

Appendix A: Regulatory Impact Statement

Agency disclosure statement

1. This Regulatory Impact Statement has been prepared by the Ministry of Transport (the Ministry).
2. It provides an analysis of options to allow heavy vehicles to operate at weights and lengths greater than the current statutory limits. This will be done by amending the Land Transport Rule: Vehicle Dimensions and Mass Limits 2002 (the Rule). It considers productivity, safety, environmental, and economic impacts.
3. The version of the Rule discussed in this paper is different to the version on which consultation was undertaken. The original amendment to the Rule proposed to increase the maximum mass limits for vehicles operating up to 44 tonnes without the need for a permit. As a result of the consultation process and further analysis this proposal has been withdrawn. While this lowers the Benefit Cost Ratio it does not fundamentally alter the potential productivity benefits from the rule change.
4. The present analysis is more an economic impact analysis than a social cost-benefit analysis. We have not estimated the net welfare effects of the approach taken (ie, changes in consumer surplus plus changes in producer surplus), but rather (as explained below) have analysed the impacts on road freight transport providers (including changes in liabilities) and have extrapolated the impact on gross domestic product. The benefit-cost ratios cited below, and other summary results of analysis, should be appraised in this context.
5. The principal reason for the proposal to amend the rule is to improve the productivity of the current freight transport task and mitigate the effects of the forecast freight growth, while not adversely impacting on the environment or the safety of road users.
6. The proposal assumes a significant and reasonably widespread demand for high productivity vehicle (HPV) permits.
7. The analysis supporting the proposed rule change is based on a number of assumptions. The economic and productivity implications were addressed by undertaking heavy vehicle trials and considering previous research. Data from heavy vehicle trials (trip numbers, fuel use, payloads carried, and Road User Charges) were analysed to calculate productivity improvements for individual transport operators. The outcomes were compared to 'desk top' modelling of comparable information. The outcomes of both were broadly consistent showing potential productivity benefits of 10-20 percent.
8. Various GDP calculations were also compared. The information from both the financial analysis and from the GDP studies were used to

calculate indicative benefit:cost ratios (BCR). Assumptions were made about the timing and cost of infrastructure improvements and the value and timing of future benefit streams. The BCR analysis can be considered 'broad-brush' as it includes assumptions about GDP increases as a measure of the benefits in one calculation. However, carrying out a similar analysis using the 'savings in transport costs' as the benefit produces a broadly similar result. The results show that the net present value of benefits to costs once the proposal is fully implemented, is in the range 7 – 14 to 1. The BCR analysis also assumes a progressive uptake of permits related to a progressive upgrading of relevant infrastructure, primarily bridges.

9. Two key potential constraints to the realisation of the benefits of the rule change are the extent to which permits will be approved by Road Controlling Authorities (RCAs), and the speed with which any necessary infrastructure upgrades will be carried out. In relation to approvals by RCAs it should also be noted that where a heavy vehicle proposes to operate across several RCAs each will be required to consider the application and issue a permit.
10. As the impact of the proposed change is to essentially relax existing regulatory constraints (not increase them) on mass and dimensions to allow the realisation of significant productivity and efficiency gains, it does not have an effect on government policy in relation to the impact of regulatory change.
11. The NZ Transport Agency (NZTA) has prepared an implementation plan.

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Status quo

1. The current statutory mass and dimensions limits for heavy vehicles are set under the Land Transport Rule: Vehicle Dimensions and Mass 2002 (the Rule).
2. The Rule;
 - essentially restricts vehicles to maximums of 44 tonnes and 20 metres;
 - establishes a permit regime to allow the transport of indivisible loads that exceed 44 tonnes and 20 metres;
 - enables the issuing of permits for divisible loads that exceed the limits to a very limited extent, and under very restrictive provisions, but for all practical purposes they are ineffective.
3. The effect of the Rule is to restrict the operation of a significant number of heavy vehicles below their operating capacity.
4. The current limits of 44 tonnes and 20 metres were introduced in 1989 and were based on assessments of infrastructure capacity. It should be noted that vehicles are allowed to operate at these weights and dimensions across the whole network. Prior to this date the limits were 39 tonnes and 20 metres.
5. On 21 November 2007 the Cabinet Economic Development Committee (EDC), in Cabinet Minute (07) 27/2, noted that “preliminary analysis suggests that there are significant productivity gains to be realised by allowing heavy vehicles to operate outside the current mass and dimension limits.” In this minute EDC agreed to the following policy framework for considering a change to heavy vehicle mass and dimension limits (collectively referred to as the Cabinet Decision):
 - 5.1. overall productivity gains are maximised;
 - 5.2. safety and environmental outcomes are maintained to at least the same level initially, with improvements being made over time;
 - 5.3. access to the roading network is managed appropriately;
 - 5.4. costs are equitably shared and do not outweigh benefits; and,
 - 5.5. the impact on other modes (such as shipping and rail) is managed.
6. It should be noted that the above framework was developed by the previous Government and some aspects may not necessarily reflect the current Government’s overall, economy-wide productivity focus.

7. The Committee also 'agreed that the Ministry of Transport proceed with the next steps of the work programme for considering a controlled permit system for vehicles operating outside the current mass and dimension limits' (the Cabinet Direction). This was confirmed when the then Minister of Transport stated that 'Cabinet has agreed to further work on developing a controlled permit system to allow heavier vehicles on specified New Zealand routes' (4 December 2007).

Problem definition

8. The Rule sets weight and length limits that do not allow heavy vehicle operators to take full advantage of their vehicle capacities.
9. The freight task in New Zealand is forecast to increase by 70 to 75 percent over the next 25 years. It is expected that the bulk of this increase will be carried on road. If the current mass and dimension limits remain then the increase in freight movements will adversely impact on New Zealand's roading network through increased congestion, increased fuel use, and international competitiveness by imposing unnecessary costs on the transport sector.
10. The status quo and market forces cannot address the outlined problem. The only way to allow vehicles to carry heavier weights and operate at greater lengths is through an amendment to the Rule.
11. The expected outcome if no action is taken by the Government is that truck operators will continue to operate in a manner that does not allow them to improve efficiency and achieve greater productivity.

Objectives

12. The public policy objective sought in relation to the identified problem is to:
 - 12.1. enable the freight task to be met in an efficient and effective manner;
 - 12.2. improve the productivity and efficiency of the heavy vehicle sector.
13. These objectives will be achieved without compromising:
 - safety or environmental standards;
 - access to the roading network (the permit system will ensure appropriate management).

Regulatory impact analysis

14. Since the last change to the mass and dimensions limits in 1989 there has been extensive work undertaken to analyse the prospect of increasing the allowable mass and dimensions for heavy vehicles in New Zealand. However, no significant steps towards any change that would

have a positive outcome for increased productivity in the heavy vehicle sector have been taken.

15. The Cabinet Decision was therefore an important direction to begin work on investigating the possibility of a controlled permit system to allow increased mass and dimensions for heavy vehicles.
16. Consideration was given to the option of an across-the-board increase in mass and dimensions. An across-the-board increase to 50 tonnes from the current 44 tonne gross mass limit and an increase to 22 metres from 20 metres permitted dimension would be welcomed by the majority of industry stakeholders. However, this approach is not recommended because some routes are inappropriate for heavier vehicles and there could be adverse effects on roading infrastructure – pavements and especially bridges with the potential for catastrophic outcomes. This is of particular concern to road controlling authorities. A controlled permit system allows for route assessments to ensure they are appropriate to the heavier vehicles. This would not be possible with an across-the-board increase.
17. The proposed Rule Amendment provides for:
 - increases in vehicle lengths for some vehicles to operate without the need to obtain a permit, for example car transporters, empty container transporters and existing 20 metres logging trucks that currently operate on a permit with a two metre overhang;
 - a permit regime for road controlling authorities to issue permits for existing vehicles up to 20 metres in length, to operate up to 53 tonnes on specified routes. This category will represent the majority of permits;
 - a permit regime to allow road controlling authorities to issue permits for vehicles to exceed 53 tonnes, and to exceed 20 metres in length with the approval of NZTA. This category is expected to have a limited number of permits issued;
 - conditions to be placed on permits to meet safety, compliance and operating requirements;
 - all permits to be subject to approval by local RCAs for local roads and the NZTA for State highways;
 - some technical changes to improve the operation of the rule and some heavy vehicles, for example the operation of quad axle semi-trailers;
 - bus lengths increase from 12.6 metres to 13.5 metres;
 - bike racks to be fitted to the front of buses but not be included in the definition of overall bus length;

- relaxation of travel time restrictions for agricultural machinery.
18. The current proposal does not allow heavier and longer vehicles to operate across the entire network but is based on a permit system that will prescribe the routes that heavier and longer vehicles may use. These routes will be those assessed as capable of accommodating any increase in mass and dimensions.
 19. Trials and other analysis indicate that the proposed approach should, in the short term, result in an initial reduction in the number of heavy vehicles on the roads and in the number of trips by heavy vehicles. As New Zealand's freight task increases the changes will reduce the rate of increase in the number of vehicle movements and trips that might have otherwise been needed to convey the increased freight task. This will have a positive benefit in improving safety, in that other road users will have a reduced exposure to being involved in a crash with a heavy vehicle. Studies have also demonstrated that with fewer heavy vehicle trips there will be a reduction in emissions (per freight tonne kilometre) and this will contribute to the promotion and protection of public health. It was also determined that there will be no adverse noise or vibration effects.
 20. The provisions in the Rule Amendment related to bus length, allowing bike racks on buses, and the relaxation of the restrictions on the movement of agricultural machinery, were considered and consulted on in an Omnibus Rule Amendment. They are included here for administrative reasons and to avoid duplication of the VDM Rule Amendment process.
 21. The length provision will allow buses to operate at 13.5 metres and will formalise lengths currently allowed by way of exemptions. The bike rack provision will improve the ability of buses to carry bicycles without exceeding their overall length restriction. The provision relating to time of travel restrictions on the movement of agricultural machinery will allow farmers and agricultural contractors to operate more effectively.

Ministry of Transport Heavier Vehicle Trials

22. The Ministry initiated heavier vehicle trials throughout 2008 and early 2009 based on increasing the gross mass of some existing 20 metre vehicles from 44 tonnes to around 50 tonnes. One specific trial increased the overall length to 25 metres and a gross mass of 62 tonnes. These trials indicated that significant productivity benefits will be generated from the increases in weight and length proposed in the Rule Amendment. The aggregated data from the weight-only trials showed that the new limits (from 44 to around 50 tonnes) could:
 - increase productivity by approximately 16 percent;
 - reduce the number of trips by around 16 percent;
 - reduce fuel use by about 20 percent.

23. The above productivity benefits (defined as a reduction in the number of trips to move the same amount of tonnage) are net of the substantial additional RUC that will accrue with the increases in mass. Heavier vehicles incur substantially higher RUCs through the operation of the scale of charges that relates RUC to the 4th power rule, which in turn reflects increased pavement wear and tear. Essentially this means that transport operators meet any additional pavement maintenance costs over time.
24. Annex B contains an example of the data collected and used to calculate the productivity increases from three trial participants.

Ministry of Transport Study of Mass and Dimension Limits

25. During 2007 a study of the implications of amending the dimension and mass limits was commissioned by the Ministry and carried out by the Pearson Transport Resource Centre Pty Ltd (the Pearson Report). Based on an analysis of possible permits this report concluded that there would be a:
 - 16 percent reduction in annual distribution costs;
 - 20 percent reduction in road trips;
 - 16 percent reduction in fuel usage;
 - reduction of between 5 and 10 percent in operators' transport costs, and a,
 - 10 percent reduction in inventory at the end of the distribution chain.
26. The Pearson Report indicated that the costs of introducing and operating an appropriate permit system are assumed to be quite low. The Pearson Report also concluded that transport costs could be reduced by between \$100 million and \$200 million annually (how this reduction may be shared between operators and users will depend on commercial considerations). The study also calculated BCRs for three companies which were calculated at 17, 13.2, and 12.7 to 1 if they were to operate at around 50 tonnes on selected routes.
27. The Pearson Report based its findings on 33.1 million tonnes of freight being moved by road annually, and the data from participants in the study. If this figure is divided by the current statutory maximum weight of 44 tonnes, there would be 750,000 trips combined. However, the same tonnage of freight carried on high productivity vehicles could require only 620,000 trips - a reduction of 130,000 trips per year. This assumes a reasonably widespread introduction of heavy vehicle permits.

Conclusion

28. The trials carried out by the Ministry found similar results to those of the Pearson Report in terms of productivity increases, trip and fuel

reductions. These results are considered an appropriate measure of productivity benefits to be achieved by the Rule Amendment.

GDP

29. There have been a number of estimates of the impact on GDP of a rule change. In 2004, Infometrics Consulting estimated that 'if freight rates were to fall by 10% due to an increase in truck productivity [of around 19%] GDP would increase by 2.2%' above the baseline. Using the Infometrics 'baseline', and assuming productivity increase of between 10 and 20 percent, a GDP increase of between \$1.2 billion and \$2.4 billion is indicated. The New Zealand Institute of Economic Research (NZIER) on the other hand took a more conservative approach and estimated the expected GDP increase at 0.1 percent or \$180 million, but also noted that 'it is unlikely that the impact would be in excess of 1.2% of GDP' (\$1.2 billion). The Pearson Report suggested that an increase in allowable mass and dimensions could have an overall positive effect on GDP of between 10 and 20 percent of the transport component (1.5 percent of total GDP or \$2.4 billion in 2007 values) based on expected productivity improvements, ie between \$250 and \$500 million per annum. It is reasonable to conclude that there is a significantly positive potential contribution to GDP as a result of a rule change and a reasonably widespread uptake of permits.

Other Modes - Rail

30. The National Freight Demands Study shows that rail carries about 6 percent of the total freight task by volume, with the freight task defined as both intra-regional and inter-regional.
31. For inter-regional freight Transport Engineers Research New Zealand Limited (TERNZ) estimates that the rail share is about 12 percent by tonnage and 18 percent by tonne kilometres. If current rates of growth were to continue, then by 2020 rail would transport 14.8 percent of the freight task. However, it would be unlikely that rail could carry more than 20 percent of the freight task without significant changes to the way freight is carried.
32. As TERNZ indicates, rail is expected to have limited growth in terms of volume and share over time. Therefore the expected increase in the freight task will not be able to be met by rail, although it will continue to play a significant and increasing role. This will mean that the freight task will largely need to rely on road transport to be moved effectively and efficiently.
33. Much of rail freight is contestable by heavy vehicles. But the pattern of transport mode choice is determined by a number of factors, for example, time sensitivity of the delivery task, relative transport costs, reliability, type of freight for example bulk versus light packages and distance of transport.

34. Rail has an advantage in the carriage of less time sensitive bulk over longer distances. It is unlikely that heavier vehicles will significantly affect this advantage. For example, dairy and export meat products at the bottom of the South Island are carried by rail, as is West Coast coal which is carried to the Port of Lyttleton. There is little likelihood that heavier vehicles will compete for this type of freight. It has been suggested (Northland forestry and some container transporters) that heavier vehicles will increasingly operate to rail terminals and therefore be complementary to rail.
35. Given the uncertainties surrounding rail/road modal shift it is not possible to accurately determine any net shift. However, it is expected that rail will continue to play an important part in meeting the freight task and that on balance the net effect may be relatively low.

Other Modes - Coastal Shipping

36. It is considered that the proposed change is unlikely to have any significant competitive impacts on coastal shipping, this is due to a number of factors:
 - heavy vehicles move different types of product compared to shipping;
 - there are less time delivery requirements for shipping;
 - shipping moves products much greater distances at lower cost.

Other Modes - Air

37. It is highly unlikely that there will be any impacts, especially modal shift effects, in relation to air freight transport. Air freight focuses on high value, low volume, often perishable, products. Heavy vehicle operations are not a substitute for air freight.

Infrastructure Costs

Pavements

38. The increased weight of heavier vehicles under the Rule Amendment is expected to accelerate the deterioration of pavements. This in turn will reduce the maintenance cycle and therefore increase the cost of maintenance over time.
39. Various estimates have been made of the likely impact on pavements of the operation of heavier vehicles.
40. Data assembled by NZTA for last year's Government Policy Statement (GPS) submission suggested additional pavement costs of \$10 to \$20 million per annum over the first three years on State highways. This is a result of the higher axle mass limits proposed in the draft amendment to the Rule. It was also indicated that the additional pavement costs for local roads would be similar.

41. It should be noted, however, that via their RUC payments, transport operators meet the costs of any increased pavement deterioration as RUCs reflect road maintenance costs through the application of the 4th power rule. Under this rule each additional tonne of mass carries an exponential increase in RUC which reflects the increased wear and tear caused by the heavier vehicle. Further analysis is being done in relation to assessments of infrastructure costs.

Bridges

42. The 2007 Pearson Report estimated a possible cost for bridges of between \$21 million and \$50 million. The bridge evaluation implementation report for the Transit Heavy Vehicle Limits Project estimated that 70 percent of the bridges on State highways would be satisfactory for higher mass limits. A further 11 percent would likely be cleared for higher mass limits after further examination.
43. Earlier this year, at the request of the Ministry, the NZTA undertook an assessment of the bridges on the State highway network that were most likely to be used for heavy vehicle movements. The study found that 306 State highway bridges required work, and the estimated cost of strengthening and replacing bridges from this study is \$85 million (with a best case/worst case scenario range of \$60 to \$190 million). A similar figure for local road bridges has been suggested. No detailed assessment of the local network has been undertaken.

Implementation Costs

44. A review of all permit fees for heavy vehicles is currently underway and is expected to be concluded in mid-2010. A new section for permits for High Productivity Motor Vehicles (that is those new vehicle types created by the Rule Amendment) will be included. It is expected that the fee will reflect the costs associated with administering the permit system.
45. Transport operators may face some costs as a result of higher vehicle maintenance and to meet possible permit conditions related to route compliance. This is difficult to quantify but is not expected to be high. Any vehicle upgrading as a result of a rule change is expected to be implemented as part of the normal vehicle renewal and replacement programme.
46. The cost to the NZTA of implementing a controlled permit system is unknown at this stage as the NZTA is still working through an implementation plan. The NZTA has given a preliminary indication that the controlled permit system may cost \$950,000 in year one, \$600,000 in year two, \$500,000 in year three, and \$250,000 per year thereafter.

Safety

47. Ministry statistics show a decline over the past 16 years in the total number of crashes involving trucks, and per 100 million kilometres travelled. During the period 2004 to 2008, in crashes that involved a

truck and another road user, the truck driver was not at fault in 75 percent that caused fatalities, 52 percent that caused minor injuries, and 29 percent that caused serious injuries.

48. The Pearson Report commented that if the amount of travel undertaken by trucks (exposure) is reduced due to greater efficiency (higher payloads) under any permit regime there would be fewer trucks to be involved in accidents. This would lead to improvements in road safety. Paragraph 27 above indicates that there could be a potential reduction of up to 130,000 heavy vehicle movements.
49. A braking test study¹ was carried out which demonstrated that heavy vehicles weighing 44 tonnes and 50 tonnes met the braking performance requirements of Land Transport Rule: Heavy-vehicle Brakes 2006. Vehicles carrying 53 tonnes will also have to meet the statutory braking requirements.
50. All heavier vehicles will comply with all existing safety standards and requirements. In addition it will be possible for RCAs to impose other reasonable safety conditions on any permit they issue. It is not expected that meeting the required safety standards will impose any significant additional costs on operators; however, if a permit condition requiring Stability Control is imposed this could increase costs.
51. A provision in the Rule Amendment provides RCAs with the ability to decline a permit on the grounds of a negative effect on the safety of other roads users and the suitability of infrastructure.

Environmental

52. Concerns have been raised over the environmental impacts of heavier vehicles. To test these, a study² was commissioned to assess and compare the level of emissions of vehicles operating at statutory and heavier weights. Emissions measured included, carbon dioxide, carbon monoxide, sulphur dioxide, nitric oxide, nitrogen dioxide, total oxides of nitrogen, hydrocarbons and oxygen. The study concluded that when emissions were considered on a tonne per kilometre of freight movement basis, there was no indication of significant worsening in emission rates with vehicles travelling at 44 tonnes compared with 48 tonnes.
53. It should also be noted that the reduced vehicle movements will result in a lowering of emissions in the short term (estimated at 25,000 tonnes of CO₂ annually, valued at \$1 million per annum), and a reduction in the rate of increase of heavy vehicle activity over time to meet the forecast freight demand.

¹ 50 Tonne Braking tests by TERNZ

² Heavy Vehicle Mobile Emission Monitoring programme – October 2008 - Weltec

54. Noise and vibration level tests³ were carried out and the conclusion was that there should be no noticeable increase in noise and vibration effects from increased vehicle weight.

Economic Benefits

55. The table in Annex C attempts to bring together the information related to costs and benefits.
56. BCRs have been calculated for some individual transport operators (producing results of between 12 and 17 to 1). Simplified BCRs have also been calculated for the expected effect of the overall rule change. Increased productivity can be measured as a contribution to GDP and this is used as a proxy for the ‘benefit’ of the Rule Amendment in a simplified BCR calculation to give an indication of the significance of the project.
57. A second BCR calculation has been carried out based on figures for the potential ‘savings to the transport sector’ from the proposed rule change. The savings have been conservatively estimated at \$100 to \$200 million per annum. While these figures are likely to underestimate the overall benefit they are used here as a measure of the ‘benefit’ of the rule change for the purposes of establishing a range for the BCR.
58. The results of these approaches to the BCR calculation show that with a reasonably widespread implementation the rule change has a significantly positive BCR in the range 7 - 14 to 1.
59. The following assumptions were made:
- Costs of \$25 million per year for the first four years for bridge upgrades (local road and state highway bridges), which then decrease to \$10 million per year for the next five years and then reduce to \$5 million per year for the next two years. Administrative costs of \$950,000 for year one, \$600,000 for year two, \$500,000 in year three, and \$250,000 per year thereafter.

Year	1	2	3	4	5 – 8	9 - 10
Bridge (\$m)	25	25	25	25	10	5
Admin (\$m)	.950	.600	.500	.250	.250	.250

- Benefit assumptions:
 1. GDP increase beginning in year two in the order of \$10 million and then reaching the lower estimate of the GDP increase range of \$250 million in year 10, then remaining constant to year 20.

³ Quantification of Noise and Vibration Effects Arising from Higher Mass Limits for Heavy Vehicles – OPUS International Consultants Ltd

2. GDP beginning in year two in the order of \$25 million and then reaching \$500 million (the estimated upper bound for the GDP increase) in year 10, then remaining constant to year 20.
3. Five year phase in of \$100 million per annum of savings to transport operators.
4. Five year phase in of \$200 million of savings per annum to transport operators.

Consultation

60. Throughout 2008 and 2009 significant key stakeholder consultation took place with the Road Controlling Authorities, Regional Transport Committees, Road Transport Forum, KiwiRail, New Zealand Automobile Association, Local Government New Zealand, Coastal Shippers, New Zealand Forest Owners Association, Fonterra, Federated Farmers, Horticulture New Zealand, Ports, Bus and Coach Association, Road Controlling Authorities Forum.
61. The following departments and agencies have been consulted: The Treasury, NZ Transport Agency, Ministry for Economic Development, Ministry of Agriculture and Forestry, Department of Internal Affairs, New Zealand Police.
62. The following departments and agencies have been kept informed: Department of Prime Minister and Cabinet, Ministry of Tourism, Ministry for the Environment
63. A major part of the consultation process was the distribution of the public consultation draft of the Rule Amendment to stakeholders and the public in June 2009 seeking comment. This document was also available on the Ministry and NZTA websites.
64. Two hundred and ninety one submissions were received and considered in June, July and August from the public consultation process (this includes 5 submissions received after the consultation period had closed). A break down of the submitters is as follows:
 - ninety were from members or people associated with the Auckland-based Campaign for Better Transport and were all opposed;
 - eighty five were from private individuals and were mostly, but not all, opposed;
 - forty nine were from vehicle suppliers, consignors and transport operators, and were generally in agreement with the proposal;
 - thirty five were from organisations primarily in favour (with the exception of the Institute of Professional Engineers New Zealand (IPENZ) which was opposed, and Local Government New

Zealand (LGNZ) and the NZ Automobile Association (AA) who gave qualified support);

- thirty two were from RCAs or groups of RCAs. With the exception of the Waikato Regional Transport Committee, the Auckland Regional Land Transport Committee and the Northland Regional Land Transport Committee, there was general support for the proposal, conditional on any additional costs caused by accelerated pavement deterioration or bridge strengthening/replacement being met by central government.
65. As mentioned in the disclosure statement the version of the Rule Amendment consulted on is different to the version discussed in this paper. As a result of further consultation of infrastructure issues the proposed changes to mass limits in the less than 44 tonne category have been removed.
66. The following is a summary of the key issues and concerns that were raised in the submissions, and responses to these issues and concerns.

Safety

- 66.1. Submissions raised concerns that; 'larger trucks are more dangerous', passing is difficult, speed, spray from tyres, increased risk of roll-overs, crashes involving heavier vehicles will have worse outcomes, stopping distances, trucks should be fitted with 'speed limiters'.
- 66.2. However, the vast majority of HPMVs will be existing vehicles operating at heavier weights; they will not be 'bigger'. The Rule will require all HPMVs (heavier and or longer trucks) to meet all existing safety requirements and standards, and in addition RCAs will have the ability to impose safety conditions. Rear under-run protection and signage identifying them as HPMVs are also mandatory. These are all consistent with the overall objective of *Safer Journeys*.

Modal Shift

- 66.3. Submissions indicated that more freight should be carried on rail, and expressed concern that freight will move from rail to road. KiwiRail in particular submitted that 'about 12 percent of rail's tonnes, and 13 percent of its tonne kilometres would transfer and 15 percent of its rail freight revenue would be lost'. A few submissions suggested that there might be some shift from coastal shipping to road.
- 66.4. In response to this point, there have been a range of estimates of possible modal shift from rail to road. It is difficult to determine any accurate net modal shift effect. During discussions with transport users and some operators it was suggested that there could be a move to greater use of rail with the further

development of rail infrastructure, for example rolling stock, rail-head and transfer facilities, the ability to carry heavier containers with subsequent transfer to rail. It has been suggested for example that there could be an increase in the use of rail for both the transport of bulk milk and finished products. A number of forest owners also indicated a willingness to make greater use of rail; especially in Northland.

RUC

- 66.5. There was criticism in a number of submissions that there was inadequate consideration of the costs of the Rule Amendment.
- 66.6. The principal concern was that the costs of bridge upgrading and pavement maintenance would increase, and that recompense for this was insufficient. A number of submissions expressed concerns that RUC would negate any productivity benefits in some cases. This applies to those transport operators that only travel for a relatively short distance at the heavier weight but pay significantly higher RUC for the whole route. Two examples are liquid milk collection where only the last part of the journey is at full weight, and fuel deliveries to service stations where only the first part of the journey is at full weight.
- 66.7. RUC implications are considered to be outside the scope of the Heavy Vehicle Productivity Project as they are being addressed elsewhere.

Permit Fees

- 66.8. There were some submissions that suggested permit fees should be set to allow RCAs to recover the cost of permit processing, including route assessments involving pavement and bridge evaluations.
- 66.9. Permit fees for HPMVs are being considered and a new fee structure will be proposed for inclusion in the Heavy Motor Vehicle Regulations 1974.

Infrastructure

- 66.10. The majority of submissions raised concerns about the impact on roads and bridges of increasing the mass of vehicles. All local authorities expressed concerns that under the present funding arrangements their ratepayers would be subsidising the productivity benefits accruing to transport operators and users. It should be noted that heavier vehicles will incur substantially higher RUC and that these will meet any increased pavement maintenance costs over time.

- 66.11. The issues of accelerated pavement deterioration and bridge replacement/strengthening were acknowledged in the consultation material.
67. The Ministry of Transport also commissioned a survey on the perceptions of the general motorist and truck drivers to assess the attitudes of these groups towards each other. This was to ascertain how the Rule Amendment might be received by the general motorist.
68. The results showed 71 percent of the car drivers surveyed viewed trucks on the roads either positively or neutrally (38 percent positive and 33 percent neutral)⁴. The survey also found that truck drivers think the general motoring public has a more negative opinion of them than the results above showed, with 46 percent of truck drivers believing that the general public viewed them negatively (compared with 28 percent of the general motoring public who actually did have negative views of truck drivers).

Conclusions

69. An increase in the mass and dimensions limits for heavy motor vehicles is expected to produce significant productivity benefits for transport operators, users and the national economy. Higher limits allow the consolidation of loads and thus reduce the number of vehicle movements required to distribute a given quantity of freight. This in turn has positive implications for the economy, fuel use, safety and the environment.
70. An increase in the mass and dimensions limits for heavy motor vehicles will also assist in more effectively and efficiently meeting the current freight task and the forecast increased freight task (a 70 to 75 percent increase over the next 25 years).
71. Increasing productivity is a major Government objective. The Rule Amendment is concerned with allowing productivity benefits to be realised for heavy motor vehicles, and will assist in achieving substantial productivity benefits for heavy vehicle operators and transport users. The increased mass and dimensions limits will provide for a new permit regime that will allow heavy vehicles to increase their weight from the current maximum of 44 tonnes and increase their maximum length from 20 metres.

⁴ Heavy vehicles productivity project research amongst truck drivers and the general motoring public – a quantitative report September 2008 (UMR research)

Implementation issues

72. NZTA has indicated that there are potentially 4,000 to 5,000 vehicles that could qualify for permits under the new regime. It is expected that there will be a significant number of applications for permits once the Rule Amendment is in force. The realisation of the stated benefits depends on the extent to which permits are issued.
73. The NZTA has appointed a VDM Rule implementation team. There will be some costs in implementing and administering a permit system. There may also be some additional costs for transport operators in meeting possible route compliance requirements; for example GPS equipment required in permitted vehicles, and the cost of permit fees.
74. It is expected that the Rule Amendment to give effect to this proposal will be signed by the Minister of Transport by 29 March 2010. Permits would be available to be applied for from 1 May 2010. The proposed new permit regime will amend the Vehicle Dimensions and Mass Rule 2002 which sets out the limits and conditions required for the operation of heavy motor vehicles.
75. The industry has been consulted throughout the development of the Rule Amendment, and has been made aware that the implementation process will occur over time. The industry has also been made aware that applications for permits for some roads can proceed from the planned date of implementation (1 May 2010), and that other permits may not be issued until certain roading infrastructure issues are resolved.
76. The extent to which the potential benefits of the Rule Amendment are realised is dependant on its implementation. The main factors that will affect this are:
 - the willingness of road controlling authorities to issue permits (each road controlling authority will have the authority to decide if a route is suitable for heavier vehicles);
 - the uptake of permits by vehicle operators;
 - the time taken to upgrade routes, where necessary, to enable permits to be approved.
77. Where routes involve multiple RCAs each will have the authority to decide on route suitability in its area and charge the appropriate fee as specified in the Heavy Vehicle Regulations. It is expected that RCAs will process permit applications in a timely and efficient manner but no requirements are included in the Rule.
78. The allocation of funds to upgrade roading infrastructure and the timeframes to do so are at the discretion of the NZTA, and will be done through the current processes.

Permit fees

79. Permit fees are paid by heavy vehicles. The Rule Amendment creates a new classification of vehicles that will attract a permit fee. The fees will be set at the current rates for application fees for continuous permits, namely \$54.55 where three or more working days are available for processing, and \$63.64 where less than three working days are available for processing.
80. A review of the permit fees under the Heavy Motor Vehicle Regulations 1974 (the Regulations) is expected to be completed by the middle of 2010. It is expected that the fee for HPV permits will reflect the administrative costs of the permit system. Until the review is completed a minor word change in the Regulations is required to ensure that the types of vehicles being permitted under the Rule Amendment will be subject to the existing fees.

Monitoring, evaluation and review

81. A monitoring and evaluation project plan is currently being scoped. This will be a joint Ministry of Transport and NZTA project, and is anticipated to last for about 2-3 years. This project will help to inform the implementation process in the immediate and long term. Ongoing consultation and contact with stakeholders will be a necessary and important component to this phase of the project, and a feedback mechanism will be set up to assess the users' (operators and RCAs) experience with the new permit regime. The proposed project will identify if the intervention has achieved the desired outcomes, if any unexpected effects arose, what problems if any need to be addressed, and if any further amendments are required in the future. It will also assist in the on-going implementation of the permit regime.

Other VDM Rule changes

82. During late 2009 an Omnibus Rule Amendment was consulted on. An Omnibus Rule Amendment deals with relatively minor and non-controversial changes.
83. This consultation included three amendments to the Land Transport Rule: Vehicle Dimensions and Mass Rule 2002. The three amendments related to:
 - allowing an increase in overall bus length from 12.6 metres to 13.5 metres;
 - providing for bike racks to be fitted to the front of buses but not be included in the definition of overall bus length;
 - a relaxation of the travel time restrictions on agricultural machinery so that it can be moved on roads more freely.
84. These amendments are incorporated into the Rule Amendment to avoid duplication of the Rule approval, signing, and introduction process.

ANNEX A Source documents

Cabinet Minute-Cabinet Economic Development Committee (07) 27/2

Review of the potential for increasing transport productivity through concessions on heavy vehicle mass and dimension characteristics-Pearson Transport Resource Centre 2007.

Economy-Wide Impact of Changes in Freight Rates. Infometrics Consulting – November 2000.

The potential economic impacts of the review of heavy vehicle limits. Report to Transit New Zealand-NZIER 2004.

National Freight Demands Study-Ministry of Transport 2008.

The contestability of New Zealand's road freight task by rail-TERNZ 2007.

Heavy Vehicle Limits Project-Transit 2001.

50 Tonne Braking tests-TERNZ 2008.

Heavy Vehicle Mobile Emissions Monitoring Programme- Weltec 2008.

Quantification of Noise and Vibration Effects Arising from Higher Mass Limits for Heavy Vehicles-Opus 2008

Heavy vehicle productivity project research amongst truck drivers and the general motoring public-UMR 2008.

ANNEX B

TRIALS

	Trial 1		Trial 2		Trial 3	
Vehicle Mass	44T	50T	44T	48T	44T and 20m (per annum)	62T and 25m (per annum)
Number of trips	1,026	864	2,023	1,784	11,852	6,154
Average (km)	53	53	73	73	NP	NP
Total tonnes	27,454	27,454	40,634	40,634	NP	NP
Average load (Tonnes)	26.75	31.78	20.08	22.77	26.32	39.48
Total (km)	54,346	45,753	147,725	130,273	528,593	274,462
Fuel used (litres per 100 km)	2.05	2.15	2.12	1.87	NP	NP
Average fuel price (\$)	1.30	1.30	1.72	1.72	NP	NP
Fuel cost(\$)	34,464	27,665	147,927	130,451	253,989	166,955
RUC purchased (\$ cost per km)	0.3513	0.522	0.9808	1.20	NP	NP
RUC purchased (\$)	19,092	23,883	144,891	156,328	236,575	198,303
Reduced (km)		8,953		17,451		254,131
Reduced trips		162		239		5,698
Increased payload		5.02		2.69		13.16
Increased productivity (%)		15.81		11.81		48
Reduced fuel usage (lt)		5,230		10,161		NP
RUC cost increased (per km)(%)		32.70		22.35		NP
RUC's purchase increased (%)		20.06		7.81		-19.29

NP – Not Provided

ANNEX C

Summary of costs and benefits

BENEFITS		
What/Type	Figure	Impact (Who affected)
GDP per annum	Estimated \$250-500 million per annum	National- economy
Productivity	Increase between 10-20%	Transport operators/users
Trips	Decrease by approximately 16 %	Transport operators
Fuel	Reduce use by about 20%	Transport operators
Distribution costs	Decrease by about 16%	Transport operators/users
Transport costs	Decrease between 5 and 10%	Transport operators/users
Inventory at end of distribution chain	Decrease by about 10%	Transport users
BCR for individual companies	Between 12.7 and 17	Transport operators
Trip number ratio	Reduction by about 130,000 trips per year	National- road safety
CO2	Estimated decrease of \$1 million per annum	National- environment
COSTS		
What/Type	Figure	Impact (Who affected)
RUC	Increase by about 20% (net)	Transport operators
Pavement cost	Estimated at between \$10-20 million per annum over the first 3 years	NZTA for State highways and Local RCAs for local roads
Bridge cost	Estimate at about \$85 million (further work is ongoing)	NZTA for State highways and Local RCAs for local roads
Implementation cost	Approximately 950,000 in year 1, 600,000 in year 2, 500,000 in year 3, and 250,000 per year thereafter. (further work is ongoing)	NZTA