MASS LIMITS COMPLIANCE - THE DEVELOPMENT AND POTENTIAL OF ALTERNATIVE COMPLIANCE SCHEMES

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ABSTRACT

This paper outlines approaches to the enforcement of mass limits for heavy vehicles, explores the role of an alternative enforcement regime based on quality management principles and discusses the implications of the alternative approach. If developed and implemented carefully, voluntary accreditation schemes comprising management based compliance can improve the productivity of scheme members, improve the effectiveness of conventional enforcement and improve compliance outcomes overall. Compliance with heavy vehicle mass limits can be improved with more flexible and sophisticated approaches, provided regulatory incentives are sufficient to attract a critical mass of operators.

1 CURRENT REGULATORY REGIME

Mass limits enforcement in Australia relies principally on on-road checking and enforcement. Except on a small number of high volume routes where permanent weighing stations are located, most enforcement is via on-road interception and weighing by portable scales. Some jurisdictions also resort to periodic ‘blitzes’ in which all vehicles passing a road block are subject to mass checks and checks for compliance with other heavy vehicle regulations.

Despite a heavy reliance on on-road interception of mass limits breaches, the number of inspectors engaged in this activity is quite small. In Victoria for example, the regulatory authority (VicRoads) employs only 68 inspectors relative to a heavy vehicle population registered in Victoria of 100,000. Their responsibilities cover the full range of heavy vehicle regulations including mass, driver hours, roadworthiness and dangerous goods. The traffic branch of the State police force supplements road authority resources, but its enforcement priorities tend towards areas of breach with potentially significant safety consequences, particularly fatigue and substance abuse.

With limited enforcement resources in each of the jurisdictions, inspectors must carefully target their available resources towards regulations believed to be frequently or severely breached, towards particular operators, classes of operator or products carried, or towards particular geographic areas. Inspectorate priorities differ between jurisdictions. Typically though, inspectors, either individually or collectively maintain records of operators known to be frequently non-compliant. In addition, unless a vehicle is being intercepted for another purpose, a mass interception will generally be made only if visual inspection suggests a significant overload.
2 THE OVERLOADING PROBLEM

There is little collated data available on the extent of the overloading problem in Australia, and the data which is available reflects gross as distinct from axle mass compliance. A very limited range of data is reported in the evaluation of the VicRoads mass management alternative compliance scheme (Kinhill Economics 1996). Key findings were:

- Culway recordings in Victoria in 1995 showed an average of 13% of vehicles over gross mass, after allowance for a 500 kg mass tolerance
- The average over-gross mass in Victoria from a sample of 26,000 interceptions in 1995 ranged between 2.9 and 5.9 tonnes
- In one Victorian region in 1995, 71% of overmass vehicles exceeded mass limits by less than four tonnes.
- In New South Wales in 1995, 3% of intercepted vehicles exceed gross mass limits, but of the vehicles intercepted an average of 21% were over statutory mass.

Allowing for differences in definition of mass for breach purposes and for different settings of Culway equipment, the evaluation concluded that non-compliance with gross mass limits is probably around 10% in Australia. The level of serious non-compliance in terms of large individual overloads is obviously considerably lower.

More recently, the National Road Transport Commission (NRTC) commissioned ARRB Transport Research (Koniditsiotis 1997) to collate Culway data and report on the incidence of grossly overloaded vehicles in Australia. While the report concentrated on gross overloading (more than 30 per cent of legal limits on GVM), some information on lower level overloading was obtained.

The report found overloading is more frequent in rural than in urban areas. For Austroads Class 8 vehicles (5-axle articulated) and above, around 2 per cent were loaded at more than 5 per cent above the legal GVM in urban areas, compared with a rate of overloading of around 8 per cent in rural areas.

The report found the incidence of gross overloading to be small. On average, 0.16 per cent of Austroads Class 8 and above vehicles were found to be overloaded more than 30 per cent of their GVM limit. Gross overloading was also found to be more frequent in rural than in urban areas (0.19 per cent compared with 0.14 per cent).

It is evident from this limited data however, that under the traditional enforcement regime, inspectorates devote considerable proportions of their limited resources in identifying, prosecuting and deterring that small proportion of very large overloads. The converse of this conclusion is the largely compliant behaviour of the large majority of heavy vehicle operators. Recognising these two tentative conclusions, alternative compliance offers inspectorates the opportunity to direct resources away from operators who are naturally compliant or who are prepared to make the effort to lift their compliance performance.
3 A NATIONAL APPROACH TO ALTERNATIVE COMPLIANCE

The purpose of alternative compliance is to enable efficiency improvements in road transport by allowing a lesser degree of on-road enforcement for operators who can demonstrate a high degree of compliance by other means. In this way, the efforts of responsible operators to comply with regulatory standards can be recognised and enforcement resources targeted on operators likely to be in breach. Alternative compliance schemes are seen as voluntary alternatives to conventional enforcement.

Alternative schemes in Australian road transport have been developed in a national process involving road and enforcement authorities, the road transport industry and motoring organisations, with the co-ordination of the NRTC. National pilot schemes have been initiated in fatigue management, mass management and maintenance management. The pilot schemes in mass and maintenance have been subject to individual evaluation and a joint Regulatory Impact Statement. In November 1997, Ministerial Council for Road Transport approved the national implementation of alternative compliance modules for mass and maintenance under the umbrella Heavy Vehicle Accreditation Scheme (HVAS). Operators may seek accreditation under one or both of these modules. Ministers also approved arrangements under which members of industry accreditation schemes will have automatic entry to relevant modules of the national alternative compliance scheme. Membership of any industry scheme which adopted common standards and audit practices would allow automatic entry to the relevant HVAS module or modules.

Alternative compliance may be seen as an application of regulatory reform initiatives which are being pursued in many countries including Australia, Canada and the United States. Another Australian application of this approach is the Accredited Licensee Systems, which has been implemented under the Victorian Environment Protection Act.

In its recent report on *Regulatory Efficiency Legislation*, the Law Reform Committee of the Victorian Parliament (1997) stated that:

> it appears from all accounts that the NRTC alternative compliance pilot programs have been a great success. Certainly, those submissions to the present Inquiry which considered the NRTC’s programs were very supportive of them (p53)

4 OBJECTIVES OF THE VICROADS ALTERNATIVE COMPLIANCE SCHEME

VicRoads implemented a pilot mass management accreditation program in 1995, initially with nine operators. The pilot program (referred to as MMAP or Mass Management Accreditation Pilot) was developed in conjunction with operators, police and a representative of a motoring organisation. The purpose of the pilot was to test the extent to which alternative compliance could achieve the potential benefits identified by the National Road Transport Commission including:

- enhanced compliance with existing mass limits by operators included in alternative compliance schemes
- improved efficiency for those operators due to reduced incidence of on-road enforcement
increased compliance of operators outside the scheme through increased concentration of enforcement resources

reductions in enforcement resources to achieve a given level of compliance (see Kinhill Economics 1996 and NRTC 1994).

MMAP comprised four elements:

• a set of operator performance standards and an audit framework for those standards developed by VicRoads

• systems developed by pilot operators for complying with the MMAP standards

• an agreement between the individual pilot operators and VicRoads setting out the conditions under which each participates in the pilot

• processes for auditing operators prior to their joining the scheme (entry audits) and on a regular basis while they remain in the scheme.

Table 1 MMAP performance standards

<table>
<thead>
<tr>
<th>Responsibility and authority</th>
<th>The operator must define the responsibility and authority of all personnel who manage, perform and verify work affecting the operation of vehicles under the Mass Management Accreditation Program.</th>
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</thead>
<tbody>
<tr>
<td>Vehicle control</td>
<td>All vehicles nominated by an operator must be operated in accordance with the Mass Management Accreditation Program.</td>
</tr>
<tr>
<td>Vehicle Use</td>
<td>The vehicle mass must be determined by a method of assessment prior to departure allowing for any variation.</td>
</tr>
<tr>
<td>Records and Documentation</td>
<td>Records and documentation must be maintained to demonstrate the effective operation of the Mass Management Accreditation Program.</td>
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<tr>
<td>Verification</td>
<td>The weight of the vehicle and the mass must be verified to produce an auditable record.</td>
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<tr>
<td>Management of non-compliance and corrective action</td>
<td>The operator must establish and maintain documented procedures that can monitor, identify and record instances of non-compliance together with methods to ensure that corrective action is taken.</td>
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<tr>
<td>Internal audit</td>
<td>The operator must establish and implement documented procedures that plan for audits to verify that the system and performance of the system are in compliance with the Mass Management Accreditation Program.</td>
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Once the performance standards in the Table had been set by VicRoads, operators seeking accreditation scheme were required to demonstrate means by which they intended to meet the standards. Typical of the quality management approach, the intended outcome - mass compliance - was defined by the regulatory agency. The operators were then left to devise means of achieving the outcome that suited their circumstances and provided an appropriate degree of performance surety to the agency. Even though the pilot included only nine operators, a diversity of approaches to meeting performance standards emerged. In the important area of identifying
the load of each mass, only four operators relied on on-board scales. The remainder elected to rely on various combinations of scales on loading vehicles (at quarry sites), volume loading templates, and the controls of weighbridges at the consignor and/or consignee end of each run. One bulk liquids operator developed computer software to determine permissible gross mass and load distribution for each product carried and for each truck and trailer combination in the fleet.

Similarly, while most operators relied on paper based chain of command procedures to ensure that mass limits were adhered to, three operators were able to demonstrate additional external controls. In two of these cases, the linking of weighbridge records to invoicing procedures provided an additional layer of management checking and control. One operator using this approach programmed its own weighbridge sites to bar the issuing of a client invoice to any departing vehicle presenting an overload. A third operator regularly delivered loads to a consignee whose weighbridges would not accept overloads. Operators presenting overloads at this consignee’s premises were penalised by being denied the right to deliver for the following day.

Only three out of the nine operators integrated their MMAP management processes with a third party accreditation system.

5 TREATMENT OF WEIGHING TOLERANCES

The appropriate treatment of weighing tolerances was a vexed issue in the development of the pilot. The basis of the national approach for mass and maintenance has been that operators are required to demonstrate compliance with existing standards. In the case of mass, two standards coexist: the *de jure* standard, which is that set down in the Regulations; and the *de facto* standard, which is that enforced on the road.

For a variety of reasons, some of which are lost in the mists of time, weighing ‘tolerances’ are permitted which may bear no relation to machine accuracy or method of weighing. It is commonly acknowledged that breaches of mass standards will not be pursued so long as the load is within the ‘tolerance band’. In the case of a six-axle articulated truck, the legal limit for gross mass is 42.5 tonnes, with a tolerance of 1.0 tonnes. Operators expect this tolerance to be granted, whether the weighing is undertaken on a set of portable scales with an accuracy of several hundred kilos, or a weighbridge with an accuracy to within a few kilos.

The effect of this is that the perception among operators is that the mass limit which is enforced includes the tolerance.

The issue for the mass management pilot was whether accredited operators, who must demonstrate very accurate control over mass, should be required to target the legal limit or the extent of the tolerance band.

If the legal limit had been required, it is arguable that these operators would have disadvantaged in relation to operators outside the scheme. If the tolerance had been permitted, it is arguable that operators would have been granted a concession unavailable to other operators.

The outcome for the pilot was that operators were required to target mass limits (the NAASRA Guidelines) plus nationally agreed tolerances (NAASRA 1987).

6 IMPLICATIONS OF THE VICTORIAN PILOT PROGRAM
The Victorian MMAP scheme has implications for the use of alternative compliance specifically in the area of mass control, and more generally for heavy vehicle management.

In the area of mass compliance, the scheme was able to demonstrate the effectiveness of alternative compliance. It needs to be noted at the outset that most of the pilot operators had above average levels of compliance prior to joining MMAP. The basis of the Mass and Maintenance Schemes is that past compliance is not relevant. Entry is based on current behaviour, as indicated by the on-entry audit. All but two operators were able to achieve total compliance by the end of the three month compliance monitoring stage in the final stages of the pilot. One operator’s efforts were hindered by malfunctioning vehicle scales. The other, with a relatively high level of non-compliance in a traditionally poor compliance sector, reduced non-compliance by half. In one month in that period, out of 106,000 pilot operator loads, 286 were non-compliant, including 239 which were non-compliant by amounts under 500 kg.

For operators, MMAP demonstrated that new technology and radically new systems were not always fundamental to good load control. One operator incurred a major capital investment in the installation of on-board scales, but other operators found themselves able to effect significant compliance improvement by using existing weighbridge control systems and data recording systems, integrating load control with other quality management systems, and refining volume loading techniques.

Operators reported a range of benefits from their participation in the pilot, including reductions in re-loading costs, reduced wear and tear on vehicles, reduced incidence of under-loading, a sense of pride in the operation, and a more efficient matching of vehicles and loads. One operator though reported a significant increase in vehicle operating costs in moving from non-compliance to compliance.

Whether or not the scheme has wider application in Australia depends on the balance of costs and benefits, both for operators and for the regulatory agencies. In this respect, one of the significant benefits of the pilot process in MMAP was in highlighting the role of incentives in the development of alternative compliance more generally.

**Costs and benefits for operators**

The preceding remarks suggest that operators joined the pilot program for a range of reasons, some directly related to measurable bottom line financial results and others to less tangible outcomes such as industry image, company image and employee morale. A desire to better manage corporate liability also played a part. Similar concerns have been evident in workplace health and safety for some time, and are becoming more prevalent in environmental management as the law increasingly imposes statutory as well as common law duties of care on employers. Without doubt, several pilot operators had been expecting participation in alternative compliance to lead to increased mass limits for accredited operators. For them, intangible benefits may have been worth the required investment provided the expected tangible benefits also materialised.

With this complexity of motives, the attractiveness of alternative compliance in mass management might only be established once the scheme is readily available in the market place. Operators will seek accreditation provided they perceive the benefits to exceed the costs. Whether those benefits are tangible or intangible is a matter solely for the operators. What the Victorian mass management pilot highlighted was that the tangible benefits were unlikely to be sufficient to cover operator set up and running costs for their alternative compliance systems.
The evaluation of MMAP (Kinhill Economics 1996) concluded that the scheme would be financially viable for the pilot operators irrespective of whether on board scales were factored in set up costs. This conclusion was reached on the basis of an interpretation of the mass limits applying to one type of vehicle, namely B-doubles. Subsequent abandonment of that assumption in the national evaluation (see below) swung the benefit cost ratio from positive to negative. Under the pilot evaluation’s assumptions about mass limits permissible for accredited operators, the estimated benefit cost ratio for operators ranged between 3.2 and 14.9 depending on the assumption made about scales costs. Set up costs ranged between $480 per vehicle and $2300 depending on whether operators were assumed to have purchased scales solely for the purposes of the alternative compliance pilot. That range of costs is of particular interest because probably less than 5% of the Australian heavy vehicle fleet is equipped with scales. The principal tangible benefit influencing the benefit cost ratio was a perception by operators of a two tonne mass gain for B-double vehicles. The pilot agreements allowed these operators a two tonne tolerance over statutory mass limits. The evaluation took this tolerance as a mass gain following the argument of operators that, outside the scheme, B-double vehicles were not being accorded any mass tolerance at road side inspections.

It should be noted, however, that while the results for B-doubles figured prominently in quantified benefits of the pilot, operators of other vehicle types have also been keen to join the scheme.

In the subsequent evaluation of a national alternative compliance scheme for mass management (Kinhill Economics 1997), the assumption of an effectively differential tolerance for B-double vehicles was dispensed with. Other benefits, such as better loading efficiency and reduced vehicle wear were extrapolated from the Victorian pilot results. Under those assumptions, a national alternative compliance scheme for mass management was estimated to yield a negative quantified net present value for operators, which was only partially offset by positive net benefits to agencies and the community.

Costs and benefits of MMAP for regulatory agencies and the community

The national evaluation found that the alternative compliance scheme would yield negative benefits of $8.8 million (benefit cost ratio of -1.4) over a 5 year period. Agency set up costs for alternative compliance were estimated to be $0.3 million. Benefits comprised $1.9 million in inspectorate resources able to be reallocated away from enforcement of the accredited fleet. It was assumed that the value of these redeployed resources represented the benefits to be gained by stronger enforcement of non-accredited vehicles. No road safety benefits of improved compliance were estimated in light of a lack of guidance in the literature on the safety implications and costs of overloading. The estimated benefits were offset by estimated scheme operating costs for agencies of $1.280 million over five years, and negative benefits for operators of approximately $9 million over five years.

Agencies and the community would not be economically disadvantaged by their contribution to alternative compliance. Estimated set up costs for agencies amount to less than $40 per vehicle, while recurrent costs would be approximately $30 per vehicle per year. On the other side of the ledger, agencies and the community would accrue positive benefits in reduced road wear costs (proxied by reduced inspectorate costs).
7 A ROLE FOR ALTERNATIVE COMPLIANCE?

Increasing statutory and public pressures for due diligence on the part of the industry, and competitive pressures are carving a role for the quality management approach embraced in the national alternative compliance scheme. Following from the experience of occupational health and safety regulation, and more recently environmental regulation, the pressures can only increase on employers to be able to demonstrate desirable standards of behaviour. In the longer term, the possibilities of electronic regulation of mass will stimulate employers to seek proactive means to contain their financial and statutory risk.

The desire for certainty by operators of their legal position on mass limits is growing. For some operators, it is not sufficient that they can load within the tolerance band and not be subject to on-road enforcement. They are increasingly seeking certainty in the event of action by occupational health and safety agencies or investigations by coroners. These concerns are not confined to road transport operators. There is a supplier of bulk products in Victoria who will not load beyond the legal limit, except for operators in the MMAP who are permitted to operate within the tolerance band.

For some operators, this legal certainty already provides a strong incentive to join an alternative compliance scheme. For other operators, this incentive will grow as pressures of “duty of care” increase.

As the 1996 Victorian evaluation foreshadowed, operator take up of alternative compliance, at least in the short run, will be greatest among those operators whose loading task is simple and consistent, or who have some form of quality management system already in place, or who are already equipped with on board vehicle scales. Notwithstanding the benefits offered by alternative compliance systems in terms of process control, operators more generally may still encounter substantial set up costs, and the internal cultural barriers that QA systems encounter. The additional costs of mass management accreditation may diminish as increasing numbers of operators are forced by competitive pressures to implement quality management systems.

The major change in outlook for alternative compliance in mass in Australia may emerge from the Mass Limits Review currently being led by the National Road Transport Commission. Alternative compliance may provide a vehicle for delivering higher mass limits in conjunction with road friendly suspension systems. This combined approach has some potential to assuage agency and community concerns about the infrastructural and safety implications of higher truck weights. At the meeting of Ministerial Council for Road Transport in November 1997, Ministers requested the NRTC to report back on proposals for operators to be required to be accredited as members of an approved mass management compliance assurance scheme in order to operate in increased limits. Implementation of a proposal of this type, in conjunction with “pure” alternative compliance raises the spectre of a three level system of enforcement comprising:

- conventional enforcement for operators choosing not to be accredited to alternative compliance, or for operators whom agencies would not deem suitable candidates for alternative compliance
- alternative compliance with current mass limits
- alternative compliance with new, higher mass limits.

The latter two levels present philosophical and operational problems for regulators. The philosophical problem is that of whether a compliant operator who chooses not to seek
accreditation should, on that ground, be denied access to higher mass limits. Two operational problems loom: firstly whether the audit requirements and internal sanctions incorporated in the current design of alternative compliance are sufficiently stringent to ensure adherence to higher mass limits; and secondly, finding easy means for inspectors on the road to identify vehicles at each of the levels of accreditation.

These operational problems are inter-related. In its current guise, the national alternative compliance scheme promises reduced levels of on road enforcement for accredited operators. Would that promise remain necessary as a regulatory incentive for those operators accredited to higher mass limits? Following from that, would operators choosing to remain accredited at the current (unchanged) mass limits be sure that their vehicles could clearly be discerned as being entitled to reduced enforcement. It is likely that only those operators whose loads typically 'mass out' would want to enter alternative compliance. Those same operators would be enthusiastic about increased mass limits. Given these considerations, one scheme, associated with increased mass limits for accredited operators, may well be sufficient to satisfy operator needs. Alternative compliance systems generally are fairly new in Australia, so that the answers to these questions may only emerge for mass through the operation of the national scheme at current mass limits.

8 THE BALANCE OF INCENTIVES

While agencies might legitimately express concern for their own costs, the significant cost implications of alternative compliance in mass management are clearly those that operators must consider. Both the Victorian and national evaluations of the mass scheme pointed to the importance of regulatory incentives in making the scheme sufficiently attractive for operators. Perhaps not surprisingly given low levels of enforcement, immunity from on-road enforcement did not figure as a major benefit for operators in the Victorian evaluation. Interestingly however, some pilot operators proposed higher levels of enforcement of non-accredited operators so that the differential benefit of accreditation would be increased.

Public comment on the national regulatory impact statement took up the question of incentives with most submissions from industry arguing that the national scheme be supported by regulatory incentives in the form of increased mass limits, reduced charges and reduced enforcement (and/or increased enforcement of non-accredited operators).

Alternative compliance as a pre-condition for access to higher mass limits would without doubt overcome any problem of a lack of regulatory incentive. There is however no certainty that the inter-governmental process will pursue this option. In the meantime, the lack of a regulatory incentive in the national scheme for mass may severely constrain operator take up.

The pilot operators in the Victorian scheme pointed to the need for a regulatory incentive, and some joined the scheme anticipating an incentive. Several agencies, and the NRTC, have expressed the view that a specific incentive, in addition to the reduced impact of conventional enforcement, is inappropriate. Indeed the national approach was developed on the basis of enforcement trade-off only. One view may be that everyone should obey the law anyway, and no preference should be given. A variant of this view is that regulators should be careful not to disadvantage non-accredited operators simply because they are not willing to join a scheme.

The pilot schemes in Maintenance Management and Mass Management have demonstrated that alternative compliance is more suited to larger operators. The costs of alternative compliance schemes are greater for smaller operators and the benefits are less. Almost 80 per cent of road transport fleets are made up of one or two trucks.
A major benefit of the establishment of management systems is to ensure the flow of relevant information within an operation. Systems are required when an organisation reaches a size and degree of complexity where more direct forms of communication are no longer adequate. For larger organisations, these systems impose relatively small additional costs and results in relatively large additional benefits. For smaller organisations, management systems impose relatively large additional costs and result in relatively small additional benefits.

Many smaller operators are currently complying with relevant mass and vehicle condition requirements. The imposition of management systems may increase costs for these operators, and weaken their competitive position, while not resulting in any improvement in road safety. A perverse outcome could occur if these operators, in an effort to control costs in the face of a higher regulatory burden, were forced to reduce maintenance standards.

The association of alternative compliance with significantly higher mass limits may not be consistent with the Mass Management scheme as it has been developed to date. If the proposed mass increases were granted, competitive pressures would force operators with poor compliance behaviour to seek entry. In addition, suspension or removal of membership would result in significant commercial disadvantage.

For these reasons, schemes which grant concessions to operators (such as higher mass limits) may require more rigorous internal processes. This may include closer scrutiny of scheme applicants, more intense audit of scheme members and more severe sanctions for breaches of scheme requirements. Greater rigour would involve higher costs for operators and increased scheme membership would involve greater administrative resources for road agencies. The “bad” operators, currently responsible for gross overloads, would be the most difficult to control through management based compliance.

Linkage of increased mass limits to management based compliance schemes may lead to higher costs for many operators, reduce the competitive position of smaller operators and may reduce the uptake of increased mass limits by deterring some operators. The effect may be to reduce the overall benefits of increased mass limits while increasing the costs of achieving these benefits.

There is perhaps a second view that if operators accrue intangible benefits from scheme participation, no further regulatory incentive should be necessary. The issue turns it seems firstly on whether operators should be rewarded for providing a higher level of assurance to agencies, and conversely whether agencies see the benefits offered by alternative compliance as being worthwhile. If agencies do anticipate benefits relative to their objectives, there could be grounds for granting a regulatory incentive. Operators who already comply with the law without recourse to alternative compliance could signal the inequity of incentives for accredited operators but not for them. On the other hand, accredited operators are able to demonstrate an on-going basis their compliance with the law. Demonstration entails costs, for which they must be entitled to some level of compensation.

For operators in the Victorian pilot, a differential mass gain was seen as the strongest accreditation incentive. It provides a clear competitive gain and is readily understood. For agencies, a mass incentive entails no direct cost, as would be the case for reduced charges. Indirectly, the higher ESAs on accredited vehicles may be offset by reduced movements of non-accredited vehicles. Agencies would want to be sure that the audit and sanctions processes in the alternative compliance scheme were sufficiently comprehensive and strong to deter abuse of the incentive.
The level of incentive required to entice operators into alternative compliance will vary widely between operators and cannot readily be gauged without some knowledge of the value they place on the intangible benefits of accreditation. A maximum mass incentive could be estimated by working back from operator accreditation costs, average vehicle utilisation and average freight rates per tonne. The benefit cost ratios from the Victorian pilot suggest as an example, the maximum incentive would be less than two tonnes for B-doubles equal to less than 3% of gross permissible mass. Further, from the results of the national evaluation, agencies and the community experience positive net benefits from alternative mass compliance. On this basis it would not be necessary to net agency accreditation costs out of the estimated mass incentive.

9 THE FUTURE FOR ALTERNATIVE COMPLIANCE

Following approval by Ministers in November 1997, Australia is about to embark on national schemes of alternative compliance in maintenance management and mass management. For mass management, pilot operation has demonstrated that this form of regulation can be beneficial for operators and regulators. It provides an environment within which operators can seek innovative solutions to the mass management problem. For agencies it allows a degree of quarantining of accredited operators from expensive enforcement efforts. The question remains as to whether the net benefits for operators will encourage a high enough take up rate to justify agency implementation. As the national scheme evaluation points out though, the financial risks for agencies are small if take up rates turn out lower than estimated. Only full national implementation will determine whether the scheme will be sufficiently attractive for operators other than that small proportion already operating quality management systems and on-board vehicle scales.

The capacity of accredited operators to demonstrate their compliance reduces risk for agencies. Accredited operators incur costs in demonstrating their capacity to comply, in return for which they should be entitled to the benefit of some form of regulatory incentive. The implementation of alternative compliance schemes places Australia at a leading edge of regulation reform. Take up rates for the mass management scheme following full implementation will demonstrate whether the appropriate balance of incentives has been struck.
REFERENCES


National Association of Australian State Road Authorities (NAASRA) .  *Guidelines for Weighing Vehicles*.

FOOTNOTE

1 This ignores the obvious terminological problem of whether the scheme can properly be referred to as *alternative* compliance when it is imposed in addition to conventional enforcement.