

Impact of proposed VDAM Rule changes

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1 Heavy fleet change needed to meet future economic growth in transport

Older fleet carrying 90% of NZ's freight tonnage

- 142,000 heavy vehicles on NZ roads in 2014
- 17.5 years – average age of the fleet
- 34% are used imports (mainly 1990s era)
- 18% of road fatalities (2010-14) involved heavy vehicles with drivers responsible for 35% of these
- Heavy vehicles emitted 21.5% of vehicle CO₂ in 2014

High productivity vehicles on the increase but more required

- 25% of truck trailer combinations of which 5,000 permits are for 50MAX
- 50MAX has 2-3% of current freight market
- High capacity urban buses introduced 1 October 2015

Transport task to substantially rise

- 90% of freight tonnage is carried on the road
- Bus passenger boardings experienced an average growth of 2.5% p.a (approx 250,000 passengers) over the last 10 years
- Transport freight task to increase by 58% in 30 years

2 Suite of preferred proposals

Changes to mass/weight

- Increase gross mass from 44t to 45t for 8 axle vehicles
- Allow 50MAX vehicles to operate without a permit on the 50MAX network
- Increase axle mass limits for specific categories
- Increase pro-forma car transporters from 36 to 38t
- Tolerance levels on gross mass will be 500kg

Changes to dimension (width & height)

- Increase vehicle width from 2.5m to 2.55m
- Increase vehicle height from 4.25m to 4.3m

Changes to permitting

- Introduce bulk permits for HPMV
- Give RCAs flexibility to permit overweight vehicles
- Formalise current working list of indivisible loads
- Allow multiple crane boom sections to be carried \ as a single load

Smaller changes

- Temporary increase in height for ground clearance
- Allow overweight/dimension vehicles to operate without permit in emergencies
- Revise Schedule 2 Rule limits
- Remove pilot tyre size requirement in Rule

3 Impact of Rule changes

Productivity estimated to increase

- Higher loading on a vehicle would result in more efficient transportation per tonne-kilometre
- Increased bus passenger capacity expected

Net safety expected to improve but some risks created

- Heavier, wider and higher vehicles would increase safety risk to other road users should a crash occur
- However, an expected reduction in vehicle trips would lower risk exposure for other road users
- As fleet turns over newer vehicles will incorporate higher standards of safety equipment

Pavement wear would be impacted

- Road wear would decrease per tonne-km if 50MAX replace 44t trucks
- Newer vehicle design & technologies could reduce impact
- Higher axle mass on specialist vehicles may incur higher wear, but will be reflected in the RUC they will need to pay

Environmental effects expected to be positive

- Reduced truck kilometres would likely reduce net emissions but higher mass vehicles operating at low speed could have higher emissions
- New technologies may mean higher mass trucks can reduce emissions per km

Compliance costs estimated to reduce with permit changes

- 50MAX not requiring permits will reduce compliance costs
- Change to GVM tolerance will benefit compliant operators
- Compliance with width & height maybe difficult to enforce
- Legislative amendment to powers of enforcement is needed to support compliance with proposed limits

Infrastructure impacts likely to increase

- Slightly higher vehicles may have implications for some over-bridges & tunnels particularly on local roads
- Greater vehicle weight may have implications for some bridges – particularly on local roads

4 Rule changes lead to fleet changes

- Accelerate fleet turnover and introduction of new vehicles with intelligent technologies that significantly improve safety & efficiency
- Increase options for vehicle supply (moving to 2.55m significantly increases choice of vehicles)
- 50MAX, HPMV & 44t trucks estimated to grow market share
- Numbers of heavy vehicles on the network estimated to be less for equivalent freight task

5 Initial cost benefit assessment over 30 years

Scenario 1: Optimistic assessment (\$1 billion net benefit)

- 50MAX grow aggressively to capture 50% of market
- 44t trucks shift to 50MAX
- Large dimension 44t trucks capture 15% market share
- 44t to 45t with reduced tolerance increases average payload by 0.12 tonne
- Permit application for high axle loading issued on 2 yearly basis

Scenario 2: Expected estimate (\$634 million net benefits)

- Same as above but 50MAX grows by 35% & overdimension 44t trucks capture 12.5% of market

Scenario 3: Conservative estimate (\$313 million net benefit)

- Same as scenario 2 but 50MAX grows 30% of market share & overdimension 44t trucks captures 10% of market

Vehicle Dimensions & Mass Backgrounder

What does the VDAM Rule do

- Regulates how large and how heavy vehicles can be when using the roads
- Balances the risks heavy vehicles present to other road users & their impact on the road infrastructure, against the need to allow the heavy vehicle fleet to optimise operations.

Why the need for change

The Rule needs modernising & requires well-placed change to:

- Meet projected increases in land-based freight and passenger transport demand (estimated to be 58% over 30 years)
- Take advantage of on-going innovation in vehicle technology, design and use (especially safety & emission technology)
- Provide an agile regulatory platform that can systematically meet economic growth while ensuring New Zealand's road assets are maintained
- Meet Government's commitment to Better Public Services and better quality regulation.

Guiding principles to this review

- To facilitate economic growth by encouraging innovation & uptake of new technologies in the heavy vehicle fleet in a manner that:
 - improves road safety by allowing more freight & passengers to be carried by safer vehicles
 - improves vehicle operator compliance
 - optimises the fit between vehicles & NZ's road network

Stakeholder involvement

- There has been active engagement with industry stakeholders, with workshops in 2014 and 2015 to identify issues, options, & preferred proposals – including Bus & Coach Assoc, Road Transport Forum, Heavy Haulage Assoc, LGNZ & RCAs, NZDF, Fonterra, Federated Farmers, Crane Association (amongst others)

Examples of emerging heavy vehicle technology

Safety

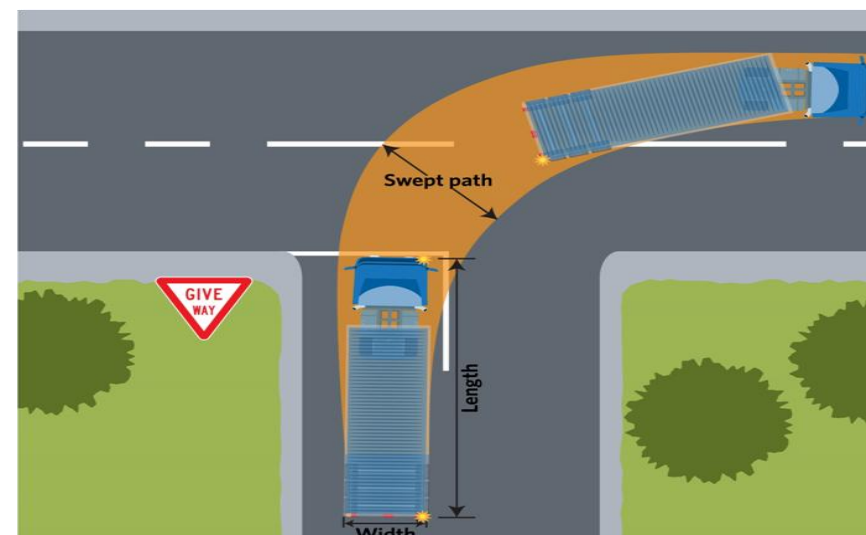
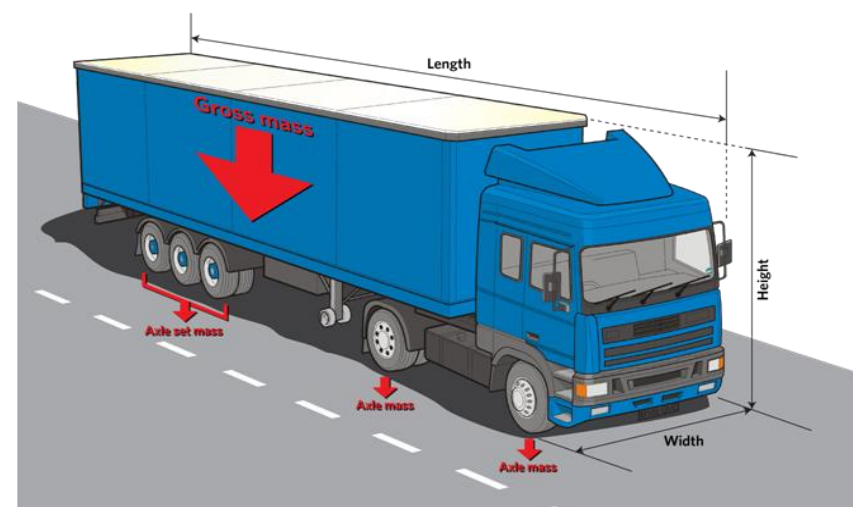
- Autonomous emergency braking, Blind spot warning systems
- Electronic stability control, Lane departure warning systems

Environment

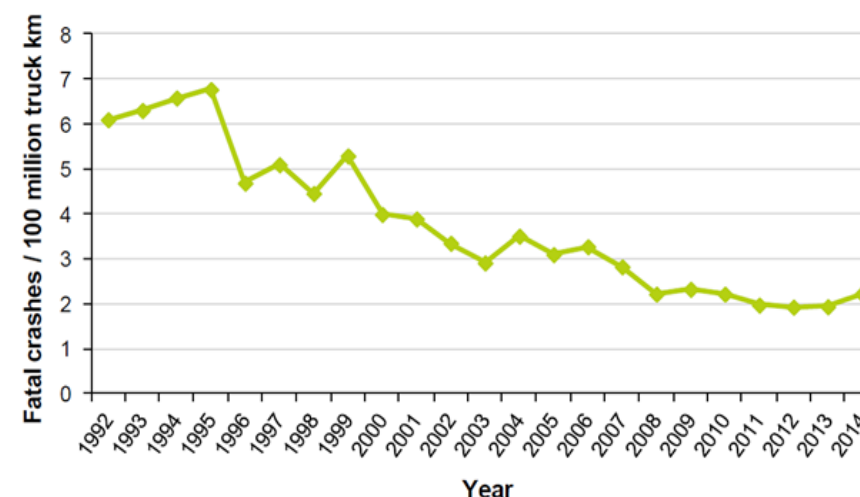
- Euro 5 & 6 emission standards

Efficiency

- Aerodynamics, autonomous controls



Fatal Truck Crashes per 100kilometres travelled trucks



Mass & Dimension

- Gross mass is the weight of the vehicle plus load. This has implications for bridge integrity & life
- Axle mass is the weight carried by an axle or axle set. This has implications for pavement wear
- Height has implications for tunnels & over-bridges
- Width has implications for lane fit

Swept path

- Is the additional width required when vehicles turn and shows the tendency of a trailer to turn through a wider circle than the towing vehicle
- Swept path is important for road design & ensuring safety of other road users

Truck Crashes

- With a significant increase in forecasted freight task (under the current VDAM policy settings) would see more truck trips undertaken.
- While truck crashes have halved since 2001-13 they remain 3 x higher than for light vehicles
- 18% of fatalities involved heavy vehicles (2010-14) with truck drivers fully responsible in 35% of fatal crashes.