

Tasmanian Government
2012 Submission to Nation Building 2 Program

Midland Highway Safety Package

September 2012

<p>Priority assigned by jurisdiction for NB2 funding consideration</p>	<p>Priority one under Safety</p>
<p>Details of full scope of project, including objectives, service requirements, project status and project phase(s) seeking funding.</p> <p>Note: It is expected that this will be largely addressed through the main IA submission. However, the Department requires cost estimates to be provided using the Best Practice Cost Estimation Standard and at both P50 and P90. Also to use both 4% and 7% for BCRs.</p>	<p>Information on project objectives, strategic context and options analysis is discussed in the Stage 1-6 template.</p> <p>Information on the technical and delivery aspects of the project, including benefit cost analysis, project risks and delivery program is discussed in the Stage 7 template.</p> <p>BCRs for the major junctions of Oatlands Northern Access, Esk Main Road, Mudwalls Road, and Kempton South Access are:</p> <ul style="list-style-type: none"> • Discount Rate (7%) and P50: 0.32. • Discount Rate (7%) and P90: 0.30. • Discount Rate (4%) and P50: 0.52. • Discount Rate (4%) and P90: 0.48. <p>BCRs for the realignment and upgrades for South of Tunbridge, St Peters Pass, and White Lagoon are:</p> <ul style="list-style-type: none"> • Discount Rate (7%) and P50: 0.57. • Discount Rate (7%) and P90: 0.51. • Discount Rate (4%) and P50: 0.90. • Discount Rate (4%) and P90: 0.81. <p>BCRs for Conara - removal of at grade rail crossing, Realignments and upgrades, and Streetscaping Campbell Town and Perth to follow with stage 7 template.</p>
<p>Alignment with objectives of NB2</p> <p>Note: This should include how a project aligns with the overarching objective of NB2, as well as how it aligns with the objective of each relevant NB2 subprogram.</p>	<p>The Midland Highway Safety Package aligns with the Safety theme, and along with the Moving Freight and Moving People of Nation Building 2.</p> <p>The Midland Highway is a critical freight connection facilitating access from the Southern region to the State's northern ports, and the major transport link for passengers travelling between the northern and southern regions.</p> <p>The Tasmanian Government has identified a package of improvements to improve safety and efficiency.</p>

	<p>As part of this Package, sixteen individual safety projects have been identified at key junctions, along key sections and through major towns, consistent with priorities identified in the <i>Midland Highway Partnership Agreement 2009</i>. The projects are:</p> <ul style="list-style-type: none"> • Major junction upgrades: Oatlands Northern Access, Esk Main Road, Mud Walls Road, Kempton South Access • Removal of at-grade rail crossing: Conara • Realignments/upgrade of existing alignment: South of Tunbridge, St Peters Pass, White Lagoon • Minor junctions: Mood Food, Sorell Springs Road, Stonor Road, Auburn Road and Ashby Road, Lower Marshes Road, Mona Vale • Streetscaping: Campbell Town and Perth <p>Further details are contained under Goal Definition (Stage 1 - 6 template).</p>
<p>Alignment with broader Commonwealth and state/territory policies and plans</p> <p>Note: Specific plans/policies to be addressed (at a minimum) include the Commonwealth's Infrastructure Investment Framework; the National Urban Policy; the National Ports and Land Freight Strategies; and the Australian Government commitment on the incorporation of ITS for major urban roads (as appropriate).</p>	<p>The project aligns with a number of Infrastructure Australia's strategic priorities, including:</p> <ul style="list-style-type: none"> • Increase Australia's productivity • Developing Australia's cities and regions • Improve social equity, and quality of life, in our cities and our regions <p>Further details are contained under Goal Definition (Stage1-6 template).</p>
<p>Overall financial exposure including identification of other partner funding</p> <p>Note: It is expected that this will be addressed in the main IA submission.</p>	<p>Full details of cost estimates are outlined in the submission.</p>
<p>Identification of key strategic risks to the project</p> <p>Note: It is expected that this will be addressed in the main IA submission</p>	<p>A Risk Management Register has been developed for the project. Risks are detailed in the submission under Costs, Risks and Funding (Stage 7 template).</p>
<p>Quantification of the expected benefits</p>	<p>Project benefits are outlined in the Stage 7</p>

<p>from the proposal</p> <p>Note: It is expected that this will be addressed in the main IA submission.</p>	<p>template.</p>
<p>Information regarding the extent to which the potential for private sector involvement or investment has been evaluated</p> <p>Note: It is expected that this will be addressed in the main IA submission.</p>	<p>The need for Government funding is discussed in the Stage 7 template.</p>
<p>Likely impacts from the project proposal on citizens and the market</p> <p>Note: Detail is needed on how each proposal will impact citizens and the market (as two distinct groups) – positively or negatively, and the extent of the impact</p>	<p>Further details on the impacts are outlined in Problem Identification, Assessment and Analysis (Stage 1-6 template).</p>
<p>Identification of key stakeholders in the project and the complexity of stakeholder relationships</p>	<p>Further details on key stakeholders and relationships are discussed in the Stage 7 template.</p>
<p>Extent of multijurisdictional and/or private sector involvement in the proposal</p>	<p>No other jurisdictions or private sector entities involved in developing this proposal.</p>
<p>Details of the level of innovation and information technology involved in the proposal, including in relation to information technology requirements to successfully manage/implement the proposal</p> <p>Note: Detail is to include identification of any new/untried methodologies or technologies to be used in the project, as well as IT requirements for the proponent agency to successfully manage or implement the proposal.</p>	<p>An ITS solution is not considered to be applicable to this issue.</p>
<p>Details of the proposed procurement methods for the proposal</p> <p>Note: It is expected that this will be addressed in the main IA submission.</p>	<p>Procurement methods for the proposal are discussed in the Stage 7 template.</p>
<p>Level of complexity in construction, and any known issues in relation to the construction of the project, including environmental and heritage considerations</p>	<p>Further details on construction and related issues are discussed in the Stage 7 template.</p>

<p>Note: It is expected that this will be largely addressed through the main IA submission. However, the Department requires sufficient detail to fulfil its probity and accountability requirements, so any additional information not explicitly addressed in the main IA submission should be provided here.</p>	
<p>Any known issues in relation to contractual or service delivery obligations stemming from the proposal</p> <p>Note: This is to include any issues that are not currently present but could reasonably be foreseen.</p>	<p>There are no foreseen contractual or service delivery issues.</p>
<p>Details of the proposed governance arrangements for the proposal</p> <p>Note: This should be largely addressed in the main IA submission. However, the Department requires an explicit statement about the experience of the management team in delivering similar proposals and whether there are any expected knowledge gaps or training needs to successfully implement the proposal.</p>	<p>The governance model for this project is outlined in the Stage 7 template.</p>
<p>Details of the proposed delivery timetables and whether there are any known challenges to achieving those timeframes</p> <p>Note: It is expected that this will be addressed in the main IA submission.</p>	<p>The delivery timetable is outlined in the submission.</p>
<p>Details of any significant interdependencies for the project</p> <p>Note: It is expected that this will be addressed in the main IA submission.</p>	<p>The key interdependencies for the project are outlined in the Stage 7 template.</p>

Proposal Summary

Initiative Name:	Midland Highway Safety Package
Location (State/Region(or City)/ Locality):	Perth to Kempton, 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>The Midland Highway is part of the National Land Transport Network in Tasmania, an integrated network of land transport links within national and inter-regional land transport corridors that are of critical importance to national and regional growth. The Highway is both a critical freight connection facilitating access from the Southern region to the State's northern ports, and the major transport link for passengers travelling between the northern and southern regions.</p> <p>In 2009, the Highway carried an average of around 2 million tonnes of freight, which is forecast to increase to 3.8 million tonnes by 2030.</p> <p>The Tasmanian Government has identified a package of improvements to the Highway over the short (0-5 years), medium (5-10 years) and long-term (10-25 years) to improve safety and efficiency. The Midland Highway Improvement Projects are designed to improve efficiency and safety across the Highway. Some of these improvements are underway and will shortly be delivered – Brighton Bypass and Brighton Transport Hub – while others are in the final planning and development phase – Bagdad Bypass and New Bridgewater Bridge.</p> <p>As part of this Package, sixteen individual safety projects have been identified as part of a whole of corridor proposal to improve safety at key junctions, along key sections and through major towns, consistent with priorities identified in the <i>Midland Highway Partnership Agreement 2009</i>. The projects are:</p> <ul style="list-style-type: none"> • Major junction upgrades: Oatlands Northern Access, Esk Main Road, Mud Walls Road, Kempton South Access • Removal of at-grade rail crossing: Conara • Realignments/upgrade of existing alignment: South of Tunbridge, St Peters Pass, White Lagoon • Minor junctions: Mood Food, Sorell Springs Road, Stonor Road, Auburn Road and Ashby Road, Lower Marshes Road, Mona Vale • Streetscaping: Campbell Town and Perth
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):	\$128M

Commonwealth contribution sought by Proponent (\$M, nominal, undiscounted):	<p>\$128M</p> <ul style="list-style-type: none"> • Major junctions: \$15.3M • Streetscape: \$15.2M • Rail: \$22M • Realignment:\$32.3M • Minor junctions: \$42.9M
Other funding (source/amount/cash flow) (\$M, nominal, undiscounted):	<p>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 "Infrastructure Finance and Funding Reform" 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.</p>
BCR by Proponent excluding Wider Economic Benefits	<p>Major Junctions 0.30.</p> <p>Streetscape BCRs to follow with stage 7 template.</p> <p>Conara - removal of at grade rail crossing to follow with stage 7 template.</p> <p>Realignments and upgrades 0.51.</p> <p>Minor Junctions BCRs to follow with stage 7 template.</p>
Estimated program	<p>Major junction upgrades: Oatlands Northern Access, Esk Main Road, Mud Walls Road, Kempton South Access - project planning and development for all projects across the period 2014-16 with construction staged from 2016-19.</p> <p>Removal of at-grade rail crossing: Conara – project planning and development 2015-16; construction 2015-17.</p> <p>Realignments/upgrade of existing alignment: South of Tunbridge, St Peters Pass, White Lagoon - project planning and development for all projects across the period 2014-16 with construction staged from 2016-19.</p> <p>Minor junctions: Mood Food, Sorell Springs Road, Stonor Road, Auburn Road and Ashby Road, Lower Marshes Road, Mona Vale – project planning and development for all projects across the period 2014-16 with construction staged from 2016-19.</p> <p>Street scaping: Campbell Town and Perth – project planning</p>

and development 2014-16; construction 2017-18.

Goal Definition

The objective of the Midland Highway Safety Package is to improve safety and connectivity at targeted locations on this critical north-south road link.

The Midland Highway is part of the National Land Transport Network (National Network) in Tasmania, an integrated network of land transport links within national and inter-regional land transport corridors that are of critical importance to national and regional growth. The Highway is both a critical freight connection facilitating access from the Southern region to the State's northern ports, and the major transport link for passengers travelling between the northern and southern regions.

The Highway is classified as a Category 1 Trunk Road in the Tasmanian State Road Hierarchy. It connects Hobart and southern Tasmania to Launceston, and the Bell Bay Port and industrial area. It is Tasmania's key north-south road connection.

In 2009, the Highway carried an average of around 2 million tonnes of freight, which is forecast to increase to 3.8 million tonnes by 2030.

The Tasmanian Government has identified a package of improvements to the Highway over the short (0-5 years), medium (5-10 years) and long-term (10-25 years) to improve safety and efficiency. The Midland Highway Improvement Projects are designed to improve efficiency and safety across the Highway.

Some of these improvements are underway and will shortly be delivered – Brighton Bypass and Brighton Transport Hub – while others are in the final planning and development phase – Bagdad Bypass and New Bridgewater Bridge.

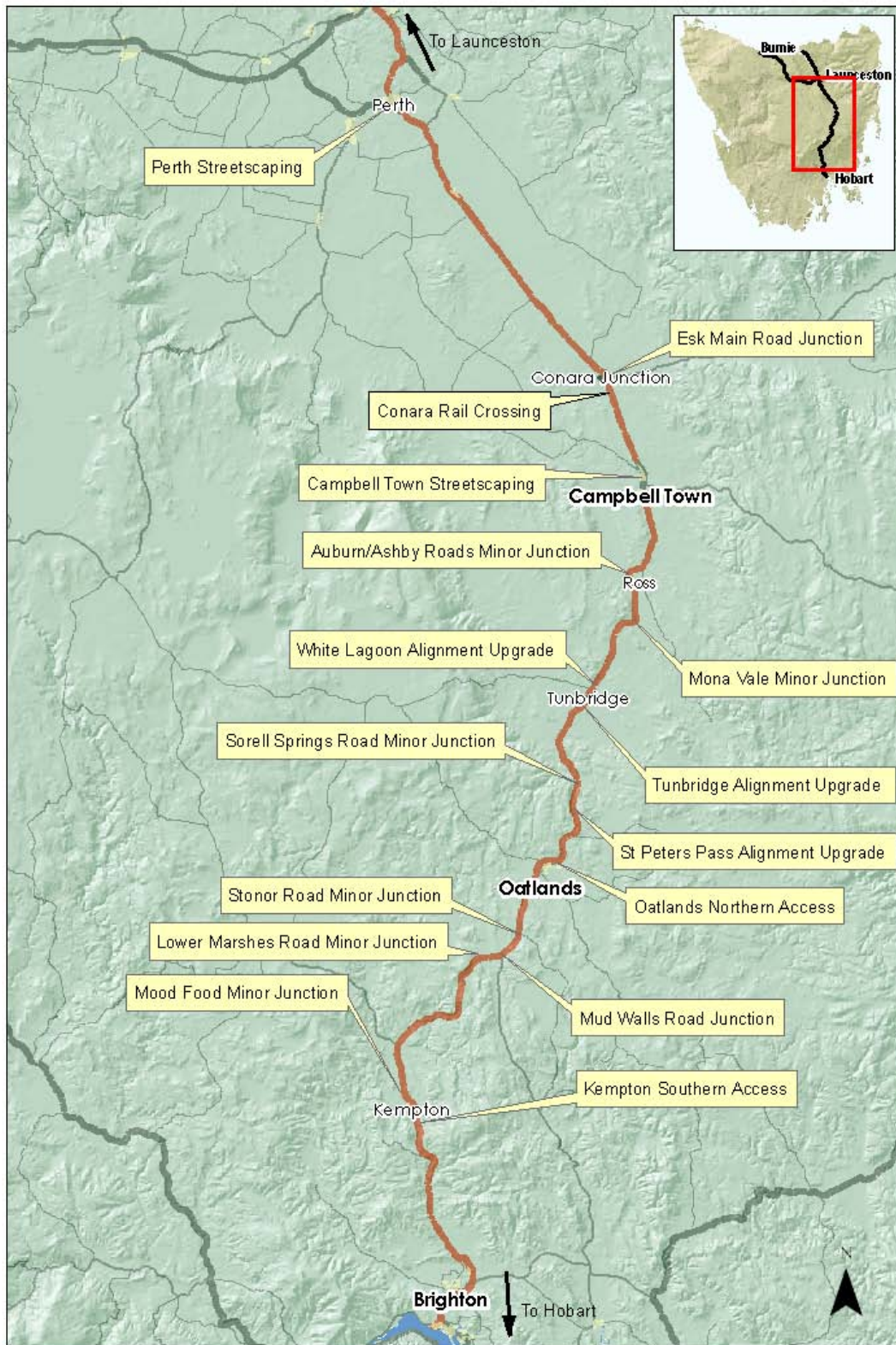
The key projects identified for the Highway over the short to medium term are: Perth-Breadalbane Duplication (*Nation Building 2 submission*); South Perth Bypass (*Nation Building 2 submission*); New Bridgewater Bridge (*Nation Building 2 submission*); Brighton Bypass (under construction); Bagdad Bypass (proposed) and interim safety upgrades through Bagdad (*Nation Building 2 submission*); Brighton Transport Hub; and general safety improvements across the corridor (*Nation Building 2 submission*).

Sixteen individual safety projects have been identified as part of a whole of corridor proposal to improve safety at key junctions, along key sections and through major towns, consistent with priorities identified in the *Midland Highway Partnership Agreement 2009*. The projects are:

- **Major junction upgrades:** Oatlands Northern Access, Esk Main Road, Mud Walls Road, Kempton South Access
- **Removal of at-grade rail crossing:** Conara
- **Realignments/upgrade of existing alignment:** South of Tunbridge, St Peters Pass, White Lagoon
- **Minor junctions:** Mood Food, Sorell Springs Road, Stonor Road, Auburn Road and Ashby Road, Lower Marshes Road, Mona Vale
- **Streetscaping:** Campbell Town and Perth

Optimal efficiency gains across the corridor will be made when the complete package of projects is delivered.

Map 1: Midland Highway Safety Package



Positive contribution to Infrastructure Australia and Nation Building 2 strategic priorities

The project aligns well with 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** – the Midland Highway connects Southern Tasmania to the Northern Ports, which Tasmania is heavily reliant on for both domestic and international trade.
- **Achieving better utilisation of existing infrastructure** – enhancing the Midland Highway through targeted, smaller-scale upgrades, over large-scale treatments ensures that investment already made in the existing infrastructure is maximised.

The project is submitted under the Safety theme of Nation Building 2, and furthers the objectives of this program area:

- **Safety**
As part of this Package, sixteen individual safety projects have been identified at key junctions, along key sections and through major towns, consistent with priorities identified in the *Midland Highway Partnership Agreement 2009*. The package of projects is designed to improve safety, both for vehicles and pedestrians, across key sections of the Midland Highway, including the provision of turning and deceleration lanes, improving sight distances and providing better crossing points for pedestrians at Perth and Campbell Town, which are two of the major stopping points for those travelling between the north and south of the State.

The project also aligns with the following Nation Building 2 theme areas and objectives:

- **Moving Freight**
The Midland Highway is a critical freight connection facilitating access from the Southern region to the State's northern ports, and freight volumes are forecast to increase over the next 20 years, compounding existing problems. The Tasmanian Government has identified a package of improvements to improve safety and efficiency, allowing greater opportunity for traffic to maintain speed rather than slowing to avoid turning vehicles, improvement of curves, and widening and sealing of shoulders. While these are small improvements for each individual project, the delivery of the package of projects combined will ensure the overall standard of the Midland Highway is improved for freight vehicles.
- **Moving People**
The Midland Highway is also the major transport link for passengers travelling between the northern and southern regions. Improvements made to the highway will also benefit the growing number of passenger vehicles as well as freight.

Alignment with State/regional strategic plans

Continued growth in freight volumes through Tasmania's three northern ports, supported by a changed direction of trade from the Southern Region, will impact on Tasmania's land transport system. Over the past two decades, freight throughput at Hobart port has declined significantly and the Southern Region is now reliant on the northern ports for exports/imports. This will see higher volumes of freight vehicles on an already constrained road corridor.

The Midland Highway is the key north-south link in this broader freight supply chain. It is also the key passenger and tourist link between major population centres in the southern (Hobart) and northern (Launceston) regions.

Upgrade of the Midland Highway has been identified as a priority by all levels of government, and is essential to maintaining and supporting improved safety and efficiency in the context of increasing freight and passenger volumes.

The importance of upgrading the Midland Highway has been a key element of State strategic transport planning for a number of years.

Tasmanian Infrastructure Strategy

Upgrading the Midland Highway is identified as a key short to medium-term transport infrastructure priority under the *Tasmanian Infrastructure Strategy* (TIS). The TIS, released in 2010, is the State's integrated long-term strategy to guide future infrastructure projects and decision making. The TIS identifies the State's heavy economic reliance on the ability of its transport system to move freight from producers to processors and on to markets – within Tasmania, nationally and internationally. The project aligns with the TIS stream for the integrated, efficient and safe movement of freight.

Midland Highway Partnership Agreement 2009

The *Midland Highway Partnership Agreement* was developed through a partnership between the Tasmanian Government and seven local governments. The Agreement identifies short (0-5 years), medium (5-10 years), and long (10-25 years) term priorities along the Highway.

This project is identified as a short term priority under the Agreement.

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 along the Highway in the context of its role in Tasmania's National Network.

Infrastructure Delivery Imperative

Upgrading the Midland Highway has been identified as a priority by all levels of Government. The projects identified as part of this submission complement work already undertaken and planned for other sections of this key transport corridor.

Parts of the Midland Highway have a number of deficiencies, including poor alignment and limited sight distances; narrow sealed shoulders; short left-turn deceleration lanes; lack of channelised right turn lanes; and no formalised crossing points for pedestrians within key towns. The focus of this submission is on improving safety and connectivity at targeted locations along the Highway to address these issues.

The package of projects identified is a priority under the *Midland Highway Partnership Agreement 2009*. The Agreement sets out a common vision for the future of the Midland Highway and a plan for management and upgrading of the highway to meet current and future needs. This has been developed on evidence based research with an emphasis on:

- Road user safety
- Improved freight efficiency

- Travel reliability on the urban approaches
- Asset performance

Reflecting the strategic function of the Highway, the Tasmanian Government's objective in planning and managing this section of the key Burnie to Hobart Freight Corridor is to:

- provide an efficient and safe road network, that supports improved productivity and efficiency between the northern export ports, freight generating areas and distribution centres, across regions; and
- deliver ongoing improvements to support freight productivity gains over the long term.

Problem identification, assessment and analysis

The Burnie to Hobart freight corridor is Tasmania's most significant freight corridor by tonnage, traffic volumes, and strategic land use connections. This corridor includes the Bass Highway, Midland Highway, Illawarra Main Road, Brooker Highway, and the north-south rail line, connecting major ports, the Brighton Transport Hub and key industrial and manufacturing centres in all three regions. It is Tasmania's key corridor for the movement of containerised freight.

Sixteen individual Midland Highway improvement projects have been identified. The highest traffic volumes are through Campbell Town and Esk Main Road areas, followed by Perth. Mud Walls Road has the highest traffic volumes of connecting roads, followed by the accesses into Oatlands and Kempton.

The Campbell Town and Perth areas experienced over 40 crashes in the period 2002-2012. Across all projects there were 201 crashes over 10 years, including 4 fatal crashes and 16 serious injury crashes. The highest rate of total crash occurrence relative to the traffic volume and length of road is at the Oatlands Northern Access (for both total crashes and casualty crashes only). The highest rate of fatal and serious injury crashes is at the Mood Food access. The Perth area recorded the second highest rate of total crashes, but experienced no fatal or serious injury crashes.

A possible increase in coal mining in the Fingal Valley would increase the coal freight task from 400,000 tonnes per annum to around 1.4 million tonnes per annum. It is likely that this task would utilise the existing rail line which crosses the Midland Highway at Conara. A Project Proposal Report for a Fingal Valley Coal Transport Plan will be submitted through the Regional Infrastructure Fund with the aim of improving the productivity and efficiency of the road and rail links to and within the Fingal Valley to encourage efficient industry development.

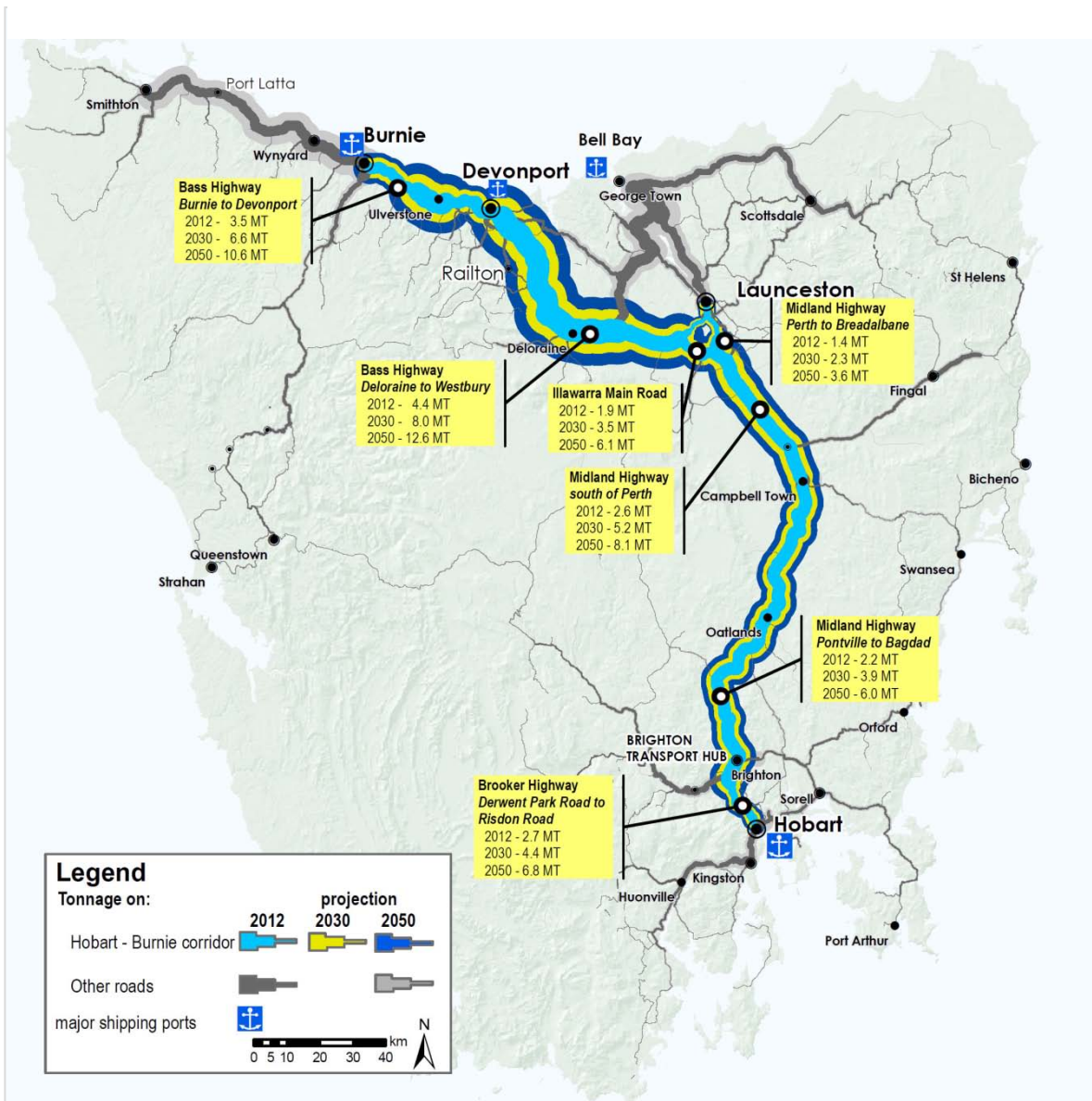
The deficiencies identified over the 16 projects cover a large part of the Midland Highway, from Kempton in the South (approximately 50km north of Hobart) to Perth in the North (approximately 18km from Launceston), and affect the overall performance of the transport network.

Deficiencies include:

- **Major junctions** (Oatlands Northern Access, Esk Main Road, Mud Walls Road, Kempton South Access): poor alignment, poor sight distances, narrow sealed shoulder, short left turn deceleration lanes, lack of channelised right turn lanes

- **Rail crossing** (Conara): existing road/rail alignment has a level crossing on the Midland Highway over the Fingal rail line at Conara, additional rail crossings in Conara
- **Realignments/upgrade of existing alignment** (South of Tunbridge, St Peters Pass, White Lagoon): alignments do not meet 110km/h design speed, narrow sealed shoulder, limited sight distances
- **Minor junctions** (Mood Food, Sorell Springs Road, Stonor Road, Auburn Road and Ashby Road, Lower Marshes Road, Mona Vale): poor alignment, limited sight distances, narrow sealed shoulder, short left turn deceleration lanes, lack of channelised right turn lanes, lack of night time lighting
- **Streetscaping** (Campbell Town and Perth): Midland Highway runs through the centre of these towns, there are high pedestrian volumes but lack of pedestrian crossing points, wide adjoining side junctions, main parking areas located away from cafes and restaurants, poor line of sight, unsafe conditions for pedestrians

Map 2: Current and forecast freight volumes, Burnie to Hobart Freight Corridor



Option Generation and Assessment

The objective of the Midland Highway Safety Package is to improve safety and connectivity on this critical north-south road link. All projects have been designed to accommodate high productivity vehicles.

The preferred projects are:

Major junctions

- Oatlands Northern Access \$3.69M – Rural channelised T-junction, long right turn deceleration lane, increase shoulder width to 2.5m, directional arrows, widening northbound lane to accommodate extended right turn lane, installation of solar lighting
- Esk Main Road \$15.16M – Rural channelised T-junction

- Mud Walls Road \$3.92M – Rural channelised T-junction, long right turn deceleration lane, increase shoulder width to 2.5m, directional arrows, widening northbound lane to accommodate extended right turn lane, sealed vehicle parking area on Mud Walls Road adjacent to junction, new crash barrier, installation of solar lighting
- Kempton South Access \$3.93M - Rural channelised T-junction, long right turn deceleration lane, increase shoulder width to 2.5m, directional arrows, widening northbound lane to accommodate extended right turn lane, additional crash barrier, installation of solar lighting

Minor junctions

- Mood Food \$7.16M – long left turn deceleration lane into Mood Food southbound, channelised right turn deceleration lane into Mood Food northbound, long right hand acceleration lane southbound, long left hand acceleration lane northbound, barriers on edge of should preventing vehicle parking adjacent to mood food, no overtaking permitted adjacent to Mood Food, reduced crest, junction co-ordinates with Kempton North intersection
- Sorell Springs Road \$3.7M - Rural channelised T-junction, long right turn deceleration lane, increase shoulder width to 2.5m, directional arrows, widening northbound lane to accommodate extended right turn lane, provision of new traffic island to improve line of sight for vehicles approaching the junction from Sorell Springs Road, installation of solar lighting
- Stonor Road \$3.49M - Rural channelised T-junction, long right turn deceleration lane, increase shoulder width to 2.5m, directional arrows, widening northbound lane to accommodate extended right turn lane for the School bus turning area in Stonor Road, installation of solar lighting
- Auburn Road \$6.07M (includes Ashby Road) - Rural channelised T-junction, long right turn deceleration lane, increase shoulder width to 2.5m, directional arrows, widening northbound lane to accommodate extended right turn lane, installation of solar lighting
- Ashby Road – reroute Ashby Road (1.2km) South to intersect with Auburn Road to ensure a safer entry/exit onto the Midland Highway
- Lower Marshes Road \$3.59M - Rural channelised T-junction, long right turn deceleration lane, increase shoulder width to 2.5m, directional arrows, widening northbound lane to accommodate extended right turn lane, installation of solar lighting
- Mona Vale \$17.29M – improvement of curve alignment

Realignments/upgrade of existing alignment

- South of Tunbridge \$4.0M – Realignment of southern bend to increase radius and meet minimum design speed requirements for 110km/h, increase sealed shoulder to 2.5m, removal of sight line obstructions
- St Peters Pass \$4.6M – lowering crest to improve sight distances, dedicated right turn lane into rest area to avoid vehicles having to slow/stop in the travel lane, extended left turn deceleration lane and increased merge length, new safety barrier

to protect vehicles from steep watercourse embankment and large trees, increase sealed shoulder to 2.5m

- White Lagoon \$23.3M – widening and installation of a separation barrier, 4 equal alternating sections of 2+1 over 6km providing opportunities for overtaking for both northbound and southbound vehicles

Streetscaping

- Campbell Town \$15.16M (includes Perth) – provision of four specific pedestrian crossing points with midblock pedestrian refuge islands and disability ramps, reduce side street road widths at all junctions within the 50km/h zone, improved lighting at each of the crossing points, widen existing footpath and improve pedestrian/disability safe access, narrowed side junctions to improve safety and shortened pedestrian crossing distances, formed point of entry into 50km/h zone, well defined speed limit area, improved parking locations
- Perth – provision of 2 additional specific pedestrian crossing points with midblock pedestrian refuge islands and disability ramps, reduced side street road widths at all junctions within the 50km/h zone, narrowed side junctions to improve safety and shortened pedestrian crossing distances, formed point of entry into 50km/h zone, clearly identified entry points into 50km/h speed limit area, improved/designated parking areas within the 50km/h zone

Removal of at-grade rail crossing

- Conara \$21.9M – realignment of the Fingal rail line to the southern side of Esk Main Road for a distance of approximately 6km until it meets the current alignment adjacent to the rail underpass on Esk Main Road, removal of Conara rail crossing on Midland Highway and the removal of two road crossings within the Conara township

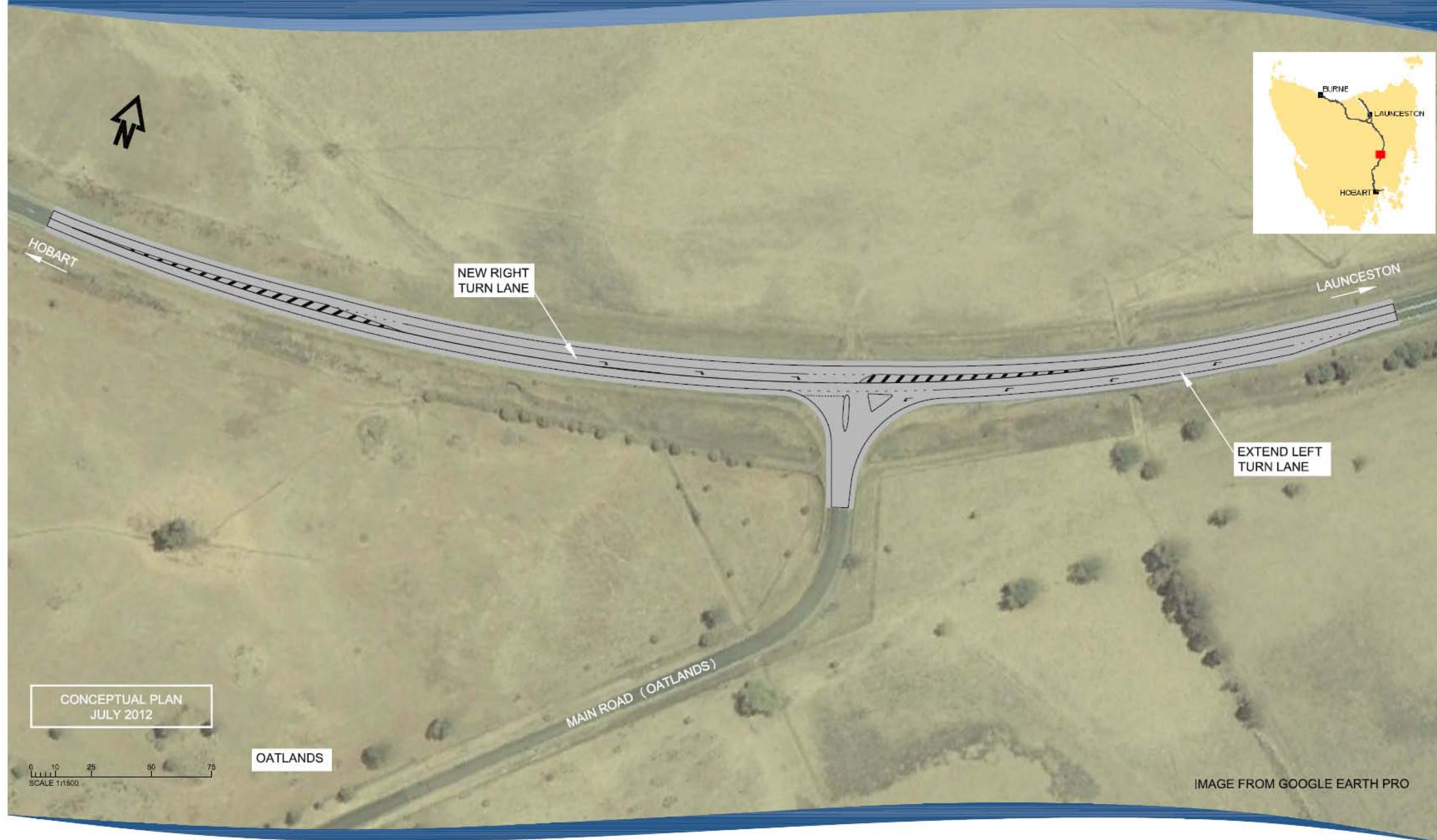
A number of options have been considered for the range of projects listed. Options include:

- Do nothing – safety issues are likely to continue and increase over time as passenger and freight traffic increases
- Large scale treatment for all of the Midland Highway – this is costly and unnecessary at this stage
- Targeted improvements to specific sections of the Midland Highway – treatment of individual areas is the preferred option as it minimises disruption while maximising benefits
- For Conara, a number of options have been investigated including:
 - Do nothing – safety issues with having a level crossing of the rail line on a major highway
 - Altering the level of the rail line – not appropriate due to proximity to Conara township
 - Lifting the highway over the rail line – existing grade is approximately 4 to 5% so this will increase length significantly, affecting vehicle and freight movements, would make existing northern junction into Conara redundant, and would require new junction, height and width of elevated highway

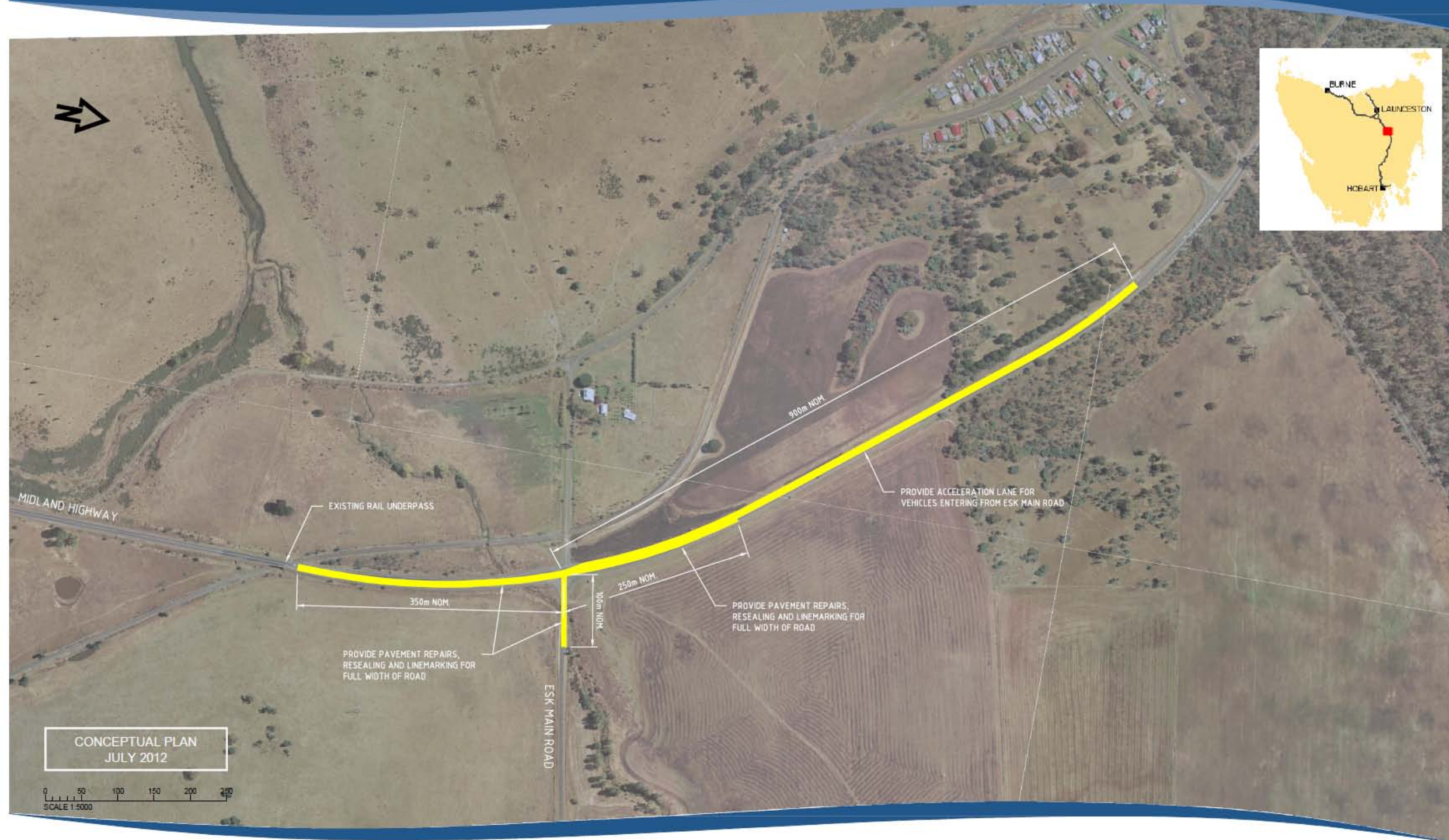
embankments would be visually displeasing, construction would cause complicated traffic control and would be costly as a detour would be required, land acquisition required which would have a significant impact on the Midland Highway Scenic Corridor Special Area

- Relocation of the Fingal rail line – safety improvements by removing Midland highway level crossing and 2 other level crossings in Conara, simpler construction and no expected delays to vehicular traffic or rail movements or disruption to Conara residents through detours and road closures

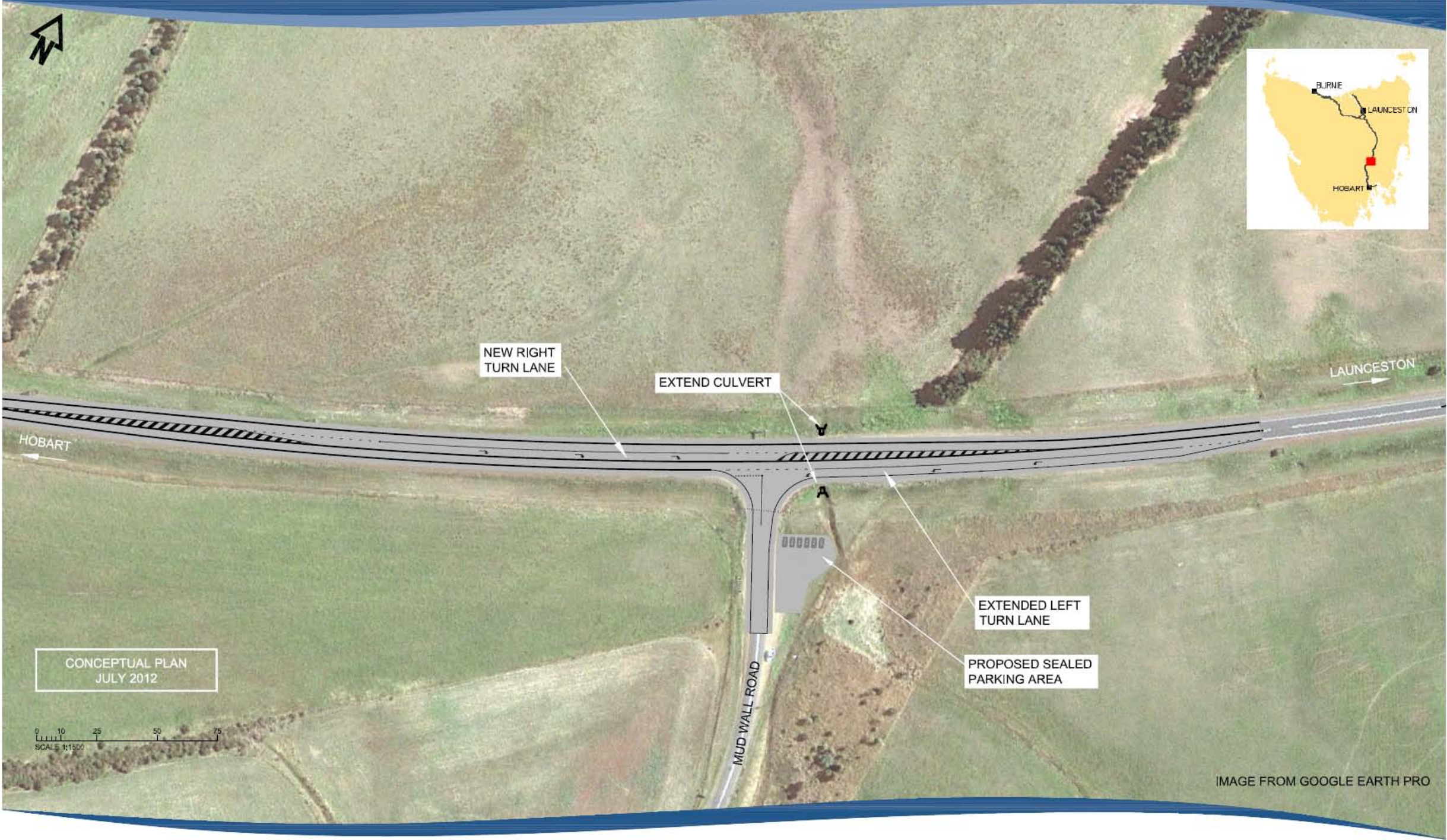
MIDLAND HIGHWAY SAFETY PACKAGE
Specific Junction Upgrades
Oatlands Northern Access



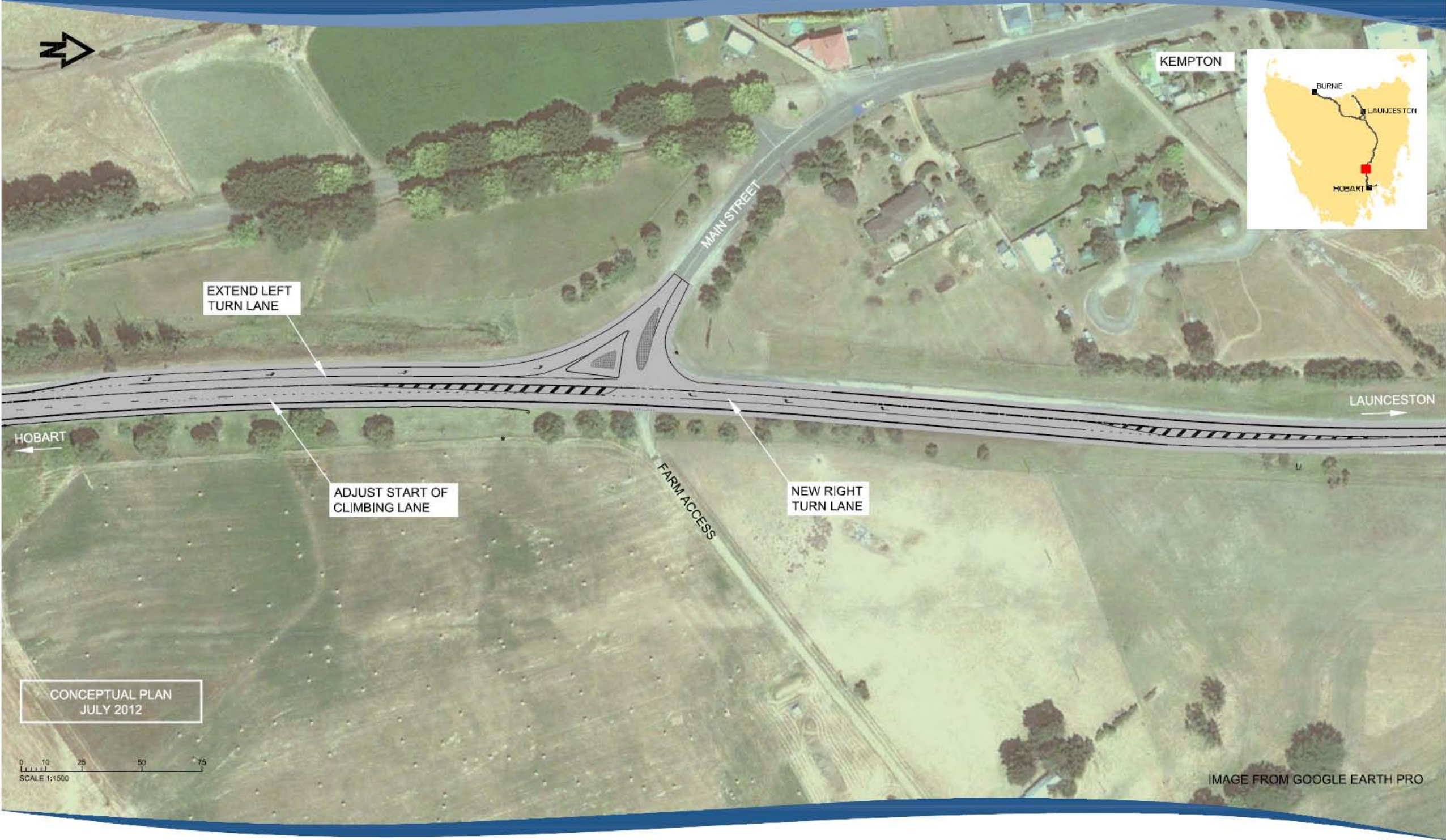
MIDLAND HIGHWAY SAFETY PACKAGE Esk Main Road Junction



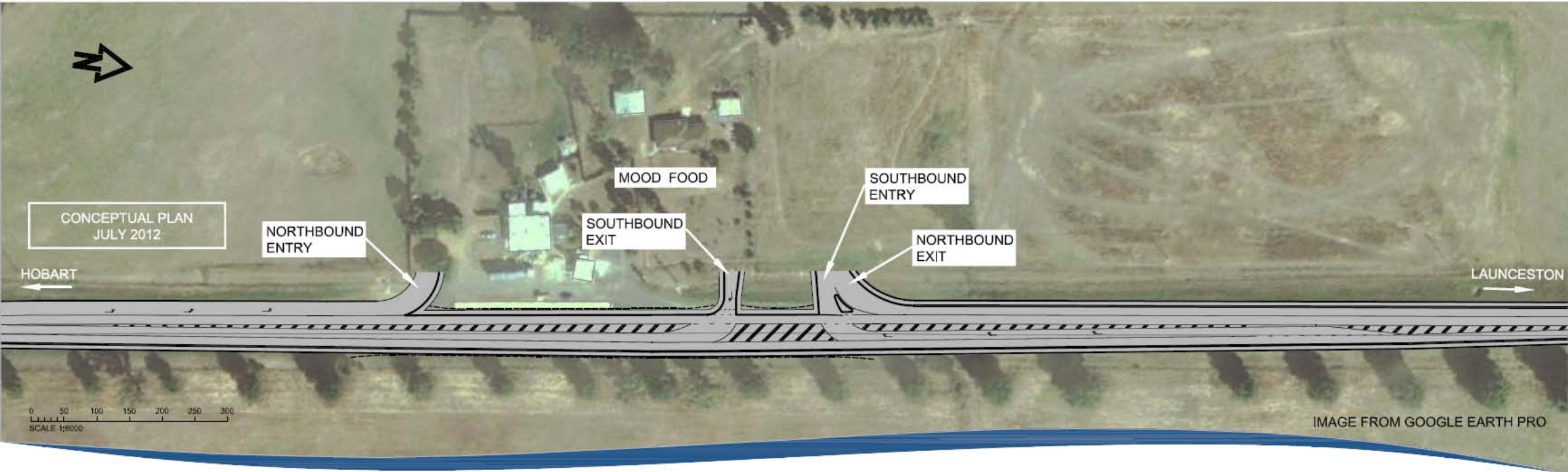
MIDLAND HIGHWAY SAFETY PACKAGE
Specific Junction Upgrades
Mud Walls Road



MIDLAND HIGHWAY SAFETY PACKAGE
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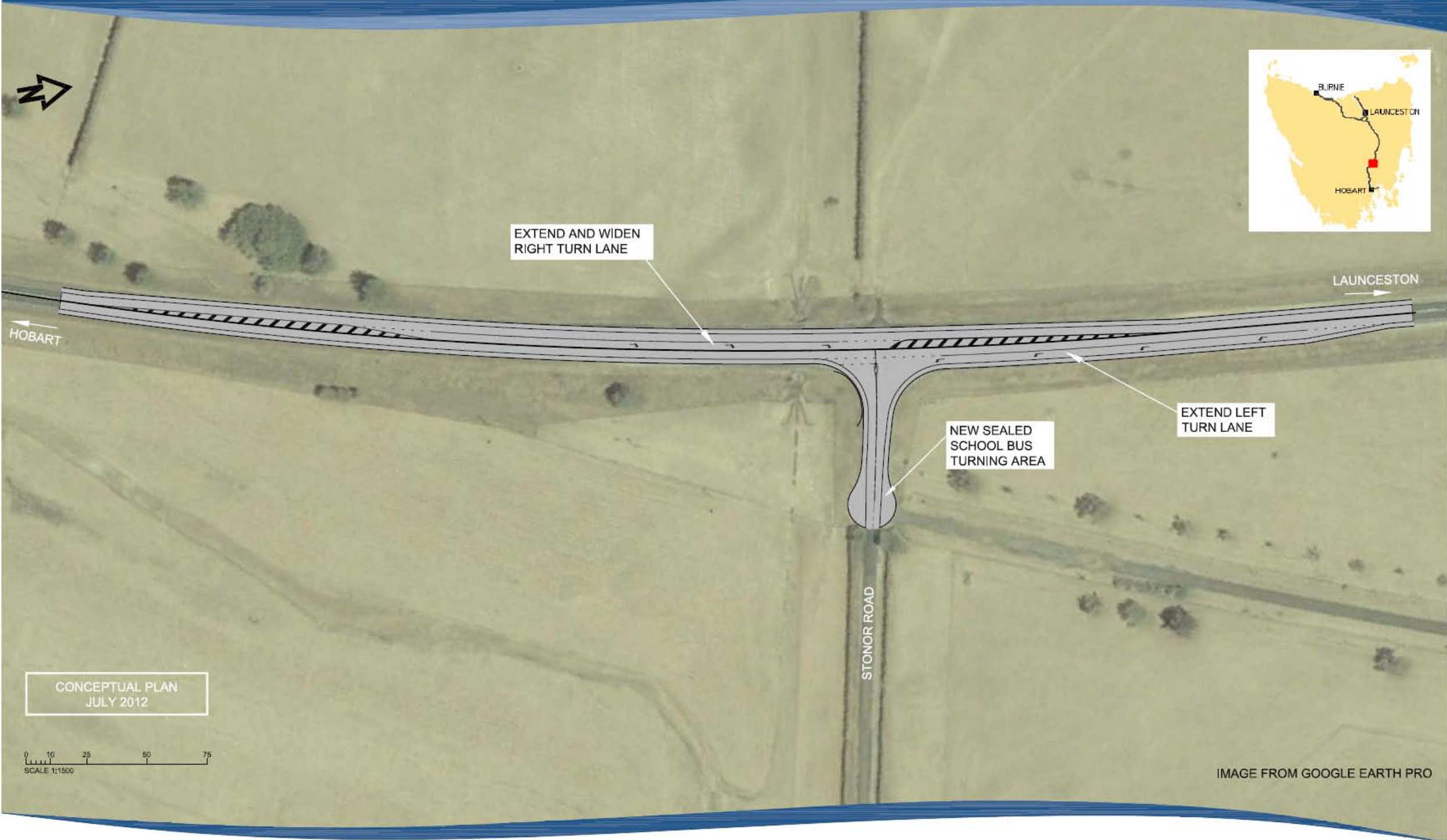
MIDLAND HIGHWAY SAFETY PACKAGE
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MIDLAND HIGHWAY SAFETY PACKAGE
Specific Junction Upgrades
Sorell Springs Road



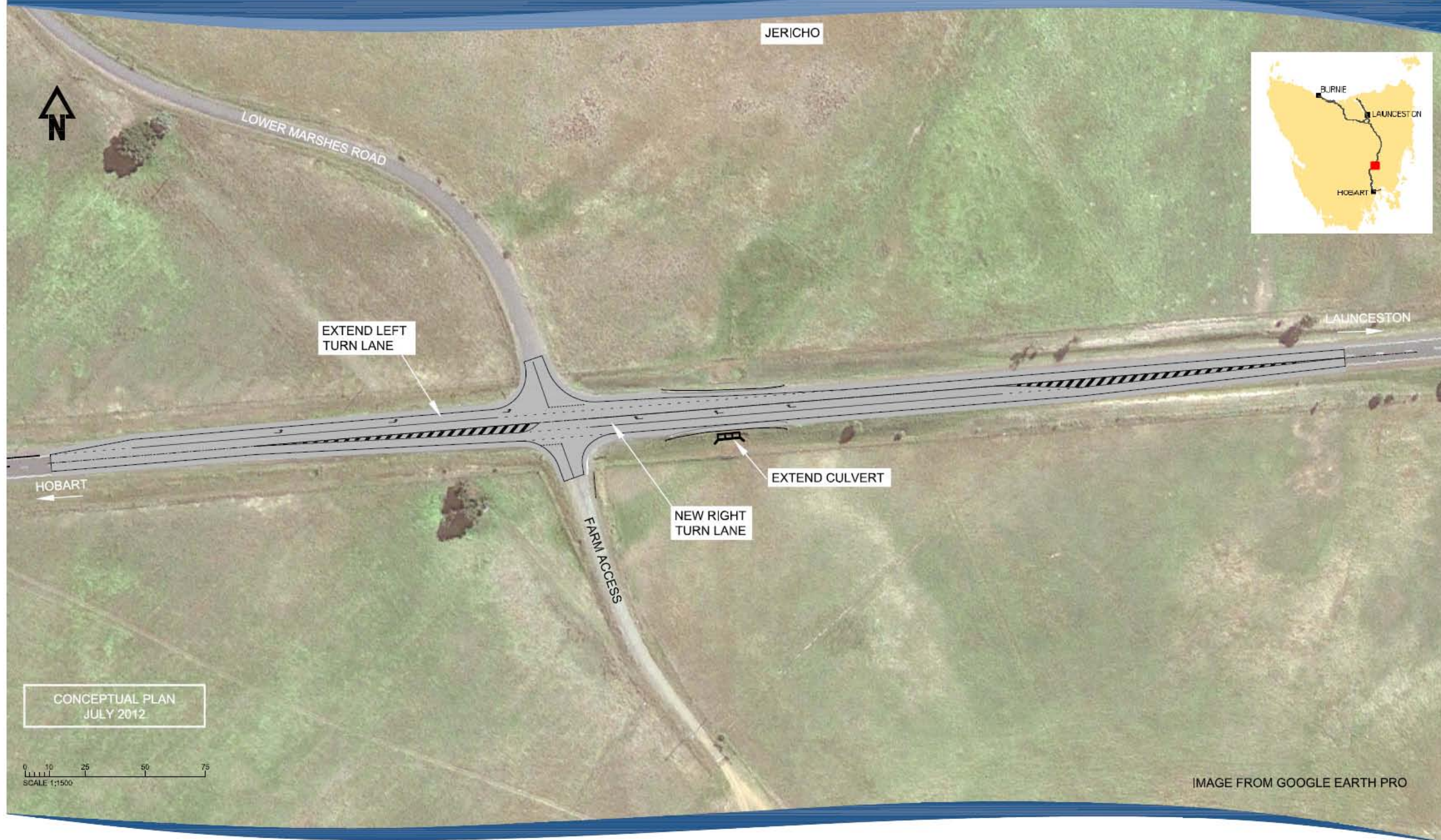
MIDLAND HIGHWAY SAFETY PACKAGE
Specific Junction Upgrades
Stonor Road



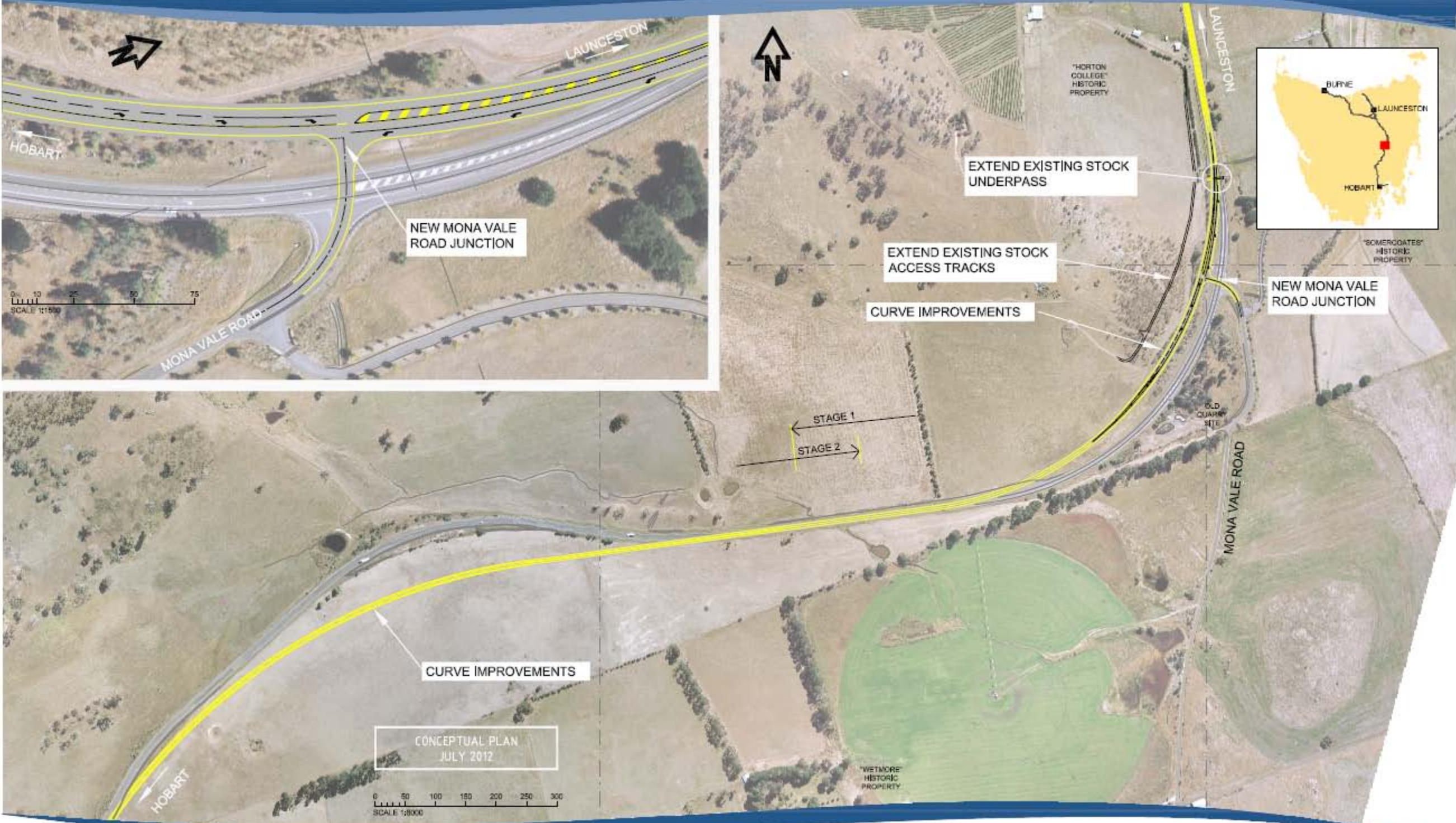
MIDLAND HIGHWAY SAFETY PACKAGE
Specific Junction Upgrades
Auburn & Ashby Roads



MIDLAND HIGHWAY SAFETY PACKAGE
Specific Junction Upgrades
Lower Marshes Road



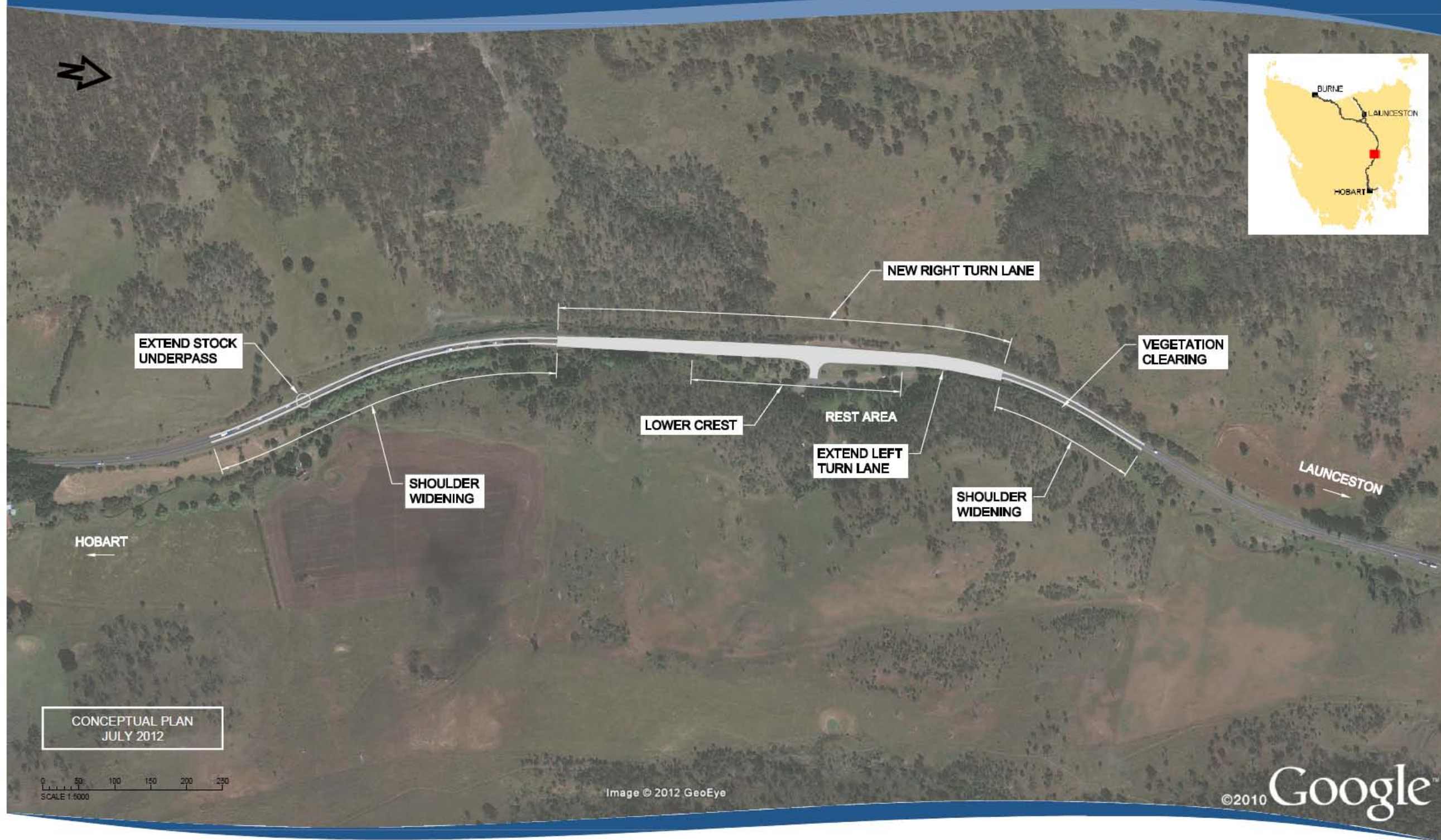
MIDLAND HIGHWAY SAFETY PACKAGE
Mona Vale



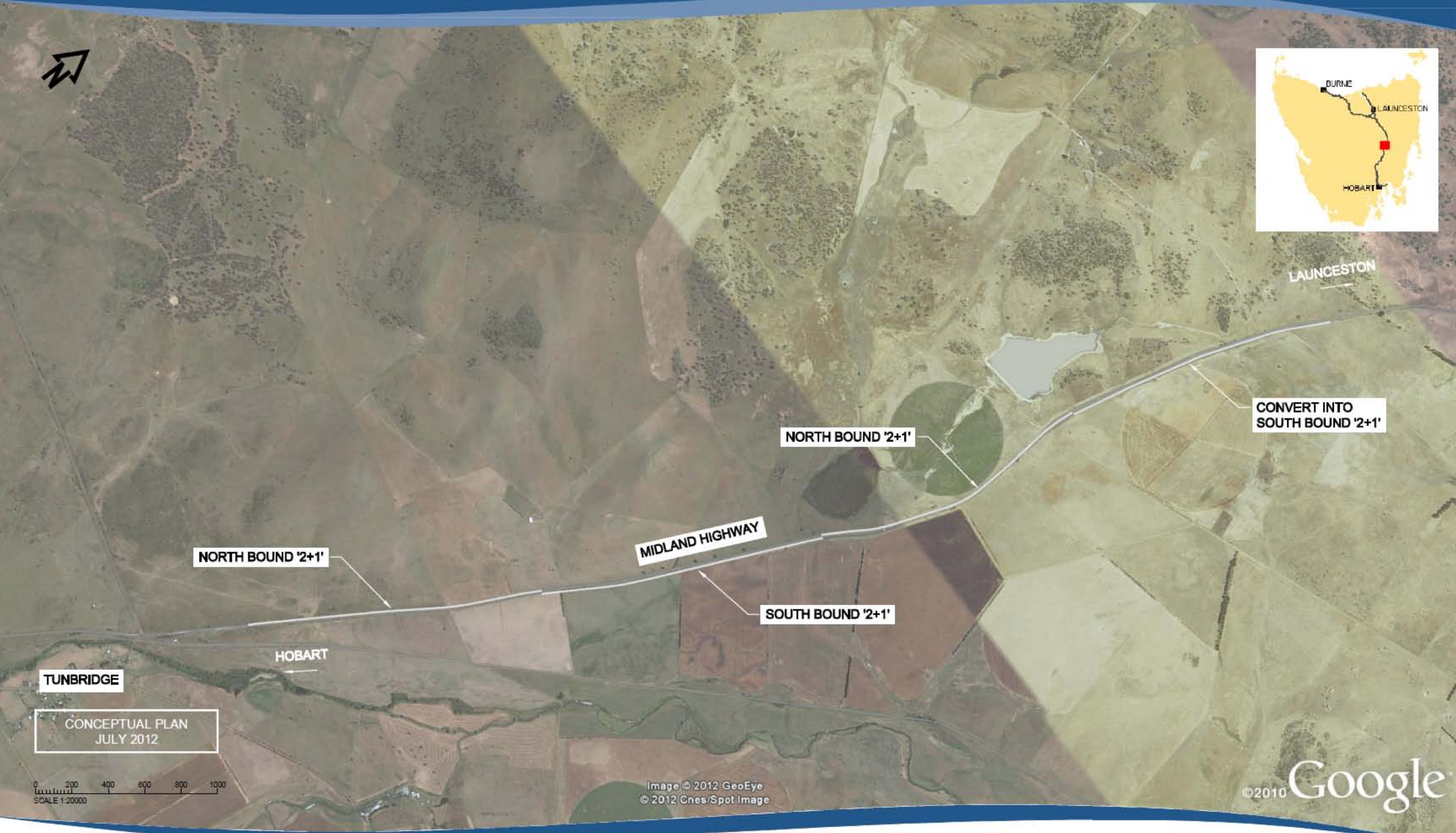
MIDLAND HIGHWAY SAFETY PACKAGE
SOUTH OF TUNBRIDGE



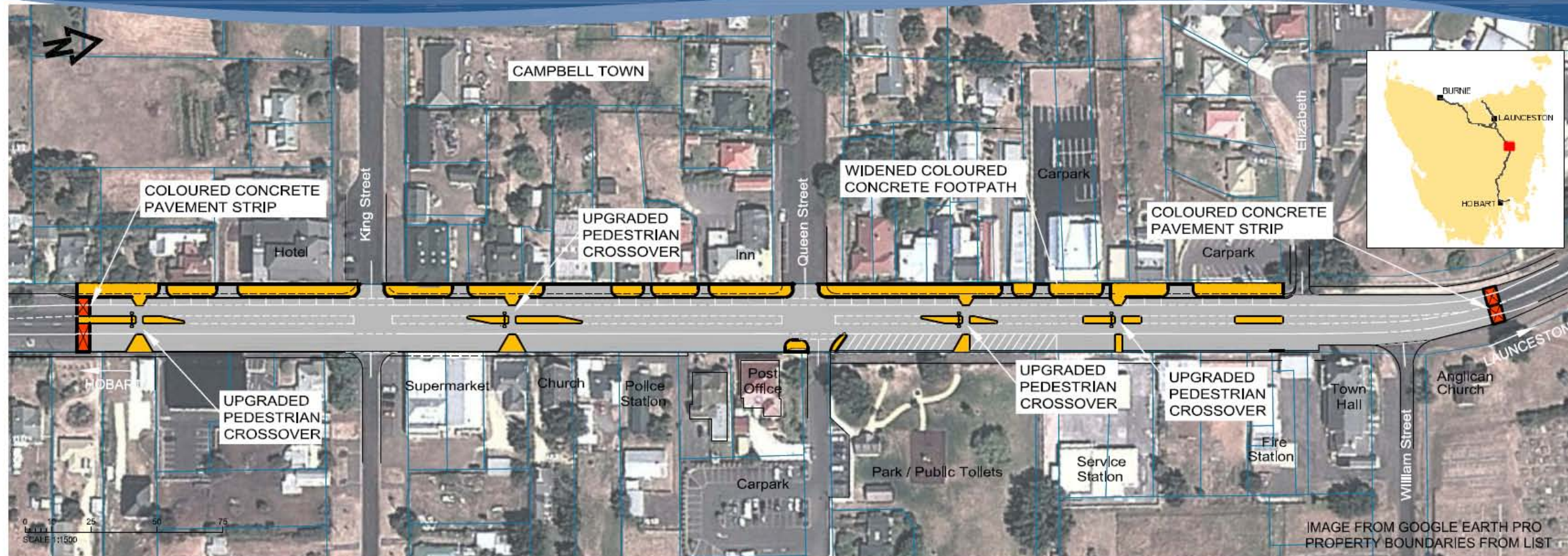
MIDLAND HIGHWAY - ST PETERS PASS PROJECT OVERVIEW



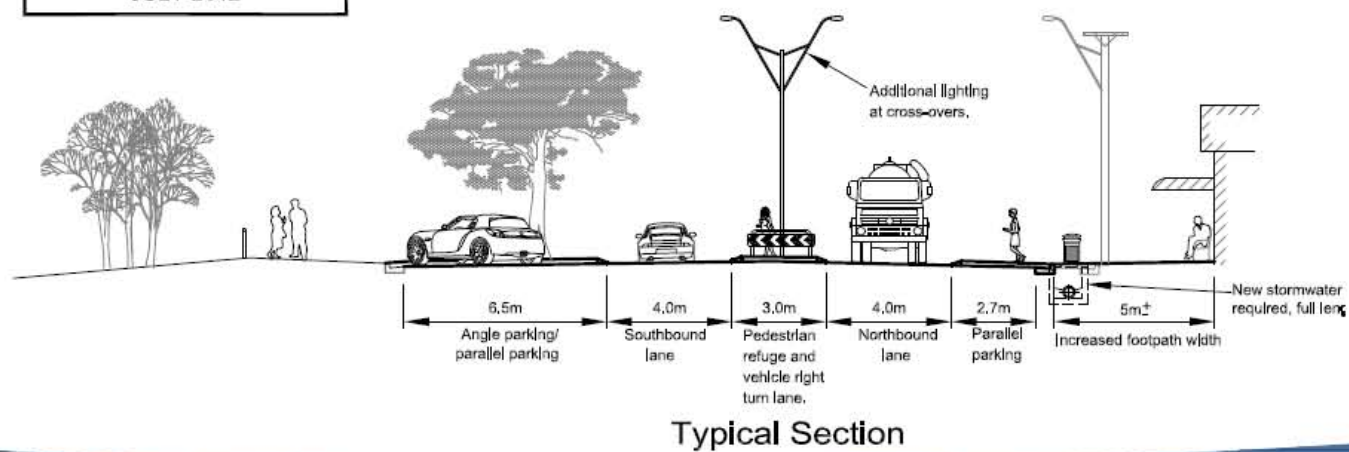
MIDLAND HIGHWAY - WHITE LAGOON
PROJECT OVERVIEW



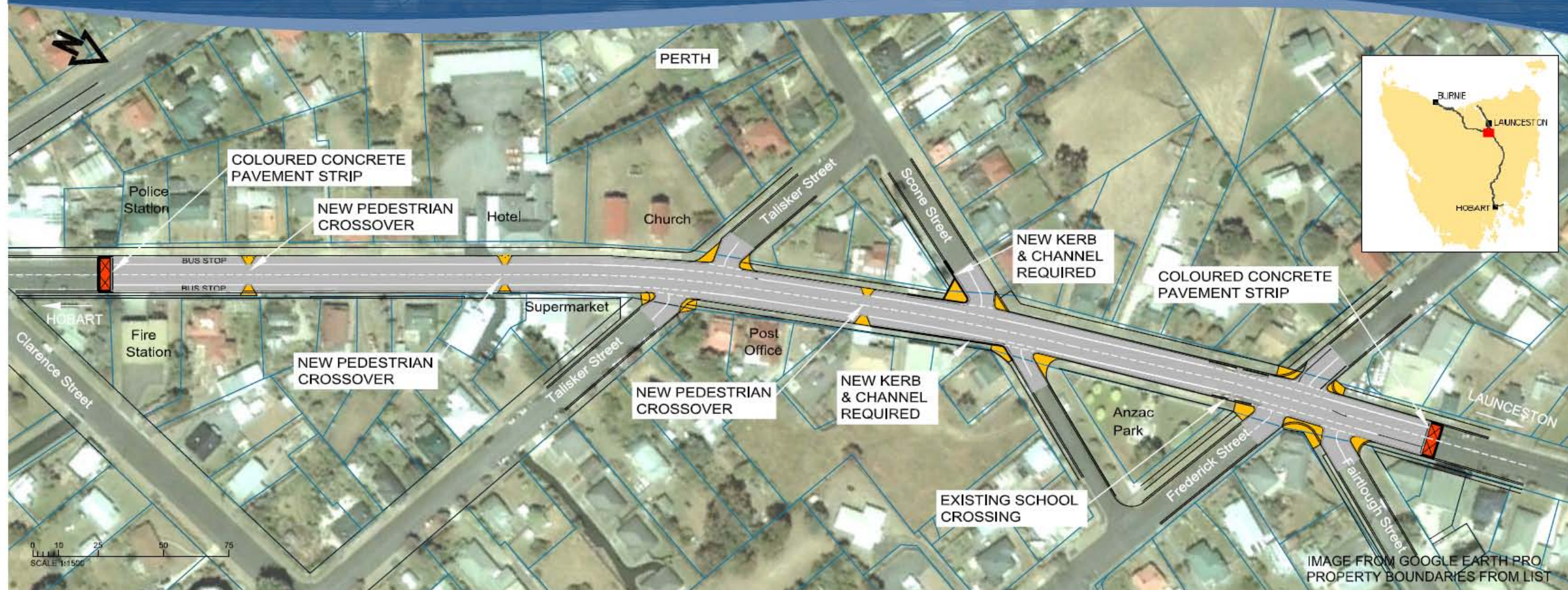
MIDLAND HIGHWAY SAFETY PACKAGE
Campbell Town and Perth
Campbell Town - High Street Upgrade



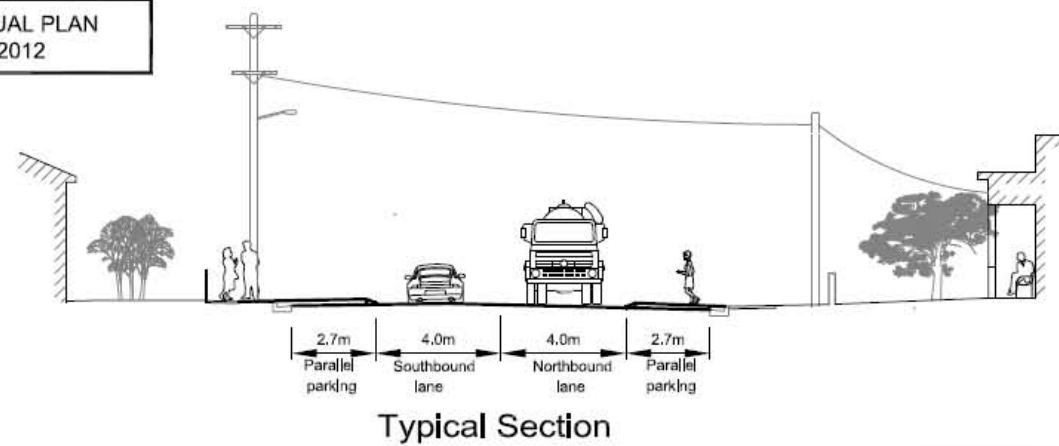
CONCEPTUAL PLAN
 JULY 2012



MIDLAND HIGHWAY SAFETY PACKAGE
Campbell Town and Perth
Perth - Main Road Upgrade



CONCEPTUAL PLAN
 JULY 2012



MIDLAND HIGHWAY SAFETY PACKAGE
Conara Rail Realignment

