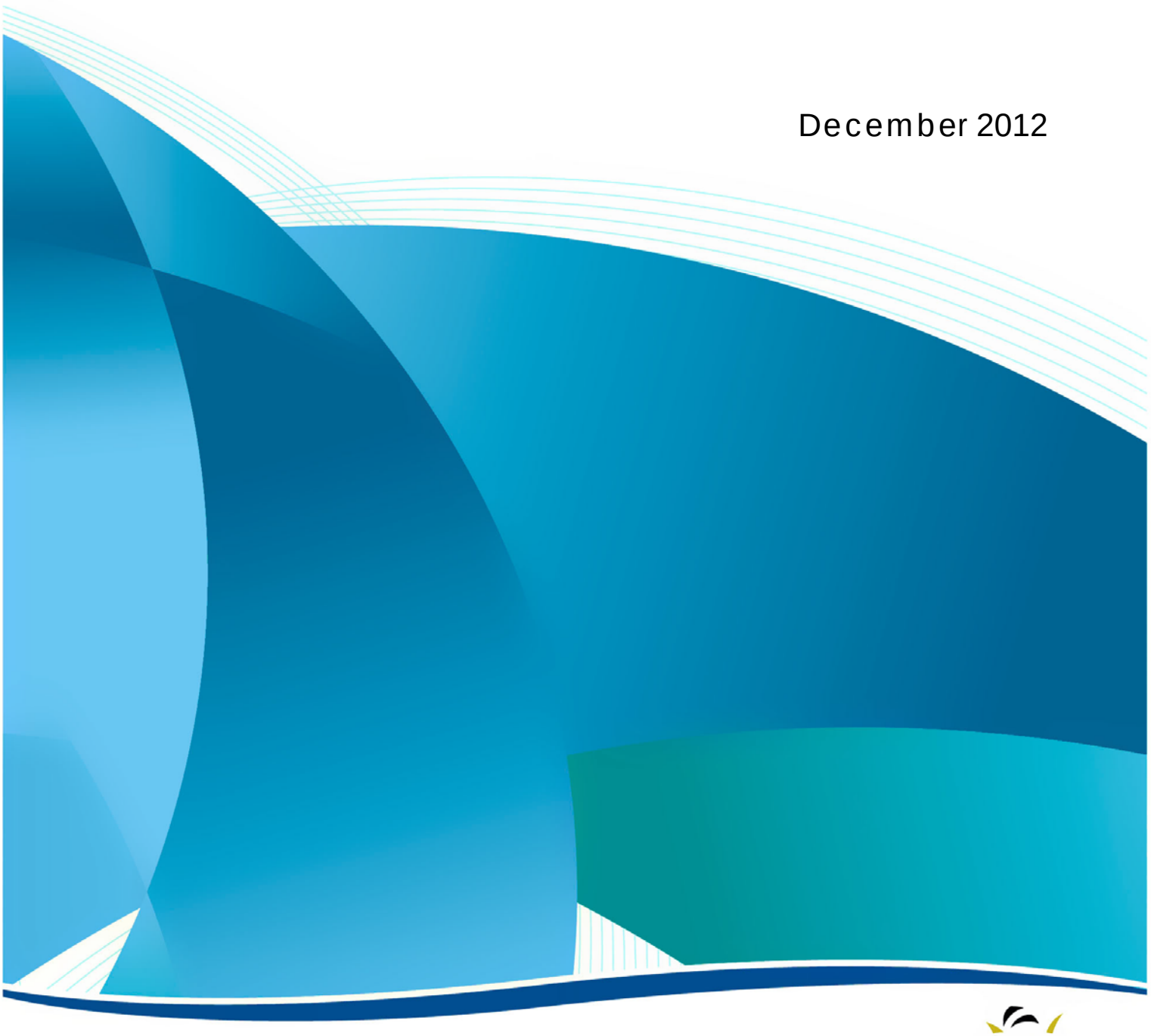
Huon Highway Corridor Study

December 2012



Tasmanian Government

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1. Executive Summary

Sinclair Knight Merz (SKM) is currently engaged by the Department of Infrastructure, Energy and Resources (DIER) to undertake a Huon Highway Corridor Study from Huonville to Southport. The Study is an investigation of the highway corridor with the primary objective of developing a prioritised list of corridor improvement projects to meet the expected strategic function of the road corridor over the next 30 years. The study includes an assessment of the existing road geometry, safety performance and transport efficiency, including transport modelling, with the outcome being an identified list of short, medium and long term projects.

This report outlines the processes used, including extensive stakeholder consultation, a Multi-criteria Analysis (MCA), a Value for Money Assessment (VMA) and documents the resulting projects recommended for further consideration.

A comprehensive stakeholder engagement program was conducted which included eight focus group workshops, three manned public displays and community feedback forms. Stakeholders included representation from the Huon Valley Community, Huon Valley Council, Industry Groups and DIER. This consultation in conjunction with an engineering assessment of the road corridor resulted in identification of the key issues and opportunities for improvement of the Huon Highway corridor between the Huon River Bridge at Huonville and Southport. The following is the priority of the stakeholders (highest priority first):

- Passing Opportunities
- Junction / Access Improvements
- Road Width and Curve Related Improvements

An individual investigation of each issue (stakeholder raised) and the corresponding improvement opportunity was used as an input to a MCA and VMA. This provided an objective means of comparing the relative benefits and disadvantages and the value for money for each project resulting in a prioritised list of projects.

Passing Opportunity Projects	
Project No.	**Name**
4600600	Somers Straight sight distance improvements
5805490	Scotts Road junction pullover area
6805100	Northbound slow vehicle passing lane south of Hopetoun Rd
3405100	Southbound overtaking lane north of Swamp Rd junction
6804450	Southbound slow vehicle passing lane north of Hopetoun Rd
4602690	Northbound overtaking lane north of Castle Forbes Bay

Junction/ Access Improvement Projects	
Project No.	**Name**
3409950	BAR treatment Jacksons Road Junction
5800000	Increase set-back to safety barrier Arve Rd junction
4609870	BAR treatment Sacred Heart School access
4604260	BAR treatment Palmers Rd junction north
6800000	Improve BAR width Esperance Coast Rd Junction
4606440	Sight distance improvements Shipwrights Point access
9408250	Priority change Hastings Caves Rd junction
5800170	Church St junction roundabout

Road Width and Curve Related Improvement Projects	
Project No.	**Name**
4608410	Shoulder Sealing - Port Huon (South) to Arve Rd
3400610	Shoulder Sealing - Huonville Sth to Swamp Rd
3405630	Shoulder Sealing - Swamp Rd to Castle Forbes Rd
4603150	Shoulder Sealing - Castle Forbes Rd to Port Huon (South)

2. Introduction

2.1. Background

Sinclair Knight Merz (SKM) is currently engaged by the Department of Infrastructure, Energy and Resources (DIER) to undertake a study of the Huon Highway corridor from Huonville to Southport. The study is an investigation of the Highway corridor with the primary objective of developing a prioritised list of road improvement projects to meet the expected strategic function of the road corridor over the next 30 years. The study includes an assessment of the existing road geometry, safety performance, transport efficiency (including transport modelling) leading to an identified list of short, medium and long term projects.

The Huon Highway corridor includes the Huon Highway from Huon River Bridge to Southport and includes Scotts Road. These two roads are Category 3 – Regional Access Roads, as defined by the Tasmanian State Road Hierarchy. The corridor is of strategic importance to regional and local communities and economies. The corridor carries heavy freight vehicles, school buses and tourist traffic as well as commuters.

Scotts Road and the Huon Highway north of Geeveston are part of the Tasmanian Gazetted High Productivity Vehicle (HPV) Route Network.

The daily traffic volumes range from approximately 350 vehicles per day (vpd) at Southport up to approximately 4,850 vpd south of Glen Huon Road junction with Huon Highway.

This report outlines the process used to derive the list of priority projects including the stakeholder consultation, Multi-criteria Analysis (MCA) and Value for Money Assessment (VMA).

The stakeholder engagement program included eight focus group workshops and the opportunity for general community input at three manned public displays and using individual feedback forms. Stakeholders included representation from the Huon Valley community, Huon Valley Council, Industry Groups and DIER. This stakeholder engagement, in conjunction with an engineering assessment of the road corridor, resulted in identification of the key issues and the opportunities for improvement of the Huon Highway Corridor between the Huon River Bridge at Huonville and Southport.

The MCA process assesses and scores each project against the following key themes:

- Social
- Environment
- Economic

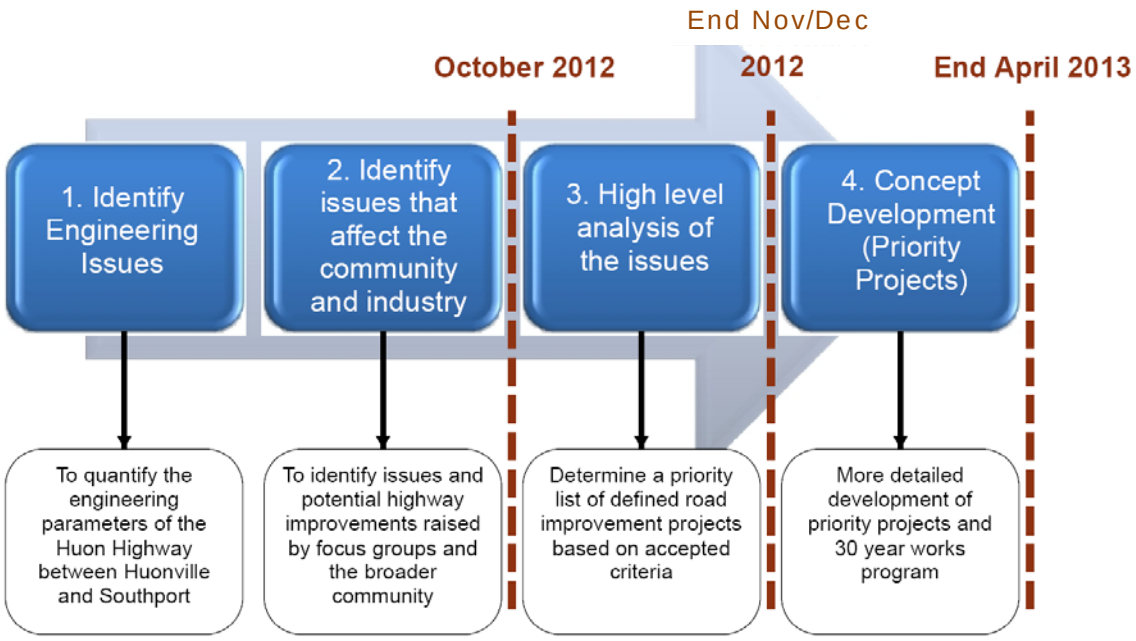
The VMA process adopts the key principles of a benefit cost analysis to ultimately determine a VMA score for each project that is comparable to the MCA scores.

The MCA and VMA processes are discussed in more detail in Sections 3 to 5.

2.2. Objectives

The objective of the overall study is to develop a prioritised list of road improvement projects that can be implemented for the road corridor over the next 30 years. Projects have been identified that will improve safety outcomes, provide a more consistent traffic environment along the road corridor and improve transport efficiency (including overtaking opportunities). The extent of the road corridor addressed by the study is the Huon Highway from Huon River Bridge (southern end) to Southport and includes Scotts Road.

The study involved a number of phases each with its own objective as shown in Figure 1.



- **Figure 1 Consulting Phases and Key Outcomes**

The final outcome of Phases 1 to 3 is a prioritised list of projects as presented in this report.

2.3. Phase 1 – Engineering Identification of Issues

Phase 1 of the project involved identifying the current operating environment and issues for the corridor from an engineering perspective. This included:

- A road safety audit
- Assessment of the current geometry and road parameters against contemporary road design standards
- Assessment of current road users
- Crash data analysis
- Transport efficiency including modelling of existing vehicle queuing, travel times and vehicle operating costs.
- Geographic Information System (GIS) analysis and mapping to allow for the impact of multiple issues to be assessed at the same time.

The results from Phase 1 were a key input into the stakeholder consultation process to achieve two key aims:

1) Ensure that any issues raised are supported by factual information
2) Provide a list of issues as a starting point for the Focus Groups workshops

2.4. Phase 2 - Stakeholder Consultation

Issues and potential improvement opportunities were identified in Phase Two of the Study through eight Focus Group workshops held with local community, tourism and industry representatives. The Focus Groups were selected from the following locations and/or affiliations:

Industry Groups/Council:

1) Huon Valley Council
2) Local tourism organisations and businesses
3) Local Industry, including aquaculture, agriculture, forestry and other road users

Community-based groups centred in or around the area:

4) Franklin
5) Port Huon/Geeveston
6) Waterloo/Glendevie
7) Dover
8) Southport

Each of the eight Focus Group workshops were highly interactive where participants provided feedback on an initial list of issues identified by the SKM/DIER project team along with identifying new issues.

Participants were then asked to list potential project opportunities to address the issues and identify and rank their top three project opportunities. The results are summarised in Figure 2.

The results from the Phase 1 - Engineering Assessment and the Phase 2 - Stakeholder Engagement were updated in the GIS and public display panels with all the identified opportunities prepared. Three manned public displays were setup at Franklin, Geeveston and Dover to gain wider community input and feedback. A form for providing individual feedback was available at these displays.

A more comprehensive description of the stakeholder engagement process is provided in the report *Huon Highway Corridor Study Preliminary Report on Community Consultation* prepared by John Wadsley Planning and Heritage Consultancy (Dec 2012).

The outcome of Phase 2 was a list of project opportunities for more detailed development during Phase 3.

2.4.1. Focus Group Priorities

The key issues that were raised at each of the eight focus groups is summarised below:

1) Industry/Transport Focus Group

- Huon Highway is getting busier with changes in the freight task, while the road condition is deteriorating and driver behaviour is often a cause of frustration.
- Often tourists travel very slowly which affects all drivers, not just trucks. Local truck drivers pull over to allow cars to pass and many do this regularly, but tourists do not appreciate the disruption they can cause. It was suggested better signage for tourists would help as well as providing designated pullover areas for taking photographs etc.
- Increase in the aquaculture industry has changed the freight task along the highway, and also the use of the road at different times. There are very few passing opportunities and the journey to work can often be much longer than anticipated.
- The section between Dover and Geeveston was the worst in terms of poor road alignment, insufficient road width and lack of passing opportunities. However, the HPV section from Huonville to Geeveston also needs to be maintained at a good standard. Scotts Road was seen as a major link and should be improved.

2) Business/Tourism Focus Group

- Businesses in the region are going through difficult times. The tourist season has been going longer, beginning in September and extending to May. Overall visitor numbers have reduced over the past 2 years.
- The Tahune Air Walk has recorded a drop in numbers from 150,000 in the first year to 60,000 last year. There has been a 40% decrease in numbers this year compared to last year. Similar results have been recorded at Hastings Cave, the unsealed road is blamed for many tourists not venturing that far south. Many participants believed tourist numbers would increase if the Hasting Cave and Lune River roads were sealed to allow hire car visitors to use them.
- There were issues raised about needing better tourism signage to attractions, all the way from Kingston and the Southern Outlet.
- Esperance Coast Road was suggested as being signed a scenic tourist route to allow people to ‘do the loop’ through Dover. There was also agreement there needs to be better designation of scenic lay-by areas for photographs/picnics particularly near Franklin, Port Huon and Dover.

3) Franklin/Castle Forbes Bay Focus Group

- The community were pleased to see that this project had commenced after the Overtaking Lanes Project. There was concern over traffic flows through Franklin and the need to have designated crossing points for pedestrians as well as a lay-by for tourists near Eldercare (this could be integrated with the walking track). A gateway concept for Franklin as also discussed. The Huon Eldercare entrance was raised as a concern for turning traffic.
- There was comment that the highway should have wider sealed shoulder/edge lines to attract cyclists, as the Huonville to Geeveston section is now quite popular.
- There were many concerns with some existing junctions and the lack of turning lanes, as well as the need to clear vegetation to improve sight lines for overtaking. However, many did not want to see the scenic/heritage qualities of the route adversely affected. The variation in speed zones was also frustrating for many people.

4) Geeveston/Port Huon Focus Group

- Concerns were raised over safety for pedestrians through Port Huon and Geeveston, particularly at bus stops and near major junctions. Poor road safety was also raised as a concern near Shipwrights Point, the Kermandie Hotel/marina, Sacred Heart School, Kermandie River Road junction, Arve Road junction and Church Street junction. There was discussion over moving tourism signage to direct tourists through the main street of Geeveston, while still directing forestry vehicles down Arve Road. The section between Geeveston and Scotts Road (southern junction) was seen as being very poor in terms of width, alignment and the number of crashes.
- There was support for a speed limit review, widened and sealed road shoulders, as well as identifying lay-by locations for tourists along the route, and sealing of Hastings Cave/Ida Bay Roads.

5) Surges Bay/Glendevie Focus Group

- The majority of concerns for this group were over the poor standard of existing junctions and/or the lack of turning lanes, poor sight distance and access to existing farms, quarries and aquaculture operations. A number of bus stops were also criticised, particularly where cars wait for pick-ups and/or the lack of safety for children walking along the highway.
- There was support for better tourism signage, widened road shoulders, and a review of speed zones. Tourism traffic was considered to be frustrating, especially where caravans/motor homes were involved as they were very slow and did not pull over to allow traffic to pass. Overtaking opportunities on both sides of Glendevie Hill, near Scotts Road and Sommers Straight were seen as important developments.

6) Dover/Strathblane Focus Group

- There was concern over the junction of Station Road in the Dover township complicated by the supermarket access, and there was support for works here to address this (e.g. small roundabout). The poor quality of the road surface and alignment between Geeveston and Dover was seen as a major concern. The Police Point Road junction was of particular concern. The highway north of Dover has been the site of many crashes because of small dips and poor alignment.
- Bus operators commented on the dangerous situations caused by narrow lanes with heavy vehicles passing them in the opposite direction. Comment was also made on the need for improved bus stops and pedestrian safety in that vicinity. All agreed on the need for overtaking opportunities between Dover and Geeveston.

7) Southport/Ida Bay Focus Group

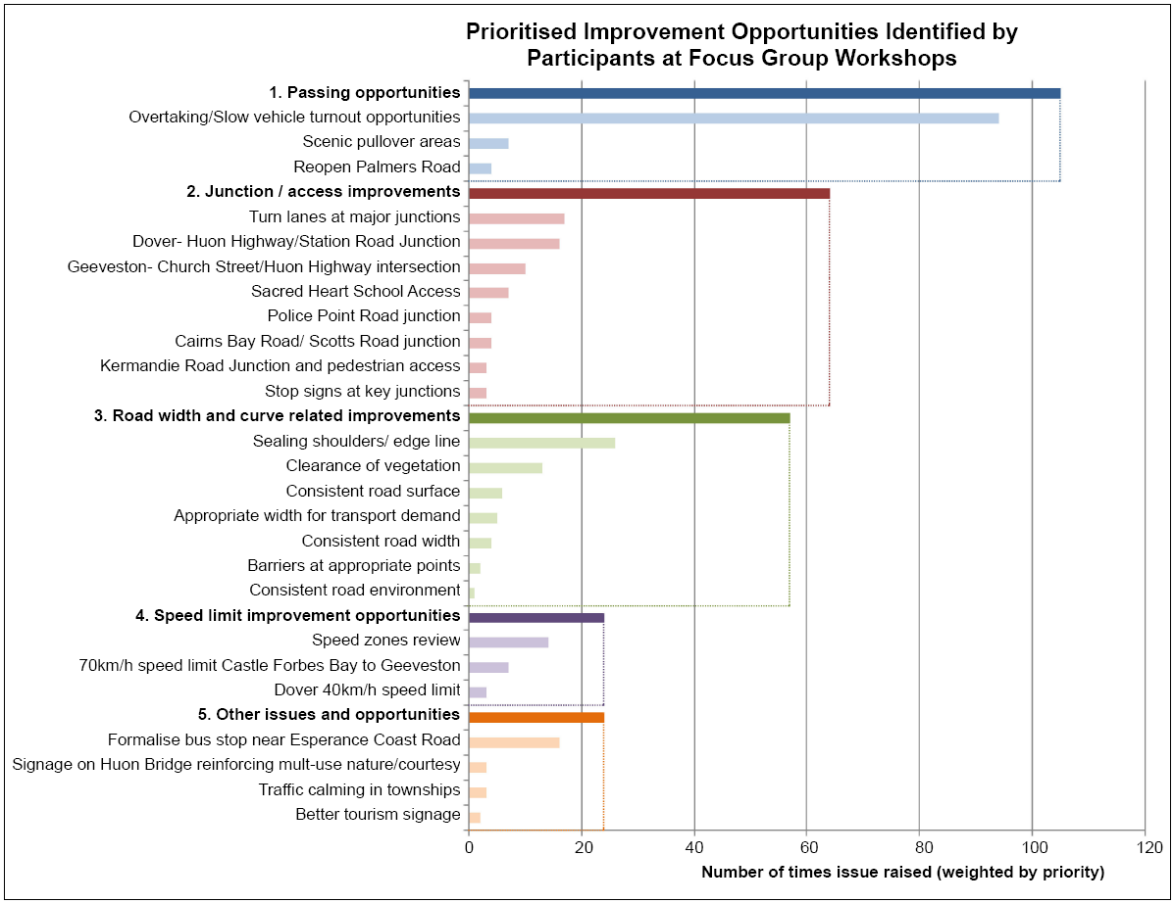
- Sealing of the Hasting Cave and Lune River roads was seen as an important way of improving tourism; however it was acknowledged this was outside the project scope. But the existing junction with the highway and Hastings Cave Road was raised as a concern because the signage is confusing for tourists, has poor delineation and very poor sight distances.
- The highway into Southport was considered to be very narrow with increasing traffic (including large abalone dive boats on trailers) and more people going to Recherche Bay.

- Signage generally was seen as confusing or non-existent, making it very difficult for tourists especially the ‘end speed limit’ signs. There was support for improved tourism signage and scenic pullover areas. The need for overtaking opportunities between Southport and Geeveston was highlighted, a more consistent road pavement width with sealed shoulders and better vegetation clearance.

8) Huon Valley Council Focus Group

- The provision of passing opportunities along the whole route was emphasised, as was the need to improve some of the junctions with turning lanes or improved sight distances. Vegetation clearance was also highlighted. It was agreed that Council needs to better control any future applications for direct access to the highway and look for alternative solutions. Better driver education was also raised as a matter to be promoted. The location of power poles close to the road was raised; however the costs to relocate these may be prohibitive.
- There was support for a speed limit review, better pedestrian infrastructure, and scenic pullover locations for tourists along the route.

Figure 2 Prioritised Improvement Opportunities Identified by Participants at Phase 2 Focus Group Workshops



2.5. Phase 3 – High Level Analysis

This phase takes the opportunities identified in Phase 2 and develops them into projects based on a high level analysis. This analysis included:

- Field assessment of each project to ensured the proposed solution would address the issues raised and understand any constraints
- High level assessment of likely construction cost
- Consideration of the economic aspects of each project including:
  - Road safety performance
  - Transport efficiency
  - Constructability
- Consideration of the environmental aspects including:
  - Flora and fauna
  - Heritage
  - Visual amenity.
- Consideration of the Social aspects including:
  - Impact on landowners
  - Broader community acceptance and benefit
  - Landuse impacts.

Developed projects were then run through the MCA and VMA processes resulting in a list of priority projects. These processes are explained in more detail in Section 3 and Section 4 of this report.

3. MCA Process

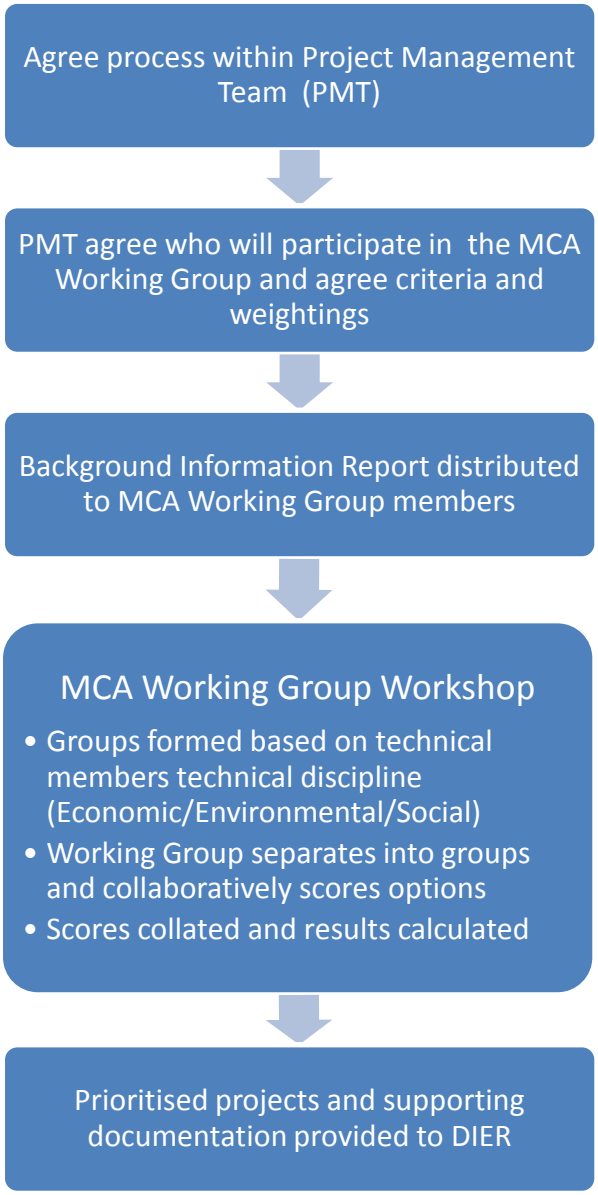
The Project Management Team , consisting of DIER and SKM staff and sub-consultant John Wadsley Planning and Heritage Consultancy, developed a methodology to facilitate a Multi Criteria Analysis (MCA) for the projects. The general organisation of the process is outlined in Figure 3.

The process adopted is similar to that used in MCA for other road projects in Australia, including Tasmania, where a number of projects need to be assessed against each other to formulate a priority list.

There are three theme areas; economic, environmental and social with overall weightings. Within each of these theme areas are appropriate criteria that are scored individually and then combined to provide the overall theme scores. The adopted weightings, as shown in Table 1, were formulated based on knowledge from previous MCA processes in Tasmania and with careful consideration of the particular issues of importance for this project. The stakeholder consultation as outlined in Section 2.4, along with an understanding within the MCA Working Group of the technical and planning issues, was used to formulate and fine tune the weightings. Once the MCA Working Group had completed the scoring process a sensitivity analysis was conducted to further understand the impact of individual weightings. The overall conclusion is the adopted criteria weightings as outlined in Table 1 are considered appropriate.

To ensure a consistent and transparent approach a scorecard was developed to guide the MCA Working Group with the scoring of each criterion. The scorecard used is shown in Table 2. The higher the score the more impact or importance is placed on the criterion being considered.

- **Figure 3 MCA Process**



- **Table 1 Adopted MCA Themes & Criterion Weightings**

Theme	Theme Weighting	Criterion	Criterion Weighting	Overall Weighting
Social	30	Impact on Landowners	20	6
		Broader Community Acceptance	30	9
		Land Use Impacts	20	6
		Community Benefit	30	9
		Subtotal	100	30
Environment	30	Flora & Fauna	35	10.5
		Heritage Impacts (Aboriginal & European)	30	9
		Visual Amenity	35	10.5
		Subtotal	100	30
Economic	40	Transport Efficiency / Reliability (VOC)	25	10
		Road Safety Performance	25	10
		Engineering / Constructability	20	8
		Construction Cost	30	12
		Subtotal	100	40
Total	100			

- **Table 2 Criteria Definition Scorecard**

Theme	Criterion	Indicator	Score Range
Social			
	Impact on Landowners	Acceptance by owners directly effected	5 = Expected to receive majority support from directly affected landowners. No significant risk of appeals against required statutory approvals 3 = No significant opposition or support. No significant risk of appeals against required statutory approvals 1 = Unlikely to be supported by affected landowners. High risk of appeals against statutory approvals
	Broader Community Acceptance	Acceptance by general community	5 = Expected to receive majority support from general community. No significant risk of appeals against required statutory approvals 3 = No significant opposition or support from genial community. No significant risk of appeals against required statutory approvals 1 = unlikely to be supported by general community. High risk of appeals against statutory approvals
	Land Use Impacts	Severance of land and impact on future development potential	5 = Minimal severance of land and reduction of future development potential 3 = Some severance of land but impacts can be mostly be minimised through amalgamation of severed titles 1 = Significant land severance and unable to minimise impact by amalgamation of severed titles
	Community Benefit	Benefit to the community	5 = Positive outcome to the Huon region 3 = Positive outcome to local town / community 1 = No significant benefit
Environment			
	Flora & Fauna	Impact on threatened flora and fauna species	5 = No threatened species within footprint, no permits required 3 = Rare or vulnerable species within footprint, low risk of permit(s) not being granted 1 = Endangered or critically endangered species within footprint, highly likely that permit required with probable lengthy timeframes, EPBC referral
	Heritage Impacts (Aboriginal & European)	Impact on site of Aboriginal or European heritage significance	5 = No likelihood of sites within project footprint and minimal impact on adjacent site(s) of significance, no permits required 3 = Known site(s) of significance within footprint but not likely to adversely effect site or project, low risk of permit(s) not being granted 1 = Known site(s) of significance within footprint of adjacent that is likely to have significant adverse effect of heritage site or project, highly likely that permit required with probable lengthy timeframes, EPBC referral.
	Visual Amenity	Impact on visual amenity of surrounding properties	5 = Significant improvement to the visual amenity 3 = No impact to visual amenity 1 = Significant adverse impact to the visual amenity
Economic			
	Transport Efficiency / Reliability / Vehicle Operating Cost	Improvement in Transport efficiency	5 = Significant improvement by reduction in platooning or vehicles stopping for turning vehicles, improvement to vehicle travel time reliability 3 = Minor improvement to transport efficiency 1 = Negative impact to transport efficiency
	Road Safety Performance	Anticipated road safety performance	5 = Improvement by significant reduction in crash potential 3 = Minor improvement in road safety performance 1 = Potential adverse affect to crashes that requires further assessment
	Engineering / Constructability	Potential engineering or construction issues to impact construction and on going asset life cycle	5 = No engineering and construction challenges 3 = Minor engineering / construction challenges 1 = Major engineering / construction challenges
	Construction Cost	Construction cost	5 = low cost per m2 of works area (pavement) 3 = average cost per m2 of works area (pavement) 1 = high cost per m2 of works area (pavement)

The MCA workshop included representatives from SKM, sub consultant John Wadsley and DIER. The attendees were selected by the Project Management Team based on their knowledge and experience relevant to the Study and the issues to be considered. The members of the MCA Working Group were as follows:

- John Wadsley (SKM Sub Consultant & Workshop Facilitator)

- Social
  - Mark Iles DIER Project Manager, Planning & Design Section
  - Mel Simmons DIER Communication Consultant, Communications and Marketing
  - Eddie Gall DIER Analyst, Asset Information Group
  - Janine Pearson DIER Active Transport Project Officer
  - Simon Monk DIER Ministerial Advisor - Infrastructure
  - Helen Cordell DIER Project Manager, Planning & Design Section

- Environment
  - Lillian Reardon DIER Project Manager, Planning & Design Section
  - Kirsten Leggett SKM Senior Environmental Consultant
  - Selena Dixon DIER Manager Environment and Heritage
  - Dick Shaw DIER Departmental Liaison Officer
  - Mike Jones SKM Senior Archaeologist
  - Andrew McConachy SKM Senior Environmental Engineer and Study Project Manager

- Economic
  - Peter Hubble DIER Manager Traffic South
  - Julian Koning SKM Senior Civil Engineer and Study Design Manager
  - Adrian Payne DIER Senior Project Manager, Project Delivery
  - Ricky Smith DIER Planning & Design Officer
  - Kathryn Easther SKM Graduate Civil Engineer

Prior to the workshop a background paper was distributed to all Working Group participants. This paper outlined the potential impacts and issues associated with each project relevant to the assessment criteria.

Participants in the workshop only scored the projects against the criteria that were relevant to their area of expertise. For each project and each criterion as listed in Table 1 the MCA theme groups, (Social, Environment and Economic) as shown above, came up with one consensus score. This was to promote discussion on each issue and ensure robust results.

4. Value for Money Assessment

4.1. Overview

A **Value for Money Assessment** (VMA) was undertaken and adopts the key principles of a benefit cost analysis which is a systematic process for calculating and comparing benefits and costs of a project. The **VMA** has two purposes:

1) To determine if the project is a sound investment/decision (justification/feasibility),
2) To provide a basis for comparing differing and discrete projects. It involves comparing the estimated order of cost for construction of each project against the estimated cost benefits, to see whether the benefits outweigh the costs, and by how much.

The benefits have been determined for user travel time savings and crash reduction cost savings and the initial investment for project construction has been estimated. These benefits are expressed in monetary terms, and are adjusted for the time value of money, so that the flow of benefits and initial project costs over time (30 year period) are expressed on a common basis in terms of their "net present value."

The process of determining crash reductions and travel time savings are discussed further in Sections 4.2 and 4.3 respectively.

The potential projects identified in this phase have been grouped into the following types:

1) Transport efficiency (passing opportunity) improvement opportunity
2) Road width and/or road geometry related improvement opportunity
3) Junction/access improvement opportunity

Projects have been assessed for crash reduction effectiveness and those projects of the type “Transport efficiency improvement opportunity” have also been assessed for road user travel time savings.

A VMA score has been assigned to each project based on the ratio of the monetary value of benefits (travel time and crash reduction) against likely construction costs, analysed over a time period of 30 years.

The VMA score is a value between 0 and 200 and is determined by moderating the value of the ratio of the monetary benefits against cost for all the identified projects.

4.2. Crash Reduction Assessment

An analysis of the recorded crashes along the corridor that occurred over the past 10 years was undertaken to determine the current level of safety performance of the corridor. This is referred to as the base case crash rate.

Each potential project opportunity has been assessed to determine the safety performance improvement. The safety improvement that is determined is expressed in terms of crash reduction in the base case crash rate. The monetary value of the crash reduction was then determined and this monetary benefit used in the VMA process.

The assessment of crashes, crash reduction due to each potential improvement opportunity (project) and the associated crash costs has been undertaken using established methodologies as identified in the following Austroads publications:

1) Austroads (2001) Effects of Sealed Shoulders on Road User costs.
2) Austroads Research Report AP-R422-12 ; Effectiveness of Road Safety Engineering Treatments, November 2012.
3) Austroads (2001) Economic Evaluation of Road Investment Proposals, Improved Prediction Models for Road Crash Savings.

The results of the crash reduction assessment have been expressed in monetary terms for the VMA.

4.3. Travel Time Savings Assessment

A traffic model of the existing road corridor was undertaken in order to determine the current level of road efficiency performance. This traffic model is referred to as the base traffic model.

The modelling was undertaken using TRARR (TRAffic on Rural Roads) software, which is a micro-simulation model of traffic flow on two-lane roads that was developed by the Australian Road Research Board (ARRB).

Passing opportunity type projects were re-modelled and compared to the base traffic model in order to quantify a reduction in road user travel time along the road corridor that is resulting from the project opportunity.

The TRARR software has also been used to determine the benefits of alternative improvement options in terms of traffic characteristics including speed, travel time, vehicle bunching, vehicle queuing characteristics, overtaking rate and fuel consumption.

The travel time savings determined for overtaking opportunities has been expressed in monetary terms for the VMA based on a comparison with the existing situation.

5. Prioritised Projects

The MCA and VMA scores have been combined based on the weightings shown in Table 3.

- **Table 3 MCA – VMA Weightings**

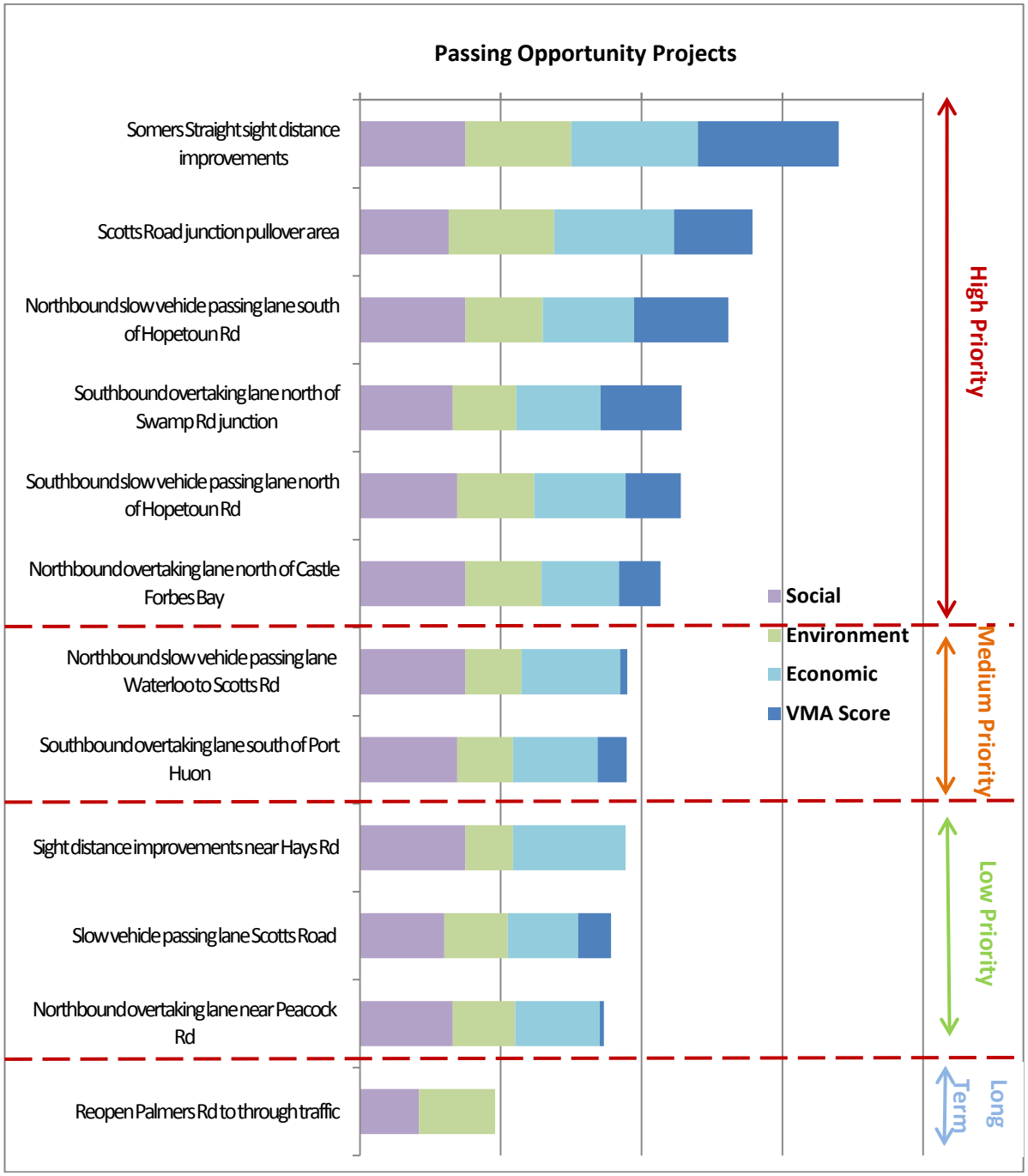
Process	Theme	Weighting (%)	Score Range	Weighted Score Range
MCA	Social	21	1-5	30-150
	Environment	21	1-5	30-150
	Economic	29	1-5	40-200
VMA	Value for Money Index	29	NA	0-200
	Total	**100**		**100-700**

The resulting priority projects based on the combined MCA and VMA scores are shown in Figure 4, Figure 5 and Figure 6. The priority projects have been broken down into the three key improvement opportunities identified at the Focus Group Workshops by the community and industry stakeholders (refer to Figure 2). These improvement opportunities are:

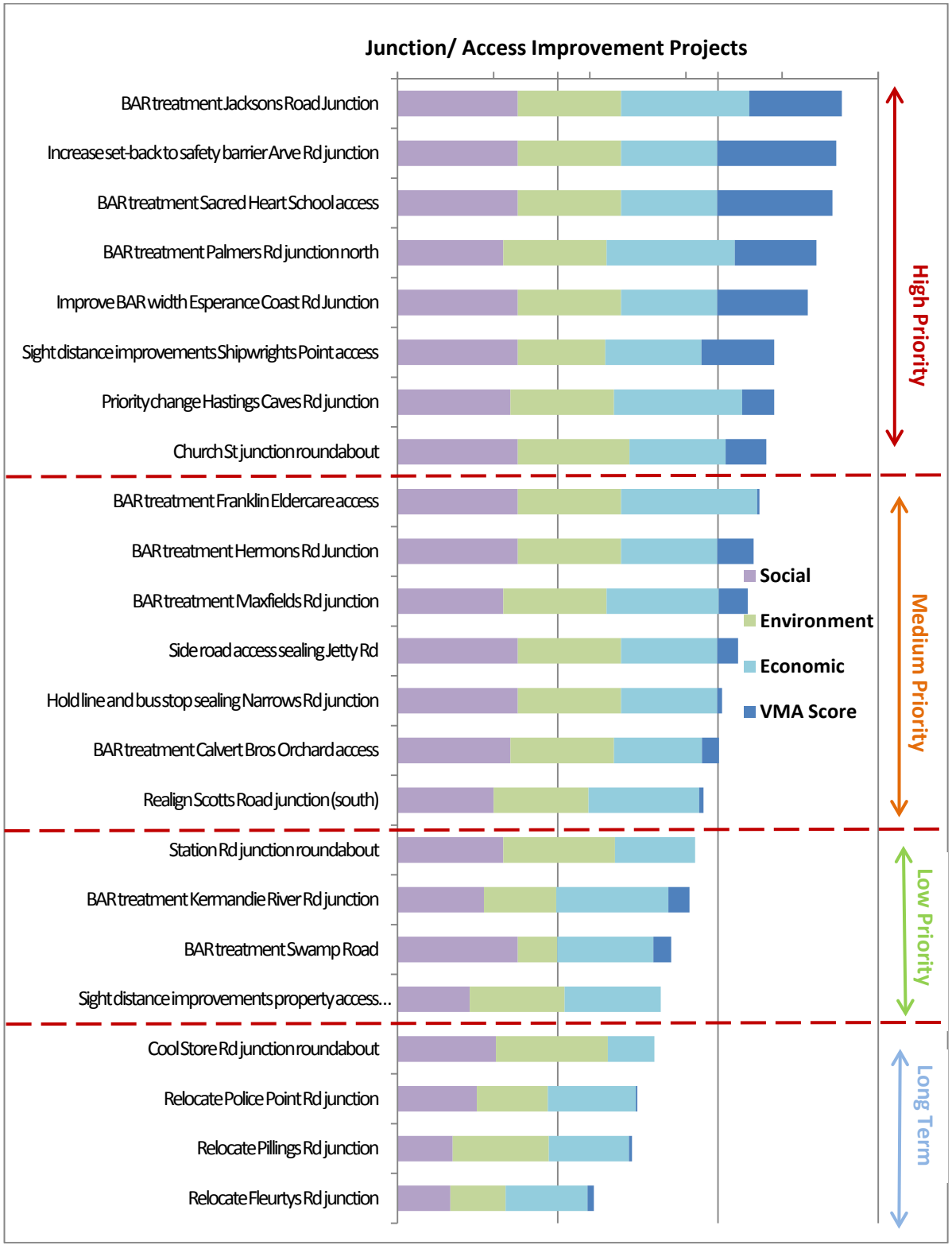
- Passing opportunities
- Junction/access improvements
- Road width and curve related improvements

Projects have been grouped as high, medium and low with a fourth category “long term” to represent those projects that may be considered past the 30 year planning time frame of this corridor study.

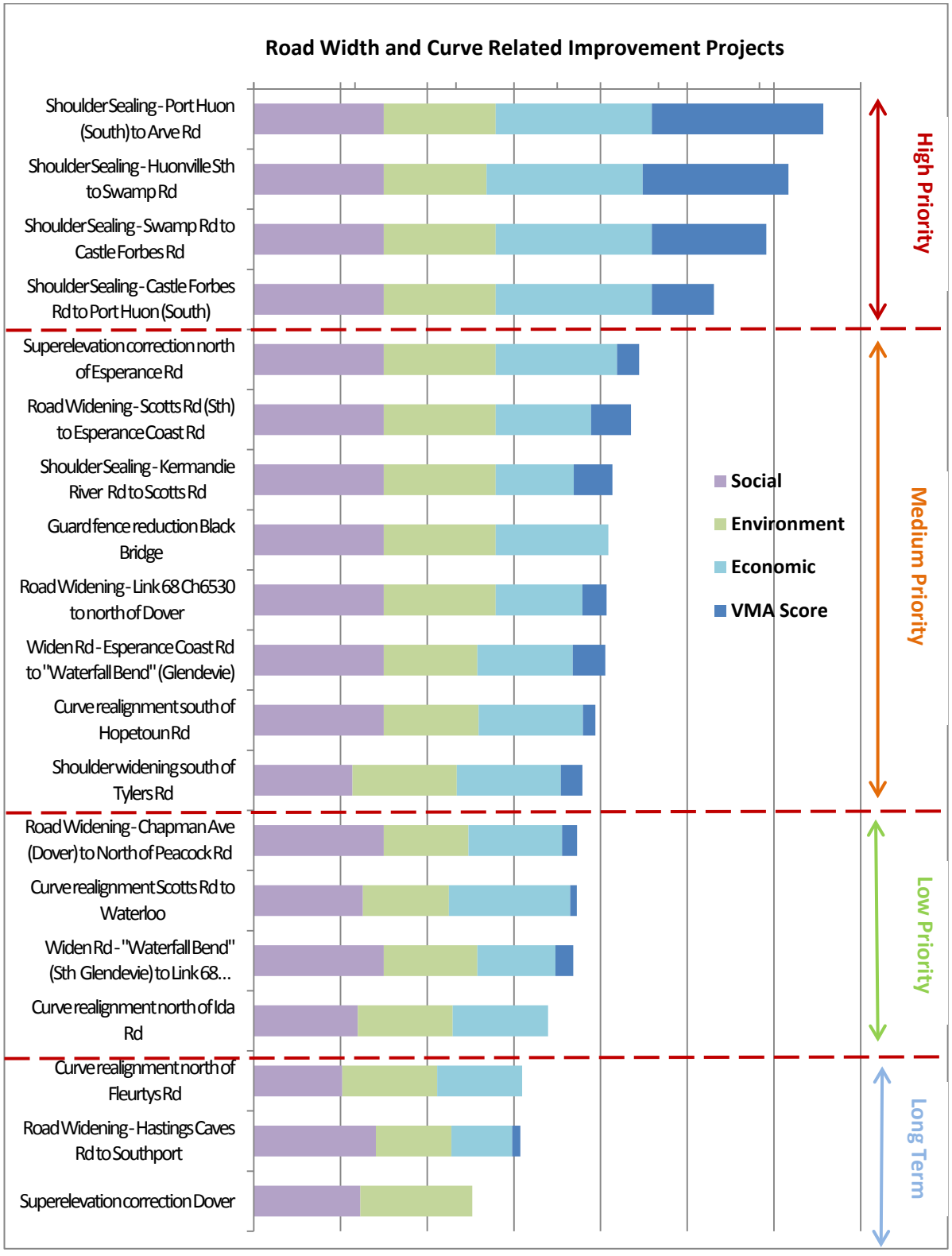
- **Figure 4 List of Priority Passing Opportunity Projects based on MCA & VMA Process**



- **Figure 5 List of Priority Junction/ Access Improvement Projects based on MCA & VMA Process**



- **Figure 6 List of Priority Road Width and Curve Related Improvement Projects based on MCA & VMA Process**



The **passing opportunity projects** in order of priority are shown in Table 4.

- **Table 4 Passing Opportunity Projects in Order of Priority**

Passing Opportunity Projects		
Project No.	**Name**	**Priority**
4600600	Somers Straight sight distance improvements	High
5805490	Scotts Road junction pullover area	High
6805100	Northbound slow vehicle passing lane south of Hopetoun Rd	High
3405100	Southbound overtaking lane north of Swamp Rd junction	High
6804450	Southbound slow vehicle passing lane north of Hopetoun Rd	High
4602690	Northbound overtaking lane north of Castle Forbes Bay	High
5806010	Northbound slow vehicle passing lane Waterloo to Scotts Rd	Medium
4609000	Southbound overtaking lane south of Port Huon	Medium
9404500	Sight distance improvements near Hays Rd	Low
5805400	Slow vehicle passing lane Scotts Road	Low
9406300	Northbound overtaking lane near Peacock Rd	Low
4604280	Reopen Palmers Rd to through traffic	Long Term

The **junction/access improvement projects** in order of priority are shown in Table 5.

- **Table 5 Junction/ Access Improvement Projects in Order of Priority**

Junction/ Access Improvement Projects		
Project No.	**Name**	**Priority**
3409950	BAR treatment Jacksons Road Junction	High
5800000	Increase set-back to safety barrier Arve Rd junction	High
4609870	BAR treatment Sacred Heart School access	High
4604260	BAR treatment Palmers Rd junction north	High
6800000	Improve BAR width Esperance Coast Rd Junction	High
4606440	Sight distance improvements Shipwrights Point access	High
9408250	Priority change Hastings Caves Rd junction	High
5800170	Church St junction roundabout	High
3406380	BAR treatment Franklin Eldercare access	Medium
5804680	BAR treatment Hermons Rd Junction	Medium
3403800	BAR treatment Maxfields Rd junction	Medium
5807230	Side road access sealing Jetty Rd	Medium
7807310	Hold line and bus stop sealing Narrows Rd junction	Medium
5806860	BAR treatment Calvert Bros Orchard access	Medium
5805500	Realign Scotts Road junction (south)	Medium
7801870	Station Rd junction roundabout	Low
5801070	BAR treatment Kermandie River Rd junction	Low
3405620	BAR treatment Swamp Road	Low
5806600	Sight distance improvements property access Waterloo	Low
3400420	Cool Store Rd junction roundabout	Long Term
6802240	Relocate Police Point Rd junction	Long Term
5804690	Relocate Pillings Rd junction	Long Term
4601810	Relocate Fleurtys Rd junction	Long Term

The **road width and curve related improvement projects** in order of priority are shown in Table 6.

- **Table 6 Road Width and Curve Related Improvement Projects in Order of Priority**

Road Width and Curve Related Improvement Projects		
Project No.	**Name**	**Priority**
4608410	Shoulder Sealing - Port Huon (South) to Arve Rd	High
3400610	Shoulder Sealing - Huonville Sth to Swamp Rd	High
3405630	Shoulder Sealing - Swamp Rd to Castle Forbes Rd	High
4603150	Shoulder Sealing - Castle Forbes Rd to Port Huon (South)	High
5809460	Super elevation correction north of Esperance Rd	Medium
5805510	Road Widening - Scotts Rd (Sth) to Esperance Coast Rd	Medium
5801080	Shoulder Sealing - Kermandie River Rd to Scotts Rd	Medium
3404570	Guard fence reduction Black Bridge	Medium
6806530	Road Widening - Link 68 Ch6530 to north of Dover	Medium
6800010	Widen Rd - Esperance Coast Rd to "Waterfall Bend" (Glendevie)	Medium
6805400	Curve realignment south of Hopetoun Rd	Medium
9401340	Shoulder widening south of Tylers Rd	Medium
7802160	Road Widening - Chapman Ave (Dover) to North of Peacock Rd	Low
5806000	Curve realignment Scotts Rd to Waterloo	Low
6803700	Widen Rd - "Waterfall Bend" (Sth Glendevie) to Link 68 Ch6530	Low
6808700	Curve realignment north of Ida Rd	Low
4601600	Curve realignment north of Fleurtys Rd	Long Term
9410000	Road Widening - Hastings Caves Rd to Southport	Long Term
7802260	Super elevation correction Dover	Long Term

6. Further Investigations

The assessment of projects has been at a high level and whilst every effort has been made to accurately define each project, the definitions are only considered satisfactory for assessing the relative level of priority of the projects. Further project refinement and assessment could result in differing return on capital investment than that determined in the high level VMA process. In addition, the grouping together of some of the discrete projects to form larger projects, in certain areas, may have economic advantages.

Of the projects with a high priority, it is envisaged that with further conceptual design development, the project benefits can be optimised and likely capital investment costs more accurately determined.

Phase 4 of the Study will further develop the concept designs of the identified high priority projects and may result in the priority of some projects changing.

7. Conclusions and Recommendations

Sinclair Knight Merz (SKM) in collaboration with DIER, John Wadsley Planning and Heritage Consultancy, and community and industry stakeholders have completed Phases 1 to 3 of the Study to investigate the Huon Highway corridor from Huonville to Southport. The primary objective of this Study is to develop a prioritised list of road improvement projects to meet the expected strategic function of the road corridor over the next 30 years. The Study includes an assessment of the existing road geometry, safety performance and transport efficiency, including transport modelling, with the outcome being an identified list of short, medium and long term projects.

Comprehensive stakeholder engagement in conjunction with an engineering assessment of the road corridor resulted in identification of the key issues and the opportunities for improvement of the Huon Highway Corridor between the Huon River Bridge at Huonville and Southport.

An individual investigation of each stakeholder raised issue and the corresponding improvement opportunities was used as an input to an MCA and VMA. This provided an objective means of comparing the relative benefits and disbenefits and the value for money for each project resulting in a prioritised list of projects.

The following projects are considered high priority (in order of highest to lowest within each category):

Passing Opportunity Projects	
Project No.	**Name**
4600600	Somers Straight sight distance improvements
5805490	Scotts Road junction pullover area
6805100	Northbound slow vehicle passing lane south of Hopetoun Rd
3405100	Southbound overtaking lane north of Swamp Rd junction
6804450	Southbound slow vehicle passing lane north of Hopetoun Rd
4602690	Northbound overtaking lane north of Castle Forbes Bay

Junction/ Access Improvement Projects	
Project No.	**Name**
3409950	BAR treatment Jacksons Road Junction
5800000	Increase set-back to safety barrier Arve Rd junction
4609870	BAR treatment Sacred Heart School access
4604260	BAR treatment Palmers Rd junction north
6800000	Improve BAR width Esperance Coast Rd Junction
4606440	Sight distance improvements Shipwrights Point access
9408250	Priority change Hastings Caves Rd junction
5800170	Church St junction roundabout

Road Width and Curve Related Improvement Projects	
Project No.	**Name**
4608410	Shoulder Sealing - Port Huon (South) to Arve Rd
3400610	Shoulder Sealing - Huonville Sth to Swamp Rd
3405630	Shoulder Sealing - Swamp Rd to Castle Forbes Rd
4603150	Shoulder Sealing - Castle Forbes Rd to Port Huon (South)

It is recommended that these projects be considered in more detail in Phase 4 where the projects will be further developed to more accurately define the project scope, costs and benefits.

8. References

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