Transport for NSW response to Productivity Commission interim report on impacts of heavy vehicle reform

Introduction

Transport for NSW (Transport) welcomes the opportunity to comment on the Productivity Commission's interim report on impacts of heavy vehicle reform. The Interim Report reflects alignment with the core themes provided in the Transport for NSW submission from January 2026, which among other's submissions has been used to inform the Interim Paper, particularly in recognising that improving freight productivity depends on expanded access for higher-productivity and lower-emission vehicles, reduced regulatory barriers fragmentation, and more harmonised national approaches to network access decisions.

The Interim Report correctly identifies road freight productivity in Australia has stalled. More significantly, we are at a decision point where if we do nothing our economic competitiveness will erode, and we will not achieve our sustainability targets.

We note the report identifies that a more streamlined, harmonised framework is required to support a more productive freight task. This alignment provides a good foundation for reform and demonstrates shared intent to modernise the system in a way that supports both economic growth and decarbonisation objectives.

However, if we use our traditional approaches to increasing road freight productivity, such as increased axle mass and investing in network upgrades to accommodate poorer performing higher productivity vehicles, we will deliver incremental benefits that will mostly be achieved many years in the future at unsustainable expense to government.

The Interim Report places comparatively less weight on practical, implementation-focused considerations that are critical to translating reform intent into operational reality. For example, the description of achieving as-of-right access on page 5 does not address the need for third-party asset consent, despite third party assets being some of the most significant constraints to the movement of higher productivity vehicles today. In practice, successful delivery of the reform objectives, and the associated safety and productivity benefits, will require improved engagement and coordination with the rail industry and other third-party asset managers (including utility providers) to address known risks. As-of-right access for PBS is supported; however, like all heavy vehicle access, it remains constrained by the successful delivery of road–rail interface reforms.

Additionally, further development is needed in relation to infrastructure readiness, funding pathways, and cost recovery arrangements to ensure that expanded access can be safely and sustainably supported across state and local road networks. This includes

clearer articulation of how asset risks and network constraints will be managed, and how investment decisions will be prioritised across competing demands.

The National Automated Access System (NAAS) and the State and Local Government Asset Assurance Program (SLGAAP) will be critical to enabling effective implementation of the reform agenda. Strengthening these frameworks will require dedicated and sustained funding, not only for their initial development and rollout, but also for ongoing maintenance, system upgrades, and continuous improvement. It will also require investment in capability uplift, including training for road managers and relevant stakeholders in the effective use of NAAS.

The opportunity Performance Based Standards (PBS) vehicles present to improve road safety, sustainability, and productivity improvements while reducing the need for network infrastructure investment and maintenance remains largely untapped. Automated access assists in the rapid assessment of access for PBS vehicles, however automated access systems can only deliver faster, more consistent application of heavy vehicle access policies and their current outcomes. Radical change in heavy vehicle access policy, regulatory settings, and PBS is required to deliver transformational changes in road freight.

In addition, these frameworks will depend on improved documentation of network capability and constraints, alongside more transparent and consistent approaches to prioritising infrastructure upgrades and access decisions. Stronger jurisdictional alignment is also essential to ensure that expectations, responsibilities, and funding arrangements are coherent and consistently applied across state and local road managers and third parties. This includes clear and enduring funding pathways for implementation activities, ongoing operational requirements, and targeted relevant network (capturing the network's complete environment e.g. road, rail, utilities) enhancements. Addressing these gaps will be essential to ensure the reforms are not only nationally consistent in policy intent, but also practical, well-resourced, and deliverable across the road network.

CONTEXT FOR HEAVY VEHICLE REFORM

Information request 1.1

The PC is seeking evidence and views about how the package of heavy vehicle reforms examined in this study may impact:

- different cohorts, including by age, gender, income and education, and any other relevant demographic classification (including impacts on Aboriginal and Torres Strait Islander people)
- consumers, including in ways that may be difficult to quantify, such as improved quality of service or wellbeing, or greater choice.

Transport for NSW response:

While the heavy vehicle reforms present a comprehensive framework for modernising the sector, their successful operationalisation must take into account the current education and training landscape within the industry. Many access instruments remain highly complex, and with no mandated minimum education requirements for operators, there is a risk that reforms may not translate effectively into improved practices. To maximise productivity and safety outcomes, it is crucial that reform implementation includes targeted education initiatives and clear, accessible guidance for all stakeholders.

Enhancing the human factors, such as operator understanding, decision-making, and communication, in the operationalization of access outcomes offers a valuable opportunity to foster a safer and more productive industry. Simplifying processes and documentation will not only improve comprehension but also reduce unnecessary communication and delays between heavy vehicle operators, the National Heavy Vehicle Regulator, and Road Managers. By prioritising user-friendly reforms and investing in industry-wide education, both safety and productivity goals can be achieved in tandem, ensuring the reforms deliver tangible benefits across the entire road freight network.

ACCESS FOR HIGH PRODUCTIVITY AND HEAVY ZERO EMISSIONS VEHICLES

Information request 2.1

The PC is seeking feedback on how proposed reforms to the Heavy Vehicle (Mass, Dimension and Loading) National Regulation (expected to commence on 1 July 2026) will affect access. These reforms include uplifting General Mass Limits to Concessional Mass Limits, increasing general length limits from 19 m to 20 m and increasing general height limits from 4.3 m to 4.6 m.

- What implications would these reforms have for high productivity and heavy zero emissions vehicles?
- Will these reforms create any unintended consequences? What effect will they have on the interoperability of heavy vehicles with existing trailers, equipment and loading infrastructure?

Transport for NSW response:

- *What implications would these reforms have for high productivity and heavy zero emissions vehicles?*

Lifting GML to CML will see a productivity uplift across most heavy vehicles up to 5%, however increases in axle masses across the HV fleet from this initiative, Euro 6, EV concessions etc. can have a cumulative effect on pavements and bridges, including third party assets, that should be factored into maintenance funding budgeting and reviewing pavement standards.

Increasing length limits from 19m to 20m will provide more flexibility for vehicle design and productivity for some industries with the ease and confidence of general access. It may see a reduction in PBS level 1 vehicles, however that is positive if those vehicles were not genuinely leveraging the benefits of the PBS scheme. The risk of the length increase may be when longer vehicles are interacting with rail level crossings that are unable to accommodate a longer vehicle. This risk needs to be supported by a rail level crossing upgrade program that mitigates risk for rail operators and all road users, including innovative higher productivity vehicles. It should also be noted for context, that most level crossings in NSW were designed for 19m vehicles and particularly on the local road network, there are genuine safety risks beyond this length at some locations e.g. short staking which is when there is insufficient distance between the outer rail and an adjacent intersection to accommodate a road vehicle, resulting in the vehicle fouling the tracks whilst stopped at the adjacent intersection or fouling the intersection whilst stopped at the level crossing.

Lifting height limits from 4.3m to 4.6m will reduce some network constraints for vehicles that operate at 4.6m and may encourage volumetric operators to seek productivity gains from easier accessible vehicle height. The risk is conflict with

vertical clearance restrictions, including bridges, tunnels, utility structures and wiring that are below 4.6m vehicle clearance but not signposted or accurately signposted. Tree trimming to create a 4.6m kinetic envelope may also be at varying degrees of suitability. Tree strikes can damage heavy vehicles however dislodged branches can also pose a road safety risk to other road users.

- *Will these reforms create any unintended consequences? What effect will they have on the interoperability of heavy vehicles with existing trailers, equipment and loading infrastructure?*

Perverse outcomes for industry are not envisaged as vehicle selection will be governed by operational requirements. Issues for road asset managers are above.

Draft finding 2.1
Access reforms can unlock the benefits of a modern fleet

Growth in heavy vehicle productivity can be constrained by factors that restrict access, including:

- the reliance on permit-based access, limited flexibility in the application of access rules and inconsistency across jurisdictions
- a lack of harmonisation between domestic standards and international standards, which can limit the importation and use of modern technologies
- a mismatch between who benefits from heavy vehicle road access and who bears the costs of maintenance and infrastructure upgrades, which can reduce incentives to provide access.

The Australian, state and territory governments can play a central role in promoting better access outcomes, particularly where they are able to:

- promote as-of-right access by expanding general access and notices, with regulatory settings that can be applied flexibly and consistently across jurisdictions
- support fleet transition by ensuring vehicle design and access rules enable the uptake of innovative technologies, including by aligning domestic standards more closely to international standards
- move towards better aligning who benefits from heavy vehicle access with funding arrangements for those who bear the costs of maintenance and infrastructure upgrades.

Transport for NSW response:

The opportunity Performance Based Standards (PBS) vehicles present to improve road safety, sustainability, and productivity improvements while reducing the need for network infrastructure investment and maintenance remains largely untapped. Automated access assists in the rapid assessment of access for PBS vehicles, however automated access systems can only deliver faster, more consistent application of heavy vehicle access policies and their current outcomes. Radical change in heavy vehicle access policy, regulatory settings, and PBS is required to deliver transformational changes in road freight.

However, a focus on PBS risks only while omitting considerations for other NHVR classes as well risks missed opportunities to improve performance and reduce impact on assets more broadly.

SPVs and OSOM access

SPVs, such as mobile cranes and concrete pumps, potentially need to travel to all locations in NSW on occasions; however, they will typically make that trip very infrequently if ever again. SPVs generally perform equivalently to general access vehicles; however, they are usually more impactful on bridges due to their weight and relatively short length. Access for SPVs should be general access unless identified otherwise by the road manager. Locations a road manager may restrict access is most likely access over vulnerable structures.

OSOM vehicles carry large and unusual loads that cannot be made smaller. Like SPVs, OSOM vehicles can need to travel to all parts of the NSW road network; however, they may travel more frequently to a single location, often to support major infrastructure projects. OSOM vehicles should be considered for general network access, subject to individual bridge access approval, however risk mitigations due to their size, weight, and vehicle performance need to be managed with travel conditions such as escorts, pilots, and or vehicle conspicuity lights and marking depending on their size.

Moreover, insufficient attention to SPV and OSOM network access may significantly affect the productivity and efficiency of other sectors, especially construction. This is evidenced by prolonged delays in obtaining structure and third-party approvals.

Wide-single tyres (WSTs)

Another fuel saving initiative for ICE and EHVs is WSTs. WSTs, typically 385mm or wider, have been shown to create similar pavement wear outcomes as dual-tyres at the same mass; however, they are not provided with equivalent axle masses as axles fitted with dual-tyres under the HVNL. WSTs at higher mass limits (HML) masses on tri-axle groups (22.5 tonnes) and QML masses on quad-axle groups (27 tonnes) have marginal pavement wear increases and in some cases less pavement wear compared to axle groups fitted with WSTs that are currently permitted in the HVNL, however WSTs reduce rolling resistance leading to reduced fuel use, they reduce tare weight leading to increased payloads for the same axle mass, they improve rollover stability when paired with wide suspension, they enable tankers bodies to be situated lower in the vehicle leading to lower centre of gravity and further increases in stability and subsequent safety, they require less oil to manufacturer, and they are easier to maintain safe air pressures compared to dual-tyres. Currently, WSTs are not permitted to travel at higher mass limits on tri-axle groups and quad-axle groups outside of NSW. Consideration should also be given to WSTs operating at HML on single and tandem axle groups when part of a PBS design for a tanker. The increased stability for these high-risk vehicles

brought by using WSTs along with improved vehicle design would offset the potential additional pavement wear.

Draft recommendation 2.1
Allow greater as-of-right access and simpler vehicle approvals for Performance-Based Standards (PBS) vehicles

State, territory and local governments should support as-of-right access for PBS vehicles where it is safe to do so. Road managers should provide in-principle consent for as-of-right access for PBS vehicles (which have met safety and infrastructure requirements) that is at least equal to access for equivalent non-PBS vehicles. Governments should enable eligible PBS vehicles to be added to existing gazetted access notices without requiring a new notice.

In addition, the National Transport Commission should amend the Heavy Vehicle National Law to remove the requirement to refer all PBS design approval applications to the PBS Review Panel for advice.

Transport for NSW response to 2.1:

TfNSW supports this proposal. However, the proposal is missing the 'third party asset consent' element in their thinking i.e. that to successfully deliver on reform objectives and ensure safety and productive benefits are achieved, improved engagement and coordination with the rail industry (and other third parties such as utility providers) is required to address the known risks. As-of-right access for PBS however is a supported proposal, but like all heavy vehicle access is constrained by successful delivery of road-rail intersect reforms.

Information request 2.2

The PC is seeking feedback on how the Performance-Based Standards (PBS) scheme can be improved and enable greater as-of-right access for PBS vehicles over time. We are also interested in views around how the Australian Government can best support this process.

- Could there be any unintended impacts arising from not requiring the PBS Review Panel to provide advice on all PBS design applications? What types of PBS design applications should still require panel advice?

The PC is also seeking feedback on implementation issues, including how a pathway to add eligible PBS vehicles to existing notices (with in-principle road manager consent) could be embedded in legislation.

- How should the mechanism be designed and implemented? Why?
  - What amendments to the Heavy Vehicle National Law or related regulations would be required?
  - Are amendments to the PBS classification system required?
  - How should amendments be implemented to ensure eligible PBS vehicles can be added to existing notices without having to get access approvals, while ensuring existing access arrangements previously agreed by road managers are preserved?
  - What criteria should PBS combinations fulfil to be eligible to be added to existing notices? Which specific PBS combinations should be prioritised? On what basis?
  - What safeguards, monitoring or review mechanisms would be required to ensure the approach maintains road safety and protects infrastructure?

Transport for NSW response:

Limitations on current approach to PBS

Artificial limits on vehicle performance have been inadvertently designed into the PBS scheme through some arbitrary standards settings and conservatism in the Network Classification Guidelines, and those limitations are reinforced by outdated heavy vehicle access policies by road managers.

Examples of this are the arbitrary mass limits for the horizontal pavement wear standard that determine PBS level based on gross combination mass as opposed to performance or road impact.

The Network Classification Guidelines also place arbitrary length limits for PBS levels that are unrelated to performance. An example of where this prevents greater gains from PBS can be found in the NSW Heavy Vehicle Access Policy. A 42 metre AB-triple that combines new and innovative trailers paired with an existing standard 45 foot semi-trailer is able to achieve PBS level 2 performance, which is equivalent to a 26 metre B-double that has broad access (approximately 60,000km in NSW), but under the PBS Network Classification Guidelines the AB-triple would generally be considered for access as a PBS Level 4 vehicle which typically has very small access (approximately 150km in NSW).

Regulatory change

Australian Design Rules along with access legislation and regulation does not sufficiently keep pace with industry innovation. Euro emissions standards for instance are telegraphed well in advance however Australia is slow to adopt and even slower to adjust regulatory settings to enable ease of uptake. Euro 6 standards were in place in Europe in 2014; however, Australia did not mandate Euro 6 until 2024, and regulatory changes are being implemented in July 2026 that enable increased axle mass to accommodate Euro 6 technology. Euro emissions standards are typically released 2-3 years before mandatory implementation dates in Europe. This should be sufficient time for Australia to prepare for and adopt the Euro emissions standards. For context, Euro 7 emissions were released in 2024 and are scheduled for adoption in Europe in November 2026. By waiting 12 years for regulatory change to support the commercially viable use of Euro 6 vehicles means transport operators can be commercially disadvantaged for choosing the latest technology and the NSW community potentially miss out on the benefits of newer vehicles with better emissions performance and more advanced safety technology on the road as well.

Benefits of revision of PBS access

When treated as a PBS level 2 vehicle and provided access to a 26 metre B-double network, by exception, the AB-triple is able to carry 64.8% more freight than the 26 metre B-double, cause 9% less pavement wear per tonne of payload than the B-double, and use 26.9% less fuel per tonne of payload than the B-double.

Considering articulated vehicles carry 70% of the tonne kilometres of road freight moved in NSW and use approximately 1 billion litres of diesel per year, the savings opportunity is significant from moving to innovative PBS vehicles. By combining existing trailers with better designed trailers, like the path followed 40 years ago with the creation of the 26 metre B-double, and providing access to existing networks for similar performing vehicles, road managers can significantly reduce road infrastructure investment required to achieve step change in productivity while retaining the return on investment of existing trailer stock.

When utilizing completely redesigned trailers with proven design technology, it is possible to deliver even greater benefits such as a PBS level 2 performing 58 metre A-quad. This vehicle would perform the same as existing 26 metre B-doubles in all aspects, however the A-quad could be expected to carry 148% more payload, cause 7.6% less pavement wear per tonne of payload, and use circa 40% less fuel per tonne of payload (subject to testing). Currently, these types of PBS vehicles do not have access in Australia. This is generally owing to heavy vehicle access policies that are risk averse, lack the understanding of the benefits of improved access for better performing, safer, more productive vehicles, and are usually driven by thoughts of asset protectionism.

Enablers for enhanced PBS access

This is not a zero-cost option; however, these innovative PBS vehicles require relatively modest increased capital investment from industry and may require strengthening or replacement of some key bridges, some rail level crossing upgrades, and some rest stop parking bay realignment to support access, but they do not require any intersection, lane width, shoulder width, curve or grade treatments. This approach delivers upfront savings in infrastructure investment while delivering upfront safety, sustainability, and productivity benefits for the road freight industry.

Access for these innovative PBS vehicles must come with advanced safety technologies and monitoring devices such as satellite tracking and smart on-board mass. While the performance and productivity of the innovative PBS vehicles create a safer road environment by reducing exposure to trucks, road degradation, and congestion for other road users; reducing the number of heavy vehicle drivers required for the same task also importantly reduces exposure to human factors.

This leads to a reduction in exposure to key contributors of fatal crashes such as human error, fatigue, drug and alcohol impairment, and speeding. The advanced safety technologies fitted are designed for crash avoidance and harm minimization to further reduce road safety risk. Studies have shown that heavy vehicles fitted with autonomous emergency braking, electronic stability control, and lane keep assist or lane departure warning systems for instance are 35% less likely to be involved in a fatal crash.

Monitoring technology is critical to support a risk-based approach to access and road asset management. Smart on-board mass paired with other network-based mass monitoring systems and bridge strain gauge monitoring systems can provide assurance for road managers to consider risk-based bridge access. Risk-based access is achieved by lowering the live load factor during bridge access assessments. Structural integrity is always maintained in the access decision making process, however improved access for safer, more sustainable, more productive heavy vehicles is provided now and asset life span is managed based on demand. Bridge assets would be consumed faster than their expected 100-year life span however the asset safety and performance would be managed via movement data, vehicle mass data, utilisation driven inspection and maintenance programs, bridge health monitoring equipment, and a demand driven replacement program. Moving from ‘fixed asset life spans’ to ‘assets as a service’ mindset brings forward and maximises productivity outcomes and enables targeted, value for money, evidence driven maintenance and investment spend in the future.

Current practice ensures a fixed asset life, irrespective of utilisation or the criticality of the bridge for freight movement. Instead, reductions in freight access are used to manage and extend asset life. This approach places insurmountable constraints for innovative PBS vehicles.

This is a radical change in asset management and would not be adopted, or successful, without underwriting the risk to asset managers with clear funding commitments. Even in those circumstances, this would realistically require a centralized approach that leverages economy of scale while minimizing complexity in bridge asset management. Ideally, all road bridge stock would be managed by the road authority in each jurisdiction with utilisation data driven funding provided for each bridge by the Commonwealth.

For the same reason, the safety and infrastructure decision making for the road manager function on local roads should be determined by the road authority using automated access, while Local Councils should provide input on public amenity. Funding for freight vehicle use on local roads, apart from bridges, should continue to flow to the Local Council asset manager.

Conclusion

The full possibilities of PBS have not yet been embraced, and it will require a radical change in heavy vehicle access policy, risk-based asset management, funding regimes, and regulatory settings to capitalize on the full potential of PBS quickly. PBS design approvals for common innovative vehicle options need to be made freely available to industry along with broad networks for their use if we want to accelerate realization of the benefits broadly. TfNSW has created PBS Design Approvals for innovative vehicles, however, it has not released the designs for public use yet due to the lack of associated networks because of limited access over state road bridges and local roads. Lack of certainty of access is the biggest barrier for transport operators contemplating designing and building PBS vehicles.

PBS reform needs to focus on three things, the standards, the overall PBS experience of customers and road managers, and the regulatory settings around access.

- **The standards** – the standards need to have a fast first principles review with the intention to deliver improved real-world outcomes from the PBS vehicle fleet. This process needs to leverage the vast experience we've developed over the duration of the PBS scheme.

  The principles of the scheme are right to focus on safety and performance while achieving productivity gains however some standards should be rationalized, such as all the low-speed performance standards into a single 'donut' solution; some standards need to be improved such as static rollover threshold to a dynamic load transfer approach, the acceleration standard changed to measure a 50m clearance time instead of a 100m bonnet to bonnet race, and real world measures for startability and gradeability standards; and some standards need to be added like crash avoidance, harm minimization, noise and fuel emissions, and driver/vehicle performance monitoring.

- **PBS customer experience** – when choosing a general access heavy vehicle, even with older emissions and safety standards, the path for a transport operator is simple. A transport operator selects the vehicle that best suits their operational needs, hands over money and drives away potentially to a paying job that day. Choosing a prescriptive restricted access vehicle such as a 26m B-double, the transport operator would take some time to assess the available network for suitability for his or her task, and if sufficient, they hand over money and can commence business perhaps the following day.
  Historically, if a transport operator chooses the best heavy vehicle path for the community and government, a PBS vehicle, they embark on a costly and indeterminate length path that may lead to the PBS vehicle being parked in a yard and written off as an expensive failed asset after many years of perseverance. Every step of the PBS pathway from choosing to embark on the journey to utilizing the vehicle for commercial gain needs to be examined for value and efficiency until the process is optimized and timelines made transparent.
  Ideally, common PBS vehicle designs that deliver significant benefits to other road users, road asset managers, and transport operators should be freely available with broad approved networks attached to them making it commercially viable for transport operators to adopt. There is proof that when PBS designs are freely accessible and extensive access networks are available then uptake is high, this is evidenced by the vast bulk of PBS vehicle uptake initially being for common truck and dog combinations. This approach shift the PBS customer experience to being more in line with the 26m B-double path.
- Regulatory settings – the HVNL needs to be improved to better define the road manager function and clarify the rights and responsibilities of third-party asset managers. In terms of road manages, this could include rationalising responsibilities for safety and infrastructure assessment into the road authority for each jurisdiction, when automated access is available, while leaving public amenity input to local road managers. PBS access needs to follow an 'if not, why not' approach. Ideally heavy vehicle access should be assessed via three vehicle characteristics:
  - **Mass** – this includes axle mass, axle spacings, ground contact width and is relevant when assessing access over bridges and culverts
  - **Performance** – based on PBS level or equivalent PBS level if not a PBS vehicle, including for Special Purpose Vehicles and OSOM when possible, is relevant for low speed and high-speed performance when assessing geometric access such as intersections, lane widths, shoulder widths, curves, grades, maneuvering through rest areas etc.
  - **Dimension** such as vehicle height, width, and length including the load – for PBS vehicles this is limited to assessing rail level crossing stacking distance, storage bay lengths, stopping bay or marked rest area bay lengths, and vertical clearance heights. For non-PBS vehicles, such as

special purpose vehicles (SPVs) and Oversize / Over mass (OSOM) vehicles, the dimension risk is mitigated via travel conditions and network restrictions by exception.

If access on a road is already approved for a vehicle that has equivalent or more onerous mass, performance or dimensions, the access should not be able to be declined based on that vehicle characteristic.

Ideally the HVNL should have a first principles review on access to drive the creation of dynamic, risk-based and outcomes-based legislation and regulations. To achieve broad changes in access, the road manager function needs to be recognised as a complex and specialist role that must understand the benefits of higher productivity vehicles and recognizes the risk profile comparison with existing heavy vehicles as the movement of goods is essential and will continue in less productivity combinations that don't need to seek permission when access for higher productivity vehicles is declined.

With respect to third-party asset managers, clarity regarding roles and responsibilities is long overdue. Transport recommends that the Commission request a copy of the paper that has been prepared by the National Transport Commission on this topic for consideration. Transport has long advocated reform in this area for the following reasons, among others:

- Insufficient clarity regarding which organisations are considered third parties
- Uncertainty as to which party is responsible for requesting and obtaining third-party approval
- Absence of stipulated timeframes for third parties to assess and respond to access requests
- Lack of regulation of costs associated with third-party approvals, including application and assessment fees
- When third parties try to assist access outcomes, they often face limitations in resources, as access assessments do not typically fall within their primary responsibilities and in some instances, actually conflict with their business objectives. For example, rail infrastructure managers depend on access revenue from freight trains to fund maintenance of their networks (which includes maintaining and/or upgrading level crossings) and heavy vehicles can be perceived as direct competition to obtaining this revenue stream
- Third parties often have separate legislative obligations that must be satisfied
- Road managers are unable to make access decisions on behalf of third parties due to those parties' separate legislative obligations
- Many road managers are unaware of their safety obligations in relation to third-party assets. This is most evident among local road managers. Transport recommends that the Commission discuss this issue with the Office of the National Rail Safety Regulator, which has been conducting compliance

inspections of local road managers in relation to the management of road-rail interfaces.

- Widespread non-compliance by operators with administrative controls relating to third-party approvals, particularly where the only control is a permit or notice condition requiring the operator to contact third parties. The introduction in NSW of a requirement to provide evidence prior to the issue of road manager consent identified significant non-compliance.

Draft recommendation 2.2
A nationally-consistent concessional mass limit for electric heavy zero emissions vehicles (HZEVs)

The Australian, state and territory governments should – through the National Transport Commission – work to embed a concessional mass limit in the Heavy Vehicle (Mass, Dimension and Loading) National Regulation to ensure electric HZEVs can operate across jurisdictions without significant payload disadvantages arising from battery weights.

These arrangements should be reassessed over time as batteries get lighter with technological change. An option is for governments to implement a transparent review mechanism every three years which monitors the development of electric HZEVs and the interaction with road wear to ensure the concession is set appropriately. The review mechanism should monitor the following areas:

- the payload gap between comparable diesel heavy vehicles and electric HZEVs
- how international jurisdictions are setting concessional mass limits for electric HZEVs.

The concession should sunset following a positive review determination that the payload gap between comparable diesel and electric HZEVs has materially closed.

Transport for NSW response:

Supported recommendation. As technology advances lighter batteries are being developed and there should be review and continued assessment of allowable mass limits on electric HZEVs as industry should be encouraged to innovate. e.g. current Windrose heavy vehicles are not seeking the heavier masses of other electric HZEVs manufacturers, and their vehicles a currently comparable to diesel equivalents)

The light to medium rigid vehicle task is well suited to the current electric heavy vehicle (EHV) technology capability, however the payload penalty and charging options prevent broader use. 2 and 3-axle rigid EHVs currently require increased axle mass to ensure parity of payload and commercial viability, however that increased axle mass disproportionately increases pavement wear. This increased pavement wear presents a challenge to road asset managers.

Given the net zero targets across most jurisdictions in Australia, rapid uptake of existing EHVs that require increased axle masses is essential now, however it may not need to be

an ever-worsening issue. As battery technology improves, it is reasonable to assume, or demand, EHV axle masses will align with existing equivalent ICE heavy vehicles while maintaining payload parity. Like the Euro emissions standards process, aspirational reducing axle mass limits for EHVs manufactured from a date in the future could be gradually introduced until axle mass parity is achieved. To ensure confidence in EHV investment, and reward early adopters if they repower their EHV with lighter batteries in the future, the EHV axle mass concessions at the time of first registration should be grandfathered (for a pre-determined life of the vehicle such as 20 years). This approach would provide confidence for industry to invest in EHVs early, drive innovation in battery technology to deliver productivity gains for early adopters, and minimize pavement wear increases as EHV uptake hits critical mass.

Alternatively, there is the potential to take a different path and change pavement standards to meet EHV axle mass requirements. This approach provides a road infrastructure capital solution that can accommodate EHV axle mass requirements while minimizing opex costs in the future. Using this approach, any reduction in EHV tare mass due to improved battery technology can translate into greater payloads and increased productivity in the future.

Either way, equivalent access will be required for EHV vs ICE vehicles and as battery technology continues to reduce tare masses to achieve payload parity at equal axle masses, increased payload productivity may be able to be achieved for EHVs compared to existing ICE vehicle payloads and axle masses today.

To support equivalent EHV vs ICE access and enable demand driven network maintenance and investment decision making, EHV access must come with satellite tracking and smart on-board mass as access conditions. Expanded EHV access discussed here, like PBS access, will rely solely on risk-based bridge and network access assessments on state and local roads to enable increased uptake.

Information request 2.3

The PC is seeking feedback on implementation of a nationally-consistent mass concession for electric heavy zero emissions vehicles (HZEVs).

- How should a concessional mass limit to overcome the current payload gap between comparable diesel and electric HZEVs be implemented?
  - What should the size of the concessional mass limit be?
  - What are the outcomes and learnings that have come out of the trial-based concessional electric HZEVs mass limit arrangements?
  - How should the mass concession interact with the Performance-Based Standard scheme, including new and/or existing permits? What are the merits and downsides of the different options?
  - Are there any additional changes or approvals required to ensure operators can make use of the mass concession?
  - Are there cases where the concession should not be automatically applied? Why?
  - Is a three-yearly review process appropriate? What benchmarks should be considered in the review process?
- What are the expected impacts of applying the mass concession?
  - To what extent would changes assist and/or accelerate the uptake of uptake of electric HZEVs?
  - What road wear impacts will this have at anticipated take up rates?

Transport for NSW response:

The current electric heavy vehicle (EHV) technology requires increased tare mass (weight when unloaded) due to battery technology. Increased axle mass is problematic for road asset managers, partly because of increased impact on bridges however mostly because increased axle mass causes exponentially increased pavement wear according to the Equivalent Standard Axles (ESA) measure. Access on local roads is particularly limited, which is a significant barrier to EHV uptake because current EHV capability best suits local deliveries that rely heavily on local road networks.

Approximately 40% of the diesel fuel used in road freight in NSW is consumed by light commercial vehicles that move an estimated 5% of the tonne kilometres of freight. The light electric commercial vehicle barrier is licence class creep. The payload of a 4.5 tonne GVM ICE freight vehicle driven on a C-class licence can carry 32% more payload than the electric version of the same vehicle due to increased tare mass from batteries. To make the decision to go electric for such a critical part of the freight vehicle fleet, the best approach is to increase the GVM a C-class licence can drive for an electric vehicle from 4.5 tonnes to 6.5 tonnes. This increase should come with risk mitigations to reduce any potential road safety risk such as:

1. 6.5 tonne GVM concession applies to fully electric heavy vehicle only

2. Batteries that provide motive power must be positioned no higher than 1 metre from the ground to lower the centre of gravity of the vehicle and increase stability
3. Vehicle cannot exceed maximum of 6.5 tonnes GVM or manufacturers maximum GVM rating, whichever is lower
4. Vehicle must be fitted with the relevant safety systems from the Safer Freight Vehicles package, such as ADR 97/00 Advanced emergency braking and ADR 99/00 Lane departure warning system
5. Maximum gross combination mass (GCM) not to exceed 9 tonnes
6. Vehicle must be monitored by a satellite tracking and smart onboard mass telematics application from the National Telematics Framework
7. Vehicle must be fitted with a smart reversing alarm that adjusts noise level based on ambient noise to maximise electric vehicle lower noise benefits

A 6.5 tonne GVM concession on a C-class licence holder operating an electric freight vehicle would increase the available driver cohort from circa 500K HV licence holders to include the additional 4.5M C-class licence holders in NSW. It would also mean a C-class licence holder operating an electric freight vehicle with a GVM of 6.5 tonnes could transport 28% more payload than a C-class licence holder operating an equivalent ICE powered freight vehicle with a GVM of 4.5 tonnes.

For electric prime mover payload parity, there is an opportunity to think differently about mass concessions immediately by re-examining where the payload parity concession is provided. Currently, higher axle masses for an EHV are provided to prime movers however the axles on the prime mover already cause the most pavement wear in most ICE powered articulated vehicles. The payload parity concession has typically been applied to the prime mover because traditional vehicle design has evolved around ICE technology and its characteristics. Placing enough fuel for a 120-tonne road train to travel 2000km in an ICE prime mover has been easily achieved with diesel, but the same can't be said for battery power in an EHV.

Carrying increased axle mass in the prime mover, especially on the steer axle, is the worst possible outcome for pavement wear. A single steer axle operating at 7 tonnes, which is typical for a Euro 6 ICE vehicle, is causing 0.403 ESA of pavement wear per tonne. In comparison, each of the individual axles in the typical tri-axle group on a semi-trailer operating at 22.5 tonnes, which is higher mass limits for an ICE vehicle, is causing 0.032 ESA of pavement wear per tonne. That equates to 92% less pavement wear per tonne on the individual trailer axle compared to the steer axle. What that means is we are far better off working with EHV manufacturers and trailer manufacturers and encouraging them to load their prime movers and trailers in a way that the increased tare mass required for batteries is positioned over the tandem drive axle group only on the prime mover, if required, and payload parity can be provided by the creation of a new mass limit, nominally known as zero-emissions mass limits (ZEML), where a tri-axle group is permitted up to 24 tonnes (up from 22.5 tonnes at HML) and a quad axle group is permitted 30 tonnes (up from 27 tonnes on QML).

The table below shows some comparisons in pavement wear. To note, the two EHVs using the current prime mover axle mass concessions (vehicle 2 & 3 in the table) create between 18-21% more pavement wear per tonne of GCM than the Euro 6 ICE semi-trailer (vehicle 1), while the EHV utilizing ZEML masses on a tri-axle trailer group and minimizing prime mover axle masses but maintaining the same payload concession (vehicle 4) creates only 1% more pavement wear than the Euro 6 ICE (vehicle 1). The EHV using the minimum prime mover axle mass increase and ZEML on a quad-axle trailer group (vehicle 5) creates **11% less pavement wear than the Euro 6 ICE semi-trailer (vehicle 1) and carries 0.5 tonnes more payload**.

	Vehicle	Steer axle mass	Tandem drive axle mass	Trailer axle mass	Pavement wear per tonne of GCM	Payload parity concession
1	Euro 6 ICE semi-trailer at HML	7 tonnes	17 tonnes	22.5 tonnes tri-axle at HML	0.168 ESA	Nil
2	EV semi-trailer with max steer mass	8 tonnes	18 tonnes	22.5 tonnes tri-axle at HML	0.204 ESA	2.5 tonnes
3	EV semi-trailer with max drive axle mass	7.5 tonnes	18.5 tonnes	22.5 tonnes 4tri-axle at HML	0.199 ESA	2.5 tonnes
4	EV semi-trailer with ZEML tri-axle trailer mass and reduced prime mover axle mass	7 tonnes	17.5 tonnes	24 tonnes tri-axle at ZEML	0.170 ESA	2.5 tonnes
5	EV semi-trailer with ZEML quad-axle trailer mass and reduced prime mover axle mass	7 tonnes	17 tonnes	30 tonnes quad-axle at ZEML	0.149 ESA	3 tonnes

While ZEML trailers should only be permitted to be paired with EHV prime movers, smarter use of trailer axle mass 'head room' should also be applied to trailers used with ICE prime movers. Electric powered trailer axles may require 24 to 25 tonnes for a tri-

axle group to maintain payload parity, but early testing indicates they may be able to reduce ICE prime mover fuel use by 50%. They also reduce horizontal pavement wear by spreading traction through more axles than just the prime mover, they increase the startability of the HV on steep grades, they increase acceleration from rest meaning the HV can clear the danger zone at intersections and rail level crossings faster, they increase down grade braking performance and stability through regenerative braking that also reduces reliance on exhaust brakes leading to reduced noise, cause reduced wear on traditional brake assemblies keeping emergency braking equipment in better working order for longer, and they maximise the use of current diesel prime movers without any increased charging infrastructure or could extend the range of an EHV prime mover.

ACCELERATING A NATIONAL AUTOMATED ACCESS SYSTEM

> **Draft finding 3.1**
> **The existing permit system for heavy vehicle access is ripe for reform**
>
> The heavy vehicle permit system imposes significant costs and uncertainty on operators, as well as administrative burden on road managers and the National Heavy Vehicle Regulator. There is a need to reform the system to promote flexibility, timeliness, consistency and quality of access decisions – this will support broader productivity.

Transport for NSW response:

TfNSW agrees with the acceleration of a NAAS. TfNSW is working with the Commonwealth, NHVR, and multiple jurisdictions to help redesign the Permit system through the introduction of automated access.

Additionally, TfNSW is working with the NHVR to provide better tools and process improvements for the current assessment process with the aim of improving access for heavy vehicles and enabling road managers to make better informed evidence-based decisions.

Automated access is essential to lift the speed and accuracy of road manager decision making in Australia. An automated access system, including the NAAS, can only deliver expanded access when:

1. All aspects of the access decision making process are automated and incorporated, including an automated bridge access decision making engine and including third party assets such as rail level crossings and bridges.
2. Sufficient road asset data is available in a suitable format to support automated access decision making.

3. Integration with the NHVR Permit system (NHVR Go) to ensure one customer interface.
4. The correct heavy vehicle access policy settings are in place.

Without these four elements, automated access systems will only deliver the same limited access outcomes faster or not be able to deliver an access decision at all.

Accelerating the delivery of NAAS is best achieved by:

1. introduce IT project management rigour, including independent assurance of project progress, to produce customer experience focused outcome commitments and timelines.
2. prioritising the integration of the Victorian automated bridge access decision making engine, HVSAPS, into the NAAS. HVSAPS is the first to achieve automated bridge access decision making and has been trialed with industry in Victoria via connection with the NHVR GO portal. If HVSAPS had been integrated into the NAAS already, Australia would have a functioning NAAS now with true automated access. Once the NAAS is functioning with HVSAPS, further work may be warranted on the NAAS developed automated bridge decision making engine.
3. Incorporate third parties, particularly automated rail level crossing access assessment modules into NAAS. Without third party access assessment input, access in NSW on state and local roads will have significant restrictions.
4. Ensure the NAAS development team works effectively with NHVR to integrate NAAS with NHVR Go to provide one customer entry point. I.e. if the NAAS cannot provide approve access based on the predefined characteristics entered by road managers and/or third parties and a more bespoke assessment is required, the customer should not be required to enter in both their vehicle and requested route/area into a separate system; the system should undertake this step on behalf of the customer.
5. Confirm Commonwealth funding to NHVR/jurisdictions for completion of local road asset data collection via the Strategic Local Government Asset Assessment Project (SLGAAP).
6. Confirm Commonwealth funding for risk-based heavy vehicle access decision making to support policy harmonization at best in breed level for productivity, sustainability, and safety.

It is broadly accepted that permits will continue to be necessary in the future, particularly given the rapid pace of innovation in the heavy vehicle sector. Therefore, refraining from investing in the NHVR Go system is inadvisable, as it would impede approvals for innovative vehicles. Current limitations within the system restrict road managers' capacity to perform essential activities and analyses; Transport has provided NHVR with a list of recommended system enhancements. While Transport supports NAAS, insufficient investment in the existing permit system substantially constrains

road managers' abilities to effectively manage the network both now and in the future, especially during significant disruption events. Moreover, although the NAAS has not fully considered the integration of third parties, NHVR acknowledges the importance of this feature and is developing prototype functionality for the Australian Rail Track Corporation (ARTC). This new functionality mirrors the road manager capabilities, but it is understood that legislative reform is required, as system improvements alone will not resolve challenges associated with third parties.

Draft recommendation 3.1
The National Automated Access System should incorporate network-based access

As much as possible, the National Automated Access System should be designed to provide network-based access rather than automating access for prescriptive routes. This will maximise the benefits of the system for operators and the community.

Transport for NSW response:

Network-based assessments would provide significant benefits to industry but would likely impact on road manager ability to monitor and track network usage within their areas of responsibility. To realise network-based assessment, accompanying technology, such as telematics, must be considered as a pre-requisite to provide the evidenced based data on network usage to assist road managers in maintaining road networks and infrastructure to facilitate increased and sustained heavy vehicle access.

The NAAS currently is a Notice based system and does not adequately address all aspects of heavy vehicle access. There will continue to be a role for Permits in heavy vehicle access, and as such should be included in the NAAS workflow to ensure a fully inclusive and wholistic assessment system, especially to support NAAS rollout as road managers and industry will manage access through both systems during the transition.

Whilst Permits would likely maintain the current practice of access being granted for a prescriptive route (though noting permits do exist for multiple routes), including a full access assessment process in the NAAS, Notice based assessment first then Permit based as required, will further maximise the benefits of the system for operators, road managers, and the community and support safe and sustainable access decision making.

Information request 3.1

The PC is seeking evidence and views about how the National Automated Access System can be designed to improve the consistency and quality of local governments' access decisions. Is guidance and improved road asset data adequate, or are broader reforms needed to optimise decision making by local governments?

Transport for NSW response:

Workflows and assessment guidelines, process maps, etc need to be developed and shared with local governments in advance of NAAS rollout within participating States. Providing this information early will help local governments prepare for the NAAS and enable a more seamless integration and assist with the change management processes involved with this significant shift in decision making processes.

Support (financial and training) needs to be given to councils, provided through Federal funding sources, to maintain data required for participation within the NAAS. Both quantity as assessment modules develop but also quality of existing date (validity, accuracy, and currency) to ensure safe and sustainable access decision making.

Jurisdictions need to be provided funding to facilitate local government's implementation and integration of the NAAS. Total costs for the NAAS development do not take into consideration the onboarding costs associated with jurisdictions and local councils within them. The NAAS team has explicitly stated that these costs are to be borne by the respective jurisdictions and these costs will be significantly greater than the cost of the system development.

Information request 3.2

- What are the factors affecting implementation of the National Automated Access System? What are the main resource constraints (for example, skilled people, data and information or equipment), and what parts of the implementation do they affect?
- What would be the best way to accelerate rollout of the National Automated Access System? If more funding is needed, where should it be directed and what should it be spent on?

Transport for NSW response:

Constraints:

- The NAAS solution does not encompass permits (i.e. integration with NHVR Go) at this stage. Consequently, the solution does not solve all access timing constraints and will not be able to deliver fully on the original ITTM commitments, noting the continued permit requirement. This will impact all stakeholders as the benefits associated with the NAAS won't be able to be fully realised without Permits being incorporated into the solution. Specifically, when an operator needs access to a section of the network not yet integrated into the

NAAS, such as a local road or a third-party asset, obtaining a permit through NHVR Go remains necessary. This process does not eliminate the permit requirement and introduces additional administrative workload and potential time delays, thereby diminishing many of the productivity advantages associated with the NAAS.

- There is currently no documentation on the NAAS, including manuals, processes, solution architecture, legal requirements, or governance/assurance for the solution, creating significant uncertainty around the future operating state, hosting, maintenance, operational costs, and jurisdictional and user requirements on implementation. Allowing jurisdictions to obtain and review this will reduce time required on lengthy reviews at pivotal moments of the system development. A template agreement for the NAAS must be developed to enable road managers to effectively plan and allocate budgets for NAAS. This agreement should delineate standard terms and conditions regarding:
    - Allocation of maintenance costs
    - Maintenance and support arrangements
    - Incident management, reporting, and quality assurance measures
    - Ownership, licensing, and intellectual property rights
    - IT connectivity and cybersecurity requirements
    - Service level agreements
    - Procedures and funding for system enhancements
    - Liability provisions

  While no such agreement exists for NAAS, conversely, Transport is working closely with Department of Transport and Planning (Victoria) to establish such an agreement for the use of HVSAPS. Importantly, both parties have agreed that the template must make provisions for other parties to join in the future e.g. jurisdictions and/or third-parties.

- Lack of harmonisation of data requirements is impacting jurisdictions being able to provide meaningful contribution to the NAAS development. This is compounded by the development in isolation approach adopted by the NAAS project team. The absence of SME resourcing within the team is affecting the development of assessment modules that are truly fit for purpose. This has led to a significant reliance on pre-assessed decision-making as the foundation for proposed solutions, which may be misleading since this approach does not constitute genuinely "automated" access. Further, this approach of “pre-assessing” places significant burden on road managers, increasing their current workload.

Accelerating Rollout:

- There is a lack of alignment between jurisdictions on prioritisation of capability/function development and funding allocations. An external assurance review on the approach, schedule and priortisation would greatly assist in obtaining jurisdictional alignment and assurance on the best approach is being

undertaken that benefits all parties involved earlier, and efforts are directed towards nationally and mutually beneficial developments that will see imitate return on investment.

- The NAAS project team has invested significant time and funding to develop an automated bridge access assessment tool, however this capability has not yet been delivered. By contrast, Victoria's Heavy Vehicle Structural Assessment Permit System (HVSAPS) is currently conducting automated bridge access decisions and has been integrated with NHVR Go (the national system for heavy vehicle permits and compliance). Despite ongoing requests to integrate HVSAPS into NAAS, and the ITMM commitment to do so, this integration has not yet occurred, nor has it been made a priority.

  Instead, the NAAS project has focused on developing a new module similar to HVSAPS at significant cost and time. If HVSAPS had been integrated into NAAS, Australia could have an operational automated access system available now. Shifting funding away from development of an assessment module only a minority of jurisdictions will use to an all-encompassing and proven operational solution, HVSAPS, will see immediate benefit and earlier implementation of NAAS nationally.

- The adoption of NAAS is contingent upon the involvement of third-party asset managers. In certain asset classes, such as structures, level crossings, and overhead wires, excluding these from NAAS could pose significant public safety risks. Bringing third-party requirements, particularly those of rail infrastructure managers, into NAAS earlier would deliver significant benefits by increasing the volume of access able to be granted through the system. Under the current schedule, this work is not planned to commence until after NAAS has been rolled out in some form across all participating states, which is expected around Q1 2028. While ensuring network safety is paramount, excluding third-parties may result in their lack of awareness regarding changes to heavy vehicle movements. This could subsequently increase their maintenance costs and contribute to premature asset failure, whether catastrophic or through loss of serviceability, ultimately affecting future access.

Draft recommendation 3.2
Funding for the Strategic Local Government Asset Assessment Project

The Australian Government should fund future phases of the Strategic Local Government Asset Assessment Project, starting with Phase 4 in the 2027-28 Budget.

Transport for NSW response:

- Agree, noting that alignment across Commonwealth, NHVR, and Jurisdictions needs to be confirmed prior to start of phase 4. All parties should be collecting the same data in support of automated access, with a focus on future proofing collection as much as possible to minimise local council disruptions.

- A further expansion to phase 4 could include incorporating rail infrastructure managers with a focus on level crossing data collection across the respective locations. Noting level crossings play a significant part in determining access and pose a significant safety risk for heavy vehicle usage on the road networks. Noting the requirement of this to inform any access decisions, bringing this under the SLGAAP grant will help expedite the inclusion of this into the NAAS. Transport would welcome the opportunity to arrange a discussion with ARTC and the Commission to provide an overview of the work funded by Transport to collect and analyse level crossing data as an example of activities that are not presently funded through SLGAAP, particularly those relating to rail-specific infrastructure within the rail corridor, e.g. signaling data. This discussion may also aid in the understanding of the risks and opportunities third parties present to productivity and the NAAS.

ADMINISTRATIVE AND REGULATORY BARRIERS TO CHARGING INFRASTRUCTURE

Draft recommendation 4.1
Make the Electric Vehicle Charging Infrastructure Mapping Tool more relevant to heavy zero emissions vehicle (HZEV) charging

To make the Electric Vehicle Charging Infrastructure Mapping Tool more useful to guide investments in HZEV charging infrastructure, the Department of Climate Change, Energy, the Environment and Water should:

- work with electricity distribution network service providers and the Australian Energy Regulator to incorporate more granular (distribution substation-level) distribution network capacity information
- work with the Department of Infrastructure, Transport, Regional Development, Communications, Sport and the Arts and the National Heavy Vehicle Regulator to incorporate information on freight locations and movements
- work with state and territory governments to incorporate information on where charging is an allowed land use (with and without planning permission)
- allow all mapping data to be exported.

Transport for NSW response:

Charging infrastructure is required at high frequented locations for EHVs, however an opportunity exists for government to also invest in EHV depots that could run under subscription. An EHV depot located in Western Sydney for instance would include EHV rigid truck and prime mover parking, no trailers, and light vehicle parking. The subscription could include a rate for regular overnight truck parking, charging, and include daytime light vehicle parking or perhaps a cheaper rate for daytime truck parking and charging with light vehicle parking to take advantage of solar load and encouraging more freight moving at night.

The concept would be to get EHVs off the local road network, as most HV drivers do not have access to off-street HV parking, and into a safe shared depot facility. The driver can park their car in a secure area on site during the day while they use their truck, then park their truck safely at night to charge while they are at home. Ideally, this approach could also be commercially incentivized to be reversed to encourage EHV operators to

use their trucks at night then charge them during the day. With smart design, the site could be covered with solar panels to generate electricity and should be cost neutral, if not profit generating for government.

Draft recommendation 4.2
Adapt land use regulation to heavy zero emissions vehicle charging infrastructure

State and territory governments should alter the definitions of land uses that cover bus depots, freight centres, freight nodes and heavy vehicle rest stops to explicitly allow for electric vehicle charging on land used in this way.

State and territory governments should exempt the installation of charging infrastructure from requiring planning permission where it is consistent with existing land use provisions. To the extent that jurisdictions apply conditions to manage any public impact, these should be balanced against potential impacts on innovation and investment.

Transport for NSW response:

Removing curfews for HZEV deliveries 24/7 via legislation or regulation is essential to the broader uptake of HZEV vehicles as the technology will be best suited to the local delivery task. This should come with vehicle requirements such as a smart reversing alarm that adjusts alarm volume based on ambient noise. It may also need maximum noise limits placed on loading and unloading activities after hours for public amenity.

Information request 4.1

How much would draft recommendations 4.1 and 4.2 reduce administrative and regulatory barriers to heavy zero emissions vehicle charging infrastructure and what implications would this have for project costs?

Transport for NSW response:

Information request 4.2

What regulatory or administrative actions should governments take (if any) to facilitate private investment in charging infrastructure at state and territory government-provided heavy vehicle rest areas?

Transport for NSW response:

HEAVY VEHICLE CURFEWS

Information request 5.1

The PC is seeking information on the prevalence of curfews. How widespread are local government restrictions through local planning rules? What are the typical terms of these restrictions? If they exist, what are the typical reasons (noise or other reasons)?

Transport for NSW response:

Draft finding 5.1
There is a strong case for reducing curfew burdens on heavy zero emissions vehicles

Heavy vehicle curfews largely arise from two sources – local traffic controls that restrict truck traffic through particular streets, and conditions imposed on local government planning permits that restrict delivery hours to and from businesses. Local traffic controls appear to exist almost exclusively in Victoria, while planning restrictions appear more widespread.

Many curfews were designed for conventional diesel vehicles and do not recognise the quieter noise profile of heavy zero emissions vehicles. As a result, some curfews are no longer fit for purpose, and there is a strong case for reducing curfew burdens on heavy zero emissions vehicles.

Transport for NSW response:

Information request 5.2

The PC is seeking information to illustrate the costs and benefits of reducing curfews on heavy zero emissions vehicles and the costs and benefits of possible approaches to reform, along with their implementation.

- What are the practical options for implementing exemptions for heavy zero emissions vehicles from curfews? If vehicles were to be exempted by heavy zero emissions vehicle status – how would this distinction be made and enforced?
- How would a performance-based approach work in practice, and what would be the associated costs?
- What would be the practical costs associated with implementing an outcomes-based approach to regulating noise?
- What would be the most effective means of implementing reform? What should be the respective roles of the Australian Government, state and territory and local governments?

Transport for NSW response:

Removing curfews for HZEV deliveries 24/7 via legislation or regulation is essential to the broader uptake of HZEV vehicles as the technology will be best suited to the local delivery task. This should come with vehicle requirements such as a smart reversing

alarm that adjusts alarm volume based on ambient noise. It may also need maximum noise limits placed on loading and unloading activities after hours for public amenity.

THE NATIONAL HEAVY VEHICLE DRIVER COMPETENCY FRAMEWORK

Draft finding 6.1
Driver competency reforms are progressing

Reforms to the National Heavy Vehicle Driver Competency Framework appear on track to be implemented by most states and territories by 2028. Some states and territory governments may be able to deliver earlier under current arrangements. Others are not expecting to implement the reforms within the 2028 timeframe, with some still uncertain if they will be implemented in full. Support to implement changes, including to undertake regulatory reform, policy work and IT systems updates, may aid implementation.

Transport for NSW response:

Information request 6.1

The PC is seeking information on:

- the potential size of the costs and benefits, including the productivity effects, arising from the National Heavy Vehicle Driver Competency Framework reforms and if there are any costs and benefits not identified in this report
- how the costs and benefits of National Heavy Vehicle Driver Competency Framework reform might be distributed across the workforce, including by age, gender, income and education, and any other relevant demographic classification (including impacts on Aboriginal and Torres Strait Islander people).

Transport for NSW response:

Information request 6.2

The PC is seeking feedback on future reform directions for the National Heavy Vehicle Driver Competency Framework, including:

- weight concessions in Australian licence classes to create parity between payloads for electric and diesel heavy vehicles and any safety implications of such a concession
- recognition of the credentials, skills and experience of drivers with overseas heavy vehicle licences within Australia's licensing system, considering the effects on safety, driver supply and productivity.

Transport for NSW response:

Getting drivers job ready faster and creating pathways for young people, and others, into the heavy vehicle driver cohort should be the prime focus for this. Leveraging technology, competency-based assessment, and experienced driver support; drivers should be able to progress rapidly through to higher licence classes based on performance.

The current heavy vehicle competency-based training and assessment to commence driving a particular class of heavy vehicle is beneficial and should remain as the formal training element to get drivers skilled enough to commence driving a heavy vehicle. However, eligibility to progress through the competency-based assessment process for a higher heavy vehicle licence class should include a documented experience option as well as the current tenure only option.

Industry has suggested a path like below that has merit:

1. Driver completes formal competency-based assessment and attains a rigid heavy vehicle licence

2. Driver collects documented evidence, via electronic work diaries, of 100 hours of supervised training by an experienced supervising driver in an eligible vehicle. The nominated experienced driver must be able to produce evidence of 5 years full time equivalent driving or driver supervising in the class of vehicle, or higher, being supervised within the last 10 years. However, the experienced driver should not need to hold a heavy vehicle licence. The experienced driver role is ideally suited to drivers who may be at the end of their career and no longer drive. Unfortunately, this cohort is large and growing as our average age of HV drivers increases. An eligible vehicle should be limited to zero or low emissions heavy vehicles such as EHVs or Euro 6 and above. Eligible heavy vehicles should also require advanced vehicle technologies to be fitted such as the Safer Freight Vehicle safety technologies where applicable, satellite tracking, speed monitoring, and fatigue and distraction technology. The experienced supervising driver will also need to maintain an electronic work diary when conducting supervision and provide that evidence to the monitored driver for submission to the licencing authority when required.

3. Once 100 hours of supervision is achieved in a rigid heavy vehicle, the driver is eligible to attempt the articulated vehicle competency-based licence training and assessment.

4. If successful in the final competency assessment for an articulated heavy vehicle licence, the driver would need to collect documented evidence, via electronic work diaries, of 200 hours of supervised training by an experienced supervising driver in an eligible vehicle. The nominated experienced driver must be able to produce evidence of 5 years full time equivalent driving or driver supervising in the class of vehicle, or higher, being supervised within the last 10 years. However, the experienced driver should not need to hold a heavy vehicle licence. The experienced driver role is ideally suited to drivers who may be at the end of their career and no longer drive. An eligible vehicle should be limited to zero or low emissions heavy vehicles such as EHVs or Euro 6 and above. Eligible heavy vehicles should also require advanced vehicle technologies to be fitted

such as the Safer Freight Vehicle safety technologies where applicable, satellite tracking, smart onboard mass monitoring, speed monitoring, and fatigue and distraction technology. The experienced supervising driver will also need to maintain an electronic work diary when conducting supervision and provide that evidence to the monitored driver for submission to the licencing authority when required.

5. Once 200 hours of supervision is achieved in an articulated heavy vehicle, the driver is eligible to attempt the multi-combination vehicle competency-based licence training and assessment.

6. If successful in the final competency assessment for a multi-combination heavy vehicle licence, the driver would be issued a conditional MC licence and need to collect documented evidence, via electronic work diaries, of 100 hours of supervised training by an experienced supervising driver in an eligible vehicle. The nominated experienced driver must be able to produce evidence of 5 years full time equivalent driving or driver supervising in the class of vehicle, or higher, being supervised within the last 10 years. However, the experienced driver should not need to hold a heavy vehicle licence. The experienced driver role is ideally suited to drivers who may be at the end of their career and no longer drive. The conditional MC licence would limit the driver to using an eligible MC vehicle only for 12 months or the completion of 100 hours of supervised training. An eligible vehicle should be limited to zero or low emissions heavy vehicles such as EHVs or Euro 6 and above. Eligible heavy vehicles should also require advanced vehicle technologies to be fitted such as the Safer Freight Vehicle safety technologies where applicable, satellite tracking, smart onboard mass monitoring, speed monitoring, and fatigue and distraction technology. The experienced supervising driver will also need to maintain an electronic work diary when conducting supervision and provide that evidence to the monitored driver for submission to the licencing authority when required.

7. Once 100 hours of supervision or 12 months tenure is achieved in a multi-combination heavy vehicle, the driver is eligible to apply to remove the licence condition on their MC licence that limits them to driving an eligible MC vehicle only.

This approach is predicated on the fact that after completing initial driver training and passing a final competency assessment, drivers may have some skills and knowledge however they do not have experience in the class of heavy vehicle and are not job ready. Formally pairing them with an experienced heavy vehicle driver to gain documented experience in HV driving, loading, load securing etc. accelerates experience building in a supported environment and creates a job ready driver.

The National Heavy Vehicle Driver Competency Framework (NHVDCF) has proposed a path to reduce tenure which is currently being finalized, however there is significant opportunity to improve the proposed outcomes.

Opportunities could also be explored to bring drivers into the HV industry earlier, perhaps with traineeships to incentivize young people to stay and engage with the heavy vehicle industry. A driver who starts learning at 16 and gains their P1 licence at 17, is eligible to train for and gain a medium rigid (MR) licence at 18 and or a heavy rigid (HR) at 19. Having held an HR for a year, a driver in NSW may currently train for and gain a heavy combination (HC) or multi-combination (MR) at around 20 years of age. Work done as part of the NHVDCF review and refresh advised that consideration should be given to delaying a driver's ability to gain a heavy vehicle licence to increase safety. This was not adopted as it would have reduced the opportunity for drivers to join the industry as, or soon after, they leave school and fails to consider the role an experienced supervising driver and advanced vehicle technologies can play in keeping young drivers safe.

Opportunities should also be explored to bring drivers into the HV industry earlier, perhaps with traineeship supported pre-starter courses that teach practical HV knowledge such as fatigue management, rudimentary mechanics, load securing, business basics for self-employed people etc. and include riding with licenced drivers. Completing this course should lower the minimum age to achieve a rigid HV licence by 12 months to incentivize young people to stay and engage with the heavy vehicle industry as a career.