National Transport Commission

Mass Concessions for Accredited Heavy Vehicles – Regulatory Impact Statement

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Type of report: Regulatory Impact Statement
Objectives: Increased road safety and transport efficiency
NTC Programs: Regulatory Reform
Key Milestone: Approval-in-principle to a three tier mass limits regime by the Australian Transport Council at its November 2005 meeting

Abstract: The Regulatory Impact Statement (RIS) considers the provision of mass concessions to vehicles accredited for Mass Management under the National Heavy Vehicle Accreditation Scheme (NHVAS).

The impact analysis shows that the Regulatory Proposal would be economically viable with a net present value (NPV) of at least $105 million and a benefit cost ratio of at least 2.8.

Purpose: For comment
Key words: Concessional mass, heavy vehicle accreditation, NHVAS, Mass Management Pilot Program, higher mass limits, measurement adjustment, NAASRA tolerances.
The National Transport Commission (NTC) is an independent body established under an Inter-Governmental Agreement. It has an on-going responsibility to develop, monitor and maintain uniform or nationally consistent regulatory and operational reforms relating to road transport, rail transport and intermodal transport.

The 1997 decision by the Australian Transport Council (ATC) on ‘Alternative Compliance’ resulted in the establishment of the National Heavy Vehicle Accreditation Scheme (NHVAS). NHVAS was designed to provide assurance that scheme members were complying with transport regulations through a quality systems approach to their operations. The Mass Management and Maintenance Management Modules were offered to industry when NHVAS was first introduced in 1999.

A feature of the Mass Management Module was the provision for accredited vehicles operating at General Mass Limits to add a mass tolerance to the statutory mass limit. This was effectively a statutory equivalent to the normal tolerances applied by jurisdictions in on-road enforcement. The rationale for formalising higher mass limits for NHVAS accredited vehicles was that there should be no detriment to scheme members from them being able to control their loadings through quality assured systems.

These tolerances were developed during the 1980s by the then National Association of Australian State Road Authorities (NAASRA) (precursor to Austroads) to make allowances by which the scale reading of a vehicle being weighed could exceed the statutory mass limit before a breach was recorded. An ‘administrative tolerance’ was factored into the NAASRA tolerance. Austroads has now reviewed its enforcement guidelines to effectively remove the ‘administrative tolerance’ from on-road enforcement by replacing the NAASRA tolerance with an adjustment to the measured readings.

The NTC sought the support of jurisdictions to formalise concessional mass limits for operators accredited under NHVAS Management, in order to provide on-road mass limits equal to those permitted under the NAASRA tolerances. This would provide an incentive to accreditation and provide a means of retaining current productivity levels for accredited operators. The proposal was supported in-principle by ATC at their meeting in November 2005.

This Regulatory Impact Statement has been prepared to identify the regulatory impact associated with the adoption of the Concessional Mass Limits at a national level. It effectively formalises a third level of mass limits between General Mass Limits and Higher Mass Limits.

Comments on the Regulatory Impact Statement closed on 17th March 2006. A submission will be made to ATC.

It has been prepared by Bob Pearson (Pearson’s Transport Resource Centre) with the assistance of Peter Leyden and Peter Rufford from the NTC.

Michael Deegan
Acting Chairman
SUMMARY

Three regimes of mass limits are in force in Australia:

- **General Mass Limits (GML)** – limits prescribed in State and Territory legislation incorporating the requirements of the national *Road Transport Reform (Mass and Loading) Regulations*;
- **Concessional Mass Limits (CML)** – GML limits plus as-of-right access to nationally agreed tolerance limits for vehicles operated under the Mass Management module of the National Heavy Vehicle Accreditation Scheme (NHVAS); and
- **Higher Mass Limits (HML)** – vehicles with road-friendly suspensions operating on approved routes, which are permitted an additional 0.5 tonnes on a tandem axle group and 2.5 tonnes on a tri-axle group above GML limits.

It should be noted that the mass management module of NHVAS has not been applied uniformly across States and Territories.

HML vehicles fitted with tri-axle groups must also be accredited with the National Heavy Vehicle Accreditation Scheme (NHVAS) Mass Management module. A range of specific, local schemes exempting vehicles from these arrangements in special circumstances also exist around Australia, but are not the subject of this RIS.

The nationally agreed tolerance limits are referred to as the NAASRA tolerances. When vehicles are weighed for enforcement of GML, the NAASRA tolerances are added prior to deciding if a breach of legal limits has taken place. The tolerances are up to 1 tonne for an axle group and a fixed mass tolerance on gross mass that generally equates to about 5% of the gross mass. However, the application of these tolerances in on-road enforcement varies between jurisdictions, causing frustration for interstate operators.

Accredited operators are required to keep within legal limits at all times while non-accredited operators have access to the NAASRA tolerances. Without CML, accredited operators would need to load to levels below those available to those operating under the GML regime, leading to a disadvantage for accredited operators. By allowing formal access to the tolerances under a ‘no-detriment’ policy, accredited operators have not been at a disadvantage.

A decision has been taken to replace NAASRA tolerances with Measurement Adjustments, which are allowances determined solely on the basis of the accuracy of how the vehicle is weighed. Removal of the NAASRA tolerances would reduce the effective maximum mass for accredited operators and lead to lower vehicle productivity and difficulties for accredited operators who have contractual arrangements based on as-of-right access to the NAASRA tolerances.

With the introduction of Measurement Adjustments, there will be little incentive for operators to remain accredited, or for other operators to become accredited if they cannot access a mass concession. One objective of this proposal is to provide an incentive for accredited truck operators to remain in the Mass Management module of NHVAS, and for non-accredited operators to become accredited by allowing accredited operators to retain access to CML.
The Regulatory Proposal is that:

(a) The Concessional Mass Limits (CML) regime be re-structured and apply to operators accredited, either presently or in the future, under the NHVAS Mass Management module.

(b) The mass limits for CML be set at 5% above GML, subject to:

- a maximum of 1 tonne for a vehicle or vehicle combination with an allowable gross mass not exceeding 55 tonnes;
- a maximum of 2 tonnes for vehicle combinations with an allowable gross mass exceeding 55 tonnes;
- an upper limit on axle and axle group mass as given in the Table of Concessional Mass Limits below; and
- the operator or owner of the vehicle implementing an auditable maintenance system for the vehicle’s suspension.

### Concessional Mass Limits: Axle Group Mass

<table>
<thead>
<tr>
<th>Axle or axle group</th>
<th>Allowable mass (tonnes)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single steer</td>
<td>6.0</td>
</tr>
<tr>
<td>Twin Steer (Non Load-Sharing)</td>
<td>10.0</td>
</tr>
<tr>
<td>Twin Steer (Load Sharing)</td>
<td>11.0</td>
</tr>
<tr>
<td>Single Axle – Dual Tyres</td>
<td>9.0</td>
</tr>
<tr>
<td>Tandem Axle</td>
<td>17.0</td>
</tr>
<tr>
<td>Tri-axle</td>
<td>21.0</td>
</tr>
</tbody>
</table>

CML would be applied using the statutory GML as the baseline and would apply on the same routes as GML. Concessional Mass Limits would not apply to vehicles operating under permits in existing concessional schemes.

The requirement to maintain a vehicle’s suspension system is based on the recognition that road wear can be strongly influenced by the vehicle suspension system.

Alternative options considered were to allow the introduction of the Measurement Adjustments to remove the mass concessions from NHVAS or retain the mass concessions but charge for the additional mass. Options for ensuring compliance with the vehicle suspension maintenance were also considered. The Regulatory Proposal was preferred to all other options considered.

Using a variety of sources, it was estimated that the proportion of vehicles that would operate under CML would be:

- Rigid trucks: 5%
- Truck and trailer combinations and single articulated vehicles: 10%
- B-doubles: 15%
- Road trains: 10%
The major impacts of the Regulatory Proposal would be:

- reductions in fleet operating costs for operators;
- an increase in road wear due to greater mass of individual vehicles; and
- administration costs, for operators to establish and maintain Mass Management accreditation and for jurisdictions in administering the scheme.

The benefits of the Regulatory Proposal to operators were estimated at $21-46 million per annum, whilst the industry on-entry accreditation costs were estimated at $9 million and the total industry and jurisdiction annual costs were estimated at $6.35 million.

The Regulatory Proposal is strongly positive in economic terms as measured by net present value of at least $105 million and a benefit cost ratio of at least 2.8.
APPENDIX E - REGULATORY IMPACT STATEMENT & CONSULTATION........ 33

APPENDIX F - WRITTEN RESPONSES TO REGULATORY IMPACT STATEMENT35
LIST OF TABLES

Table 1: Official NAASRA tolerances .................................................................................... 1
Table 2: Measurement adjustments for each weighing step ................................................ 2
Table 3: Concessional Mass Limits: Axle Group Mass ........................................................ 6
Table 4: Approximate percentage of trucks operating under GML that are mass accredited ........................................................................................................................... 11
Table 5: Average distance travelled and tonne kilometres of travel by State and Territory 2002 ................................................................................................................................ 12
Table 6: Estimated increase in fleet efficiency under the Regulatory Proposal .......... 14
Table 7: Calculations for road wear ..................................................................................... 15
Table 8: Summary of impacts ............................................................................................... 21
1. STATEMENT OF THE PROBLEM

1.1 The Regulatory Issue

Three regimes of mass limits are in force in Australia:

- General Mass Limits (GML) – limits prescribed in State and Territory legislation incorporating the requirements of the national Road Transport Reform (Mass and Loading) Regulations;
- Concessional Mass Limits (CML) – GML limits plus as-of-right access to nationally agreed tolerance limits for vehicles operated under the Mass Management module of the National Heavy Vehicle Accreditation Scheme (NHVAS); and
- Higher Mass Limits (HML) – vehicles with road-friendly suspensions operating on approved routes, which are permitted an additional 0.5 tonnes on a tandem axle group and 2.5 tonnes on a tri-axle group above GML limits.

The Mass Management module of NHVAS has not been applied uniformly across States and Territories, which has restricted its usefulness for interstate road haulage.

HML vehicles fitted with tri-axle groups must also be accredited with the National Heavy Vehicle Accreditation Scheme (NHVAS) Mass Management module. A range of specific, local schemes exempting vehicles from these arrangements in special circumstances also exist around Australia, but are not the subject of this RIS.

The nationally agreed tolerance limits are referred to as the NAASRA tolerances. NAASRA is the acronym for the National Association of Australian State Road Authorities, now Austroads. When vehicles are weighed for enforcement of GML, the NAASRA tolerances are added prior to deciding if a breach of legal limits has taken place. The tolerances, extracted from the 1987 NAASRA publication, Guidelines for Weighing of Vehicles, are given in Table 1. However, the application of these tolerances in on-road enforcement varies between jurisdictions, causing frustration for inter-state operators.

<table>
<thead>
<tr>
<th>Axle Group Mass</th>
<th>Gross Mass</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single Steer</td>
<td>0.25t</td>
</tr>
<tr>
<td>Twin Steer Group</td>
<td>1.00t</td>
</tr>
<tr>
<td>Single Axle – Dual Tyres</td>
<td>0.50t</td>
</tr>
<tr>
<td>Tandem Axle (4,6 or 8 tyres)</td>
<td>1.00t</td>
</tr>
<tr>
<td>Tri-axle (6 or 12 tyres)</td>
<td>1.00t</td>
</tr>
</tbody>
</table>

Accredited operators are required to keep within legal limits at all times while non-accredited operators have access to the NAASRA tolerances, leading to a disadvantage for accredited operators. By allowing formal access to the tolerances under a ‘no-detriment’ policy, accredited operators have not been at a disadvantage.

A decision has been taken to replace NAASRA tolerances with Measurement Adjustments, which are allowances determined solely on the basis of the accuracy of how the vehicle is weighed. Removal of the NAASRA tolerances would reduce the effective maximum mass for operators and lead to lower vehicle productivity. Whilst this loss of productivity would
apply to both accredited and non-accredited operators, it would impact more on accredited operators who have contractual arrangements based on as-of-right access to the NAASRA tolerances.

Implementation of the CML proposal is seen as giving effect to the COAG recommendation (10th February 2006 – National Competition Policy Review) on the implementation of previously agreed national policy on heavy vehicle accreditation (i.e. Mass Management and Maintenance Management modules of the National Heavy Vehicle Accreditation Scheme).

1.2 Background

1.2.1 Tolerances and Allowances

NAASRA tolerances were developed in the mid 1980s and were designed to cover a range of factors that applied when a vehicle was weighed. These factors are outlined in NRTC (1996) and were:

- machine accuracy allowances;
- allowances depending on the method of weighing; and
- administrative allowances.

Administrative allowances were described in NRTC (1996) as being made to:

- ensure that it will be possible to prove beyond reasonable doubt that an offence was committed;
- give the benefit of doubt to drivers/operators with load distribution difficulties where weighing facilities were not available;
- allow for unforeseen or unusual circumstances, such as rain being trapped in a load of dry sand; and
- avoid the prosecution of lower level overloads, an historical throwback to days when all cases were heard in court.

The new Measurement Adjustments (MA) remove the consideration of administrative allowances and covers only the machine accuracy and method of weighing. There are three categories of MA that are designed to accommodate the types of weighing equipment and common environmental factors associated with mass measurement for enforcement purposes. Table 2 sets out the MA applicable to each category of weighing.

<table>
<thead>
<tr>
<th>Axle group</th>
<th>Measurement Adjustment (tonnes)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Category 1 weighing</td>
</tr>
<tr>
<td>Single axle with single tyres</td>
<td>0.3</td>
</tr>
<tr>
<td>Twin steer or tandem axle, single tyres or combination of single and dual tyres</td>
<td>0.3</td>
</tr>
<tr>
<td>Single axle with dual tyres</td>
<td>0.4</td>
</tr>
<tr>
<td>Tandem axle with dual tyres</td>
<td>0.5</td>
</tr>
<tr>
<td>Tri-axle or Quad-axle</td>
<td>0.5</td>
</tr>
<tr>
<td>Gross mass</td>
<td>0.25</td>
</tr>
</tbody>
</table>
Note: *Category 1* weighing occur at the best available sites, such as certified weighbridges operated by road authorities or sites designed and constructed for accurate, reliable use with portable scales. *Category 2* weighing takes place at well set out temporary roadside sites using portable scales. *Category 3* weighing is conducted under less favourable conditions than *Category 1* or *Category 2* weighing. In the interests of certainty, there are limits on the circumstances where heavy vehicles can be weighed even with a *Category 3* weighing.

The MA is applied for each *weighing step*, i.e. for each movement of the vehicle onto the scales that is needed to weigh the axles relevant to the limit in question.

### 1.2.2 Mass Management Accreditation

The objectives of the NHVAS are to:

- improve efficiency for scheme members by reducing the impact of conventional regulatory enforcement;
- raise levels of compliance for non-accredited operators through more effective deployment of enforcement resources;
- improve road safety; and
- increase the productivity of the transport industry through adoption of good management by responsible operators.

Mass Management accreditation under the NHVAS involves an operator introducing a quality system that is designed to prevent a vehicle operating in excess of applicable mass limits. The quality system must include a documented procedure to demonstrate that the quality system produces and records evidence of weight specific to a vehicle for every trip.

From a regulatory perspective, mass accreditation provides greater confidence that the mass of accredited vehicles do not exceed the allowable limits. Such confidence not only has positive impacts on wear of road infrastructure and on road safety by reducing overloaded vehicles but also allows enforcement resources to be directed towards more recalcitrant operators.

No tolerances are applied when considering the mass of a vehicle under Mass Management. Consequently, an accredited operator under GML would not have been permitted to exceed the GML gross mass limit of 42.5 tonnes whereas a non-accredited operator could have a gross mass of 43.5 tonne (depending on how it is weighed) and not be prosecuted. This is the anomaly that was avoided by the introduction of the as-of-right access to NAASRA tolerances for Mass Management accredited operators.

As NAASRA tolerances are to be removed and replaced with Measurement Adjustments, accredited operators will no longer have access to the tolerance band and accreditation to NHVAS would be considerably less attractive. The ability to carry a greater mass has economic benefits for vehicle operators as the marginal cost of additional load is considerably less than the cost of additional trucks. Therefore, without any economic incentive, participation in mass management would be significantly reduced.

Whilst the benefits of the economic evaluation undertaken for the original Alternative Compliance policy were relatively low, it was augmented during implementation with the
statutory access to the NAASRA Tolerances. The economic evaluation undertaken to support the Regulatory Proposal reflects the benefits and costs associated with the Mass Management module of NHVAS, as implemented in 1999.
2. **OBJECTIVES OF THE REGULATORY PROPOSAL**

The objectives of the Regulatory Proposal are:

- to provide incentives for accredited truck operators to remain in the Mass Management module of NHVAS and for non-accredited truck operators to become accredited;
- to retain the productivity gains for currently accredited operators;
- to provide consistency in the management of national mass limits; and
- to provide a mechanism to allow for the retention of existing on-road mass limits.
3. THE REGULATORY PROPOSAL AND ALTERNATIVES

3.1 The Regulatory Proposal

The Regulatory Proposal is that:

(a) The Concessional Mass Limits (CML) regime be re-structured and apply to operators accredited, either presently or in the future, under the NHVAS Mass Management module.

(b) The mass limits for CML be set at 5% above GML, subject to:
   - a maximum of 1 tonne for a vehicle with an allowable gross mass not exceeding 55 tonnes;
   - a maximum of 2 tonnes for a vehicle with an allowable gross mass exceeding 55 tonnes;
   - an upper limit on axle and axle group mass as given in Table 3; and
   - the operator or owner of the vehicle implementing an auditable maintenance system for the vehicle’s suspension.

<table>
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<th>Axle or axle group</th>
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<tr>
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</tr>
<tr>
<td>Single Axle – Dual Tyres</td>
<td>9.0</td>
</tr>
<tr>
<td>Tandem Axle</td>
<td>17.0</td>
</tr>
<tr>
<td>Tri-axle</td>
<td>21.0</td>
</tr>
</tbody>
</table>

CML would be applied using the statutory GML as the baseline and would apply on the same routes as GML. Appendix A outlines the resultant limits for various vehicle configurations. Since the concessions apply only to national GML, they do not pertain to vehicles such as truck and pig which operate under separate mass concessions. The Proposal does not provide for any increase in the steer axle mass.

The requirement to maintain a vehicle’s suspension system is based on the recognition that road wear can be strongly influenced by the vehicle suspension system. The Regulatory Proposal would require the inclusion of an additional standard pertaining to suspension maintenance in the Mass Management module of NHVAS (see Appendix B). Whilst this is a workable approach for operators who haul their own trailers, it is not appropriate for hired trailers that are not required to be mass accredited, when hauled by a mass accredited prime mover. In this situation, the requirement for an auditable maintenance system for the vehicle’s suspension would be met by the trailer owner issuing a certificate of compliance that was either affixed to the trailer or available to the driver of the prime mover.

In order to address this issue, an additional criterion, (6), was added to the additional standard relating to the maintenance of suspension. The aim of this amendment is to facilitate action under the accreditation system against an accredited operator towing a hired trailer with a defective suspension system. This would provide a strong incentive for the accredited
operator to ensure any externally supplied trailers are maintained in accordance with the proposed standard and criteria.
3.2 Alternatives to the Regulatory Proposal

In 2004, a Discussion Paper (NTC 2004) with options for alternative approaches was circulated to jurisdictions and industry. Three options canvassed in the Discussion Paper were:

Option 1 – Remove the mass concessions from NHVAS
Option 2 – Retain the mass concessions for mass accredited operators
Option 3 – Retain the mass concessions but charge for the additional mass

Even though the Regulatory Proposal is a variation of the present position, the Regulatory Proposal will be evaluated from a base case where no concessions apply, as that would be the case in the future if the concessions provided in the Regulatory Proposal were not allowed. Therefore, Option 1 of the Discussion Paper is the base case and Option 2 is effectively the Regulatory Proposal. This leaves Option 3 – retain the mass concessions but charge for the additional mass, as a possible alternative, even though it is also a variation of the Regulatory Proposal.

Responses to the Discussion Paper showed that the option of linkage of concessional mass to pricing received little support, either from industry or road agencies. Implementation of a pricing scheme would be administratively difficult and would raise issues of reallocation of funds between jurisdictions imposing the additional charge and those where additional road costs were incurred. In addition, the heavy vehicle charging system currently is based on full cost recovery and the imposition of additional costs on accredited operators would require some charge offset for other operators.

The NTC has initiated a scoping project for the Fourth Heavy Vehicle Road Pricing Determination, where mass-distance pricing will be explored. In this context, the introduction of a charge for concessional mass would be premature and potentially counter-productive to the broader need for an equitable pricing regime of road use. Option 3, although feasible at a cost, is not a preferred option at this stage. Notwithstanding, it has been included in the Impacts of the Regulatory Proposal in Section 3 of the RIS.

Another possible alternative is that the suspension requirements not be linked to concessional mass. However, some road agencies offered support for CML only on the condition that effective maintenance of suspension systems was included. Their concern is that ineffective suspension systems would lead to accelerated road wear and, for vehicles operating at CML, this would occur off a higher base. For this reason, auditable maintenance of suspension systems has been included in the Regulatory Proposal.

The approach taken with respect to ensuring an auditable maintenance system was in place for a hired trailer may not be the preferred approach for some agencies or parts of the transport industry. A more robust approach may involve requiring a hired trailer owner to be accredited in a maintenance management module of NHVAS if the trailer is to be used in a CML arrangement. A module adapted for hired trailers is currently on trial in NSW and could be offered nationally as part of NHVAS to not only meet the suspension maintenance requirements of CML but also for accreditation of the hired trailer segment of the industry. It is estimated that 1,000 hired trailers representing approximately 10% of the total estimated number of trailers operating at CML may wish to access the concessional mass limits (refer to Appendix B).

Another approach could be for operators to sign up to a Code of Practice (which would include an auditable maintenance system for the vehicle’s suspension), instead of issuing a
certificate of compliance or requiring accreditation. This would put the onus on the operator to demonstrate that it has met its obligations under the Code when requested by a jurisdiction. Failure to comply with the Code would result in the withdrawal of the concession. The advantage of this approach is that it is simpler for both the operator and jurisdictions but it may not have sufficient legal force for the concession to be removed when a jurisdiction deems that an operator has breached the Code of Practice.

An alternative which was considered was to introduce a mandatory Code of Practice, however, on balance, the inclusion of a maintenance standard into the NHVAS Mass Management regime was seen as a preferential regulatory instrument.

There are no realistic alternatives to the Regulatory Proposal apart from not allowing the concession. Minor variations to the limits, particularly the axle or axle group mass limits in Table 3 could be considered but these limits were chosen to ensure consistency with HML limits and to broadly align with the minor risk band within the offences and penalties established under recent reforms to compliance and enforcement arrangements for mass, dimension and load restraint.

Larger mass increases would be more attractive to operators but would have significant implications for road and bridge wear and would require a major study to estimate the benefits and costs. Road wear in particular is exponentially related to increases in mass. Larger increases would also raise the potential for safety outcomes to be adversely impacted. It is likely that safety impacts would vary by vehicle configuration, type of load carried and other details of vehicle design. This would require detailed assessment and increase the complexity of any arrangements for concessional mass limits. Larger increase would therefore be unlikely to meet the objectives of the regulatory proposal. These problems do not arise under the regulatory proposals as vehicles have been operating at the levels proposed for some time without any significant problems emerging.
4. IMPACTS OF THE REGULATORY PROPOSAL

4.1 Introduction

This section essentially deals with the impact of the Regulatory Proposal on industry and jurisdictions. The benefits for Option 3 will be the same as for the Regulatory Proposal however the costs will be greater due to the added cost for jurisdictions in establishing and maintaining a charging mechanism for the concessional mass. However the additional revenue to jurisdictions will have no net effect on the analysis, as it will be offset by an additional cost to industry of the same amount.

The additional administration costs for Option 3 are discussed in Section 4.3.5 Jurisdiction Administration Costs and summarised in Section 6 Evaluation.

4.2 Fleet Estimates

An estimate of the vehicle fleet that is likely to take advantage of the Regulatory Proposal is provided in NTC (2005). Although that report estimated the effects of the removal of NAASRA tolerances, which are slightly different to allowances proposed in the Regulatory Proposal, the types of vehicle affected and the global nature of the estimates makes the differences inconsequential. Appendix C outlines the analysis behind the estimates as presented in that report but some of the analysis has been changed to reflect the Regulatory Proposal. Only a summary of Appendix C is reported here.

4.2.1 Introduction

If access to mass concessions were to be confined to NHVAS Mass Management vehicles, then candidate vehicles to access these concessions would include:

- vehicles currently accredited; and
- currently non-accredited vehicles operating under GML and which presently load to a gross mass covered by the Regulatory Proposal, either on a regular or irregular basis.

Other candidate vehicles for accreditation would be those whose owners or drivers:

- intend to load to legal limits but are uncertain of loads and therefore do not wish to risk the fines associated with overloading; or
- seek to meet chain of responsibility requirements through accreditation.

The numbers of vehicles in these two latter categories are likely to be small and are not relevant for this investigation as there would be no change in productivity for these vehicles.

4.2.2 Calculations of Fleet Numbers

The number of vehicles presently accredited was estimated based on a survey of Victoria and Queensland, the only jurisdictions that currently allow concessions to operators accredited to NHVAS Mass Management. Neither jurisdiction keeps records of the reasons for accreditation, only total numbers under all accreditation schemes. After adjustments for vehicles accredited in order to access HML, it was concluded that the percentage of vehicles accredited under NHVAS and operating under GML (rather than HML) were 2.9% in Victoria and 6.5% in Queensland, as shown in Table 4.
Table 4: Approximate percentage of trucks operating under GML that are mass accredited

<table>
<thead>
<tr>
<th></th>
<th>VIC</th>
<th>QLD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rigid trucks</td>
<td>3%</td>
<td>4%</td>
</tr>
<tr>
<td>Truck and trailer</td>
<td>3%</td>
<td>9%</td>
</tr>
<tr>
<td>Single articulated trucks</td>
<td>2%</td>
<td>10%</td>
</tr>
<tr>
<td>B-doubles</td>
<td>2%</td>
<td>13%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>2.9%</strong></td>
<td><strong>6.5%</strong></td>
</tr>
</tbody>
</table>

Estimates are also required of the numbers of vehicles that presently load to a gross mass covered by the Regulatory Proposal. The present gross mass concession for single articulated vehicles is 1 tonne, which is the same as the NAASRA tolerance on gross mass. In order to estimate the number of vehicles that are customarily loaded to include NAASRA tolerances, Weigh In Motion (WIM) data from NSW and Victoria was obtained and evaluated as outlined in Appendix C.

Some of the issues that may influence the decision of an owner to apply for accreditation include:

- the relative cost of accreditation;
- whether the new Measurement Adjustments are rigorously enforced in the field or whether actual field enforcement allows greater leniency; and
- the chances of being weighed and found to be overweight.

Based on the analysis in Appendix C, it was estimated that the percentage of vehicles that would be accredited under the Regulatory Proposal are:

- Rigid trucks – 5%;
- Truck and trailer combinations and single articulated vehicles – 10%;
- B-doubles – 15%; and
- Road trains – 10%.

These proportions are consistent with the WIM data, which indicated that around 5% of the weighed vehicles were loaded to within the tolerance band. For the reasons given in Appendix C, this equates to around 10% of the fleet.

It is important to stress that the wider availability of HML, particularly in NSW, would probably increase the total number of accredited vehicles but reduce the number of vehicles operating at CML. Therefore the percentage of vehicles outlined above would most likely be less if there were wider implementation of HML, and particularly in NSW due to its size and strategic location. This greater access to HML routes in NSW is expected to happen over the next few years with the implementation of new road funding arrangements between the Commonwealth and State Governments.
4.3 Estimation of Impacts

4.3.1 General

The major impacts of the Regulatory Proposal would be:

- reduction in fleet operating costs for operators;
- an increase in road wear due to greater mass of individual vehicles; and
- administration costs, for operators to establish and maintain Mass Management accreditation and for jurisdictions in administering the scheme.

Each of these impacts will be examined in turn. However in assessing the impact on industry, it should be appreciated that operators would only become accredited to access the CML if they perceived that the benefits would exceed their costs.

4.3.2 Impacts on Fleet Operating Costs

Travel data

Data for average distance travelled and net tonne kilometres of travel were sourced from the 2002 SMVU (ABS 2003) and are shown in Table 5. It is recognised that this is 2002 data, from which the truck fleet in 2005 has been estimated, but the imprecision in other estimates, particularly take-up, means this difference is not considered a problem.

Table 5: Average distance travelled and tonne kilometres of travel by State and Territory 2002

<table>
<thead>
<tr>
<th>Distance travelled (’000 kms)</th>
<th>NSW</th>
<th>VIC</th>
<th>QLD</th>
<th>SA</th>
<th>WA</th>
<th>TAS</th>
<th>NT</th>
<th>ACT</th>
<th>AUST</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rigid trucks</td>
<td>24.5</td>
<td>23.5</td>
<td>22.8</td>
<td>19.3</td>
<td>20.7</td>
<td>20.5</td>
<td>17.4</td>
<td>29.4</td>
<td>22.9</td>
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<tr>
<td>Articulated trucks</td>
<td>90.0</td>
<td>96.0</td>
<td>100.6</td>
<td>102.6</td>
<td>79.3</td>
<td>88.6</td>
<td>111.7</td>
<td>128</td>
<td>94.2</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Freight task (million tonne kms)</th>
<th>NSW</th>
<th>VIC</th>
<th>QLD</th>
<th>SA</th>
<th>WA</th>
<th>TAS</th>
<th>NT</th>
<th>ACT</th>
<th>AUST</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rigid trucks (note 1)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>rigid truck only</td>
<td>6,899</td>
<td>6,110</td>
<td>4,654</td>
<td>1,325</td>
<td>2,143</td>
<td>570</td>
<td>102</td>
<td>186</td>
<td>21,989</td>
</tr>
<tr>
<td>truck trailers</td>
<td>1,991</td>
<td>1,764</td>
<td>1,343</td>
<td>383</td>
<td>618</td>
<td>165</td>
<td>29</td>
<td>54</td>
<td>6,347</td>
</tr>
<tr>
<td>Articulated trucks (note 2)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>single articulated</td>
<td>10,654</td>
<td>14,359</td>
<td>12,888</td>
<td>7,083</td>
<td>6,805</td>
<td>944</td>
<td>1,217</td>
<td>331</td>
<td>54,281</td>
</tr>
<tr>
<td>B-double</td>
<td>5,922</td>
<td>7,981</td>
<td>7,164</td>
<td>3,937</td>
<td>3,782</td>
<td>525</td>
<td>677</td>
<td>184</td>
<td>30,172</td>
</tr>
<tr>
<td>road train</td>
<td>4,421</td>
<td>5,958</td>
<td>5,348</td>
<td>2,939</td>
<td>2,824</td>
<td>392</td>
<td>505</td>
<td>137</td>
<td>22,524</td>
</tr>
<tr>
<td>Total</td>
<td>29,886</td>
<td>36,172</td>
<td>31,397</td>
<td>15,668</td>
<td>16,172</td>
<td>2,596</td>
<td>2,530</td>
<td>892</td>
<td>135,313</td>
</tr>
</tbody>
</table>

Source: ABS (2002)
Notes: 1. Rigid trucks divided into rigid truck only and truck trailers by proportions in NRTC (1996).
2: Articulated trucks divided into the three groups by the proportions in Table 15 of ABS (2002), excluding the category of other

Assumptions

A range of assumptions was necessary to determine the impacts of the Regulatory Proposal. In particular, it was assumed that:
• proportions that would use the mass concessions are 5% of rigid trucks, 10% of truck and trailer combinations, single articulated vehicles and road trains while 15% of B-doubles would use the tolerance band1;
• accredited vehicles would travel greater distances than the average, in the case of rigid trucks and articulated vehicles by 20% and in the case of truck and trailers by 50% (greater than rigid trucks alone)2;
• only 50% of travel would use the additional mass except for rigid trucks where the percentage assumed was 40%3; and
• payload impacts would not be the full concession of the Regulatory Proposal but the vehicles would use the full concession on average on only 75% of journeys4.

Two methods were used to quantify the impacts on fleet efficiency. The first method used the economic values of $0.06/tonne-km of travel (low estimate)5 and $0.13/tonne-km of travel (higher estimate)6. The second method involved estimating the total truck kilometres of travel that would be saved for each vehicle configuration multiplied by the travel cost per kilometre for the configuration. In the latter calculation, other costs such as increased fuel and maintenance costs for the remaining more productive vehicle are an order of magnitude lower than the saving in truck kilometres of travel and have been ignored. So too have the road safety impacts which would provide net benefits under the Regulatory Proposal but again are a lower order of magnitude.

Estimation of impacts

Estimates of the maximum increase in fleet efficiency under the Regulatory Proposal are given in Table 6. Note that this is the efficiency of the fleet of accredited vehicles, not the total freight task. The Table suggests that the increase in fleet efficiency throughout Australia is likely to be in the band between 0.2% and 0.3% of the present freight task.

---

1 Refer to the above analysis

2 Based on the author’s local knowledge and data from the 1996 Mass Limits Review.

3 Reflects the common practice of back-loading at less than full mass capacity. The percentage for rigid trucks is less than other vehicle classes.

4 Not all laden trip will be loaded sufficiently accurately to take advantage of the full mass concession.

5 Based on the simple calculation of the cost of operating a 6 axle articulated vehicle with a payload of 25 tonnes is $1.50 per kilometre.

6 Derived from estimates provided in Working Paper 60, An Overview of the Australian Road Freight Transport Industry published by the Bureau of Transport and Regional Economics.
### Table 6: Estimated increase in fleet efficiency under the Regulatory Proposal

<table>
<thead>
<tr>
<th></th>
<th>NSW</th>
<th>VIC</th>
<th>QLD</th>
<th>SA</th>
<th>WA</th>
<th>TAS</th>
<th>NT</th>
<th>ACT</th>
<th>AUST</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Rigid trucks</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>tonne km impacts (million)</td>
<td>5.1</td>
<td>4.0</td>
<td>3.2</td>
<td>1.3</td>
<td>1.8</td>
<td>0.4</td>
<td>0.1</td>
<td>0.1</td>
<td>16.1</td>
</tr>
<tr>
<td>percentage impact</td>
<td>0.07%</td>
<td>0.07%</td>
<td>0.07%</td>
<td>0.10%</td>
<td>0.09%</td>
<td>0.07%</td>
<td>0.12%</td>
<td>0.07%</td>
<td>0.07%</td>
</tr>
<tr>
<td><strong>Truck trailers</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>tonne km impacts (million)</td>
<td>5.0</td>
<td>4.0</td>
<td>3.1</td>
<td>4.0</td>
<td>1.8</td>
<td>0.4</td>
<td>0.1</td>
<td>0.1</td>
<td>19.1</td>
</tr>
<tr>
<td>percentage impact</td>
<td>0.25%</td>
<td>0.22%</td>
<td>0.23%</td>
<td>1.05%</td>
<td>0.29%</td>
<td>0.22%</td>
<td>0.40%</td>
<td>0.25%</td>
<td>0.30%</td>
</tr>
<tr>
<td><strong>Single articulated</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>tonne km impacts (million)</td>
<td>51.2</td>
<td>63.9</td>
<td>45.5</td>
<td>21.8</td>
<td>23.0</td>
<td>4.5</td>
<td>2.5</td>
<td>1.2</td>
<td>214.1</td>
</tr>
<tr>
<td>percentage impact</td>
<td>0.48%</td>
<td>0.45%</td>
<td>0.35%</td>
<td>0.34%</td>
<td>0.48%</td>
<td>0.21%</td>
<td>0.21%</td>
<td>0.21%</td>
<td>0.29%</td>
</tr>
<tr>
<td><strong>B-doubles</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>tonne km impacts (million)</td>
<td>32.8</td>
<td>32.4</td>
<td>28.5</td>
<td>13.9</td>
<td>11.0</td>
<td>0.0</td>
<td>0.0</td>
<td>108.1</td>
<td></td>
</tr>
<tr>
<td>percentage impact</td>
<td>0.55%</td>
<td>0.41%</td>
<td>0.40%</td>
<td>0.35%</td>
<td>0.03%</td>
<td>0.18%</td>
<td>0.00%</td>
<td>0.19%</td>
<td>0.36%</td>
</tr>
<tr>
<td><strong>Road trains</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>tonne km impacts (million)</td>
<td>2.4</td>
<td>0.0</td>
<td>19.9</td>
<td>4.2</td>
<td>20.0</td>
<td>0.0</td>
<td>2.5</td>
<td>0.0</td>
<td>50.9</td>
</tr>
<tr>
<td>percentage impact</td>
<td>0.05%</td>
<td>0.00%</td>
<td>0.37%</td>
<td>0.14%</td>
<td>0.71%</td>
<td>0.00%</td>
<td>0.50%</td>
<td>0.00%</td>
<td>0.23%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>tonne km impacts (million)</td>
<td>94.1</td>
<td>104.3</td>
<td>80.3</td>
<td>40.9</td>
<td>47.7</td>
<td>6.2</td>
<td>2.7</td>
<td>1.8</td>
<td>357.3</td>
</tr>
<tr>
<td>percentage impact</td>
<td>0.31%</td>
<td>0.29%</td>
<td>0.26%</td>
<td>0.26%</td>
<td>0.17%</td>
<td>0.24%</td>
<td>0.11%</td>
<td>0.20%</td>
<td>0.26%</td>
</tr>
</tbody>
</table>

The benefits in fleet efficiency can be calculated by multiplying the savings in tonne-km of freight by the economic value of laden travel. The costs would be expected to lie between $0.06/tonne-km and $0.13/tonne-km, with the lower level applicable to the larger vehicles and the higher level a more general estimate of gross value added. Therefore, the benefits in reduced fleet operating costs of the Regulatory Proposal are expected to lie between $21 and $46 million annually. However, these benefits would be less for a more extensive HML network than is currently available.

A check on the order of magnitude of the benefits was undertaken using estimates of reduction of vehicle kilometres of travel, which resulted in an approximate saving of $35 million annually.

These savings are net benefits of reduced freight costs due to higher payload less a slight increase in fuel and maintenance costs. They do not include road safety benefits.

**Estimation of suspension maintenance**

The required suspension maintenance has not been separately costed as it is expected that the cost would be low and would not have a significant impact on the net benefits of the proposal. For operators already accredited in Maintenance Management (another of the NHVAS modules), no additional processes will be required except the specific requirement for maintenance to include suspension systems. Maintenance Management already requires full vehicle maintenance, so specific inclusion of suspension systems implies no additional requirements. For vehicles not currently accredited in Maintenance Management, management and record-keeping systems are already in place for Mass Management. These operators will have to include suspension maintenance in these auditable management systems. This will be only a minor extension of their current processes. As mass accredited operators are required to demonstrate systematic approaches, it is likely that most already apply these processes to all aspects of their operations, although they may only be accredited for mass. It is also likely that operators have in place systematic processes for suspension maintenance, as worn suspensions lead to increased operational costs, primarily through
increased tyre wear. If operators do face additional costs, these will be at least partially offset by the reduced tyre costs.

NTC believes that a suspension maintenance standard would, in practice, have the same effect as a mandatory code. The suspension maintenance standard will also apply to HML vehicles, although as NHVAS Mass Management accreditation is also a prerequisite for HML, it is estimated that this will have minimal impact, since the majority of HML operators will already be applying higher maintenance practices, and the additional standard merely requires them to document their current practices. A voluntary code would not have the same impact as a standard.

For these reasons, it is assessed that any additional costs resulting from the suspension maintenance requirement will be minor and will be at least partially offset by reduced operational costs.

### 4.3.3 Impacts on Road wear

Estimations of road wear impacts were made as the difference in SAR-km of travel for the CML vehicles against the equivalent GML vehicles. SARs, which stands for Standard Axle Repetitions, is effectively the same as the more common term of Equivalent Standard Axles or ESAs. A fourth power road wear relationship was used as this is the most commonly used relationship for network wide analyses and reflects the global nature of the investigations in this RIS.

Total SARs for each fleet was calculated by:

\[
\text{Total SARs} = (\text{SAR/vehicle} \times \text{no. vehicles} \times \text{distance travelled laden})
\]

The SARs per vehicle, total fleet distance travelled and total SAR-kms of travel are given in Table 7. At 4.22 cents per SAR km (or ESA km) of travel (from NTC 2004(b)), the annual additional road wear resulting from the Regulatory Proposal is about $1.6 million.

**Table 7: Calculations for road wear**

<table>
<thead>
<tr>
<th>Vehicle type</th>
<th>SARs/vehicle</th>
<th>Distance (million kms)</th>
<th>SAR-kms of travel (million)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>GML</td>
<td>CML</td>
<td>% incr</td>
</tr>
<tr>
<td>Rigid</td>
<td>3.57</td>
<td>3.76</td>
<td>5.4%</td>
</tr>
<tr>
<td>Truck trailer</td>
<td>5.02</td>
<td>5.22</td>
<td>3.9%</td>
</tr>
<tr>
<td>Single artic</td>
<td>4.93</td>
<td>5.15</td>
<td>4.4%</td>
</tr>
<tr>
<td>B-double</td>
<td>6.30</td>
<td>6.52</td>
<td>3.4%</td>
</tr>
<tr>
<td>Road train</td>
<td>8.34</td>
<td>8.56</td>
<td>2.6%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>459.7</strong></td>
<td><strong>448.4</strong></td>
<td><strong>2.5%</strong></td>
</tr>
</tbody>
</table>

### 4.3.4 Industry administration costs

Industry costs arise from the need to establish and maintain a Mass Management quality system. The system requires procedures to meet the standards established by NHVAS, standards, which presently cover:

- responsibilities;
- vehicle control;
- vehicle use;
• records and documentation;
• verification;
• internal review; and
• training and education.

The Regulatory Proposal includes an additional requirement for Suspension Maintenance, which will deal with the regular maintenance of the suspension in accordance with suspension manufacturer’s requirements.

Operator’s costs include both establishment costs and annual costs. Establishment costs include costs for development of the system and training of staff. The costs will depend upon the complexity of the system, which in turn is likely to depend on the different types of loading operations covered by the system. Annual costs include costs for meetings, documentation requirements, vehicle verification and audit and again will depend on the complexity of the system. The number of vehicles covered by each system will vary, from single vehicle operations to fleets of up to 50 or 100 vehicles.

Most of the administration costs would be borne by companies who operate their own trailers. However the analysis in Appendix B suggests that approximately 10% of the number of trailers seeking to operate at CML would be undertaken by trailer-hire companies who would not normally be themselves mass accredited but would be part of a mass accredited operation through the accreditation of the hauling company. These trailer-hire companies would now need to issue compliance certificates for the suspension maintenance and either affix them to each trailer or issue them in a form that could be handed to the driver of the prime mover.

For the purposes of this RIS, the following assumptions were made:
• each system would cover 4 vehicles;
• entry cost is $3,000; and
• annual cost is $1,500.

On this basis the total entry cost to industry would be $9 million and annual costs would be $4.5 million.

Note that these costs do not include cost of actual maintenance of vehicle suspension, as it would be expected that an operator would maintain the suspension with or without a quality system. As noted above, if operators do face additional costs, these will be at least partially offset by the reduced tyre costs.

4.3.5 Jurisdiction Administration Costs

Jurisdictions generally have arrangements in place to administer operators under accreditation systems, whether Mass Management (as it is a requirement for HML) or some other types of accreditation such as Maintenance Management under NHVAS. It is assumed therefore that there would be no establishment costs for jurisdictions and the only administration cost would

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7 These estimates were based on information provided by several heavy vehicle auditors.

8 Accredited operators tend to be the larger fleet owners giving a higher number of vehicles per fleet than might be expected from the statistic that approximately 80% of vehicles are owned by single fleet operators.
be to cover the cost of recording and oversight of additional accredited operators. This cost is estimated to be $250,000 per annum spread across all jurisdictions\(^9\).

Option 3 would incur additional costs to the Regulatory Proposal by way of additional costs for jurisdictions to establish and maintain a charging mechanism for CML. It is assumed that the additional $1 million would be required to establish the mechanism and a further annual cost of $0.5 million per annum across all jurisdictions\(^10\).

### 4.3.6 Benefits of Increased Participation in Mass Management

The NTC consulted with various auditors and some operators to establish the benefits of accreditation to industry. A common theme to emerge from these discussions was the wider benefits beyond simply compliance with regulation; namely the benefits that effective systems bring to management in the operation of the business. It is expected that these benefits could be significant depending on the extent of integration of the risk management system into the general management of the business. Auditors have indicated that the cost of accreditation is normally offset by a clear financial benefit (sometimes in large orders of magnitude) due to the efficiency gains created through the systems.

The impact of legal liability on attitudes toward risk management systems, particularly in large companies, was also evident. This consideration will strengthen with enhanced chain of responsibility provisions in compliance and enforcement legislation.

Recent work for Austroads\(^11\) suggests that the accident rate of NHVAS accredited operators in each of NSW, Victoria and Queensland is less than half the rate of non-NHVAS accredited operators. The consultants reached a comparable finding with an analysis of insurance claim data provided by National Transport Insurance on Trucksafe accredited and non-accredited operators. Whilst the data is very preliminary at this stage, there is every indication that operators that are accredited are involved in fewer accidents pro-rata than non-accredited operators.

Whilst it is very difficult to quantify some of the benefits of accreditation or measurable attribute benefits to accreditation, there is an increasing body of evidence to suggest that the community and industry generally would be better served by more operators being accredited in a recognised scheme.

---

\(^9\) Based on inquiry of several jurisdictions.

\(^10\) Based on previous road pricing work undertaken by the NTC.

\(^11\) Analysis of the Safety Benefits of Heavy Vehicle Accreditation Schemes. Presentation of preliminary findings by TERNZ to a Steering Committee on 15 February 2006.
5. CONSULTATIONS

A Discussion Paper (NTC 2004a) was circulated to jurisdictions and industry. As outlined earlier, three options were canvassed in the NTC Discussion Paper, namely:

- Option 1 – Remove the mass concessions from NHVAS
- Option 2 – Retain the mass concessions for mass accredited operators
- Option 3 – Retain the mass concessions but charge for the additional mass

Industry responses were received from:

- Australian Trucking Association;
- an industry Working Party;
- NSW Road Transport Association;
- National Bulk Tanker Association;
- K&S Freighters;
- Toll Liquid Distribution;
- Toll Linehaul;
- Patrick Logistics;
- Caltex Australia;
- Bsitecnicos;
- Hansen Construction Materials;
- FRH Tynong Quarry; and
- XL Concrete.

The industry responses was overwhelmingly in favour of adopting Option 2, although some responses sought a revised axle mass schedule and some responses sought increased mass, such as the more generous concessions in the Victorian pilot scheme.

Other points made in the industry responses included:

- support for the reward for effort principle arising from the additional mass for accredited operators;
- support for an orderly transition to the new scheme with no detriment to existing Victorian pilot operators;
- support for the continued application of NAASRA tolerances until a stronger case is made or until issues related to weighing technology were resolved;
- the scheme should be implemented at no extra charge to industry, provide general access to the network and be available to all operators;
- industry needs the productivity benefits; and
- industry needs simplicity in the regulations.

Jurisdictions were divided on the preferred option at that time, with some jurisdictions concerned at the potential road pavements damage. These concerns have been allayed by the provision of an additional standard in the Mass Management module of NHVAS requiring the operator or owner to maintain the vehicle suspensions to manufacturer’s standards.
A report was circulated in June 2005 on a preliminary investigation into the removal of mass tolerances for accredited heavy vehicles (NTC 2005). A number of meetings were held on the preliminary findings of that investigation, including a seminar and two other meetings with the Victorian Transport Association and the National Bulk Tankers Association. As a result of questions raised at these meetings, additional investigations into the impact of removal of the NAASRA tolerances were undertaken and the findings confirmed.

Following these consultations, ATC agreed in-principle to implement the concessional mass limits.

Generally, the responses to the draft Regulatory Impact Statement received from both industry and jurisdictions were favourable, although one jurisdiction expressed reservations that a more prescriptive approach should be adopted for the Suspension Maintenance Standard.

A review of consultations and responses to the draft Regulatory Impact Statement can be found in Appendix E.
6. EVALUATION

6.1 Discussion of Options

In the Base Case (Option 1), where no mass concessions would be provided, operators would lose access to existing NAASRA tolerances. In addition, the number of operators accredited to Mass Management would be expected to be quite low because of the lack of incentive to offset the cost of accreditation. The objectives of the regulatory proposal would not be achieved.

Option 2, which is the Regulatory Proposal, provides for a mechanism for accredited operators to retain access to existing on-road mass limits, as outlined in Section 3.1. The concession is up to 2 tonnes depending on the vehicle configuration. Operators choosing to become accredited obtain benefits due to greater payloads and incur costs in participating in the scheme, but as the scheme is voluntary, only operators who determine that the costs exceed the benefits would participate. It is expected that in the order of 5% of rigid trucks, 10% of articulated vehicles and road trains and 15% of B-doubles would become accredited under this proposal. The objectives of the regulatory proposal would be advanced.

With Option 3, which provides similar mass incentives as the Regulatory Proposal but with operators paying for the costs of road wear, the individual choice is still available but the economic returns for operators are less as they incur additional costs. Take-up of mass management would therefore be lower and the achievement of the objectives of the regulatory proposal would be of a lower order than for Option 2. In addition, as explained in Section 3.2, the introduction of a charge for concessional mass would be premature and potentially counter-productive to the broader need for an equitable pricing regime of road use.

6.2 Summary of Impacts

A summary of the impacts of the Regulatory Proposal and other options are detailed in Table 8.

Option 2 (the Regulatory Proposal) is preferred over Option 3 because whilst the benefits are the same, the cost for jurisdictions to establish and maintain the charging mechanism makes it less attractive. It may even be counter-productive in view of the NTC scoping project for the Fourth Heavy Vehicle Road Pricing Determination, where mass-distance pricing will be explored.

Assuming that all entry costs are incurred in year 1, which is unlikely, the net present value over a 10 year period at a 5% discount rate for the Regulatory Proposal would be between $105 million (if the lower level of $21 million per year in fleet benefits is taken) and $297 million (if the higher level of $46 million per year is taken). The benefit cost ratio is at least 2.8.

A sensitivity analysis was undertaken with the lower levels of expected fleet savings but the industry administration costs increasing by 50%. Such a scenario would reduce the net present value to $85 million and reduce the benefit cost ratio to 2.1.
### Table 8: Summary of impacts

<table>
<thead>
<tr>
<th>Type of impact</th>
<th>Benefits</th>
<th>Costs</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Option 1 – Remove the mass concessions from NHVAS (essentially the Base Case)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>Nil</td>
<td>Nil</td>
</tr>
<tr>
<td><strong>Option 2 – The Regulatory Proposal</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fleet operating benefits</td>
<td>$21-46 million annually</td>
<td>$1.6 million annually</td>
</tr>
<tr>
<td>Road wear costs</td>
<td></td>
<td>$9 million entry costs</td>
</tr>
<tr>
<td>Administration costs - industry</td>
<td></td>
<td>$4.5 million annually</td>
</tr>
<tr>
<td>Administration costs - jurisdictions</td>
<td></td>
<td>$0.25 annually</td>
</tr>
<tr>
<td>Total</td>
<td>$21-46 million annually</td>
<td>$9 million entry costs</td>
</tr>
<tr>
<td></td>
<td></td>
<td>$6.35 million annually</td>
</tr>
<tr>
<td><strong>Option 3 – The Regulatory Proposal but charge for the additional mass</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fleet operating benefits</td>
<td>$21-46 million annually</td>
<td>$1.6 million annually</td>
</tr>
<tr>
<td>Road wear costs</td>
<td></td>
<td>$9 million entry costs</td>
</tr>
<tr>
<td>Administration costs - industry</td>
<td></td>
<td>$4.5 million annually</td>
</tr>
<tr>
<td>Administration costs - jurisdictions</td>
<td></td>
<td>$1 million to establish</td>
</tr>
<tr>
<td>Administration costs - jurisdictions</td>
<td></td>
<td>$0.75 million annually</td>
</tr>
<tr>
<td>Total</td>
<td>$21-46 million annually</td>
<td>$10 million entry costs</td>
</tr>
<tr>
<td></td>
<td></td>
<td>$6.85 million annually</td>
</tr>
</tbody>
</table>

### 6.3 Conclusion

Given all the circumstances, including the voluntary nature of the proposal and the strong economic case, it is recommended that the Regulatory Proposal be adopted.
7. REVIEW/IMPLEMENTATION

The Regulatory Proposal would be implemented by States and Territories through individual arrangements with accredited operators and by notice or gazette. No changes would be required to legislation.

National road transport policies are reviewed as necessary by the NTC and the Australian Transport Council.

As the proposal is voluntary, the number of operators becoming accredited will provide a guide as to the success of the Regulatory Proposal. It is normal practice for national land transport reforms to be reviewed on a five to ten year cycle. Five years after implementation an assessment would be made as to whether a detailed review should be initiated immediately or whether it is sufficient for this to occur ten years from implementation.
8. COMPETITION ASSESSMENT

There are a number of ways in which policies relating to changes in vehicle mass allowances might potentially restrict competition. The major possibilities are:

- directly restricting the number of operators in the industry;
- advantaging large relative to small operators;
- erecting barriers to entry to the industry; and
- limiting the range of individuals or organisations able to supply services related to implementation or operation of the Regulatory Proposal.

8.1 Directly Restricting the Number of Operators in the Industry

The Regulatory Proposal contains no restriction that would limit the number of operators in the industry and hence is not anti-competitive in this respect.

8.2 Advantaging Large Relative to Small Operators

The Regulatory Proposal would apply equally to large and small operators. Small operators may experience greater relative cost to implement a mass management system but the differences per vehicle will be slight as larger operators are likely to have more complex systems that require greater training. The Regulatory Proposal is therefore not anti-competitive in this respect.

8.3 Erecting Barriers to Entry to the Industry

The Regulatory Proposal would not hinder entry to or exit from the industry. The requirements of Mass Management are clear and unambiguous and no known operators have failed the entry audit. In other words, if an operator wishes to become accredited the barrier is not high. In addition, Mass Management is not a barrier to the industry as it is a voluntary system.

The only conceivable barrier to becoming accredited is the need to verify the weight of each vehicle before the commencement of travel. With some types of transport operations, verification may cause some difficulties but is not impossible as various on-board weighing systems are available.

Hence the Regulatory Proposal is not anti-competitive in this respect.

8.4 Limiting the Range of Individuals able to Supply Services related to Implementation or Operation of the Regulatory Proposal

The choice as to whether to become accredited is left to the individual operator to determine after considering the type of transport task to be undertaken, including the advantages of being able to meet the mass verification requirements. Accordingly, the Regulatory Proposal is not anti-competitive in this respect.

8.5 Conclusion

The Regulatory Proposal will not restrict competition.
9. REFERENCES


## APPENDIX A – VEHICLE TYPE MASS LIMITS SCHEDULE

<table>
<thead>
<tr>
<th>Vehicle Type</th>
<th>Concessional Mass Limits for NHVAS Mass Accredited Vehicles</th>
<th>General Mass Limit</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Steer</td>
<td>Single Axle</td>
</tr>
<tr>
<td>Rigid (2) (1 + 1)</td>
<td>6.00</td>
<td>9.00</td>
</tr>
<tr>
<td>Rigid (3) (1 + 2)</td>
<td>6.00</td>
<td>17.00</td>
</tr>
<tr>
<td>Rigid (4) (2 + 2) NLS</td>
<td>10.00</td>
<td>17.00</td>
</tr>
<tr>
<td>Rigid (4) (2 + 2) LS</td>
<td>11.00</td>
<td>17.00</td>
</tr>
<tr>
<td>Rigid (3) &amp; T (1+1)</td>
<td>6.00</td>
<td>17.00</td>
</tr>
<tr>
<td>Rigid (3) &amp; T (1+2)</td>
<td>6.00</td>
<td>17.00</td>
</tr>
<tr>
<td>Artic (1+1+1)</td>
<td>6.00</td>
<td>9.00</td>
</tr>
<tr>
<td>Artic (1+1+2)</td>
<td>6.00</td>
<td>9.00</td>
</tr>
<tr>
<td>Artic (1+1+3)</td>
<td>6.00</td>
<td>9.00</td>
</tr>
<tr>
<td>Artic (1+2+2)</td>
<td>6.00</td>
<td>17.00</td>
</tr>
<tr>
<td>Artic (1+2+3)</td>
<td>6.00</td>
<td>17.00</td>
</tr>
<tr>
<td>B Double (1+2+2+2)</td>
<td>6.00</td>
<td>17.00</td>
</tr>
<tr>
<td>B Double (1+2+2+3)</td>
<td>6.00</td>
<td>17.00</td>
</tr>
<tr>
<td>B Double (1+2+3+3)</td>
<td>6.00</td>
<td>17.00</td>
</tr>
<tr>
<td>B Triple (1+2+2+2)</td>
<td>6.00</td>
<td>17.00</td>
</tr>
<tr>
<td>B Triple (1+2+3+3+3)</td>
<td>6.00</td>
<td>17.00</td>
</tr>
<tr>
<td>R Train (1+2+3+2+3)</td>
<td>6.00</td>
<td>17.00</td>
</tr>
<tr>
<td>R Train (1+2+3+2+3+2+3)</td>
<td>6.00</td>
<td>17.00</td>
</tr>
</tbody>
</table>

### Notes

1. **Note 1**  Vehicles must not exceed Manufacturer’s ratings.
2. **Note 2**  Vehicles must comply with axle spacing formulas appropriate to statutory mass limits.
3. **Note 3**  Not all vehicle configurations are listed above.
4. **Note 4**  NLS means non-load sharing suspension, LS means load sharing suspension

### Concessional Mass Limits: Axle Group Mass

<table>
<thead>
<tr>
<th>Axle Group Mass</th>
<th>Mass Limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single Steer</td>
<td>6.0t</td>
</tr>
<tr>
<td>Twin Steer (Non Load-Sharing)</td>
<td>10.0t</td>
</tr>
<tr>
<td>Twin Steer (Load Sharing)</td>
<td>11.0t</td>
</tr>
<tr>
<td>Single Axle – Dual Tyres</td>
<td>9.0t</td>
</tr>
<tr>
<td>Tandem Axle</td>
<td>17.0t</td>
</tr>
<tr>
<td>Tri-axle</td>
<td>21.0t</td>
</tr>
</tbody>
</table>
APPENDIX B – MAINTENANCE OF SUSPENSION STANDARD

Additional Standard for the NHVAS Mass Management Module

8.0 MAINTENANCE OF SUSPENSION

Standard

All vehicles subject to this accreditation, including trailers supplied by other parties, must have their suspension systems maintained and replaced according to manufacturer’s or a qualified mechanical engineer’s specification.

Criteria

To satisfy the standard, an operator would need to demonstrate the following:

1. Documentation of the manufacturer’s or qualified mechanical engineer’s specification for the suspension of both trailing and hauling equipment. Road Friendly Suspension must also be certified under VSB 11.

2. A documented instruction detailing when the suspension is to be checked (based on manufacturer’s or qualified mechanical engineer’s specifications of time and/or distance), by whom and how it is to be recorded.

3. Documented procedures for recording faults to the suspension during a journey, how the faults are reported to the maintenance provider, for the repair of major or serious faults that may affect the performance of the suspension system, as soon as possible even if the vehicle is away from home base and for the repair of other faults in a timely manner.

4. Documentation of the decision making with respect to suspension maintenance. This is to include the final sign-off of the repair when completed.

5. Evidence that any repairs to suspensions are only carried out by persons having suitable qualifications or experience to competently complete any maintenance tasks, or do so under qualified supervision with recent experience.

6. For a trailer which is supplied by another party, the accredited operator must demonstrate that a statement of compliance with the suspension maintenance standard accompanies each trailer, and that the trailer supplier is able to demonstrate compliance with the above criteria.
APPENDIX C – ESTIMATE OF HIRED TRAILERS LIKELY TO ACCESS CML

A key element of the Regulatory Proposal is the requirement for an auditable system for the maintenance of the vehicle’s suspension. This is accommodated by the inclusion of an additional standard pertaining to suspension maintenance in the Mass Management module of NHVAS. Whilst this is a workable approach for operators who haul their own trailers, it is not appropriate for hired trailers who are not required to be mass accredited, when hauled by a mass accredited prime mover. In this situation, the requirement for an auditable maintenance system for the vehicle’s suspension would be met by the trailer owner issuing a certificate of compliance that was either affixed to the trailer or available to the driver of the prime mover.

Some jurisdictions may consider that this approach is not sufficiently robust to maintain the integrity of the required auditable system. To facilitate this discussion, this appendix has been prepared to estimate the number of hired trailers likely to be affected by the Proposal.

Table B1 estimates the total number of trailers likely to be affected by the Proposal as approximately 9,500.

Table B1: Estimate of number of trailers affected by the Proposal

<table>
<thead>
<tr>
<th>Combination</th>
<th>Total no of combinations</th>
<th>% likely to access CML</th>
<th>No of combinations affected</th>
<th>No trailers affected</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single artic</td>
<td>49,032</td>
<td>10%</td>
<td>4,903</td>
<td>4,903</td>
</tr>
<tr>
<td>B-double/B-triple</td>
<td>9,758</td>
<td>15%</td>
<td>1,464</td>
<td>3,074</td>
</tr>
<tr>
<td>Road train</td>
<td>7,482</td>
<td>10%</td>
<td>748</td>
<td>1,871</td>
</tr>
<tr>
<td>Total</td>
<td>66,272</td>
<td>10%</td>
<td>7,115</td>
<td>9,847</td>
</tr>
</tbody>
</table>

Based on discussions with Orix, Krueger and Flexfleet, the total number of hired trailers operating nationally is estimated at 5,000. Assuming that:

- half this number operates to the mass limits;
- a further half would take advantage of the concessional mass limits; and
- 80% of the trailers are on the road at any time,

the total number of hired trailers affected by the Proposal is estimated at 1,000. This represents approximately 10% of the estimated total number of trailers likely to access the concessional mass limits.
APPENDIX D – FLEET ESTIMATES

C.1 Introduction

If access to mass concessions were to be confined to NHVAS Mass Management vehicles, then candidate vehicles to access these concessions would include:

- vehicles currently accredited; and
- currently non-accredited vehicles operating under GML and which presently load to a gross mass covered by the Regulatory Proposal, either on a regular or irregular basis.

Other candidate vehicles for accreditation would be those whose owners or drivers:

- intend to load to legal limits but are uncertain of loads and therefore do not wish to risk the fines associated with overloading; or
- seek to meet chain of responsibility requirements through accreditation.

The numbers of vehicles in these two latter categories are likely to be small and are not relevant for this investigation as there would be no change in productivity for these vehicles.

C.2 Calculations of Fleet Numbers

The number of vehicles presently accredited was estimated based on a survey of Victoria and Queensland, the only jurisdictions that currently allow concessions to operators accredited to NHVAS Mass Management. Neither jurisdiction keeps records of the reasons for accreditation, only total numbers under all accreditation schemes. After adjustments for vehicles accredited in order to access HML, it was concluded that the percentage of vehicles accredited under NHVAS and operating under GML (rather than HML) were 2.9% in Victoria and 6.5% in Queensland, as shown in Table C1.

<table>
<thead>
<tr>
<th></th>
<th>VIC</th>
<th>QLD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rigid trucks</td>
<td>3%</td>
<td>4%</td>
</tr>
<tr>
<td>Truck and trailer</td>
<td>3%</td>
<td>9%</td>
</tr>
<tr>
<td>Single articulated trucks</td>
<td>2%</td>
<td>10%</td>
</tr>
<tr>
<td>B-doubles</td>
<td>2%</td>
<td>13%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>2.9%</td>
<td>6.5%</td>
</tr>
</tbody>
</table>

Estimates are also required of the numbers of vehicles that presently load to a gross mass covered by the Regulatory Proposal. The present gross mass concession for single articulated vehicles is 1 tonne, which is the same as the NAASRA tolerance on gross mass. In order to estimate the number of vehicles that are customarily loaded to include NAASRA tolerances, Weigh In Motion (WIM) data from NSW and Victoria was obtained.

In NSW, data from 4 sites on major freight routes was obtained for 6 axle articulated vehicles. The data related to the percentage of vehicles which exceeded the legal GML limit of 42.5 tonnes but did not exceed the legal GML limit plus NAASRA 1 tonne tolerance limit of 43.5 tonnes. As NSW does not permit HML on any roads but the Newell Highway and some feeder roads, the results are exclusively GML and are shown in Table C2.
Table C2: Percentage of 6 axle articulated vehicles between 42.5 tonnes and 43.5 tonnes gross mass, New South Wales

<table>
<thead>
<tr>
<th>Site</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Site 1</td>
<td>5.1%</td>
</tr>
<tr>
<td>Site 2</td>
<td>3.1%</td>
</tr>
<tr>
<td>Site 3</td>
<td>11.5%</td>
</tr>
<tr>
<td>Site 4</td>
<td>2.5%</td>
</tr>
<tr>
<td>Average</td>
<td>4.5%</td>
</tr>
</tbody>
</table>

In addition, 6.7% of vehicles exceeded 43.5 tonnes. Some of these vehicles would have been just over the 43.5 tonne cut-off and probably aiming to use the NAASRA tolerances. Allowing for site 3 which looks like an outlier and allowing that some vehicles slightly above the 43.5 tonne cut-off should be included, somewhere between 3.5% and 4.5% of 6 axle articulated vehicles recorded at these WIM sites appear to have loaded to the NAASRA tolerances in NSW.

In Victoria, the position is more difficult due to the availability of access for HML vehicles. Two sites on the Hume Freeway (to and from Sydney) were selected; one at the northern end (Site 1) and one at the southern end (Site 2). It would be expected that most trucks on the Hume Freeway and heading for or coming from Sydney would be laden to GML, due to the limits in NSW. The third site was on the Western Highway leading to South Australia, which does allow HML. Data was obtained for both 6 axle articulated vehicles and B-doubles at all three sites.

The percentage of trucks in the NAASRA tolerance bands above the GML and HML legal limits was determined. The percentages are of interest even though the NAASRA tolerances would not be applicable to HML vehicles. The results are given in Table C3.

Table C3: Percentage of 6 axle articulated vehicles and B-doubles in the NAASRA tolerance bands, Victoria

<table>
<thead>
<tr>
<th>Configuration and mass</th>
<th>Site 1</th>
<th>Site 2</th>
<th>Site 3</th>
<th>Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>6 axle articulated</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• 42.5 to 43.5 (GML)</td>
<td>4.3%</td>
<td>4.4%</td>
<td>4.6%</td>
<td>4.4%</td>
</tr>
<tr>
<td>• 45.5 to 46.5 (HML)</td>
<td>1.9%</td>
<td>1.0%</td>
<td>3.3%</td>
<td>2.1%</td>
</tr>
<tr>
<td>B-doubles</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• 62.5 to 64.5 (GML)</td>
<td>5.8%</td>
<td>6.4%</td>
<td>6.1%</td>
<td>6.1%</td>
</tr>
<tr>
<td>• 68.0 to 70.0 (HML)</td>
<td>1.4%</td>
<td>1.9%</td>
<td>5.0%</td>
<td>2.8%</td>
</tr>
</tbody>
</table>

Some of the vehicles in the GML tolerance range at Site 3 would be HML vehicles but as the total number of HML vehicles appears very small the results are not likely to be significantly affected. B-doubles are more likely to be HML and that would explain the higher percentages at Site 3 for B-doubles. It is possible also that some of the vehicles in the HML band are in fact GML vehicles that are significantly overloaded. Again allowing for some vehicles just above the 43.5 tonne cut-off that may have been loading to the tolerances, it appears that, similar to NSW, about 4.5% of 6 axle articulated vehicles in Victoria load to within the tolerance band and a slightly higher percentage of B-doubles.

The WIM sites investigated were primarily long distance routes and results covered 6 axle articulated vehicles, together with B-doubles in Victoria. Rigid vehicles and truck trailer
Mass concessions for accredited heavy vehicles – draft RIS

combinations operate primarily in urban areas where vehicles are subject generally to lower levels of mass enforcement. NRTC (2001) reported (based on mid 1990s WIM data) the 95th percentile of gross mass for rigid trucks as shown in Table C4.

### Table C4: 95th percentile loads for rigid trucks

<table>
<thead>
<tr>
<th>Configuration</th>
<th>95th percentile gross mass</th>
<th>Legal maximum gross mass</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 axle rigid</td>
<td>13.2 tonnes</td>
<td>15.0 tonnes</td>
</tr>
<tr>
<td>3 axle rigid</td>
<td>22.6 tonnes</td>
<td>22.5 tonnes</td>
</tr>
<tr>
<td>4 axle rigid</td>
<td>30.0 tonnes</td>
<td>27.5 tonnes</td>
</tr>
</tbody>
</table>

Source: NRTC (2001)

According to this older data, 5% of 3 axle rigid trucks exceed the legal maximum. For the larger 4 axle rigid trucks, it appears that a significant proportion exceed the legal limit.

From these data, it is not unreasonable to assume that about 5% of rigid trucks weighed at WIM sites in the categories of interest have a gross mass within the band between legal limits and legal limits plus NAASRA tolerances.

For the purposes of this RIS, it is assumed that 5% of vehicles weighed at WIM sites load to within the NAASRA tolerance band.

### C.3 Discussion

Emphasis in the preceding discussion has been placed on the term “vehicles weighed at WIM sites”. The percentages of vehicles measured at WIM sites that load to within the NAASRA tolerance band will under-represent the actual percentage of the freight task (as distinct from vehicles in the fleet) that is undertaken by vehicles that load in this band. WIM sites often measure vehicles in both directions, leading to the situation where a vehicle that is laden in one direction and empty in the other (such as a tanker) is counted twice. Urban vehicles, which are underrepresented in the WIM data, are also more likely to be fully laden only for part of a trip. Therefore, the percentage of actual vehicles in the fleet that are laden to within the NAASRA tolerance band, rather than the percentage of vehicles weighed at WIM sites, will be greater than the indicative figure of 5%.

Contributions to the freight task as measured by net tonne-kilometres of travel are made by both fully laden vehicles and partly laden vehicles but not empty vehicles. By way of illustration, consider the example of a freight task undertaken by a fleet of 1,000 vehicles. Each vehicle undertakes 10 trips in the laden direction and 10 trips in the return empty direction and in each case a WIM reading was taken. Total WIM readings would be 20,000 for the fleet that actually undertook only 10,000 laden trips.

As a further illustration of the impacts on the freight task, consider each vehicle travels 40% of outbound trips fully laden and the remaining 60% are partly laden with an average of 50% payload capacity. Table C5 gives some results.
Table C5: Illustrative example of effects of contribution to the freight task of fully laden vehicles

<table>
<thead>
<tr>
<th>Configuration</th>
<th>no.</th>
<th>full load (t)</th>
<th>average part load (t)</th>
<th>dist’ce (km)</th>
<th>trips full</th>
<th>trips part laden</th>
<th>tonne kilometres of travel (‘000)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rigid</td>
<td>500</td>
<td>14</td>
<td>7</td>
<td>100</td>
<td>4</td>
<td>6</td>
<td>2,800</td>
</tr>
<tr>
<td>Truck trailer</td>
<td>100</td>
<td>30</td>
<td>15</td>
<td>200</td>
<td>4</td>
<td>6</td>
<td>2,400</td>
</tr>
<tr>
<td>Single artic</td>
<td>300</td>
<td>26</td>
<td>13</td>
<td>400</td>
<td>4</td>
<td>6</td>
<td>12,480</td>
</tr>
<tr>
<td>B-double</td>
<td>100</td>
<td>40</td>
<td>20</td>
<td>500</td>
<td>4</td>
<td>6</td>
<td>8,000</td>
</tr>
<tr>
<td>Total</td>
<td>1,000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>25,680</td>
</tr>
</tbody>
</table>

The WIM results would show that 20% of these vehicles were fully laden when in fact 40% of vehicles had a full load for part of the round trip and contribute more than 25 million tonne kilometres of freight or 57% of the freight task in this example.

Finally, consider the impacts of 10% of these vehicles having their full load changed by the allowances in the Regulatory Proposal. Table C6 gives the impact on tonne kilometres of travel. In this illustration, the Regulatory Proposal would mean a productivity increase of 106,000 tonne kilometres of freight or 0.24% of the total example task.

Table C6: Illustrative change of freight task by change in NAASRA tolerances

<table>
<thead>
<tr>
<th>Configuration</th>
<th>No.</th>
<th>Payload change (t)</th>
<th>dist’ce (km)</th>
<th>trips</th>
<th>tonne km of travel change (‘000)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rigid</td>
<td>50</td>
<td>0.5</td>
<td>100</td>
<td>4</td>
<td>10</td>
</tr>
<tr>
<td>Truck trailer</td>
<td>10</td>
<td>1.0</td>
<td>200</td>
<td>4</td>
<td>8</td>
</tr>
<tr>
<td>Single artic</td>
<td>30</td>
<td>1.0</td>
<td>400</td>
<td>4</td>
<td>48</td>
</tr>
<tr>
<td>B-double</td>
<td>10</td>
<td>2.0</td>
<td>500</td>
<td>4</td>
<td>40</td>
</tr>
<tr>
<td>Total</td>
<td>100</td>
<td></td>
<td></td>
<td></td>
<td>106</td>
</tr>
</tbody>
</table>

C.4 Conclusions on Potential Fleet

At present, Queensland does not have an extensive HML network. It is probable that as the HML network is extended in Queensland, which is considered likely in the very near future, the numbers of vehicles seeking mass accreditation for CML payload advantages would diminish.

Some of the issues that may influence the decision of an owner to apply for accreditation include:

- the relative cost of accreditation;
- whether the new Measurement Adjustments are rigorously enforced in the field or whether actual field enforcement allows greater leniency; and
- the chances of being weighed and found to be overweight.

As CML will be made available to NHVAS accredited vehicles but not to other GML vehicles, it would be expected that the percentages of accredited vehicles would rise as the availability of the mass concessions would make the national position more commercially attractive.
It can be assumed that the maximum proportion of accredited vehicles would approximate the current Queensland position, which could be represented as follows:

- Rigid trucks 5%
- Truck and trailer combinations and single articulated vehicles 10%
- B-doubles 15%

The remaining configuration is road trains and it is assumed that 10% of road trains would be accredited.

These proportions are consistent with the WIM data, which indicated that around 5% of the weighed vehicles were loaded to within the tolerance band. For the reasons given earlier, this equates to around 10% of the fleet. Clearly, allowance would need to be made for empty travel.

It is important to stress that the wider availability of HML, particularly in NSW, would probably increase the total number of accredited vehicles but reduce the number of vehicles operating at CML. Therefore the percentages of vehicles outlined above would be most likely to reduce if there were wider implementation of HML, and in particular in NSW due to its size and strategic location.
APPENDIX E - REGULATORY IMPACT STATEMENT & CONSULTATION

E.1 Introduction

The Mass Concessions for Accredited Heavy Vehicles Regulatory Impact Statement was submitted to TACE in October 2005. The paper was issued for public comment and presented the issues to be considered.

E.2 Consultation Process

A series of teleconferences were conducted with road agency representatives during December 2005, and February and March 2006 to discuss details of issues relating to concessional mass limits, suspension maintenance standards and hired trailer issues. At these meetings, participants were supplied with information, briefed on progress and provided with opportunities for input to the development of maintenance criteria.

The teleconference group included representatives from all State and Territory road authorities.

Written responses to the RIS were sought from jurisdictions by 17 March 2006. No responses were received from jurisdictions by this date, and in the absence of material from written submissions, the following section summarises the attitudes expressed by representatives from State and Territory road authorities in verbal responses at the aforementioned teleconferences.

Industry briefings were conducted in Melbourne, Brisbane and Sydney.

E.3 Feedback from teleconferences

South Australia agreed in principle with the introduction of CML, however proposed a mandatory Code of Practice.

Victoria supported the RIS and reiterated the importance of simplicity with regard to the suspension maintenance requirement.

New South Wales expressed serious reservations about the additional suspension maintenance standard, and proposed the adoption of a more prescriptive approach. Industry and other jurisdictions viewed such a move as being too intrusive and costly and were strongly opposed.

Queensland was very supportive, although emphasised that a phase-in period would give industry time to get processes in place. The lack of prescriptiveness was of no concern.

Concessional Mass Limits will have little impact on Western Australia, and Northern Territory has no issues with CML since it already has 100 per cent access to HML. This package means all jurisdictions will be expected to implement NHVAS, albeit through an agency arrangement with another jurisdiction. Northern Territory will need to consider outsourcing these functions to another jurisdiction.

In general, jurisdictions supported the concept of having a three-tier mass limits regime as a necessary policy response to the growing freight task which will deliver productivity, safety and environmental improvements. The link between mass accreditation and the entitlement to operate at CML was also supported, and will encourage more operators to manage their business under the mass accreditation scheme.

An issue raised in discussions related to the need for recognition of variations in truck type, road (and off road) quality, as well as load characteristics which justify flexibility in
maintenance programs. Maintenance regimes specified by manufacturers should provide the basis of the accredited maintenance program, and in instances where there are no specifications provided by the manufacturer, engineering advice should be provided by the operator in order to achieve compliance under the maintenance management program.

In relation to hired trailers, three proposals were discussed:

1. Accreditation: as used in the NSW pilot;
2. Certificate of Compliance: as proposed by Victoria; and
3. Code of Practice: the preferred option in South Australia.

There was some support for the accreditation and code of practice proposals, however most jurisdictions were satisfied with the revised proposal which was subsequently enhanced through the addition of criterion 6 to the suspension maintenance requirement.
APPENDIX F - WRITTEN RESPONSES TO REGULATORY IMPACT STATEMENT

Response received from NatRoad

1. The proposal to introduce CML is to compensate the industry for the removal of the NAASRA tolerances, in particular the ‘administrative allowances’. As recognised in the Summary of the RIS, that “...Removal of the NAASRA tolerances would reduce the effective maximum mass for accredited operators and lead to lower vehicle productivity...” the NTC appears to be trying to address the decrease in productivity that will arise from the removal of the NAASRA tolerances, with the introduction of CML.

As noted on page 2 of the RIS, there were a number of practical reasons why the ‘administrative allowances’ were introduced – all of which still apply. The notes supporting the introduction of the new Measurement Allowances, as per page 2 of the RIS, “The new Measurement Adjustments (MA) remove the consideration of administrative allowances and covers only the machine accuracy and method of weighing” provide no evidence as to why the ‘administrative allowances’ should be discarded.

NatRoad cannot support the CML proposal, where it is simply a scheme to give back that which has been taken away, without good reason.

2. It has been announced that the new Measurement Allowances (MA’s) will come into force on 1 July 2006. Given the period for comments on the RIS does not close until 17 March, and knowing the speed at which governments move to introduce new regulations, it is inconceivable that CML will be in place prior to 1 July. Therefore, NatRoad’s members will have a period of time, from 1 July until whenever the necessary regulation is in place, where they will have to comply with the impracticable MA’s (See point 1 above)

NatRoad cannot support the CML proposal, where it is obvious cannot be a delivered in time to address the problems that will arise from the introduction of the MA’s.

3. The most important practical mass issues for NatRoad’s members, is not the overall mass of the vehicle combination but rather the spread of mass across the axle groups. The practical ability of an operator to be able to spread the load to ensure that the mass on each axle group is correct, is limited in many circumstances. The ‘administrative allowances’ under the NAASRA scheme recognised this practical consideration.

The issue of axle group mass was raised at the meeting called by the NTC in August 2005, where further research on the matter was promised. From NatRoad’s understanding a research paper is being completed and will not be available until the middle of this year.

How can the new MA’s be introduced, when the critical issue of axle group mass has still not been discussed or recognised? NatRoad cannot support any new scheme, such as CML that does not consider, using reliable research, the issue of axle group mass.

4. In Appendix C of the RIS, the NTC has conducted some research into the number of trucks that would be impacted by the CML proposal. However, the NTC has failed to consider an important point in its research. The NTC has based its numbers on the available data on the
number of vehicles that are loaded to within the NAASRA tolerance band e.g. 42.5t to 43.5t for a semi. This sample is too restricted when industry practices are taken into account.

The NTC has failed to consider why the NAASRA tolerance was created; that is to provide practical certainty for operators when loading; the ‘administrative allowance’. Operators, under GML, plan to load their trucks to the legal limit. However, given the uncertainty that can occur when loading, especially on axle group loads, having the NAASRA tolerance gave operators a ‘comfort’ zone.

Having the NAASRA tolerance means operators can load to the legal maximum to achieve maximum productivity and efficiency, but in the worst case scenario still be within the overall legal limits i.e. GML+Tolerance. Taking away the NAASRA tolerance will mean operators will have to reduce their loads to ensure they stay within the new limits.

Therefore, the number of operators that will be impacted upon will be greater than the predicted 10-15% (p31 Appendix C – RIS). It’s not just the vehicles who register on the WIM data as being within the NAASRA tolerance band that will be affected. Any operator who wants the certainty that they will not receive an infringement notice arising from the practical uncertainties associated with loading, will be forced to be accredited for CML, otherwise they will suffer a loss in productivity.

For example, loading a semi to 42.5t, the practical uncertainty might be plus or minus 0.5t – giving a loaded vehicle mass of between 42t and 43t overall. Under the NAASRA tolerance this would be legal. However, removing the NAASRA tolerance will mean an operator will have to aim to load a semi to 42t, so that by allowing plus or minus 0.5t for practical uncertainty, the truck will be loaded to within the 41.5t to 42.5 t range. The result is a 0.5t loss in a 26t payload – a 2% decrease. Given the slim margins that the industry operates under, 3-5%, any decrease in productivity will be disastrous.

NatRoad cannot support the CML proposal, as the impact upon the industry has been severely under estimated, in particular the number of operators that will have to accredit for the scheme or suffer a loss in productivity.

5. The NTC in its paper has made some projections regarding the economic improvements that will arise through the introduction of the proposed CML.

At the very least, the NTC has failed to recognise the economic damage that will be created through the loss in productivity by taking away the NAASRA tolerances. Any economic gain associated with the introduction of the CML has to be offset against the losses.

As stated in point 4. it is expected that a greater number of vehicles will be impacted than the NTC estimates. There are also concerns about the cost to operators, as they appear to be too low by a factor of 50%-100%. If the number of operators is higher, and the costs are higher, then the impact upon the industry will be higher still.

NatRoad cannot support the NTC’s proposal, where the economic impact upon the industry is flawed, and that the benefits to the industry, particularly in terms of productivity are extremely doubtful.
**NTC Comment**

Natroad expressed concerns about the Measurement Allowances. NTC’s response to this is that the CML proposal decision to implement Measurement Allowances was part of the Compliance & Enforcement reform agenda.

**Response from New South Wales Road Transport Association**

The New South Wales Road Transport Association (NSWRTA) reiterates its support for the creation of Concessional Mass Limits (CML) as a third tier of mass limits within a national framework which sits between the General Mass Limits tier and the Higher Mass Limits (HML) tier. NSWRTA believes the creation of the CML third tier is a necessary policy response to the growing freight task and will deliver productivity, safety and environmental improvements. However, for industry to get the maximum possible advantage from this proposal, it needs the support of all jurisdictions, greater flexibility in axle/axle group limits, a consistent approach by those jurisdictions to enforcement and adoption of a practical, yet credible maintenance program.

Accredited operators have ‘lost’ the benefit of the NAASRA tolerances following the introduction of Measurement Adjustments which reflect the capability of transport and road agencies (the agencies) to more accurately weigh a heavy vehicle. However, the Measurement Adjustments take no account of industry’s ability to accurately weigh, especially at clients’ premises due to either the lack of weighbridges or weighbridges which provide the degree of accuracy in weighing when compared to those owned by the agencies. These resulting anomalies need to be addressed and resolved. While the proposed limits under CML go some way to resolve this anomaly, more needs to be done.

NSWRTA also supports as a matter of principle the link between mass accreditation and the entitlement to operate at CML. This recognises the importance of the concept of reward for effort as a feature of industry policy. This policy will also encourage more operators to manage their business under the mass accreditation scheme.

Therefore, while agreeing with the broad thrust of the RIS, NSWRTA wishes to make the following comments:

- The proposed steer axle limits, while consistent with existing limits in other tiers, will require review given existing anomalies for certain vehicle classes. NSWRTA accepts the proposed limits as an interim measure in order to secure support for a third tier and its adoption by all jurisdictions but flags that steer axle limits will require review and resolution as a matter of high priority;

- NSWRTA supports the concept of flexibility in axle group limits and believes operators should be able to load to HML axle limits but within the proposed truck/comination CML gross combination mass limits;

- Operation under the Intelligent Access Program should not be a precondition for access to CML (and HML);
Accredited maintenance programs need to recognise there are differences in terms of truck type, road quality and off road quality as well as load characteristics that justify flexibility in terms of maintenance programs. Where manufacturers specify the maintenance regime to be followed, this regime should provide the basis of the accredited maintenance program. Where there are no specifications provided by the manufacturer, advice from an engineer should be relied on by the agencies to give them confidence regarding the maintenance management program in place;

In respect of trailers, NSWRTA supports the NTC’s proposed Code of Practice. However, this would only work if the operator in question loses the right to operate under CML. Maintenance specifications are not often supplied by the manufacturer thus reinforcing the point previously made regarding the need for engineering advice. There may be a case to create a ‘three strikes’ type regime that allows the operator to correct a breach prior to suspension on the first or second occasion in which an offence is committed but to face suspension on a third offence within a specified time period;

In respect of hired and rented trailers, NSWRTA believes there would be support for a maintenance management module within the hire and rental sector of the industry that gave regulators confidence that trailers owned by the hire and rental sector would be made available to operators accredited to operate under CML. NSWRTA proposes that this scheme operate on the same basis as would apply to other trailers while noting advice from industry that manufacturers generally do not supply specifications regarding maintenance practices for trailers. However, NSWRTA recognises some hire and rental companies may want to supply trailers with suspension requirements as a matter of course for commercial reasons, not as a result of a prescriptive approach. This would be possible under the NTC’s proposed Code of Practice and should minimise compliance and enforcement costs;

The issue of mass distance charging requires resolution through a separate process and should not hold up progress in implementing a third tier;

In respect of the benefit cost ratio it is important to note that:

- Costs and benefits for the required suspension maintenance have not been separately costed and this should be carried out as a matter of priority;

- Administrative and enforcement costs the agencies should be lower under CML because compliance is likely to increase slightly.

These issues should be investigated to add further rigour to the benefit cost analysis.

In conclusion, NSWRTA strongly supports this proposal going forward for final decision and implementation as a matter of high priority.

*NTC Comment*

NSWRTA raised the necessity to review steer axle limits and supports the concept
of flexibility in axle group limits, however these issues are the subject of another NTC project.

In relation to NSWRTA’s concerns about the Measurement Adjustments, the NTC’s response is that the decision to introduce Measurement Adjustment’s has already been made as part of the Compliance & Enforcement reform agenda.

NSWRTA argued that the Measurement Adjustments take no account of industry’s ability to accurately weigh, especially at clients’ premises due to either the lack of weighbridges or weighbridges which provide the degree of accuracy in weighing when compared to those owned by the agencies. However the decision to replace the NAASRA tolerances with Mass Adjustments was part of the approved C & E policy package.

NSWRTA’s concerns regarding the benefit cost ratio have been considered, however no changes are proposed to the RIS as a result. The issues raised will not impact on the benefit cost ratio as outlined in the RIS.

**Response from Pacific National**

Pacific National supports the basic concept behind the NTC’s proposal. It is clearly in the interests of our much-burdened road network to provide incentives for operators to use quality-assured mass management systems.

PN does have concerns, however, about the lack of clarity regarding enforcement of the proposed new rules.

From the Regulatory Impact Statement, it is unclear what systems are in place to tackle non-conformance and how these would be applied in practical scenarios.

Under the current National Heavy Vehicle Accreditation Scheme (NHVAS), there is no indication of the regularity of compliance audits, or how many times an operator needs to break the rules before they are removed from the scheme.

The RIS explains that NHVAS was introduced to “provide assurance that scheme members were complying with transport regulations through a quality systems approach to their operations.” PN would be interested to know how many operators have recorded non-conformances under the current system, and how many have subsequently lost their accreditation.

If non-conformers tend to remain part of the scheme, then it could be argued that the NHVAS/CML system may, for some operators, provide a further informal increase in mass limits beyond the proposed one tonne increase.

As this would clearly be an unacceptable outcome, Pacific National looks forward to the NTC providing clarity on the compliance procedures which will underpin the new scheme.

**NTC Comment**

Pacific National (PN) supports the basic concepts behind the NTC proposal but queried the accreditation requirements in complying with Mass Limits. The effectiveness of NHVAS is being reviewed by the NTC in the current review of accreditation arrangements.
With regard to PN’s concerns regarding the on-road enforcement of the new arrangements. NTC’s response to this is that on-road enforcement provisions are not a part of CML.