however the exclusion of the indirect benefits, which can have significant value, distorts the actual economic contribution of regional and small scale infrastructure projects.

The Government notes the significant discussion on governance and planning reform in the Audit. This is an area of focus for Tasmania, with major changes to the State's land use planning system underway, and recent changes to whole of state infrastructure planning and advice to deliver greater strategic and sectoral coordination and consistency across economic infrastructure. The Tasmanian Government also supports the focus on infrastructure standards and service quality within the Audit, including the need for greater community engagement regarding user expectations. Work underway in relation to the planning of Tasmania's State Road network is relevant, and is discussed below.

In the context of the significant demand pressures facing Australia's larger cities, the Audit signals a greater consideration of the role regional economies and centres can play in moderating both demand pressures, and required infrastructure investment, in Australia's higher growth cities. However in this context, the Audit does not recognise the difficulties smaller jurisdictions face in relation to infrastructure funding, evaluation and delivery, primarily as a result of low economies of scale. Greater recognition of the role maintenance and renewal can play in meeting broader economic and social objectives, together with enhanced consideration of these types of projects within national funding programs, is also supported. The Tasmanian Government has identified these issues as part of a broader regional economies reform (see below).

PRIORITY INFRASTRUCTURE INITIATIVES

The Tasmanian Government is recommending five Initiatives for inclusion on IA's updated *Infrastructure Priority List*. These initiatives cover capital investment, sustainable maintenance linked to improved access and productivity for industry, and pilot research to inform improved urban passenger network planning in Greater Hobart.

The recommended Initiatives are -

- *Burnie to Hobart freight corridor (updated)*
- *A sustainable renewal program for Tasmania's road network supporting improved heavy vehicle access and productivity*
- *New Bridgewater Bridge*
- *Investment in urban water and sewerage, Hobart and Launceston (updated)*
- *Greater Hobart urban movement pilot study*

These five recommendations are made in addition to Tasmania's existing projects on the List – the Bell Bay Intermodal Expansion and Tasmanian Irrigation Schemes.

A summary of each initiative is provided below. A detailed overview of each Initiative, using IA's *Initiative Identification Template*, is provided at Attachment I.

Key initiatives

Burnie to Hobart freight corridor

This Initiative is an update of the Tasmanian Government's existing project on IA's 2013 Infrastructure Priority List. The project is currently listed as an Early Stage Project.

By tonnage, traffic volumes, and strategic land use connections, Burnie to Hobart is Tasmania's most significant freight corridor. The corridor connects major ports at Burnie and Devonport, key population and industrial centres, and major intermodal hubs at Brighton and Burnie Port.

65 per cent of Tasmania's land freight task travels on this corridor for at least part of its journey, and most major freight origins and destinations are located within 30km of the corridor. It is Tasmania's key corridor for the movement of containerised freight.

Over the long-term, freight volumes will continue to increase and remain highest between Burnie and Hobart.

In 2014, the Australian Government committed significant funds to improve safety and high productivity vehicle infrastructure standards on the Midland Highway, with a 10-year program of works now underway. Tasmania's strategic rail network also received significant funding, with a four year (\$119.6m) program underway, and second tranche of funding (\$120m) committed thereafter. This funding addressed a key part of the Tasmanian Government's original 2012 submission in relation to improved safety and reliability for road and rail between Burnie and Hobart.

Upgrades to support improved heavy vehicle productivity and general safety are still required on the Bass Highway between Port Sorell and Deloraine, and in relation to bridge strengthening for higher productivity vehicles. Future rail investment will also be evaluated.

The Tasmanian Government will shortly release a draft Tasmanian Freight Strategy for consultation. The Strategy will recognise the importance of the Burnie to Hobart freight corridor, including through its relationship to key container ports, and industrial and processing centres. The strategy will identify additional planning work on this corridor, with a focus on quantifying required future road and rail investment, based on freight demand and future contestability, and long-term planning in support of a single domestic container port at Burnie. This planning work will support the identification of specific investment projects, which will form the basis of subsequent submissions to IA.

A sustainable road renewal program supporting improved access and productivity

Tasmania's road network carries the majority of the State's freight, with the highest volumes on the Tasmanian Government-owned State Road Network. Local roads are critical for last mile access.

Many parts of Tasmania's road network have restricted access or at risk of reduced access in the near future for high productivity (including Higher Mass Limit) and oversize and overmass (OSOM) vehicles, based largely on deficient bridge structures. An inability to access, or easily access, the road network impacts both general freight productivity, and increases the regulatory complexity of land development.

The Government is seeking to maintain and expand access for higher productivity vehicles, based on more specifically defined, under notice or pre-approved networks. Ideally, enhanced access will be delivered firstly through more detailed risk-based assessments and risk mitigation strategies for specific bridges and working cooperatively with the logistics sector and freight demanders to maximise access and therefore productivity by matching freight-specific vehicle designs to bridge infrastructure constraints. Recent experience has shown that, while labour intensive for the road asset manager, the Performance-Based Standards (PBS) Scheme has the potential to provide an ideal mechanism to facilitate significant industry-specific productivity improvements. It is intended that this will be supported through a program of targeted investment in bridge strengthening and renewal, across state and local government roads.

Allocation of resources will respond to State-wide economic growth priorities.

For higher productivity vehicle access outside the State's well-recognised key freight routes, supporting growth in the agricultural sector will be a key focus. The agricultural sector accounts for almost a quarter of the State's freight task by volume, with demand spread relatively evenly across regions, and expected to be higher within defined irrigation schemes. The Tasmanian Government has forecast 4 per cent growth in this sector based on a general increase in market demand and higher outputs associated with Tasmania's substantial investment in irrigation. Growth will be higher in some sub-sectors, including dairy and aquaculture.

By its nature, agricultural supply chains rely on local and regional road networks, many of which have lower access and infrastructure standards. The infrastructure impact of growth in this sector has been recognised in relation to upgrades on Tasmania's Midland Highway, with dedicated turning opportunities provided at regular intervals to allow heavy vehicle access to adjacent agricultural areas.

OSOM vehicles are a key part of the land use and development process, across a very broad range of economic activities. Access needs are highly dispersed across the State. The Tasmanian Government has undertaken a structured process to identify networks under notice for OSOM vehicles based on defined vehicle configurations and integration across State and local government roads. The networks are based on extensive consultation with industry to agree key vehicle configurations and loads (to ensure access isn't unnecessarily restricted for administrative reasons), and with local government on key local routes and local infrastructure. A web-based, interactive viewer condenses this information into defined networks based on vehicle and load types, providing industry with an interactive tool that indicates where specific vehicles can travel, and under what, if any, conditions.

This proposed package forms part of the Government's broader State Road network planning and renewal program. Key related activities include:

- Progressing a more specific risk-based approach to bridge access assessments, including greater use of the PBS Scheme to increase productivity by optimising vehicles design to overcome bridge infrastructure limitations;
- A statewide survey of bridge structural limitations to inform the identification of key pinch points affecting heavy vehicle access;
- The development of service standards across the network, incorporating a range of customer performance measures (journey time reliability, safety, asset condition and connectivity);
- Future development of policies to support specific users of the system, including tourism, agriculture and general heavy freight;
- Planned annual reporting on network performance against service level standards; and
- Development of a 10-year State Road investment plan.

Information on freight movements will be provided through the *Tasmanian Freight Survey*, supported by heavy vehicle counts and detailed asset information.

The Initiative will be developed as a package of projects that in total meets IA's minimum project threshold.

New Bridgewater Bridge

The Bridgewater Bridge is a key freight and passenger link.

The Bridge is a key part of Tasmania's Burnie to Hobart freight corridor, connecting southern Tasmania to key northern export ports. It also performs an important urban function, connecting major industrial areas at Glenorchy and Brighton, and communities and local service centres in the Brighton municipality with central Hobart.

The existing Bridgewater Bridge was constructed in the 1940s and does not meet contemporary loading and design standards. The structure has dimensional limitations, and high maintenance costs associated with its lifting mechanism. The bridge structure is affected by subsidence from unconsolidated sediments associated with early construction.

The new Bridge will connect the Brooker Highway to the Brighton Bypass, delivering 20km of continuous highway standard dual carriageway, with a limited access road between Claremont and Mangalore.

Replacement of the Bridge has attracted broad stakeholder support, including from adjacent local governments.

The Australian Government has provided previous funding to support land acquisition and concept design. This submission focuses on the development of a final, contemporary, cost-effective design solution in support of a new bridge.

Investment in urban water and sewerage infrastructure, Hobart and Launceston

The Tasmanian Government has previously identified investment in the State's water and sewerage assets as an infrastructure priority. The investment requirements across these assets are significant and was the primary reason for structural reform of the industry in 2009 that led to dedicated water and sewerage providers. However, the legacy of past asset underfunding by councils has been water and wastewater treatment plants

that do not meet contemporary standards, resulting in a backlog of pipework renewal required to update ageing infrastructure.

These compliance issues are the immediate focus for TasWater's investment program. However, the system of wastewater treatment plants across the State generates major system inefficiencies, largely because each council treated wastewater within its own municipality.

Present capital expenditure is undertaken in accordance with TasWater's Price and Services Plan, approved by the Tasmanian Economic Regulator. This baseline program aims to address the fundamental environmental and public health requirements in the water and sewerage industry.

TasWater expects these programs to take priority over the ensuing 10-year period, but given its financial limitations, it is not possible to derive sufficient revenue to simultaneously undertake major infrastructure rationalisation projects necessary to materially benefit customers, the environment and the economy.

For example, in the Launceston area there are seven wastewater treatment plants. Located in Legana, Newnham, Riverside, Ti-Tree Bend, Hoblers Bridge, Norwood and Prospect Vale, these plants are generally all ageing and do not consistently meet environmental license conditions. To reinvest in compliance upgrades for each plant individually is costly, but will otherwise have to happen. However, rationalisation to a single plant, or a smaller number of plants, albeit more costly in capital terms, would deliver significant operational savings.

A second rationalisation project proposed by TasWater is on the western side of the Derwent River in Hobart encompassing four wastewater treatment plants.

A number of wastewater treatment plants are located close to waterfront areas. In this context, rationalisation of assets will deliver broader benefits in relation to freeing up prime waterfront land for development activity. For example, a significant component of this rationalisation would see the de-commissioning and transfer of the present treatment plant located at Macquarie Point. In addition to the above health, compliance and pricing benefits, this relocation would significantly enhance the Macquarie Point precinct in terms of amenity, investment opportunity and utilisation. Removal of the plant would optimise the potential of the precinct ensuring the intent of creating an iconic site within Sullivans Cove.

With funding assistance, completing the rationalisation works at the same time as resolving the compliance issues would not only bring major improvements to the health of the Derwent, Tamar and Esk rivers through improved wastewater quality, it would impact positively on pricing for customers in the long run. External funding would also allow TasWater to then focus on the renewal backlog that it also inherited.

Greater Hobart urban movement pilot study

Tasmania's urban movement patterns are dominated by car-based travel, with the percentage of people driving to work higher than the national average. Use of public transport is low compared to other states, however a higher percentage of people walk or cycle to work.

The Tasmanian Government collects detailed, business-derived data on heavy vehicle freight movements throughout the State. Information on passenger transport movements is far more limited, and has not been collected in a way that supports a detailed understanding of network use, including in relation to travel origin and destination, or the identification of trends over time.

The Greater Hobart metropolitan area comprises the municipalities of Hobart, Clarence, Glenorchy, Brighton, Sorell and Kingborough, and has a combined population of 220,000. The area has a highly dispersed, low-density settlement pattern, with a small number of key arterials providing access to and through central Hobart.

Morning and afternoon traffic peaks are very short and comparatively severe when compared to general traffic flows throughout the day. The provision of hard road infrastructure to cater for peak demand will result in a surplus for non-peak periods. There is currently little in the way of an evidence base to support either infrastructure or non-infrastructure solutions.

The Tasmanian Government is focused on retaining the comparative advantages Greater Hobart has as a liveable and accessible city. The Government is seeking to undertake an urban movement pilot study to measure people's travel patterns. The initiative will use contemporary technology to collect, collate and analyse data sets to model current and future demand on the transport system. This data will identify key travel patterns and routes, and facilitate decision making that ensures the maximum benefit is gained from existing infrastructure, maximising return on current investment.

Outputs will inform network planning, including targeting infrastructure investment to ensure key routes are managed and operated to maintain levels of service; supporting the greater use of public transport; and enabling the wider application of intelligent transport systems.

PRIORITY INFRASTRUCTURE REFORMS

IA's Australian Infrastructure Audit provides a detailed overview of Australia's infrastructure reform needs. Generally, the Tasmanian Government supports the discussion within the Audit, noting that while many of the reforms are challenging to address, progress across all jurisdictions in improving infrastructure outcomes has not kept pace with demand.

The Tasmanian Government has identified two broad priority reform areas. These reforms are presented in the context of IA being able to assume a leadership role in the identified area, and are based on a broad interpretation of reform that includes best practice and research.

Where existing national processes are underway, for example in relation to heavy vehicle road reform, the Tasmanian Government has not identified any additional reform needs as part of this submission.

A summary of each proposed reform is included below. A detailed overview of each Reform, using IA's Suggested Reforms Template, is provided at Attachment 2.

Funding for regional economic infrastructure

IA's recent Australian Infrastructure Audit recognises the role regional economies can play in addressing Australia's infrastructure challenges, including offsetting demand pressures in larger, higher growth cities. The Audit identifies Hobart as one of the top 20 regions for infrastructure direct economic contribution by 2031.

The Tasmanian Government supports a greater focus on the role of regional economies within Australia's national infrastructure system. The Government has committed \$60 million to the Northern Cities Major Development Initiative, a job-creating infrastructure package targeting Launceston, Devonport and Burnie. Better understanding how to facilitate sustainable, long-term growth in regional centres; supporting sustainable infrastructure delivery and maintenance in the context of lower economies of scale; and a review of how regional projects are assessed within national frameworks, are key issues.

Many regional infrastructure projects fall below IA's minimum project threshold of \$100 million. In part this reflects lower demand pressures in regional areas and a related focus on smaller-scale projects, including network renewal, to meet broader objectives. The application of traditional cost benefit methodologies, which rely on a certain level of demand, can be problematic in regional areas, where infrastructure delivery costs vary little from higher demand locations, but underlying demand which is a key driver of derived benefits, is lower.

The Tasmanian Government supports changes that better reflect the role of regional economies within IA's national infrastructure assessment framework. This includes changes that better recognise:

- the economic and community stimulus benefits associated with infrastructure investment in regional economies, supported by a more equitable incorporation of these benefits in IA's project assessment methodology;
- packages of projects at or close to a \$100 million threshold within IA's assessment framework; and
- the importance of renewal and maintenance projects within IA's assessment framework and broader capital investment programs.

Strengthened infrastructure and land use planning

IA's Australian Infrastructure Audit synthesises the key governance and planning-related reforms facing Australia's infrastructure system. The Tasmanian Government supports a greater focus on integration of infrastructure and land use planning, in particular.

Based on Tasmania's demographic profile, work undertaken in the transport area, and reforms underway to the State's land use planning system, the following areas are of particular relevance to Tasmania:

Improved sharing of best practice approaches to infrastructure data and analysis

Data and information underpin effective infrastructure planning, delivery and maintenance. All states have undertaken significant work in relation to the collection, analysis and modelling of infrastructure data. The ability to share this work and to identify best practice in specific areas would be valuable.

Within freight transport, the Government has successfully delivered four Tasmanian Freight Surveys. The Survey collects commodity-based data direct from businesses to inform a detailed understanding of heavy freight movements throughout the State, including freight origin and destination, route, volume and mode. The Survey is a significant input to the Government's freight planning, and has highlighted the value of business-derived data to transport planning. The Tasmanian Government is interested in the application of this approach to other parts of the transport sector.

In relation to HPV access, the Government has worked extensively with industry and local government to match vehicle configurations and loads to pre-defined HPV networks. This has involved the identification of common vehicle types and loads, and a detailed review of bridge assets. A web-based viewer will provide industry with a comprehensive and accessible method to inform their route planning.

As part of this submission, the Government proposes an urban pilot study to significantly improve information on travel movements across the Greater Hobart road network. Successful implementation of this initiative, which uses data from third party providers, could be applicable to other regional centres and major capital cities.

Implications of demographic change on infrastructure demand

Tasmania currently has the oldest population in Australia and the population is ageing faster than any other state or territory. By 2050, it is projected that more than one in four Tasmanians will be aged 65 or older. Tasmania also has a highly decentralised population, with a higher proportion of people living in regional areas.

Understanding the implications of an ageing profile for infrastructure and service demand and provision is critical. Research and approaches that can better inform state and local level planning, and across infrastructure sectors, would be useful to share across jurisdictions.

POTENTIAL FUTURE PROJECTS

There are a range of other infrastructure opportunities presently being considered by the Tasmanian Government but they remain relatively immature in their planning at this stage and it was not considered appropriate to include them as formal initiatives or projects at this stage. However, it is felt that these matters should at least be drawn to the attention of Infrastructure Australia as possible projects for the future. This may have some value in the context of developing the national infrastructure plan.

Bass Strait Interconnector

The Tasmanian Government sees value in the current renewable energy capability in Tasmania, and the potential for this capability to be valued more highly in the future. However the current market conditions associated with oversupply of generation in the National Electricity Market makes the business case for more generation in Tasmania challenging.

In time, the preconditions for more on-island generation and possibly a second Bass Strait interconnector may eventuate, and Tasmania should be prepared to quickly take advantage of rapid changes in the market as and when they eventuate. A key part of this strategic planning is ensuring that Tasmania is well placed to take advantage of global trends towards lower emissions intensive electricity generation.

Any future development must be predicated on sound commercial business cases based on the underlying market conditions. For this reason, the Government is undertaking preliminary work the development of a nationally funded second interconnector to enable prompt action should the necessary market preconditions arise.

Telecommunications

The Tasmanian Government is interested to explore the opportunity for the provision of a fourth communications cable to mainland Australia, with ownership independent of existing redundant cable operator Telstra. A new entrant would address the disadvantages from the lack of world class digital communications infrastructure, higher latency to end users, limited competition, use by incumbents of market power, and the exclusion from consideration of Tasmania as a potential location for major data centres and other digital service providers.

While Tasmania is able to satisfy a range of general requirements such as renewable and/or lower cost energy, geographic stability, cooler climate, lifestyle and other potential benefits for a data centre location, these matters are secondary considerations to diverse path, direct international point of interconnect, low latency, dedicated (not shared/leased), competitively priced, high capacity communications.

The Tasmanian Government is presently in discussions with a key infrastructure provider and is seeking specialised technical and commercial advice on the proposal and once it has investigated costs and opportunities, is open to discussion with the Australian Government on options to support this opportunity or alternative options to improve the level of telecommunications competition and redundancy across Bass Strait.

Burnie Port Precinct Development

The Tasmanian Government through Tasmanian Ports Corporation (TasPorts) has developed a long term plan for the State's Ports to guide state-wide port development in Tasmania. TasPorts 30-Year Port Plan takes a strategic view of the State's freight task, related logistics and market trends and supports the retention of a

multi-port system in Tasmania. In this context, Burnie will emerge as the State's primary container and dry bulk port.

Currently, the Burnie Optimisation Project is underway to improve rail efficiency and increase container terminal capacity at the Port. The project is due for completion in 2015 and will result in a short-term increase in container capacity at the rail yard, while reconfiguring of the Toll terminal will create additional container capacity and provide for more efficient cargo handling.

A range of initiatives are emerging as drivers for further development of the Burnie port precinct. These initiatives include major expansion in the Southeast to accommodate very large 'capesize' vessels for iron ore exports. This project will involve capital dredging, reclamation, construction of new channels, berths and wharf infrastructure as well as reconfiguration of access corridors to the Port. Additionally, relocation of activities and infrastructure within the precinct will take place to create designated container, forestry and mineral commodity zones. Central to this reorganisation is the relocation of the minerals concentrates ship-loader and storage infrastructure from its current location at Berth 5 into the Southeast development area.

Hobart Flagship Science and Technology Precinct

In addition to the above possible projects, the Tasmanian Government is aware that the University of Tasmania has made a separate submission to Infrastructure Australia seeking funding support for the development of the Hobart Flagship Science and Technology Precinct in the Hobart CBD.

The project would deliver a new, fit-for-purpose world-class STEM (Science, Technology, Engineering, Mathematics) research and teaching facility, close to the city's major medical care, research and training centres. It would support the education of more than 4000 students and house 200 academic staff, 300 postdoctoral and research assistants, and more than 200 PhD students and support staff.

The proposal addresses the Audit's findings regarding facilitating greater long-term growth in Hobart and providing new infrastructure to directly support productivity growth. It would also deliver against the identified challenges of supporting growth in population, productivity and regional growth.

The new infrastructure would support the revitalisation of the Tasmanian economy, lead to an increase in productivity by raising the State's educational attainment, and attract migrants from interstate and overseas. By replacing ageing current infrastructure, the proposal would also continue the University's long-term strategy to invest in an expanded campus in the Hobart CBD, building a critical mass of research and teaching excellence while supporting the city's revitalisation and growth.

This is a transformational project that will bring energy and renewed activity into the City of Hobart. With key research facilities such as CSIRO, IMAS and the Menzies Research Centre already within the city precinct, the UTAS relocation project builds on this exciting and vibrant academic base. The city shaping project will provide enriched access for students and breathe new life into a neglected and dormant property footprint in the city. The modern facilities and enhanced design elements will create an iconic facility and coupled with the \$70 million high density student housing project presently under construction, it will reshape the northern corner of the city precinct.

The Tasmanian Government is fully supportive of this project and would commend it to Infrastructure Australia for favourable funding consideration.



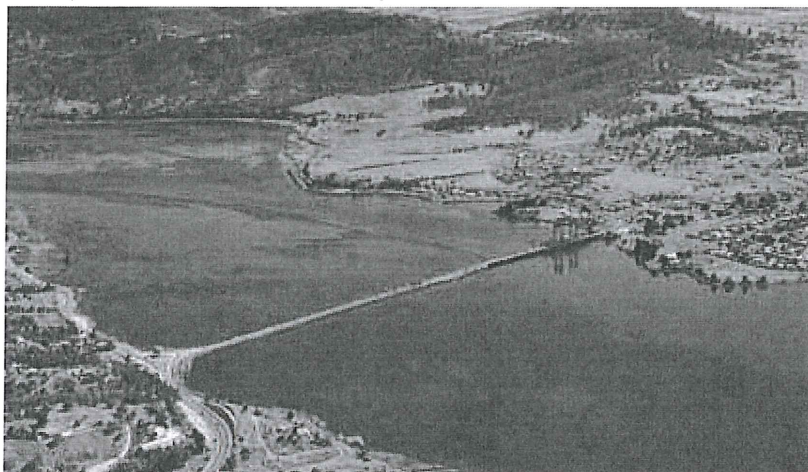
DRAFT Assessment Framework Stage 1: Initiative Identification Template

Name of initiative	New Bridgewater Bridge
Proponent agency	Department of State Growth
Contact (name, position, email and phone)	Allan Garcia CEO, Infrastructure Tasmania Allan.Garcia@stategrowth.tas.gov.au (03) 6166 3285 I
Submission approved by:	Tasmanian Government through Infrastructure Tasmania
Date of approval:	14 September 2015

1. Location of Initiative

The Bridgewater Bridge crosses the Derwent River, at Bridgewater.

Figure 1. Existing Bridgewater Bridge



2. Description of Initiative

This initiative involves the construction of a contemporary bridge adjacent to the existing Bridgewater Bridge and causeway.

The Bridgewater Bridge is a key component of the Midland Highway -Tasmania's major north-south transport corridor and a key link in Tasmania's National Network and Key Freight Network (roads), facilitating access from the Southern region to the State's key northern export ports. The Midland Highway is also a major transport link for passengers (including tourists) travelling between the northern and southern regions. The Bridgewater Bridge also performs an important urban function, connecting major industrial areas at Glenorchy and Brighton, and communities and local service centres in the Brighton municipality with central Hobart.



The new Bridge will connect the Brooker Highway to the Brighton Bypass, delivering 20 kilometres of continuous highway standard dual carriageway, with a limited access road between Claremont and Mangalore. It will reduce travel times, increase travel time reliability, reduce crash frequency and improve access for the growing industrial and commercial areas around Brighton.

Replacement of the Bridge has attracted broad stakeholder support, including from adjacent local governments. The Australian Government has provided previous funding to support land acquisition and concept design.

The current cost estimate for a new Bridgewater Bridge is not considered by the Australian Government to deliver value for money; however, it is critical that the Tasmanian Government is in a position to commence development/delivery of a new bridge within the next five years.

This initiative focuses on the development of a final, contemporary, cost effective design solution to progress to the development and delivery of a new bridge.

3. Strategic Challenges relevant to the proposed initiative

Productivity	1	Governance	
Population	2	Sustainability and Resilience	
Connectivity	1	Regional	
Funding		Indigenous	
Competitive Markets	2	Best Practice	

Productivity: The draft *Tasmanian Integrated Freight Strategy* recognises the Burnie to Hobart as Tasmania's premier interstate freight corridor. The Bridgewater Bridge forms a key component of this corridor, connecting the Brooker Highway to the Brighton Bypass. The new Bridge will enhance the efficiency of growing freight and passenger movements between the southern and northern regions of the State, including reduced travel times and increased travel time reliability.

Population: Population growth is a key strategic focus for the Tasmanian Government, having set a long-term target to increase Tasmania's population to 650 000 by 2050 from 515 000 currently. The Department of State Growth is developing a Population Growth Strategy so support this outcome.

Connectivity: The Bridgewater Bridge is a key component of Tasmania's major north-south transport corridor, connecting to key population centres and freight hubs. The Bridge also performs an important urban function, connecting major industrial areas at Glenorchy and Brighton, and communities and local service centres in the Brighton municipality with central Hobart.

Competitive Markets: Tasmanian is reliant on trade with domestic and international markets. Efficient and productive supply chains, including land freight connections are critical in maintaining a competitive position within key commodity markets.

4. Jurisdiction problem or opportunity addressed

Jurisdiction problem or opportunity addressed:

A new crossing of the Derwent River will provide a continuous, high standard connection for the Midland Highway that reliably meets the standards required of the National Land Transport Network.



Goal definition and problem / opportunity identification:

The following section addresses the identification, assessment and analysis of problems and opportunities in relation to this Initiative.

The primary function of the Midland Highway is to provide safe, high-speed travel for freight and passenger vehicles. Safety and efficiency over the southern section, is currently significantly compromised, with implications for future economic growth in Greater Hobart and Southern Tasmania more widely.

The existing Bridgewater Bridge was constructed in the late 1940s, with the causeway built in the late 1800s. Extensive repairs to the lifting span were completed in 2007. A major refurbishment of the bridge was undertaken between 2009 and 2010; however, both the causeway and the bridge are reaching the end of their serviceable life in terms of functionality and levels of service.

The structure has dimensional limitations and does not meet contemporary loading and design standards as part of the National Land Transport Network. The Bridge has high maintenance costs associated with its operation as a vertical lift bridge; with risks of continuing settlement of the causeway embankment.

Analysis shows that continued investment in the existing bridge structure is not a viable long term option with future investment cycles having escalated costs for diminishing returns.

At present, during normal daytime traffic flows the level of service on the existing Bridgewater Bridge is low, further reducing during peak hour. Contributing factors include a single carriageway design carrying approximately 19 500 vehicles per day with a 60 kilometre per hour speed limit (further reduced during regular bridge maintenance works).

5. Effectiveness of the initiative in addressing the jurisdiction problem / opportunity

The objective of the New Bridgewater Bridge project is to enhance the efficiency of growing freight and passenger movements between the southern and northern regions of the State by removing a capacity and functional constraint. The project will link to the Brighton Bypass and the Brooker Highway and will provide improved connection between the north and south of the State and address traffic, safety and amenity issues associated with freight movements on this route.

The New Bridgewater Bridge will ensure the benefits from the significant investment already made in the Brighton Transport Hub and the Brighton Bypass are fully realised.

Expected effectiveness of the proposed initiative in addressing the problem / opportunity of national significance¹:

Rating of effectiveness:	+5	Burnie to Hobart is Tasmania's most significant freight corridor and is also the major transport link for passengers travelling between the State's northern and southern regions.
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6. Initiative fit within the broader system or network and any other key interdependencies

The Bridgewater Bridge is a key component of the Midland Highway -Tasmania's major north-south transport corridor and a key link in Tasmania's National Network and Key Freight Network (roads).

7. Initiative Alignment with jurisdiction plans or strategies

The new Bridgewater Bridge aligns with –

- Draft *Tasmanian Integrated Freight Strategy*
- Burnie to Hobart Freight Corridor Strategy (separate submission to IA)

¹ See detailed technical guidance for scoring guidelines
Tasmanian Government - New Bridgewater Bridge



- *Midland Highway 10-year Action Plan*
- *State Roads Infrastructure Services Policy*

8. Development stage

The progression of the new Bridgewater Bridge is a priority project, and is directly linked to the end of the existing bridge's serviceable life, which is expected to occur around 2020.

Between 2009 and December 2010 \$18 million was expended to extend the life of the existing bridge and the construction of a roundabout to improve traffic safety and efficiency at the Midland Highway/Brooker/Lyell Highway junction. It was anticipated that the bridge refurbishment and roundabout works would enable the bridge and causeway to operate until approximately 2020 when a new bridge would be under construction.

Concept design work for the new Bridgewater Bridge was undertaken in 2011. The Department of State Growth is building on this work to refine the design to support a cost effective proposal, with the final design to be developed in consultation with Infrastructure Tasmania. The most recent option developed to concept design stage has significant stakeholder support, however the cost estimate is in the range of \$600 million (P50) to \$800 million (P90).

The Australian Government provided funding of \$6.4 million in 2012 to purchase property and secure the corridor for the new bridge. The acquisition process is now almost complete.

Environmental and heritage assessments have been undertaken as part of the initial Concept Design work including:

Aboriginal Heritage

A comprehensive Aboriginal heritage assessment was undertaken in 2010 and resulted in the recording of two remnant shell midden sites that, at Concept Design stage, were expected to be avoided by the proposed works. Aboriginal Heritage Tasmania was satisfied with the level of investigation was sufficient to inform the Concept Design phase and any permits that might be required to commence construction works. An Aboriginal Cultural Heritage Management Plan (ACHMP) was prepared to outline the management and mitigation of any impacts during construction. The ACHMP also set out a process for consultation with the Tasmanian Aboriginal community.

Based on this and earlier comprehensive investigations it would be expected that further assessments would not be required in coming years. However, if the current Concept Design is altered to the extent that it extends outside of the existing study area, then further field investigations would be required.

European Heritage

A comprehensive historic heritage investigation was undertaken to assess the historic values associated with the existing heritage listed Bridgewater Bridge and nearby historic properties. At the Concept Design stage it was expected that there would be no direct impacts on heritage listed properties; however, discussions were held with Heritage Tasmania on the scope of a further assessment that was to consider impacts of the proposed development on heritage values and application of urban design elements.

Flora, Fauna and Aquatic values and water quality:

Surveys to assess Flora, Fauna and Aquatic values were undertaken in 2009-2011; however, new and comprehensive surveys will be required no more than 2 years prior to the commencement of works. Due to the contaminated sediments at this location, it is expected that baseline water quality data that represents a range of seasonal conditions for a reasonable period will also be required prior to the commencement of construction.

The assessment requirements in relation to water quality are likely to be onerous based on the existing contamination and the proposed piling works.

9. Next Steps

A Consultant has been engaged to undertake a review of the Bridgewater Bridge Concept design to determine if a lower cost option is feasible – consideration will be given to original design assumptions, simplification of junctions/interchanges, bridge form construction methodology and height requirements.



10. Funding

It is anticipated that once review of the Concept design is complete, funding will be required for the development and delivery phase

11. Confidentiality

This submission does not contain any confidential information.

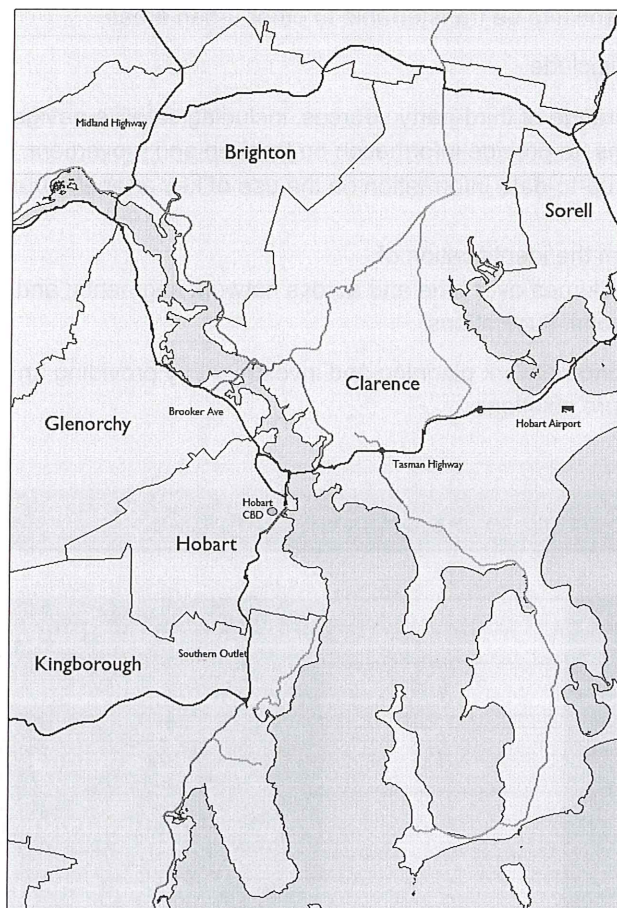


DRAFT Assessment Framework Stage 1: Initiative Identification Template

Name of initiative	Greater Hobart Urban Movement – Pilot Study
Proponent agency	Tasmanian Government
Contact (name, position, email and phone)	Allan Garcia CEO, Infrastructure Tasmania Allan.Garcia@stategrowth.tas.gov.au (03) 6166 3285 I
Submission approved by:	Tasmanian Government through Infrastructure Tasmania
Date of approval:	14 September 2015

1. Location of Initiative

The study focuses on the Greater Hobart metropolitan area, which includes the municipalities of Hobart, Clarence, Glenorchy, Brighton, Sorell and Kingborough.





2. Description of Initiative

Maintaining the comparative advantages Greater Hobart has as a liveable and accessible city, while encouraging population and economic growth, is a key objective of the Tasmanian Government.

The Greater Hobart metropolitan area comprises the municipalities of Hobart, Clarence, Glenorchy, Brighton, Sorell and Kingborough, and has a combined population of 220,000. The area has a highly dispersed, low-density settlement pattern, with a small number of key arterials providing access to and through central Hobart.

Passenger transport is dominated by car-based travel, with the percentage of people driving to work higher than the national average. Use of public transport is low compared to other states, however percentage of Tasmanians who walk or cycle to work is higher than the national average.

Morning and afternoon traffic peaks are very short but comparatively severe when compared to general traffic flows throughout the day. The provision of hard road infrastructure to cater for peak demand will result in a surplus for non-peak periods. In the broader context of travel demand, including why and where people travel, it is only one response to improving travel reliability and accessibility.

The Tasmanian Government collects detailed, business-derived data on heavy vehicle freight movements throughout the State. Information and analysis on passenger transport movements is more limited. While the focus of past work has been Greater Hobart, generally data has not been collected in a way that supports a detailed understanding of network use, particularly travel origin and destination, or the identification of trends over time. The cost and resources associated with past activities, including household travel, travel time and reliability surveys, have also been comparatively high, being reliant on low technology, manual processes.

The Government is seeking to undertake an urban movement pilot study to better understand travel patterns across the urban road network, particularly on arterial roads. The pilot study will use contemporary technology to collect, collate and analyse data using a methodology that is repeatable, cost and time efficient; allows for the analysis of trends over time; and has the potential to be transferrable to other urban areas.

Specific features of the approach include -

- Collection of data from a range of third-party sources, including satellite navigation, mobile phones and in-vehicle navigation systems, to provide information on location and movement.
- Ability to access regular, up-to-date information on the use of key arterial routes (potentially, 24 hours a day, 7 days a week).
- Network analysis to inform the identification of:
 - travel patterns and volumes over time and across network segments; and
 - daily, peak and seasonal fluctuations.

Outputs from the initiative will inform network planning and investment by providing an evidence base to support infrastructure and non-infrastructure solutions.

3. Strategic Challenges relevant to the proposed initiative

Productivity		Governance	1
Population	1	Sustainability and Resilience	
Connectivity	1	Regional	
Funding		Indigenous	
Competitive Markets		Best Practice	



Population: While Tasmania is facing moderate population growth compared to other states, Hobart has a highly dispersed, low density settlement pattern, with a small number of key arterials providing access to and through the centre. Future population growth and change has the potential to negatively impact the comparative advantages Hobart has as a liveable and accessible city. Understanding the impact of population change on demand for use of the transport network as well as how changes to the transport network can influence settlement is an important part of developing infrastructure solutions which target the best use of existing infrastructure.

Connectivity and Governance: The transport network connects population and employment centres, and with a focus on both population and economic growth in Tasmania, understanding how these centres are connected and planning for future development in an integrated manner will assist in managing future demand.

4. Jurisdiction problem or opportunity addressed

Jurisdiction problem or opportunity addressed:

Maintaining adequate road connectivity

Goal definition and problem / opportunity identification:

The following section addresses the identification, assessment and analysis of problems and opportunities in relation to this Initiative.

Greater Hobart is Tasmania's largest urban area, containing over 40 per cent of Tasmania's total population, across six local governments.

Passenger transport across Greater Hobart is dominated by car-based trips, with a low use of public transport compared to other Australian cities. Rates of walking and cycling are higher than the national average in some local government areas.

Central Hobart is accessed by a three arterial roads, which funnel traffic into and through the central urban area, making Hobart CBD both a key travel destination and through point for local, metropolitan and regional trips. All three arterial roads are owned and managed by the Tasmanian Government -

- *Brooker Highway:* carries a high freight and passenger task, with sections of the Highway carrying over 50,000 vehicles a day. The Highway is the major urban network in the broader north-south freight and passenger link that connects southern distribution centres to the northern ports.
- *Tasman Highway:* a strategic passenger route for the Hobart metropolitan area, with daily vehicle numbers now over 66,000 over the Tasman Bridge. The Tasman Highway provides access to eastern Hobart, including existing and expanding industrial and commercial areas at Rosny, Mornington, Cambridge and Hobart International Airport, and expanding residential areas.
- *Southern Outlet:* while the Outlet carries just over 30,000 vehicles per day, much less than the Brooker and Tasman Highways, it provides the major connection between growing residential areas in Kingborough and areas to the south in the Huon Valley, and the Hobart CBD.

The *Macquarie-Davey couplet*, which provides the central east-west link through Hobart CBD, connecting to all three arterial roads above, is also critical. The couplet is owned and managed by local government.

Despite some decentralisation of commercial activity to sub-regional centres, Hobart CBD remains the major employment, financial and educational centre of Greater Hobart. Nearly all major State and Commonwealth government offices are located in or near the CBD, including both administrative agencies and research institutions (University of Tasmania, CSIRO, Institute for Marine and Antarctic Studies, Menzies Research Institute). The CBD is the centre for financial and business services, and supporting retail and service industries. Most major private high schools and colleges are located in central Hobart. The University of Tasmania will continue to develop inner-city sites to support a greater concentration of educational services in the CBD.

Over the past two decades, residential growth has been highest in Hobart's outer urban areas, particularly in Kingborough (south) and Clarence (east), driven by a combination of lifestyle choice and affordable housing



opportunities. Brighton and Sorell, once small, outlying rural towns, are now sub-regional service centres and essentially form part of metropolitan Hobart. Hobart's outer suburbs are within easy commuting distance of central Hobart. Traffic volumes have increased across major arterial roads as people travel from these outer areas to access more central employment and educational locations.

Improved understanding of travel demand across Greater Hobart's urban road network

While the Tasmanian Government regularly collects detailed, business-derived data on heavy freight movements throughout the State, there is limited information on passenger transport movements in Tasmania, particularly in relation to key parts of the network to and through central Hobart.

The Government has undertaken past analysis on travel time and reliability, traffic volumes, trip purpose and destination, across Greater Hobart. This work has been an important input to strategic, passenger transport and network planning, but has not resulted in a comprehensive overview of travel patterns across the arterial network based on a cost-effective, repeatable methodology.

The road transport network is particularly important in Tasmania where personal transport is dominated by car-based travel, with low use of public transport and buses currently the only mode of public transport available. Without an improved understanding of network use and change over time, Tasmania's potential future economic and population growth may be constrained by infrastructure which cannot keep pace with change.

5. Effectiveness of the initiative in addressing the jurisdiction problem / opportunity

Improved understanding of how and where people travel in Greater Hobart will inform the development of sustainable, cost-effective responses that more effectively target actual demand. Specifically, this Initiative will:

- support future planning of key arterial roads at a network level and in response to specific developments; and
- inform an integrated network approach that clearly matches network issues to appropriate and sustainable management responses.

There is currently limited information available on how people use the transport network and having better information on origin, destination, routes and times will help to provide an evidence base to inform network planning decisions, particularly for the key arterial routes into Hobart.

Electronic data including information from mobile phones, satellite navigation, in vehicle systems, traffic signals and permanent counter sites can be collected continuously, accessed regularly and analysed over time to help detect trends, as well as monitoring the effectiveness of any changes to the network or its operation.

Data is collected continuously, allowing network changes to be identified quickly, including the impact of roadworks and other short term delays not collected using other methods.

Expected effectiveness of the proposed initiative in addressing the problem / opportunity of national significance¹:

Rating of effectiveness:	+5	<i>The pilot provides a contemporary approach to better understanding urban travel patterns. This information will significantly improve network planning, supporting responses that better target specific locations and parts of the network; users and types of travel demand.</i>
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6. Initiative fit within the broader system or network and any other key interdependencies

The Government has undertaken a number of past strategic planning and analytical projects in relation to the Greater Hobart transport network, across both road and public transport. These have included -

- *Greater Hobart Household Travel Survey (2008-09)*. The Survey provided detailed information on travel patterns across Hobart, based on a household travel diary and a 3% sample of the metropolitan region's population. It provided detailed information on why people travel, how and where, informing future planning options across all modes. The delivery of a household travel survey is costly and highly resource intensive. It is not a realistic method of collecting travel information on a regular basis to ensure up-to-date information on network and public transport use.
- *Travel Time Survey*. Analysis of peak and off-peak travel times and reliability on key arterial routes in Greater Hobart. The methodology involved real time travel, making it a resource intensive exercise. Data extraction and analysis was also complex.
- *Urban Travel Demand Model*. The Government developed an urban travel demand model, using data from the Greater Hobart Household Travel Survey. The model is intended for use in modelling more complex passenger transport, land use and network planning scenarios, including the impact of specific interventions on travel behaviour.
- *Analysis of specific data sets*, including Australian Bureau of Statistics Journey to Work data and Department of State Growth traffic count data.

7. Initiative Alignment with jurisdiction plans or strategies

The initiative aligns with the following related plans and strategies:

- *10 Year Infrastructure Investment Plan*
- *State Roads Infrastructure Services Policy*
- *Tasmanian Urban Passenger Transport Framework 2010*
- *Brooker Highway Transport Plan*
- *Southern Integrated Transport Plan*
- *Main Road Transit Corridor Plan (Glenorchy to Hobart CBD)*
- *Infill Development Report 2014*

8. Development stage

The pilot is in the early scoping stage. The Government has undertaken some preliminary research on data collection methods and content, and has reviewed past work to inform directions within the study, including methodology and application of data to network planning.

9. Next Steps

This Initiative is presented as an early stage pilot study. The Tasmanian Government will continue to work with IA to further develop and deliver the pilot.

Next steps will follow standard project planning and delivery, including finalisation of project objectives and scope; confirmation of data availability and sources; consultant engagement; data collection and preliminary analysis.

Subsequent steps will focus on the use and application of data collected through this pilot, to broader passenger transport projects and to support more detailed analysis and modelling.



10. Funding

The Tasmanian Government will provide funding for the collection of data as part of the pilot. Once the pilot has been evaluated, future funding from the Federal Government may be required in order to prepare a model using the data, or to determine a method for utilising an existing model and to collect data on an ongoing basis. The technology and method have the potential to be used by other jurisdictions.

11. Confidentiality

The following submission content should be treated as confidential –

- Commentary on the validity of infrastructure proposals made by external stakeholders. The Government has not made any public statements on specific proposals, including major road bypasses and light rail, and is seeking to use information from this pilot as a key input to inform future responses.
- Reflecting the very early stages of this Initiative, consultation with local government has not yet been undertaken.

DRAFT Assessment Framework Stage 1: Initiative Identification Template

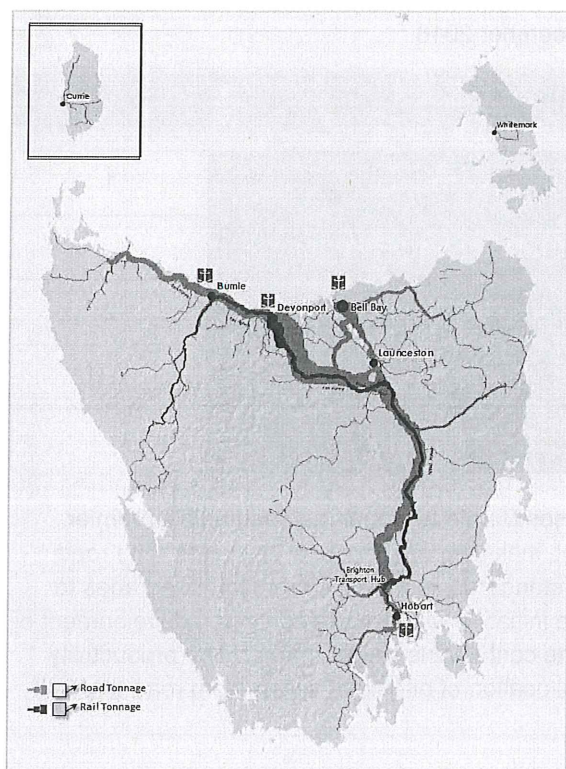
Name of initiative	Burnie to Hobart Freight Corridor Strategy (update)
Proponent agency	Tasmanian Government
Contact (name, position, email and phone)	Allan Garcia CEO, Infrastructure Tasmania Allan.Garcia@stategrowth.tas.gov.au (03) 6166 3285
Submission approved by:	Tasmanian Government through Infrastructure Tasmania
Date of approval:	14 September 2015

1. Location of Initiative

The *Burnie to Hobart Freight Corridor Strategy* incorporates the rail and road networks between Burnie Port and Hobart, connecting to Devonport Port, key population and industrial centres and southern Tasmania's major intermodal freight hub at Brighton.

The Corridor is shown in Figure 1.

Figure 1: Burnie to Hobart Freight Corridor



2. Description of Initiative

The Burnie to Hobart corridor connects major ports at Burnie and Devonport, key population and industrial centres and major intermodal hubs at Brighton and Burnie Port. The corridor forms part of the National Network and has been identified as Tasmania's premier freight corridor under the Tasmanian Government's draft *Tasmanian Integrated Freight Strategy* (under development).

Reflecting its strategic importance, the Tasmanian Government will develop this corridor to deliver the State's highest standard freight infrastructure and service levels, across both road and rail. Future planning and investment will be demand-driven, mode-neutral and outcome-based.

As part its broader freight planning and economic development frameworks, the Government has prioritised the development of a *Burnie to Hobart Freight Corridor Strategy*. This Strategy will provide clarity and certainty on future planning and investment across this corridor, in support of improved freight efficiency and productivity; industry growth and transparent public investment.

The key elements of the Strategy are to -

- Identify a single, integrated package of investment priorities for road and rail based on freight demand, corridor and system outcomes.
- Prioritise major freight-related investment in support of general freight growth.
- Confirm required road and rail infrastructure standards and service levels.
- Plan for the highest road freight infrastructure standards across the State Road Network, including in support of major step changes in heavy vehicle productivity.
- Focus rail investment to support a safe, reliable and sustainable rail network.
- Consider broader and alternative mechanisms to support freight users to meet their supply chain needs.

The Burnie to Hobart Corridor Strategy is currently listed as an early stage project on Infrastructure Australia's *Infrastructure Priority List*.

The *Burnie to Hobart Freight Corridor Strategy* will be delivered by December 2016.

3. Strategic Challenges relevant to the proposed initiative

Productivity	1	Governance	1
Population		Sustainability and Resilience	
Connectivity	1	Regional	2
Funding		Indigenous	
Competitive Markets	1	Best Practice	

Productivity: The draft *Tasmanian Integrated Freight Strategy* recognises Burnie to Hobart as Tasmania's premier interstate freight corridor and the priority network for freight investment, including major capital upgrades. The road corridor will be developed to Tasmania's highest freight infrastructure standards, including incremental upgrades to meet long-term, step-changes in vehicle productivity in Tasmania. The initiative will facilitate continued development of Tasmania's rail network to accommodate future growth, including in the contestable freight market. The productivity benefits of road and rail corridors are optimised through the efficient allocation of all freight across both road and rail freight services.



Connectivity: The Burnie to Hobart freight corridor connects major ports at Burnie and Devonport (Tasmania's primary container ports), key population and industrial centres and major intermodal hubs at Brighton and Burnie Port

Competitive Markets: Tasmania is reliant on trade with domestic and international markets. Efficient and productive supply chains, including land freight connections are critical in maintaining a competitive position within key commodity markets.

Regional: The Tasmanian Government's reform agenda includes an ambitious population growth strategy, economic growth and jobs creation. Transport infrastructure that delivers the necessary service standards is central to supporting these strategies.

4. Jurisdiction problem or opportunity addressed

Jurisdiction problem or opportunity addressed:

Future planning and investment on Tasmania's premier freight corridor based on a demand-driven, mode-neutral and outcome-based strategy.

Goal definition and problem / opportunity identification:

The following section addresses the identification, assessment and analysis of problems and opportunities in relation to this Initiative.

By tonnage, traffic volumes and strategic land use connections, the road and rail networks between Burnie and Hobart are Tasmania's most significant freight corridor. 65 per cent of Tasmania's land freight task travels on the Burnie to Hobart corridor for at least part of its journey, and most major freight origins and destinations are located within 30 kilometres of the corridor. It is Tasmania's key corridor for the movement of containerised freight.

Freight volumes are forecast to increase and remain highest on this corridor. Under general freight growth scenarios, the freight task will be carried by road and rail, with the highest volumes on road (Figure 2). Identifying how the proportional allocation of freight between road and rail may change over time, including in the contestable freight market and for major new tasks, is a key focus of the corridor strategy.

Significant public investment has been made in both road and rail networks to improve efficiency and safety across the corridor, with further investment required.

Clarifying future investment priorities as part of an integrated freight corridor and in response to freight demand and transparent infrastructure and service levels, is a focus of this Initiative, and key to delivering effective and sustainable public investment over the long-term.

5. Effectiveness of the initiative in addressing the jurisdiction problem / opportunity

The *Burnie to Hobart Freight Corridor Strategy* is a strategic planning initiative that will inform options generation for future infrastructure investment and management across road and rail.

The Initiative is supported by the following operational plans and freight system analysis:

Tasmanian Freight Survey (whole of system)

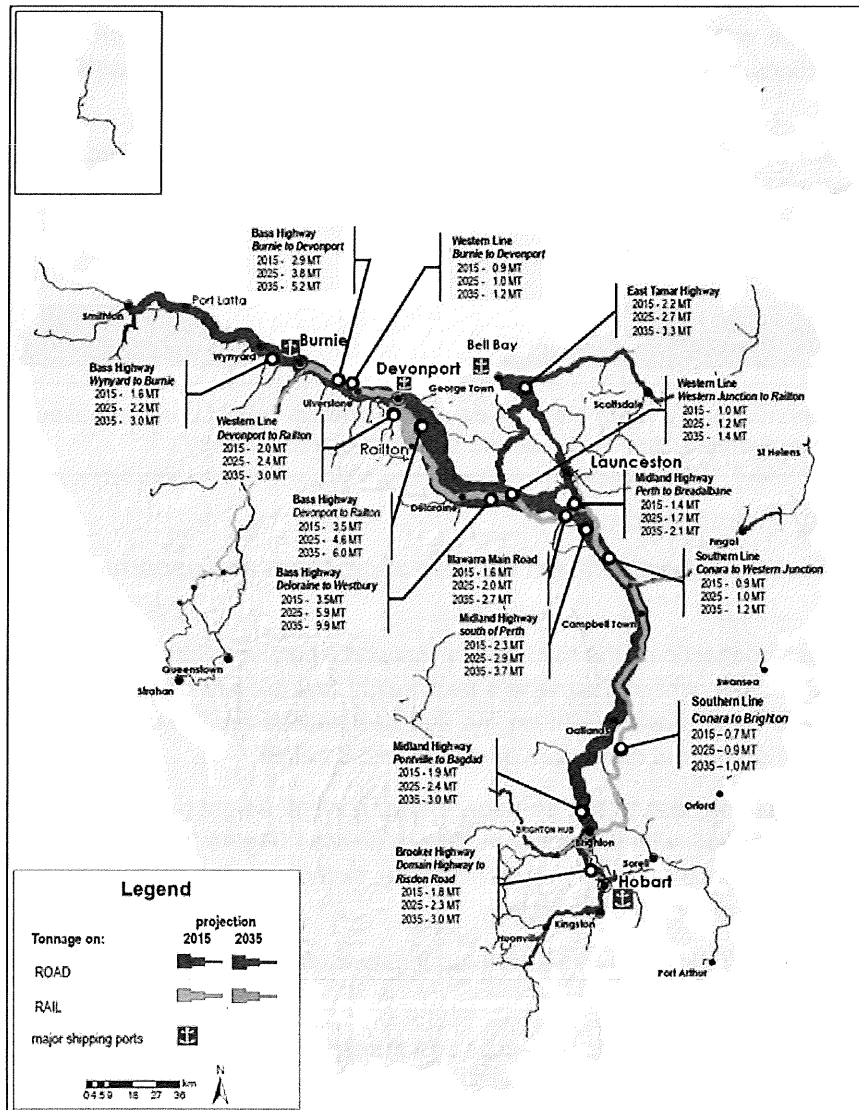
The Tasmanian Government's *Tasmanian Freight Survey*¹ has underpinned major freight planning and investment for over a decade, forming a key component of major infrastructure funding bids for both road and rail.

The new Survey captures detailed freight movements across Tasmania's road and rail networks based on information direct from businesses. In 2011-12, around 150 companies participated in the Survey.

¹ www.dier.tas.gov.au/infrastructure/freight/tasmanian_freight_survey
Tasmanian Government - Burnie to Hobart Freight Corridor



Figure 2: Tasmanian Land Transport Network, forecast freight volumes



Information collected includes freight routes – including between and through major sea and air ports; between industrial areas and across road and rail network segments – freight tonnages; commodity type; and mode and vehicle type.

The Survey will support an understanding of freight volumes and commodity mix across Tasmania's regional road network, including over time, to inform investment prioritisation under this program.

The Government will shortly commence a fifth Tasmanian Freight Survey.

National Network – road

At an operational level, this Initiative forms part of the Government's State Road network planning and renewal program. Key related activities include -

- Development of a 10-year State Road investment plan;
- The development of service standards, incorporating a range of customer performance measures (journey time reliability, safety, asset condition and connectivity);



- Future development of policies to support specific users of the system, including tourism, agriculture and general heavy freight;
- Planned annual reporting on network performance against service level standards; and
- Periodic vehicle counts.

National Network – rail

The Burnie to Hobart freight corridor strategy aligns with, and builds upon the *Tasmanian Freight Rail Revitalisation Program*. It supports continued investment in network asset renewals and upgrades to single points of failure across the rail corridor.

At a strategic level, the Initiative will support –

- the development of a long-term strategic model for the rail network; and
- an increasingly competitive freight market on the Burnie to Hobart freight corridor, through the expansion of rail services into emerging areas and growth sectors, including agriculture, mining, and retail.

Expected effectiveness of the proposed initiative in addressing the problem / opportunity of national significance²:

Rating of effectiveness:	+5	Burnie to Hobart is Tasmania's most significant freight corridor and is also the major transport link for passengers travelling between the State's northern and southern regions.
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6. Initiative fit within the broader system or network and any other key interdependencies

The Burnie to Hobart land transport network (road and rail) form part of the National Network and is identified as Tasmania's premier freight route under the draft *Tasmanian Integrated Freight Strategy*.

The Australian Government recently committed significant funds to improve safety and high productivity vehicle infrastructure standards on the Midland Highway, with a 10-year program of works now underway.

The development of a new Bridgewater Bridge as a key link on this corridor, and is the subject of a separate priority project submission to IA.

Tasmania's rail network has also received significant funding, with a four-year \$119.6 million program underway and a second tranche of funding committed thereafter. This funding was provided in support of the 2012 submission entitled 'Tasmanian Rail Revitalisation Program' which was provided to Infrastructure Australia by the Tasmanian Government.

The Tasmanian Government has invested in the multi-modal transport hub at Brighton. The Australian Government and key stakeholders have invested in the Burnie Port Optimisation Project (currently underway) to improve container handling capacity and efficiency at Tasmania's highest volume port.

7. Initiative Alignment with jurisdiction plans or strategies

The Burnie to Hobart Freight Corridor Strategy aligns with -

- Draft *Tasmanian Integrated Freight Strategy* (under development – copy attached)
- Development of a new Bridgewater Bridge (separate submission to IA)
- Development of a 10 year infrastructure investment plan for the State Road Network
- Review of the Tasmanian Rail Access Framework

² See detailed technical guidance for scoring guidelines
Tasmanian Government - Burnie to Hobart Freight Corridor



- Operational plans of both TasRail and the Department of State Growth (roads authority)

8. Development stage

The Burnie to Hobart Freight Corridor Strategy will be undertaken as a strategic planning initiative, with outcomes to inform specific project proposals.

9. Next Steps

The *Burnie to Hobart Freight Corridor Strategy* will be finalised by December 2016.

The Tasmanian Government will provide additional information on this Initiative to IA, consistent with completion of internal planning work and progression of this Initiative as a corridor strategy. Project-level submissions will be provided separately, under IA's assessment framework.

10. Funding

The Burnie to Hobart Freight Corridor Strategy represents strategic planning and will inform future funding submissions.

11. Confidentiality

The Tasmanian Government's draft *Tasmanian Integrated Freight Strategy* has not yet been released for public consultation and is provided in confidence.



DRAFT Assessment Framework Stage 1: Initiative Identification Template

Name of initiative	Major Tasmanian Sewerage Compliance Projects: Hobart Sewerage Improvement Project (HSIP) Launceston Sewerage Improvement Project (LSIP) Pardoe Sewerage Improvement Projects (PARSIP) Launceston Combined Drainage System Strategy (LCDSS)
Proponent agency	Tasmanian Water and Sewerage Corporation
Contact (name, position, email and phone)	Andrew Truscott, Manager Asset Strategy Email: andrew.truscott@taswater.com.au Phone: (03) 6345 6314
Submission approved by:	
Date of approval:	



1. Location of Initiative



This initiative includes four flagship projects located in and around significant waterways in three of Tasmania's biggest population centres in each region of the state:

The Hobart Sewerage Improvement Project (HSIP) covers the Derwent River in the greater Hobart area, including the Sullivans Cove waterfront and Cameron Bay where MONA is situated.

The Launceston Sewerage Improvement Project (LSIP) and the Launceston Combined Drainage System Strategy (LCDSS) cover the Tamar, North Esk and South Esk Rivers in the greater Launceston area.

The Pardoe Sewerage Improvement Project (PARSIP) covers the Mersey River in the greater Devonport area, including nearby fast growing areas of Latrobe and Port Sorell.

2. Description of Initiative

TasWater is responsible for the provision of water and sewerage services across Tasmania. The Corporation was established to fix significantly non-compliant and ageing infrastructure that results in poor public health and environmental outcomes that do not meet contemporary standards and jeopardise Tasmania's status as a clean green state and preferred tourist destination.

Progress is being made to address ongoing non-compliance; however, TasWater does not have the financial capacity to undertake the aforementioned flagship projects in timeframes that are acceptable and expected by the Tasmanian community, whilst continuing to complete core business activities.

The major population centres of greater Hobart, greater Launceston and Devonport are each served by an excessive number of sewage treatment plants (STPs), which are often located on prime waterfront land and in densely populated areas. These STPs are either, discharging effluent that does not comply with contemporary environmental standards, over or nearing capacity, or tying up land that could result in significant development activity.



TasWater is presented with a unique opportunity to rationalise a significant number of treatment plants which will provide the following benefits:

- Improved environmental and regulatory compliance
- Improved levels of service for customers
- Improved health of some of Tasmania's most significant waterways
- Increased development potential in the affected areas
- Job creation associated with the engineering and construction work
- Significant economic benefit for other industries, e.g. tourism.

The following sets out a brief description of the four projects that make up the initiative.

HSIP

TasWater currently operates a number of STPs located along the Derwent River serving greater Hobart. One of these plants is located at Macquarie Point on Hobart's iconic waterfront and another is located at Cameron Bay in close proximity to the internationally recognised MONA.

The plants considered require upgrade to support ongoing development within the respective service areas and to provide treatment to contemporary standards. Rationalisation of the plants is a prudent way to address these issues, will contribute to an improvement in the health of the Derwent River and will allow access to prime waterfront land that has significant development potential.

LSIP

In the greater Launceston area TasWater operates seven STPs located along the Tamar and Esk rivers. These plants frequently breach current environmental regulatory limits, and most are reaching treatment capacity.

Rationalisation of the current plants and construction of one new plant that will service the same area will address the capacity and non-compliance issues that currently exist and will contribute to an improvement in the health of the Tamar and Esk rivers. Additionally, the project will also have significant community and economic benefit given the many users of the rivers.

LCDSS

The City of Launceston is currently serviced by a combined sewer and stormwater system that in some areas is greater than 130 years old. During high rainfall events the system frequently overflows and discharges dilute untreated sewage into the Tamar and Esk rivers.

LCDSS will augment LSIP by reducing the frequency and volume of combined sewer overflows (CSOs), therefore reducing the impact on the Tamar and Esk rivers. LSIP will work in conjunction with this project as one of the current STPs will be used to treat combined system flows only and be upgraded to ensure it will have adequate capacity to treat flows that would previously have been discharged to the river.

PARSIP



TasWater operates three STPs in close proximity to Devonport, including Port Sorell, one of the state's highest growth areas. Port Sorell STP is approaching capacity and may constrain the significant ongoing development in the area. Latrobe STP does not have sufficient capacity to treat all incoming flows during wet weather events, and overflows to the Mersey River.

Rationalisation of the plants will address these issues by providing higher quality and capacity treatment for the area.

3. Strategic Challenges relevant to the proposed initiative

Productivity		Governance	1
Population	2	Sustainability and Resilience	2
Connectivity		Regional	
Funding	2	Indigenous	
Competitive Markets		Best Practice	1

Describe how the initiative addresses each strategic challenge

This initiative ensures that sewerage infrastructure in the Hobart, Launceston and Devonport regions, which currently face capacity issues, can sufficiently cater for continued and future growth, which addresses the 'Population' strategic challenge. Identified development hotspots such as Legana, Port Sorell, Blackstone Heights and the Macquarie Point precinct are accounted for in the initiative.

This initiative addresses the 'Sustainability and Resilience' and 'Best Practice' strategic challenges by ensuring the State's major STPs are upgraded and consolidated to enable lowest lifecycle cost into the future and maximise capital investment through the construction of high technology sewage treatment infrastructure. This will mean that new STPs operated by TasWater will provide treatment to contemporary standards, increased operational efficiencies and reduce breaches of environmental regulatory limits.

The 'Governance' strategic challenge is being addressed through an ongoing program of key stakeholder consultation for both projects. Stakeholder consultation is conducted in a transparent and open method that allows the community and key stakeholders to flag issues and/or project opportunities. TasWater also engages with other planning authorities, including local councils, to ensure future growth and other relevant factors are understood and appropriately taken into account in planning and decision making.

The initiative will contribute to 'Funding' opportunities by the potential rationalisation of infrastructure which will release land that has significant development potential.

4. Jurisdiction problem or opportunity addressed

Jurisdiction problem or opportunity addressed:

Significant investment will be required (in Tasmania's sewerage infrastructure) in the period to 2031, especially for plants discharging into the Tamar and Derwent Rivers.

Infrastructure Australia, 2015. Australian Infrastructure Audit – Report Volume 2, Page 252



Goal definition and problem / opportunity identification:

i. Problem / opportunity identification:

There are significant ongoing compliance and performance issues with a small number of large STPs that treat more than 50 per cent of sewage volume across Tasmania in three of the state's major population centres. TasWater considers that addressing these issues in a timely and efficient manner is one of the key reasons that the Corporation was created.

With this one off external funding contribution, TasWater will be able to address compliance issues in these systems and therefore contribute to improved environmental outcomes for five major rivers and allow for continued development and growth in areas of strategic importance for the state.

ii. Problem / opportunity assessment:

The existing STPs have an inherent inability to comply with contemporary STP standards due to their age, condition and capacity. This initiative is a priority due to the potential environmental impact on the Derwent, Tamar, Mersey and Esk rivers; all of which are used as recreational waterways and have significant community, economic and iconic value to Tasmania.

iii. Problem / opportunity analysis:

Upon its creation TasWater inherited infrastructure and systems that were largely ageing and non-compliant, and built within the constraints of historical council boundaries. In many cases the investment required for maintenance and renewal had not occurred. This has resulted in a number of STPs being in poor condition and the operation of more STPs than is prudent or efficient.

As a state wide entity, TasWater does not have the same constraints; instead it has an opportunity as a result of pending compliance and/or capacity concerns to consider infrastructure solutions that not only address those issues but also generate other economic and community benefits. TasWater does not, however, have the financial capacity to fund the major projects in timeframes expected by the community and regulators.

5. Effectiveness of the initiative in addressing the jurisdiction problem / opportunity

The proposed rationalisations are expected to adequately address the jurisdiction problem. Upgrading and operating a reduced number of STPs in Hobart, Launceston and Devonport, will ensure there is adequate treatment capacity for future growth and minimise environmental regulatory breaches. Rationalisation is also expected to have a long term positive impact on customer pricing as the efficiency gained will reduce operational expenses. The rationalisation projects will also generate other economic and community benefits, for example opening up access to prime waterfront land could result in significant development activity.

Expected effectiveness of the proposed initiative in addressing the problem / opportunity of national significance¹:

¹ See detailed technical guidance for scoring guidelines



Rating of effectiveness:	5	This initiative will significantly improve the level of treatment and infrastructure capacity which will provide positive environmental as well as economic outcomes for Tasmania.
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6. Initiative fit within the broader system or network and any other key interdependencies

This initiative will increase the efficiency and reduce the impacts of the current sewerage systems in Hobart, Launceston and Devonport. While it involves the replacement of much of the existing treatment infrastructure, existing network infrastructure, pipework and pump stations will remain and operate as usual.

The projects that comprise this initiative will address the problems without relying on other projects. TasWater currently has an annual capital expenditure program of \$110 million which is being used to address a number of other ageing infrastructure, compliance, growth and improvement issues across the state.

7. Initiative Alignment with jurisdiction plans or strategies

The HSIP, LSIP and LCDSS projects align with the Australian Infrastructure Audit, in that *“significant investment will be required (in Tasmania’s sewerage infrastructure) in the period to 2031, especially for plants discharging into the Tamar and Derwent Rivers.”* Additionally the initiatives align with the jurisdiction strategy of investing in urban water and sewerage infrastructure in Hobart and Launceston as specified in the “Tasmania’s economic infrastructure investment and reform priorities” document prepared for Infrastructure Australia by the Tasmanian Government

This strategy directly depends on the HSIP, LSIP and LCDSS projects proceeding as this has been established as the most prudent method of addressing issues with performance of the existing sewerage systems in the two regions.

PARSIP will play a large part in addressing population growth at Port Sorell; as noted in the Australian Infrastructure Audit²

8. Development stage

A business case for HSIP is currently in development, with rationalisation to one STP at Selfs Point likely to be the preferred option. A net present value (NPV) financial analysis will be undertaken concurrently with the business case.

LSIP has an approved “in principle” business case, inclusive of a community and stakeholder consultation plan, and a 30 year NPV financial analysis supporting the rationalisation to one STP located at the current Ti-Tree Bend site. This business case is attached for your information.

TasWater has recently awarded Beca the project to develop the LCDSS. This document is scheduled to be completed by December 2015 and will include a list of options and cost estimates to reduce the frequency and volume of combined sewer overflows to the Tamar and Esk rivers.

² Infrastructure Australia, 2015. Australian Infrastructure Audit – Report Volume 2, Page 252



PARSIP also has a business case currently in development with rationalisation to an upgraded treatment plant at Pardoe likely to be the preferred option. An NPV financial analysis will be undertaken as a part of the business case.

9. Next Steps

HSIP, PARSIP and LCDSS are currently in the business case development stage. These business cases will all need to be approved by TasWater's Board. Once the business case is approved, the initiative will enter the preliminary design phase to improve cost estimates and construction feasibility. Detailed design and project implementation will be dependent on TasWater sourcing external funding approval.

LSIP has an approved business case (attached) and is currently in the preliminary design phase. As above, detailed design and project implementation is dependent on TasWater sourcing external funding approval.

10. Funding

The table below shows the latest capital cost estimate of each major project:

Major Project	Estimated Capital Cost
Hobart Sewerage Improvement Project	\$ 300,000,000
Launceston Sewerage Improvement Project	\$ 185,000,000
Launceston Combined Drainage System Strategy	\$ 200,000,000
Pardoe Sewerage Improvement Project	\$ 45,000,000
Total	\$ 730,000,000

TasWater is a regulated entity, with prices and service levels set by the Tasmanian Economic Regulator. A Price and Service Plan covering the period 1 July 2015 to 30 June 2018 is currently in place and sets capital expenditure at \$330 million over the period to address a range of projects that include a number identified as priorities by the local public health and environment regulators but not the major projects that comprise this initiative.

TasWater also has a significant renewal backlog of \$640 million and, as with any business, a limited ability to borrow money and increase customer prices. The competing priorities for investment, and TasWater's limited ability to fund all core business functions, means that TasWater does not have the capacity to fund this initiative and requires full funding for each of the projects.

11. Confidentiality

No part of this template is confidential.



Additional information – to be provided if possible

Infrastructure Australia acknowledges that some initiatives may be further developed than others. To encourage the most comprehensive assessment of initiatives at this stage, proponents are encouraged to provide as much information as possible in the following areas, or any other information that should be considered as part of the assessment of this initiative.

12. Options generation

Significant optioneering has been undertaken for each project in this initiative. Optioneering included consideration of various methods of treatment and disposal including upgrade of all individual STPs, partial rationalisation and full rationalisation. Options have been developed through collaborative workshops and incorporation of engineering investigation and design expertise.

For the LSIP project options were shortlisted and further developed to enable a multi criteria assessment (social, economic, environmental). Shortlisted options were discussed with the community through a community engagement process and a preferred approach endorsed by the TasWater Board.

13. Timetable for completion or implementation

Timing for the projects in this initiative is contingent on the availability of funding. Once funding is secured, each major project would each involve the following indicative schedules:

- Design: 1 year
- Approvals: 1-2 years
- Construction: 3-5 years
- Commissioning: 1 year

Should external funding be secured, it is estimated HSIP and LSIP will be completed by FY 2025, LCDSS by FY 2024 and PARSIP by 2020.

14. Key risks or sensitivities

Minor risks have been identified for each project; however these will be addressed in the detailed design phase. All projects are likely to receive strong community support due to the economic and environmental benefits they will provide.

15. Supporting data

TasWater's internal business case for LSIP has been attached to provide additional information. A project needs statement has also been attached for HSIP, as the business case is yet to be completed. Business cases have not been developed for LCDSS or PARSIP.

Estimated capital costs for each project can be found in section 10 above. An estimation of the operational and maintenance costs is yet to be completed. As well as compliance improvements, the drivers for these projects include increased levels of service and improved operational efficiencies.