

Christchurch City Council

Submission

To

New Zealand Government

on

Review of the Vehicle Dimensions and Mass Rule, December 2015



January 2016

Review of the Vehicle Dimensions and Mass (VDAM) Rule, December 2015

1.0 Introduction

- 1.1 Christchurch City Council (“the Council”) wishes to submit on the Review of the Vehicle Dimensions and Mass (VDAM) Rule 2015 (“the Review”). The Council sees the Review as important to protect the Council’s transport infrastructure. It is also a key component in the delivery of Christchurch Transport Strategic Plan (CTSP), particularly Goal 3 “Support economic vitality through easy movement of and access to goods and services,” ensuring freight reliability.

2.0 Key Comments

- 2.1 The Council recognises that the aim of the Review is to enable improved transport productivity through ensuring a better fit between vehicles and the roading network. To that end, the VDAM Rule needs to support a range of competing elements such as economic growth, public road safety, the delivery of goods and services to the public. The case for change is largely well made in the key sections of the Review - and so those concerns raised in this response primarily focus on whether and how the full effects of these changes have been assessed for local (i.e. non State Highway) networks including those controlled by the City Council. The Council's concerns focus on whether the true infrastructure and operational costs of these changes nationwide (i.e. state highway and local roads networks alike) affect the calculated national economic benefits of any of the proposals.
- 2.2 Notwithstanding the above comments, the Council believes that the Review will provide benefits to freight operators, encouraging economic growth both nationally and across the region. However, the introduction of the proposed new rules is not without risk and there is the need to fully understand the potential infrastructure consequences for local road networks. This is especially true at a time when considerable changes occur across the city and its transport network as the rebuild of Christchurch continues.
- 2.3 The Council recognises its role in the provision of transport infrastructure that meets the requirements of heavy vehicles on appropriate routes. It is not entirely evident in the Review that the total cost implications of heavier and larger dimensioned vehicles on local roads have been fully accounted for. A case in point, is that lower vehicle speeds and tighter turning space will have higher costs associated with kerb and pavement maintenance and renewals on local roads than on the State Highway network. An increase in the cost associated with the maintenance of the transport network for heavier

vehicle use will as a consequence need alignment with the Council's Long Term Plan.

- 2.4 The Council will need to consider any transport network weaknesses where heavier vehicle loads may not be easily accommodated. It is noted in the Review that the Transport Agency (NZTA) has a programme to extend the 50MAX and HPMV network including upgrading some bridges, so discussion will need to occur with the NZTA to confirm where funding will be required to preserve or improve the Council controlled local roading network to handle the proposed changes and make it fit-for-purpose. A risk is that Road User Costs may not be increased to the extent that the accelerated pavement degradation is fully recuperated. Road improvement subsidies for local government agencies may therefore not be adequately adjusted upward to reflect the increased revenue.
- 2.5 Technical documentation that forms the economic assessment for a number of the proposed mass and dimension changes does not appear to be available to submitters regarding the impact of the proposals on the nation's urban and local road networks. In terms of the proposals for a change in vehicle height limits, a specific and potentially significant constraint in the Greater Christchurch network is the Lyttelton Tunnel. The proposed change to the vehicle height rule could well mean that more vehicles may be diverted to less appropriate alternative routes because they cannot any longer use the tunnel. With the current impediment to alternative routes to the Port of Lyttelton more acute since the Christchurch earthquakes and a projected significant increase in freight quantities to the Port of Lyttelton from across the South Island, this potential infrastructure impediment, cited in the Review document, does need very careful consideration. The Review itself may therefore need to accelerate investigation of alternative capital works to remedy this potential obstacle, which itself may negate a large proportion of the national savings anticipated by the proposed rule change.
- 2.6 A critical issue the Council will also need to consider is how increases to axle mass and gross mass limits will be appropriately managed on its network. It is currently difficult to protect our transport structures, such as bridges and culverts, from damage by vehicles exceeding sign posted weight or speed limits traversing these structures illegally. Access restrictions may be required beyond those already in place for over-dimension vehicles, particularly on bridges.
- 2.7 Enforcement is a separate issue, the police cannot issue infringements under 16A of the Land Transport Act (restriction of heavy traffic on roads) and have to take every breach of a restriction to court which is time consuming. The provisions in the Local Government Act for Heavy

Vehicle restrictions allow police to issue infringements for a breach of the bylaw, but the infringement fee is minimal. There is a separate need therefore for the Land Transport Act to be updated to allow the police the power to issue infringements for breach of 16A which will occur later in 2016/17.

- 2.8 However, decisions made as a result of the Review will enable the provision of new infrastructure to be designed in such a way that it is future-proofed and provides sufficient capacity to cater for the long term freight aspirations and needs of the rebuilt City, which is to be welcomed.
- 2.9 Council's specific response to each of the individual Review proposals is below:

3.0 Axle Mass and Gross Mass

***Proposal 1:** Maintain current axle mass and gross mass limits.*

***Proposal 2:** Revise current Schedule 2 limits.*

***Proposal 3:** Increase general access gross mass limit from 44,000kg to 45,000kg.*

***Proposal 4:** Remove the permitting requirement from the operation of 50MAX.*

***Proposal 5:** Increase axle mass limits for specific categories of vehicles.*

***Proposal 6:** Amend tyre size categories for axle mass.*

***Proposal 7:** Reduce weighing tolerance from 1,500kg to 500kg.*

- 3.1 The Council supports **Proposals 2, 3, 5, 6 and 7** on the basis that they rectify anomalies in law and standardise industry practice.
- 3.2 **Proposal 2** – as noted in the Review, Proposal 2 provides for a more accurate matching of axle mass limits to the impact that vehicles have on the roading infrastructure.
- 3.3 **Proposal 3** – as noted in the Review, the proposal includes a safeguard for pavement impact that the maximum 45,000kg has to be carried over 8 axles. A 7-axle vehicle combination weighing 44,000kg causes more wear and tear to roads than an 8-axle vehicle combination weighing 45,000kg. Proposal 3 should only be progressed in conjunction with Proposal 7.
- 3.4 **Proposal 5** – as noted in the Review, roading infrastructure is designed to bear a limited number of loadings above the standard Rule limits, repeated loadings can reduce the service life of the infrastructure. There is no information provided in the Review that outlines the additional cost to reduced pavement life, further information is required to assist in making a final decision.

3.5 **Proposal 6** – as noted in the Review, wider ‘mega’ tyres have the benefit of distributing mass over a larger footprint, therefore reducing pavement impact and wear and creating productivity benefits for some operators. However, the key change is to increase the max axle load for a single wheel from 7.2T to 8.2T. This is critical to pavement design. Austroads Guide to Pavement Technology Part 2: Pavement Structural Design sets the load assumption of:

- Standard Axle loading consists of a dual-wheeled single axle, applying a load of 80kN.
- The change enables single-wheeled single axle to apply a load of 82kN.

There is no information provided as to how the change affects pavement stress. However, this appears to change the key loading assumption for pavement design in NZ. As a result:

- Means that current pavements may not have been designed to accommodate proposed loading.
- Impacts on reduced pavement life need to be assessed and form part of the consultation documentation.
- If accepted, would require review of national pavement design standards.

Further information is required to assist in making a final decision.

3.6 **Proposal 7** – as noted in the Review, the proposal better reflects the level of accuracy of modern weighing techniques, compared to accuracy levels when the 1,500kg tolerance level was established. Without adoption of this reduced tolerance proposal, the move to 45,000kg would equate to a 46,500kg tolerated limit. This is considered beyond acceptable general access gross mass limits, and therefore it is expected that Proposal 3 will only be progressed in conjunction with this proposal. A concern held by CCC is that by lowering freight costs, volumes of freight could increase negating any consolidation benefits.

3.7 Further to the proposal considerations, the Council believe the proposals will reduce the permitting burden and allow safer and more energy efficient vehicles to be introduced to the freight fleet. However, there is limited evidence available that a sufficiently full economic evaluation of the cost implication of proposals has been completed. To be confident that the proposals will bring the projected benefits, further information is required that robustly assesses the economic consequences of the proposals on local roads. For example, bus routes that have a higher volume of buses using them can generate rutting waves in the asphalt at the stops and this can be a danger to other road users. Local authorities may therefore need to use structural asphalt in certain locations with the consequential cost implications of that change.

- 3.8 The Council does not support **Proposal 4** because there is a risk of 50MAX vehicles travelling on unexpected routes which increases pavement loading, however tightening the tolerances mitigates the risk of overloaded vehicles. Council will have to clearly indicate which routes drivers are to use and support changes to the LTA to help enforce it. It is suggested that investigation into the use of GPS tracking could help ease this problem.
- 3.9 The Council does not support heavier limits beyond the current proposals and suggests that heavier penalties for those exceeding the 500kg tolerance could help ensure better compliance by operators.
- 3.10 The Council has no other proposals to present.

4.0 Width

***Option 1:** Status Quo – retain current maximum width of 2.50m.*

***Option 2:** Increase maximum width to 2.55m (including securing devices).*

***Option 3:** Increase maximum width to 2.55m (plus 50mm for securing devices).*

***Option 4:** Increase maximum width to 2.60m (plus 50mm for securing devices).*

- 4.1 The Council supports **Option 2** on the basis that it allows the industry to obtain safer and more efficient rigid sided freight vehicles with side under run protection.
- 4.2 **Option 2** – as noted in the Review, securing devices (e.g. ropes, lashings, j-hook assemblies) that previously brought the total width of a vehicle to 2.55m anyway would remain included in the 2.55m maximum width (i.e. no additional allowance for securing devices).
- 4.3 Further to the proposal considerations, the Council believe the proposals will improve productivity for the industry whilst not compromising and potentially enhancing road safety. The Council agree therefore that a rule specifying that box body hinges are required to be flush with the body's walls is necessary.
- 4.4 The Council is highly supportive of steps to re-introduce battery electric buses back into the city. Increasing the maximum width to 2.55m would allow bus operators greater access to a range of bus models from international markets. A previous study that was undertaken to assess opportunities for alternative public transport technologies identified the current 2.5m width as a barrier to using internationally designed battery electric buses on New Zealand roads.
- 4.5 The Council has no other proposals to present.

5.0 Height

Option 1: Status Quo – maintain current height limit of 4.25m, plus 25mm for load restraining devices.

Option 2: Increase the general access height limit to 4.275m, inclusive of load restraining devices.

Option 3: Increase the general access height limit to 4.30m, inclusive of load restraining devices.

5.1 The Council supports **Option 3** on the basis that it corrects the need for exemptions and standardises the vehicle fleet.

5.2 **Option 3** – as noted in the Review, this option standardises the height limit to 4.3m and provides productivity gains through increased load capacity. However, further detailed consideration of the true impact of higher vehicles on the Lyttelton Tunnel (4.275m) is absolutely critical in Council's view. If Lyttelton Tunnel requires capital works to fully accommodate the proposed increased standardised height (given that it is a crucial freight link for the entire south island to the Port of Lyttelton), rectification of that link in infrastructure terms may possibly negate many or all of the expected economic benefits. An increase in higher vehicles would likely require a significant increase in heavy vehicles using less appropriate alternative routes, noting that freight volumes to and from the port are expected to grow significantly over the coming decades. Finally, there are a number of other structures in the Council local road network (over a dozen bridge structures, numerous mast arms and overhead signs) that will require further assessment to ensure they meet any new height limit proposal.

5.3 Further to the information provided in the Review, the Council would like the benefits of increasing the height of heavy vehicles to be presented more openly.

5.4 The Council has no other proposals to present.

6.0 Car Transporter Gross Mass

Option 1: Status Quo – maintain current mass limit for pro-forma car transporters at 36,000kg.

Option 2: Increase the gross combination mass limit for pro-forma car transporters to 38,000kg.

6.1 The Council supports **Option 2** (as proposed) on the basis that it rectifies an anomaly in the current rule.

6.2 **Option 2** – as noted in the Review, the 38,000kg limit was assessed as an appropriate limit using current performance based standards, with the pro-forma vehicle performance considered satisfactory in all respects. It enables the longer pro-forma car transporters to carry the same number of cars as standard designs. This could improve safety as longer vehicles are generally safer to operate than standard vehicles.

6.3 The Council has no other proposals to present.

7.0 Permitting

***Option 1:** Status Quo – do not provide width or height exceptions for crane boom sections.*

***Option 2:** Provide exceptions for crane boom sections, up to 3.1m in width and 4.5m in height.*

7.1 The Council supports **Option 1** on the basis that it standardises the rules for all heavy vehicles.

7.2 Divisible loads

a) Should RCAs be allowed to grant permits for overweight divisible loads for non-HPMVs?

No.

7.3 Indivisible loads

a) Should the items noted be formally included as part of a definition of “indivisible load”?

Yes.

7.4 Indivisible loads

b) Should ancillary components of indivisible loads be allowed to be carried with an indivisible load?

No, if the GVM exceeds max HV weight why make exceptions for HH.

7.5 Crane Boom Sections

Option 1 – do not provide width or height exceptions for crane boom sections.

7.6 HPMV Bulk Fleet Permits

N/A

8.0 Management of Over-Dimension Loads

Proposal 1: Clarify in the Rule the responsibilities of 'operator' for overweight and over-dimension permits.

Proposal 2: Flags should no longer be permitted to signal the edge of over-width loads (but still be required to mark the end of long loads).

Proposal 3: All tractors between 2.5m and 3.1m wide should be required to use a warning light or hazard panels signifying width.

Proposal 4: Pilots should be able to use sound warnings to warn oncoming vehicles of an approaching over-dimension load.

Proposal 5: Pilots should be allowed (or be required) to be positioned on the road in line with the outer extremity of an over-width load.

8.1 The Council supports **Proposals 1 – 5** (Proposal 5 being required).

8.2 **Clarification of 'operator' on overweight/over-dimension permits**

Comment: make the load pilot responsible.

8.3 **Hazard panels and flags on over-dimension loads**

Comment: allow the use of warning panels and allow tractors or slow vehicles to use amber lights.

8.4 **Load pilot vehicles**

Comment: N/A.

8.5 **Use of sound devices to warn of over-dimension vehicles.**

Comment: agreed.

8.6 **Placement of local pilots on the road.**

Comment: agreed, allow pilot to cross the centre line and if not already in place restrict Max load speed to 45km/hr.

8.7 **a) If there were to be a maximum width for transporting houses, what should that limit be, and why?**

5m would give the approaching vehicle shoulder space to avoid the load and lessen the damage to infrastructure caused by house moving companies.

8.8 **b) Should there be a speed limit for very wide loads? If yes, what should that limit be?**

Yes, 45 km/hr or 30% of existing speed limits (whichever is less). The pilot vehicle should be a suitable distance in front of a fast moving load.

8.9 **c) If the current hours of travel for moving over-dimension vehicles are revised, what hours do you consider appropriate for what size of load?**

Over-dimension vehicles should not transport loads at peak travel times in cities and there should be restricted night time travel and should be specified and approved in the Traffic Management Plan.

- 8.10 **d) If the travel zones for over-dimension vehicles are revised to ensure they reflect changing road use patterns, are there any specific changes you recommend?**

N/A.

- 8.11 **e) Do you have a preference as to signage on pilot vehicles warning oncoming vehicles of an approaching over-dimension load? If yes, what is your preference?**

Yes, "move left of the road".

- 8.12 **f) Do you have a preference as to the positioning and extent of hazard panels, including reflective and illuminating signs/lights on over-dimension loads? If yes, what is your preference?**

Yes, lower front and rear corners of the load.

- 8.13 **g) Do you support increasing the number of pilots for very wide vehicles to three pilots?**

This may not be necessary.

9.0 Other Comments

- 9.1 The Council would also recommend a review of the permitting arrangements for freight operators and suggests a single point of contact would streamline the process in the South Island. The Christchurch Transport Operations Centre may be well placed to manage this.

10.0 Summary / Recommendation

- 10.1 Christchurch City Council would like to thank the New Zealand Government for the opportunity to provide feedback on the Review of the Vehicle Dimensions and Mass Rule 2015. Council wishes to be heard in support of its submission. Should any issues need clarifying then Council staff would be happy to discuss the content of this Submission further.

10.2 Summary:

10.2.1 Council are generally supportive of the rule changes proposed in the Review.

10.2.2 To decide on how this is further progressed analysis of the capital impact on pavement maintenance and renewals is required.

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- 10.2.3 Further analysis is required to assess the impact of the proposed increase in vehicle height to trips through the Lyttelton Tunnel and alternative routes.
- 10.2.4 Changes to the enforcement rules are required to enable local authorities to protect transport infrastructure.
- 10.2.5 Council support a single point of contact for freight permits for the South Island.

Approved by:

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