<table>
<thead>
<tr>
<th><strong>Title</strong></th>
<th>Twinsteer and tri drive mass limits</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Type of report</strong></td>
<td>Discussion paper</td>
</tr>
<tr>
<td><strong>Purpose</strong></td>
<td>For public consultation</td>
</tr>
<tr>
<td><strong>Abstract</strong></td>
<td>The NTC is undertaking this project to determine whether increasing general mass limits for twinsteer and tri drive semitrailer combinations could result in improved vehicle productivity and regulatory efficiency.</td>
</tr>
<tr>
<td><strong>Submission details</strong></td>
<td>Submissions will be accepted until 26 April 2016 online at <a href="http://www.ntc.gov.au">www.ntc.gov.au</a> or by mail to:</td>
</tr>
<tr>
<td></td>
<td>Att: Project Manager: Twinsteer and Tri Drive Mass Limits Discussion Paper, National Transport Commission Level 15/628 Bourke Street Melbourne VIC 3000</td>
</tr>
<tr>
<td><strong>Key words</strong></td>
<td>Twinsteer, tri drive, mass limits</td>
</tr>
<tr>
<td><strong>Contact</strong></td>
<td>National Transport Commission Level 15/628 Bourke Street Melbourne VIC 3000 Ph: (03) 9236 5000 Email: <a href="mailto:enquiries@ntc.gov.au">enquiries@ntc.gov.au</a> <a href="http://www.ntc.gov.au">www.ntc.gov.au</a></td>
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Executive summary

Context

The Heavy Vehicle National Law (HVNL) manages the impact of heavy vehicles on the environment, road infrastructure and public amenity. The regulatory framework under the HVNL prescribes requirements about:

- standards heavy vehicles must meet before they can use roads
- maximum permissible dimensions of heavy vehicles
- securing and restraining loads on heavy vehicles
- ensuring parties in the chain of responsibility are held responsible for drivers of heavy vehicles exceeding speed limits
- preventing drivers of heavy vehicles from driving while impaired by fatigue
- nationally consistent penalties.

The HVNL also sets mass limits for heavy vehicles. General mass limits are designed to balance the load limits of heavy vehicles with the current capacity of roads and bridges. The extra axle on a twinsteer vehicle gives it the capability to carry more mass than is currently permitted under the HVNL. The NTC has consulted with the states and territories about this and they agree there is merit in considering an increase in the permitted mass limits under the HVNL.

Conversely, road managers have told us they do not see a need to operate tri drive prime movers in a semitrailer configuration across the majority of Australia. Currently, only the Northern Territory and Western Australia permit tri-drive–semitrailer combinations to operate at higher masses, which is reflective of the nature of the geography and freight movements in those areas.

Proposal

The NTC is seeking stakeholder views about two separate but related proposals to improve productivity, that is, increasing the current allowable mass of:

1. twinsteer axle prime movers towing a semitrailer
2. tri drive prime movers towing a semitrailer.

The NTC’s preferred option is to increase the general mass limit for twinsteer prime movers towing a semitrailer to 46.5 tonnes, with a twinsteer axle limitation of 10.5 tonnes. The HVNL also provides a mechanism by which a vehicle can operate at a higher mass limit under a Class Notice or Permit (see Table 2). Under the preferred option, the National Heavy Vehicle Regulator (NHVR) would permit a 49.5 tonne mass limit under a Class Notice or Permit arrangement where appropriate. This option would in effect reintroduce the model regulations that were in place between 2008 and 2011 and allow twinsteer–semitrailer combinations to carry approximately 4.0 tonnes more load than they are currently allowed on the general access network.

The states and territories have told us there is little demand across Australia for tri drives to operate in a semitrailer combination and it would therefore be an unnecessary change to the arrangements in place. The NTC’s preferred option for tri-drive–semitrailer combinations is to retain the existing arrangements. We would also encourage the states and territories to work with the NHVR where appropriate to develop a nationally consistent assessment process to permit tri-drive multi-combination vehicles to operate under higher mass limits.

Current arrangements for vehicles to operate at higher limits under alternative arrangements such as Class Notices and Permits are explored in this discussion paper.

Next steps

The NTC will accept submissions until Tuesday 26 April 2016. Once submissions close, we will review submissions and use these to inform recommendations to the Transport Infrastructure Council regarding the next steps.
1  Context

Key points
General mass limits are designed to match load limits on heavy vehicles with the current capacity of roads and bridges. The NTC is seeking stakeholder views about two separate but related proposals to improve productivity, that is, increasing the current allowable mass of:

1. twinsteer axle prime movers towing a semitrailer
2. tri drive prime movers towing a semitrailer.

1.1 Objective
The NTC’s objective is to increase economic efficiency without reducing road safety by increasing the permitted general mass limits of certain vehicle combinations within the Heavy Vehicle National Law (HVNL). The HVNL manages the impact of heavy vehicles on the environment, road infrastructure and public amenity. General mass limits are designed to match load limits on heavy vehicles with the current capacity of roads and bridges.

1.2 Background
According to the Bureau of Infrastructure, Transport and Regional Economics, the productivity growth of heavy freight vehicles has increased almost six-fold since 1971. Articulated trucks alone have contributed over 90 per cent of the increase in total road freight vehicle productivity.

An increase in the mass carried by a freight vehicle that does not disproportionally affect infrastructure assets represents a productivity improvement. The purpose of restricting mass is to help manage road wear and the risk that vehicles and their loads may pose to road users. The regulations are designed to match load limits on heavy vehicles with the current capacity of roads and bridges. The limits take into account vehicle combinations, including their loads, individual tyres, wheels, axles and axle groups.

The NTC is seeking stakeholder views about two separate but related proposals to improve productivity. We seek feedback about the options presented in this paper for increasing the current allowable mass of:

1. twinsteer axle prime movers towing a semitrailer
2. tri drive prime movers towing a semitrailer.
Twinsteer axle prime movers towing a semitrailer

A prime mover is a heavy motor vehicle designed to tow a semitrailer (see Figure 1). Twinsteer means a group of two axles (with single tyres) in the steer axle group connected to the same steering mechanism fitted to a motor vehicle. The Trucking Industry Council says 172 twinsteer prime movers have been sold in Australia since 2013.¹

Figure 1: Example of a twinsteer semitrailer

Twinsteer

The Office of Best Practice Regulation previously approved a regulatory impact statement proposing increased mass limits for twinsteer combinations to 46.5 tonnes in October 2006. The Australian Transport Council agreed on 21 February 2008 to introduce the National Transport Commission (Model Amendments Regulations 2008 (Twin Steer Mass and Loading Limits)) Regulations 2009, which gave effect to this proposal. However, as 'model amendments', the regulations served not as law but as a source for nationally agreed reforms, which may then be implemented by the states and territories. The regulations were superseded by the HVNL, which was adopted by Queensland, New South Wales, the Australian Capital Territory, Victoria, Tasmania and South Australia. Western Australia and the Northern Territory continue to operate under their own legislation covering the operation of heavy vehicles. The Heavy Vehicle (Mass Dimension and Loading) National Regulation, which was created in 2012, limits all articulated truck combinations with general access to the road network to carrying 42.5 tonnes.

Tri drive prime movers towing a semitrailer

A tri drive is a motor vehicle incorporating three axles in the drive axle group (see Figure 2); the drive forces may be transmitted through two of the axles or all three axles, in either equal or unequal torque-sharing configurations.

Figure 2: Example of a tri drive semitrailer

Tri drive

As with twinsteer vehicles, the HVNL prescribes a maximum mass of 42.5 tonnes for tri-drive–semitrailer combinations.

¹ Truck Industry Council, Twinsteer vehicle prime mover sales figures, received via email from M Hammond on 21 August 2015.
1.3 Discussion of issues

Capacity

The general mass limits at which vehicles should be operated are set out in Schedule 1, Part 2 of the Heavy Vehicle (Mass Dimension and Loading) National Regulation. Table 2 of that Part sets out the axle spacing limits and currently prescribes a maximum mass of 42.5 tonnes for twinsteer and tri drive prime movers towing semitrailer combinations. This means the mass of the vehicle plus the mass of the load must total no more than 42.5 tonnes.

The Australian Trucking Association has suggested that the current mass limits are unnecessarily low and that there is potential to gain productivity improvements by increasing them. For example, there has been an increase in the number of 33 tonne, 40 foot-long shipping containers being imported to Australian ports. Australian restrictions on heavy vehicle mass limits are not considered an important factor by importers, and Australian receivers have limited influence over container weights. In any case, a reduction in container weight would be inefficient and costly.

Road managers have implemented limited regulatory measures to accommodate the movement of heavy containers to and from ports. For instance, the operation of 48 tonne semitrailers is permitted within a highly restricted range of the Port of Melbourne. Once the heavy containers are moved off the docks, their contents are broken down and reloaded at a mass suitable for road transportation. Whereas, if the mass limit of certain semitrailer combinations was increased, some of this double handling may be avoided (see Table 1).

Twinsteer semitrailer combinations

Certain twinsteer combinations have the technical capacity to operate with a mass of up to 47.5 tonnes, for example, a twinsteer and tandem drive articulated combination towing a tri-axle trailer (see Figure 3). Currently these combinations see no productivity benefit on the general access network as they must operate below capacity to meet the regulated mass limit. In fact, tare mass of the additional steer axle results in a net reduction in payload and hence productivity compared with a single steer vehicle.

![Figure 3: Twinsteer tandem drive tri-axle semitrailer](image)

<table>
<thead>
<tr>
<th>Twinsteer (tonnes)</th>
<th>Tandem drive (tonnes)</th>
<th>Tri-axle (tonnes)</th>
<th>Sum of axles masses (tonnes)*</th>
</tr>
</thead>
<tbody>
<tr>
<td>11.0</td>
<td>16.5</td>
<td>20.0</td>
<td>47.5 GML</td>
</tr>
</tbody>
</table>

Tri-drive–semitrailer combinations

Tri drive prime movers towing a semitrailer are also restricted under the same regulations to a general access mass of 42.5 tonnes. This gross combination mass for general access under the HVNL is less than the sum of its axle masses and therefore these vehicles cannot operate at capacity on the general access network under the current regulations.
Based on Truck Industry Council Australia estimates of the average tare mass of vehicles, we can estimate the potential productivity gains of increasing mass limits.

### Table 1: Potential unused capacity by vehicle type

<table>
<thead>
<tr>
<th>Vehicle type</th>
<th>Proposed mass limit under preferred option</th>
<th>Typical tare gross vehicle mass</th>
<th>Current load capacity at 42.5 t limit</th>
<th>Load capacity under preferred option</th>
<th>Potential productivity gain under the preferred option</th>
</tr>
</thead>
<tbody>
<tr>
<td>Twinsteer prime mover towing a semitrailer combination under general mass limits</td>
<td>46.5 t GML</td>
<td>13.5–24 t</td>
<td>18.5–29 t</td>
<td>22.5–33.0 t</td>
<td>Approximately 4 t per vehicle</td>
</tr>
<tr>
<td>Tri drive prime mover towing a semitrailer combination under higher mass limits</td>
<td>Up to capacity of 51.0 t HML</td>
<td>13.5–24 t</td>
<td>18.5–29 t</td>
<td>27–37.5 t</td>
<td>Approximately 8.5 t per vehicle</td>
</tr>
</tbody>
</table>

Where an operator is seeking to operate outside of the general access requirements, they have a number of options available under Class Notices and Permits. These are set out in Table 2.

---

2 Truck Industry Council, Typical tare mass of prime movers, received via email from M Hammond on 2 December 2015.
Table 2: Class Notice and Permit arrangements

<table>
<thead>
<tr>
<th>Access level</th>
<th>Class Notice Applies to all vehicles in that class</th>
<th>Permit Applies to a ‘person’</th>
</tr>
</thead>
</table>
| Class 1 and Class 3 Allows flexibility related to mass and dimension constraints | • Class 1 and Class 3 vehicles do not comply with a prescribed mass requirement or prescribed dimension requirement applying to them.  
• A Class 1 vehicle is a special purpose vehicle or an agricultural vehicle other than an agricultural trailer or a heavy vehicle carrying, or designed for the purpose of carrying, a large indivisible item. It is not a road train or B-double.  
• Class 3 vehicles do not comply with a prescribed mass requirement or prescribed dimension requirement applying to it but is not a Class 1 heavy vehicle.  
• The National Heavy Vehicle Regulator (NHVR) may exempt Class 1 or Class 3 vehicles for up to five years, from a prescribed mass requirement or a prescribed dimension requirement, and may attach certain conditions. | • Granted by the NHVR for up to three years.  
• Exemption can apply to compliance with a prescribed requirement.  
• May be subject to any conditions the NHVR considers appropriate. |

Class 2 Allows flexibility within time and geographic constraints

• Class 2 heavy vehicles comply with the prescribed mass and dimension requirements applying to them and include (among others) B-doubles, road trains and performance-based standards (PBS) vehicles.  
• Notice granted by the NHVR for up to five years.  
• Specifies the routes on which vehicles may be used, subject to compliance with certain conditions.  
• Does not exempt the Vehicle Carrier from other requirements of the HVNL.

Some regulators currently permit twinsteer combinations to operate at a higher mass with an appropriate permit or notice. Western Australia and the Northern Territory permit a mass limit of 47.5 tonnes – which is the sum of the axle weights on the general access road network. The NHVR has a notice process, under which Victoria and Tasmania allow twinsteer semitrailers to operate at 49.5 tonnes (see Table 3).
Table 3: Twinsteer semitrailer mass currently allowed tonnes, by state/territory

<table>
<thead>
<tr>
<th>State/territory</th>
<th>Mass allowed tonnes</th>
<th>Legislative instrument</th>
<th>Network</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACT</td>
<td>42.5</td>
<td>MDL regulations</td>
<td>General access</td>
</tr>
<tr>
<td>NSW</td>
<td>42.5</td>
<td>MDL regulations</td>
<td>General access</td>
</tr>
<tr>
<td>NT</td>
<td>47.5 &amp; 49.5</td>
<td>MDL regulations</td>
<td>General access and HML</td>
</tr>
<tr>
<td>Qld</td>
<td>42.5</td>
<td>MDL regulations</td>
<td>General access</td>
</tr>
<tr>
<td>SA</td>
<td>42.5</td>
<td>MDL regulations</td>
<td>General access</td>
</tr>
<tr>
<td>Tas</td>
<td>47.5 &amp; 49.5</td>
<td>Class 3 Notice</td>
<td>General access and HML</td>
</tr>
<tr>
<td>Vic</td>
<td>Max 49.5</td>
<td>Class 3 Notice</td>
<td>HML network</td>
</tr>
<tr>
<td>WA</td>
<td>47.5 &amp; 49.5</td>
<td>Period Permit</td>
<td>General access and HML</td>
</tr>
</tbody>
</table>

HML: Higher mass limits
General access: All roads except where signposted.

Performance-based standards limits for twinsteer–semitrailer combinations

In addition to use of permits and notices, the NHVR can grant an operator an exemption to operate a vehicle under the PBS. The regulator provides exemptions under the PBS if a vehicle combination complies with performance standards related to vehicle behaviour, powertrain requirements, vehicle stability and infrastructure requirements. The regulator issues a permit to the operator to operate a PBS-approved vehicle on a defined road network subject to road manager approval.

PBS allow twinsteer semitrailers to operate at the sum of the axles’ masses at up to a total length of 20 metres, on the PBS level 1 network. The PBS level 1 network is a subset of the general access road network.

In most cases the PBS networks have been assessed in accordance with the PBS network classification guidelines, which take into account factors such as grades, road geometry, stacking distance, traffic volumes, sight distance and railway crossings.

According to the NHVR, there are approximately 20 twinsteer combinations operating under the PBS framework.

State and territory limits for tri-drive–semitrailer combinations

The HVNL does not restrict the use of tri drive prime movers; however, it limits the gross combination mass of tri drive combinations to 42.5 tonnes on the general access network. Tri-drive–semitrailer combinations currently do not operate in the states and territories that have adopted the HVNL, though this could change if there was an incentive to operate this vehicle type through allowing an increased mass limit.

Tri drive prime movers towing a semitrailer at masses higher than 42.5 tonnes currently only operate in the Northern Territory and Western Australia under a Period Permit that applies to a defined road network. The Northern Territory allows them to operate at the sum of the axle masses. In Western Australia, the Period Permit includes twinsteer tri drive prime movers. It also includes B-doubles and road trains.

Under the Period Permit, the forces on the tri drive axle group may be transmitted through two of the axles in the group (known as tridem), or all three axles, in either equal or unequal torque-sharing configurations. Other operating conditions in Western Australia include:

1. A semitrailer towed by a tri drive prime mover must not exceed 13.73 metres in length.
2. The combination can operate at a maximum height of 4.6 metres if the combination is:
   a. built to carry livestock on more than one deck
   b. carrying a crate built to carry livestock on more than one deck
   c. carrying multimodal container(s).
3. The operator or permit holder must be accredited under the Western Australia Heavy Vehicle Accreditation Scheme.

4. The combination must comply with the axle spacings listed in Table 4.

Table 4: Minimum axle spacing for tri drive combinations in Western Australia

<table>
<thead>
<tr>
<th>Adjacent axles or axle groups</th>
<th>Minimum distance (measure between extreme axles)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tandem axle group to tandem axle group</td>
<td>6.8 metres</td>
</tr>
<tr>
<td>Tandem axle group to tri-axle group</td>
<td>8.0 metres</td>
</tr>
<tr>
<td>Tri-axle group to tri-axle group</td>
<td>9.2 metres</td>
</tr>
</tbody>
</table>

National regulatory consistency

The NTC has a role to develop nationally consistent reforms to improve the productivity, safety and environmental performance of Australia’s roads. Nationally, there is general support for increasing the allowed general mass limit of twinsteer–semitrailer combinations to between 46.5 and 49.5 tonnes subject to further consideration of the impact on infrastructure within each area. However, the states and territories do not see a need to increase the allowed mass limits for tri drive prime movers towing a semitrailer as they are not widely used. This is further explored in Table 5.

With Western Australia, the Northern Territory, Tasmania and Victoria already permitting a mass limit higher than 42.5 tonnes for twinsteer combinations, the NTC agrees there is a case to explore increased mass limits at the national level. However, there does not seem to be a strong case to increase the mass limits for tri drive combinations for the general access network.

The NTC consulted representatives of states and territories regarding:
- whether the gross combination mass of twinsteer–semitrailer combinations should be increased to 46.5 tonnes GML and 49.5 tonnes HML
- whether the increase should instead be capped at the sum of the axle weights (47.5 tonnes GML and 50.5 tonnes HML)
- whether (under either increase) the twinsteer axle load should be capped at 10.5 tonnes
- the appropriate mass limit for tri drive prime movers towing semitrailers and current impediments to this mass increase.

A high-level summary of views presented at that meeting is at Table 5.
### Table 5: State and territory views on mass limit increases

<table>
<thead>
<tr>
<th>State/territory</th>
<th>Twinsteer</th>
<th>Tri drive</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>National Heavy Vehicle Regulator</strong></td>
<td>- Supports having no twinsteer axle mass limitations.</td>
<td>- The NHVR agrees with the comments made by the states and territories that tri drive prime movers are better suited to heavy road train combinations and that it may be better to extend the scope of the project to include tri drive prime movers usage on any combination.</td>
</tr>
<tr>
<td></td>
<td>- The NHVR has no particular views on the overall gross mass of these combinations and suggests that increased mass limits could potentially benefit other types of combinations like B-doubles.</td>
<td></td>
</tr>
<tr>
<td><strong>New South Wales</strong></td>
<td>- New South Wales will consider the infrastructure impacts of each proposal. There is concern that local roads may not support higher masses and about how road managers would handle access requests.</td>
<td>- New South Wales believes there is insufficient demand for use of tri-drive–semitrailer combinations to warrant a change to the HVNL. New South Wales addresses issues (such as traction) with other combination types through a permit process. Concerns about the impact on pavement.</td>
</tr>
<tr>
<td></td>
<td>- Views of local governments should be sought.</td>
<td></td>
</tr>
<tr>
<td><strong>Northern Territory</strong></td>
<td>- The Northern Territory supports the status quo arrangements remaining in place as they currently allow for higher mass limits for these vehicles in the territory anyway.</td>
<td>- The Northern Territory supports the status quo arrangements remaining in place.</td>
</tr>
<tr>
<td><strong>Queensland</strong></td>
<td>- Pending infrastructure concerns, Queensland supports an increase to 46.5 t GML and 49.5 t HML with no twinsteer limitations. Queensland will consider whether the current infrastructure can support general access at the higher mass limits.</td>
<td>- Queensland believes there is insufficient demand for use of tri-drive–semitrailer combinations to warrant a change to the HVNL. This type of vehicle is better suited to road trains and quad-axle semitrailers are meeting heavy container transport needs.</td>
</tr>
<tr>
<td><strong>South Australia</strong></td>
<td>- South Australia initially approved the 2008 proposal to increase mass limits to 46.5 t based on providing access to specific networks. South Australia will consider whether current infrastructure can support general access at 46.5 t, or whether access would potentially be limited to PBS level 1 networks at the higher limit.</td>
<td>- South Australia believes there is insufficient demand for use of tri-drive–semitrailer combinations to warrant a change to the HVNL. Tri drives are better suited for large multi-combinations. South Australia will consider the mass its network can support without creating additional damage.</td>
</tr>
<tr>
<td><strong>Tasmania</strong></td>
<td>- Tasmania has a notice allowing twinsteers to 47.5 t at GML and 50.5 t at HML. Tasmania supports the proposed mass limit increases as long as the existing ability to allow higher limits on a state-by-state basis is retained.</td>
<td>- Tasmania believes there is insufficient demand for use of tri-drive–semitrailer combinations to warrant a change to the HVNL. Tri drives are better suited for heavy road trains operating in remote areas. Twinsteers and quad-axles can adequately transport heavy containers.</td>
</tr>
<tr>
<td><strong>Victoria</strong></td>
<td>- Victoria supports the proposal to increase allowable mass limits to 46.5 t GML and currently allows for this within state regulations.</td>
<td>- Victoria believes there is insufficient demand for use of tri-drive–semitrailer combinations to warrant a change to the HVNL. Additional mass will need to be assessed by infrastructure sections of VicRoads.</td>
</tr>
<tr>
<td><strong>Western Australia</strong></td>
<td>- Western Australia currently provides access to these combinations at 47.5 t GML.</td>
<td>- These vehicles can already operate at up to a mass of 51 t in Western Australia (permit includes twinsteer tri drive prime movers).</td>
</tr>
</tbody>
</table>
2 Options

Key points

The NTC’s preferred option for twinsteer combinations is to increase the allowable mass limit for twinsteer prime movers towing a semitrailer to 46.5 tonnes GML and 49.5 tonnes HML with a twinsteer limitation of 10.5 tonnes.

Our preferred option for tri drive combinations is to allow for tri drive prime movers towing semitrailers to operate at higher masses using the options provided by the existing regulatory framework.

2.1 Twinsteer–semitrailer combination options

<table>
<thead>
<tr>
<th>Options</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. <strong>Preferred option:</strong> Increase the allowable mass limit for twinsteer prime movers towing a semitrailer to 46.5 tonnes GML and 49.5 tonnes HML with a twinsteer limitation of 10.5 tonnes.</td>
<td></td>
</tr>
<tr>
<td>2. Increase the allowable mass limit for twinsteer prime movers towing a semitrailer to 46.5 tonnes GML and 49.5 tonnes HML with a twinsteer limitation of 11 tonnes (the maximum allowed mass for twinsteers with a load-sharing suspension).</td>
<td></td>
</tr>
<tr>
<td>3. Increase the allowable mass limit for twinsteer prime movers towing a semitrailer to the sum of the axle masses (47.5 tonnes GML and 49.5 tonnes HML) with a twinsteer limitation of 11 tonnes.</td>
<td></td>
</tr>
</tbody>
</table>

Note: Options 1–3 will require amending the Heavy Vehicle (Mass Dimension and Loading) National Regulation.

4. Retain the existing arrangements – no change.

The NTC’s preferred option is to amend the Heavy Vehicle (Mass Dimension and Loading) National Regulation to increase the general mass limit for twinsteer prime movers towing a semitrailer to 46.5 tonnes, with a twinsteer axle limitation of 10.5 tonnes. The HVNL also provides a mechanism by which a vehicle can operate at a higher mass under a Class Notice or Permit (see Table 2). Under the preferred option, the NTC would encourage the states and territories to work with the NHVR to permit a 49.5 tonne mass limit under a Class Notice or Permit arrangement where appropriate.

As this option would in effect reintroduce the model regulations that were in place between 2008 and 2011 (see Figure 5), it would not require a second regulatory impact statement (RIS).

Figure 5: Preferred option for twinsteer semitrailer combinations

Twinsteers can technically operate at 11.0 tonnes if they have a load-sharing suspension system in place. The 2007 RIS considered a twinsteer limitation of 11.0 tonnes; however, it was rejected in order to limit road wear. If stakeholders are attracted to this option, then the Office of Best Practice Regulation may require a new RIS to be undertaken.
The remaining options were also considered as part of the original RIS process. The ‘do-nothing’ option failed to deliver national consistency and productivity gains for industry. The option to set the gross combination mass at the sum of the axle masses was rejected because at that time it was considered that the increased bridge wear was excessive and would restrict the reform from being suitable for the general access network.

In 2007 terms, the RIS determined that pavement costs would decrease annually under the preferred option but would slightly increase if vehicles were allowed to operate at the sum of the combined axle masses. In addition to this, twinsteer–semitrailer combinations also contribute payments for the road wear they create through registration charges. The RIS deemed the preferred option to be economically viable and in the NTC’s view it remains so.

The NTC is interested in stakeholder views about whether there is any reason this view is no longer appropriate and whether this affects the recommended option.

### 2.2 Tri-drive–semitrailer combination options

<table>
<thead>
<tr>
<th>Options</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. <strong>Preferred option:</strong> Allow for tri drive prime movers towing semitrailers to operate at masses higher than 42.5 tonnes on an exception basis.</td>
</tr>
<tr>
<td>2. Amend the Heavy Vehicle (Mass Dimension and Loading) National Regulation to Increase the allowable mass of tri-drive–semitrailer combinations to 46 t GML.</td>
</tr>
</tbody>
</table>

The states and territories have told us there is not enough demand across Australia for tri drives to operate in a semitrailer combination, and it would therefore be an unnecessary change to the arrangements in place. The NTC’s preferred option for tri-drive–semitrailer combinations is to retain the existing arrangements, and we encourage the states and territories to work with the NHVR where appropriate to permit entire vehicle classes and/or specific operators to operate outside of the general access requirements, under Class Notices or Permits (see Table 2).

The NTC is keen to hear from industry and other potential operators of tri drive semitrailers to confirm or contest these views.
3 Consultation

Questions to consider

1. Do you agree with the NTC’s preferred options outlined in Chapter 2 for twinsteer vehicle combinations?

2. Do you agree with the NTC’s preferred options outlined in Chapter 2 for tri drive vehicle combinations?

3. Please detail any concerns you can identify with the preferred options’ effect on:
   - transport productivity
   - environmental outcomes
   - safety
   - community
   - law enforcement.

4. If you do not agree with the proposed options, what is your preferred option for each vehicle type and why?

Information is particularly sought from transport operators who use tri drive or twinsteer semitrailers, or would seek to use such vehicles if mass limits were increased.

How to submit

Any individual or organisation can make a submission to us.

To make an online submission, please visit www.ntc.gov.au and select ‘Submissions’ from the top navigation menu.

Or, you can mail your comments to: Att: Project Manager, Twinsteer and Tri Drive Mass Limits Discussion Paper, National Transport Commission, Level 15/628 Bourke Street, Melbourne VIC 3000.

Where possible, you should provide evidence, such as data and documents, to support your views.

Unless you clearly ask us not to, we will publish all submissions online. However, we will not publish submissions that contain defamatory or offensive content.

The Freedom of Information Act 1982 (Cwlth) applies to the NTC.
## Appendix A: Glossary

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
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<tbody>
<tr>
<td>GML</td>
<td>The maximum mass limits at which a heavy vehicle may operate under the Heavy Vehicle National Law.</td>
</tr>
<tr>
<td>HML</td>
<td>Higher mass limits (HML) allows particular heavy vehicles to access additional mass entitlements providing operators are accredited to do so.</td>
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<tr>
<td>NHVL</td>
<td><em>Heavy Vehicle National Law Act 2012</em>, which commenced in the Australian Capital Territory, New South Wales, Queensland, South Australia, Tasmania and Victoria on 10 February 2014. In addition to passing the HVNL, the states and territories agreed to four regulations made under the national law. The Northern Territory and Western Australia have not commenced the HVNL at this time.</td>
</tr>
<tr>
<td>NHVR</td>
<td>National Heavy Vehicle Regulator – the national regulator for all heavy vehicles over 4.5 t gross vehicle mass; administers the NHVL and regulations.</td>
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<tr>
<td>Twinsteer</td>
<td>Twinsteer means a group of two axles (with single tyres) in the steer axle group connected to the same steering mechanism fitted to a motor vehicle.</td>
</tr>
<tr>
<td>Tri drive</td>
<td>A tri drive is a motor vehicle incorporating three axles in the drive axle group; the drive forces may be transmitted through two of the axles or all three axles, in either equal or unequal torque sharing configurations.</td>
</tr>
</tbody>
</table>
Appendix B: Useful resources

Allowable gross combination mass for twin-steer prime mover and semi-trailer combinations: draft regulatory impact statement 2007, viewed 20 November 2015, 

Bureau of Infrastructure, Transport and Regional Economics, Truck productivity: sources, trends and future prospects, Report 123, 2011, viewed 20 November 2015,  

Heavy Vehicle National Law Act 2012, viewed 20 November 2015,  

Heavy Vehicle (Mass Dimension and Loading) National Regulation, viewed 20 November 2015 at:  

National Transport Commission (Model Amendments Regulations 2008 (Twin Steer Mass and Loading Limits)) Regulations 2009, viewed 20 November 2015,  