

WEST TAMAR HIGHWAY, TRAFFIC SOLUTION

Submission to the Parliamentary Standing
Committee on Public Works

Version: 1 Date: May 2019

Table of Contents

1	INTRODUCTION	1
1.1	BACKGROUND	1
1.2	PROJECT OBJECTIVES	3
1.3	PROJECT LOCATION	4
1.4	STRATEGIC CONTEXT OF THE PROJECT	8
2	PROJECT DETAILS	9
2.1	PROPOSED WORKS	9
2.2	DESIGN SPEED	10
2.3	ROAD CROSS-SECTION	10
2.4	DRAINAGE	11
2.5	UTILITIES	12
3	SOCIAL, ENVIRONMENTAL IMPACTS AND STAKEHOLDER ENGAGEMENT	13
3.1	PROPERTY ACQUISITION	13
3.2	NOISE	13
3.3	FLORA	13
3.4	FAUNA	14
3.5	ABORIGINAL HERITAGE	16
3.6	HISTORIC HERITAGE ASSESSMENT	16
3.7	LANDSCAPE AND VISUAL IMPACTS	16
3.8	STAKEHOLDER ENGAGEMENT	16
3.9	DEVELOPMENT APPROVALS	17
4	PROJECT PROGRAM AND COSTS	18
4.1	PROJECT PROGRAM	18
4.2	COSTS	18
4.3	RISK ASSESSMENT	23
5	CONCLUSION	24

Appendices

APPENDIX A. STAKEHOLDER CONCERNS

Authorisation

	Name	Signature	Date
Authorised by:	Adrian Paine, Manager Project Services		

1 Introduction

1.1 Background

The Tasmanian Government has committed \$12 million under the *West Tamar Highway, Traffic Solution* for transport efficiency and road safety improvement projects along the West Tamar Highway (A0252) between Riverside and north of Exeter. Project areas have been selected to improve safety for all road users, cater for future development in the region and reduce commuter travel time to and from Launceston.

Six projects have been identified, four of which are the subject of this submission. These are:

- 1) Reconstruct and widen the West Tamar Highway between the Gravelly Beach intersection and Rosevears Drive
- 2) Reconstruct and widen the West Tamar Highway between the intersection with Atkinsons Road and Waldhorn Drive
- 3) Provide overtaking opportunities between Exeter and the Batman Highway
- 5) Construct a left-turn acceleration lane at the Motor Road/West Tamar Highway Junction

The two projects not included in these works are:

Project 4, reseal and widen the West Tamar Highway north of the Batman Highway intersection to Lightwood Hills Road. The entire project site has recently been resealed, the sealed shoulders are consistent with the road design standards for the Highway, the objectives of this project are considered to have been met and the project is complete.

Project 6, reseal and widen the West Tamar Highway between Brisbane Street and Legana Park Drive roundabout to provide cycling improvements is being undertaken separately with investigation and design underway following consultation with stakeholders including officers from Launceston and West Tamar Council's and a representative from the Tamar Bicycle User Group.

1.1.1 Identified safety issues

The existing highway has deficiencies in stopping sight distance (SSD), approach sight distance (ASD) and safe intersection sight distance (SISD), along with a horizontal alignment for a 100km/h speed environment in some locations. The road corridor is narrow, with limited to no sealed shoulders or gravel verges in many sections. Existing bi-directional overtaking opportunities are in areas of poor horizontal alignment and sight distance. The land adjacent to the highway within the project sites is a combination of agricultural land, rural living, low and general residential as well as local and general businesses.

A total of 34 known crashes have occurred between 2000 and 2018 for Project 1, according to the Department of State Growth's crash statistics. A total of approximately 89% of these crashes have occurred at intersections throughout the project site, including Gravelly Beach Road (44%), Lanena Crescent (18%), Rosevears Drive (18%) and Killara Avenue (9%). The crashes involved vehicles travelling off the carriageway or off bends into objects/parked vehicles, rear end and head on collisions. One fatality occurred as a result of a head on collision just prior to Killara Avenue. One serious crash has occurred, with the majority of the remainder resulting in property damage and minor injuries. A summary of the crash history is shown in Table 1-1.

Table 1-1: Project 1 Crash Data

Crash Type	Number
Fatal	1
Serious	1
Minor	6
First Aid	4
Property Damage	22
TOTAL	34

A total of 96 known crashes have occurred between 2000 and 2018 for Project 2, according to the Department of State Growth's crash statistics. Approximately one third of these crashes have occurred near one of the four intersections throughout the project site, in particular Atkinsons Road (10%) and Craythorne Road (9%). The crashes involved vehicles travelling off the carriageway or off bends into objects/parked vehicles, turning movements and rear end and head on collisions. One fatality occurred as a result of an off-carriageway incident into an object / parked vehicle, approximately 1km north of McEwans Road. One serious crash has occurred, with the majority of the remainder resulting in property damage and minor injuries. A summary of the crash history is shown in Table 1-2.

Table 1-2: Project 2 Crash Data

Crash Type	Number
Fatal	1
Serious	4
Minor	29
First Aid	12
Property Damage	50
TOTAL	96

A total of 132 known crashes have occurred between 2000 and 2018 for Projects 3 & 5, according to the Department of State Growth's crash statistics. Approximately one fifth of these crashes have occurred near one of the five intersections throughout the project site, in particular the Batman Highway (15%) including one serious crash in 2005. The crashes involved vehicles travelling off the carriageway or off bends into objects/parked vehicles, turning movements and rear end and head on collisions. Three fatalities have occurred, as the result of a rear end collision, a head on collision and an off right bend into object/parked vehicle. Eight serious crashes have occurred overall, with the majority of the remainder resulting in property damage and minor injuries. A summary of the crash history is shown in Table 1-3.

Table 1-3: Projects 3 & 5 Crash Data

Crash Type	Number
Fatal	3
Serious	8
Minor	38
First Aid	9
Property Damage	74
TOTAL	132

1.2 Project Objectives

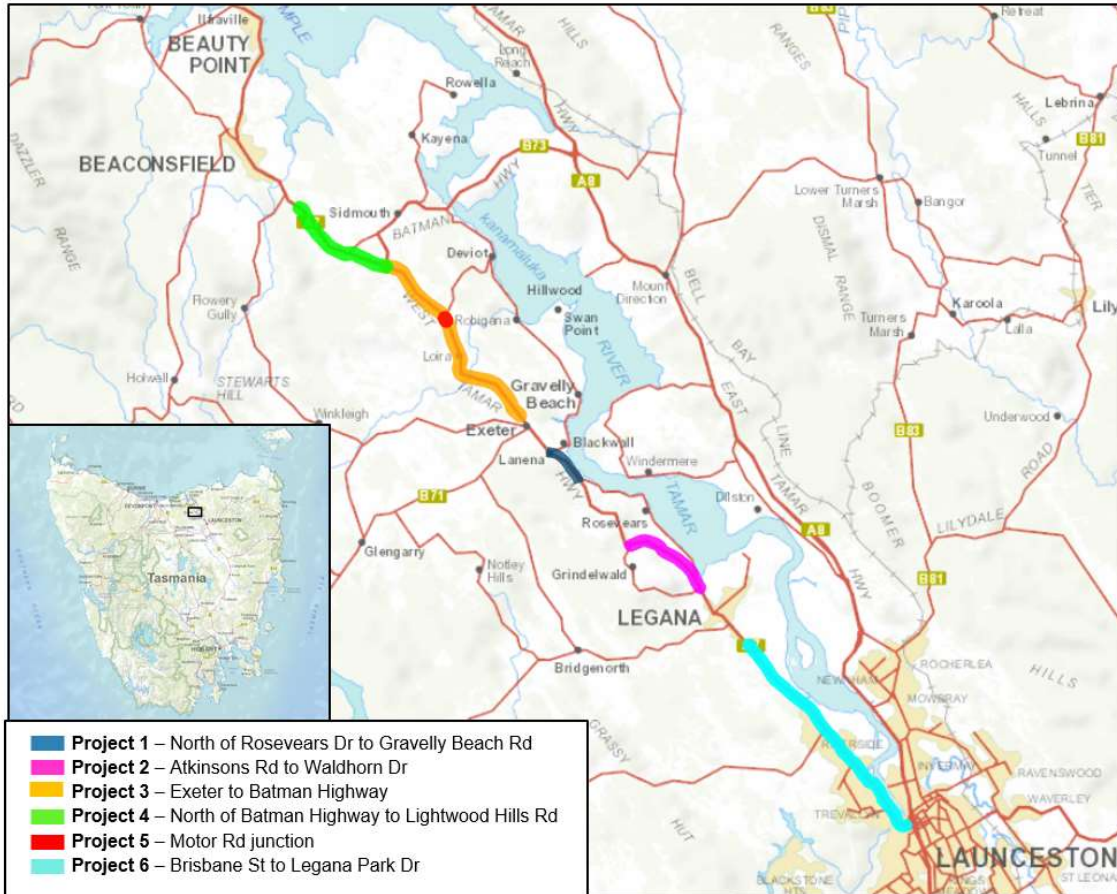
The main objectives for the upgrades to the West Tamar Highway for each of the four projects outlined above are;

- Improve road user safety and reduce commuter travel times along the West Tamar Highway, to cater for future development in the area
- Establish and maintain clear and open communication with landowners
- Geometric improvements to meet relevant standards and minimum sight distance requirements

1.3 Project Location

The four projects are located between Legana and Beaconsfield along the West Tamar Highway. They are defined in the Figure 1 legend as Project 1, Project 2, Project 3 and Project 5.

Figure 1-1: Project Location Map

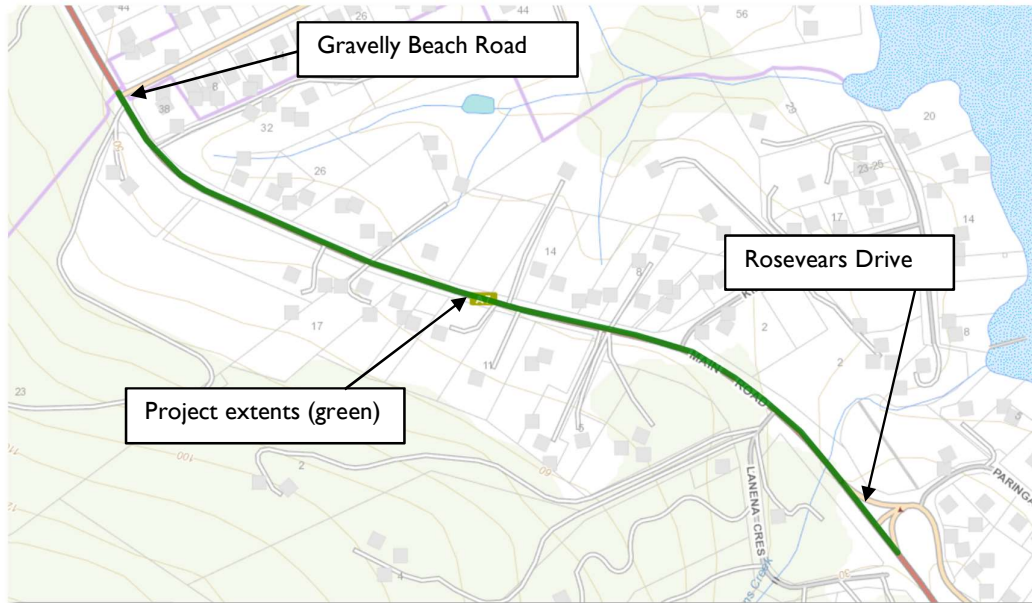


Base image by TASMAR www.tasmap.tas.gov.au © State of Tasmania

1.3.1 Project 1 Location

Project 1 is located on the West Tamar Highway (A0252) between Rosevears Drive (Link 41, Chainage 4.82km) and Gravelly Beach Road (Link 41, Chainage 5.66km).

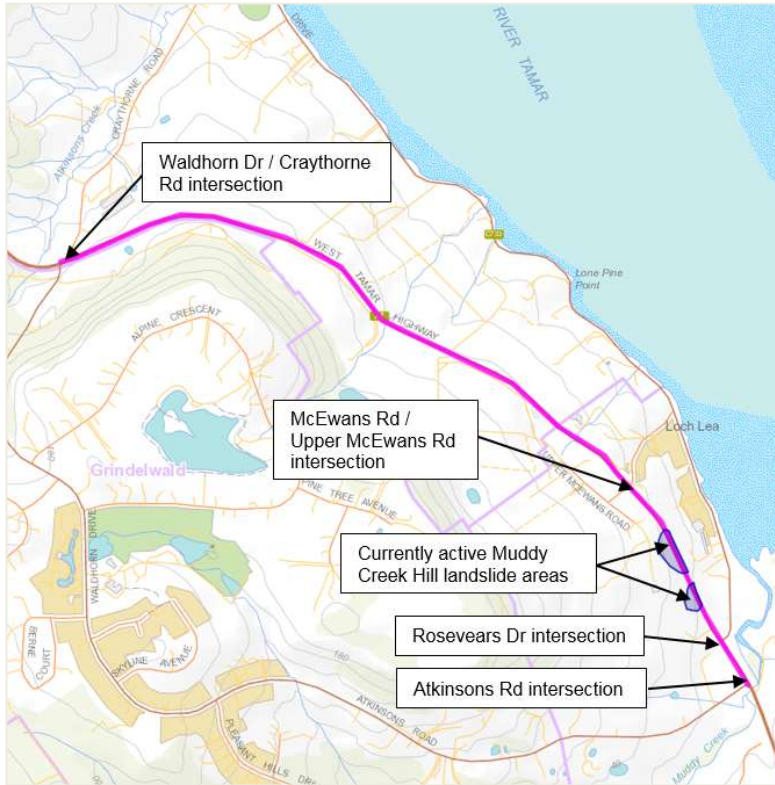
Figure 1-2: Project 1 Location Map



1.3.2 Project 2 Location

Project 2 is located on the West Tamar Highway (A0252) between Atkinsons Road (Link 26, Chainage 6.3km) and Waldhorn Drive (Link 41, Chainage 0.04km), forming part of the road corridor between Launceston and Greens Beach and facilitates movements to the suburbs of Loch Lea, Rosevears and Grindelwald.

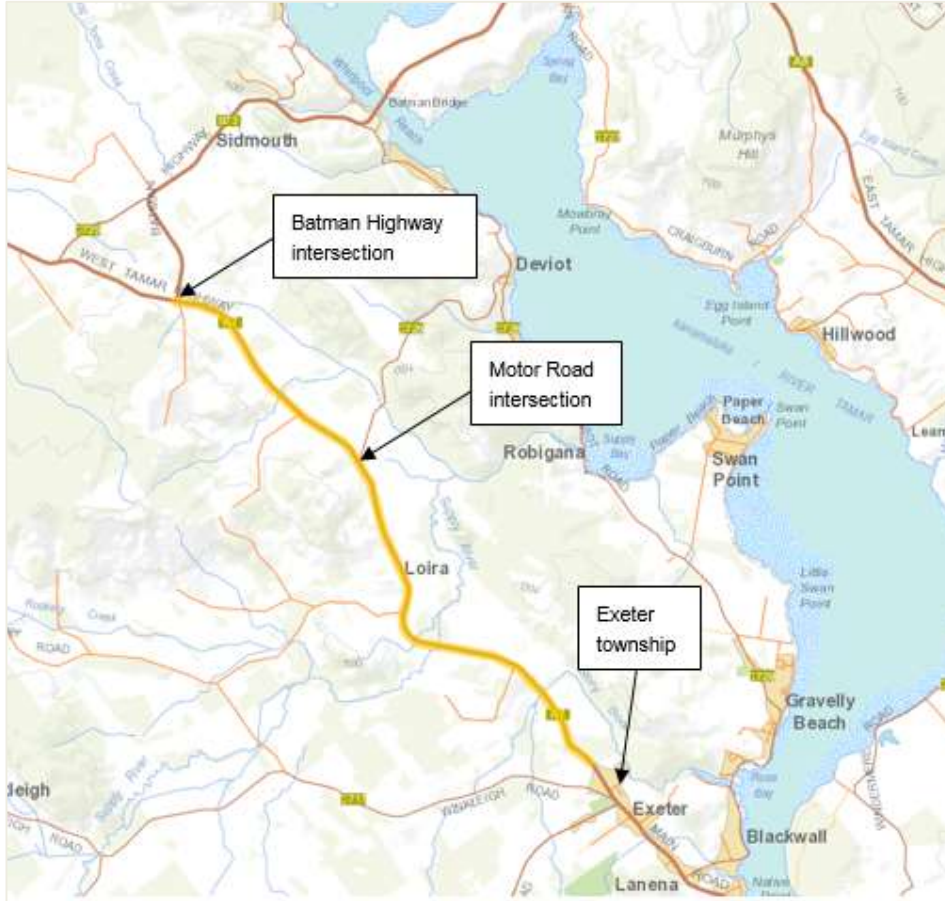
Figure 1-3: Project 2 Location Map



1.3.3 Project 3 Location

Project 3 is located on the West Tamar Highway (A0252) between Exeter (Link 63, Chainage 0.6km) and the Batman Highway (Link 63, Chainage 9.3km), forming part of the freight link between the West Tamar and East Tamar Regions including the heavy industrial zone around Bell Bay.

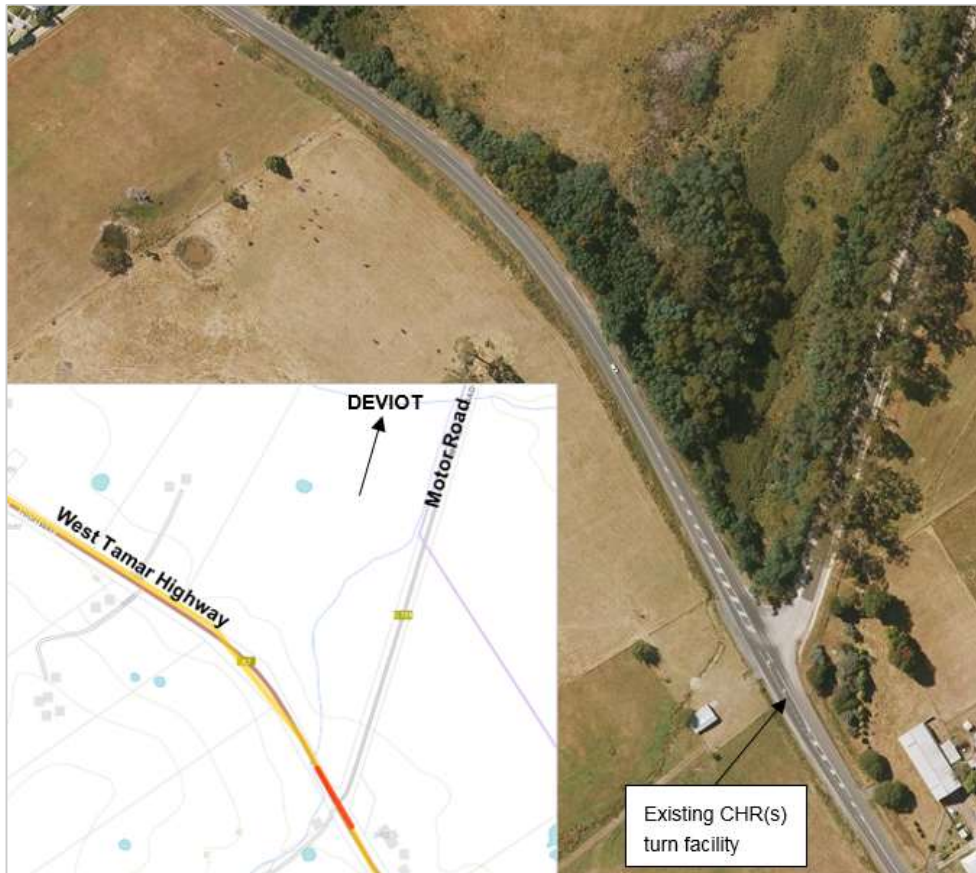
Figure 1-4: Project 3 Location Map



1.3.4 Project 5 Location

Project 5 is located on the West Tamar Highway (A0252) at the Motor Road junction (Link 63, Chainage 6.1km), which forms the main access point for residents of Deviot.

Figure 1-5: Project 5 Location Map



1.4 Strategic Context of the Project

1.4.1 Alignment with Approved Strategies

The Tasmanian Government has developed a six-point plan to address high priority projects along the West Tamar Highway in recognition of population increases, growth in employment opportunities and increases in commuter travel times to and from Launceston along the highway: the *West Tamar Highway Priority Upgrades* six-point plan. The \$12 million investment from the Government will work towards maintaining the liveability of communities along the highway by reducing travel times through a more efficient, safer road network.

1.4.2 Alignment with Planning Policies and Themes

The improvements to the West Tamar Highway have been identified as high priority by the West Tamar Council (WTC), the Council's Road Safety Committee (RSC) and the Royal Automobile Club of Tasmania (RACT). The State Government has been lobbied for over 20 years to undertake safety improvements along the highway; RACT's annual member survey identified the West Tamar Highway as number 6 in Tasmania's top 10 worst roads, due to narrow seal width, limited formalised overtaking opportunities, poor pavement condition and historical landslip issues. This identified the highway as an urgent priority by RACT in the *Tasmanian Road Futures: Funding Priorities 2017 and Beyond* action plan.

2 Project Details

2.1 Proposed Works

The scope of the works is separated into four identified projects.

2.1.1 Project 1

The scope of Project 1 is to undertake safety improvements along the section of the West Tamar Highway between the Gravelly Beach intersection and Rosevears Drive by addressing the existing issues including the narrow road width with no defined shoulders and 0-0.5m gravel verges throughout the project site, deficient sight distances for vehicles utilising property accesses and key junctions throughout the project site, along with stormwater runoff from the highway which is creating inundation issues for properties adjacent to the highway.

The scope of works for Project 1 under the preferred Option 1 includes:

- Pavement widening to provide 3.0m lane widths, a 1.0m sealed eastern shoulder, a 1.5m sealed western shoulder to allow for cyclists moving slowly up steep grades
- Kerb and channel on the eastern side of the highway with a concrete spoon drain on the western side
- Provide a 1.5m concrete footpath on the eastern side to replace the existing 1.0m gravel footpath
- Nominal 2m sight distance benching on the eastern side and landscaping works
- Provision of channelised right turn lane (CHR) treatments at the Rosevears Drive, Killara Avenue and Gravelly Beach Road junctions
- Provision of an auxiliary left turn lane (AUL) at Killara Avenue and extension of the existing AUL at Rosevears Drive

2.1.2 Project 2

The scope of Project 2 is to improve safety and the service capability of the West Tamar Highway between Atkinsons Road and Waldhorn Drive. Areas of the existing road have been identified as having significant pavement failures, including longitudinal cracking and rutting, landslip issues and unsafe passing opportunities. The seal width is narrow with non-existent shoulders in some sections and gravel shoulders have dropped away from the road. The road pavement is visibly deformed and uncomfortable to drive on over Muddy Creek Hill between Atkinsons Road and McEwans Road and the northbound overtaking lane to the south of McEwans Road is of insufficient length and is immediately followed by an auxiliary left turn lane (AUL).

The scope of works for Project 2 includes pavement widening to provide 1.0m sealed shoulders on either side of the highway and the extension of existing drainage culverts, where required, under Option 2b. Options have been considered to replace the subgrade and construct a full-depth pavement where pavement failures have been identified at Muddy Creek Hill, however, further geotechnical investigation is required to determine an appropriate solution to the landslip issues in this area.

2.1.3 Project 3

The scope of Project 3 is to improve travel time reliability and provide safe, formalised overtaking opportunities between Exeter and the Batman Highway to facilitate passing of slow vehicles. Presently, the only safe, frequently used overtaking opportunity within the designated project area is the 800m section of bi-directional broken lines between Everest Road and Supply River. In this section, the road alignment is flat and straight with adequate sight distance in both directions.

A second section of bi-directional overtaking opportunity exists between Loira Vineyard and Motor Road, however, poor horizontal curves and a series of vertical crests impede sight distances, and therefore overtaking manoeuvres are dangerous and not frequently attempted in this area. There are also houses in close vicinity to the highway, which limit the opportunities to both formalise overtaking opportunities in this section and minimise impacts on surrounding residents.

The scope of works therefore proposes to widen the road to the south of Motor Road and provide a northbound overtaking opportunity and to widen the road to the south of the Batman Highway and provide a southbound overtaking opportunity. Widening is to occur on the eastern side of the highway in both locations to minimise impacts to properties on the western side of the highway. These works will include widening of the existing pavement to include an additional 3.5m lane, 1.0m sealed shoulder and 0.5m gravel verge, along with full depth pavement construction and spray sealing, property acquisition and associated accommodation works where required, reinstatement of roadside furniture and the extension of existing drainage culverts where required. The length of overtaking lanes minimises landowner impacts, and is in accordance with the proposed allocation of funding.

2.1.4 Project 5

The scope of Project 5 is to address the need for a left-turn acceleration lane for traffic entering the West Tamar Highway from Motor Road, as identified in the *West Tamar Highway Upgrades* six-point plan. Motor Road is the main access road to Deviot; the project will provide safety and amenity benefits for Deviot residents who currently need to stop before entering the highway traffic stream. The acceleration lane will improve the safety for merging vehicles from Motor Road by enabling them to achieve the highway speed limit more quickly. Project 5 lies within the project site of Project 3.

A number of private residential accesses will be impacted by the construction of the acceleration lane. This presents safety risks to landowners attempting to access their properties across the acceleration lane, which may not be amenable to landowners.

Site investigation and a desktop assessment have identified deficient sight distance at the intersection of Motor Road and the West Tamar Highway. It has therefore been identified that improvements to sight lines will improve safety and amenity for vehicles accessing the highway and will avoid the impact of an acceleration lane on private residential accesses. The acceleration lane is not expected to provide significant benefit.

The scope of works for Project 5 under Option 5b includes excavation works for sight benching of roadside batters, relocation of power poles and vegetation clearance including acquisition to facilitate ongoing vegetation maintenance. These works will improve sight distance at the intersection, giving drivers increased decision and manoeuvre time to improve the safety of turning manoeuvres.

2.2 Design Speed

The highway is currently signposted at 60km/h within the project 1 and at 100km/h within the projects 2, 3 & 5.

2.3 Road Cross-Section

The existing road cross-section across the four projects consists of 3.0-3.5m lane widths, 0-0.5m sealed shoulders and 0-0.5m gravel verges. Shoulders and verges vary in width along the extent of the highway. The existing road reservation is narrow and adjacent landowners are in close proximity to the carriageway. Encroachment onto, and acquisition of, private land is unavoidable to achieve minimum geometric design standards.

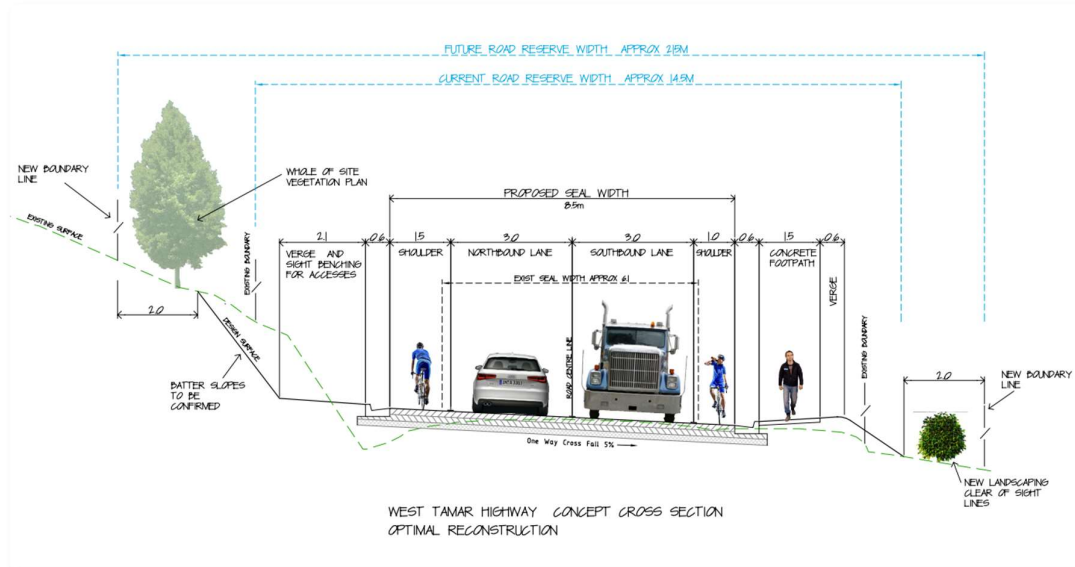
2.3.1 Project 1

The upgraded highway for Project 1 will generally consist of the following:

- Lane widths of 3.0m
- Shoulder width of 1.0m on the eastern side of the highway
- Shoulder width of 1.5m on the western side of the highway to provide allowance for cyclists
- Kerb and channel on the eastern side
- Concrete spoon drain on the western side
- 1.5m concrete footpath on the eastern side

A typical cross-section of the upgraded highway is shown in Figure 2-1 below.

Figure 2-1: Typical Cross-Section for Project 1



2.3.2 Project 2

The upgraded highway for Project 2 will generally consist of sealed shoulder widths of 1.0m on either side of the highway.

2.3.3 Project 3

The upgraded highway for Project 3 will generally consist of the following:

- An additional lane of width 3.5m
- Sealed shoulder width of 1.0m on either side of the highway
- Gravel verge width of 0.5m on either side of the highway

2.3.4 Project 5

The works proposed for Project 5 will retain the existing road cross-section, with excavation works to bench roadside batters for sight distance improvements and vegetation clearing to occur.

2.4 Drainage

Future design stages will require high level assessments of the capacity of existing and proposed table drains and culverts. As the design stage of each Project is at Concept Design, further hydrological assessment will be conducted for each site as the design progresses.

2.4.1 Project 1

Drainage issues have been identified within this section with the inundation of properties occurring adjacent to the highway, due to the inability of the existing stormwater system to convey flows from the large, pervious catchment on the western side of the highway. Kerb and channel is proposed for the eastern side of the highway, however this is highly unlikely to have the capacity to convey the stormwater flows required on the western side of the highway. A concrete spoon drain has therefore been specified to effectively capture and convey overland flows. A formal pit and pipe network will be installed on the eastern side of the highway, with a pit located upstream of every driveway to eliminate runoff entering properties at driveway crossovers.

2.4.2 Project 2

The catchment to the west of the highway in this section is significant and steep and conveys runoff to roadside drainage infrastructure alongside the northbound lane. Extensive vegetation growth in these drains demonstrates the significant quantity of runoff these drains convey and coupled with the

pavement failures and historical landslip issues in the area, suggest that drainage improvements throughout the site would be of benefit.

2.4.3 Projects 3 & 5

The highway within this section is bounded by hills on either side of the highway which convey overland flows from rural catchments into a network of tables drains and transverse culverts within the road reserve. Five bridge structures exist along the highway within this section and a floodway for the Supply River was constructed in 2005 from approximately Chainage 3.1km to Chainage 3.9km. Proposed pavement widening will impact the existing table drain network and may require the extension of existing culverts.

2.5 Utilities

2.5.1 Overhead Power

Power poles within, or immediately adjacent to, the road corridor for each project site are likely to be impacted by pavement widening works. Liaison with TasNetworks will be required and documented in the Preliminary Design stage as to the requirements and locations for relocation.

2.5.2 Telecommunications Cables

Pavement widening works may affect these assets and liaison with Telstra will be required in the Preliminary Design stage.

2.5.3 Sewer and Water

Potholing of these services will be required in the Preliminary Design stage to confirm the locations, depths and extents of the services and any potential relocation or protection measures required.

3 Social, Environmental Impacts and Stakeholder Engagement

3.1 Property Acquisition

The requirements for land acquisition have not been formally or exactly finalised as each of the Projects are in the Concept Design stage. It is expected that property acquisition will occur for each project site to accommodate the proposed safety improvements; further assessment is required during the Preliminary Design stage.

Table 3-1: Potential Property Acquisition

Project	Safety Improvements	Acquisition Required (Y/N)	Reason
1	Sealed shoulders, concrete spoon drain, kerb and channel, sight benching and landscaping	Y	Acquisition required to widen the footprint of the highway, and to facilitate ongoing vegetation maintenance to ensure sight distance remains adequate
2	Pavement widening to provide 1.0m sealed shoulders on either side of the highway	Y	Acquisition required to widen the footprint of the highway
3	Pavement widening to provide additional, formalized, safe overtaking opportunities	Y	Acquisition required to widen the footprint of the highway
5	Sight benching and vegetation clearance	Y	Acquisition required to facilitate ongoing vegetation maintenance to ensure sight distance remains adequate

3.2 Noise

The West Tamar Highway remains on the same alignment within the project sites for each of the four Projects, with pavement widening to occur in sections to accommodate safety improvements and the provision of safer overtaking opportunities. Noise impacts at properties along the highway are therefore expected to be minimal and are not expected to increase in comparison to the existing conditions. Furthermore, the Department of State Growth's Noise Management Guidelines state that noise mitigation will not be considered for safety upgrades of existing roads.

3.3 Flora

The Department of State Growth compiled an Environment and Development Approvals Report for Project 1 for flora and fauna in March 2018.

A desktop assessment of environmental and heritage values that are recorded on Land Information System Tasmania (LISTmap) has been conducted for Projects 2, 3 & 5.

Further assessment of the listed vegetation communities in each project site will be required to assess the potential impacts of the proposed design and any likely permit approval processes to be undertaken. It is likely that impacts to flora can be minimised or removed in future design stages.

3.3.1 Project 1

Eucalyptus ovata forest and woodland (DOV) was identified in the northern extent of the project site (opposite the Gravelly Beach Rd turn off) and is listed as threatened under the *Nature Conservation Act, 2002*. It was recommended to avoid major impacts to this area.

Table 3-2: Threatened Flora adjacent to the West Tamar Highway

Species	State-Listed? (Nature Conservation Act 2002)	Federally listed? (EPBC Act 1999)	Estimated Impact to Population
<i>Eucalyptus ovata forest and woodland</i>	Y – Threatened	N	None to minimal

3.3.2 Project 2

A patch of *Eucalyptus viminalis grassy forest and woodland* (DVG) was noted at the northern end of the project but is unlikely to be impacted by the works. This community is not listed as a threatened native vegetation community under the *Nature Conservation Act, 2002*. No threatened flora species were identified within the project area.

3.3.3 Projects 3 & 5

A number of native vegetation communities adjacent to the road corridor are listed as threatened under the *Nature Conservation Act, 2002*. These include *Eucalyptus ovata forest and woodland*. No other threatened flora species were identified within the project area.

Table 3-3: Threatened Flora adjacent to the West Tamar Highway

Species	State-Listed? (Nature Conservation Act 2002)	Federally listed? (EPBC Act 1999)	Estimated Impact to Population
<i>Eucalyptus ovata forest and woodland</i>	Y – Threatened	N	None to minimal

3.4 Fauna

The Department of State Growth compiled an Environment and Development Approvals Report for Project 1 for flora and fauna in March 2018.

A desktop assessment of environmental and heritage values that are recorded on Land Information System Tasmania (LISTmap) has been conducted for Projects 2, 3 & 5.

Further assessment of the listed fauna species in each project site will be required to assess the potential impacts of the proposed design and any likely permit approval processes to be undertaken. It is likely that impacts to fauna and their habitats can be minimised or removed in future design stages.

3.4.1 Project 1

The eastern barred bandicoot (*Perameles gunnii*) and Tasmanian devils (*Sarcophilus harrisii*) have previously been identified near the project site, however it is unlikely that these species will be impacted as part of the works. The eastern barred bandicoot and the Tasmanian devil are listed as rare and endangered, respectively, under the *Threatened Species Protection Act, 1995*, and are listed as vulnerable and endangered, respectively, under the *EPBC Act, 1999*. A further determination is to be made regarding the requirement of a fauna habitat assessment as the design progresses to the Preliminary Design stage.

Table 3-4-1: Threatened Fauna adjacent to the West Tamar Highway

Species	State-Listed? (Threatened Species Protection Act 1995)	Federally listed? (EPBC Act 1999)	Estimated Impact to Population
Perameles gunnii (Eastern barred bandicoot)	Y - Rare	Y - Vulnerable	Impact unlikely – Further investigation required
Sarcophilus harrisii (Tasmanian Devil)	Y- Endangered	Y – Endangered	Impact unlikely – Further investigation required

3.4.2 Project 2

The eastern barred bandicoot (*Perameles gunnii*) and the spotted-tail quoll (*Dasyurus maculatus*) have been observed in the project area, both of which are listed as vulnerable species under the *EPBC Act, 1999*, and as rare under the *Threatened Species Protection Act, 1995*. A Tasmanian wedge-tailed eagle (*Aquila audax fleayi*), which is listed as endangered under both state and national schedules, has also been observed at the southern end of the project site.

Table 3-4-2: Threatened Fauna adjacent to the West Tamar Highway

Species	State-Listed? (Threatened Species Protection Act 1995)	Federally listed? (EPBC Act 1999)	Estimated Impact to Population
Perameles gunnii (Eastern barred bandicoot)	Y - Rare	Y – Vulnerable	Impact unlikely – Further investigation required
Dasyurus maculatus (Spotted tailed quoll)	Y - Rare	Y – Vulnerable	Impact unlikely – Further investigation required
Aquila audax fleayi (Tasmanian wedge-tailed eagle)	Y - Endangered	Y – Endangered	Impact unlikely – Further investigation required

3.4.3 Projects 3 & 5

A number of fauna species have been observed in the project area, including the eastern barred bandicoot (*Perameles gunnii*), the green and gold frog (*Litoria raniformis*), both of which are listed as vulnerable under the *EPBC Act, 1999*. They are also listed as rare and vulnerable, respectively, under the *Threatened Species Protection Act, 1995*.

Table 3-4-3: Threatened Fauna adjacent to the West Tamar Highway

Species	State-Listed? (Threatened Species Protection Act 1995)	Federally listed? (EPBC Act 1999)	Estimated Impact to Population
Perameles gunnii (Eastern barred bandicoot)	Y - Rare	Y - Vulnerable	Impact unlikely – Further investigation required
Litoria raniformis (Green and gold frog)	Y- Vulnerable	Y – Vulnerable	Impact unlikely – Further investigation required

3.5 Aboriginal Heritage

Aboriginal Heritage Tasmania has advised that there are no identified Aboriginal heritage sites in or near the road reserve within any of the Project sites along the West Tamar Highway. There is no requirement for an Aboriginal Heritage Investigation, as there is a low probability of Aboriginal heritage being present. An Unanticipated Discovery Plan will be included within the tender documentation.

3.6 Historic Heritage Assessment

There are no known registered heritage properties or sites within the Project areas along the West Tamar Highway.

3.7 Landscape and Visual Impacts

No significant changes are proposed to the existing Highway alignment along the West Tamar Highway. The works involve widening of the existing road footprint to allow for a safer road cross-section for both vehicles and cyclists and will remain within the existing road reserve for much of the works. The preferred options that have been selected take into consideration the balance between the safety benefits achieved, the cost of each option and the overall impact of the proposed upgrade.

3.8 Stakeholder Engagement

3.8.1 Stakeholder Response

Public consultation and stakeholder engagement, in conjunction with the Department of State Growth, has been undertaken as part of the scoping phase. Stakeholder engagement activities have included visits with landowners adjacent to the works. Landowners have previously been sent correspondence regarding heritage and environmental field investigations being undertaken on their land.

The key stakeholders for the safety upgrades along the West Tamar Highway are:

- Landowners
- Tasmanian Farmers and Grazers Association (TFGA)
- RACT
- Department of State Growth
- Department of Primary Industries, Parks, Water and Environment
- Australian Government
- West Tamar Council
- Public Utilities
 - Tas Networks
 - Telstra
 - NBNCo
 - TasWater
- Heavy vehicle industry
- Passenger Transport operators
- School and public bus companies

The project is well supported by the West Tamar Council (WTC) and the Road Safety Committee (RSC) who have been lobbying the State Government for over 20 years to undertake improvements along the West Tamar Highway. Consultation with WTC and RSC has significantly informed the options analysis through discussion of their key issues, constraints and local knowledge of the area.

Meetings to-date have been held with sixteen individual landowners, with the vast majority of feedback being positive toward the safety improvements. The safety benefits of improved sight distances, a safer footpath, safer access to properties, proposed stormwater improvements, safer junctions for entering and exiting the highway, amenity for cyclists and safer overtaking opportunities between Exeter and the Batman Highway were understood and well received.

A public display of the proposed works was provided at the West Tamar Council offices in May 2019. The display was available for two weeks and provided the public an opportunity to give feedback or request further information.

Public participation will continue to be facilitated through the following means:

- One-on-one meetings with adjacent landowners
- Development and maintenance of web page content

3.9 Development Approvals

The projects are located within the West Tamar Council municipality. Development in this area is subject to the provisions of the *West Tamar Council Interim Planning Scheme 2013*. The project areas are subject to the Rural Resource Zone (adjacent agricultural land), the Utilities Zone (existing road reserve for the West Tamar Highway), Rural Living, Low Density Residential and General Residential, and Local and General Business.

The projects are discretionary use/development under the provision of the Planning Scheme. All affected landowners will be notified of the development as part of the discretionary planning application.

A Development Application is currently being developed and will be lodged with the West Tamar Council. The Development Application will be advertised by Council for 14 days for public comment as the nature of the development is discretionary.

4 Project Program and Costs

4.1 Project Program

The critical path for the project is based on the delivery of tender documentation in August 2019. Meeting these critical dates will ensure that construction works can begin in the 2019/2020 summer construction season. The key dates for the Project are shown in Table 4-1 below; the contract is to be tendered as Design & Construct.

Table 4-1: Critical Project Tasks and Timing

Project Task	Completion Date/Timing	Critical Path?
Development application submission	December 2019	Yes
Tender document delivered	Late June 2019	Yes
Advertisement of D&C tender	19 August 2019	Yes
Award of D&C contract	October 2019	Yes
Detailed Design delivered	Late January 2020	Yes
Commencement of works	February 2020	Yes
Practical completion of works	June 2021	Yes
Project close out	June 2021	No

The key assumptions of the project schedule developed for the West Tamar Highway projects include:

- The Development Application is accepted by the West Tamar Council without any major representations or onerous conditions imposed.
- No environmental or heritage delays impact the Project.
- Property acquisition negotiations are resolved during the development phase (including any requirements)

4.2 Costs

Project cost estimates have been prepared based on the Concept Design and also the “Best Practice Cost Estimation Standard for Publicly Funded Road and Rail Construction.” The nominal escalation rate applied in the cost estimates was 2.5%. The P50/P90 cost estimate summaries for each project are shown below.

The total combined project outturn cost for the proposed upgrades to the West Tamar Highway for Projects 1, 2, 3 & 5 is **\$12.85 million** for the P50 case and **\$14.2 million** for the P90 case.

The “Escalation Rate” applied to these cost estimates is determined by the cash flow, and the assumed rate of escalation each year from the date of these estimates to one year after practical completion. The predicted project cash flows for each project are shown below. Escalation has been applied to costs expended after 2019/2020 in the P90 estimate.

Table 4-2: Project cost estimates

Project	P50	P90
Project 1	\$6,550,000	\$7,150,000
Project 2	\$1,650,000	\$1,850,000
Project 3	\$4,400,000	\$4,900,000
Project 5	\$250,000	\$300,000
	\$12,850,000.00	

Note that current funding allocation is \$12 million however the Government has agreed that if required additional funding can be accessed from the *Launceston and Tamar Valley Traffic Vision* as necessary to allow for completion of the four projects listed above and Project 6.

4.2.1 Project 1 P50/P90 Cost Estimate and Cash Flow Summaries

Figure 4-2-1-1: P50/P90 Cost Estimate Summary

Cost Element:	Summary of Results:	
Scoping Phase Estimate	\$	244,000
Development Phase Estimate	\$	407,000
Utilities, Acquisition and Contract Administration Estimate	\$	841,000
Construction Costs Estimate (CC)	\$	3,790,000
Base Estimate (Owners Cost + Construction Cost)	\$	5,282,000.00
Inherent risk allowance	P50	P90
Contingent risk allowance	\$ 850,000	\$ 1,160,000
Base Estimate + Contingency (Inherent + Contingent)	\$ 310,000	\$ 610,000
Total contingency % above base estimate + Escallation	\$ 6,442,000	\$ 7,052,000
Escallation (Nominal - applied to base case + contingency)	22%	34%
	\$ 100,000	\$ 110,000
Total Out Turn (rounded)	\$ 6,550,000	\$ 7,150,000

	P50	P90
Total Out Turn Cost Est. (High Level)	\$ 6,550,000	\$ 7,150,000

Figure 4-2-1-2: Cash Flow Summary

Overall Cash Flow

P50 Cash Flow	Financial Year				
	2017/2018	2018 / 2019	2019 / 2020	2020/2021	2021/2022
Project Identification and Scoping	\$ -	\$ -	\$ 244,000	\$ -	\$ -
Project Development	\$ -	\$ -	\$ 407,000	\$ -	\$ -
Project Delivery (incl. CA)	\$ -	\$ -	\$ 1,389,300	\$ 3,241,700	\$ -
Inherent Risk	\$ -	\$ -	\$ 255,000	\$ 595,000	\$ -
Contingent Risk	\$ -	\$ -	\$ 93,000	\$ 217,000	\$ -
Escalation costs (nominal)	\$ -	\$ -	\$ -	\$ 101,343	\$ -
Sub-Total (annual)	\$ -	\$ -	\$ 2,388,300	\$ 4,155,043	\$ -
Accumulative Total	\$ -	\$ -	\$ 2,388,300	\$ 6,543,343	\$ 6,543,343

P90 Cash Flow	Financial Year				
	2017/2018	2018 / 2019	2019 / 2020	2020/2021	2021/2022
Project Identification and Scoping	\$ -	\$ -	\$ 244,000.00	\$ -	\$ -
Project Development	\$ -	\$ -	\$ 407,000.00	\$ -	\$ -
Project Delivery (incl. CA)	\$ -	\$ -	\$ 1,389,300.00	\$ 3,241,700	\$ -
Inherent Risk	\$ -	\$ -	\$ 348,000	\$ 812,000	\$ -
Contingent Risk	\$ -	\$ -	\$ 183,000	\$ 427,000	\$ -
Escalation costs (nominal)	\$ -	\$ -	\$ 145,000.00	\$ 112,017.50	\$ -
Sub-Total (annual)	\$ -	\$ -	\$ 2,065,300	\$ 4,480,700	\$ -
Accumulative Total	\$ -	\$ -	\$ 2,065,300	\$ 6,546,000	\$ 6,546,000

4.2.2 Project 2 P50/P90 Cost Estimate and Cash Flow Summaries

Figure 4-2-2-1: P50/P90 Cost Estimate Summary

Cost Element:

Scoping Phase Estimate
Development Phase Estimate
Utilities, Acquisition and Contract Administration Estimate
Construction Costs Estimate (CC)
Base Estimate (Owners Cost + Construction Cost)
Inherent risk allowance
Contingent risk allowance
Base Estimate + Contingency (Inherent + Contingent)
Total contingency % above base estimate + Escallation
Escallation (Nominal - applied to base case + contingency)
Total Out Turn (rounded)

Summary of Results:

\$	66,000
\$	109,000
\$	122,000
\$	1,020,000
\$	1,317,000.00
P50	P90
\$ 200,000	\$ 300,000
\$ 110,000	\$ 210,000
\$ 1,627,000	\$ 1,827,000
24%	39%
\$ 20,000	\$ 10,000
\$ 1,650,000	\$ 1,850,000

Total Out Turn Cost Est. (High Level)

P50	P90
\$ 1,650,000	\$ 1,850,000

Figure 4-2-2-2: Cash Flow Summary

Overall Cash Flow

P50 Cash Flow	Financial Year				
	2017/2018	2018/2019	2019/2020	2020/2021	2021/2022
Project Identification and Scoping	\$ -	\$ -	\$ 66,000	\$ -	\$ -
Project Development	\$ -	\$ -	\$ 109,000	\$ -	\$ -
Project Delivery (incl. CA)	\$ -	\$ -	\$ 571,000	\$ 571,000	\$ -
Inherent Risk	\$ -	\$ -	\$ 100,000	\$ 100,000	\$ -
Contingent Risk	\$ -	\$ -	\$ 55,000	\$ 55,000	\$ -
Escalation costs (nominal)	\$ -	\$ -	\$ -	\$ 18,150	\$ -
Sub-Total (annual)	\$ -	\$ -	\$ 901,000	\$ 744,150	\$ -
Accumulative Total	\$ -	\$ -	\$ 901,000	\$ 1,645,150	\$ 1,645,150

P90 Cash Flow	Financial Year				
	2017/2018	2018/2019	2019/2020	2020/2021	2021/2022
Project Identification and Scoping	\$ -	\$ -	\$ 66,000.00	\$ -	\$ -
Project Development	\$ -	\$ -	\$ 109,000.00	\$ -	\$ -
Project Delivery (incl. CA)	\$ -	\$ -	\$ 285,500.00	\$ 285,500	\$ -
Inherent Risk	\$ -	\$ -	\$ 150,000	\$ 150,000	\$ -
Contingent Risk	\$ -	\$ -	\$ 105,000	\$ 105,000	\$ -
Escalation costs (nominal)	\$ -	\$ -	\$ 145,000.00	\$ 13,512.50	\$ -
Sub-Total (annual)	\$ -	\$ -	\$ 685,500	\$ 540,500	\$ -
Accumulative Total	\$ -	\$ -	\$ 685,500	\$ 1,226,000	\$ 1,226,000

4.2.3 Project 3 P50/P90 Cost Estimate and Cash Flow Summaries

Figure 4-2-3-1: P50/P90 Cost Estimate Summary

Cost Element:		Summary of Results:	
Scoping Phase Estimate		\$	176,000
Development Phase Estimate		\$	293,000
Utilities, Acquisition and Contract Administration Estimate		\$	309,000
Construction Costs Estimate (CC)		\$	2,730,000
Base Estimate (Owners Cost + Construction Cost)		\$	3,508,000.00
Inherent risk allowance		P50	P90
Contingent risk allowance		\$ 540,000	\$ 780,000
Base Estimate + Contingency (Inherent + Contingent)		\$ 310,000	\$ 600,000
Total contingency % above base estimate + Escallation		\$ 4,358,000	\$ 4,888,000
Escallation (Nominal - applied to base case + contingency)		24%	39%
		\$ 40,000	\$ 40,000
Total Out Turn (rounded)		\$ 4,400,000	\$ 4,900,000

	P50	P90
Total Out Turn Cost Est. (High Level)	\$ 4,400,000	\$ 4,900,000

Figure 4-2-3-2: Cash Flow Summary

Overall Cash Flow

P50 Cash Flow	Financial Year				
	2017/2018	2018 / 2019	2019 / 2020	2020/2021	2021/2022
Project Identification and Scoping	\$ -	\$ -	\$ 176,000	\$ -	\$ -
Project Development	\$ -	\$ -	\$ 293,000	\$ -	\$ -
Project Delivery (incl. CA)	\$ -	\$ -	\$ 1,823,400	\$ 1,215,600	\$ -
Inherent Risk	\$ -	\$ -	\$ 324,000	\$ 216,000	\$ -
Contingent Risk	\$ -	\$ -	\$ 186,000	\$ 124,000	\$ -
Escalation costs (nominal)	\$ -	\$ -	\$ -	\$ 38,890	\$ -
Sub-Total (annual)	\$ -	\$ -	\$ 2,802,400	\$ 1,594,490	\$ -
Accumulative Total	\$ -	\$ -	\$ 2,802,400	\$ 4,396,890	\$ 4,396,890

P90 Cash Flow	Financial Year				
	2017/2018	2018 / 2019	2019 / 2020	2020/2021	2021/2022
Project Identification and Scoping	\$ -	\$ -	\$ 176,000.00	\$ -	\$ -
Project Development	\$ -	\$ -	\$ 293,000.00	\$ -	\$ -
Project Delivery (incl. CA)	\$ -	\$ -	\$ 1,823,400.00	\$ 1,215,600	\$ -
Inherent Risk	\$ -	\$ -	\$ 468,000	\$ 312,000	\$ -
Contingent Risk	\$ -	\$ -	\$ 360,000	\$ 240,000	\$ -
Escalation costs (nominal)	\$ -	\$ -	\$ 145,000.00	\$ 44,190.00	\$ -
Sub-Total (annual)	\$ -	\$ -	\$ 2,796,400	\$ 1,767,600	\$ -
Accumulative Total	\$ -	\$ -	\$ 2,796,400	\$ 4,564,000	\$ 4,564,000

4.2.4 Project 5 P50/P90 Cost Estimate and Cash Flow Summaries

Figure 4-2-3-1: P50/P90 Cost Estimate Summary

Cost Element:

Scoping Phase Estimate
Development Phase Estimate
Utilities, Acquisition and Contract Administration Estimate
Construction Costs Estimate (CC)
Base Estimate (Owners Cost + Construction Cost)
Inherent risk allowance
Contingent risk allowance
Base Estimate + Contingency (Inherent + Contingent)
Total contingency % above base estimate + Escalation
Escalation (Nominal - applied to base case + contingency)
Total Out Turn (rounded)

Summary of Results:

\$		8,000
\$		14,000
\$		25,000
\$		130,000
\$		177,000.00
	P50	P90
\$	30,000	\$ 50,000
\$	30,000	\$ 80,000
\$	237,000	\$ 307,000
	34%	73%
\$	-	\$ -
\$	250,000	\$ 300,000

Total Out Turn Cost Est. (High Level)

	P50	P90
\$	250,000	\$ 300,000

Figure 4-2-3-2: Cash Flow Summary

Overall Cash Flow

P50 Cash Flow	Financial Year				
	2017/2018	2018 / 2019	2019 / 2020	2020/2021	2021/2022
Project Identification and Scoping	\$ -	\$ -	\$ 8,000	\$ -	\$ -
Project Development	\$ -	\$ -	\$ 14,000	\$ -	\$ -
Project Delivery (incl. CA)	\$ -	\$ -	\$ 155,000	\$ -	\$ -
Inherent Risk	\$ -	\$ -	\$ 30,000	\$ -	\$ -
Contingent Risk	\$ -	\$ -	\$ 30,000	\$ -	\$ -
Escalation costs (nominal)	\$ -	\$ -	\$ -	\$ -	\$ -
Sub-Total (annual)	\$ -	\$ -	\$ 237,000	\$ -	\$ -
Accumulative Total	\$ -	\$ -	\$ 237,000	\$ 237,000	\$ 237,000

P90 Cash Flow	Financial Year				
	2017/2018	2018 / 2019	2019 / 2020	2020/2021	2021/2022
Project Identification and Scoping	\$ -	\$ -	\$ 8,000.00	\$ -	\$ -
Project Development	\$ -	\$ -	\$ 14,000.00	\$ -	\$ -
Project Delivery (incl. CA)	\$ -	\$ -	\$ 155,000.00	\$ -	\$ -
Inherent Risk	\$ -	\$ -	\$ 50,000	\$ -	\$ -
Contingent Risk	\$ -	\$ -	\$ 80,000	\$ -	\$ -
Escalation costs (nominal)	\$ -	\$ -	\$ 145,000.00	\$ -	\$ -
Sub-Total (annual)	\$ -	\$ -	\$ 430,000	\$ -	\$ -
Accumulative Total	\$ -	\$ -	\$ 430,000	\$ 430,000	\$ 430,000

4.3 Risk Assessment

The Department of State Growth has established a Risk Assessment process which has been set up to support delivery of this project. The risk assessment includes impact, risk rating, mitigation strategies and revised risk rating, throughout the Planning, Scoping and Delivery Phases of the project. The rating system for the risk assessment is defined in Table 4-3. The risk assessment has been continually updated through the project lifecycle as appropriate.

Table 4-3: Risk Ratings

Risk Rating	Risk Action Levels
VH – Very High	<ul style="list-style-type: none"> • Minister/Secretary decision/direction may be required • Provide memorandum to Manager Project Services • Include in Project Monthly Report
H – High	<ul style="list-style-type: none"> • Take immediate action to further control the risk • Include in Project Monthly Report • Consider providing supplementary advice to Manager Project Services
M – Medium	<ul style="list-style-type: none"> • Proactively manage risks • Report to Project Steering Committee through risk register • Review for improvement opportunities
L – Low	<ul style="list-style-type: none"> • Monitor risk, reduce if practicable

The risk assessment considered the key areas such as scope, communication, design, approvals, construction and implementation. Mitigation strategies have been developed for all of the risk items identified within these general areas. At this stage the residual risk ratings for all the items are either Medium or Low. A consolidated list of the identified risk events for the project has been incorporated into the P50/P90 cost estimates. Currently the major risks identified include:

- Tight project timeframes
- Stakeholder opposition and protracted landowner negotiations
- Discovery of an unlisted site with heritage values
- Geotechnical risks / latent conditions

5 Conclusion

The West Tamar Highway Traffic Solution safety improvements will improve the current deficiencies along the highway by providing sight distance improvements, a safer footpath, safer access to properties, proposed stormwater improvements, safer junctions for entering and exiting the highway, amenity for cyclists and safer overtaking opportunities between Exeter and the Batman Highway.

The safety upgrade comes from the West Tamar Highway Traffic Solution commitment of \$12 million from the Tasmanian Government to improving transport efficiency and road safety along the West Tamar Highway over the next three financial years (2018-2021). Project areas have been selected to improve safety for all road users, to cater for future development in the region and to reduce commuter travel time to and from Launceston. The upgrade project supports the *West Tamar Highway Priority Upgrades* six-point plan developed by the Tasmanian Government by addressing four of the six identified priority projects:

- Reconstruct and widen the West Tamar Highway between the Gravelly Beach Intersection and Rosevears Drive
- Reconstruct and widen the West Tamar Highway between the intersection with Atkinsons Road and Waldhorn Drive
- Provide safer overtaking opportunities between Exeter and the Batman Highway
- Construct a left-turn acceleration lane at the Motor Road/West Tamar Highway Junction

Improvements along sections of the highway have been identified as requiring high priority by the West Tamar Council, the Council's Road Safety Committee and the Royal Automobile Club of Tasmania, who have been lobbying the Tasmanian Government for over 20 years to undertake safety improvements along this section of road.

It is recommended the project be approved.

Appendix A. Stakeholder Concerns

Summary of Concerns

Issue	Comments
Land acquisition	Land acquisition is likely to occur to accommodate the widened footprint of the highway in some sections, and to allow ongoing maintenance of vegetation to ensure sight distances remain adequate.
Fencing	New fencing will be installed on the new boundary where property acquisition takes place. Fencing types will be agreed with the property owner addressed in the Project Specification.
Noise	Road noise is unlikely to increase due to the safety improvements to the highway, as the road remains on its existing alignment and the improvements are to increase safety and travel efficiency. Provision of an asphalt seal may appease any concerns.
Land value	Where property acquisition is likely to occur, consideration has been given to the direction in which pavement widening is to be undertaken to minimise the impact of works on landowners, where possible. For example, provision of safer overtaking opportunities (project 3) proposes pavement widening on the eastern side of the highway only to avoid impacting properties adjacent to the western side.
Utility services	A number of utility services cross under the highway within the project site, including communications, gas and power services. The utility providers have been contacted to discuss the proposed designs and how impact can be mitigated. Consultation with the utility providers will continue through the development and finalisation of the design and documentation.
Sight benching & loss of vegetation	Widening and benching of an existing batter west of Motor Road is required to provide safe intersection sight distance for the upgraded Motor Road intersection. Acquisition and fence relocation are likely to be required. Consultation with the landowner will continue.