



Moving more with less

The NSW Heavy Vehicle Access Policy Framework



New South Wales plays a key role in the movement of freight across Australia, with our road network alone carrying over 60 per cent of the total NSW freight task. We are also the connection for freight transport travelling to Brisbane, Adelaide and Melbourne, making the movement of freight in NSW even more critical.

The Heavy Vehicle Access Policy Framework is an important reform delivering greater national harmonisation, with better safety and efficiency outcomes for industry and community as freight demand grows.







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1. Introduction

Heavy vehicle operation is critical to support economic growth in NSW through freight delivery and passenger transport

With the NSW freight task set to increase by 28 per cent between now and 2036, it is vital that we keep up with demand. This is why NSW has adopted a staged approach to enhance the efficiency and productivity of the industry, while also maintaining high safety standards.

Transport for NSW (TfNSW) has developed a new policy framework that outlines a strategic approach to heavy vehicle access in NSW for both state and council roads. The aim of the new framework is to achieve safe and efficient movement of road freight in NSW now and into the future.

TfNSW's Future Transport 2056 Strategy sets the 40 year vision, directions and outcomes for customer mobility in NSW, which will guide transport investment over the longer term. It will be delivered through a series of supporting plans, including the NSW Freight and Ports Plan 2018-2023 (the Plan).

The Plan, released in 2018, supports Future Transport 2056 and provides direction to business and industry for managing and investing in freight into the future.

The Heavy Vehicle Access Policy Framework (the Framework) aligns with and supports Future Transport 2056 and the Plan through a key objective; improving the efficiency of existing infrastructure and ensuring greater connectivity and access along key freight routes.

A key action for achieving this objective is to increase the use of safer and more productive vehicles through implementing the Framework, which sets out networks

for modern high productivity vehicles (HPVs) (these are vehicles that can carry more payload than a B-double) such as Performance Based Standards (PBS) vehicles, road trains, other restricted access vehicles including those operating at Higher Mass Limits (HML) and double decker buses.

The Framework aims to achieve safe and efficient freight movements which also address community feedback about local amenity issues, network impacts and infrastructure constraints.

A considered, strategic approach to opening heavy vehicle access will help ensure NSW can safely and efficiently meet the freight task in the context of:

- growing freight demand, particularly non-bulk freight
- national harmonisation of access through regulation
- NSW Government transport strategic plans
- changes to the heavy vehicle fleet, such as safety improvements, increases to the size and mass of heavy vehicles
- current and emerging technologies and innovation
- ongoing costs of maintaining road infrastructure assets; and
- urban network congestion.

1.1 National initiatives – access harmonisation

National harmonisation of heavy vehicle access is a key cornerstone of the Heavy Vehicle National Law, which commenced in February 2014 in Queensland, New South Wales, Victoria, South Australia, Tasmania and the Australian Capital Territory. The National Heavy Vehicle Regulator (NHVR) coordinates access decisions at the national level to minimise and make consistent any conditions placed on access.

The NHVR sets out strategic directions including a productivity goal to maximise the economic value of heavy vehicles by facilitating better, more efficient ways for industry to undertake their activities.

In addition, Infrastructure Australia's Australian Infrastructure Plan emphasises the need to deliver efficient infrastructure to better connect our freight and logistics supply chains ensuring goods are moved efficiently and reliably. NSW currently has a number of high priority projects recognised in the plan that facilitate more efficient and sustainable use of the NSW infrastructure including, development of the intermodal terminals and motorway networks.

1.2 Why the need for change?

B-double trucks have been operating on NSW roads since the 1980s and are the predominant and most efficient mainstream freight vehicle currently permitted. However, with the rising freight task, limiting ourselves to B-doubles will mean there will be an increase of trucks on our roads.

In addition, the existing road network is facing its own challenges including; infrastructure capacity, geometric constraints, urban peak hour congestion and safety and amenity issues that can hinder freight vehicle access and productivity which continue to impact on the efficiency of the road freight task.

In order to manage the growing freight task, alternative solutions must be considered.

1.3 What is NSW doing?

To achieve the NSW Government's objectives of ongoing productivity improvements for movement of freight, in the context of the growing road freight task, the Framework has been developed to set out the vision for heavy vehicle access in NSW.

The overarching policy objective of the Framework is to achieve safe and efficient freight movements, which also address local amenity issues, network impacts and infrastructure constraints. The Framework aims to create PBS networks with connectivity across the whole NSW road network to unlock freight productivity, by enabling these vehicles to carry more freight to operate on existing vehicle networks. This will provide for the next generation of newer, safer and more productive vehicles on key freight corridors across NSW (the Hume, Pacific and Golden highways) as well as in the Sydney Greater Metropolitan Area (GMA), while minimising the infrastructure upgrades required.

The new Framework allows access to the road network, for modern High Productivity Vehicles (HPVs) (these are vehicles that can carry more payload than a B-double), road trains, and other restricted access vehicles including double decker buses and vehicles operating at Higher Mass Limits.

The national PBS scheme, operating since 2007, aims to encourage innovation and the development of safer and better equipped HPVs and an alternative to the prescriptive system for regulating heavy vehicles. PBS vehicles are tested against 16 performance and safety standards, and four infrastructure standards. The scheme focuses on how well the vehicle performs on the road, by assessing the particular vehicle design against a set of safety standards, rather than assessing a vehicle based on prescriptive limits.

Modern, safer, PBS vehicles which can carry more freight will put downward pressure on the number of trucks in operation, leading to fewer trucks on the road than would otherwise be the case.

1.4 What vehicles are affected by this change?

The policy focuses on opening access to HPVs, with emphasis on PBS vehicles as well as other prescriptive types of HPVs. It also applies to all restricted access heavy vehicles and PBS combinations, and certain types of double decker buses operating in NSW.

The following types of vehicles are included in this policy:

- All Class 1A restricted access vehicles up to the size and mass of a 26 metre B-double
- All prescriptive vehicles operating at Higher Mass Limits
- 'Traditional' Type 1 (A-double) road train with a total length not exceeding 36.5 metres
- Traditional Type 2 (A-triple) road train with a total length not exceeding 53.5 metres
- Modern Type 1 (A-double) road train with a total length not exceeding 36.5 metres
- Modern Type 2 (A-triple) road train with a total length not exceeding 53.5 metres
- Modular B-triple with a total length not exceeding 35 metres
- B-triple with a total length not exceeding 36.5 metres
- AB-triple triple with a total length not exceeding 36.5 metres
- AAB quad road train with a total length not exceeding 53.5 metres
- BAB quad road train with a total length not exceeding 53.5 metres
- PBS Level 2B A-double combinations
- PBS Level 2B B-double combinations (with or without a quad axle group)

- PBS Level 3A B-double combinations (with or without a quad axle group)
- Double decker buses.

1.5 The benefits of change

A new approach will mean that we will be able to achieve our objective to create PBS networks across the whole NSW road network to unlock freight productivity, by enabling vehicles able to carry more freight to operate on existing equivalent vehicle networks.

What are the benefits of this Policy Framework?

- Provides a strategic planning approach to heavy vehicle access using the benefits of the national PBS scheme (enables vehicles of higher productivity and safety through 'innovative' vehicle design) and consistent with national initiatives
- Provides clarity to industry thus allowing them to plan their transport operations and investment in new more productive vehicles
- Reduces red tape for industry by having a streamlined policy that promotes access on a network basis, rather than ad hoc decisions for access via permits
- Assists and encourages Road Managers (Roads and Maritime and local councils) to make timely access decisions consistent with Future Transport 2056 directions, i.e. provides a systematic basis for the future development of strategic freight networks (including corridor strategies) to inform investments by Road Managers. It assists in identifying the need for freight-focused investment, or for programs of work for heavy vehicle access to maintain and enhance our state-wide productivity by identifying where the needs of freight vehicles are strongest.

2. Building an effective road network

The NSW road network has been designed over time to meet the needs of semi-trailers and B-doubles. As a result, parts of the network are constrained in trying to meet the access demands for freight movements using larger vehicles such as HPVs or vehicles running at Higher Mass Limits. Road network characteristics that impact on HPV access include:

- Strength and design loading capacity of ageing bridges
- Condition and strength of road pavements
- Road geometry, width, grades and intersection layouts
- Railway crossings and traffic lights
- Provision of rest areas and decoupling sites
- Suitable and sufficient opportunities for overtaking longer vehicles.

The Framework identifies 30 metre PBS Level 2B Vehicles as the next PBS vehicle to be permitted wider access on NSW roads using a staged approach. PBS Level 2 Vehicles include A-doubles and super B-doubles that are 30 metres in length. These vehicles are able to operate on the existing B-double network with minor infrastructure upgrades. The first step will be to increase the permit-based access before going to a network approach. The network will be opened up in a staged approach.

The primary vision is to develop a PBS 2B network for access by notice, as PBS 30 metre vehicles are safer and provide up to 30 per cent payload improvement and generally fit on the current B-double network. The Framework will guide a staged approach to introducing access

for these vehicles on key freight networks as priority targeted infrastructure upgrades are completed under the relevant corridor strategies. This will include the Hume, Pacific and Golden highways and parts of the Sydney GMA, including key local road connections.

This will provide long called-for certainty to industry and ensure PBS 2B vehicles can drive between Sydney, Melbourne and Brisbane, including Port Botany to Western Sydney freight precincts.

The Framework will also address access for other HPVs such as Modern Road Trains which meet the PBS Level 3 Standards along the Newell highway and eventually a PBS 3A network east of the Newell Highway. The longer term vision is to build a 36.5 metre PBS 3A network on specific corridors (not including within the Sydney GMA) following broad community consultation. These vehicles would be able to carry a further two pallets per trailer compared to a PBS 2B combination. Access for these vehicles would require resolution of issues, such as rest area capacity, longer passing lanes, and de-coupling areas to break down vehicles into smaller combinations where access to urban areas is required.

The Framework will also improve the efficiency of double decker buses in the Sydney GMA by allowing increased mass limits on a connected network. The use of three axle double decker buses on key service routes in Sydney will provide enhanced passenger transport outcomes, improving the efficient utilisation of the road network.

Bridge assessments are also a critical determinant for access for mass constrained structures, but require specialist engineering skills. Work is proceeding at a national level to standardise Bridge Assessment Rules and Guidelines.

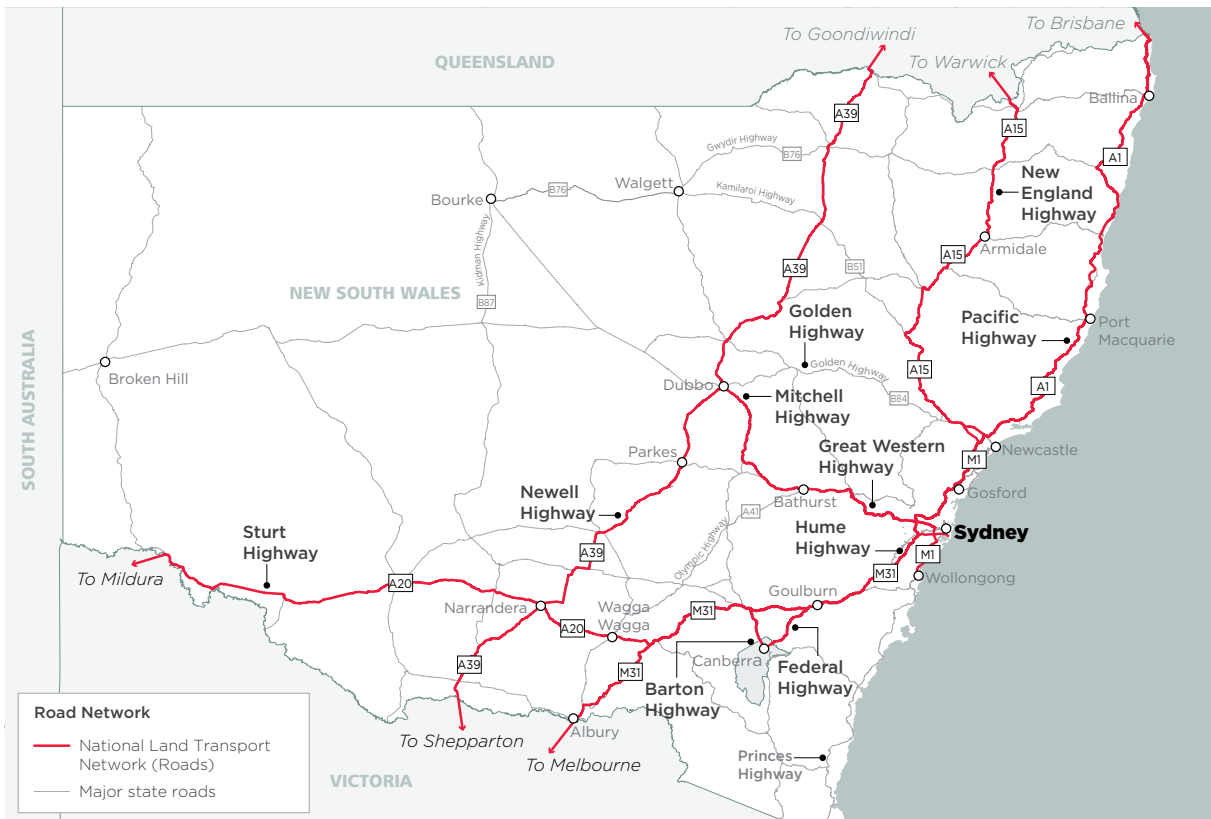


Proposed staged approach

1. PBS Level 2B Combinations – Interim Access Policy with Permit



2. Regional NSW Freight Road Network (Major State Roads and National Land Transport Network)



3. Key policy outcomes

The Framework identifies priority freight corridors and covers existing and new access arrangements

The focus is to develop a PBS 2B network for access by Notice and to open access for other HPVs along the Newell Highway (longest highway in NSW running north to south through the state and providing an essential connection for Western NSW) and eventually a PBS 3A network east of the Newell Highway.

As part of building a HPV network, a High Mass Limit (HML) network is also planned for Sydney. This will involve upgrading some bridges, particularly on local roads. A brief overview of the key policy outcomes are listed below:

High Productivity Vehicle/location	Current Access policy	Stage 1 Access Policy (0-5 years)	Stage 2 Access Policy - Vision (5-10 years)
PBS Level 2B combinations			
Sydney GMA, Port Botany, Regional Priority Routes	Access by permit on a case by case basis. No dedicated network	<p>Access by permit including pre-approved permit</p> <p>Commence with Sydney Motorways and sections of Hume, Pacific and Golden highways that are considered suitable, and supporting road networks</p> <p>Build strategic metropolitan and regional networks with local councils/Joint Organisations</p>	<p>Access by gazetted as of right access (Notice) to PBS 2B State-wide network across Sydney GMA and the regional NSW road freight network</p> <p>With supporting road networks</p>
Modern HPVs - PBS Level 3A Vehicles, prescriptive B-triples, Modular B-triples operating at GML, and modern Type1 (A-double) road trains meeting PBS level 3 standards			
On the Newell	Access by permit and notice to some sections of Newell Highway	Access by permit and notice to additional sections of the Newell Highway as infrastructure upgrades are completed, and supporting road networks	Access by notice to whole length of Newell Highway and supporting road networks

High Productivity Vehicle/location	Current Access policy	Stage 1 Access Policy (0-5 years)	Stage 2 Access Policy - Vision (5-10 years)
East of the Newell	Access by Permit and Notice to approved roads only; no dedicated network	Access by Permit including pre-approved permit and Notice on a case-by-case basis while network finalised	Access by Permit and Notice PBS Level 3A Network on freight routes not including within Sydney GMA, following community consultation and resolution of issues such as rest area capacity, longer passing lanes, and de-coupling areas to break down vehicles into smaller combinations where access to urban areas is required
West of the Newell	Access by Notice to Road Train network	Access: status quo	Access: status quo
Buses	Facilitate higher productivity buses during peak times on current network	Improved efficiency of double decker buses in the Sydney GMA by allowing increased mass limits	Improved efficiency of double decker buses in the Sydney GMA by allowing increased mass limits



4. Safety

The overarching aim of the Framework is to achieve safe and efficient movement of road freight in NSW now and into the future, and to ensure that overarching policy objectives for freight are keeping pace with technological change and facilitating access for new safety systems and safer vehicles.

The plan will also align with the guiding principles of the NSW Centre for Road Safety's NSW Road Safety Strategy 2021 which elevates safety design in infrastructure and safety technologies in new vehicles.

PBS vehicles are tested against 16 safety standards and four infrastructure standards to ensure they fit the existing road network and how the vehicle performs on the road, by assessing the particular vehicle design against safe measures, rather than assessing a vehicle based on prescriptive limits. For example, these measures include the vehicle's dynamic performance at low speed and the rearward amplification measuring the whip crack effect of a lane change manoeuvre at high speed.

Road factors include consideration of outcomes of any road crash investigations reports, road safety audits and road safety assessment tools on relevant roads and routes. Safe interaction with other infrastructure, such as rail level crossings, should also be considered.

PBS vehicles offer the following advantages:

- HPVs can carry an increased payload, putting downward pressure on the number of trucks in operation, leading to fewer trucks on the road than would otherwise be the case
- PBS includes prescribed safety features such as anti-lock braking (ABS) and trailer roll stability control

- By giving certainty to industry to invest in their truck fleet, more modern trucks will be on our roads with the latest technology such as autonomous emergency braking, lane departure warning and some will have real time safety messages displayed in cabs.

The Heavy Vehicle Access Policy Framework supports best safety outcomes through:

- policy implementation in a staged approach that is monitored and reassessed at each stage.
- better congestion management with the potential to take 20,000 trucks off the road by 2036.
- industry harmonisation within and between states by reducing confusion over requirements and creating better policy consistency.
- encouraging vehicle upgrades where technology in newer vehicles is driving safety improvements.
- the completion of a three year monitoring period across 15 operators where no accidents were reported.
- published industry data that indicates reduced accident rates such as that published by Austroads, The National Transport Commission and VicRoads.¹

¹ Austroads (2014) Quantifying the Benefits of High Productivity Vehicles. Research Report AP-R465-14; National Transport Commission (2017) report; Moving More with Less (VicRoads).

5. Industry benefits

Heavy vehicle operation is vital to the NSW economy through its role in delivering freight and carrying passengers efficiently within the state and across borders.

Provision of improved network access and streamlined access policies for heavy vehicles is crucial for accommodating the future freight task and supporting the economic growth of the state.

The benefits to industry include:

- Supporting industry and their safety priorities
- Provides certainty for industry to invest in new trucks
- Corridor strategies on State Roads to guide transport infrastructure investment taking into account PBS 2B vehicles and other HPVs operating at HMLs
- HPVs will be able to drive from Sydney to Melbourne and Brisbane, and from Port Botany to Western Sydney
- PBS Level 2B trucks at 30 metres translates to a 30 per cent increase in cubic payload capable of carrying two 40-foot containers, compared to a 40-foot and 20-foot on a normal B-double
- A recent National Transport Commission report² regarding the benefits of HPVs found there are significant cost savings to operators, industry and the community for each TEU transferred from smaller trucks to HPVs. By 2034 it is estimated that truck operators will save \$17.2 billion in cost savings using PBS vehicles
- If 20 per cent of articulated and B-double trucks carrying cubic freight convert to HPV, it will reduce 20,000 trips per year. From 2014 – 2016, PBS vehicles saved about 440 million kilometres in road mileage. By 2034, PBS vehicles are estimated to exceed this saving reducing 8.9 billion kilometres of heavy vehicle travel {based on a 7 per cent growth rate}
- Fuel consumption savings – PBS vehicles can save millions of litres of fuel consumption reducing CO2 emissions. In 2016, use of PBS vehicles reduced the need for fuel to deliver Australia's road freight task by 94 million litres, and resultant CO2 emissions by 250,000 tonnes. (By 2034, PBS vehicles would save 3.2 billion litres of fuel and 8.7 million tonnes of CO2 emissions).

Around 15 operators have been permitted limited use of PBS 2B vehicles on the Sydney motorway network and around Port Botany over the last three years. No road safety issues or congestion issues were reported. Transport and Performance Analytics modelling has estimated reductions in kilometres travelled by up to 32 per cent and reductions in CO2 emissions by up to 22 per cent compared to B-doubles.

2 National Transport Commission Report. Assessing the effectiveness of the PBS Scheme, August 2017

6. Implementation

Implementation of the Framework involves the following key actions:

- Staged implementation – Initial access will be limited and focused on Sydney motorways, Port Botany and the Sydney GMA, and the Hume, Pacific and Golden highways and supporting road networks.
- Access by permits – access will initially be by permit as performance is evaluated and a suitable network is put in place, including infrastructure upgrades, before going to a network approach.
- Building partnerships – with local councils are vital to developing connected networks on local roads to support industry needs and reduce the need for breaking up HPVs prior to accessing final destinations. The focus will be on building strategic regional networks with key local councils and joint organisation of councils (JOCs)
- Streamline administration processes – the Framework identifies the need to reduce red tape for industry by having a policy that promotes access on a network basis, rather than access via permits, and to streamline the existing permit process. TfNSW will work with the National Transport Commission, National Heavy Vehicle Regulator and Roads and Maritime to promote more efficient access and permit arrangements, particularly for PBS combinations.

Actions in the first 12 months:

- **Port Botany and Sydney GMA**
Access by permit for PBS 2B vehicles in the Port Botany area will be considered by Roads and Maritime. Using a staged approach, a network will be established for PBS 2B vehicles involving use of the Sydney motorway network, with minimal use of local roads, particularly linking Port Botany to freight sites.
- **Improving HML access in Sydney GMA**
TfNSW will work with Roads and Maritime and local councils to identify key freight routes across Sydney and examine those structures constraining HML access to see if more detailed bridge assessment and assured compliance could open up access.
- **Hume Highway**
Access along the full length of the road at volumetric masses will be considered for PBS 2B combinations. Relevant Roads and Maritime regions to monitor rest areas and apply for funding for upgrade of priority rest areas identified in line with the Rest Area Framework.
- **Pacific Highway**
Pending completion of full duplication of the Pacific highway in 2020, the interim policy approach is that access will be considered for sections of the highway that are already duplicated and suitable for PBS 2B vehicles. Further sections can be opened up that are continuous with that section of the road as soon as upgrades are completed.

- **Golden Highway**

Access will be considered under permit for sections of the highway that are suitable for PBS 2B vehicles for end to end freight tasks. Access will be developed in consideration of regional issues, and regional networks developed with local councils and relevant stakeholders.

Key stakeholders are engaged in implementation of the Framework, through new and existing communication structures including:

- Case-by-case targeted stakeholder engagement to seek input to inform implementation plans for improving HPV access on state road freight corridors

- Ongoing advice on progress to advisory and industry groups as required

For further information on the implementation of this framework please contact Roads and Maritime at roadfreight@rms.nsw.gov.au





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