NHVR
National Heavy Vehicle Regulator

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National Transport Commission
Att: HVNL Review Project Team
Level 3, 600 Bourke Street
MELBOURNE VIC 3000

NHVR'S Submission to the Easy Access to Suitable Routes Issues Paper

The National Heavy Vehicle Regulator (NHVR) welcomes the opportunity to respond to the third Heavy Vehicle National Law (HVNL) Review Issues Paper on *Easy Access to Suitable Routes*.

Since February 2014, the NHVR has been responsible for managing the heavy vehicle access functions within the HVNL and has a well-developed understanding of the issues with the existing framework and impact that it is having on all stakeholders involved in the process.

Over the past five years, we have undertaken a range of significant reforms to the process for heavy vehicle operators to obtain access, including new systems such as the NHVR Portal, education and training for road managers on their role, as well as a major focus on national notices and pre-approvals to deliver easier access to the most suitable routes.

The NHVR believes that we can have safe, efficient and productive heavy vehicle movements supporting a strong and prosperous Australia achieved through developing:

- Collective awareness of heavy vehicle impacts on infrastructure.
- Understanding of the infrastructure capacity to handle the movements.
- Well-formed understanding of the demand for movements.

While changes to the HVNL will restructure how this can be achieved, the NHVR is continuing to work towards delivering the best possible heavy vehicle access policies, processes and systems that delivers on the original intent of the Law.

This is a unique opportunity for all Transport Ministers to agree to a new national access management framework that delivers significant safety, efficiency and productivity outcomes for Australia.

Yours sincerely

Sal Petroccitto
Chief Executive Officer

Easy Access to Suitable Routes – NHVR's Submission

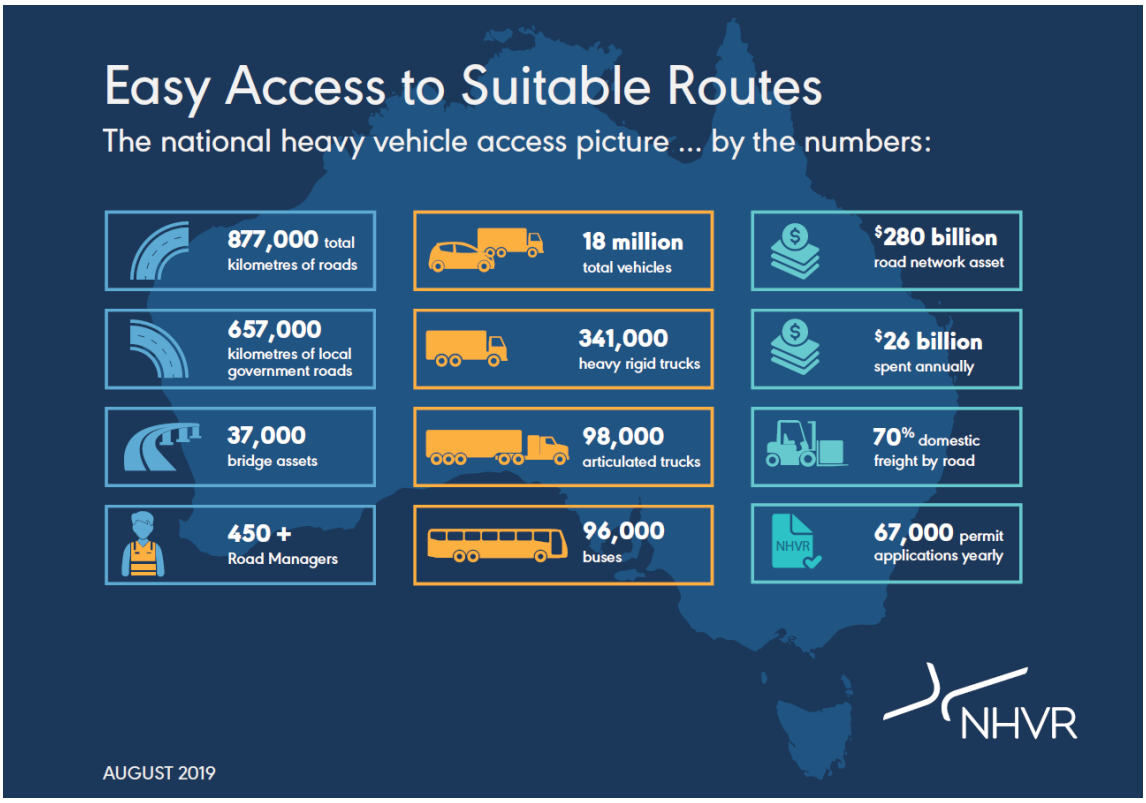
Introduction

Heavy vehicles provide a critical link in the end-to-end supply chain process for moving and storage of goods and people across Australia for local and international use. The NHVR administers the HVNL and has overarching responsibility for managing heavy vehicle access. This is generally a coordinating role, working with road managers to deliver an access system on public road networks.

The NHVR and road managers have implemented numerous measures over the past five years that continue to improve access outcomes under the current legislative framework. Some of these have included:

- Facilitation of access requests for over 200,000 permit applications for industry to enable restricted access vehicles to move safety and productively across the country.
- Establishment of the NHVR Portal as a national service delivery platform for the transport and logistics industry to engage with relevant governments for their network access needs.
- Focused on a range of national harmonisation initiatives, including national notices and standardising processes, aimed at minimising the compliance burden on the heavy vehicle transport industry by eliminating inconsistent access conditions across state and territory borders.
- Developing road manager and heavy vehicle industry support and education programs supported by dedicated resources and targeted engagement activities.
- Working extensively with road managers to gain pre-approved consent for a range of routes, establishing over 1,900 pre-approved routes and 918 gazetted requests across the country.

The issues outlined by the NTC in the *Easy Access to Suitable Routes Issues Paper* identify many of the key challenges with the current HVNL that have been experienced by the heavy vehicle industry and the NHVR. In response to the Paper, the NHVR has prepared a submission that considers the current issues being faced by all parties involved in the heavy vehicle access process, and presents a number of solutions to address them.



Current Issues *for* Heavy Vehicle Access

Summary Statement

The current management of heavy vehicle access under the HVNL is not functioning as intended, when a single national heavy vehicle law and regulator was established. The NHVR has implemented numerous measures that continue to drive improved access outcomes. However, structural barriers remain to delivering a truly national, efficient and integrated access system.

A key challenge in achieving this outcome is an access system that concentrates decision making for restricted access vehicle movements in the hands of over 450 road managers who own and/or manage the road network. This change, brought about by the HVNL, has resulted in a system marked by inconsistent access decisions by individual road managers, often made on their own local assessment criteria and interpretations access risk (noting that previously heavy vehicles moved on the majority of the road network without any requirement to assess access risk).

While the NHVR has a coordinating role under the HVNL and work closely with road managers to deliver the best possible access outcomes, it has limited influence over road manager access decisions. The NHVR's role is restricted to accepting access permit applications from heavy vehicle operators and directing consents to the relevant road managers for decision. This is a manual, labour-intensive process that is not scalable to achieve the efficiencies demanded of a responsive, modern access system. We cannot develop integrated heavy vehicle networks under a current legislative system that requires consent for access on a road-by-road basis.

Road managers often struggle to assess heavy vehicle access requests that are technically complex. This results in decisions based on risk appetite rather than measurable criteria. Some road managers lack the resources and expertise to complete technically complex assessments. This includes conducting bridge assessments and understanding bridge loading effects. In addition, they also have difficulty understanding how risk is managed in a broader, regional or even national sense (nor does it appear relevant at the local level on a 'case by case' basis).

It has been noted that some road managers (and third party organisations) have difficulty in understanding which parts of determining access are their responsibility and which are the NHVR's – and are sometimes unsure of accepting advice from the regulator. Many elements of access decisions do not vary with local circumstances, but rather than adopting a national position established by the NHVR, near-identical assessments are being repeatedly conducted by large numbers of road managers – yielding different outcomes.

Over the past 12 months, the NHVR has processed 41,345 road access permit applications from customers, with 94% of those requests approved. Permits that are routinely approved can be administered via notice with minimal risk and increased efficiency. In a sample selection of 47,000 permit renewals sent to road managers for consent, only 350 of those were refused indicating a 99% approval rate with little to no change to previous conditions applied.

These combined practices consume much greater resources than necessary, result in less informed decisions and poor heavy vehicle access outcomes. They contribute to frequent delays in making consent decisions – often well beyond the legislative limit of 28 days. Road managers due to a lack of historical responsibility in this space often lack the skills, experience, systems and tools to provide an efficient assessment service, despite the best of intentions in many cases. Further, there is an undercurrent of apprehension from road managers in allowing access due to many factors including potential infrastructure constraints.

The lack of transparency and consistency in heavy vehicle access decisions, and the over-reliance on permits deny industry the certainty they need to plan their business operations. This extends far beyond just heavy vehicle operators, but also to their customers who include all industries, increasing costs that are ultimately passed onto consumers and harm our export competitiveness. Certainly and justifiably the focus of road managers remains on safety and amenity as opposed to economic gain; finding the balance appears to be a challenge.

Pre-HVNL, some state and territory governments considered network access and permit requests more broadly than just their own roads and infrastructure. Clarification in the HVNL of individual road managers' responsibility for consenting to access realigned their formal role to heavy vehicle access on major roads only (ie. jurisdictionally owned). A key benefit of a national is to enable the development of integrated networks with seamless access across state and locally managed roads, which needs to continue to be a major focus.

If the heavy vehicle network planning and development task is not managed effectively, it may contribute to inefficiencies in and higher costs for the heavy vehicle transport sector. The NHVR believes it can and should be better equipped to play a stronger role in the overall decision making around network access to deliver greater productivity benefits. We believe this would require some changes to how we partner with road managers to deliver a national heavy vehicle access system.

Key Issues and Considerations

The NTC's *Easy Access to Suitable Routes Issues Paper* outlines a number of challenges faced by transport operators, government and the community, including the following high level statements:

- Inefficient access costs Australians.
- Determining access is complicated.
- Decision making process is prescriptive and inflexible.
- Decision making is inconsistent.
- Risk controls are insufficient.
- Many challenges are beyond the current HVNL.

In addition to the challenges outlined in the Issues Paper, the NHVR would also highlight a number of additional challenges and issues for consideration:

Policies and Processes

- Freight movement is not physically constrained by borders, yet there remain differences for the heavy vehicle industry in access decisions depending on various road manager involvement, even where there is no difference in the road infrastructure. Providing consistent, predictable and timely decisions for heavy vehicle access should be the key NHVR objective, regardless of the jurisdiction or the route being proposed.
- Relevant laws and standards are not applied consistently across jurisdictions and have been slow to change to meet new circumstances, thereby frustrating innovation for customers, road managers and the NHVR. Addressing perceptions of an uncompetitive and inequitable operating environment (ie. lack of a level regulatory playing field) and vehicles essentially 'running hot' without the appropriate approvals is important.
- The current regime for granting access authorisations does not promote flexible or timely access decisions or harmonisation of national notices. The review should produce a Law that gives the NHVR more flexibility to progress impasses, whilst still maintaining the fundamental role of the road manager in respect of their infrastructure. National harmonisation of other aspects under the Law has been challenging, such as moving permit duration from 3 months in some states to 12 months across the country, which took over three years to progress before full endorsement was achieved.
- There is no deemed approval or refusal provisions in the HVNL for access permit applications, which means that if a road manager has not responded within 28 days, there are no powers for the NHVR to approve or refuse the application. In addition, there is no ability for the NHVR to consider applications where the impact is the same or less than previous decisions that have been made, potentially enabling 'deemed approval' with conditions (if previously granted).
- The current HVNL has a narrow focus in that it applies constraints on road managers but not on the end to end access process. The law needs to move to a holistic view of the overall access process, including constraints / timeframes around NHVR's involvement and that of third parties.

Road Managers and Infrastructure

- The current process for obtaining road manager consent does not promote timeliness or efficiency for access decisions. This is a key matter for reform of the HVNL with a view to broadening what the NHVR and road managers can do to make the process more flexible. The triggers for road manager consent need to be reviewed. Rather than an 'all-or-nothing' approach as currently exists, there is room for a risk-based approach to road manager consent/consultation that does not fundamentally remove the road manager's right to decide access but would greatly increase the flexibility for issuing access authorities.
- Road managers often struggle to assess network access requests that are frequently technically complex and often decided more by risk appetite than measurable criteria. They lack the resources and expertise to make technically complex assessments – an example being bridge loading effects. They lack the perspective of how risk is managed in a broader, national sense. Further work is required to assist road managers to perform these types of assessments and support the retention and reuse of this assessment data to improve consent decision response timeframes.
- Road network access is impeded by inadequate and ageing infrastructure, which means that the funding invested into infrastructure maintenance and upgrades needs to be targeted to the most appropriate areas. The design and suitability of road infrastructure needs to consider the heavy vehicle movement, as well as the design of modern heavy vehicles. The NHVR is well positioned to influence the operating environment through permit decisions, including Australian Design Rules (ADR) and infrastructure planning, to enhance industry productivity.
- As road managers develop their areas under land use planning laws and therefore expand the road network, greater consideration needs to be given to heavy vehicle access in order to build in additional capacity. Potentially this additional capacity can be leveraged through existing mechanisms in the planning laws nationally.

Technology and Data

- As the NHVR Portal platform begins bedding down and delegated permit responsibilities are returned to the NHVR, consideration needs to be given on how the access management function will evolve into the future. It is important that the new HVNL allows the NHVR to take advantage of technology solutions to maximise business operations, while increasing the number of pre-approvals and gazettals by road managers to reduce the need for permits.
- Improving coordination and consistency in responding to the demands of the rapidly growing road freight task across the country for the benefit of the national economy. Reviewing heavy vehicle movement trends through data analysis will allow transport operators and governments to develop insights on how transportation demands and how the access management framework can improve.
- Continue to work closely with key government partners to see an increased adoption of appropriate technology solutions, whereby satellite tracking and wireless communication technology remotely monitors where, when, and how heavy vehicles are being operated on the road network. Opportunities exist to reduce permit requirements where operators take up this technology to demonstrate access compliance.
- There remains a fragmented approach to maintaining infrastructure data and creating networks across the country. This means that a heavy vehicle operator may need to visit multiple jurisdictional transport agency websites to confirm the latest version of their asset data or relevant network. This means that there is no real time access to a single national road dataset to benefits all stakeholders.

Awareness and Engagement

- Targeted and focused education of stakeholders continues to be an ongoing need and activities to fully support this have not been provided. By all stakeholders having a better understanding of their requirements and obligations, along with the support they can access, efficiencies can be found within the network access processes and arrangements.
- Support functions such as the LGAQ Liaison Officer role has demonstrated how the NHVR can deliver support to local government road managers in their responsibilities under the law. However, the role

of awareness and education should not rest solely as a responsibility of the NHVR.

- The heavy vehicle classification system adds a great deal of complexity and red-tape to the process, and stakeholders have difficulty understanding the framework of categorisation. To improve the process and simplify understanding based on risk, options could consider having two classes, such as oversize overmass and freight.

Addressing the Issues

The current piecemeal approach to heavy vehicle network access will not yield the long term economic benefits that can be achieved through the introduction of safer and more productive (i.e. performance based standards) vehicles on the road network.

We need to deliver a modern access regime that moves away from requiring multiple individual approvals based on a vehicle type (from more than 450 road managers), to providing approval based on nationally set infrastructure parameters. This approach requires a greater understanding of infrastructure capabilities and limitations.

NHVR has learnt a lot over the last five (5) years by bringing access under a single system and through road managers becoming more aware of their responsibilities. In particular, we know:

- It is not sustainable to develop effective heavy vehicle networks by repeatedly requesting case-by-case access consent from road managers, often for vehicles with the same risk profile. This results in ad hoc networks, lack of permit consent transparency for customers and prevents the heavy vehicle industry and its customers from effectively undertaking critical freight tasks.
- Many road managers are over-burdened and don't have the necessary resources and capability to assess technical access requests so often default to rejecting applications or over rely on permits when they are not required.
- Case-by-case approval process doesn't support a strategic network planning approach which involves the protection of freight gateways in state and local planning instruments. The freight network and its heavy vehicle risk classification must be established and supported by evidence to inform planning decisions.
- There is often no 'correct answer' to access assessments – there are varying degrees of risk. Road managers largely base risk on local priorities which yields inconsistent outcomes that often inaccurately reflect the level of risk being controlled. There needs to be greater support for road managers to make nationally consistent risk-based decisions.

Heavy vehicle access is not going to be effectively resolved by making incremental improvements. We now have the foundations established to strongly pursue the genuine safety and productivity benefits that can be achieved through a more efficient and modern access regime.

Creating Easier Access to Suitable Routes

In consultation with industry and government stakeholders, the NHVR has considered how improvements to the legislative framework would ensure that industry had easy access to suitable routes.

Future State Vision

Future State Vision for Heavy Vehicle Access

We have **safe, efficient and productive** heavy vehicle movements supporting a strong and prosperous Australia achieved through:

- Collective awareness of **heavy vehicle impacts** on infrastructure
- Understanding of the **infrastructure capacity** to handle the movements
- Well-formed understanding of the **demand for movements**

We have a **risk-based framework** for heavy vehicle access which considers vehicle performance and the transport task to the road infrastructure characteristics.

We have **dynamic national networks maps** that understand the suitability of heavy vehicle travel on the most suitable route enabled through up-to-date asset data.

We have **shared movement data** exchanged by industry for increased network access availability, made available through an appropriate assurance framework.

We have **targeted infrastructure funding** based on a strong understanding of the use and increasing demand for networks which informs maintenance and upgrade programs.

1. Risk-based Access Framework

We have a risk-based framework for heavy vehicle access which considers vehicle performance and the transport task to the road infrastructure characteristics

Elements:

- Risk-based processes for assessing networks with a focus on developing notices for each vehicle type.
- Use an envelope approach to manage complexity and grouping previous access decisions.
- Fast track process for lower risk permits or those with previous permit history on the same route.
- Deemed approvals for heavy vehicle permit applications that have been approved on the same route.
- Road managers to focus on developing network understanding and network growth.
- The NHVR to develop a *National Risk-based Access Assessment Code.*

Description:

Risk-based Approach

- With respect to a modern access regime, the new law should focus on establishing a national risk-based access framework.
- The risk-based framework would enable a move from the current practice of road managers consenting to individual heavy vehicles (types) to one in which they consent to the parameters of a road or bridge i.e. what dimensions, mass can the infrastructure safely accommodate and enable as of right access for heavy vehicles that can safely operate within the parameters.
- Road managers would also identify clear 'no go' zones where the infrastructure cannot withstand certain heavy vehicle movements. *Note: This model has already been successfully adopted in Tasmania through the Department of State Growth OSOM Model.*
- A national risk assessment framework drives a shared responsibility by both road managers and industry – while road managers are required to know their infrastructure capabilities, transport operators will have a requirement of self-assessing their vehicle access on the network in line with this capability. *Note: Infrastructure capability can be made transparent to industry through a national mapping tool in the NHVR Portal.*
- Heavy vehicles that are more productive and equipped with increased safety standards and therefore perform better would be a priority in the risk-based assessment (similar to performance based standard assessments). This would facilitate a move away from challenges with the current mass and dimension class systems (i.e., class 1, 2, 3 heavy vehicles) and encourage adoption of a safer and more modern national fleet. Through a risk-based approach, we could simplify the class system to as little as two categories: freight and OSOM.
- The risk-based approach would retain the principle of road managers determining heavy vehicle access on the roads they control, but create a shift to approving infrastructure access based on national infrastructure parameters rather than vehicle type.
- The new HVNL would ideally move away from road managers responding to access requests with a 'Yes' or 'No' and encourage heavy vehicle access decisions being made to more accurately and consistently reflect relevant and material risks. This will encourage more informed dialogue on relevant matters and provide targeted intervention on network deficiencies and risks.
- The NHVR as the regulator should set national risk safety standards which would be made transparent and require road managers to adopt a consistent approach.
- This approach removes the need for permits through increased knowledge of infrastructure. Where it is deemed that permits are required, they should only be needed for movements considered high risk in line with the national standards.

Roles and Responsibilities

- Delivering efficient networks needs to be a joint commitment, we need to collectively reduce the over reliance on over-burdened individual road managers to determine heavy vehicle access.
- To deliver a modern risk-based approach to access, it is essential road managers know the capabilities and limitations of their roads and bridges (which is currently significantly lacking at a local level). The NHVR has already developed the capabilities through the NHVR Portal whereby road managers and industry can communicate directly through one single point regarding access requests.
- The NHVR is now in a position where it can refocus its remit from predominantly being the coordinator of permits between industry and road managers, to taking a strategic leadership role in facilitating productive heavy vehicle networks – productivity ambassadors.
- The NHVR as the national regulator should take responsibility for setting the standards for a risk-based access framework and work closely with industry and road managers to ensure the standards are appropriately applied across the country. This would include the development of guidelines for the *Risk Assessment Model* and *Asset Data for Route Assessment.*
- The NHVR also believes it is important that we work closely with federal, state and local government planning departments to ensure freight networks are properly established and protected.
- To deliver an increased focus on delivering strategic and productive networks, the NHVR would need to ensure it is equipped with the right expertise, including increased engineering resources, to provide ongoing support to road managers and industry.
- Under a risk-based access regime, the NHVR could apply risk principles in simplifying access arrangements for common PBS combinations. The performance of some combinations, such as PBS truck-trailers, has been proven through numerous PBS assessments. The NHVR has enough knowledge to specify key requirements of these combinations, our experience with which has shown would comply with PBS standards – without requiring applicants to submit to the expense and delays of being formally PBS-approved. These combinations could safely be granted equivalent or similar access to formally approved PBS variants.

Outcomes:

- Drive shared responsibility by transport operators and local governments through a national risk-based assessment framework. Requiring road managers to understand their infrastructure capability and industry to self-assess their vehicles based on the infrastructure (i.e. through a national mapping tool of infrastructure capability).
- Risk-based systems remove issues associated with 'pigeon holing' vehicles into the current mass and dimension class systems. As an example, this may enable an expansion of the HML network (considered by industry to be the biggest productivity boost since B-doubles) and encourage a safer and more productive national heavy vehicle fleet.
- Drastically reduce the need for permits so they are only required for movements considered 'high risk' in line with transparent national risk parameters.
- Enable the NHVR to operate as productivity ambassadors (rather than coordinator of permits) that provides a strategic leadership role in delivering productive freight networks, including establishing protected freight gateways for planning purposes.

2. Dynamic National Network Maps

We have dynamic national networks maps that understand the suitability of heavy vehicle travel on the most suitable route enabled through up-to-date asset data

Elements:

- Asset management standards developed and nationally agreed for data sharing.
- Asset management tools available for managing infrastructure and restriction information.
- Asset management database for centralised access to asset and restriction information.
- Heavy vehicle routing enabled by asset data and network/vehicle matching.
- Establishment of the *Heavy Vehicle Enforceable Network* (HVEN).

Description:

Network Data Management

- The heavy vehicle industry relies on geospatial information for route planning and fatigue management. The current need is to effectively deal with geospatial information received from jurisdictions that are not in the same format or standard. Currently, data cleansing and aggregation is a significant time impost on the NHVR. Due to this, geospatial information is not always accurate when needed by heavy vehicle operators to plan movements.
- NHVR believes that a key component of the future state is all stakeholders having access to *reliable and accessible geospatial intelligence,* underpinning the vision of a safe, efficient and productive heavy vehicle industry. This will deliver dynamic national heavy vehicle network maps for all stakeholders to use and continually update.
- By adopting a modern access regime based on the premise of telling industry 'where they can't go', rather than 'where they can go', local government road managers would identify clear 'no go' zones based on transparent national risk parameters for infrastructure – rather than repeated yes/no answers to access based on heavy vehicle types.
- Open data standards for infrastructure and network attributes already exist. Where appropriate, data should be publicly available unless considered unsuitable for disclosure (for example, privacy restrictions).
- Establishment of the *Heavy Vehicle Enforced Network* (HVEN) – a single authoritative source of national transport network spatial data, including infrastructure data, date classified road constraints, conditions and national networks. These support improvements to data quality and increased confidence of stakeholders, a key recommendation of the OSOM Review.
- There will need to be an appropriate *GeoPortal*, enabling self-service geospatial data to be accessible, providing tools for exploration, analysis and reporting. It will support the review of current and proposed key freight routes to support funding decisions and land-use planning processes, a priority action for the Inquiry into National Freight and Supply Chain Priorities.
- Technology providers would be able to leverage national heavy vehicle data and mapping services, which has been challenging and a regular request by a number of operators and solution providers.
- The NHVR would be able to offer a service such as *LiveDrive*, which would enable drivers to virtually pre-drive their selected route, relevant conditions with the context of live events, thereby increasing road safety for the public and drivers alike. "*As a driver, I would like to see, on my mobile device, my route overlay with live alerts on traffic or changes occurring on my approved route, and conditions of road segment and get notifications when coming near these segments or when I'm off the approved route to ensure safety*."
- By focusing on network management and updating their asset data, road managers can be assured that risks to road infrastructure they control are being effectively managed. This will give them

confidence to consent to access that does not rely on them scrutinising individual permit applications.

Use of NHVR Portal and Data Hub

- Over the last five years, the NHVR Portal capabilities have been enhanced to deliver a number of automated processes including mapping functions.
- The NHVR Portal has the ability to store state and local infrastructure asset information and link this information to a national mapping system. This will provide road managers and industry transparent oversight of the infrastructure capabilities and access availability of freight networks across the country. As mentioned previously – the NHVR has funding to start developing this capability through funding in the 2019/20 Federal Budget.
- Including this function in the Portal would add to the existing route planner capability whereby heavy vehicle operators can plot their heavy vehicle route and identify which part of their route falls on a gazetted heavy vehicle network, who the road managers are and where rest stops are located.
- The NHVR also has the ability to analyse all permit applications received by industry, which includes the heavy vehicle combination details, the networks where access has been requested and the road manager access consent (yes or no) as well as reasons for rejections. This information could be easily drawn on now to start the process of delivering a modern access regime focused on infrastructure capabilities.
- This NHVR Portal will also soon begin rolling out additional transactional services, including the National Heavy Vehicle Accreditation Scheme (NHVAS), Vehicle Standards and PBS design approval process, which will enable heavy vehicle operators to locate information and better plan their journeys through the NHVR Portal.

Outcomes:

- Enable smart route planning 'in-vehicle' made possible through national network maps matched to vehicles, available to all stakeholders and maintained by the infrastructure owners.
- Improved efficiency of the supply chain through accurate data supplied by road managers at 'real time' to deliver improved decision making processes and reduced assessment timeframes.

Case Study: Tasmanian Department of State Growth's OSOM network

The NTC's issues paper describes how the Tasmanian Department of State Growth worked with road managers to assess key networks and develop a notice-based network for OSOM heavy vehicle access. This project has particular importance for understanding how we could establish a modern, risk-based heavy vehicle access regime. Key learnings that can be adopted in delivering a national regimes include:

- A central body (Tasmanian Department of State Growth - TDSG) funding and coordinating the assessment of key road infrastructure as necessary to develop integrated road networks.
- That work by TDSG supporting local government road managers in better understanding how their road infrastructure could accommodate the OSOM heavy vehicles – notice-based access for which was the objective.
- TDSG leading development of a risk-based access framework under which categories of OSOM heavy vehicles were granted access to the road networks in ways that reflected their relative risk to the relevant road infrastructure.
- TDSG working closely with local road managers to ensure the access framework was understood and agreed by all parties.

The NHVR believes this project can serve as a model for expanding a risk-based access regime on a national scale. It demonstrates how bodies responsible for coordinating heavy vehicle access can work effectively with road infrastructure bodies and managers, and the outcomes of a dynamic network map.

3. Shared Movement Data

We have shared movement data exchanged by industry for increased network access availability, made available through an appropriate assurance framework

Elements:

- Legislated framework for sharing movement data and use of appropriate technology solutions.
- Data sharing agreement between heavy vehicle operator and NHVR outlining its collection and use.
- Tools and systems for all parties to support the analysis of the shared movement data.
- Agreed governance and nationally applied framework for GPS tracking and data sharing.

Description:

- There is a strong perceived value in governments looking to partner with industry to gain access to or share certain information collected by GPS tracking devices in road transport vehicles to improve understanding in implementing targeted productivity, safety and compliance strategies.
- Most medium to large road transport companies (ten or more vehicles) already have technology systems installed in their vehicles which are designed to meet a range of complex business needs. These systems vary considerably and usually involve a substantial investment to address specific tasks and/or customer needs in regards to efficiency and safety.
- The collection of de-identified aggregated movement information will be made available to the NHVR and road managers for research to enable development of targeted policy solutions, as well as the management of and increase to national networks.
- It is important to leverage and share benefits from the huge investment transport companies have already made in adopting technology solutions by setting minimum standards, rather than mandating a prescriptive piece of technology or black box devices.
- The purpose of movement data collection will needs to be disclosed and included in a data sharing agreement between the heavy vehicle operator and the NHVR.
- Appropriate systems and tools need to be available for heavy vehicle operators, road manages and the NHVR to utilise the data and benefit from the movement data to inform better decision making regarding future movements, network optimisation, maintenance planning and future investment analysis. Current tools such as RAVRAT (offered by ARRB) would benefit from integration with this type of data.

Outcomes:

- As the NHVR and road managers access more movement data, it will improve the performance of the entire supply chain through increased awareness and network optimisation possibilities.
- Heavy vehicle operators will obtain access to increased networks through the sharing of GPS tracking data for the NHVR and road managers to improve network planning.

4. Infrastructure Funding Prioritisation

We have targeted infrastructure funding based on a strong understanding of the use and increasing demand for networks which informs maintenance and upgrade programs

Elements:

- Freight network analysis based on movement data and permit application outcomes.
- Understanding of current and future network demands for heavy vehicle movements.
- Infrastructure investment programs aligned with improved heavy vehicle access outcomes.

Description:

- Federal and state governments will need to provide support to local governments through a dedicated annual fund for assessments as well as capital upgrades and maintenance aligned with the network demand requirements.
- A number of programs and initiatives are already in place to support this approach, including Fixing Country Roads (NSW), Commonwealth led program to collect state infrastructure information and the 2019/20 Federal Budget funding commitment for bridge assessments on local roads including development of a local infrastructure asset database.
- A coordinated effort is required between all levels of government to build on these programs and provide a commitment to ongoing funding and management of assets.
- Making financial support available (particularly for key freight networks), will take the unnecessary pressure off local governments and remove the conflict they have in managing their role as the infrastructure builder and deliverer against the critical role as service provider for the heavy vehicle industry and the local industries and communities.
- There will need to be a commitment from road managers that where prioritised and targeted funding is made available, there is an increased level of access is as a result (to a defined standard).
- Ongoing funding requirement for maintenance of data hub and asset management tool provided by the NHVR, as well as maintenance inspections and assessment by road managers. This will also include funding to be maintained for the data collection and assessment of key infrastructure.

Outcomes:

- Dedicated annual federal and state funding program for capital works and maintenance to remove the conflict local government road managers experience being the infrastructure builder and service provider to industry and businesses.
- Smarter and targeted investment using network demand to increase productivity outcomes and connect networks of high value for the heavy vehicle industry.
- Delivery of local infrastructure assessments by road managers that will maintain the asset data to ensure that heavy vehicle access requests can match the vehicle to the most suitable route.

Roadmap for Achieving the Vision

How we can deliver a better access regime

To deliver on a modern, more effective heavy vehicle access regime, the NHVR's role would evolve. The NHVR would lead the development of heavy vehicle networks as a road network coordinator and productivity ambassador. We would lead the development of a National Risk-based Access Assessment Code which could be administered through the NHVR Road Manager Portal.

Coordinating heavy vehicle networks and maintaining a national repository of road infrastructure information in the Portal would position us to strategically work with road managers on developing their networks. We would do that by providing expert assistance in assessing road infrastructure of value to key heavy vehicle networks and advise on where investment would be of greatest value in infrastructure upgrades to open up access.

As the NHVR developed these capabilities and progressively built a national database of road infrastructure information, it would be able to more constructively engage with road managers in developing more productive heavy vehicle networks. This would allow us to transition away from processing permit applications and reduce the resource demands that places on the NHVR and road managers alike.

Principles of a risk-based access regime

Under a risk-based access regime, the NHVR would be authorised to make and use risk assessments in managing heavy vehicle access. The NHVR does not propose to diminish the authority of road managers in consenting to heavy vehicle road access. Rather, the NHVR would take a more proactive role in working with road managers – particularly by categorising access cases by risk. This would support road managers by better informing them of which are the key risks they should and need not focus on assessing to determine whether to consent to access or not.

There are two immediately identifiable means by which this NHVR could use risk assessments to help manage heavy vehicle access:

- Heavy vehicle envelopes.
- Road infrastructure data.

Using heavy vehicle envelopes to assess access

An envelope represents a heavy vehicle type, or characteristic to which a road manager has previously consented to access on a given road. The NHVR would use that consent as a precedent in assessing other heavy vehicle types with characteristics within the precedent's 'envelope' as low risk access propositions.

An example is given in **Figure 1** (next page), which shows how a 9 axle, PBS-approved truck-trailer can safely operate within the envelope of a 9 axle B-double. Where the B-double has broad road access, the truck-trailer has less. This analysis helps justify how the truck-trailer's access could be safely expanded.

Figure 1 Heavy vehicle envelope using a 9 axle B-double applied to a 9 axle truck-trailer

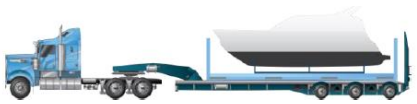
Vehicle Description	Max. Length (m)	Maximum Permitted Mass (t)			Network Access	Average Low Speed Swept Path (m)
		GML	CML	HML		
9-Axle B-double (Prescriptive) 	26	63	65	68.5	Yes, B-double Networks	8.7
3-Axle Truck and 6-Axle Dog Trailer (PBS) 	26	63	65	68.5	No	7.8

- ✓ Prescriptive B-double's have access to B-double networks under Notice. No permit required
- ✓ The truck and dog combination is required to go through the PBS scheme to obtain access.
- ✓ The performance between both combinations is very similar, refer to the LSSP.
- ✓ Maximum permitted mass is also the same.

Figure 2 shows another example using the envelope set by a low loader combination carrying a large indivisible load. These are commonly used and operate with broad road access. The same combination is used to carry large indivisible loads either cradled in a flat rack container or in an open top container. As these loads do not fall within the strict definition of an indivisible load, they may not access the road network available for indivisible load transport.

This distinction is largely definitional, with each configuration having a nominally equivalent risk. There is little reason for each to have different road access. The NHVR can use an envelope approach to developing road networks to clearly and simply demonstrate these principles.

Figure 2 Heavy vehicle envelope using a low loader combination carrying a large indivisible load, applied to a similar combination carrying a large indivisible load cradled in a flat rack container and in an open top container

Vehicle Description	Max. Mass (t)	Maximum (m)			Vehicle Class	Network Access (Notice)	Performance
		Length	Height	Width			
Prime Mover Low Loader Combination (OSOM) 	Up to 100t[1]	30 - 35[2]	4.9 - 5	4.6 - 5.5	**Class 1**	**NSW QLD SA VIC ACT** OSOM Networks	Similar load stability performance Deck height assurance to manage centre of gravity (COG)
Prime Mover Low Loader Combination (Flat Rack) 	Up to 100t[1]	30	4.6	5[3]	**Class 3**	**NSW** only OSOM Network	
Prime Mover Low Loader Combination (Open Top Container) 							

[1]The mass for varies depending on the number of tyres/axles on the trailer and state of operation
[2]The maximum length of 35m is only in Queensland
[3]Up to 5m wide depending loading type

- ✓ There is currently a Multi-State Load Carrying Vehicle Notice (Mass and Dimension) that allows these vehicles to operate on networks in each jurisdiction subject to conditions.
- ✓ NSW is the only state to adapt flat rack and open top containers
- ✓ The HVNL defines OSOM vehicles as class 1. Flat rack and open top containers fall into class 3 due to divisible items.
- ✓ NSW allows these vehicles to operate under the same conditions and network as OSOM vehicles.

Using road infrastructure data to assess access

A comparable approach to using heavy vehicle envelopes to assess road access is using road infrastructure data. An advantage of an envelope approach is to use defined heavy vehicle types and existing heavy vehicle networks. This would allow the NHVR to commence developing expanded or new networks for suitable heavy vehicles using existing information.

We do not yet have access to road infrastructure data that would allow us to do the same. In principle, heavy vehicle access is determined by comparing heavy vehicle and road infrastructure characteristics. This approach proposes precisely that. Under existing arrangements, the NHVR submits a candidate heavy vehicle to a road manager for assessment.

In theory, the road manager is equipped to make an informed decision on whether to consent by comparing heavy vehicle and road infrastructure characteristics. In practice, many road managers lack the resources and knowledge to do this. The NHVR proposes that road manager resources currently allocated to assessing access would be more usefully diverted to assessing road infrastructure. Those assessments could be uploaded to the NHVR Portal, in which more efficient, accurate and transparent access assessments could be made.

This would substitute similar assessments being duplicated by over 450 road managers with a centralised system that pooled knowledge, data and expertise. This would allow the NHVR to take more of a role in leading the development of heavy vehicle networks – while not compromising road managers' oversight and authority over access decisions.

Developing a National Risk-based Access Assessment Code

The NHVR would work with experts and key stakeholders to develop of a National Risk-based Access Assessment Code. The code would be developed on two (2) key principles:

- **Building on established access assessment criteria by embedding risk management principles**. Better incorporating a risk management approach into a code would offer road managers more guidance on how to make more holistic assessments. A shortcoming of existing criteria is a lack of guidance for circumstances such as when an access request is assessed as passing the majority of criteria. Current guidelines – such as the PBS Network Classification Guideline - have a technical focus and tend to incorporate pass/fail criteria – including for matters where risk exists on a spectrum.
- **Empowering the NHVR to use previous road manager consent decisions as criteria for assessing the risk of new access requests**. The current permit-centric access regime requires the NHVR to repeatedly request consent for the same or similar heavy vehicle access that road managers have previously granted. These previous decisions are evidence of new requests representing low risk access decisions. The HVNL currently empowers road managers to compel these repeated requests, by granting road managers almost complete discretion in choosing the nature and duration of any given consent. This arrangement is a major barrier to achieving productivity gains through establishing a more streamlined, risk-based decision framework. It could be overcome with appropriate legislative amendments.

Legislative Implications:	Consideration would be needed for how the HVNL could appropriately recognise the use of a risk-based assessment code in granting heavy vehicle access. In particular, legislation may best clarify the respective roles of the NHVR in interpreting the code and road managers in consenting to access under it.

Administering the Regime via the NHVR Portal

The NHVR Portal is ideally placed as the online platform on which a modern heavy vehicle access regime can be built and administered. It could store state and local infrastructure asset information, linked to a national mapping system incorporating approved freight networks. With an embedded risk-based access assessment capability, the Portal would provide road managers and industry with enhanced, valuable information on how they could gain road access for their heavy vehicle.

The NHVR has funding from the 2019/20 Federal Budget to start building this capability on top of the Portal's existing capabilities. The Portal has been enhanced over the last five years to deliver a number of automated processes, including mapping functions.

Delivering these capabilities into the Portal would support intelligent routing. This would enhance the NHVR Route Planner by allowing users to input their trip details and receive real-time advice on possible road access tailored to their circumstances and assessed against route-specific infrastructure characteristics. Advice would be on matters such as a preferred route, the extent to which it has already been approved/ gazetted, who the road managers are and where rest stops are located.

The Portal could record and analyse permit applications received by industry, including heavy vehicle combination details, the networks where access has been requested, road manager access consent decision history and associated reasons. This information could be drawn on now to start the process of delivering a modern access regime focused on infrastructure capabilities.

The Portal will also soon begin rolling out additional transactional services, including the National Heavy Vehicle Accreditation Scheme (NHVAS), Vehicle Standards and PBS design approval process. These will better enable heavy vehicle operators to access these types of information and use them to better plan their journeys.

Legislative Implications:	Under a risk-based framework, the legislation would specify assessment timeframes for the various levels of risk.

Supporting road managers in assessing and upgrading road infrastructure

Resources established within the NHVR could be used to provide road managers with strategic, expert advice on assessing road infrastructure. We could assist particularly smaller, lesser-resourced road managers with complex assessments, and guidance on better incorporating risk management within their assessments, under nationally-endorsed principles.

Federal, territory and state governments would need to provide support to local governments through a dedicated annual fund for assessments, and capital upgrades and maintenance. A number of similar programs and initiatives already exist, including Fixing Country Roads (NSW), a Commonwealth-led program to collect state infrastructure information and the 2019/20 Federal Budget funding commitment for bridge assessments on local roads that includes developing a local infrastructure asset database.

A coordinated effort is required between all levels of government to build on these programs and provide a commitment to ongoing funding and management of assets. Making financial support available (particularly for key freight networks), will take the unnecessary pressure off local governments and remove the conflict they have in managing their role as the infrastructure builder and deliverer against the critical role as service provider for the heavy vehicle industry and the local industries and communities.

Legislative Implications:	Nil for the HVNL Review, however there may be other legislative implications.

Implementation and Timeframes

Implementing a modern, more effective access management system can be split into four parts:

1. NHVR making operational improvements – particularly to functionality of the Portal to serve as a platform for accepting, storing and analysing road infrastructure data in supporting the NHVR administering a risk-based access regime.
2. Transport Ministers approving amendments to the HVNL as necessary to support the NHVR and road managers in administering a risk-based access regime.
3. Support from road managers – including state and local governments – to work with the NHVR to transition from the current permit-centric access regime to a more risk-based one.
4. Provision of dedicated annual funding by federal and state governments to support the NHVR and road managers in conducting more effective road infrastructure assessments, capital upgrades and maintenance.

Immediate improvements to the access regime - under the existing HVNL

Immediate improvements to the access regime exclude those requiring HVNL amendments. A key improvement achievable in the short term is for the NHVR, state and territory governments to agree on implementing a program of low-risk heavy vehicle access enhancements.

These would mean gazetting low-risk, currently permit-based heavy vehicle access movements so that they may operate under notice. Examples of these movements include:

- The large number of low risk, class 1 (OSOM) heavy vehicle movements currently administered under permit but with a history of near-uniform access approval.
- Immediately expanding PBS road networks to at least those roads under which corresponding, non-PBS heavy vehicles can already operate under notice, including:
    - All PBS Level A road networks (which limit PBS heavy vehicle lengths to those of corresponding, non-PBS variants)
    - PBS Level B road networks (which incorporate the same performance/ safety standards as for PBS Level A heavy vehicles and networks - but provide an incremental increase in vehicle length limit)

These improvements to heavy vehicle access reflect the risk-based principles proposed in this submission. They can be made without delay by road managers - in partnership with the NHVR. As a priority, we recommend they be made to state and territory government-controlled roads. We acknowledge that implementing them on local government-managed roads (in the absence of supporting HVNL amendments) will require additional time and resources to influence their support.

Medium term improvements - including HVNL amendments

Medium term improvements would focus on establishing a modern, risk-based heavy vehicle access regime. HVNL amendments to better support the NHVR and road managers in adopting this regime would be necessary to fully realise its benefits. These would require some time for the NHVR to develop, consult on and refine before they were finalised and approved by responsible ministers.

The improvements the NHVR has proposed do not wholly rely on HVNL amendments before they could be implemented. In the meantime, the NHVR would continue developing the Portal to make it ready for administering a new modern access regime.

A key risk is gaining the support of road managers. The NHVR can only deliver a truly risk-based, nationally consistent access regime if we have access to the right information. This means having visibility of key road infrastructure data and road manager assessments so that we can use it to develop a risk-based access framework and apply it in practice.

Gaining that support and information quality would be a significant leap forward from the current arrangements, in which road managers have mostly not shared it externally. Two key means by which we could make that transition are:

- The NHVR being funded to more directly assist road managers in assessing their road infrastructure.
- Appropriate HVNL amendments to change how access assessments and decisions were required to be made – including the more open provision and sharing of road infrastructure data and assessments.

Summary

In February 2014, the NHVR went live with new access arrangements using one set of laws to streamline the process to grant access to roads, which would in turn improve productivity and safety for the heavy vehicle industry. Through this process, the NHVR liaises directly with road managers (both state and territory road authorities and local government) to obtain road manager consent for access and issue permits.

After five years in operation, along with feedback from various stakeholders and a number of reviews, the NHVR believes that it is now timely to consider how a *modern risk-based access regime* can be achieved through legislative changes, while exploring ways to improve the current situation under the existing HVNL through policy harmonisation, process efficiencies and system enhancements.

The NHVR believes that we can create safe, efficient and productive heavy vehicle movements supporting a strong and prosperous Australia achieved through:

- Collective awareness of heavy vehicle impacts on infrastructure.
- Understanding of the infrastructure capacity to handle the movements.
- Well-formed understanding of the demand for movements.

We look forward to continuing to work with the NTC, government agencies, road managers and the heavy vehicle industry to improve heavy vehicle access through ongoing enhancements to the current processes and systems, and supporting future changes to the legislative framework to deliver important productivity and safety outcomes for the benefit of the country.