

REVIEW OF THE VEHICLE DIMENSIONS AND MASS RULE

SUBMISSION TO THE MINISTRY OF TRANSPORT

17 FEBRUARY 2016

BACKGROUND

The Institution of Professional Engineers New Zealand (IPENZ) is the lead national professional body representing the engineering profession in New Zealand. It has approximately 16,500 Members, including a cross-section from engineering students, to practising engineers, to senior Members in positions of responsibility in business. IPENZ is non-aligned and seeks to contribute to the community in matters of national interest giving a learned view on important issues, independent of any commercial interest.

SUMMARY

We have concerns with the proposed changes and analysis in the discussion document and cost-benefit analysis. These concerns relate to the need for:

- a more holistic view of the transport network
- better understanding of the roading network
- better consideration of safety impacts for other road users
- understanding of the impacts on emissions.

Given these concerns, we are currently unable to support the proposed changes to the Vehicle Dimensions and Mass Rule.

To move forward, we recommend the Ministry:

- undertake research to better understand the roading network, including the condition and dimensions of roading infrastructure, such as bridges, underpasses and tunnels
- prepare a cost estimate for upgrading the roading network for larger and heavier vehicles
- discuss the costs with local road controlling authorities to determine what is feasible
- prepare a wider assessment of the costs and benefits to society, including the impact to the rail network, road controlling authorities and other road users.

SUBMISSION

We have concerns with the discussion document and cost-benefit analysis and are currently unable to support the proposed changes to the Vehicle Dimensions and Mass Rule.

Our concerns relate to the need for:

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NEED FOR HOLISTIC VIEW OF THE TRANSPORT NETWORK

We are concerned the discussion document and cost-benefit analysis are focused solely on the roading network with no consideration of the potential impact to the rail network.

As highlighted by Bob Norman (IPENZ Distinguished Fellow) in an opinion piece in Vol. 17/1 of our membership magazine *Engineering Insight*, New Zealand's rail network has been neglected and under-utilised. Mr Norman wrote: "There is no way our small country can afford the road pavement capacity to carry freight over long distances. The solution is to develop a transfer system to combine long haul freight with a road transport distribution network."

We note the cost-benefit analysis states "there will be positive and negative secondary influences from the proposed rule changes" and that the potential wider costs include "secondary costs if cargo shifts from rail to road. Road transport has higher emission and safety costs" (page 9).

We're concerned the cost-benefit analysis doesn't cover these costs and benefits, despite the fact the proposals could significantly impact the rail industry and are of interest to the country as a whole. Coastal shipping also forms part of the freight transport network.

We recommend the Ministry of Transport adopt a more holistic view of the transport network to include the rail network and possibly coastal shipping. We believe that as the country's lead transport policy unit, the Ministry should be thinking broadly and consider the whole transport network, not just the roading network.

We believe before improving the road network, the Ministry should consider the potential impact on rail traffic, and look at measures available to the Government to encourage the most efficient means of transporting goods.

NEED FOR BETTER UNDERSTANDING OF THE NETWORK

We note the reference in several places in the discussion document to pavement damage and the need to upgrade infrastructure to accommodate larger vehicles. The upgrading of bridges, underpasses, tunnels and other roading infrastructure has significant costs. Some of these costs will be associated with the State Highway network. Others will not and local road controlling authorities will be affected.

We are concerned that while it is recognised increased mass limits could increase Road User Charges, it is not clear if or how increased funding for local road controlling authorities will be provided.

We recommend the Ministry clarify the total funding likely to be needed and set out potential mechanisms for road controlling authorities to seek this funding. The Ministry should also seek to clarify the timeframes needed to undertake these improvements or replacements. There may be some areas of the network that will be very expensive and take a significant period to upgrade, to such an extent that the merit of doing so is questionable.

We also suggest the Ministry look at Road User Charges incentives to encourage pavement friendly vehicles and tyres.

We note with concern that the discussion document contains no estimate of the number of overhead structures that could be affected by increased vehicle heights. We believe there may be areas where bridge strike could be an issue. The data presented does not enable informed decision-making – the costs cannot even be estimated, let alone allowed for.

Finally, we note the benefits from the proposed changes will accrue to the transport operators, while the infrastructure costs fall to the roading controlling authorities, offset by income via Road User Charges. The relationship between costs and funding is a very indirect relationship. We support user-pays based systems and would encourage the Ministry to investigate mechanisms through which transport operators can contribute more directly to the increased infrastructure costs that will be incurred by roading controlling authorities.

SAFETY IMPACTS FOR OTHER ROAD USERS

We believe safety concerns are inadequately addressed in the discussion document and cost-benefit analysis.

Previous increases in vehicle length have reduced clearances on narrow and winding roads. Increasing the permissible width of vehicles further erodes these margins and will increase the risk to other road users, particularly cyclists and pedestrians. Increased truck height and bulk also have negative implications for accidents.

Page 8 of the discussion document recognises the reduced separation but goes on to state that "... the reduction in the number of vehicle trips for a given freight task is likely to lower the risk of crashes for all users of the network". We believe that increasing the risk to one party to achieve an overall reduction, even if correct statistically, is flawed and suggests sacrificing some road users for the good of all.

The argument in the discussion document is that safety will be improved as there will be fewer heavy vehicles on the roads. Risk is the combination of the consequence of collisions and the probability of the collision occurring. We believe that even if the number of heavy vehicles on the road does decrease (i.e. the probability of an accident decreases), the consequence of a collision will be greater, as accidents will be with larger, heavier trucks.

Further, we question whether the number of heavy vehicles will decrease given freight levels are expected to rise. The Minister's Foreword in the discussion document (page 4) suggests freight levels are expected to increase by 75 percent over the next 25 years and page 6 of the discussion document states road freight is projected to increase by 58 per cent over the next 30 years.

In addition to the risk of accidents directly with heavy vehicles, there are secondary risks associated with pavement wear. Pavements deteriorate over time and having wider vehicles on narrow sealed roads can be expected to cause more damage to

the edge of roads. This will cause cars and other vehicles to drive closer to the centre of the road, increasing the risk of an accident. This risk does not seem to have been considered in the discussion document or the cost-benefit analysis.

BETTER ANALYSIS OF EMISSIONS

We are concerned at the very limited mention of vehicle emissions in the discussion document and cost-benefit analysis. While the discussion document states road transport contributes 21.5 per cent of New Zealand's CO₂ emissions (page 6), there is very limited analysis of the impacts of the proposed changes on emissions in the cost-benefit analysis. The cost-benefit analysis seems to gloss over the issue of emissions by noting "less truck trips will create benefits from a reduction in noise, localised congestion, and reduced emissions" and presenting one table of emissions assumptions.

This is insufficient. We recommend the Ministry of Transport undertakes a higher degree of analysis of the effects on emissions in future policy changes and proposals.

PROPOSED WAY FORWARD

Given the fundamental lack of information regarding the potential costs and benefits to New Zealand as a whole, we are currently unable to support any of the proposed changes to the Vehicle Dimensions and Mass Rule.

Before the proposals progress further we recommend the Ministry undertake research to better understand the roading network and the potential impacts of the proposals. This analysis needs to provide information about the condition and dimensions of roading infrastructure including bridges, underpasses and tunnels. Once this information is gathered, the Ministry will then have a better picture of the work needed to prepare the roading network for larger, heavier vehicles.

This analysis should be followed by the Ministry preparing an estimate of the cost of this upgrading work, with potential timeframes. This could then be discussed with local road controlling authorities. As a result, the Ministry and the local road controlling authorities could then develop realistic plans and budgets for undertaking this work. It would also help determine if there are parts of the roading network for which upgrading is not worthwhile due to time, cost or other factors.

Once the above actions are complete, we believe a wider assessment of the costs and benefits to society should be prepared. The cost-benefit analysis prepared for the Ministry by Castalia appears to have a narrow focus – on the road transport industry. We recommend a wider assessment of the costs and benefits be prepared. This analysis needs to consider the impact to the rail network, road controlling authorities and other road users. As stated above, it also needs to more clearly consider the impacts on safety (including secondary safety risks associated with pavement wear) and emissions.

CONCLUSION

We appreciate the opportunity to make this submission.

For further information, contact:

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