Deloitte.

Department of Infrastructure and Transport

Review of the Heavy Vehicle Safety and Productivity Program

24 April 2012

Final Report

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Executive summary

Overview

The Heavy Vehicle Safety and Productivity Program (HVSPP) is part of a broader initiative by the Australian Government in its Nation Building Program which provides funding support for improving the performance of land transport infrastructure, mainly across the National Land Transport Network (NLTN) and other major transport routes. The HVSPP provided $70 million through two funding rounds between 2008-09 and 2011-12. Funding was provided to State and Territory road authorities to develop four types of projects:

- Rest area projects;
- Parking/decoupling bay projects;
- Road enhancement projects; and
- Technology trial projects.

Deloitte Touche Tohmatsu (Deloitte) has been commissioned by the Department of Infrastructure and Transport to review the HVSPP. The review assessed the implementation of the HVSPP (Rounds 1 and 2) against the program's key objectives of reducing heavy vehicle accidents and enhancing the capacity of freight routes.

The review was undertaken using information provided by the Department and feedback received from consultation with relevant jurisdictional and industry stakeholders. It should be noted that the HVSPP is still ongoing and will complete by 30 June 2012.

As this review was conducted prior to the program's completion, many of the measurable benefits of the program are unlikely to be quantified until after the program's completion, and the freight transport industry has had the opportunity to adjust their operations to the changes in road infrastructure.

In addition to conducting a broader review of the program, the evaluation focused on groups of projects according to key routes and areas, and considered actions that could be taken to improve the future program delivery of similar initiatives. These were informed by discussions with relevant road jurisdictions and the road freight industry to understand the particular characteristics of specific projects, and to gather general views and feedback regarding the effectiveness of the program.

In view of the limited feedback and available data to adequately test the effectiveness of the HVSPP, we have undertaken supplementary desktop research to support a view about the program's effectiveness.

Review of the program

Upon completion, the HVSPP will fund a total of 236 projects across two rounds of funding, with an allocation of $30 million for Round 1 and $40 million for Round 2.

As of February 2012, 166 of the 179 projects comprising Round 1 had been completed, along with nearly half the remaining 57 projects in Round 2. 20% of all HVSPP projects are still in the planning or construction phases.

Projects relating to the upgrade or provision of new driver rest areas account for 67% of Round 1 funding and 54% of Round 2. Funding for projects directed at improving road safety outcomes (driver rest areas and technology trials) represent 62% of the HVSPP's total funding allocation.

Of the $70 million available through the program, 67% has been allocated to Queensland, NSW and Victoria. Approximately three-quarters of Australia's interstate road freight task[1] occurs between these states and the majority of fatal accidents involving heavy vehicles[2] has historically occurred in east coast states. The program has allocated the majority of its funding to where the majority of road freight activity and heavy vehicle accidents occur – Queensland, NSW and Victoria.

While quantification of benefits for the program were not available at the time of review, it may not be unreasonable to conclude that the decline in heavy vehicle-related accidents since 2008[3] has been impacted, to an extent, by safety initiatives like those projects being supported in the HVSPP.

Review of selected projects

As there are 236 projects involved in the HVSPP, it was agreed with the Department that a sample of projects would be selected for more detailed review. The following projects were selected across the four program categories and are located on key freight routes:

- **Driver rest areas** – Newell Highway (NSW - Round 1), Sturt Highway (Yamba, South Australia - Round 2);
- **Decoupling bays** – North West Coastal Highway (Western Australia - Round 1), Nhill Decoupling Bay (Victoria - Round 1);
- **Bridge strengthening** – Monaro Highway (ACT - Round 1); and
- **Technology trials** – Tasman Highway, Advance Warning Signs (Tasmania - Round 2).

The review found that both driver rest area projects are fully funded and completed. The new multi-purpose facility at Yamba was recently completed while improved rest area provisions along the Newell Highway have been operational since 2010.

The decoupling bays in Western Australia and Victoria are also fully funded and operational. These will allow for more efficient trailer exchange between truck operators and the reconfiguration of vehicles to better comply with respective jurisdictional regulations.

Bridge upgrades to Higher Mass Limit (HML) standard along ACT's Monaro Highway has enabled that route to join the HML network in accommodating more heavily loaded semi-trailers and B-doubles. This is a significant contribution to the productivity of road haulage along this route, linking it to other parts of the network across NSW.

[1] BITRE (2010) Interstate Freight in Australia, Report 120
[2] BITRE (2011) Fatal heavy vehicle crashes Australia quarterly bulletin, April-June 2011
[3] Ibid

The technology trial for advanced warning signs in Tasmania was deferred at the time of the review and was therefore not assessed as part of this review.

Overall, five of the six selected projects have been fully implemented and early indications show that they will likely contribute to reducing the proportion of heavy vehicle-related accidents and increase the productivity of the road network.

Feedback from jurisdictions

Views and feedback from consultation with the jurisdictional road authorities regarding working with DIT on the program were very positive – all authorities looked forward to participating on similar programs in the future.

All road authorities indicated that they had engaged with industry to some extent prior to project commencement. However, none have yet to fully gauge industry feedback post project completion.

NSW's Department of Roads and Maritime Services (RMS), the Department of Main Roads Western Australia (MRWA) and South Australia's Department of Planning, Transport and Infrastructure (DPTI) indicated that it was still too early to be seeking feedback about the effectiveness of the program, as the benefits would still take up to 12 – 36 months to be fully realised. It would also take that long for freight operators to become accustomed to these changes and adjust their operations accordingly.

As a result of matched funding, the state governments contributed $45 million towards improving heavy vehicle road safety and productivity outcomes in addition to the program's $70 million over four years.

Feedback from industry

General consensus among industry respondents was positive with respect to the HVSPP, with respondents indicating a requirement for more of these programs. Feedback showed a preference for investment in new heavy vehicle-related safety and productivity infrastructure over the improvement of existing sites.

While industry indicated that it was too early to realise immediate benefits from projects under the HVSPP, it was noted by some respondents that driver rest area designs from the program have been more effective at segregating truck drivers, allowing for more efficient fatigue management.

Industry respondents favoured an allocation towards safety-related projects, and as the HVSPP allocated 61% of total funds towards safety-related projects, this aspect of the program appears to have successfully met industry's expectations.

The increased provision of informal rest area sites supplemented by blue reflectors as delineators was also seen by some industry respondents as a very effective short term response to addressing the shortage of formal driver rest areas.

Improved road safety education was flagged as an example of addressing safety issues, especially with respect to private motorists – a 2009 study has shown that in 82% of heavy vehicle-related accidents, the third party driver was found to be at fault.[4]

[4] NTI (2009) National Transport Insurance (Major incidents) Crash Data

Conclusions

This review seeks to assess the effectiveness of the HVSPP in achieving its objectives on enhancing road safety and improving productivity. While quantitative data on the effectiveness of the program and selected projects is not yet available, jurisdictional and industry feedback, along with other supporting research would suggest that there are early indications that the HVSPP has been effective in achieving its aims.

Arguably, this can only truly be tested two to three years following the program's completion allowing for sufficient time for operators to change behaviour. The two objectives reviewed are in the following areas:

Reduction in the proportion of road accidents involving heavy vehicles through targeting of heavy vehicle driver fatigue and speed

Although specific data relating to the HVSPP's effectiveness in reducing the proportion of heavy vehicle accidents was not available at the time of the review, as at February 2012, approximately 93% of Round 1 projects and 47% of Round 2 projects were operational across Australia – the majority of which are safety-focused.

While HVSPP specific data is not available for review, BITRE data[5] showed average reductions in heavy vehicle-related accidents involving rigid and articulated trucks, at 14.7% and 3.5% respectively, each year between June 2008 and 2011 due to safety initiatives. Early indications suggest that it may therefore be reasonable to conclude that the HVSPP's improved provision of rest areas allowing for increased stops by truck operators to more effectively manage fatigue will lead to a further reduction in heavy vehicle-related accidents on these routes.

Enhancing the capacity of existing roads and thereby increasing heavy vehicle transport productivity

While the majority of the HVSPP funding was allocated to improving heavy vehicle road safety, 39% of funds were allocated towards decoupling bays and road network enhancements.

Data specific to the immediate benefits of these projects is not yet available, although feedback from the jurisdictional road agencies and industry has indicated that benefits should be realised over the next 12 to 36 months. Nevertheless, the view of respondents is that the availability of decoupling bays and the upgrading of the heavy vehicle network will result in the increased use of B-double vehicle configurations, and other HML vehicles.

Industry research shows that the use of B-double vehicle configurations leads to improved productivity outcomes.[6] A 2011 report on a National Transport Insurance study in 2009 showed that semi-trailers are disproportionately overrepresented at 60% of major accidents, though only responsible for 38% of the articulated freight task.[7] By comparison, B-doubles are the safer alternative, carrying 46% of the freight task with 29% of major accidents. Productivity improvements as a result of this program will likely make the use of B-doubles more attractive and subsequently lead to improved productivity outcomes.

[5] BITRE (2011) Fatal heavy vehicle crashes Australia quarterly bulletin, April-June 2011
[6] Australian Trucking Association (2012) Media Release: Slash B-double charges to boost, safety, productivity
[7] NTI (2011) Major Accident Investigation Report

Recommendations

The following recommendations are made at the conclusion of the review:

1. It is recommended that similar programs continue to be focusing on safety-related projects. While a funding allocation ratio of two-thirds for safety and one-third for productivity was the most common funding balance suggested by industry respondents, the breakup of funding should be based on projects which will deliver the greatest benefit.
2. The Australian Government should request that jurisdictional road authorities conduct more detailed industry stakeholder consultations to:
    a. Identify and determine a proportion of priority areas in need of road infrastructure investment; and
    b. Inform the planning and design stages of approved projects.
3. That a further review of HVSPP projects be conducted in another 36 months to (i) assess whether the BCR estimated in the PPR was achieved, and (ii) quantify any other benefits that may have been achieved from the projects.
4. Future reviews include provision for site visits to interview operators on-site to ascertain targeted feedback on specific projects rather than just rely on telephone interviews at the industry level.
5. Further consideration be given towards other means of improving heavy vehicle safety and productivity outcomes including:
    a. Promoting the use of blue reflectors as a cost-effective measure to define 'unofficial driver rest areas' as an interim alternative to the provision of driver rest areas; and
    b. Introducing a broader road safety education campaign directed at private motorists given they are at fault 82% of the time when involved in fatal accidents with heavy road vehicles.[8]

[8] NTI (2009) National Transport Insurance (Major incidents) Crash Data

1 Introduction

1.1 Background and objectives

The Heavy Vehicle Safety and Productivity Program (HVSPP) is part of a broader Australian Government initiative in its Nation Building Program which provides funding support for improving the performance of land transport infrastructure, mainly across the National Land Transport Network (NLTN) and other major transport routes. The NLTN is based on national and inter-regional land transport corridors critical to supporting national and regional economic and social development.

The main goals of the HVSPP were to improve safety and productivity outcomes for the heavy vehicle industry and other road users through the provision of $70 million towards heavy vehicle safety and productivity projects over four years from 2008-09 to 2011-12. The specific program objectives are to continue to:

- Reduce the proportion of road accidents involving heavy vehicles by targeting heavy vehicle driver fatigue and speed; and
- Increase productivity by enhancing the capacity of existing roads.

The funding was allocated through two rounds, with State and Territory jurisdictional road authorities tasked with submitting proposals (Project Proposal Reports or PPRs) seeking funding approval for a selection of project works aligned with the objectives being sought by the HVSPP.

The first round of funding allocated $30 million over 2008-09 and 2009-10. The second round involving the remaining $40 million is being distributed over 2010-11 and 2011-12. The majority of projects are either at or nearing completion. The program provided funds to State and Territory road authorities under four categories:

- Rest area projects;
- Parking/decoupling bay projects;
- Road network enhancement projects; and
- Technology trial projects.

Driver rest areas have received the majority of funding with the provision of new rest areas and the upgrading of existing sites. Rest areas play a vital role in ensuring safe and efficient road freight movements, but have been lacking in sufficient numbers on a number of important interstate freight routes across the country. For many years, the road freight industry has argued for government to improve the provision of driver rest areas, particularly as other reforms such as Chain of Responsibility have been introduced to facilitate safer work practices within the road freight industry.

Various road and bridge strengthening and parking/decoupling bay projects have also been undertaken within the HVSPP to address heavy vehicle access bottlenecks on the national freight network. These projects can facilitate greater take up of Higher Mass Limits (HML) and the use of more productive freight vehicles, providing operating cost savings to the freight industry (and consumers) and safety benefits through net reductions in heavy vehicle travel.

In general, the commitment to provide better infrastructure for the road freight industry through the HVSPP has been strongly supported by road freight advocacy groups.

1.2 Scope and approach

1.2.1 Scope

Deloitte Touche Tohmatsu (Deloitte) has been commissioned by the Department of Infrastructure and Transport (DIT) to review the HVSPP. The review assessed the implementation of the HVSPP (Rounds 1 and 2) against the program's key objectives. The review is a specific requirement of the Road Charges Legislation Repeal and Amendment Act 2008. The objectives of the review are to determine:

- The effectiveness of the HVSPP in reducing the proportion of road accidents involving heavy vehicles, through the targeting of heavy vehicle driver fatigue and speed; and
- Whether the HVSPP has enhanced the capacity of existing roads and thereby has increased heavy vehicle transport productivity.

In addition to a broader review of the program, the evaluation focused on groups of projects according to key routes and areas. The following projects were agreed with the Department for further review, following the submission of an inception report on 4 January 2012. These projects are located along key freight routes:

- **Driver rest areas** – Newell Highway (NSW - Round 1), Sturt Highway (Yamba, South Australia - Round 2);
- **Decoupling bays** – North West Coastal Highway (Western Australia - Round 1), Nhill Decoupling Bay (Victoria - Round 1);
- **Bridge strengthening** – Monaro Highway (ACT - Round 1); and
- **Technology trials** – Tasman Highway, Advance warning signs (Tasmania - Round 2).[9]

Discussions were held with relevant jurisdictional stakeholders to understand the particular characteristics of specific projects and identify other sources of information to assist with the review. Various industry associations were also consulted, to identify a sample of operators likely to have first-hand experience with the different project sites, so that we could obtain their view as to the benefits they see being realised. The associations consulted included:

- Australian Trucking Association (ATA);
- Victorian Transport Association;
- Western Australian Road Transport Association;
- South Australia Road Transport Association;
- Tasmanian Transport Council;
- Transport Workers Union;
- NatRoad;
- Tasmanian Truck Owners & Operators Association; and
- Long Haul Drivers Association.

A complete list of organisations contacted for the consultation can be seen in **Appendix A**.

[9] Note: Consultation with the Department of Infrastructure, Energy and Resources (DIER) indicated that the technology trials in Tasmania had not commenced due to contractual issues with their selected contractor. Due to the time constraints of the review, it was not possible to consult stakeholders on the project. Further details discussed in **Section 3.5**.

1.2.2 Approach

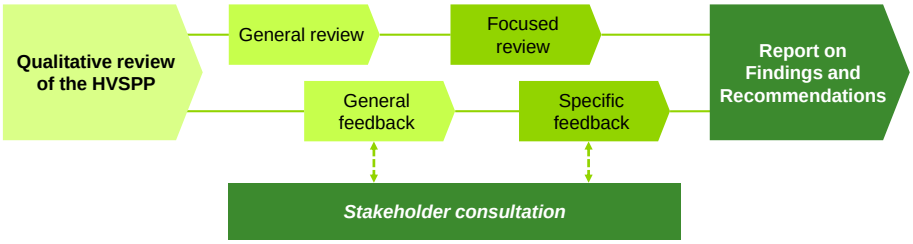
The approach used to assess driver rest areas did not validate the outcomes of individual projects, but considered the effectiveness of groups of projects. These were based on benefits typically identified within the Project Proposal Reports (PPR) submitted by the jurisdictions against feedback received from stakeholders about the benefits achieved.

Projects with a productivity focus (i.e. decoupling bays, bridge strengthening and technology trials) were also assessed against benefits set out in PPRs through discussions with road freight associations (i.e. to obtain feedback from operators) and other stakeholders.

The discussion with stakeholders also explored how similar future programs could be improved. Specifically, views were sought on areas to target (such as rest areas, trailer exchange sites, bridge strengthening etc.) that could achieve the most effective and efficient returns against safety and/or productivity.

An outline of the approach adopted in the review is shown in **Figure 1.1** below.

Figure 1.1 – Project approach



The review conducted by Deloitte was qualitative in nature due to data limitations and the short duration of the program with minimal measurable outcomes for analysis. Many of the measurable benefits of the program are unlikely to be quantified until the program is finished, and industry has had the opportunity to adjust their operations to the changes now being offered.

The review was largely informed by data provided by DIT with additional information gathered from stakeholder consultations in the form of findings and qualitative case studies, strengthened by readily available statistics where applicable. Sources used for the review are identified in **Appendix B**.

1.2.3 Considerations

A small sample of operators with first-hand experience of the issues the Department was aiming to address with the HVSPP were consulted across several states. While the initial scope for the review was to consult two to three operators per jurisdiction, this process proved to be more challenging due to the unavailability of industry stakeholders within the review timeframe.

Feedback from the operators was consequently combined with comments received from industry peak bodies and jurisdictional stakeholders, and some desktop research was conducted to support industry views about the effectiveness of the safety and productivity initiatives being typically funded under the HVSPP.

Deloitte believes, if further consultation is desired, it might be beneficial to visit some of the project sites to interview local operators on-site to obtain targeted feedback on projects to supplement interviews conducted remotely over the telephone.

2 Review of the program

2.1 Preface

The following section provides an overview of the HVSPP, its supporting guidelines, and more detail about project types, funding share and status. The data collected on these projects was accurate as at February 2012.

The HVSPP's objectives are to:

1. Reduce the proportion of road accidents involving heavy vehicles by targeting heavy vehicle driver fatigue and speed; and
2. Increase productivity by enhancing the capacity of existing roads.

Four project categories were eligible for funding. While all project categories are considered as having some impact on safety and productivity outcomes, whether directly or indirectly (e.g. driver rest areas have a safety focus, but better fatigue management leads to increased productivity), for the purpose of this review, projects have been classed as shown in **Table 2.1**.

Table 2.1 – Summary of project categories

Category	Safety	Productivity	Description
Driver rest area	✔		Formal site for truck drivers to recuperate through rest and on-site amenities
Decoupling bay		✔	Trailer exchange sites for truck drivers to consolidate/deconsolidate consignments
Road network enhancement		✔	Road infrastructure upgrades to improve Higher Mass Limit (HML) access, e.g. bridge strengthening
Technology trial	✔	✔	Trials involving variable messaging signs to improve safety or productivity outcomes, e.g. advanced warning signs

In addition to proposed projects needing to meet the HVSPP's program objectives and being one of the four project types, jurisdictional road authorities were also required to take four key considerations into account:[10]

- Matched funding – the extent to which state governments committed to match the Commonwealth's funding contribution;
- Industry priorities – the extent to which projects align with industry submissions;
- State or territory priorities – the extent to which state governments had identified the project as a top priority in submissions; and
- Benefits – the extent to which projects demonstrated safety and productivity benefits for heavy vehicles.

[10] Heavy Vehicle Safety and Productivity Program Guidelines (as at 6 September 2011)

Road authorities were required to complete Project Proposal Reports (PPR) as described in the Notes on Administration (NOA) for National Projects in the Nation Building Program, to demonstrate how their proposed projects matched the program's objectives, categories and considerations.

The Department provided PPR templates to support the program's project appraisal and approval process. In addition to providing information regarding the strategic fit and merit of proposed works and the planned outcomes and outputs from the projects, road authorities were also required to demonstrate value for money in terms of benefit-cost analysis. Road authorities were required to explain and evaluate considered project options and provide net present values (NPV) and benefit-cost ratios (BCR) to justify their preferred options.

The NPV is a central measure in discounted cash flow analysis and a widely applied method using time value of money to appraise projects. It is the present value of future cash flows minus the initial project construction cost. The BCR is an indicator summarising the overall project benefit for a particular project – it is the ratio of project benefits relative to projects costs, expressed in monetary terms. The higher the BCR (above 1) illustrates the degree to which benefits outweigh costs in present value terms.

Following project proposals and approvals, jurisdictions were required to provide the Department with monthly progress reports on projects, as well as annual audited financial statements to ensure adherence to the program's terms and conditions. Status reporting was preferred to be consistent with the processes for the National Program and was administered by the Department's Infrastructure Management System (IMS).

Financial payments were made to state and territory governments following the receipt of satisfactory progress reports. Formal project variations sought by state and territory governments had to follow a formal authorisation process. Any request for changes in scope had to be accompanied by sufficient details explaining the reasons for the requested variation.

Otherwise, funds were capped at the approved amounts and relevant state governments were responsible for covering any project cost overruns. In the event of final project costs being less than the amount the Australian Government had agreed to make available, savings were divided on a pro-rata basis and made available to other projects under the HVSPP.

2.2 Distribution of projects

A total of 236 projects are currently funded under the HVSPP. A breakdown of these projects by jurisdiction can be seen in **Table 2.2**. Some projects did not necessarily involve capital works. For example, many of the road network enhancements in ACT were related to investigating to assess bridges if they were viable for HML access, as well as five projects in NSW relating to planning and pre-construction activities.

Table 2.2 – Projects funded under the HVSPP

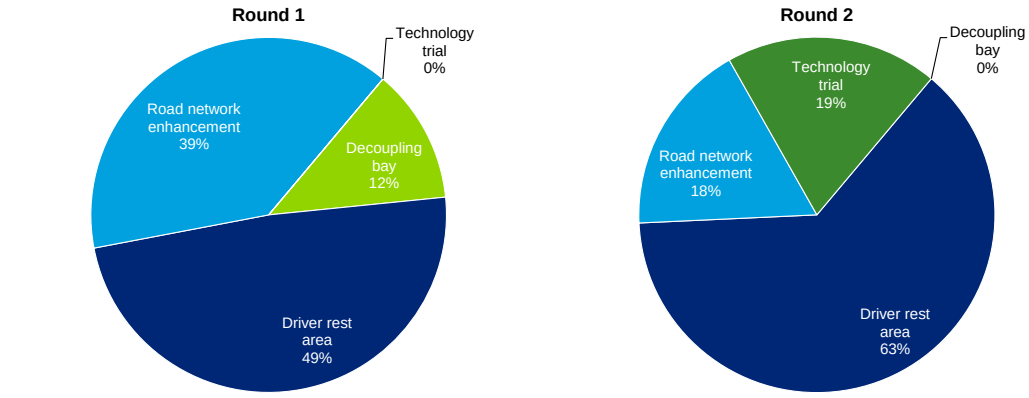
	Projects funded	
State	**Round 1**	**Round 2**
ACT	67 road network enhancements	4 road network enhancements
NSW	52 driver rest areas 5 planning / pre construction activities	14 driver rest area 1 road network enhancement
NT	3 driver rest areas	1 road network enhancements
QLD	7 driver rest areas	3 road network enhancements

State	Projects funded	
	Round 1	Round 2
SA	22 driver rest areas & decoupling bays	2 driver rest areas
TAS	3 road network enhancements	7 technology trials
VIC	1 decoupling bay	2 drivers rest areas 1 road network enhancements
WA	19 decoupling bays & driver rest areas	18 driver rest areas 4 technology trials
Total	**179**	**57**

Source: Department of Infrastructure and Transport (2012)

Figure 2.1 provides a breakdown on project types being funded by the HVSPP. More than half of the projects (57%) that received funding from the HVSPP were safety-related (e.g. rest areas and advanced warning signs as part of technology trials).

Figure 2.1 – Breakdown of Round 1 & 2 projects by type



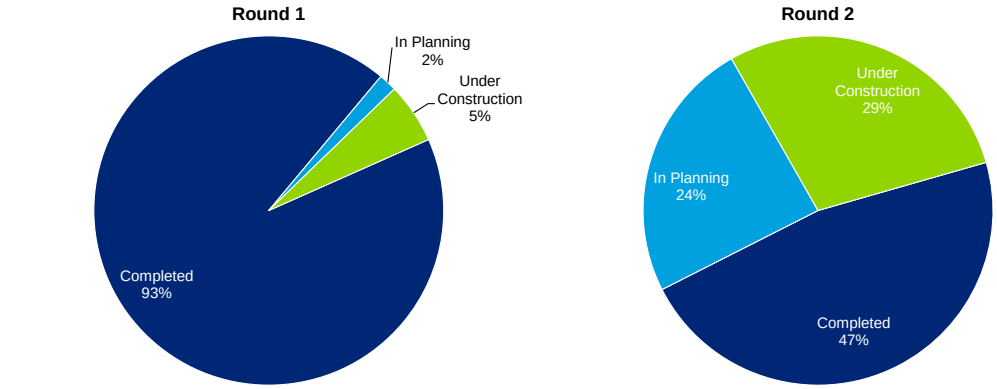
Source: Department of Infrastructure and Transport (2012) Infrastructure Management System

In Round 1, all projects were related to road enhancements, decoupling bays or driver rest areas. Driver rest areas accounted for nearly half of all projects. The relative number of safety-related projects increased in Round 2 with over 80% of all projects being driver rest areas or technology trials. No decoupling bay projects were funded in Round 2 and projects related to road enhancements dropped significantly from 39% to 18%.

2.3 Project Status

Figure 2.2 (overleaf) provides an overview on the status of projects being monitored and funded under the HVSPP. Round 1 involved a total of 179 projects, of which 93% have been completed. The remaining 57 projects in Round 2 have seen 47% reach completion.

Figure 2.2 – Status of Round 1 & 2 projects (as at February 2012)



Source: Department of Infrastructure and Transport (2012) Infrastructure Management System

As at February 2012, 80% of projects under the program have been completed, 8% were still in the planning stage and 12% were under construction.

Table 2.3 below summarises the status of Round 1 projects by state.

Table 2.3 – Round 1 project status by state (as at February 2012)

Status	ACT	NSW	NT	QLD	SA	TAS	VIC	WA	Total
Completed	67	53	3	7	13	3	1	19	166
In Planning	-	3	-	-	-	-	-	-	3
Under Construction	-	1	-	-	9	-	-	-	10
Total	**67**	**57**	**3**	**7**	**22**	**3**	**1**	**19**	**179**
Share completed	*100%*	*93%*	*100%*	*100%*	*59%*	*100%*	*100%*	*100%*	*93%*

Source: Department of Infrastructure (2012)

Round 1 projects in ACT, Northern Territory, Queensland, Tasmania, Victoria and Western Australia have been completed. 93% of NSW's Round 1 projects are completed, while South Australia still has nine projects due for completion.

Table 2.4 summarises the status of Round 2 projects by state.

Table 2.4 – Round 2 project status by state (as at February 2012)

Status	ACT	NSW	NT	QLD	SA	TAS	VIC	WA	Total
Completed	3	1	1	1	1	-	-	17	24
In Planning	-	5	-	1	-	7	2	1	16
Under Construction	1	9		1	1	-	1	4	17
Total	**4**	**15**	**1**	**3**	**2**	**7**	**3**	**22**	**57**
Share completed	*75%*	*7%*	*100%*	*33%*	*50%*	*0%*	*0%*	*77%*	*42%*

Source: Department of Infrastructure (2012)

For Round 2, only Northern Territory has fully completed its single project while Western Australia and ACT have at least three-quarters of their projects completed. 58% of all Round 2 projects across Australia are still in the planning or construction phase.

2.4 Funding

Of the $70 million made available for funding the HVSPP program, 43% was allocated to the first round, and 57% to the second round. **Table 2.5** provides a breakdown of approved funding allocated to the various road jurisdictions.

Table 2.5 – Approved funding ($ millions)

Status	NSW	VIC	QLD	NT	WA	SA	TAS	ACT	Total
Round 1	8.1	5.7	6.4	1.0	2.7	4.5	1.5	0.6	**30.4**
Round 2	9.8	8.2	8.9	1.3	3.6	5.8	1.5	0.5	**39.5**
Total	**17.8**	**13.9**	**15.3**	**2.3**	**6.3**	**10.3**	**3.0**	**1.1**	**69.9**
Share of total	*25%*	*20%*	*22%*	*3%*	*9%*	*15%*	*4%*	*2%*	*100%*

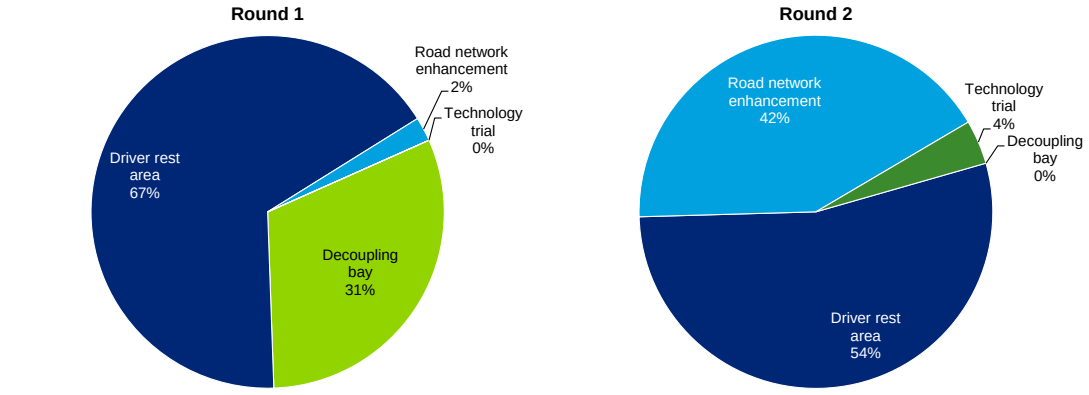
Source: Department of Infrastructure and Transport (2012)

Queensland, NSW and Victorian projects received over two-thirds of HVSPP funding, with NSW receiving the highest share of 25%. Tasmania, Northern Territory and ACT collectively received less than 10% of the total funding made available.

Approximately three-quarters of Australia's interstate road freight task occurs between Queensland, NSW and Victoria [11] and the majority of fatal accidents involving heavy vehicles has historically occurred in east coast[12] states.

Figure 2.3 provides a breakdown of funding share across the four categories of project. Driver rest area projects received 67% of the $30 million Round 1 allocation and 54% of the $40 million available in Round 2. The proportion of funds allocated towards productivity projects increased from 33% in Round 1 (road enhancements and decoupling bays) to 42% in Round 2.

Figure 2.3 – Funds allocation of Round 1 & 2 projects



Source: Department of Infrastructure and Transport (2012) Infrastructure Management System

[11] BITRE (2010) Interstate Freight in Australia, Report 120
[12] BITRE (2011) Fatal heavy vehicle crashes Australia quarterly bulletin, April-June 2011

In total, 61% of the HVSPP's $70 million was allocated towards safety-related projects (59% for driver rest areas and 2% for technology trials) while road network enhancements and decoupling bays accounted for 25% and 13% respectively.

2.5 Effectiveness statement

The HVSPP is due for completion on 30 June 2012 with the final project expected to complete in 2013. However, the program commenced in June 2008, and 93% of Round 1 projects have already been completed. No program specific quantitative statistics are available for HVSPP at this point, so it is difficult to determine the effectiveness of the program on achieving its safety and productivity goals.

Fatal crash statistics from the Bureau of Infrastructure, Transport and Regional Economics (BITRE) show there has been an overall decline in heavy vehicle accidents across Australia since 2008, particularly for heavy rigid vehicles. During the 12 months ending June 2011, 128 accidents involved articulated trucks resulting in 150 fatalities – this represented a 3% reduction in fatal accidents compared with the same period a year earlier, and an average decrease of 3.5% per annum since June 2008.[13]

There were 61 deaths from 57 accidents involving heavy rigid trucks throughout the 12 months ending June 2011 across Australia – this is a 12.3% decrease compared with the same period a year earlier, and an average decrease of 14.7% per year since June 2008.[14]

The HVSPP cannot be credited for being solely responsible for this reduction in heavy vehicle involved accidents, however as of June 2011, approximately 88% of Round 1 projects and 21% of Round 2 projects were operational across Australia – the majority of which are safety-focused.

Early indications show that it may also be reasonable to conclude that the program's contribution to the improved provision of rest areas, allowing for increased stops by truck operators to more effectively manage fatigue will result in a reduction in heavy vehicle-related accidents.

[13] BITRE (2011) Fatal heavy vehicle crashes Australia quarterly bulletin, April-June 2011
[14] Ibid

2.6 Conclusion

Key findings from the desktop review of documentation and data have been summarised in **Table 2.6** below.

Table 2.6 – Summary of review of the program

Findings
Of the 179 projects in Round 1 of the program, 49% were related to driver rest areas, 39% to road network enhancements, and 12% to decoupling bays. For Round 2, 63% out of a total of 57 projects related to driver rest areas and technology trials and road network enhancements accounted for 19% and 18% respectively.
As at February 2012, 166 of 179 Round 1 projects have been completed and nearly half the 57 Round 2 projects have been completed. 20% of the total 236 projects under the HVSPP are in planning or under construction.
67% of the $70 million funding made available under the program has been allocated to projects located in Queensland, NSW and Victoria. BITRE statistics show that approximately three-quarters of Australia's interstate road freight task occurs between these states and that the majority of fatal accidents involving heavy vehicles have historically occurred in East Coast States.
Projects relating to the upgrade or provision of new driver rest areas accounted for 67% of $30 million funding made available for Round 1, and 54% of the $40 million available for Round 2 – this amounts to 59% of the total program's funding. If technology trials (which are largely safety-related) are included, then 62% of the program's funding has been allocated to improving road safety outcomes.
In order to achieve maximum effectiveness, the HVSPP allocated the majority of its funding to Queensland, NSW and Victoria –states which historically have the largest share of road freight activity and heavy vehicle accidents. While quantification of benefits for the program is not immediately available, publically available information has shown a decline in heavy vehicle-related accidents since 2008.

3 Review of selected projects

3.1 Preface

Six projects across the four project categories were selected for a more detailed review, which involved consultation with jurisdictional and industry stakeholders on the status, outcomes and feedback on these projects. The specific projects selected were:

- Driver rest areas – Newell Highway (NSW - Round 1), Sturt Highway (Yamba, South Australia - Round 2);
- Decoupling bays – North West Coastal Highway (Western Australia - Round 1), Nhill Decoupling Bay (Victoria - Round 1);
- Bridge strengthening – Monaro Highway (ACT - Round 1); and
- Technology trials – Tasman Highway, Advance warning signs (Tasmania - Round 2).[15]

This section provides further detail on each selected project, further informed through consultations with the jurisdictional road authorities in February 2012. Feedback received from industry is discussed in the following section (**Section 4**).

3.2 Driver rest areas

Driver rest areas are primarily seen as a means of improving heavy vehicle safety-related outcomes, especially with their increased significance following the 2008 legislation with respect to heavy vehicle fatigue management.[16] Properly planned rest areas can also benefit productivity outcomes.

3.2.1 New rest areas, upgrades and enhancements on the Newell Highway, NSW

3.2.1.1 Background

The NSW Department of Roads and Maritime Services (RMS) requested funding for a package of works aimed at increasing the frequency and quality of heavy vehicle rest areas along the Newell Highway through the provision of new rest areas, and upgrades and facility enhancements to current rest areas. The Newell Highway is the longest highway in NSW, stretching over 1,060km from the border of Victoria to the border of Queensland. It is an approved HML route for the entire length and is a vital road train route for interstate freight traffic and heavy vehicles.

An estimated 1,000 heavy vehicles traverse the route every day, accounting for 20% of total traffic. AusLink's Melbourne-Brisbane Corridor Strategy expects heavy vehicle traffic along this route to increase by around 50% over the next 20 years.[17]

[15] Note: Consultation with the Department of Infrastructure, Energy and Resources (DIER) indicated that the technology trials in Tasmania had not commenced due to contractual issues with their selected contractor. The discussion on technology trials discusses this in more detail and substitutes technology trials in Western Australia for the review. However, it should be noted that the trials in Western Australia related to floodway warning signs in the Pilbara (following flooding in late 2010) which has seen increases in perceived safety by affected stakeholders as an immediate benefit.
[16] Heavy Vehicle Driver Fatigue – Chain of Responsibility legislation (2008)
[17] AusLink (2008) Melbourne-Brisbane Corridor Strategy

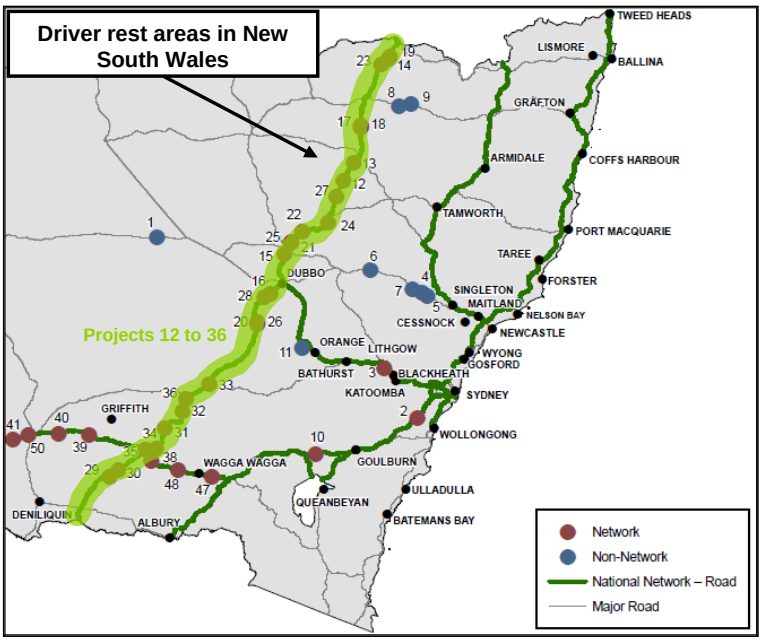
3.2.1.2 Project detail

The scope of the project package included:

- Three new heavy vehicle rest areas with amenities including toilets and shade provision;
- Upgrade the size and facilities of five existing rest areas;
- Upgrade of blue reflector informal parking areas along the route at 20 sites; and
- Upgrade intersection treatments at five existing sites.

The location of these works can be seen in **Figure 3.1**.

Figure 3.1 – Driver rest areas along the Newell Highway, NSW



The package supports the RMS's current work on developing a major heavy vehicle rest area strategy for the rural freight network, as well as being in the 2005 National Guidelines of the National Transport Commission (NTC) for the Provision of Rest Area Facilities. The main objective of the strategy is to develop a network of formal rest areas for heavy vehicles on major freight routes every 100km with suitable parking, toilets, shade and shelter at each facility.

On average, 16% of road vehicle accidents on the Newell Highway are fatigue related, which is higher than the average of 12.6% on all roads in the western and south western regions of NSW – heavy vehicles accounted for 18.6% of these incidents.[18] Approximately 40% of fatal accidents along the Newell Highway involve driver fatigue. While driver fatigue was involved in more than half the heavy vehicle-related incidents recorded between 2003 and 2007. In terms of economic benefits to be accrued from the package of works, the RMS in its PPR assumed that:

- New rest areas would produce a 15% reduction in heavy vehicle related accidents;
- Upgrades to existing rest areas would produce a 7.5% reduction in heavy vehicle related accidents;
- Other works would contribute to a 5% reduction in heavy vehicle related accidents; and
- Road safety benefits would extend 50km in each direction from each rest area.

[18] NSW RMS (2009) HVSPP Project Proposal Report

At a 7% discount rate, the net present value for the project was estimated to be $15.6 million, with a benefit-cost ratio (BCR) of 2.9 over a 20-year evaluation period. An appraisal at a 4% discount rate was also provided with a NPV of $22.2 million and a BCR of 3.3.

3.2.1.3 Project status

In total, $4.3 million was required to fund the package of driver rest areas along the Newell Highway. The breakdown of capital works can be seen in **Table 3.1**.

Table 3.1 – Funding breakdown ($ millions)

Project(s)	Funding
3 new rest areas	1.4
5 rest area upgrades	1.1
20 enhancements to blue reflector informal sites	0.8
5 intersection treatments	1
Total	**4.3**

Source: Department of Infrastructure and Transport

The HVSPP contributed half of these funds and as at February 2012, the last of the capital works along the Newell Highway had been fully funded. Follow up with the NSW RMS in February 2012 confirmed that all sites were completed and fully operational.

3.2.2 New multi-purpose rest area with inspection/weigh station at Yamba on the Sturt Highway, SA

3.2.2.1 Background

As part of Round 2 HVSPP funding, South Australia's Department of Planning, Transport and Infrastructure (DPTI) submitted a PPR for the construction of a new driver rest area at Yamba with an inspection/weigh station. Yamba is located on the border of South Australia and Victoria in close proximity to New South Wales.

The Sturt Highway is the primary freight route between Adelaide and Sydney, passing through the Victorian Riverland region. With approximately 550 to 1,400 heavy vehicles per day along this route (or an estimated 15% to 35% of total traffic), the highway caters to a substantial amount of freight traffic, including long distance freight movements from the primary producing areas of the River Murray.

3.2.2.2 Project detail

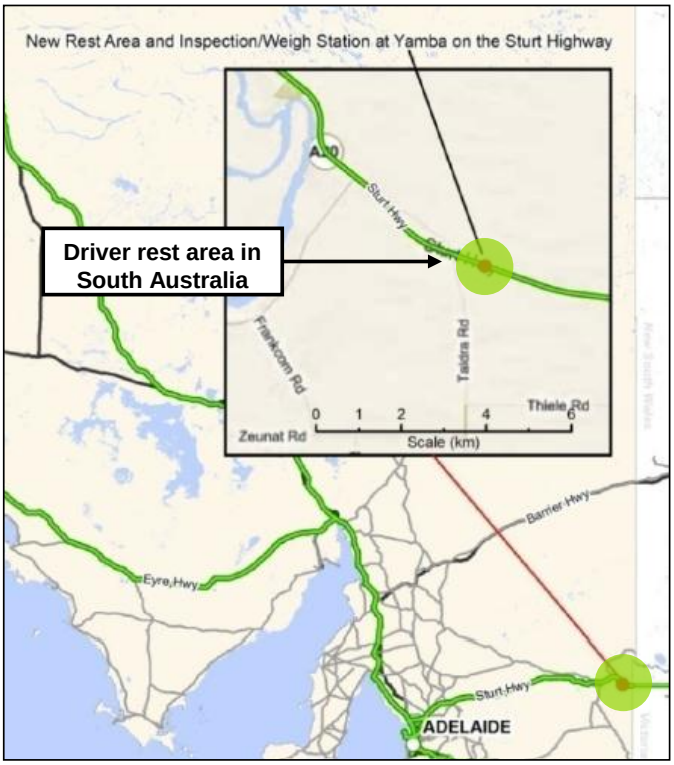
The project was identified as being able to address two important needs in managing the safety and efficiency of freight traffic along the route, in particular:

- An adequate supply of roadside parking bays and rest areas where heavy vehicles can pull off the road to allow drivers to rest and check their vehicles; and
- A checking station for monitoring the heavy vehicle weight and general compliance with heavy vehicle legislative requirements.

The site would incorporate a new truck weighing facility with a rest area capacity of up to eight B-doubles.

Location of the site can be seen in **Figure 3.2**.

Figure 3.2 – Driver rest area in Yamba, SA



Improvements to rest area provision in South Australia was identified as necessary to comply with the 2006 COAG commitment to bring rest area provision up to a level consistent with national guidelines.[19] This commitment followed significant lobbying from the heavy vehicle transport industry for increased rest area provision, to enable drivers to comply with new driver legislation in 2008 which strengthens the requirement to take regular rest breaks.

With somewhere between 5% and 20% of truck accidents in Australia being fatigue related the provision of adequate roadside rest areas is an important road safety measure. The new rest area and inspection/weigh station at Yamba was estimated to have a BCR of 1.7 and an NPV of $4.7 million based on a 4.4% discount rate. An appraisal at another discount rate (e.g. 7%) was not available.

3.2.2.3 Project status

HVSPP allocated funding of $5.3 million for this project, while DPTI provided an additional $1 million. As at February 2012, the Australian Government had paid the $5.3 million allocation and the project was completed on December 2011.

In February 2012, DPTI confirmed that the major works had been completed and that the site was operational. However, minor works related to ancillary services were still being carried out.

3.3 Decoupling bays

Decoupling bays are generally seen as a physical means of improving productivity outcomes through the more efficient exchange of trailers by truck drivers away from residential areas. These bays also provide an alternate driver rest area location.

[19] NTC (2005) National Guidelines for the Provision of Rest Area Facilities

3.3.1 New trailer exchange site at Nhill, VIC

3.3.1.1 Background

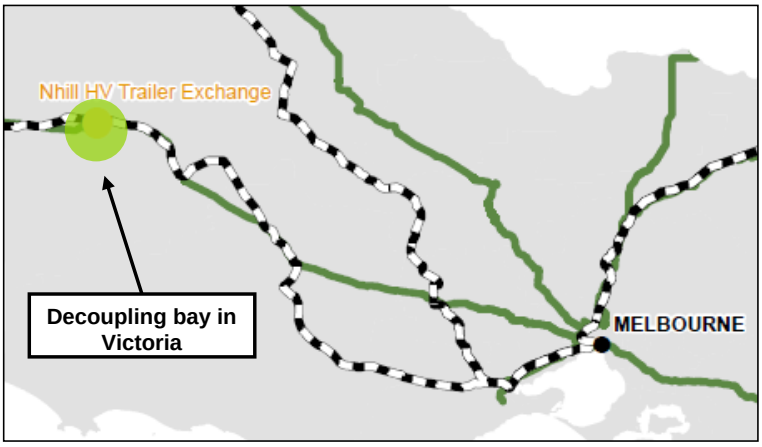
In Round 1, Victoria's Department of Transport (DoT) requested funding for a new decoupling bay at Nhill along the Western Highway, which is a principal road link between Melbourne and Adelaide. The Melbourne-Adelaide corridor links major grain, agriculture and viticulture production areas in regional Victoria and South Australia to Melbourne and Adelaide.

The Western Highway through Nhill carries approximately 2,250 vehicles per day, of which, 46% comprise commercial vehicles. Due to the new statutory regulation for heavy vehicle driver fatigue, this means that most of the 1,044 trucks per day moving along this route are due for a scheduled stop in this area to comply with the legislation. Nhill is therefore an important service centre for freight movements and activities along the corridor as it is roughly halfway between the two Capital Cities.

3.3.1.2 Project detail

This project was highlighted as particularly relevant to the previous Victorian Government's *Freight Futures* strategy, by helping to maintain and improve the efficiency, ensure the availability of sufficient capacity, and enhance the sustainability of the freight network. The project is also aligned with a requirement by COAG for a significant improvement in roadside rest areas. Location of the site can be seen in **Figure 3.3**.

Figure 3.3 – Decoupling bay in Nhill, VIC



The proposed site at Nhill was regarded as being highly suitable in that it is away from residential areas, and would provide improved amenity for residents due to noise reductions. The site has the capacity to accommodate up to 250 trucks, with the expectation that by 2025, between 120 and 150 trailers will be exchanged at the site during peak periods. The site will also support the provision of improved capacity for road freight movements.

The DoT estimated that the new trailer exchange at Nhill would provide an estimated net present value saving of $11.5 million over 20 years, based on a 7% discount rate, mainly as a result of reduced queuing time for trailer exchange, and a reduction in vehicle accidents due to better fatigue management. A BCR and appraisal at a different discount rate was not available.

3.3.1.3 Project status

The Australian Government and DoT each provided matching funding of $5.7 million for this project to plan and develop the site. As at February 2012, the site had been fully funded by

the Australian Government and following consultation with DoT, the site is confirmed as being fully operational.

3.3.2 Decoupling bays along the North West Coastal Highway, WA

3.3.2.1 Background

Western Australia's North West Coastal Highway is a key freight route designed for the use of B-triple road trains up to a certain extent along the route before requiring reconfiguration to a lower mass limit. Consequently, road freight operators are required to change the configuration of their vehicles when driving on this route – the change in HML access occurs at Carnarvon.

In addition to a new road train assembly site in Carnarvon, and a new driver rest area near Shark Bay, upgrades and the redevelopment of many of the existing parking bays had been identified as critical along this route to assist transport operators to manage fatigue. Many of the existing parking bays have become inundated due to periods of heavy rainfall and have become challenging for drivers to properly utilise.

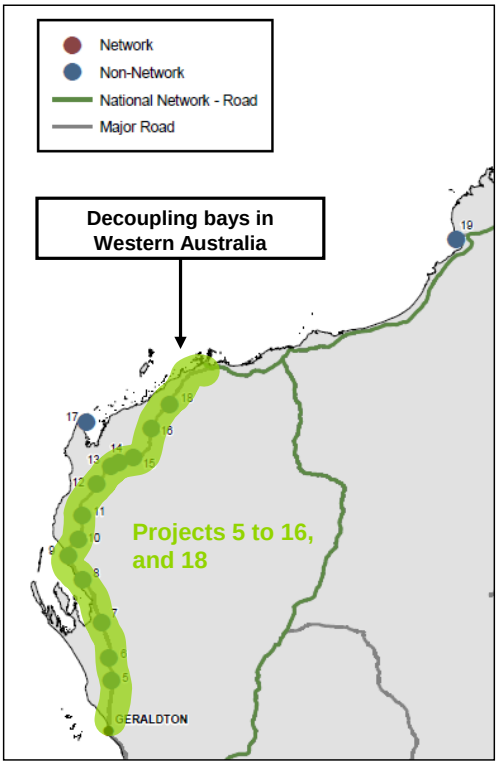
3.3.2.2 Project detail

MRWA requested funding for a package of works for road train assembly areas or decoupling bays along the North West Coastal Highway as part of Round 1 of the HVSPP. These works included:

- 11 upgrades to existing road train assembly areas and parking bays;
- One new driver rest area near Shark Bay; and
- One new road train assembly area in Carnarvon.

Location of the works can be seen in **Figure 3.4** below.

Figure 3.4 – Decoupling bays along the North West Coastal Highway, WA



These project sites are considered to be consistent with COAG's roadside rest area improvement requirements, as well as meeting MRWA's Roadside Stopping Places and Policy Guidelines.

The capital works along the North West Coastal Highway, in addition to other projects in Western Australia that received funding in Round 1, were estimated to have a net present value saving of $1.8 million over 20 years, primarily from a reduction in vehicle accidents. MRWA estimated a BCR of 3.7 based on a discount rate of 7%. An assessment at a different discount rate was not available.

3.3.2.3 Project status

The package of works along the North West Coastal Highway totalled $1.5 million of which half was funded under the HVSPP. **Table 3.2** provides a breakdown.

Table 3.2 – Funding breakdown ($ millions)

Project(s)	Funding
11 upgrades to existing exchange sites	0.7
1 new driver rest area	0.1
1 new replacement exchange site	0.7
Total	**1.5**

Source: Department of Infrastructure and Transport

As at February 2012, all three project groups had received full funding from the Commonwealth and MRWA confirmed that all capital works had been finished with all sites fully operational.

3.4 Road network enhancements

There were also projects aimed at improving heavy vehicle productivity through the upgrading of existing road infrastructure. The absence of a complete HML road network has constrained the road freight industry's move towards the use of Higher Productivity Vehicles (HPV). A large part of this constraint has been due to legacy bridges not being built to accommodate the higher HML specification. As such, many of the road network enhancements identified for the HVSPP revolved around bridge assessments and strengthening, to allow bridges to handle the minimum HML of 45.5 tonnes for semi-trailers, and 68 tonnes for B-doubles.

3.4.1 Bridge strengthening along the Monaro Highway, ACT

3.4.1.1 Background

Roads ACT identified over 67 bridge sites along nominated HML routes for assessment across both rounds of HVSPP funding. Many of these bridges needed to be re-rated or strengthened to accredit them as HML accessible, as many were identified as having load ratings of less than 44 tonnes. Enhancement of some of these sites was viewed as being critical to improving freight productivity outcomes.

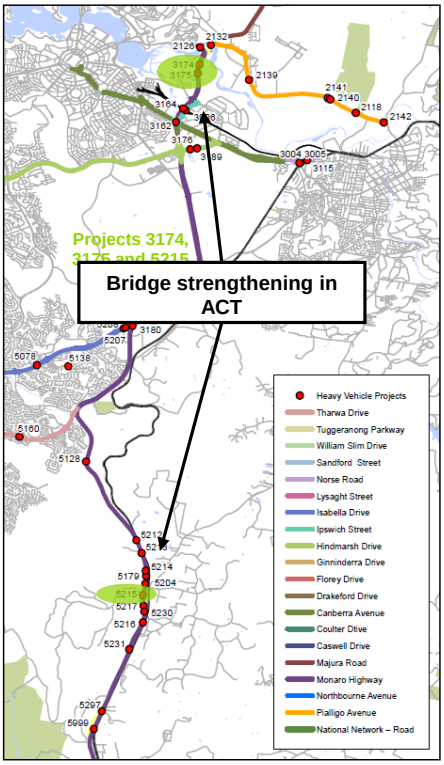
3.4.1.2 Project detail

Of the sites identified, 20 were along the Monaro Highway, linking Canberra with Victoria and NSW through Cann River and Cooma. Roads ACT conducted 20 assessments and

conducted four bridge strengthening projects to ensure that all of the Monaro Highway was HML capable.

Location of the bridge upgrades can be seen in **Figure 3.5** below.

Figure 3.5 – Bridge strengthening along the Monaro Highway, ACT



A benefit-cost analysis for the project was not provided in Roads ACT's PPR. However, the outcome sought by the project was seen as critical in expanding HML access across the network. This resulted in either bridges being re-rated to a higher standard without the need for any strengthening work, or providing capital upgrades to bring them up to HML standard.

3.4.1.3 Project status

Nearly $0.4 million had been allocated for assessments along the Monaro Highway with $1 million needed for the bridge upgrades. The HVSPP allocated funding for half the $1.4 million required to conduct the assessments and upgrades. The funding breakdown can be seen in **Table 3.3**.

Table 3.3 – Funding breakdown ($ millions)

Project(s)	Funding
20 bridge assessments	0.4
4 bridge strengthening	1.0
Total	**1.4**

Source: Department of Infrastructure and Transport

As at February 2012, funding had been fully provided and the bridge upgrades were confirmed by Roads ACT to have been completed.

3.5 Technology trials

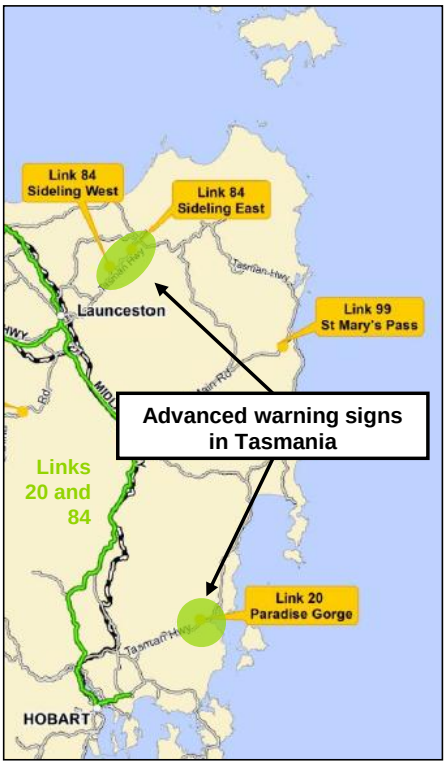
3.5.1 Advanced warning signs along the Tasman Highway, TAS

Tasmania's Department of Infrastructure, Energy and Resources (DIER) proposed to place Advanced Warning Signs (AWS) at sections along the Tasman Highway warning heavy vehicles about constrained alignments, and to assist the regional timber industry in providing reliable advice to on-coming traffic about the proximity of heavy vehicles.

Seven AWS were to be trialled along the highway at the cost of $1.5 million, fully funded by the HVSPP, as part of Round 2.

Figure 3.6 illustrates the AWS trials being considered for this review.

Figure 3.6 – Advanced warning signs along the Tasman Highway, Tasmania



DIER estimated a net present value over 20 years of $0.3 million at a 4% discount rate – this equated to a BCR of 1.2. An appraisal at another discount rate was not available.

As at February 2012, planning and deployment had been under way however, DIER has advised that the project has been deferred. This has been due to contractual issues with the contractor involved on the project.

DIER believes that a resolution will be reached and that the technology trial will commence at some point during 2012. The benefit of these technology trials was therefore not able to be fully reviewed and reported.

3.5.2 Floodway warning signs, WA

In the interest of investigating the merits of technology trials more generally in the program, the Department of Main Roads Western Australia (MRWA) was consulted about the effectiveness of their AWS floodway warning signs, introduced as part of the decoupling bay projects on the North West Coastal Highway in WA.

While there has not been any major flooding in the Pilbara since 2010 and the floodway signs being completed in March 2011, MRWA stated that local residents and stakeholders have indicated there is an improved perception about the need for safer driving behaviours around floodways since the introduction of the AWS.

While both AWS projects were categorised as trials, the Intelligent Transport Systems (ITS) being deployed have been well proven in other applications across Australia according to DIER and MWRA. These projects therefore aim to test the benefits of ITS as an alternative to expensive, hard infrastructure solutions for the mitigation of accidents involving heavy vehicles.

3.6 Effectiveness statement

3.6.1 Driver rest areas

The improved provision of driver rest areas along the Newell Highway is expected to contribute between 5 and 15% towards the reduction in heavy vehicle-related accidents along a major interstate road freight route. Furthermore, some form of rest area facility is now available every 100km along the highway to support drivers in managing their fatigue.

The Newell Highway project works were estimated to have an NPV of $15.6 million (at a 7% discount rate) and a BCR of 2.9 over a 20-year evaluation period. While data specific to the projects along the Newell Highway is not yet available, as mentioned in **Section 2.5**, publicly available information suggests there has been a noticeable decline in heavy vehicle-related accidents more generally.

The new multi-purpose facility incorporating a rest area with a weigh-in station at Yamba along the Sturt Highway will also likely contribute to improve fatigue management with additional capacity for up to eight B-doubles. The site is estimated to have an NPV of $4.7 million (at 4.4% discount rate) and a BCR of 1.7 over a 20-year period. No site or project specific data is available to measure the true effectiveness of this project.

3.6.2 Decoupling bays

Decoupling and parking bays along the North West Coastal Highway in Western Australia are expected to have a significant impact on productivity increases along a key route where B-triple road trains require reconfiguration at Carnarvon to a lower mass limit. The new road train assembly area at Carnarvon will improve efficiency of road freight operator timetables to better manage the breakdown and storage of trailers as well as act as a minor rest stop for drivers and discourage the utilisation of illegal truck configurations.

Furthermore, new driver rest areas and improvements to parking bays along the North West Coastal Highway to being usable during all weather conditions will allow for better fatigue management by truck drivers. These projects, as part of MRWA's package of works, were estimated to have an NPV of 2.4 million (at a 7% discount rate) and provide a BCR of 3.7 over 20 years.

The new decoupling bay at Nhill is a major facility that will benefit both local residents by being further away from residential areas, as well as providing a capacity of up to 250 trucks for reconfigurations. With an expected 120 to 150 trailer exchanges at the site during peak periods by 2025, the site will likely have enough capacity to support trailer exchanges well into the future.

The site is estimated to have an NPV of $11.5 million over 20 years, based on a 7% discount rate, mainly as a result of reduced queuing time for trailer exchange, and a reduction in vehicle accidents due to better fatigue management.

Both projects are expected to contribute significantly to freight productivity. The projects in Western Australia will allow road freight operators to more effectively reconfigure between B-triples and B-doubles along the North West Coastal Highway. The new decoupling bay at Nhill will allow more efficient exchanges of trailers as well as reconfiguration of trucks to comply with differing rules between Victoria and South Australia.

In both instances, no project specific data is available to quantify the benefit of each project at this time. However, this may be possible once the operator behaviour has adjusted to take full advantage of the changed conditions and benefits.

3.6.3 Road network enhancements

Prior to the HVSPP, ACT's HML network had been limited to the Barton Highway. Following 20 assessments and four bridge upgrades, the full 286km length of Monaro Highway is now also fully HML accessible with semi-trailers of up to 45.5 tonnes and B-doubles of up to 68 tonnes.

While no quantified benefits were available at the time of the review, these upgrades are expected to contribute significantly to productivity improvements for road freight operators utilising these routes. This should be measurable in the future by looking at the increased proportion of HML vehicles making up the freight task on these routes, thereby lowering the total number of truck movements.

Once the Majura Parkway is completed in 2016, there will be HML access for the entire route of the Monaro Highway through to the Federal Highway and the Hume Highway.

3.6.4 Technology trials

The Tasmanian technology trials have been deferred as a result of contractual issues between DIER and its selected contractor.

DIER believes that a resolution will be reached and that the technology trial will commence at some point during 2012. The benefit of these technology trials was therefore not able to be reviewed and reported.

3.7 Conclusion

Key findings from the review of selected projects can be seen **Table 3.4** below.

Table 3.4 – Findings from review of selected projects

Findings
Driver rest areas – both projects are fully funded and completed. While the new multi-purpose facility at Yamba was completed relatively recently, improved rest area provisions along the Newell Highway have been operational since 2010. Both projects may have contributed to a reduction in heavy vehicle-related accidents, but this is uncertain at this time.
Decoupling bays – both projects are fully funded and completed. The decoupling bays will allow for more efficient exchanges of trailers between truck operators as well as for reconfiguration of trucks to better comply with respective jurisdictional regulations. The benefits of these projects are not able to be measured at this time.
Road network enhancements – the addition of the Monaro Highway to ACT's HML network will likely make a significant contribution to productivity as it will allow the utilisation of higher productivity vehicles. This benefit will take some time to take effect as it will require operators to adjust their vehicle configurations and planning.
Technology trials – the project trial in Tasmania had been deferred at the time of review and was therefore not assessed.
Overall, it can be concluded that the selected projects have been fully implemented and early indications are that they are likely to contribute to reducing the proportion of heavy vehicle-related accidents and increase the productivity of the road network.

4 Feedback from jurisdictions

4.1 Preface

Initial consultation was held with jurisdictional authorities to obtain a better understanding of their views about the selected projects (**Section 3**). The authorities contacted were:

- NSW Roads and Maritime Services (RMS);
- Victoria Department of Transport and VicRoads (DoT);
- Main Roads Western Australia (MWRA);
- South Australia Department of Planning, Transport and Infrastructure (DPTI);
- Tasmania Department of Infrastructure, Energy and Transport (DIER); and
- Roads ACT.

MRWA and DoT also provided direct access with their regional offices who were involved with project selection and implementation. A complete list of organisations contacted can be seen in **Appendix A**.

4.2 Feedback

4.2.1 NSW Roads and Maritime Services

NSW RMS noted that the Australian Government had been helpful and flexible to project variations and outcomes. The road authority was not able to provide any quantitative data regarding the immediate benefits that the program has brought NSW.

While the RMS is confident that the rest area package will have an impact on reducing heavy vehicle-related accidents, it was felt that it would take another 12 months before any benefits are able to be realised. This view being formed on the basis that road operators will require more time to alter their travel patterns before making use of the new driver rest area sites.

4.2.2 Victoria Department of Transport & VicRoads

The Department of Transport (DoT) and VicRoads viewed the outcomes of the program and their relationship with DIT as being very positive. The road authority was not able to provide any information regarding the immediate benefits that the program has brought Victoria.

In terms of obtaining information on the effectiveness of the HVSPP, DoT indicated that they will be monitoring the area over the next 12 months (as at February 2012) to determine the realisation of benefits. Deloitte was therefore unable to obtain more detailed feedback on the benefits or operation of the program.

4.2.3 Main Roads Western Australia

MRWA feedback was that the process was rushed, and as a result of constrained turnaround times for proposal submissions, consultation with industry was only conducted at the transport operator management level, instead of directly with truck operators.

With more time being available during Round 2, MRWA were able to undertake a more comprehensive consultation with industry, with input being sought from local truck operators on priority areas. As a result, their final submission to DIT involved a combination of priority areas nominated both by industry and the road authority.

An example of industry priority areas included a new decoupling bay near Exmouth and new facilities at Carnarvon, following heavy flooding in late 2010. MRWA indicated that the site delivered immediate benefits in productivity with operators being able to switch from B-doubles to B-triples.

MRWA's view on future funding is that it should be more safety-focused. They argue that Western Australia's significantly different environmental conditions compared to the eastern states, such as irregular rainfall, can be detrimental for road freight operations. They explained that on occasions water has to be transported to some of the driver rest area and decoupling sites to ensure water is available for truck drivers - this can be an expensive process. Lack of proper shading at rest areas was also flagged as a problem due to the harsh climate impacting on tree growth. These are some of the safety-related issues MRWA would be seeking to address in future programs.

4.2.4 South Australia Department of Planning, Transport and Infrastructure

DPTI indicated during consultations that working with the Commonwealth on the program had been a positive experience, both formally and informally.

In terms of industry engagement, the department stated that it had made an effort from project inception to communicate with the community and industry (e.g. media releases and consultation with local stakeholders). While they did not receive much input from stakeholders through the process, a local service station owner had some early issues with respect to the potential impact on his business. While it was acknowledged that the concerns of this one stakeholder should not be disregarded, it does not necessarily reflect the views of the local community or the industry more generally.

In terms of realising the immediate benefits identified in the original project proposal, DPTI indicated that they will be monitoring the area over the next 12 months. Further detail on available benefits was not available at the time of review.

4.2.5 Tasmania Department of Infrastructure, Energy and Transport

DIER advised Deloitte that the technology trial project had been deferred due to contractual issues with the contractor involved. DIER believes that a resolution will be reached and that the trial will commence at some point during 2012. The benefit of these technology trials was therefore not able to be fully reviewed and reported.

4.2.6 Roads ACT

Consultation with Roads ACT identified that there had been an early misunderstanding with the Commonwealth with respect to the assessment and re-rating of bridges on ACT's road network. The misunderstanding was resolved in a timely manner and resulted in a project variation on the number of bridge assessments being increased from 45 to 67.

Roads ACT advised that they considered the program an overall success with the Monaro Highway receiving the necessary upgrades to extend the HML network. Feedback from the community and industry has been limited – it was pointed out that most road users would not notice the changes to road conditions. It also seems it might take some time before road operators fully appreciate the changes and optimise their operations to utilise the extra capacity limits.

4.3 Effectiveness statement

Overall feedback from the jurisdictional road authorities has been very positive with respect to receptiveness of the HVSPP and in working with the Department. While detailed feedback or data on the immediate benefits of projects was not obtained, all authorities expected positive outcomes over the next 12 to 36 months as a result of the program.

It is also worth noting that while $70 million was made available by the Australian Government as a result of the matched funding consideration under the program's guidelines, total expenditure by the Commonwealth and state governments on improving road safety and productivity outcomes has amounted to $115 million between 2008-09 and 2011-12.

4.4 Conclusion

Key findings based on feedback from jurisdictional road agencies can be seen **Table 4.1** below.

Table 4.1 – Findings from feedback from jurisdictions

Findings
Consultation with the jurisdictional stakeholders confirmed that apart from the technology trial in Tasmania, all selected projects were completed, fully funded and operational.
While some projects were considered to be fully operational, that is, major works had been completed, minor works such as landscaping or amenities were still being carried out (e.g. new rest area at Yamba, South Australia).
Views and feedback from the authorities with respect to working with DIT on the program were very positive – all authorities looked forward to similar programs in the future: • DPTI provided feedback that funding approval processes more generally, and not just the HVSPP, took too long; and • Roads ACT indicated that there had been misunderstanding with DIT early on in the process with regard to the number of bridges involved in the project. This was resolved in a timely manner.
In terms of the extent of industry engagement and feedback with respect to the road authorities – there were varying degrees of involvement. All authorities indicated that they had engaged with industry to some extent prior to project commencement. However, none have yet to fully gauge industry feedback post project completion: • DoT and RMS were uncertain as to the extent of industry involvement, as higher level project management was separated from day-to-day affairs usually run out of regional offices; and • Roads ACT reported little feedback was received from industry before and after the bridge upgrades. It was pointed out that while notice signs had been put up along the highway with regard to the enhancements, road users do not typically notice the changes. • MRWA and DPTI indicated that they had been very involved with industry engagement: • MRWA applied lessons learned from Round 1 funding where there was a lack of industry input, to having half their recommended projects for Round 2 arising from industry feedback; and • RMS, MRWA and DPTI all indicated that it was still too early to be seeking feedback post the program, as the benefits would still take up to 12 to 36 months to be realised and freight operators become accustomed to these changes.
As a result of matched funding, the combined contribution of the Australian and state governments towards improving heavy vehicle road safety and productivity outcomes has totalled $115 million over four years – that is, state governments contributed $45 million in addition to the program's $70 million.

5 Feedback from industry

5.1 Preface

In total, 20 stakeholders from industry peak bodies and truck operators were contacted – seven of these contacts resulting in stakeholder interviews. A complete list of organisations contacted can be seen in **Appendix A**.

The peak bodies consulted were:

- Australian Trucking Association (NSW, WA, SA, VIC offices);
- NatRoad;
- Long Haul Drivers Association (LHDA);
- National Road Freighters Association (NRFA);
- Tasmanian Truck Owners and Operators Association (TTOOA); and
- Transport Workers Union.

Feedback was also sought from truck operators in order to get first-hand experience and views on some of the projects under the HVSPP. However, the project team had difficulty in ascertaining a suitable sample size – much of this is due to the difficulty in contacting and confirming consultation with truck operators as a result of their busy schedules – a larger sample size would have provided a more balanced view. While road operators contacted are listed below, only three responded to the consultation request:

- Simon National Carriers;
- Rod Pilon Transport;
- Alan & Rachael Magill Transport Services;
- Kelvin Baxter Transport Services;
- RWS Transport; and
- TruckRight.

Stakeholder consultation took place in February 2012 and was mainly conducted by telephone. Although email and questionnaires were also used to ensure all communication avenues were attempted.

5.2 Feedback

5.2.1 General view of the HVSPP

The general consensus among all consultees was that Australian Government funding was much appreciated and required. The HVSPP funding is seen as being beneficial, not only to the industry, but also to consumers, as benefits eventually filter down in the form of cost savings. However, multiple parties noted that while the sector had been grateful for programs like the HVSPP, more funding will be required to address issues with fatigue management and improving operator productivity.

A study conducted by Austroads on the state of rest areas across the National Highway Network reported in 2008 that there were far too few sites in existence[20] – a respondent noted that the improvements garnered from this program were therefore critically needed.

Routes identified as requiring significant improvement in the provision of more driver rest areas and decoupling bays include the Hume and Pacific Highways in NSW, and the major highways in Tasmania, Victoria and Western Australia, such as the Tasman, Sturt and Great Northern Highways.

To date, industry consultation suggested that capacity upgrades to existing sites and the development of new sites have been insufficient in meeting current capacity demands – that is, there is a need for larger rest areas and decoupling bays to fit more heavy vehicles, and a need for more of them across the network.

Feedback received indicated that there is an ongoing debate between upgrading existing trailer exchange sites and driver rest areas, or building new ones. While improvements to existing sites can provide incremental benefits, such as more capacity to accommodate the increase in freight traffic and vehicle size, industry respondents preferred the provision of more rest areas and decoupling bays across the network.

While the majority of stakeholders were aware of the program, respondents felt more involvement and input from industry was required – not just by peak bodies and road operator companies, but direct input from the truck operators who make use of such facilities.

5.2.2 Immediate benefits due to the program

It was noted during consultations with both the jurisdictional road authorities and industry that it is still too early to realise immediate benefits. However, industry respondents found that newer rest areas have been better at separating private vehicles from the different types of heavy vehicles. That is, designs have been more effective at segregating trucks with livestock or refrigerated goods, which are noisier, from more conventional truck configurations. This allows for more effective resting by drivers.

Modern signage and improved hardstands being built around trees for added shade also received praise by the industry respondents at large.

Immediate benefits have not been confined to road operators themselves. New floodway advanced warning signs in the Pilbara, Western Australia have helped alleviate concerns from surrounding communities in addition to providing advanced warning to other road users.

New decoupling bays in Carnarvon, Western Australia and Nhill, Victoria have helped alleviate heavy vehicle congestion from community areas, which had previously been popular sites for truck drivers.

[20] Austroads (2008) Audit of Rest Areas against National Guidelines

The combination of the HVSPP and other state-funded capital works have delivered other noticeable improvements across major corridors, such as increased HML access and more driver rest area sites. However, more time will be needed before truck operators adapt and optimise their travel patterns to make better use of these new infrastructure improvements.

5.2.3 Feedback on selected projects

5.2.3.1 Rest areas – Newell Highway (NSW) & Yamba (SA)

While the safety improvements along the Newell Highway were welcomed, a few rest area sites which received upgrades garnered negative feedback. Some rest areas were considered to be poorly planned by respondents, such as being located on steep slopes. Rest areas located on steep slopes impact on vehicle operator costs when driving uphill, and make it more challenging to manoeuvre vehicles when driving downhill.

Other rest areas were criticised as having insufficient shade or amenities – this comment was not confined to the driver rest area projects in NSW alone.

Other sites considered to be poorly designed by respondents have parking bays where noisier heavy vehicles (e.g. refrigerated or livestock vehicles) can park in close proximity to other truck operators attempting to rest nearby.

As a result of the issues addressed above, some industry stakeholders are under the impression that projects are being rushed through planning and design phases, without proper consideration of the locational requirements of the area, and the needs of truck operators who will use the facility.

An upgrade to a key rest area at Marthaguy Creek along the Newell Highway was highlighted by respondents as an example of poor planning. The rest area was closed down during its upgrade, but respondents noted that NSW RMS failed to appropriately inform drivers on the highway. While a notice sign was placed at the site, prior rest areas did not have signs and as such drivers were not able to plan their trips accordingly.

Respondents also stated that the upgrade at Marthaguy Creek involved poor planning with respect to repavement and realignment at the rest area. It resulted in difficulties for truck operators to enter and exit the site – respondents felt that the funds spent on the site would have been better spent on building a new rest area.

A further example raised was the multi-purpose facility at Yamba where rest area and weigh station facilities were combined into a single site. Consultation indicated that many truck operators prefer to skip the site as weigh station activities often impacted on drivers trying to rest.

Some industry respondents had a view that facilities should remain separated and dedicated. A combined site may sound good in theory, but it was alleged by one respondent that such designs were likely driven by road authorities to reduce costs and by road operator employers to improve productivity, instead of basing designs from a road safety perspective.

5.2.3.2 Decoupling bays – Nhill (VIC) & North West Coastal Highway (WA)

The new decoupling bay at Nhill was endorsed as a much needed facility. However, it was noted to have already reached capacity and industry has indicated that more or larger decoupling bays are needed across Victoria.

Much of this need for more exchange sites can be attributed to long haul truck operators having to reconfigure their truck consignments to adapt for differing compliance regulations and HML access between South Australia, Victoria and NSW. As an example, reconfiguring semi-trailers into B-doubles for long haul freight to South Australia and then Western

Australia, or splitting up consignments from Queensland and NSW to destinations in Victoria and South Australia.

While Deloitte was unable to establish contact with road industry representatives in Western Australia – consultation with MRWA indicated that a share of the approved projects under the program were as a result of direct input from local road operators.

5.2.3.3 Bridge strengthening upgrades (ACT)

As highlighted in the consultation with Roads ACT, the road network enhancements to bridges along the Monaro Highway went effectively unnoticed by industry.

While this may just be a communication issue that needs resolution, it will likely take some time before being able to determine as to whether the bridge upgrades have resulted in increased numbers of HML vehicles on the highway.

5.2.3.4 Advanced warning signs (TAS)

As mentioned in **Section 3.5**, gathering specific feedback on technology trials from industry in Tasmania was not possible. However, it should be noted that our consultation with a Tasmanian industry peak body identified that they were unaware of the proposed technology trial, let alone any of the approved projects under the HVSPP for the state.

5.2.4 Projects not considered

Respondents indicated that although the Newell Highway has been significantly improved, regional road networks feeding into it require more work – particularly road infrastructure to the east and south of the highway. Rest areas and decoupling bays developed under the program have been identified as adequate along the major east coast highways, however, much more is needed. B-doubles exacerbate the capacity issue of rest areas as they take up considerably more space over conventional semi-trailers – a move to B-triples would further worsen the situation.

More decoupling bays have been flagged as being required in Victoria. The new site at Nhill was stated to already be at capacity, which apparently is also the case for other sites which have received capacity upgrades across the state.

Industry consultation in Tasmania indicated that the industry would like to see improved HML access across their highways. Meanwhile in Western Australia, which already makes strong use of Higher Productivity Vehicles (HPVs), industry would like to see the construction of more driver rest areas to more effectively address heavy vehicle-related safety.

It is recognised that development of driver rest areas can be expensive. A **case study** overleaf presents a potential, interim solution to addressing the shortage in driver rest areas over the short term.

Case study: The potential for informal parking sites as identified by blue reflectors as an interim solution to building formal driver rest areas

It is generally recognised that there are insufficient truck rest areas and insufficient funding available to fix the problem immediately. There are many informal spots used by truck operators where there is not enough capacity at existing truck bays. For example, trucks pull up on wide road shoulders for legally required breaks, load checking and rest.

Support by road authorities in further developing such informal areas, as well as making room for new ones may prove a cost-effective measure in addressing heavy vehicle fatigue management issues.

However, while a driver who regularly travels a particular road often knows where these informal spots are and can utilise them if needed to manage their fatigue, a driver already fatigued or driving in an unfamiliar area may not know where these informal sites are located. There is a risk that unfamiliar drivers may be forced to travel too far in search of a properly signed and recognised rest bay.

As an interim solution, the use of blue reflectors could be a cheap option to identify informal areas for drivers to safely park and rest. Blue reflectors are positioned on roadside guideposts to indicate to heavy vehicle drivers that they are approaching an informal truck parking area, which can be used for a rest break. It is a cost-effective measure to better flag informal sites that can be rolled out in a relatively short timeframe.

Marking of these informal sites with blue reflectors (or delineators) on guide posts was initially trialled on the Newell Highway starting in 1999 and then expanded in 2000. Transport and Main Roads in Queensland started rolling out blue reflectors across the state in 2006 and have fitting guidelines on their website, while NSW RMS is currently implementing these on six highways in NSW with other major roads to follow.

The HVSPP approved projects to upgrade blue reflector sites along the Newell Highway, further acknowledging their benefit. Victoria and Northern Territory are other jurisdictions expected to begin trialling this interim measure as well.

The combination of additional informal rest areas with low cost blue reflectors may be an effective alternative to addressing the needs for more rest areas across the network in the interim, until more funding for formal rest areas can be secured.

5.2.5 Improvements for future programs

Future programs of a similar nature will likely continue to be well received by industry. However, in terms of the balance of funding between safety and productivity-related projects, it appears that industry may be more receptive towards funding to improved safety-related outcomes.

Industry respondents' views on the allocation towards safety and productivity projects ranged from half-half to four-fifths towards safety. The majority however suggested that two-thirds of funding for safety and one-third for productivity would likely be ideal for future programs. The HVSPP allocated 61% of funds towards safety-related projects which appears to have met industry's expectations with respect to funding allocation.

The consultation highlighted that improving productivity outcomes would also have a noticeable impact on safety. Stakeholders want to see an increased use of HPVs (not necessarily longer in length, but more axles to allow for an increase in mass limit) which may lower the number of heavy vehicles on the road.

An industry-sponsored study has stated that the increased use of HPVs could reduce heavy vehicle-related accidents by as much as 40%, and improve productivity by as much as 30%.[21] In addition, bridge strengthening had been identified on several occasions by respondents as a much needed investment in terms of improving heavy vehicle productivity. A comprehensive HML network has yet to be achieved and the increases in compliance costs associated with operating HPVs has seen the overall usage for such heavy vehicles decline in recent years.

It was also suggested that since funding is often constrained and unable to keep up with the pace of growth in the freight task, future programs will need to be effective at identifying growth areas where driver rest areas are lacking. To achieve this, the road freight industry would like to have more involvement and input with respect to future programs. There is an overall consensus that there has been a disconnect between industry and government in terms of identifying priority projects and areas in need of funding.

Increased input from industry could assist with better identification of priority areas, as the needs and requirements of the freight industry change over time. These are impacted by market and infrastructure conditions which differ between major freight routes – and as improvements are made, freight operators adapt and optimise their travel patterns and therefore the locational needs for driver rest areas change. Of particular note are the differing needs, in terms of facilities required, by truck operators on shuttle routes, and drivers who regularly engage on long haul trips.

Several stakeholders indicated that they would prefer quantity over quality in terms of new rest area provision. The availability of more basic formal rest area sites with bare minimum amenities was seen to provide more immediate benefits over upgrading existing sites or providing higher quality sites. Another interim solution was suggested in the form of cheaper blue reflector informal rest areas which could be rolled out far quicker and cost-effectively until more formal sites could be established.

Several stakeholders also emphasised the need for improved education on heavy vehicle-related safety for private vehicle road users and for the community as well – this could be another cost-effective way for reducing heavy vehicle accidents related to private vehicles.

The following **case study** illustrates the attitude of truck drivers and the community towards road safety.

Case study: 2011 survey of trucking attitudes[22]

The 2011 Survey of Community Attitudes showed that 30% of truck drivers were travelling at inappropriate speeds. Almost 20% reported falling asleep while driving, while 60% stated that they have used a mobile phone while driving.

Between 2003 and 2009, inappropriate speeds saw an increase from approximately 25% to 32% as a cause for heavy vehicle-related accidents, while the share of accidents caused by truck driver fatigue dropped from 25% to 10%.[23]

However, the usage of mobile phones while driving remains high, and while usage has reportedly stabilised since 2008, more than half the respondents surveyed believed that talking on a mobile phone while driving increases the chances of having an accident. 28% of truck drivers stated that they would support the introduction of a new law banning the use of hands-free mobile phones while driving.

The study noted that while Australians generally had a good awareness of major factors contributing to road accidents such as speeding, drink driving, increased fatigue, there may be room for improvement, in terms of better road safety education.

[21] Australian Trucking Association (2012) Media Release: Slash B-double charges to boost, safety, productivity
[22] Department of Infrastructure and Transport (2011) Community Attitudes to Road Safety – 2011 Survey Report
[23] NTI (2011) Major Accident Report

5.3 Effectiveness statement

Overall, feedback showed that the HVSPP was welcomed by industry but it was noted that more of such programs were needed to address current heavy vehicle-related issues, particularly the ongoing shortage of driver rest areas.

While some negative feedback was received with respect to certain selected projects, it should be noted that a suitable sample of industry feedback was not achieved within the timeframe of the review. As such, these views should not be considered as reflective of the whole HVSPP, by the entire road freight industry. This was partially apparent with the feedback received where industry peak bodies tended to be more positive than individual truck drivers who were less receptive.

A 2009 study found that inappropriate speeds continued to be the predominant cause (at 32%) for heavy vehicle accidents in Australia. Fatigue and inappropriate speed was found to be responsible for nearly one in every two serious truck-related accidents (42%).[24] As discussed in **Section 2.5**, early indications show that the HVSPP has likely contributed to a decline in heavy vehicle accidents.

The study also showed that semi-trailers are disproportionately overrepresented at 60% of major accidents, though only responsible for 38% of the articulated freight task – B-doubles are the safer alternative, carrying 46% of the freight task with 29% of major accidents in 2009. Productivity improvements in terms of road network enhancements and decoupling bays will likely contribute to making the use of B-doubles more attractive which would subsequently improve both road safety and productivity outcomes.

Industry respondents pointed out that road safety education should also be a suitable alternative means to address road safety. The same 2009 study referred to above indicated that in fatal crash incidents involving another vehicle, the third party driver was at fault in 82% of the incidents. Other drivers therefore need to be educated about the use and operation of heavy vehicles on the road network if this factor is to be adequately addressed.

[24] NTI (2011) Major Accident Investigation Report

5.4 Conclusions

Key findings based on feedback from jurisdictional road agencies can be seen **Table 5.1** below.

Table 5.1 – Summary of feedback from industry

Findings
General consensus among industry respondents was positive with respect to the HVSPP, respondents indicated that more programs were needed. Feedback indicated that there was a preference for new heavy vehicle-related safety and productivity infrastructure over the improvement of existing sites.
While industry noted that it was too early to realise immediate benefits from projects under the HVSPP, it was noted that driver rest area designs from the program have been more effective at segregating truck drivers allowing for more efficient fatigue management.
The increased provision of informal rest area sites supplemented by blue reflectors as delineators was seen by industry respondents as a very effective short term response to addressing the shortage of formal driver rest areas.
Industry respondents favoured increased allocation towards safety-related projects by two-thirds – the HVSPP allocated 61% of total funds towards safety-related projects which appears to have met industry's expectations.
Industry respondents requested to be more involved in the planning and design phases of future projects.
Improved road safety education was flagged as another example of addressing safety issues, especially with respect to private motorists – a 2009 study showed that in 82% of heavy vehicle-related accidents, the third party driver was found to be at fault.[25]
While some negative feedback was received with respect to certain selected projects, it should be noted that these views represented only a small sample of the industry, and as such, are not necessarily reflective of the entire road freight industry.

[25] NTI (2011) Major Accident Investigation Report

6 Summary and conclusion

6.1 Review of the program

1. Of the 179 projects in Round 1 of the program, 49% were related to driver rest areas, 39% to road network enhancements, and 12% to decoupling bays. For Round 2, 63% out of a total of 57 projects related to driver rest areas and technology trials and road network enhancements accounted for 19% and 18% respectively.
2. As at February 2012, 166 of 179 Round 1 projects have been completed and nearly half the 57 Round 2 projects have been completed. 20% of the total 236 projects under the HVSPP are in planning or under construction.
3. 67% of the $70 million funding made available under the program has been allocated to projects located in Queensland, NSW and Victoria. BITRE statistics show that approximately three-quarters of Australia's interstate road freight task occurs between these states and that the majority of fatal accidents involving heavy vehicles have historically occurred in East Coast States.[26]
4. Projects relating to the upgrade or provision of new driver rest areas accounted for 67% of $30 million funding made available for Round 1, and 54% of the $40 million available for Round 2 – this amounts to 59% of the total program's funding. If technology trials (which are largely safety-related) are included, then 62% of the program's funding has been allocated to improving road safety outcomes.
5. The program has allocated the majority of its funding to states who have the largest share of road freight activity and heavy vehicle accidents – Queensland, NSW and Victoria.
6. While quantification of benefits for the program is not immediately available, publically available information has shown a decline in heavy vehicle related accidents since 2008.[27]

6.2 Review of selected projects

1. **Driver rest areas** – both projects are fully funded and completed. While the new multi-purpose facility at Yamba was completed relatively recently, improved rest area provisions along the Newell Highway have been operational since 2010. Both projects may have contributed to a reduction in heavy vehicle related accidents, but this is uncertain at this time.
2. **Decoupling bays** – both projects are fully funded and completed. The decoupling bays will allow for more efficient exchanges of trailers between truck operators as well as for reconfiguration of trucks to better comply with respective jurisdictional regulations. The benefits of these projects are not able to be measured at this time.
3. **Road network enhancements** – the addition of the Monaro Highway to ACT's HML network will likely make a significant contribution to productivity as it will allow the utilisation of higher productivity vehicles. This benefit will take some time to take effect as it will require operators to adjust their vehicle configurations and planning.

[26] BITRE (2010) Interstate Freight in Australia, Report 120; BITRE (2011) Fatal heavy vehicle crashes Australia bulletin, Apr-June 2011
[27] BITRE (2011) Fatal heavy vehicle crashes Australia bulletin, Apr-June 2011

4. **Technology trials** – the project trial in Tasmania had been deferred at the time of review and was therefore not assessed.

6.3 Feedback from jurisdictions

1. Consultation with the jurisdictional stakeholders confirmed that apart from the technology trial in Tasmania, all selected projects were completed, fully funded and operational.
2. While some projects were considered to be fully operational, that is, major works had been completed, minor works such as landscaping or amenities were still being carried out (e.g. new rest area at Yamba, South Australia).
3. Views and feedback from the authorities with respect to working with DIT on the program were very positive – all authorities looked forward to similar programs in the future:
    a. DPTI provided feedback that funding approval processes more generally, and not just the HVSPP, take too long; and
    b. Roads ACT indicated that there had been misunderstanding with DIT early on in the process with regard to the number of bridges involved in the project. However, this was resolved in a timely manner.
4. In terms of the extent of industry engagement and feedback with respect to the road authorities – there was varying degrees of involvement.
5. All authorities indicated that they had engaged with industry to some extent prior to project commencement. However, none have yet to fully gauge industry feedback post project completion:
    a. DoT and RMS were uncertain as to the extent of industry involvement, as higher level project management was separated from day-to-day affairs usually run out of regional offices;
    b. Roads ACT reported that there was no feedback from industry before and after the bridge upgrades was non-existent. It was pointed out that while notice signs had been put up along the highway with regard to the enhancements, road users do not typically notice the changes;
    c. MRWA and DPTI indicated that they had been extensively involved with industry engagement; and
    d. MRWA applied lessons learned from Round 1 funding where there was a lack of industry input, to having half their recommended projects for Round 2 arising from industry feedback.
6. RMS, MRWA and DPTI all indicated that it was still too early to be seeking feedback post the program, as the benefits would still take up to 12 to 36 months to be realised and freight operators become accustomed to these changes.
7. As a result of matched funding, the combined contribution of the Australian and state governments towards improving heavy vehicle road safety and productivity outcomes has totalled $115 million over four years – that is, state governments contributed $45 million in addition to the program's $70 million.

6.4 Feedback from industry

1. General consensus among industry respondents was positive with respect to the HVSPP, respondents indicated that more programs were needed. Feedback indicated that there was a preference for new heavy vehicle-related safety and productivity infrastructure over the improvement of existing sites.
2. While industry noted that it was too early to realise immediate benefits from projects under the HVSPP, it was noted that driver rest area designs from the program have been more effective at segregating truck drivers allowing for more efficient fatigue management.
3. The increased provision of informal rest area sites supplemented by blue reflectors as delineators was seen by industry respondents as a very effective short term response to addressing the shortage of formal driver rest areas.
4. Industry respondents favoured increased allocation towards safety-related projects by two-thirds – the HVSPP allocated 61% of total funds towards safety-related projects which appears to have met industry's expectations.
5. Industry respondents requested to be more involved in the planning and design phases of future projects.
6. Improved road safety education was flagged as another example of addressing safety issues, especially with respect to private motorists – a 2009 study showed that in 82% of heavy vehicle-related accidents, the third party driver was found to be at fault.[28]

[28] NTI (2009) National Transport Insurance (Major incidents) Crash Data

6.5 Effectiveness statement

A summary of effectiveness statements to attribute the HVSPP's ability in meeting its objectives can be seen in **Table 6.1** below.

Table 6.1 – HVSPP's effectiveness in meeting its objectives

Summary of HVSPP effectiveness and meeting its objectives
Reduction in the proportion of road accidents involving heavy vehicles through targeting of heavy vehicle driver fatigue and speed
Although specific data relating to the HVSPP's effectiveness in reducing the proportion of heavy vehicle accidents was not available at the time of the review, as at February 2012, approximately 93% of Round 1 projects and 47% of Round 2 projects were operational across Australia – the majority of which are safety-focused. While HVSPP specific data is not available for review, BITRE data[29] showed an overall reduction in heavy vehicle-related accidents involving rigid and articulated trucks, at 14.7% and 3.5% each year between June 2008 and 2011 due to safety initiatives. Early indications show that it may be reasonable to conclude that the HVSPP's improved provision of rest areas allowing for increased stops by truck operators to more effectively manage fatigue will lead to a further reduction in heavy vehicle-related accidents on these routes.
Enhancing the capacity of existing roads and thereby increasing heavy vehicle transport productivity
Through matched funding, the HVSPP's $70 million saw an additional $45 million in funding from state governments towards the improvement of safety and productivity-related outcomes. While the majority of the HVSPP funding was allocated to improving heavy vehicle road safety, 39% of funds were allocated towards decoupling bays and road network enhancements. Data specific to the immediate benefits of these projects is not yet available, although feedback from the jurisdictional road agencies and industry has indicated that benefits should be realised over the next 12 to 36 months. Nevertheless, their view is that the availability of decoupling bays and the upgrading of the heavy vehicle network will result in the increased use of B-double vehicle configurations, and other HML vehicles. Research shows that the use of B-double vehicle configurations leads to improved productivity outcomes. A 2011 report on a National Transport Insurance study in 2009 showed that semi-trailers are disproportionately overrepresented at 60% of major accidents, though only responsible for 38% of the articulated freight task.[30] By comparison, B-doubles are the safer alternative, carrying 46% of the freight task with 29% of major accidents. Productivity improvements as a result of this program will likely make the use of B-doubles more attractive and subsequently lead to improved productivity outcomes.

[29] BITRE (2011) Fatal heavy vehicle crashes Australia quarterly bulletin, April-June 2011
[30] NTI (2011) Major Accident Investigation Report

7 Recommendations

This section sets out recommendations for consideration based on the outcomes from the review:

1. It is recommended that similar programs continue to be focusing on safety-related projects. While a funding allocation ratio of two-thirds for safety and one-third for productivity was the most common funding balance suggested by industry respondents, the breakup of funding should be based on projects which will deliver the greatest benefit.
2. The Australian Government should request that jurisdictional road authorities conduct more detailed industry stakeholder consultations to:
    a. Identify and determine a proportion of priority areas in need of road infrastructure investment; and
    b. Inform the planning and design stages of approved projects.
3. That a further review of HVSPP projects be conducted in another 36 months to (i) assess whether the BCR estimated in the PPR was achieved, and (ii) quantify any other benefits that may have been achieved from the project.
4. Future reviews include provision for site visits to interview operators on-site to ascertain targeted feedback on specific projects rather than just rely on telephone interviews at the industry level.
5. Further consideration be given towards other means of improving heavy vehicle safety and productivity outcomes including:
    a. Promoting the use of blue reflectors as a cost-effective measure to define ‘unofficial driver rest areas’ as an interim alternative to the provision of driver rest areas; and
    b. Introducing a broader road safety education campaign directed at private motorists given they are at fault 82% of the time when involved in fatal accidents with heavy road vehicles.[31]

[31] NTI (2009) National Transport Insurance (Major incidents) Crash Data

8 Limitation of our work

General disclaimer

This report has been prepared by Deloitte Touche Tohmatsu for the Commonwealth Department of Infrastructure and Transport pursuant to its terms of engagement. This report is not intended to and should not be relied upon by anyone else. Deloitte Touche Tohmatsu accept no duty of care to any other person or entity in respect of any reliance placed on the report.

Appendix A Stakeholder consultation

Stakeholders contacted

In total, 30 stakeholders from 23 organisations were contacted with 16 respondents providing feedback – 14 via the telephone, 1 via email and 1 via posted questionnaire.

A list of organisations contacted can be seen in **Table A.1**.

Table A.1– Organisations contacted

Organisation	Feedback received
Road authorities	
MRWA	✔
NSW RMS	✔
Roads ACT	✔
SA DPTI	✔
TAS DIER	✔
VicRoads	✔
Industry peak body & advisory council	
National Transport Insurance Group	
NatRoad	✔
Newell Highway Task Force	✔
NSW Road Transport Association	✔
Road Freight Advisory Council	
SA Road Transport Association	
Tasmanian Truck Owners and Operators Association	✔
Transport Workers Union	
VIC Transport Association	
WA Road Transport Association	
Truck owner or operator	
Alan & Rachael Magill Transport Services	
Kelvin Baxter Transport	

Organisation	Feedback received
Owner-operator from Long Distance Drivers Association	✔
RWS Transport	✔
Owner-operator from TruckRight	✔
Rod Pilon Transport	
Simon National Carriers	

Appendix B Source documents

Documents received from DIT

Table B.1 below provides a list of 32 documents used for the purposes of this review.

Table B.1– Documents received from DIT

Document	Reference/ date	Format	Comment
Heavy Vehicle Safety and Productivity Guidelines	Sep-11	PDF	Provides administrative arrangements of the HVSPP
Notes on Administration for the Nation Building Program, July 2009	Jul-09	PDF	Detail on appraisal, approval and administration processes of projects under the Nation Building Program
Road Charges Legislation Repeal and Amendment Act 2008	No. 148, 2008	PDF	Act to repeal and amend the law relating to road charges and for related purposes
HVSPP Round 2 Guidelines & Letters	04821-2009	PDF	Ministerial approval to proceed with Round 2 of the program
HVSPP Round 1 Calls for submission	06687-2008	PDF	Signed letters calling for written submissions on priority projects for ACT, NSW, NT, QLD, SA, TAS, VIC & WA
HVSPP Round 2 Calls for submission	04821-2009	PDF	Signed letters calling for written submissions on priority projects for ACT, NSW, NT, QLD, SA, TAS, VIC & WA
HVSPP Round 1 Letters of offer	11916-2008	PDF	Signed letters of offer for projects submitted by ACT, NSW, NT, QLD, SA, TAS, VIC & WA road authorities
HVSPP Round 2 Letters of offer	08541-2009	PDF	Signed letters of offer for projects submitted by ACT, NSW, NT, QLD, SA, TAS, VIC & WA road authorities
Status of HVSPP	NB-II BP 08	MS Word	HVSPP Senate brief
HVSPP status reports	Nov-11	MS Excel	Project status reports for ACT, NSW, NT, QLD, SA, TAS, VIC & WA
Infrastructure Management System reports (IMS)	Feb-12	PDF	Project status reports for ACT, NSW, NT, QLD, SA, TAS, VIC & WA via IMS
QLD Round 1 Ministerial approval	02523-2009	PDF	Approved letter and supporting documents
QLD Round 1 Variation documents	QPT3715, QPT3716, QPT3557 09/1905	PDF	Supporting documents and minutes for variations to projects in QLD
QLD Round 2 Variation tool, documents and minutes	QPT34196 10/3924	PDF	Supporting documents and minutes for variations to projects in QLD
SA Round 2 Ministerial approval	01850-2010	PDF	Approved letter and supporting documents
WA Round 1 Ministerial approval	01983-2009	PDF	Approved letter and supporting documents

Document	Reference/ date	Format	Comment
VIC Round 1 Ministerial approval	02768-2009	PDF	Approved letter and supporting documents
NSW Round 1 Variation minutes	09/1886	PDF	Minutes on project variation for NSW in Round 1
ACT Round 1 Ministerial approval	01489-2009	PDF	Approved letter and supporting documents
ACT Round 1 & 2 Variation approvals	October 2009, November 2010	PDF	Minutes on project variation for NSW in Round 1
ACT Project Proposal Report & Evaluation Checklist	Feb-09	MS Word	ACT PPR and supporting documents for HVSPP Round 1
NSW Round 1 Ministerial approval	01947-2009	PDF	Approved letter and supporting documents
NSW Project Proposal Report & Evaluation Checklist	Newell & Sturt Highways	PDF	NSW PPR and supporting documents
SA Round 2 Ministerial approval	01850-2010	PDF	Approved letter and supporting documents
SA Project Proposal Report & Evaluation Checklist	Mar-10	PDF	SA PPR and supporting documents for HVSPP Round 2
TAS Round 2 Ministerial approval	01877-2010	PDF	Approved letter and supporting documents
TAS Project Proposal Report & Evaluation Checklist	n/a	PDF	SA PPR and supporting documents for HVSPP Round 2
VIC Round 1 Ministerial approval	02678-2009	PDF	Approved letter and supporting documents
VIC Project Proposal Report & Evaluation Checklist	n/a	PDF	VIC PPR and supporting documents for HVSPP Round 1
WA Round 1 Ministerial approval	01983-2009	PDF	Approved letter and supporting documents
WA Project Proposal Report & Evaluation Checklist	n/a	PDF	WA PPR and supporting documents for HVSPP Round 1
Community Attitudes to Road Safety - 2011 Survey Report	2011	PDF	

Other documents

Table B.2 below provides a list of eight additional documents used to inform the review

Table B.2– Other documents

Document	Source	Reference/ date	Format
Fatal heavy vehicle crashes Australia quarterly bulletin	Bureau of Infrastructure, Transport and Regional Economics	April-June 2011	PDF
Interstate Freight in Australia	Bureau of Infrastructure, Transport and Regional Economics	Report 120, 2010	PDF
Melbourne-Brisbane Corridor Strategy	AusLink	2008	PDF
National Guidelines for the Provision of Rest Area Facilities	National Transport Commission	2005	PDF
Freight Futures - Victoria's Freight Strategy	Victorian Department of Transport	2008	PDF
Audit of Rest Areas against National Guidelines	Austroads	2008	PDF
Media release: Slash B-double charges to boost, safety, productivity	Australian Trucking Association	2012	PDF
Major Accident Investigation Report	National Transport Insurance	2011	PDF