

Tasmanian Government
2012 Transport Submission to
Infrastructure Australia

Illawarra Main Road Upgrades / South Perth Bypass

August 2012

Proposal Summary

Initiative Name:	Burnie to Hobart Freight Corridor: Illawarra Main Road Upgrades / South Perth Bypass
Location (State/Region(or City)/ Locality):	Perth, Tasmania
Name of Proponent Entity:	Tasmanian Department of Infrastructure, Energy and Resources
Contact (Name, Position, phone/e-mail):	David Spence, General Manager Infrastructure Strategy Department of Infrastructure, Energy and Resources Tel: (03) 6233 2089 Email: david.spence@dier.tas.gov.au
Executive summary	<p>Illawarra Main Road is the key connection between the Bass and Midland Highways, providing a shorter, more attractive route for freight and passenger vehicles travelling between the north-west and south. While not part of the National Network, Illawarra Main Road was identified as a key link in the overall network as part of the <i>Tasmanian AusLink Corridor Strategy 2007</i> and operates as a key link in Tasmania's north-south supply chain.</p> <p>In 2012, the Road carried around 1.9 million tonnes of freight at an estimated value of \$2.2 billion. It is forecast to almost double its freight tonnages by 2030 to 3.5 million tonnes. Almost one million tonnes of freight carried on the road is destined for Hobart, highlighting the importance of the road in the north-south freight supply chain.</p> <p>The existing road is deficient in terms of current and future vehicle productivity needs. The road is single carriageway, with deficiencies along the length of the corridor. The eastern section connecting to the Midland Highway through the centre of Perth is the most constrained section, however targeted upgrades are also required on sections west toward the Bass Highway.</p> <p>The Tasmanian Government has identified a package of projects to address existing deficiencies and maximise efficiency and safety on Illawarra Main Road. The priority is a South Perth Bypass, which will provide improved travel times for vehicles; significantly reduce the volume of heavy vehicles travelling through Perth and provide grade-separation at the rail crossing. The Bypass will accommodate current and future heavy vehicle productivity improvements. A series of projects has also been identified on the western section from Pateena Road to the Bass Highway to address safety and efficiency. The package represents an appropriate balance between new infrastructure and targeted upgrades of the existing road.</p> <p>The project is part of the broader Midland Highway Improvement Projects package, designed to improve efficiency and safety across the north-south corridor. Other projects include the: Perth to Breadalbane Duplication (<i>Nation Building 2 submission</i>); New Bridgewater Bridge (<i>Nation Building 2 submission</i>); Brighton Bypass (under construction, open in 2012); Bagdad Bypass (proposed) and interim safety upgrades through Bagdad (<i>Nation Building 2 submission</i>); Brighton Transport Hub; and general safety improvements across the corridor (<i>Nation Building 2 submission to DOIT</i>). Optimal efficiency gains across the corridor will be made when the complete package of projects is delivered.</p>
Is this a new submission?	Yes
Estimated cost of problems?	The strategic framework and transport system problems to which this project responds are outlined in the Overview document and within this submission. Detailed information on project costs and benefits, to the extent that they can be quantified, is contained in the Stage 7 template.

Estimated Capital Cost of Initiative by Proponent (\$M, nominal, undiscounted):	Total package: \$142 million 1. South Perth Bypass: \$84 million 2. General Upgrades: \$58 million
Commonwealth contribution sought by Proponent (\$M, nominal, undiscounted):	\$142 million
Other funding (source/amount/cash flow) (\$M, nominal, undiscounted):	Cost reflective pricing for heavy vehicle access to the road network and road funding reform is being considered as part of the national Heavy Vehicle and Investment Reform agenda, and the Tasmanian government will continue to actively participate in this reform process. Tasmania has many attributes for a pilot study of approaches developed through national processes. It is considered that a national approach to funding and financing transport infrastructure, supported by all levels of government, is critical to effectively address long term transport infrastructure needs. In this context, the recent Infrastructure Australia's Finance Working Group's report <i>Infrastructure Finance and Funding Reform</i> is an important lead for national discussion. Tasmania is not in a position currently to adopt a unilateral approach. Further work is required on project financing and the issue of cost reflective pricing in small regional economies.
BCR by Proponent excluding Wider Economic Benefits	South Perth Bypass – 0.26 Illawarra MR – Pateena to Bass – 0.32
Estimated program	The Tasmanian Government will commence project planning and scoping in January 2014. Construction and delivery will commence in 2017, to be completed in 2019.

Goal Definition

The objective of the Illawarra Main Road Upgrades package is to enhance freight efficiency and connectivity on a key link in Tasmania's north-south freight corridor.

Illawarra Main Road connects the Midland and Bass Highways, both part of the National Network and classified as Category 1 Roads under the Tasmanian State Road Hierarchy. The existing road is deficient in terms of current and future vehicle productivity needs, with significant constraints on the eastern section into Perth in particular.

The Tasmanian Government has identified a package of projects to deliver improved efficiency and safety on Illawarra Main Road.

Positive contribution to Infrastructure Australia's strategic priorities

The project aligns with a number of Infrastructure Australia's strategic objectives, including:

- **Improving the efficiency of connections to major road and rail freight corridors to facilitate domestic trade and international exports** – Illawarra Main Road is a high volume freight connection in Tasmania's Burnie to Hobart Freight Corridor and a key link in connecting the northern ports to southern destinations. The Road is the shortest, most direct route between the Bass and Midland Highways, both part of the National Network. Addressing constraints on the Road will provide improved efficiency and reduced travel times for freight vehicles over this link and the corridor more broadly.
- **Achieving better utilisation of existing infrastructure** – The Tasmanian Government has identified a package of projects to maximise efficiency and safety outcomes on this key link. The priority is the South Perth Bypass, which bypasses the most deficient section of Illawarra Main Road into and through Perth. A series of targeted upgrades has also been identified on the western section of the Road. Together, the package represents an appropriate balance between new infrastructure and targeted upgrades of the existing road.

Alignment with State/regional strategic plans

The strategic importance of Illawarra Main Road is recognised in Tasmania's transport planning frameworks.

Midland Highway Partnership Agreement 2009

The *Midland Highway Partnership Agreement* was developed through a partnership between the Tasmanian Government and seven local governments. Improving road infrastructure through and around Perth is identified as a priority in the Agreement, with a longer-term objective to deliver a full bypass of Perth. Together with duplication of the Highway between Perth and Breadalbane, the South Perth Bypass represents the first stage of this initiative, focusing on the most deficient road connection into Perth and reducing heavy vehicle through and turning movements in the centre of Perth.

Tasmanian AusLink Corridor Strategy 2007

The Midland Highway between Perth and Breadalbane is identified as a priority section of the network for upgrade in the *Tasmanian AusLink Corridor Strategy 2007*. The Corridor Strategy is a statement of the shared strategic priorities of the Australian and Tasmanian Governments for the long term development of the corridor. The Strategy identified

deficiencies on the Midland Highway around Perth, as well as on Illawarra Main Road based on a high crash risk and density, and a low level of service.

Draft Transport Policy and Draft Freight Strategy

Strategic fit with the State's draft Transport Policy and Draft Freight Strategy is addressed in the Tasmanian Government Submission Overview.

Infrastructure Delivery Imperative

Upgrade of Illawarra Main Road is linked to improvements on the broader Burnie to Hobart Freight Corridor, including the Midland Highway. As a key link, and with forecast freight and traffic growth, upgrades that support both overall volumes and the vehicle productivity needs of industry, are critical.

The package of works includes:

- a South Perth Bypass to avoid the most deficient section of Illawarra Main Road connecting to and through the township of Perth; and
- upgrades west from Pateena Road to the Bass Highway, including curve realignment, shoulder sealing and additional safety work to bring the section of the Road to contemporary freight vehicle standards.

Problem identification, assessment and analysis

Illawarra Main Road provides a more direct route between the northern ports and the southern region, compared to the longer, alternative route through Launceston.

The road is short (16 kilometres in length) and serves as a vital link in Tasmania's road network. In 2008/09, the Road carried around 1.5 million tonnes of freight at an estimated value of \$2.2 billion. The freight mix on the road is diverse (see Table 1), with over one million tonnes of freight destined for Hobart, highlighting the importance of this road in the Hobart-northern ports supply chain.

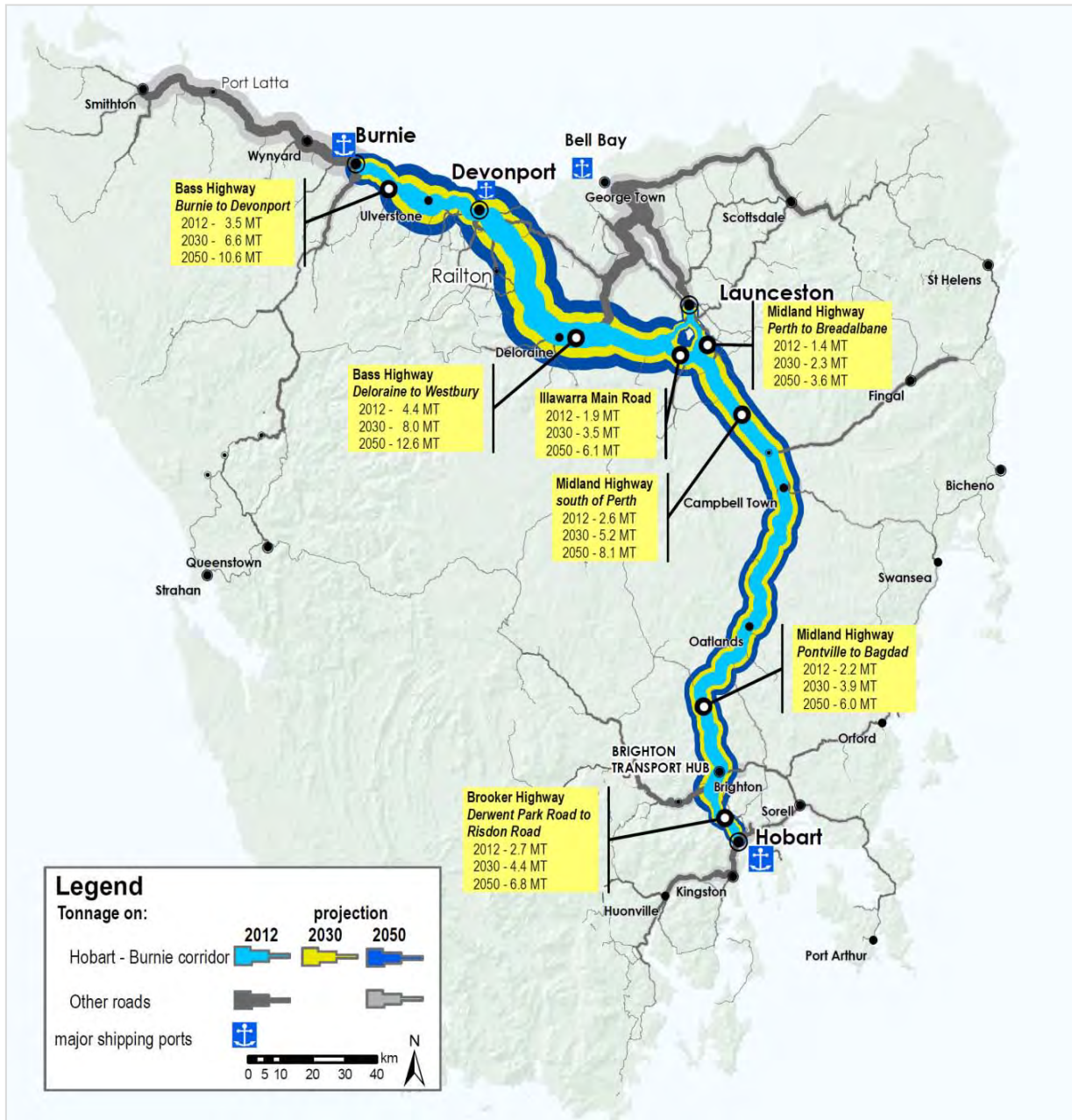
Table 1: Freight tonnages, commodity type and value, Illawarra Main Road

Commodities	Tonnage	Value
Agriculture & agricultural products	730,419	\$858M
Consumer goods	378,309	\$1.168B
Cement	166,200	\$14.8M
Construction inputs	83,528	\$11.6M
Forestry	62,852	\$4.6M
Manufacturing goods (inputs & outputs)	47,281	\$90.7M
Wood products	42,722	\$41.7M
Empty Containers	16,105	0
Basic metal products	9,130	\$22.7M
Mining ores	600	\$18.4M
Total	1,537,146	\$2.231B

Source: DIER's Tasmanian Freight Survey, 2008/09

The Road is forecast to carry 3.5 million tonnes by 2030, almost double current freight flows (see Map 1). The strong growth in freight flows for this corridor is driven by the increase in agricultural freight movement across the state, along with the growing consumer freight task between southern Tasmania and the northern ports.

Map 1: Current and forecast freight volumes, Burnie to Hobart Freight Corridor



While some improvements have been made to the existing Road, it remains a relatively low standard link, compared to other sections of Tasmania's Principal Freight Network. A crash analysis and road safety audit and review of geometry, junctions/accesses, structures and pavement condition of the road, found:

- Crash clusters on Illawarra Main Road at Youl Main Road (tight horizontal curve), Pateena Road (tight horizontal curve), Bishopsbourne Road, and Bass Highway;

- Cross-sectional inconsistency across the whole road, including narrow shoulder which restricts ability of drivers to recover;
- Inconsistent delineation across the whole length of the road;
- Hazardous objects in proximity to the road;
- Large number of side roads connecting onto Midland Highway and Illawarra Main Road;
- Numerous private accesses (many unsealed);
- Lack of sealed shoulders (does not meet HPV standards);
- Horizontal and vertical alignment deficient in some sections;
- Insufficient width at junctions and accesses;
- At-grade rail crossing;
- Directly adjacent to residential houses in Perth; and
- Deficient intersection at the Midland Highway in the centre of Perth, particularly for heavy vehicles – currently at Level of Service E.

The section of Illawarra Main Road through Perth is particularly slow speed. Vehicles traverse a number of direct accesses, along with two tight radius. This section also has a level crossing with the Western rail line – which is one of the busiest sections of rail in Tasmania. This is expected to increase with future growth in the rail task to around 10 trains per day over the next 20 years.

The existing intersection with the Midland Highway is located in the centre of Perth, a small but growing township that increasingly serves as a commuter town for Launceston. This intersection is adjacent to commercial uses and is constrained in terms of current movements and any future treatments. It is currently at Level of Service E.

From this intersection travelling west, Illawarra Main Road passes directly adjacent to residential houses, and has an associated speed limit 70 km/h. The proximity of freight vehicles and high volumes of traffic to residential houses creates noise and amenity issues on this section.

The main north-south rail line crosses at-grade over the road. The Tasmanian Government's preference is to provide grade separation between these road and rail networks to improve safety and efficiency on both networks.

The western section of Illawarra Main Road includes a number of tight horizontal curves, which correspond to clusters of crashes recorded, as well as deficiencies at the intersection with Bishopsbourne Road. Providing sections of overtaking lanes and wire rope barriers, as well as dedicated turning lanes at Bishopsbourne Road junction will assist in improving safety and efficiency for all road users.

Option Generation and Assessment

As noted above, achievement of enhanced freight productivity to meet Tasmania's future economic development needs is the proposal's key goal.

Use of rail to meet future productivity needs could be seen as an alternative to upgrading road infrastructure. However, as noted in the submission Overview document, rail and road act in a complementary manner to meet Tasmania's freight needs. Rail has inherent advantages in the movement of bulk freight and some growth in the intermodal task is expected. However, the majority of the freight task will continue to be moved by road, as the service characteristics of road are, in most cases, better suited to freight market needs. Consequently, road network upgrades will continue to be a priority in Tasmania, especially along key freight corridors, like the Illawarra Main Road.

The Tasmanian Government has taken a corridor approach to reviewing options along the Illawarra Main Road, identifying a package of works to deliver improved freight efficiency and overall safety benefits. As part of this process and considering past planning work, the options considered were:

- Do nothing;
- Improvements on the eastern approaches to Perth;
- Large-scale bypass of Perth; and
- South Perth Bypass and targeted upgrades to Illawarra Main Road.

Do nothing

If improvements are not made to this key connection from the Midland Highway to the Bass Highway in the near future, efficiency and safety issues will worsen. Continued deterioration of the road, along with an increase in both freight and passenger movements, is likely to result in increased travel times and poor safety outcomes. The overall efficiency of the route between the South and the Northern ports of Burnie and Devonport will be adversely affected.

The existing road does not meet current HPV standards and will not support any future heavy vehicle productivity improvements.

Improvements on the eastern approaches to Perth

Over the eastern end of Illawarra Main Road, connecting to and through Perth to the Midland Highway, the road passes directly adjacent to a large number of residential houses. The area is a slower speed environment and has a general residential character. The intersection with the Midland Highway is sub-optimal for heavy vehicles. Any upgrades of either the road or intersection would be problematic in terms of adjacent land uses, expensive and undesirable from an amenity or system perspective.

Any upgrades of this road would also see freight continue to travel through central Perth..

Full bypass of Perth

In the *Midland Highway Partnership Agreement*, a full bypass of Perth is identified as a long-term priority (25 years). This bypass would cover both the west and east of Perth, with the most significant (longest) section the western alignment linking to an improved interchange on the northern end at Breadalbane. As freight and general traffic volumes increase, this full bypass will be required. However, over the short to medium term, alternative solutions can meet forecast transport demand. The proposed South Perth Bypass considers the future location of a full bypass and represents an initial step toward this longer term outcome.

South Perth Bypass and general upgrades

The Tasmanian Government has examined the condition of the existing road and identified a package of projects to address existing deficiencies and maximise efficiency and safety on this key link. The priority is the South Perth Bypass, which will provide improved travel times for vehicles; significantly reduce the volume of heavy vehicle travelling through Perth; and provide grade-separation of the rail crossing. The Bypass will accommodate current and future heavy vehicle productivity improvements.

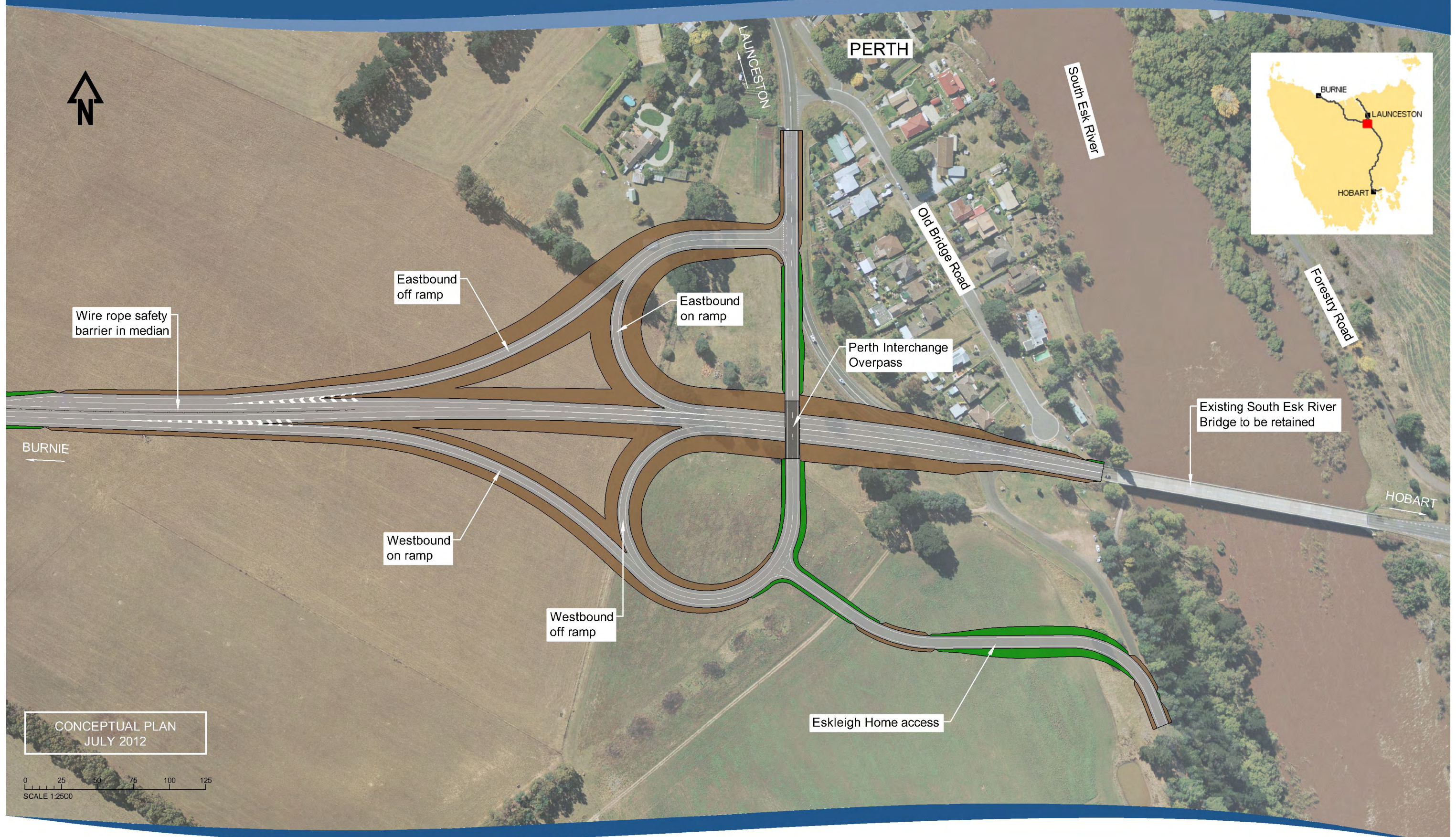
A series of projects have also been identified on the western section from Pateena Road to the Bass Highway to address safety and efficiency. These projects include curve realignment, shoulder sealing and additional safety works to bring this section of the Road to contemporary freight vehicle standards.

The package represents an appropriate balance between new infrastructure and targeted upgrades of the existing road.

MIDLAND HIGHWAY / ILLAWARRA MAIN ROAD Project Overview - South Perth Bypass



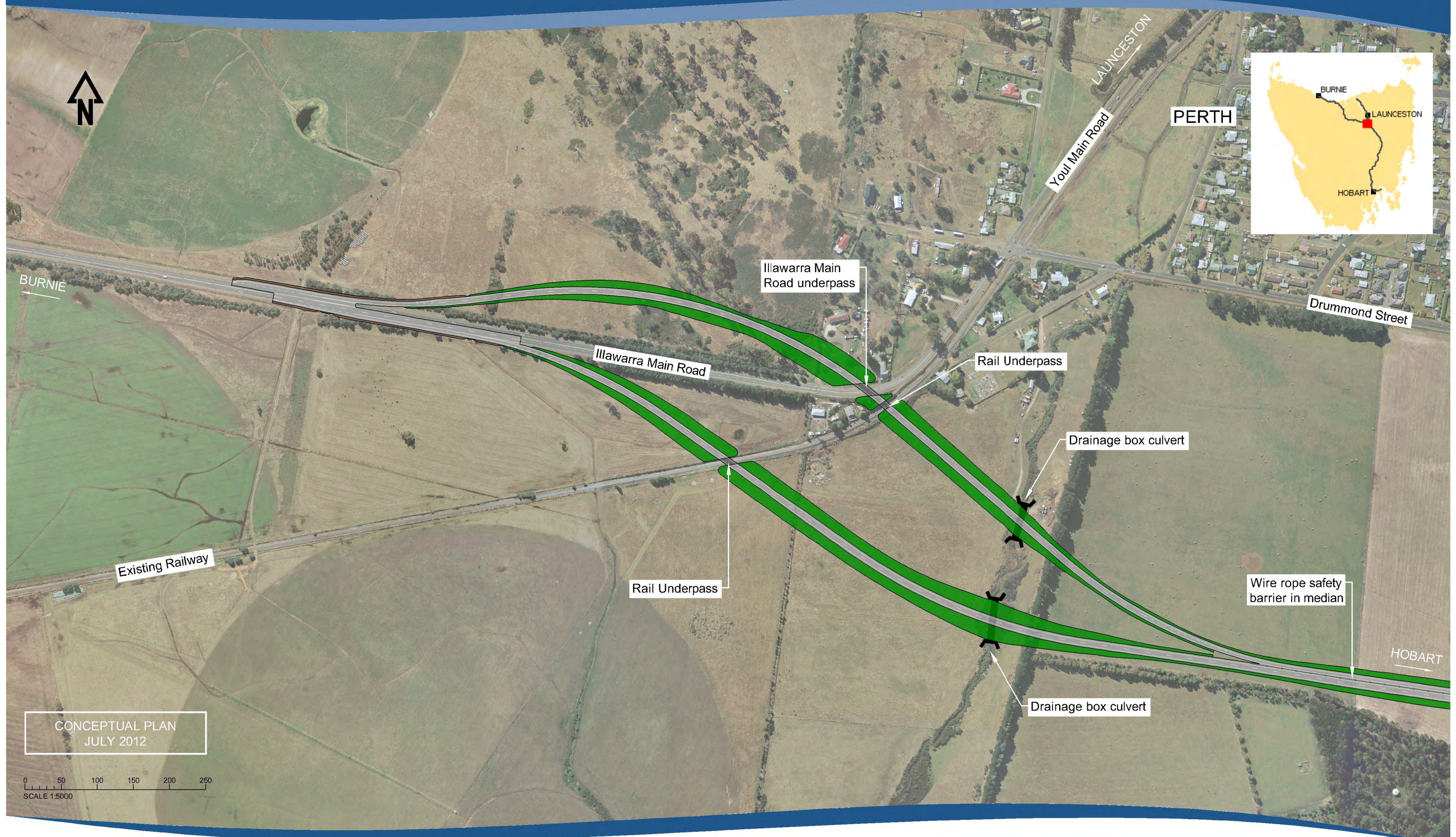
MIDLAND HIGHWAY / ILLAWARRA MAIN ROAD Perth Interchange - South Perth Bypass



CONCEPTUAL PLAN
JULY 2012

0 25 50 75 100 125
SCALE 1:2500

MIDLAND HIGHWAY / ILLAWARRA MAIN ROAD Illawarra Interchange - South Perth Bypass



ILLAWARRA MAIN ROAD Project Overview - Pateena Road to Bass Highway Upgrade

