



## Vehicle Safety Branch Circular to Industry

### Excessive Rear Overhang For Heavy Rigid Vehicles and Special Purpose Rigid Vehicles

The following guidelines have been prepared in order to assist operators who may wish to purchase or construct rigid special purpose vehicles that require an excessive rear overhang, but otherwise comply with all other vehicle standards and axle mass loadings. These vehicles are dealt with in Part 1 of this document.

The Road Traffic (Vehicle Standards) Regulations 2002, which took effect on November 1, 2002, also provide for a longer rear overhang for special purpose vehicles than that contained in the previous Vehicle Standards Regulations. These vehicles may exceed certain dimension and mass requirements, but however they must travel under a notice or permit issued by Main Roads WA. These vehicles are dealt with in Part 2 of this document.

All vehicles that have an excessive rear overhang complying with these guidelines will be conditionally licensed Class B.

These guidelines have been prepared in consultation with Main Roads WA and that agency should be consulted where a permit or notice is required for the vehicle to operate on public roads.

#### *Part 1: Guidelines for Excessive Rear Overhang*

#### *Special Purpose Heavy Rigid Vehicles which are less than 12.5m in length*

This part deals with the construction or modification of rigid special purpose vehicles that require an excessive rear overhang, but otherwise comply with all other vehicle standards and axle mass loadings. Before any such vehicle is built or modified, the Vehicle Safety Branch must be consulted for approval. Once a vehicle is approved for registration, the Vehicle Safety Branch will issue an exemption from the rear overhang requirements. A fee of \$50 is applicable for all exemptions issued under the Road Traffic (Vehicle Standards) Regulations 2002

Approvals will be considered on a case-by-case basis on the individual merits of each submission.

Approvals will not be deemed to be a precedent for further designs - approval of one design for a specific application will not mean the automatic approval of a similar design or application.

Applicants will need to demonstrate that it is not feasible to produce a conforming vehicle for their vehicle's intended purpose, before alternative designs with excessive rear overhang will be considered.



Newly constructed vehicles must display a compliance plate that indicates the vehicle is non-standard, as required by the Department of Transport and Regional Services for the certification of non-standard vehicles.

Once the approval process reaches the alternative design stage, the following broad principles will apply:

- The total mass and the load distribution of the vehicle must not exceed either the total allowable mass or the allowable individual axle mass limits when the vehicle is either empty or fully loaded.
- The load distribution must not detrimentally affect the steering or braking performance of the vehicle.
- The vehicle must be designed to its most practical compact form and the excessive rear overhang must not exceed the normally allowable rear overhang by more than 1.2m.
- The excessive rear overhang must not cause the vehicle to exceed the maximum national overall length of 12.5m for rigid vehicles. (Vehicles that exceed this dimension will be processed under Part 2 or alternatively, the over-dimensional/over-mass vehicle policies).
- Careful attention needs to be paid to the design and conspicuity of the rear of the vehicle to reduce the likelihood of injury to other road users. For example, sharp or elongated protrusions will need to be protected with a guard or barrier. The guard will also need to be equipped with retro-reflective warning material in addition to the mandatory rear marking plates fitted to the parent vehicle. Similarly, consideration needs to be given to the possible consequences of rear underrun.

**Note:** This matter is currently under review nationally and may result in the introduction of new standards for rear underrun protection.

Generally, rigid vehicles that have excessive rear overhang which does not cause the vehicle to exceed the maximum national overall length of 12.5m can operate as “as of right vehicles”.

Whilst these vehicles are technically oversize, an “OVERSIZE” warning sign will not be required because all of these vehicles fall within the overall legal dimension for a rigid vehicle.

### *Defining the overhang allowed*

The real or imaginary point (Point X), can be defined as the intersection of a line parallel to the vehicle centre-line that passes through the widest point on the vehicle, and the line marking the maximum rear overhang as allowed by the regulations. (Maximum rear overhang for rigid vehicles is 60% of the wheelbase or 3.7m whichever is the lesser.)

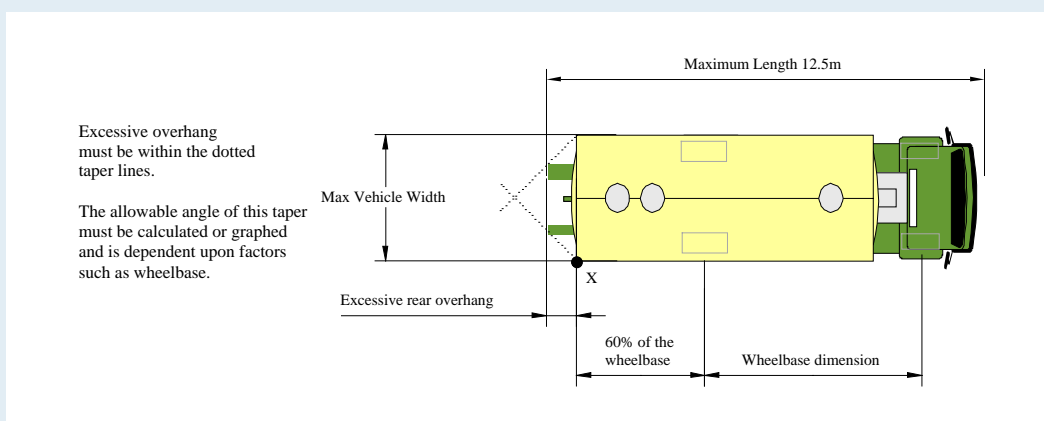
See Figures 1 & 2 which follow. The overhang will generate a particular swing-out when the vehicle executes a sharp turn.



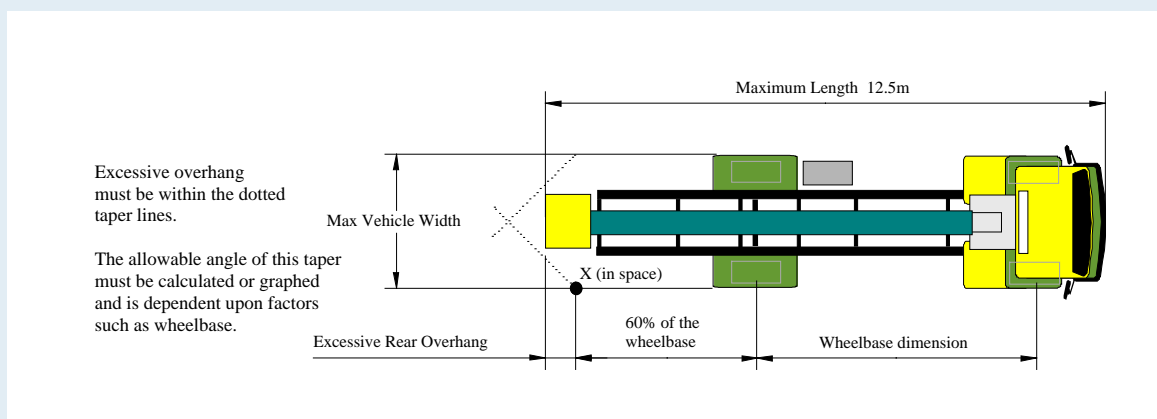
No part of any excessive rear overhanging structure shall generate a swing-out in excess of that generated by the Point X.

Essentially this means that generally vehicles with excessive rear overhang will need any overhanging part of the structure to be either tapered or stepped back from Point X.

Any overhanging material must lie within the dotted lines on Figures 1 and 2. The actual degree of the taper shown by the dotted lines on these sketches will depend upon the length and geometry of the particular vehicle in question. This can be determined graphically.



**Figure 1**  
**Typical Example of Allowable Rear Overhang for a Rigid Vehicle**



**Figure 2**  
**Typical Example of Allowable Rear Overhang for a Rigid Vehicle (Where the point X is not on the truck body)**



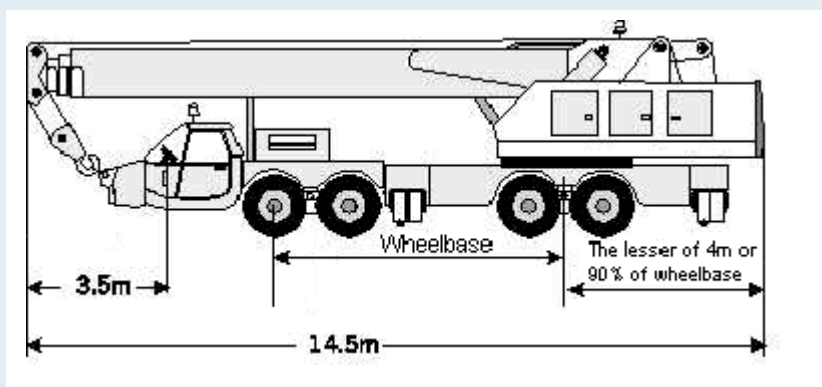
*Part 2: Guidelines for Excessive Rear Overhang*

*Special Purpose Restricted Access Vehicles (RAVs)*

The Road Traffic (Vehicle Standards) Regulations 2002 provides a means to exempt certain *Special Purpose Vehicles (SPV)* that exceed the rigid vehicle length limit of 12.5m (or other dimensional requirements) from the standards that are applicable to “as of right vehicles” providing they operate under a Class 1 Notice or Permit. These vehicles are classified as “*Class 1 RAVs*”.

Overhang on these rigid vehicles is limited to a distance from the “*rear overhang line*” to the rear of the vehicle of 4m or 90% of the wheelbase, whichever is the lesser.

RAVs do not need to taper or step back from the side of the vehicle as shown in Fig 1 and 2, although this is preferred if possible.



**Figure 3 Rigid Mobile Crane (SPV) Showing Dimension Limits**

*Part 3: Conditions of Registration*

*All Vehicles with Excessive Overhang Need Conditional Registration*

Vehicles accepted under these guidelines are non-standard vehicles, and will need to be conditionally registered Class B. Typical conditions, which apply, will include:

- 001 Licence to be carried in vehicle at all times.
- 125 Letter of approval to be carried in the vehicle at all times.

Any other condition applicable to the type and operation of the vehicle in question.

Any queries can be directed to:

**Vehicle Safety Branch**  
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