CYCLING ACTION NETWORK
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Re: Vehicle Dimension and Mass Rules 2002 Yellow Paper

Cycle Advocates Network (CAN) is the national umbrella organisation for all cyclists with an emphasis on advocating for everyday utility and commuting cycling, as well as cycle tourism. The vision of CAN is "more people on bikes more often".

Dear Sir/Madam,

CAN welcomes the opportunity to comment on the Yellow Paper which sets out changes to Vehicle Dimension and Mass Rules.

CAN acknowledges the importance of the road transport industry both as a direct and indirect employer and as a facilitator of New Zealand's economic prosperity.

The proposed changes if implemented would affect cyclists in two ways-

1. Additional 50mm vehicle width would be likely to impinge on cyclists' road space, leading both to actual and perceived reductions in cyclist road safety;
2. Additional mass would be likely to damage pavement surface, leading to reductions in quality of service for cyclists' journeys.

It is current NZTA policy to encourage cycling, both for transport and leisure, through the $100m Urban Cycleway Programme and other programmes. Cycling promotion is one of the six main priorities of NZTA set out in the 2015-19 Statement of Intent. Policies which affect the growth of cycling modal share must take account of this context.

CAN's previous submission-

In February CAN made a brief submission to the Discussion Document issued in December 2015. CAN-

- Did not support the proposed increase in vehicle width;
- Expressed concern at increases in vehicle masses;
- Felt that the proposals failed to take account of the overall transport context and potential for modal shift from road-based freight;
- Called for side under-run protection and blind zone amelioration measures;
- Called for updated driver training to be recommended for all heavy vehicle operators.

Specific comments on the proposed Rule

Section 2- Vehicle Requirements-

Dimension (width and height)-

CAN does not support the proposed increase in permitted vehicle width. Many cyclists find close-passing trucks to be the single biggest disincentive to using their bike for transport[1], and allowing reduced clearance by trucks conflicts with NZTA policy of encouraging cycling. Study of how this measure would impact on cycling numbers should be conducted before revising the Rule.

CAN notes that 77 of 140 respondents to the Discussion Document declined to support width increase.

Exceptions to width restriction- Use of close proximity monitoring systems (CPMS) has the potential to save lives, particularly in urban situations where HVs and cyclists are sharing road space and left-turn manoeuvres by HVs are statistically far more likely to result in collision with cyclists. Therefore this exception is supported by CAN in principle. However a blanket exception to width restrictions for CPMS may introduce the risk of equipment fouling or snagging on cyclists' clothing or equipment and cause impact with the HV. Consideration of setting minimum height for such protrusions, to keep them above cyclist head level, should be given.

Similarly, the exceptions for 25mm aerodynamic tabs, marker lamps, cameras etc. are not supported without some consideration of height restriction.

Increase of permitted vehicle height from 4.25 to 4.3 m- Perceived bulk and visual dominance of heavy vehicles is a disincentive to cycling.

Technical analysis in response to this change by the Road Controlling Authorities Forum concluded, '... an outcome of increasing the mass able to be carried and the centre of gravity is an increase in heavy vehicle rollovers'. This outcome will worsen the perceived risk to cyclists from heavy vehicles and may hinder modal shift to cycling. Thus CAN cannot support this measure.

Section 3- Mass limits-

Pavement Wear- It is proposed to increase the gross permissible mass of general-access combination vehicles from 44 tonnes to 45 (7 axle) or 46 tonnes (8 axle). This provision is unchanged from the Discussion Document. It is also proposed to increase axle mass limits for certain categories of axle.

Cyclists are particularly sensitive to road surface quality and smoothness. Increased loadings can affect pavement wear exponentially, up to the fourth power depending on substrate and surfacing.

Concern has been expressed by the NZAA[2] among others that significant changes in the RUC system are needed, even under status quo, to compensate for road damage caused by heavy vehicles. The AA is concerned that petrol taxes effectively subsidise heavy vehicles.

The RCA Forum, in a detailed technical submission to the Discussion Document, expressed significant concern at costs to Road Controlling Authorities, and hence to ratepayers, of increased maintenance arising from heavier tyre loadings. If road surface deteriorates, the effect on cyclists' comfort and safe-

[1] Research carried out by CAN for Nelson City Council, January 2016 (available on request).

[2] http://www.aa.co.nz/cars/licensing-safety-fees/road-user-charges/

ty (swerving to avoid sections damaged road is a potential contributor to collisions) may be considerable.

The Forum's document quoted recent New Zealand research[3] and concluded that, 'Allowing units with super single tyres on the drive or trailer axles is a very poor option for pavement sustainability as the increase in pavement damage can exceed 300%'.

This potential damage to road surface quality and smoothness contributes to CAN's decision not to support this provision.

Road Safety- The Castalia cost-benefit review issued at Discussion Document stage states that braking distances will increase (p. 3). The resulting implications of this increase -potential loss, damage and injury due to a statistically likely increase in collisions- are not costed. Heavy vehicles (HVs), though involved in less accidents per vehicle kilometre, are responsible for a higher proportion of serious crashes and fatal injuries-

> '...deaths from crashes involving trucks have made up around 15 to 19 percent of the total road toll, while only about 6 percent of the total distance travelled on NZ roads is travelled by trucks....'[4]

Thus the increase in mass limits is likely to have a negative impact on road safety which will disproportionately affect cycling.

Decreasing tolerance from 1,500kg to 500kg: This measure is supported. More accurate enforcement of load masses will likely be beneficial to road safety.

Potential reduction in truck numbers- No increase in vehicle size should be facilitated unless it can be clearly shown that previous increases in permitted vehicle dimensions resulted in a reduction in truck movements.

Should the numbers of heavy vehicles decrease there will be a net benefit to cyclists by improving the quality of service on HV-rich parts of the network. This development would be welcomed by CAN.

However there is a known risk that reduced costs accruing from more productive trucks will in fact generate more trips (Jevon's Paradox; see graph). As trucking becomes more efficient (i.e. cheaper) then the numbers of warehouses and local factories decrease, and supply chains using trucks get longer[5], resulting in more vehicle kilometres travelled.

In addition, following fundamental rules of economics, reduced costs of freighting may lead to increased demand, also negating the benefits.

The Ministry's 2014 Freight Demand analysis shows 2042 projections of a 6.0% modal share for rail and 1.7% for coastal shipping, with all remaining freight being carried by road. This estimate contradicts the growing international trend to reduce reliance on road freight and increase investment in rail (California High-Speed Rail plans; similar English proposals) with the goals of increased road safety, reduced carbon emissions and improved traffic congestion.

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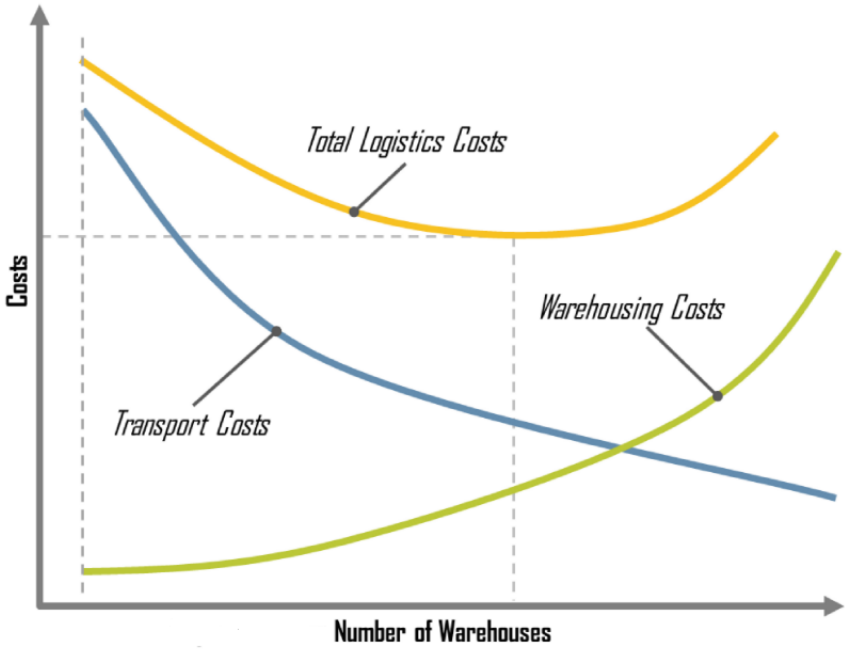
[3] Laskewitz J, Hudson K, Wanty D, The damaging effect of overweight vehicles on Southland roads. (2014)

[4] http://www.transport.govt.nz/research/crashfacts/truckcrashfacts/

[5] Adapted from McKinnon, A. 'The Effects of Transport Investment on Logistical Efficiency', Logistics Research Centre, Heriot-Watt University, Edinburgh, UK.

Acceptance of the estimated increase of 58% in road freight over 30 years anticipates no possibility of future changes in transport policy. Possible future changes in policy may serve to shift existing taxpayer or ratepayer subsidies from road freight to rail, potentially resulting in significant changes in modal share. Projections should be calculated for a range of reasonable policy scenarios.



Section 4- Permits for overweight vehicles and divisible loads- Changes to criteria for issuing a permit are supported by CAN. Requiring RCAs to consider traffic offending history, durability of bridges etc. is likely to improve forward planning for overweight vehicle journeys, thus benefitting road safety.

Section 5- Overdimension vehicles and loads- As the coincidence of permit-managed overdimension loads with cyclists will be relatively rare, CAN has no submission on this Section of the Rule.

Section 6- Responsibilities- CAN has no submission on this Section of the Rule.

CAN submits that further issues need consideration-

Side under-run protection— Consideration of a requirement for side under-run protection was strongly recommended by the Cycling Safety Panel, and has been supported in the current consultation by submissions from both AANZ[6] and IPENZ. CAN strongly endorses such consideration: mandatory side under-run protection is an urgently-needed measure to protect cyclists, pedestrians and motorists in the event of side impact with HV trailers. The Yellow paper significantly advantages HV operators, so this contribution to road safety on their part would demonstrate a welcome balance. See recommendation from Transport for London below.

[6] http://www.aa.co.nz/assets/about/events/government-submissions/2016/Review-of-Vehicle-Dimensions-Mass-17-02-2016.pdf

Blind zones- HVs sharing road space with cyclists, particularly in urban situations, must be able to ensure that their manoeuvring space is clear. Requiring or incentivising the fitting of blind zone mirrors, close proximity monitoring systems (CPMS), and/ or CCTV systems (which alleviate blind zones on HVs) must be considered in the context of the Rule Change. This measure was recommended by the Cycling Safety Panel, and has been in force in the EU since 2012[7]. The Cycling Safety Panel's Report quotes Transport for London as follows-

> 'Basic safety equipment is relatively inexpensive, especially when compared to typical heavy vehicle purchase and operating costs. A close proximity mirror costs around £300 and side guards around £1,000, including installation.'

HV operator training- As part of the NZTA Share the Road programme, CAN provides training[8] for heavy vehicle drivers. The training is empathy-based and raises drivers' awareness and safety around cyclists. We submit that consideration be given to mandating or incentivising such training in future Regulations or guidelines for HV operators.

Consider impact on public health- Ill-health due to physical activity is a major cost burden on District Health Boards. There is a potential for the new Rule to cause a reduction in cycling, and/ or active travel generally. To properly assess the proposed Rule an assessment of likely public health impacts (including any increased costs to taxpayer-funded health services) should be undertaken. The UN Health Economic Assessment Tool[9] (HEAT) has been developed to assess cycling and walking infrastructure in such contexts, and may form a basis for an assessment of the Rule.

Conclusion

CAN appreciates the importance of the trucking industry to New Zealand's prosperity, and acknowledges that —by allowing a heavier load for each truck movement, and purchase choice from a larger range of trucks— the potential benefits to operators of the new Rule are substantial.

However, the improvements for the safety of other road users claimed for the new Rule are likely to be offset by the inherent dangers of increased braking distance, reduced stability, and greater widths permitted for HVs.

Meanwhile, the costs in increased road maintenance to ratepayers have been shown, particularly in the submission from the RCA Forum's, to be considerable, and this is likely to result in the worsening of road surface conditions to the detriment of cyclists' journey quality.

For these reasons the overall effects of the new Rule on cyclists are likely to be marginally positive at best, and more likely to be negative. CAN is thus unable to support all sections of the Rule as drafted.

Will Andrews (CAN Committee)

2016- August 4th

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[7] Directive 2003/97/EC for Class VI mirrors

[8] https://can.org.nz/being-cycle-aware

[9] www.heatwalkingcycling.org/