CEMENT CONCRETE & AGGREGATES AUSTRALIA

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Impacts of Heavy Vehicle Reform
Productivity Commission
Locked Bag 2 Collins St
East Melbourne VIC 8003

Submitted via: Impacts of heavy vehicle reform - Commissioned study | Productivity Commission

Productivity Commission Request for Advice: Heavy Vehicle Reform

Dear Commissioners

Cement Concrete & Aggregates Australia (CCAA) welcomes the opportunity to provide this submission to the Productivity Commission's study into heavy-vehicle reform.

The construction-materials sector performs one of Australia's largest road freight tasks. Recent analysis of CSIRO TRANSIT data shows that cement, concrete and aggregates (CCA) freight has a unique operational profile that differentiates it sharply from the broader road freight sector:

- CCA fleets carry 26% more tonnes per trailer than the national freight average.
- CCA trip distances are 19% shorter, and trip durations 16% shorter, than the Australian freight average.
- CCA's cost performance is extremely efficient, with 68% lower cost per payload tonne and 41% lower cost per tonne-kilometre than the national average.
- The sector accounts for 39% of all annual tonnes moved on Australian roads and 21% of the national tonne-kilometre road freight task.
- CCA freight represents 22% of total national road freight transport costs, reflecting the essential nature of quarry, cement and concrete movements to every construction and infrastructure market.

These metrics demonstrate that CCA freight is high-mass, short-haul, high-frequency and extremely cost-efficient, meaning productivity gains (or losses) in this sector ripple directly into housing, infrastructure and major project delivery across the nation.

This freight underpins the delivery of Australia's housing, transport, energy, water and public infrastructure in every state and territory. Unlike long-haul freight, the CCA task is short-haul, high-frequency and overwhelmingly dependent on local-government roads, which makes the sector highly exposed to planning constraints, inconsistent access rules and local network limitations.

Despite strong fleet modernisation and high uptake of Performance Based Standards (PBS) heavy vehicles (HV's) - including the growing use of PBS-approved Truck & Dog and A-doubles for CCA freight movements - productivity has stalled.

Whilst vehicle capability has advanced; the supporting access, planning and infrastructure systems have not. The result is a structural ceiling on productivity, emissions reduction and supply reliability and diminishing incentives to continue to invest in PBS HV's.

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To support improved HV productivity and decarbonisation, we recommend the Commission assist with policy development and critically examine the costs and benefits of the following reforms:

1. A nationally harmonised construction-materials access framework that provides enhanced Concession Mass Limit (CML) and Higher Mass Limit (HML) access on pre-approved gazetted networks for PBS vehicles that meet certain vehicle configuration standards (like the NSW SPECTS and WA AMMS regimes).

2. Different HV road cost recovery and cost allocation approaches such as:

    - a Forward-Looking Cost Base (FLCB) (to ensure total heavy vehicle road user charges reflect the efficient future cost of building, operating and maintaining the road network), and

    - Mass-Distance-Location (MDL) charging (to ensure costs are allocated fairly to HV road users based on the impact they impose on different parts of the network).

    These are potential pathways to more sustainable funding streams to enable improved first- and last-mile Local Government access, and essential State Government mapping, evaluation and upgrades of the PBS CML and HML network.

3. Targeted Commonwealth capability programs for Local Governments, including digital tools, asset data, bridge and pavement assessment systems, to support safe, timely and evidence-based HV road access decisions.

4. A targeted, Commonwealth incentive program that links State, Territory & Local Government road funding to agreed KPI's to drive road network and HV productivity performance and accountability. KPI's could include:

    - Kilometres of expanded PBS CML and HML network
    - Journey-time reliability
    - The proportion of the freight network that is mass-constrained
    - The number of structural bottlenecks restricting access.

5. Strengthened HV mass compliance and enforcement activity to ensure accredited, PBS fleets are not disadvantaged and are rewarded for investing in safer and more productive HV's.

6. A stronger national approach to protecting key freight and construction-materials transport corridors - including the use of Commonwealth funding conditions, national planning frameworks, Infrastructure Australia assessment requirements, and coordinated state–federal governance to prevent incompatible land-use encroachment and ensure long-term access for high-productivity HV's.

7. A nationally consistent HV curfew policy that incentivises the adoption of Electric Vehicle (EV) HV's whilst promoting greater operating hour flexibility for non-EV PBS HV's to improve safety, reduce peak-hour congestion exposure and support the reliable delivery of construction materials.

8. A targeted, Commonwealth program that supports HV charging infrastructure planning and costs.

In relation to the National Automated Access System (NAAS), CCAA believes that this represents the most significant modernisation opportunity for HV access since the introduction of PBS. To realise its full productivity potential, the Commonwealth should:

- Fund its national deployment
- Mandate its adoption across all jurisdictions
- Ensure Councils have the tools, capability and data needed to use it effectively, and
- Support the integration of bridge, pavement and telematics datasets into the platform.

NAAS would replace today's manual and inconsistent decision-making with a modern, data-driven, transparent system. This is essential to reduce delays, improve consistency and support evidence-based access outcomes.

Our full supporting submission is provided at **Attachment 1.** A summary of the CSIRO TRANSIT CCA industry road transport profile is at **Attachment 2.**

Should officials wish to discuss this matter, please contact CCAA's Industry Policy Director, Mr David Rynne via david.rynne@ccaa.com.au and 0431 729 509.

Yours sincerely

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Chief Executive Officer

About CCAA

CCAA is the voice of the $15 billion heavy construction materials industry representing cement manufacturers, concrete suppliers, and extractive operators throughout Australia.

Our members range from large global companies to SMEs and family operated businesses and are engaged in the quarrying of sand, stone and gravel, the manufacture of cement and the supply of pre-mixed concrete.

These businesses service local, regional, and national construction and infrastructure markets to meet Australia's building and construction needs through the provision of roads, railways, bridges, ports, airports, hospitals, schools, and footpaths.

Attachment 1: Full CCAA submission

1.0 INTRODUCTION

Australia's construction-materials sector performs one of the nation's largest and most intensive freight tasks. Unlike long-haul freight, this task is short-haul, high-frequency and overwhelmingly dependent on Local Government roads, making the sector acutely exposed to access constraints, inconsistent regulatory settings and planning-system limitations.

Despite strong uptake of PBS vehicles and significant private investment in safer, more efficient fleets, productivity growth has stalled because the systems that govern access, funding, planning and infrastructure have not kept pace. Barriers such as inconsistent first- and last-mile access, slow and fragmented permit processes, outdated PBS network mapping, planning-imposed curfews, limited charging infrastructure for EV trucks, and the absence of coordinated national frameworks now represent the most significant constraints on productivity and decarbonisation for the sector.

This submission outlines the key reforms the Commission should examine to unlock the next wave of productivity and emissions reductions - reforms centred on modernising heavy-vehicle access, aligning funding and pricing with actual network use, strengthening Local Government capability, improving compliance and enforcement, protecting strategic freight corridors and supporting the transition to low- and zero-emission heavy vehicles.

2.0 INCREASING HEAVY VEHICLE ROAD ACCESS TO REDUCE EMISSIONS AND INCREASE PRODUCTIVITY

2.1 Productivity gains achieved through PBS

PBS has delivered some of the most significant improvements in productivity and safety in the history of Australia's construction-materials freight task. The CCA industry was an early adopter of PBS because its short-haul, high-frequency operations magnify the benefits of safer, more efficient vehicles.

PBS vehicles - especially Level 2 3-axle truck and 4-axle dog combinations - offer substantially improved stability, manoeuvrability and load distribution compared with older prescriptive designs. For example:

- Truck and dog PBS combinations operating at CML (57.5t), provide around 15% higher GCM than GML (50.5t), and

- Truck and dog PBS combinations operating at HML (60t), provide around 4% higher GCM than CML (57.5t), resulting in fewer total truck movements, reduced congestion, lower emissions and better utilisation of drivers, plant and fleet assets.

PBS has also enhanced safety outcomes. Vehicles must satisfy strict engineering performance standards, including rollover resistance, swept-path, braking and dynamic stability. When combined with modern technologies such as Electronic Stability Control (ESC), Roll Stability Control (RSC) and advanced suspension systems, PBS combinations demonstrate significantly lower safety risks.

PBS also accelerated the industry-wide adoption of telematics, on-board mass (OBM) systems and NHVAS Mass Management, strengthening compliance and operational transparency. PBS has therefore modernised the industry fleet and delivered clear national productivity benefits.

However, further productivity gains cannot come from vehicle improvements alone. Vehicle technology has advanced faster than the access, funding and regulatory systems that support it. The next gains must come from modernising access rules, reforming heavy-vehicle funding, improving first-/last-mile networks and adopting nationally consistent decision-making.

2.2. Why HV productivity has stalled in the CCA industry

Productivity growth in the construction-materials transport sector has slowed not because of limitations in vehicle capability or operator compliance, but because of structural, regulatory and administrative barriers that constrain the operation of high-performing HV's. Although PBS delivered a dramatic uplift, these gains are increasingly eroded because the access framework has not evolved in parallel.

2.2.1 Inconsistent, duplicated and very slow permit access decisions between Councils and States & Territories

A major structural barrier to construction-freight productivity is the fragmented and manual way in which access decisions are made for local and state road managers.

To operate on a route that includes both state and local roads, a heavy-vehicle operator must apply to the NHVR, which then seeks consent from every road manager responsible for each section of the route. The permit can only be issued if **all** road managers - state authorities and Local Councils - approve their part of the route, meaning one refusal or delay prevents access to the entire corridor.

The CCA industry recognises the progress made by the Victorian (Heavy Vehicle Structural Assessment Permit System - HVSAPS) and Tasmanian Governments (Heavy Vehicle Access Management System - HVAMS) to streamline how HV's gain access to the road network through these digital/automated systems. However, in the absence of the successful implementation of a true national approach – such as the NAAS - significant delays and costs will continue to be incurred.

Case Study: 19-Month Permit Delay

One CCAA operator sought a routine PBS truck-and-dog access permit for a short quarry-to-plant route involving both council and state roads. Although the vehicle type was already approved on similar routes, the approval process took 19 months.

The delay was driven by repeated requests for additional information from both the council and state road authority. Each time new information was sought, the clock restarted, meaning the operator endured multiple full assessment cycles for near-identical material. Misaligned requirements between agencies and staff turnover added further delay.

During this period, the operator was forced to use smaller non-PBS vehicles at higher cost, doubling trip numbers and reducing quarry and plant productivity. The case highlights how fragmented, sequential permitting and "reset-on-request" administration can turn an otherwise routine access application into a multi-year process, with avoidable cost and network impacts.

2.2.2 Outdated or incomplete PBS network mapping

Australia now operates a two-speed productivity system in relation to PBS access, mass limits and the broader regulatory environment that governs construction-materials transport. This divergence is not driven by differences in freight demand or vehicle capability, but by differences in state policy settings, risk appetite, technical capability and willingness to modernise access frameworks.

The leading states - NSW, WA, Victoria, South Australia and Tasmania - have embraced the PBS and high-productivity HV (HPHV) frameworks as a central pillar of their freight strategies. These jurisdictions have:

- Expansive, well-defined PBS and HPHV networks.
  These states have progressively opened key freight corridors, quarries, industrial precincts and metropolitan connectors to PBS vehicles. Many of these networks extend deep into first- and last-mile routes and are updated regularly based on asset condition, traffic patterns and emerging freight needs.

- Telematics-supported higher mass schemes.
  Programs such as the NSW Safety, Productivity and Environment Construction Transport Scheme (SPECTS) and the WA Accredited Mass Management Scheme (AMMS) enable HML under clear, consistent conditions. Telematics and OBM systems provide assurance to road managers and regulators, allowing productivity improvements without compromising safety or asset integrity.

- Transparent and consistent assessment processes.
  These states use structured, repeatable and engineering-based assessment methods. Operators understand the criteria, timelines and evidence required. This reduces uncertainty, limits delays and encourages investment in PBS and HPHV vehicles and safety technologies.

- Targeted first-/last-mile upgrades.
  State investment programs have increasingly focused on the short road segments that unlock access to quarries, batch plants, ports and construction hubs. These targeted upgrades generate significant productivity gains because they remove bottlenecks that previously rendered whole corridors unusable.

As a result, operators in these states enjoy greater regulatory certainty, higher productivity, fewer truck movements per tonne delivered and stronger incentives for fleet modernisation.

Example of a national outlier – Queensland

In contrast, Queensland has one of the most constrained PBS CML and HML and restricted first- and last-mile networks. This is a result of several complicated factors – including higher rainfall and higher risk of pavement damage, however regulatory and institutional settings have not been able to address this nor keep pace with other states.

Key issues include:

- Limited GML and HML access.
  Queensland offers fewer HML and concessional schemes compared with NSW, WA and Victoria. Many HV routes remain restricted to GML, forcing more truck trips to move the same volume.

- Limited first- and last-mile access.
  Networks vary significantly across Councils boundaries, and many first- and last-mile links remain unassessed or closed. The result is a patchwork of access rules that undermine route reliability.

- Risk-averse decision-making.
  Access decisions often emphasise perceived rather than demonstrated engineering risk. For example, small mass increases are assumed to have significant impacts and raise rollover or infrastructure risk, despite PBS standards demonstrating high stability, especially with ESC/RSC. The real safety risk is additional truck movements and restricting mass forces more trips, increasing traffic exposure and congestion. Engineering evidence shows PBS vehicles at slightly higher masses remain safe and road-friendly.

- Lack of construction-sector schemes.
  Queensland has no equivalent to NSW's SPECTS or WA's AMMS. Without a vehicle–network–telematics framework designed specifically for construction-materials transport, operators must rely on ad hoc permit processes that are slow and unpredictable.

This divergence constrains national productivity because construction supply chains do not operate within state borders - quarries, depots and markets often span multiple jurisdictions. When a single state persists with restrictive or outdated access settings, the entire multi-state network becomes less efficient.

Further PBS HML maps are frequently incomplete or not updated in line with freight demand. Key quarry or batch plant routes remain unassessed or restricted, meaning a road only metres from a state network may be blocked despite meeting engineering requirements.

2.2.3 Inefficient road funding and budget allocation policies

Australia's current heavy-vehicle charging framework is built around the PAYGO (Pay-As-You-Go) model. Under PAYGO, heavy-vehicle charges - registration fees and the fuel-based Road User Charges - are set to recover the historic, average expenditure that state and territory governments make on their roads.

However, PAYGO has two major structural limitations:

1. It recovers *past* expenditure rather than funding current or future needs thereby ignoring current and future freight pressures and typically underestimates the investment needed for future demand.

2. It distributes revenue only to state and territory governments, not to Local Governments.

This is a critical flaw for the construction-materials sector, because Local Governments maintain most of the roads that the CCA freight task uses - including quarry access roads, connector streets, industrial precinct roads, batch plant approaches and links into construction sites.

Under PAYGO, Local Governments receive none of the heavy-vehicle charges generated by the vehicles operating on their roads. Instead, Councils rely on:

- General rates revenues;

- Developer contributions;

- Ad hoc road user agreements;
- State funding programs, and
- Federal Grants (eg Financial Assistance Grants or FAGs).

However, these grants are not linked to heavy-vehicle use. They are formula-based, pooled funding arrangements that must cover a wide range of local services (waste, libraries, parks, community facilities, planning services, etc.). Only a fraction is available for roads - and even then, it is not tied to freight intensity or road wear from heavy vehicles.

This means Local Governments who host quarries, batch plants or high-density construction areas must maintain some of the most heavily used freight roads in the country, have no access to PAYGO heavy-vehicle charge revenue. The consequence is that CCA industry operators are often called upon to fund both own-user and multi-user roads that service quarries and the network – resulting in a 'double dip' contribution of the industry (i.e road users pay Local Government road user charges plus State Government registration charges plus Federal Government Road User Charges).

This structural misalignment produces several consequences:

- Chronic underfunding of roads with the highest freight intensity.
  Local roads bearing hundreds of heavy-vehicle movements per day receive no additional funding despite being central to the national construction supply chain.
- Double charging of operators and industry.
  Because PAYGO does not support local roads, Councils increasingly impose levies, access charges, maintenance contributions or intersection upgrades - meaning operators pay PAYGO charges *and* local charges.
- No reward for jurisdictions that enable productivity.
  States or Councils that expand PBS or higher-mass access do not receive additional road funding, even though they may reduce network-wide costs by enabling fewer truck trips.
- No differentiation between high- and low-performing fleets.
  A modern PBS truck with OBM, ESC, RSC and road-friendly suspension pays the same charges as an older, less safe, more road-damaging vehicle. PAYGO contains no mechanism to reward safer, more productive, lower-impact fleet investment.
- A disconnect between charges and the roads used.
  Construction-materials vehicles overwhelmingly use local roads, yet PAYGO funds only state-managed networks.

There is also cost recovery misalignment – where state road agencies at times deny certain HV combinations access to certain roads due to an inadequate cost recovery. If states continue to make access decisions based on these fundamentals, there is a strong argument for a phased transition toward a Mass–Distance–Location (MDL) charging framework enabled by telematics, data-sharing and strong governance structures.

2.2.4 First- and last-mile restrictions that block access to otherwise suitable corridors

Councils capability to assess and grant first- and last-mile access for heavy vehicles varies widely across Australia. Some Local Governments have engineering expertise, pavement data and bridge assessments; many do not. Without consistent tools or nationally standardised assessment methods, Councils rely on different criteria, assumptions and risk thresholds when making decisions. This results in substantial inconsistency: neighbouring Councils with similar road conditions often reach opposite conclusions on the same PBS vehicle. These inconsistencies undermine the intent of PBS, which was designed to provide a uniform, evidence-based access framework across Australia.

Because Councils often lack asset information or heavy-vehicle assessment capability, uncertainty frequently results in conservative decisions. Access may be restricted or refused not due to demonstrated safety concerns, but because Councils cannot confidently assess the risk. Delays are also common, with some applications waiting weeks or months for decisions on local roads that carry heavy vehicles every day.

Councils often decline access not because PBS vehicles are unsafe, but because they cannot quantify the risk. This creates systemic chokepoints. Declared state high-productivity corridors provide no benefit if the 500 metres from a quarry gate to the arterial remains restricted.

The consequence is that PBS vehicles - despite being safer, more stable and more road-friendly - are frequently unable to access short but essential local-road links that determine whether entire freight corridors are usable.

This mismatch between modern vehicle performance and outdated access processes is now one of the most significant constraints on productivity within the CCA sector.

Governments have begun to recognise these structural issues, and several initiatives are underway to support Local Governments and reduce first- and last-mile barriers, for example:

- Austroads now delivers national training programs to build local-government capability in heavy-vehicle assessment and is developing standardised engineering tools to support more consistent decision-making.
- The NHVR has established a Road Manager Support Program that provides Councils with technical advice, training, and digital bridge and pavement assessment tools to assist with PBS and higher-mass applications.
- State governments are also investing in targeted first- and last-mile upgrades through programs such as Fixing Country Roads (NSW), the Heavy Vehicle Safety and Productivity Program, and WA's network-tiered AMMS framework.
- The development of the NAAS is a further step toward modernising and standardising access assessments nationally.

These initiatives represent positive progress, but they remain early-stage and uneven across jurisdictions. Significant capability gaps persist, and without a consistent national framework, local-road assessments will continue to be a major bottleneck for productive, low-impact PBS operations.

2.2.5 Planning-system operating-hour curfews that compress freight into inefficient peak-hour windows

A significant productivity barrier for the CCA industry - one not captured in current heavy-vehicle regulatory frameworks - is the prevalence of stringent operating-hour restrictions imposed through State and Local Government planning and Development Assessment (DA) processes.

These restrictions commonly limit quarry, batching plant and depot operations (eg maintenance and HV loading) to windows such as 7:00am - 4:30pm, with strict constraints on HV movements outside those hours.

For the CCA sector, these limits impose substantial inefficiencies:

- Construction sites often commence work well before 7am, yet concrete and aggregates cannot be delivered until sites are already active.
- Peak-hour congestion compresses freight into the least efficient times of day, increasing trip times and fuel consumption.
- Batching plants must complete all deliveries within a narrow window, creating artificial peaks that exacerbate traffic impacts.
- Quarries and cement depots are forced to stack demand into mid-morning periods, reducing throughput.
- Operators lose significant working hours to regulatory curfews rather than genuine safety or amenity concerns.

Crucially, these planning restrictions operate independently of HV access regimes, meaning that even if PBS access, higher mass limits or NAAS automation is delivered, the productivity benefit is muted if trucks are allowed to operate only within narrow local-government-imposed windows.

This is an especially acute issue for construction materials because:

- Concrete has a finite working life and must be delivered at precise times;
- Major infrastructure projects frequently schedule early starts to manage traffic and safety;
- Construction supply chains depend on predictable, early-morning mobilisation;
- Aggregate and cement supply is typically required ahead of the main daily construction window, and
- Most noise-related impacts stem from site operations, not vehicle propulsion systems, meaning EV trucks do not eliminate the issue.

In many cases, planning-hour restrictions are more constraining than transport regulations themselves, yet they are rarely considered in national freight reform discussions.

While Councils impose these limits to balance industry operations with community amenity, current blanket rules often fail to distinguish between:

- Heavy industrial noise versus truck arrival noise;

- Low-impact early-morning movements versus full production activity, and
- Sites adjacent to industrial zones versus sensitive residential areas.

The result is a rigid system that does not reflect modern vehicle technology, improved safety, or the essential nature of the construction-materials supply chain.

2.2.6 Weak mass-limit enforcement

CCAA is also concerned that inadequate enforcement of mass limits creates a commercial disadvantage for accredited operators who invest in PBS vehicles, OBM systems and higher compliance standards. These fleets carry higher operating costs, while non-accredited operators can exploit weak enforcement settings and gain an unfair commercial advantage.

This dynamic not only erodes the business case for maintaining high compliance standards, but also disincentivises operators from investing in higher-productivity heavy vehicles (HPHVs), undermining the safety and efficiency outcomes governments seek to promote through PBS and modern access frameworks.

2.2.7 A lack of nationally consistent construction-materials access frameworks like SPECTS

Only a small number of jurisdictions - most notably New South Wales and Western Australia - have developed sector-specific access frameworks tailored to the operational needs of the construction-materials industry.

In NSW, SPECTS provides a structured, transparent framework for construction-materials vehicles that integrates defined vehicle standards, concessional mass limits, telematics requirements and pre-approved networks. In Western Australia, the AMMS delivers a similar level of certainty by combining mass concession levels, road-friendly suspension requirements and clear network tiers based on matching vehicle configurations to defined asset capability.

These schemes enable safer, more productive PBS vehicles to operate at their engineered potential on pre-identified networks where asset conditions, vehicle standards and compliance expectations are well aligned. They dramatically reduce administrative burden and provide operators with predictable, repeatable access outcomes.

However, no equivalent national scheme exists. Other jurisdictions rely on older, fragmented or prescriptive access processes that were not designed with PBS vehicles in mind. In these states, access decisions occur on a route-by-route, councils-by-councils basis, creating uncertainty, delays and inconsistent outcomes for the same vehicle types. Without a sector scheme, there is no mechanism to align vehicle performance, mass limits, telematics, and network planning in a way that reflects the high-frequency, short-haul nature of the CCA task.

The absence of nationally consistent construction-materials schemes means operators face significantly different rules, mass limits and productivity outcomes depending on the state they operate in. A PBS truck-and-dog combination may operate efficiently at higher mass limits on a defined SPECTS or AMMS network, yet face lower mass, reduced access or lengthy permit processes in Queensland or South Australia. This fragmented approach suppresses national productivity, reduces regulatory certainty, and undermines the intent of the PBS framework.

2.2.8 A lack of planning protection of key transport corridors

A growing structural risk to construction-materials freight is the lack of effective planning protection for key transport corridors and industrial precincts.

In many jurisdictions, residential and mixed-use development is being permitted to encroach on established freight routes, quarries, depots and port-related precincts. This intensification of sensitive land uses close to heavy-vehicle corridors inevitably leads to increased community complaints about noise, dust, safety and truck numbers, which in turn places pressure on governments and Councils to restrict operating hours or curtail access. Over time, this dynamic erodes the social licence for freight operations that long pre-date surrounding development.

Recent Victorian policy work[1] explicitly acknowledges this challenge. Land-use and transport integration guidance emphasises the need not only to locate housing and jobs close to transport, but also to protect existing and planned transport infrastructure from the impacts of surrounding development, including freight routes and terminals.

Similar pressures are evident in Queensland, particularly in South East Queensland (SEQ), where rapid population growth and housing development are occurring along or adjacent to key freight routes and industrial areas.

Strategic documents such as *Connecting SEQ 2031* and broader SEQ transport and growth visions recognise that accommodating growth will require careful integration of housing and freight, yet in practice Local Government's continue to make planning decisions that inevitably lead to increased objections to truck movements.

Without stronger, proactive planning protection of freight corridors and construction-materials precincts - through buffers, compatible zoning, and explicit freight overlays - these trends will progressively constrain operating hours, limit route options and undermine the viability of higher-productivity heavy vehicles. For a sector that depends on fixed quarries and batch plants and must move high volumes daily, clearer national and state-level planning policies to identify, protect and future-proof key freight routes are essential to maintaining both productivity and social licence.

2.2.9 Absence of incentives for Councils to pursue access improvements

Local Governments carry a disproportionate share of responsibility in Australia's freight access system. They are expected to assess, consent to and manage the impacts of HV movements on their local road networks, yet they receive no direct funding or financial benefit when granting PBS access. Councils therefore carry the risk, but not the reward.

Council-managed roads are essential to the CCA freight task, forming the first- and last- mile links between quarries, batch plants, cement depots and construction sites. These roads experience high volumes of HV's despite limited funding support with PAYGO revenues flowing mainly to State governments, leaving Councils without the resources needed to maintain or upgrade the very roads that support construction activity.

At the same time, Councils face strong community and political pressure relating to truck movements, noise and perceived safety concerns and in some jurisdictions also have veto over projects through control of DA's. Without standardised assessment tools, reliable asset data or clear incentives, Councils often default to conservative decisions on quarry approvals and/or

[1] The Victorian Freight Plan 2025-30: Victoria Delivers

operating hours and in road funding programs. Uncertainty becomes a barrier to approval, even when PBS/ HPHV vehicles are demonstrably safer and more road-friendly.

Importantly, Councils do directly benefit from the outcomes that efficient construction-materials transport enables. Timely, predictable and productive supply of aggregates, cement and concrete supports the delivery of local infrastructure, including roads, drainage, community facilities and housing developments. Efficient materials transport shortens project timelines, reduces disruption and supports the economic growth Councils are tasked with enabling.

However, these benefits are not linked to the access decision itself. Councils receive no direct financial return for supporting more productive freight operations.

This misalignment - Councils bearing the risk while communities who receive aggregates, cement and concrete (both inside and outside of the Local Government Area where these materials originate) enjoy the downstream benefits - creates a structural barrier to PBS and access. Productivity reforms must therefore include measures that support Councils with funding, tools and incentives so their decisions better reflect the broader economic and community benefits of enabling modern, safe and efficient PBS vehicles.

3.0 THE COMMONWEALTH'S ROLE IN IMPROVING HV ACCESS

The barriers facing construction-freight productivity - fragmented rules, inconsistent access, misaligned funding, and duplicated assessment processes - closely resemble the structural challenges addressed through Australia's earlier National Competition Policy (NCP) reforms. These are system-wide failures that no single State or Local Government can resolve independently. They require national coordination, clear policy direction, and incentive structures that align the interests of all levels of government.

The Commonwealth is uniquely positioned to lead these reforms because it:

- Sets the overarching economic and competition policy framework;
- Funds major national road infrastructure;
- Administers federal grants to Local Governments;
- Has the authority to modernise national charging and pricing systems, and
- Is responsible for productivity, housing supply, and economic performance across jurisdictions.

While states manage the road networks and Councils manage most of the first and last-mile connections, the Commonwealth is the only entity capable of integrating these components into a coherent national system.

To address the systemic constraints facing the construction-materials freight task, the Commonwealth should drive a modern, NCP-informed national reform program focused on the following.

3.1 National adoption of the National Automated Access System

The NAAS represents the most significant modernisation opportunity for HV access since the introduction of PBS. NAAS standardises the *process* of access assessment by applying

nationally consistent engineering logic, automating routine decisions, and integrating asset and telematics data into a single assessment engine.

To realise its full productivity potential, the Commonwealth should:

- fund its national deployment;
- mandate its adoption across all jurisdictions;
- ensure Councils have the tools, capability and data needed to use it effectively, and
- support the integration of bridge, pavement and telematics datasets into the platform.

NAAS would replace today's manual and inconsistent decision-making with a modern, data-driven, transparent system. This is essential to reduce delays, improve consistency and support evidence-based access outcomes.

3.2 A harmonised SPECTS like scheme for construction materials supply across States and Territories

While NAAS will modernise how access decisions are made, genuine national productivity requires aligning what rules those decisions are based on. The CCA industry has operational characteristics that make a uniform, sector-specific national framework essential.

Construction-materials transport is uniquely high-frequency, short-haul and time-critical. Vehicles may complete 15–25 trips per day from fixed quarries, batch plants and depots using the same local-road links millions of times per year. Unlike general freight, these origins and destinations cannot be relocated or rerouted around restrictions. Even small inconsistencies in access or mass limits lead to disproportionate increases in truck movements, project delays and congestion. Because construction materials cannot be stockpiled and are essential to housing and infrastructure delivery, inefficiency in this sector has direct national economic consequences.

The sector also has high PBS uptake, predictable operating patterns and strong telematics and compliance penetration, making it ideally suited for a structured, pre-assessed regulatory framework. Jurisdictions that have implemented dedicated construction-materials schemes - such as the NSW SPECTS and the WA AMMS - have demonstrated that aligning vehicle standards, network rules and mass limits delivers significant productivity and safety benefits while reducing administrative burden.

To overcome the current state-by-state inconsistency, the Commonwealth should establish a nationally consistent construction-materials access framework, which states would administer on their own networks.

This framework would align:

- PBS vehicle standards
- CML/HML
- Telematics and OBM requirements
- Access decision-making thresholds and methodologies.

A national framework would eliminate the counterproductive patchwork where a vehicle that operates safely and efficiently in one state faces lower mass limits, reduced access, or outright refusal in another. When combined with NAAS this framework would deliver predictable, evidence-based and nationally consistent access for operators investing in modern, safe and productive fleets.

A harmonised national approach acknowledges the unique characteristics of the construction-materials freight task and is critical to unlocking the next major wave of productivity in Australia's housing and infrastructure delivery pipeline.

3.3 Reform of HV pricing to a Forward-Looking Cost Base (FLCB) and adoption of Mass-Distance-Location charging

The Commonwealth should lead the transition to an FLCB model that:

- aligns charges with actual and future freight task demands;
- directs funding to where heavy-vehicle activity occurs, including local roads;
- recognises modern, high-performance vehicles, and
- enables long-term, sustainable funding for first- and last-mile infrastructure.

This is one mechanism to fix the fundamental misalignment between who uses the roads, who pays, and who maintains them.

Effort should also continue in evaluating the introduction of Mass-Distance-Location (MDL) charging as a fairer and more efficient mechanism to allocate the true costs of freight movements. MDL charging ensures that operators contribute in proportion to the mass they carry, the distance they travel, and the locations they impact - driving better investment signals and supporting sustainable funding of local and first- and last-mile infrastructure.

To this end, CCAA notes:

- The results of the National Heavy Vehicle National Pilot (NHVCP), which is testing different ways to charge heavy vehicles for road usage based on the weight of the vehicle and distance travelled (including the use of telematics to collect information) is now being analysed[2].
- The direction of national Infrastructure and Transport Ministers (Infrastructure and Transport Ministers Meeting) in charging the National Transport Commission to consult on a forward-looking cost base (FLCB) as an alternative way to set heavy vehicle charges.[3]

[2] https://www.infrastructure.gov.au/infrastructure-transport-vehicles/transport-strategy-policy/heavy-vehicle-road-reform/national-heavy-vehicle-charging-pilot

[3] https://www.ntc.gov.au/sites/default/files/assets/files/Heavy%20Vehicle%20Charges%20Consultation%202026-27.pdf:

3.4 Local Government capability uplift

Some Australian Councils lack the technical and financial capacity to perform modern heavy-vehicle access assessments. The Commonwealth should role out consistent and well-resourced national initiatives that:

- Fund training, tools and technical support for asset managers;
- Support the acquisition of digital assessment systems and asset data;
- Strengthen Councils' ability to manage freight impacts in growing urban areas, and
- lLnk support to improved turnaround times and evidence-based decision-making.

Capability uplift reduces risk-aversion and enhances safety, efficiency and confidence in the system.

3.5 Incentive-based funding tied to access performance

The Commonwealth should provide states and Councils with clear, measurable incentives to improve access outcomes. This could include:

- Federal funding bonuses tied to expanded PBS HML networks and KPI’s such as:
    - Kilometres of expanded PBS CML and HML network
    - Journey-time reliability
    - The proportion of the freight network that is mass-constrained
    - The number of structural bottlenecks restricting access.
- Targeted first-/last-mile infrastructure programs
- Performance benchmarks for timely access decisions
- Funding linked to adoption of NAAS and telematics-supported schemes.

Incentive-based reform is a proven NCP mechanism for aligning state and local decisions with national productivity objectives.

3.6 National planning alignment to protect freight corridors

The growing encroachment of sensitive land uses near established freight routes, quarries, batch plants and industrial precincts will progressively constrains operating hours, restrict access and erodes the social licence necessary for productive PBS and HPHV operations.

The Commonwealth should lead a nationally consistent planning framework that:

- Embeds freight-corridor protection into national urban-policy and housing-supply agreements.
- Links federal infrastructure and housing funding to freight-compatible land-use decisions.

- Requires states to map, protect and future-proof key construction-materials corridors.
- Supports buffer policies, freight overlays and land-use conflict mitigation tools.

This would ensure that the productivity and access reforms delivered through NAAS, PBS and FLCB/MDL charging are not undermined by local planning decisions.

4.0 BARRIERS TO AVAILABILITY OF EV TRUCK CHARGING INFRASTRUCTURE

Heavy battery-electric trucks are emerging but remain operationally challenging for the CCA industry. While CCAA supports decarbonisation and recognises the long-term role of zero-emission heavy vehicles, the CCAA industry – beyond cost sand mass/payload tradeoffs, - faces unique charging constraints due to high fleet utilisation, very high trip frequency, fixed facility locations and tight delivery time requirements.

CCAA's views on the charging barriers are elaborated below.

4.1 Planning and zoning restrictions

Many quarries, concrete batch plants and cement depots operate on industrial sites with limited land availability, strict buffer zones and planning constraints. Current planning systems are not designed for large-scale heavy EV charging, which require:

- High-voltage grid connections.
- Sufficient transformer capacity.
- Dedicated charging bays big enough for PBS trucks.
- Operational space for queuing and circulation.

Most local zoning frameworks do not yet contemplate these footprints, creating lengthy approval processes and uncertainty.

4.2 Grid connection approvals and energy regulations

High-capacity DC fast chargers for heavy trucks require grid upgrades that at times trigger:

- Environmental approvals.
- Distribution network service provider (DNSP) assessments.
- Lengthy connection studies and augmentation costs.

For many sites, especially regional quarries, required upgrades are technically feasible but financially prohibitive without government co-investment.

4.3 Practical barriers to installation and operation

4.3.1 Lack of space at production sites

Batch plants and quarries already operate under tight spatial optimisation. Unlike depots or logistics hubs, CCA sites cannot easily dedicate large areas for EV infrastructure without reducing stockpile space, raw materials handling, truck circulation or safety margins.

4.3.2 High vehicle utilisation unsuitable for long charge times

CCA trucks often complete up to 25 trips per day, with rapid turnaround times and minimal dwell periods. Existing heavy EV charging technologies cannot support these utilisation rates without:

- Multiple high-capacity chargers.
- Extensive grid infrastructure.
- Battery sizes that significantly reduce payload.

4.3.3 Route-based charging is not practical for CCA

CCA truck movements are short-range and repetitive. They do not stop at long-haul rest stations or freight hubs. Therefore, public chargers along highways do not suit:

- Agitators delivering concrete.
- Quarry trucks hauling aggregates.
- Cement bulk tankers distributing to metropolitan plants.

A lack of fit-for-purpose metropolitan industrial charging sites is a primary barrier.

4.4 Mismatch between costs and who benefits

Charging infrastructure requires significant capital investment at sites operated by private companies, but the public benefit - reduced emissions and noise - is much broader. Without government co-funding or tax incentives, the business case remains weak.

4.5 Uncertain technology pathway

For many construction-materials applications:

- hydrogen,
- battery swapping,
- trolley assist, or
- hybrid solutions,

may be more suitable than plug-in battery-electric trucks due to weight, power demands, and duty cycles. Premature regulatory settings risk locking industry into suboptimal technologies.

4.6 Risk of stranded assets

Given rapid technology change, investing in EV chargers now may result in stranded assets if:

- Charging standards evolve (i.e. today's charger types become incompatible with future truck technologies or plug standards).

- Megawatt charging becomes universal (i.e. high-power MCS systems replace current fast-charging infrastructure and make it obsolete).

- Hydrogen becomes dominant for heavy fleets (i.e. operators invest in EV hardware only to find future fleets shift to hydrogen fuel-cell technology instead).

Industry prefers coordinated national planning rather than piecemeal site-by-site investment.

5.0 CURFEWS FOR EV TRUCKS

Current curfew settings do not differentiate between electric and diesel heavy vehicles – that is, under both the HVNL and Local Government planning and traffic regulations, EV trucks are treated the same as all other heavy vehicles and are subject to identical curfews. While the Productivity Commission is exploring whether EVs should receive different curfew treatment, no such provisions exist today.

Given that most noise and amenity impacts in the construction-materials heavy vehicle transport sector arise from loading, unloading, agitator operation and other site activities - not solely from engine noise – the noise and community benefits of an EV curfew exemption are likely to be variable and dependent on the operating circumstances and activity (eg driving or loading/or unloading).

Introducing curfew exemptions or increased curfew flexibility for EV trucks could deliver tangible benefits for both industry and the community.

For industry, extended operating windows would improve fleet utilisation, reduce transit times by enabling movements during low-congestion periods, and provide a practical incentive for operators to invest in EV technology.

Hence, greater operating flexibility may be one of the most meaningful commercial levers available to accelerate EV uptake in the construction-materials sector.

The community would also benefit from EV curfew flexibility where quieter drivetrain performance leads to reduced noise impacts during early-morning or late-evening periods.

Operating outside standard hours can also ease peak-hour congestion, improve safety outcomes through fewer heavy vehicles mixing with commuter traffic, and reduce emissions in densely populated areas.

However, to maximise overall productivity and maintain fairness across the sector, any EV curfew flexibility should be complemented by a broader review of curfew settings for compliant internal combustion engine (ICE) fleets, ensuring curfew policy is aligned with actual noise impacts and wider community amenity considerations.

6.0 CONCLUSION

To support improved heavy-vehicle (HV) productivity and decarbonisation, we recommend the Commission critically examine the costs and benefits of the following reforms:

1. A nationally harmonised construction-materials access framework that provides enhanced CML and HML access on pre-approved gazetted networks for PBS vehicles that meet certain vehicle configuration standards (like the NSW SPECTS and WA AMMS regimes).

2. Different cost recovery and cost allocation approaches such as:

    - a Forward-Looking Cost Base (to ensure heavy vehicle road user charges reflect the efficient future cost of building, operating and maintaining the road network), and

    - Mass-Distance-Location charging (to ensure costs are allocated fairly to users based on the impact they impose on different parts of the network,

    as potential pathways to more sustainable funding stream to enable improved first- and last-mile Local Government access, and essential State Government mapping, evaluation and upgrades of the PBS CML and HML network.

3. A targeted Commonwealth capability program for Local Governments, including digital tools, asset data, bridge and pavement assessment systems, to support safe, timely and evidence-based HV road access decisions.

4. A targeted, Commonwealth incentive program that links State, Territory & Local Government road funding to agreed KPI's to drive general performance and accountability.

    KPI's could include:

    - Kilometres of expanded PBS CML and HML network.

    - Journey-time reliability.

    - The proportion of the freight network that is mass-constrained.

    - The number of structural bottlenecks restricting access.

5. Strengthened HV mass compliance and enforcement activity to ensure accredited, PBS fleets are not disadvantaged and are rewarded for investing in higher safety and productivity HV's.

6. A stronger national approach to protecting key freight and construction-materials transport corridors - including the use of Commonwealth funding conditions, national planning frameworks, Infrastructure Australia assessment requirements, and coordinated state–federal governance - to prevent incompatible land-use encroachment and ensure long-term access for high-productivity heavy vehicles.

7. A nationally consistent HV curfew policy that incentives the adoption of EV HV's whilst promoting greater operating hour flexibility for non-EV PBS HV's to improve safety, reduce peak-hour congestion exposure and support the reliable delivery of construction materials.

8. A targeted, Commonwealth program that supports HV charging infrastructure planning and costs.

In relation to the NAAS, CCAA believes that this represents the most significant modernisation opportunity for HV access since the introduction of PBS. To realise its full productivity potential, the Commonwealth should:

- Fund its national deployment.
- Mandate its adoption across all jurisdictions.
- Ensure Councils have the tools, capability and data needed to use it effectively.
- Support the integration of bridge, pavement and telematics datasets into the platform.

CEMENT CONCRETE & AGGREGATES AUSTRALIA

Attachment 1: Australian Road Freight Transport – National and Jurisdictional Metrics (All Commodities vs Construction-Materials Sector)

AUSTRALIAN ROAD FREIGHT TRANSPORT (ALL VS CCA INDUSTRY)

		QLD	NSW	VIC	TAS	SA	NT	WA	TOTALS
Total road freight transport (all commodities)	Annual trailers	5,055,681	6,042,728	4,645,434.48	709,414.53	1,425,384.64	203,814.61	4,770,479.32	**22,852,936**
	Annual tonnes	98,580,869	121,600,672	92,278,274	13,997,706	30,652,553	3,986,519	104,953,792	**466,050,385**
	Tonne kilometres (billion t kms)	25.55	24.75	14.51	2.71	6.54	1.50	30.75	**106.3**
	Tonnes/trailer (average)	16.3	16.9	16.5	16.7	16.9	14.8	16.9	**16.4**
	Avg Trip Distance (km) (average)	144.4	104.8	83.8	99.5	101.0	154.8	147.9	**119.5**
	Avg Trip Duration (hrs) (average)	1.6	1.2	1.0	1.1	1.2	2.2	1.6	**1.4**
	Cost per payload tonne ($) (average)	$ 54.54	$ 36.76	$ 26.30	$ 39.82	$ 30.66	$ 82.49	$ 41.32	**$ 44.55**
	Cost per tonne km ($) (average)	$ 0.38	$ 0.35	$ 0.38	$ 0.38	$ 0.39	$ 0.43	$ 0.39	**$ 0.38**
	Total transport costs ($)	$ 2,698,907,482	$ 2,525,813,332	$ 1,456,155,721	$ 297,111,881	$ 593,587,827	$ 105,670,530	$ 3,300,406,952	**$ 10,977,653,725**
CCA sector only (clinker, cement, rock, sand, gravel & concrete commodities only)	Annual trailers	2,022,394	3,286,747	2,080,274.13	175,877	463,663.01	125,347.71	734,768.68	**8,889,072**
	Annual tonnes	41,517,152	67,572,576	42,535,712	3,835,877	9,738,726	2,568,172	15,140,055	**182,908,270**
	Tonne kilometres (billion t kms)	7.79	5.18	2.20	0.61	1.91	0.97	3.47	**22.1**
	Tonnes/trailer (average)	20.5	20.4	20.3	21.6	20.4	21.1	20.4	**20.7**
	Avg Trip Distance (km) (average)	91.7	76.6	49.4	79.5	97.9	185.1	110.2	**98.6**
	Avg Trip Duration (hrs) (average)	1.1	0.9	0.6	1.0	1.2	2.6	1.2	**1.2**
	Cost per payload tonne ($) (average)	$ 16.62	$ 13.49	$ 8.64	$ 9.86	$ 12.57	$ 19.69	$ 15.12	**$ 13.71**
	Cost per tonne km ($) (average)	$ 0.23	$ 0.24	$ 0.27	$ 0.25	$ 0.22	$ 0.17	$ 0.20	**$ 0.23**
	Total transport costs ($)	$ 689,963,087	$ 911,558,853	$ 367,546,025	$ 37,806,364	$ 122,379,407	$ 50,575,278	$ 228,984,359	**$ 2,408,813,373**
CCA/Total	Annual trailers	40%	54%	45%	25%	33%	62%	15%	**39%**
	Annual tonnes	42%	56%	46%	27%	32%	64%	14%	**39%**
	Tonne kilometres (billion t kms)	30%	21%	15%	23%	29%	65%	11%	**21%**
	Total transport costs ($)	26%	36%	25%	13%	21%	48%	7%	**22%**
CCA +/- % (compared to total averages)	Tonnes/trailer (average)	26%	20%	23%	29%	21%	42%	21%	**26%**
	Avg Trip Distance (km) (average)	-36%	-27%	-41%	-20%	-3%	20%	-25%	**-19%**
	Avg Trip Duration (hrs) (average)	-35%	-23%	-35%	-15%	2%	15%	-23%	**-16%**
	Cost per payload tonne ($) (average)	-70%	-63%	-67%	-75%	-59%	-76%	-63%	**-68%**
	Cost per tonne km ($) (average)	-39%	-31%	-28%	-34%	-44%	-60%	-48%	**-41%**

Source: CSIRO Transport Network Strategic Investment Tool (2025 data)