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Lifting Industry Standards

5 December 2025

Commissioner Martin Stokie and Commissioner Barry Sterland

Email: ncp@pc.gov.au

From: The Crane Industry Council of Australia (CICA)

Dear Commissioners, Stokie and Sterland

**Submission on Impacts of Heavy Vehicle Reform: Impacts and Opportunities for the Australian Crane Industry**

## Introduction

The Crane Industry Council of Australia (CICA) welcomes the opportunity to contribute to the Productivity Commission's inquiry into the impacts of heavy vehicle reform.

CICA is the national peak industry body for the crane sector, representing crane owners, hirers, operators, manufacturers and suppliers. CICA promotes safe and efficient crane operations across Australia, provides training and technical guidance, and advocates to government and regulators for fair and practical road access and safety policies.

As a national body, CICA has unique insight into how road access arrangements impact not only the crane industry but also the timely and cost-effective delivery of the Nation's infrastructure pipeline.

Heavy Vehicle Reform is essential to address systemic issues affecting: The importation of cranes necessary to fulfill project obligations; mobile crane road access and, by extension; the safe, timely and emissions minimising delivery of major infrastructure projects across the state. In Queensland alone, the Queensland Government is delivering a $116.8 billion, 4-year capital program that will provide critical infrastructure for Queensland and the delivery of the 2032 Olympics.[1]

Add WestConnex (NSW), Melbourne Metro Rail Project (Vic), Torrens to Darlington project (SA), Citylink/Metronet Project (WA), large-scale renewable energy developments, transmission lines and

[1] Queensland Treasury (2025) *Budget Paper 3: Capital Statement – 2025–26 State Budget*. Queensland Government, Brisbane. Available at: https://budget.qld.gov.au/files/Budget-2025-26-BP3-Budget-Capital-Statement.pdf

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many other mining, housing and other construction projects, and it is evident that all require efficient crane mobilisation across borders.

Crane operations are essential to infrastructure delivery, renewable energy projects, commercial construction, emergency response, and major industrial maintenance across Australia. Efficient and safe movement of cranes and associated heavy vehicles is critical for national productivity, economic growth, and emissions reduction.

## Issues with the Current System

The current system penalises cranes by misclassifying them as goods carrying or oversized freight, the problems associated with this are evident in the following ways:

**ROVER**

The ROVER regulatory framework, while intended to enhance vehicle safety and compliance, has created considerable burdens for the crane industry. The need for extensive administrative paperwork often delays the commissioning of cranes, thus increasing project timelines and costs.

Cranes are not trucks, and CICA has been calling for some time for cranes to be classified more appropriately under the EU Regulation N3G Heavy construction or utility truck designed for off-road or specialised work instead of the NC Heavy Goods Vehicle classification currently imposed by ROVER. Cranes are not goods-carrying vehicles, they have been simply folded into to NC classification for system processing convenience.

**NAAS**

At present, the permitting and access framework treats cranes as “oversized freight” rather than recognising them as “essential plant”. Again, this distinction is important as it results in a cumbersome, inconsistent, and often duplicative process that penalises crane operators and stifles productivity. Unlike other transport modes, cranes cannot be substituted and require specific route planning due to their configuration, size, and operational constraints; delays in access approvals translate directly into project delays.

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**A Productivity Drain**

The inefficiencies of the current systems are a direct drain on productivity for both industry and government. The lack of a coordinated framework leads to excessive delays in securing approvals/permits, inconsistent conditions applied by different assessors and road managers, which all lead to increased costs.

The crane industry is uniquely affected by heavy vehicle regulations due to the specialised nature, size, and mass of crane units.

CICA therefore supports reforms that:

- enable increased road access
- streamline approval processes
- modernise driver competency pathways
- remove barriers to zero-emission heavy vehicle adoption
- ensure regulatory settings reflect contemporary technology, safety standards, and industry needs.

This submission addresses the key questions raised in the consultation paper.

## 1. Impact of ROVER and ADR Compliance on the Crane Industry

### Currently

The Road Vehicle Legislation administration system (ROVER) and the requirement to comply with Australian Design Rules (ADRs) present several challenges for mobile cranes and specialised imported heavy vehicles.

**Crane design is inherently international**

Most mobile cranes imported into Australia are engineered in Europe or Japan under stringent international standards (e.g., UNECE). Their steering system, braking systems, lighting, safety systems, and environmental performance already exceed many ADR requirements.

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**The need for individual evidence packages for each model under ROVER is burdensome.**

Unlike mass-produced trucks, cranes are low-volume specialist machines. The administrative load, engineering assessments, and evidence requirements delay importation and increase upfront costs.

**ADR discrepancies force unnecessary modifications**

Items such as lighting placement, side underrun requirements, or minor dimensional differences require reconfiguration or post-manufacture modification, adding cost without improving safety outcomes.

**Crane import delays undermine project delivery.**

Slow approval processes delay availability of new cranes, affecting construction schedules and reducing national productivity.

## How ADRs Impact Crane Importation with ROVER

Australian Design Rules (ADRs) are the national standards that set out the requirements for vehicle safety, anti-theft features, and environmental performance in Australia's Road Vehicle Standards (RVS) legislation.

They apply to almost every vehicle type that is registered for road use, including heavy vehicles such as mobile cranes. For an imported crane to be legally supplied and registered in Australia, it must be assessed against the ADRs.

Cranes present a particular challenge because they are classified as Special Purpose Vehicles. Unlike conventional trucks or cars, cranes are designed for high risk works on construction sites and do not always meet every design rule in the strict sense. For example, a crane may exceed width limits, have a turning circle that falls outside standard requirements, or rely on specialist exhaust systems that make emissions compliance complex. This does not mean the crane cannot be used in Australia, but it does mean that the importer must go through a more rigorous approval process to show that the vehicle is safe and suitable for road operation (please see Industry Case Study on Page 6).

That process is managed through ROVER, the Department of Infrastructure's online portal for vehicle imports and compliance under the Road Vehicle Standards Act. Importers are required to use ROVER to apply for either a Vehicle Type Approval or a Concessional RAV Entry to bring mobile cranes into

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the Australian market both require full compliance with all applicable ADRs. This involves uploading approval certificates, engineering reports, test data, and supporting documents that demonstrate compliance.  seeking exemptions from the National Heavy Vehicle Regulator (NHVR), when strict compliance is not possible. Once approved by the ROVER team  the crane is entered onto the Register of Approved Vehicles (RAV), which is a prerequisite before it can be supplied to the Australian market.

In practice, this means that cranes that already have been verified to comply with the more stringent international standards, must then commission detailed engineering assessments, prepare documentation that explains how the crane satisfies the intent of the ADRs, and justify exemptions where necessary. The challenges lie in the administrative burden, engineering costs, and the need to navigate exemptions for vehicles that do not fit neatly into the rules.

**Administrative cost**

Lack of Special Purpose Vehicle experience within the ROVER team and the involvement of the National Heavy Vehicle Regulator (NHVR) in the assessment process, together with the need to comply with each ADR requirement has led to a higher burden of administrative work, leading to delays, and added costs for the crane importation process.

**Supply chain and second-hand market cost**

The documentation complexities introduced by the ROVER system have also created disruptions in the supply chain for mobile cranes. 35% of the all-terrain and hydraulic truck mobile cranes imported into Australia each year were from the used crane sector, these used cranes were designed and certified to international vehicle standards at the time of manufacturing.

Used crane dealers cannot provide the relevant individual certificate without input from the crane manufacturers who are often their competitors in the used crane market, making it harder for them to remain competitive in the industry. The crane industry has witnessed a significant reduction in number of used cranes coming into Australia since the introduction of ROVER system for mobile cranes.

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**Cost of unnecessary testing and certification requirements**

Crane operation requires unique and bespoke machines due to the complex and demanding nature of the lifts required (e.g. a crane required to lift pre-cast concrete panels greatly differs from a crane required to lift wind turbines). This means mobile cranes are unable to comply with some ADR requirements due to the nature and the layout of the machine, which creates non-compliance to ADRs.

## Industry Case Study – Exhaust Design

ADR 42 clause 24 specifies that the direction of exhaust discharge must not be to the left of the vehicle. The purpose of this ADR clause is to protect pedestrians from exposure to exhaust emissions. Certain types of mobile cranes have their exhaust pipe discharging above the cabin to the left of the vehicle. This exhaust design is directly related to noise emission regulations certified under EN 13000 Cranes – Mobile Cranes to the required UNECE 51 decibel rating.

The left facing exhaust is not compliant to ADR42, even though, when looking at the configuration of the crane, the exhaust outlet pipe, being almost 3 meters high (Figure 2) from the ground, would have provided adequate ventilation for pedestrians and other roads users while the crane is travelling to the site. **Justifications were still required to explain why complying with the ADR 42 clause 24 means the vehicle would not be able to operate for the purpose for which it was designed.**


**Figure 1: Mobile Crane exhaust height**

Below are the justifications provided by the manufacturer on why the current design is the most appropriate design and why it is not possible to change the exhaust pipe discharge direction:

- Change to an upward open design will cause an excessive collection of water and debris in the exhaust system. This would adversely affect the performance, longevity and emission control quality via the SCR system (Selective Catalytic Reduction) and the AdBlue after treatment of the exhaust system, in turn compromising EURO emissions.
- Change to designs with rain caps are not suitable due to their previous poor performance and lack of resistance to the environment, causing corrosion and ultimately failure of the system. In addition, the lack of exhaust pressure would not adequately open the cap, when idling during crane operation and could adversely impact the engine and exhaust system (NB: idling averages 80% of the crane's usage).
- Change to a design where the exhaust is directed to the rear, resulting in heat, gases, vapours and diesel particulate matter discharging in the direction of the crane operator when the crane is in lifting operation. It also means UN ECE 51 and ADR 83 approvals would no longer be met.
- Change to a design where the exhaust is directed to the right could result in the fowling of critical safety components and heat damage to the boom and instruments. This has the potential to result in catastrophic failure of the crane during operation.
- Change to a design where the exhaust is directed to the front results in heat, gases, vapours and diesel particulate matter discharging directly to the crane driver when the crane is travelling. In addition to the safety and well-being of the crane driver when the mobile crane is in transportation mode and the noise emission requirements; the presence of a pressure sensor, compressed air line and electric heating of the AdBlue line could be compromised by a forward orifice.

A review of available UK, Thailand and Hong Kong incident data demonstrated no reported exhaust fume-related incidents; The limited use on-roads (mainly freeway driving to job sites) and the low volume of annual sales make the impact of the exhaust position negligible for these cranes.

A test report was still required from the NHVR to show the influence of exhaust gas on pedestrians even with the facts and justifications provided above. The crane manufacturer conducted an exhaust temperature proximity test to help determine if the temperature of the exhaust is within safe limits

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for pedestrians who may be in proximity to the exhaust outlet when the mobile crane is in transportation mode. **The cost to find a suitable test place, procure test equipment, and the engineering hours spent on the test set-up, conducting the test and drafting the report across three models added up to a total of over AUD$250, 000 for the crane manufacturer.**

This crane was designed, tested and certified to European vehicle design standards and the crane manufacturer supplies this crane model to multiple countries in the overseas market. Australia is the only country requiring this type of exhaust test which creates an enormous financial burden for the crane manufacturer and downtime in the supply chain.

## The Crane Industry Council of Australia (CICA) recommends:

**Mutual recognition of the current and previous regulatory frameworks of Regulation (EU) 2018/858 (and its predecessor, 2007/46/EC) for mobile cranes, in parallel with the existing RAV entry approval process through ROVER.**

**Classify cranes more appropriately under the EU Regulation N3G instead of the NC classification currently imposed by ROVER.**

This would mean that if a mobile crane model is designed and manufactured in compliance with *Regulation (EU) 2018/858* (or its predecessor 2007/46/EC), the crane model would be deemed compliant with the Register of Approved Vehicles, which is part of Australia's Road Vehicle Standards (RVS) legislation and is managed through the ROVER online system.

Alignment with Global Benchmarks, as the EU standards represent the highest global benchmark for vehicle safety and operational efficiency, would maintain safety without duplicating testing and certification requirements.

This would deliver meaningful productivity gains across the construction, mining, and renewables sectors by streamlining approvals, simplifying and accelerating the RAV application process, and reducing the financial and administrative burdens on businesses.

It would also enable faster introduction of newer, cleaner, and more efficient crane models into the Australian market, and reduce emissions and congestion by allowing direct travel to job sites instead of floating.

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By adopting this recommendation, there is no safety compromise because the EU framework already meets or exceeds ADR requirements in critical areas such as braking, stability, and emissions control. Table 1 (below) shows the ADR list aligned with EU Regulation 2018/858, covering all ADRs relevant to mobile cranes, and Figure 1 provides an example EU 2018/858 Certificate of Compliance.

Such an approach would remove unnecessary duplication, streamline approvals, and allow businesses to invest with greater certainty and efficiency.

**Release the findings of the ADR Harmonisation Review**

Importantly, while a review of the vehicle Australian Design Rules (ADRs) was formally commissioned by the Australian Government Department of Infrastructure, Transport, Regional Development, Communications and the Arts in late 2024, and completed by Dr Warren Mundy June 2025). Despite repeated requests, the Minister for Transport has yet to release its findings.

Reform to recognise established international standards, is critical if Australia is to remain competitive and support industries that are central to our nation's economic growth.

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| ADR designation | ADR title | Alternative standard mentioned in ADR | TUV Certificate of Compliance to EU 2018/858 or predecessor |
|---|---|---|---|
| ADR 01/00 | Reversing Lamps | UN Regulation No 23 | Yes, UN ECE 23 |
| ADR 03/04 | Seats and Seat Anchorages | UN Regulation No 17 | Yes, UN ECE 17 |
| ADR 04/06 | Seatbelts | UN Regulation No 16 | Yes, UN ECE 16 |
| ADR 05/06 | Anchorages for Seatbelts | UN Regulation No 14 | Yes, UN ECE 14 |
| ADR 06/00 | Direction Indicators | UN Regulation No 6 | Yes, UN ECE 6 |
| ADR 08/01 | Safety Glazing Materials | UN Regulation No 43 | Yes, UN ECE 43 |
| ADR 13/00 | Installation of Lighting and Light Signalling Devices on other than L-Group Veh | UN Regulation No 48 | Yes, UN ECE 48 |
| ADR 14/02 ADR 14/03 | Rear Vision Mirrors/Devices for Indirect Vision; | UN Regulation No 46 | Yes, UN ECE46 |
| ADR 18/03 | Instrumentation | UN Regulation No 39 | Yes, UN ECE39 |
| ADR 35/06 /07 | Commercial Vehicle Brake Systems | UN Regulation No 13 | Yes, UN ECE 13 |
| ADR 42/05 | General Safety Requirements | - | Yes, Regulation (EC) No 661/2009 |
| ADR 43/04 | Vehicle Configuration and Dimensions | - | Yes, Regulation (EC) No 661/2009, Regulation (EU) No 1230/2012 |
| ADR 46/00 | Headlamps | UN Regulation No 1,5,8,20, 31,112,113 | Yes, UN ECE 31 |
| ADR 47/00 | Retroreflectors | UN Regulation No 3 | Yes, UN ECE 3 |
| ADR 48/00 | Devices for Illumination of Rear Registration Plates | UN Regulation No 4 | Yes, UN ECE 4 |
| ADR 49/00 | Front and Rear Position (Side) Lamps, Stop Lamps and End Outline Marker La | UN Regulation No 7 | Yes, UN ECE 7 |
| ADR 50/00 | Front Fog Lamps | UN Regulation No 19 | Yes, UN ECE 19 |
| ADR 51/00 | Filament Lamps | UN Regulation No 37 | Yes, UN ECE 37 |
| ADR 52/00 | Rear Fog Lamps | UN Regulation No 38 | Yes, UN ECE 38 |
| ADR 61/03 | Vehicle Marking | - | Yes, Regulation (EC) No 661/2009, Regulation (EU) No 19/2011, Regulation (EU) No 1003/2010 |
| ADR 62/02 | Mechanical Connections Between Vehicles | UN Regulation No 55 | Yes, UN ECE 55 |
| ADR 65/00 | Maximum Road Speed Limiting for Heavy Goods Vehicles and Heavy Omnibus | BS AU 217: Part 1 1987- | Yes, UN ECE 89 |
| ADR 74/00 | Side Marker Lamps | UN Regulation No 91 | Yes, UN ECE 91 |
| ADR 76/00 | Daytime Running Lamps | UN Regulation No 87 | Yes, UN ECE 87 |
| ADR 77/00 | Gas Discharge Headlamps | UN Regulation No 98 | Yes, UN ECE 98 |
| ADR 78/00 | Gas Discharge Light Sources | UN Regulation No 99 | Yes, UN ECE 99 |
| ADR 80/03/04 | Emission Control for Heavy Vehicles | UN Regulation No 49, 83, 154 EU Regulations 595/2009 and 582/2011 | Yes, Regulation (EC) No 595/2009 |
| ADR 83/00 | External Noise | UN Regulation No. 51 | Yes, Regulation (EU) No 540/2014, UNECE 51 |
| ADR 90/00 | Steering System | UN Regulation No 79 | Yes, UN ECE 79 |
| ADR 92/00 | External Projections | - | Yes, Regulation (EC) No 661/2009, UN ECE 61 |
| ADR 93/00 | Forward Field of View | - | TUV inspector check the field of view in person |
| ADR 94/00 | Audible Warning | UN Regulation No 28 | Yes, UN ECE 28 |
| ADR 95/00 | Installation of Tyres | - | Yes, Regulation (EC) No 661/2009, Regulation (EU) No 458/2011 |
| ADR 96/00 | Commercial Vehicle Tyres | UN Regulation No 54 | Yes, UN ECE 54 |
| ADR 97/00 | Advanced Emergency Braking for Omnibuses, and Medium and Heavy Goods | UN Regulation No 131 | Mobile crane ADR amendment - Not applicable for mobile cranes |
| ADR 99/00 | Lane Departure Warning Systems | UN Regulation No 130 | Mobile crane ADR amendment - Not applicable for mobile cranes |
| ADR 105/00 | Blind Spot Information Systems | UN Regulation No 151 | Application date for new model vehicle 1 Nov 2025. |
| ADR 106/00 | Side Underrun Protection | UN Regulation No 73 | Yes, UN ECE 73 |

**Table 1**

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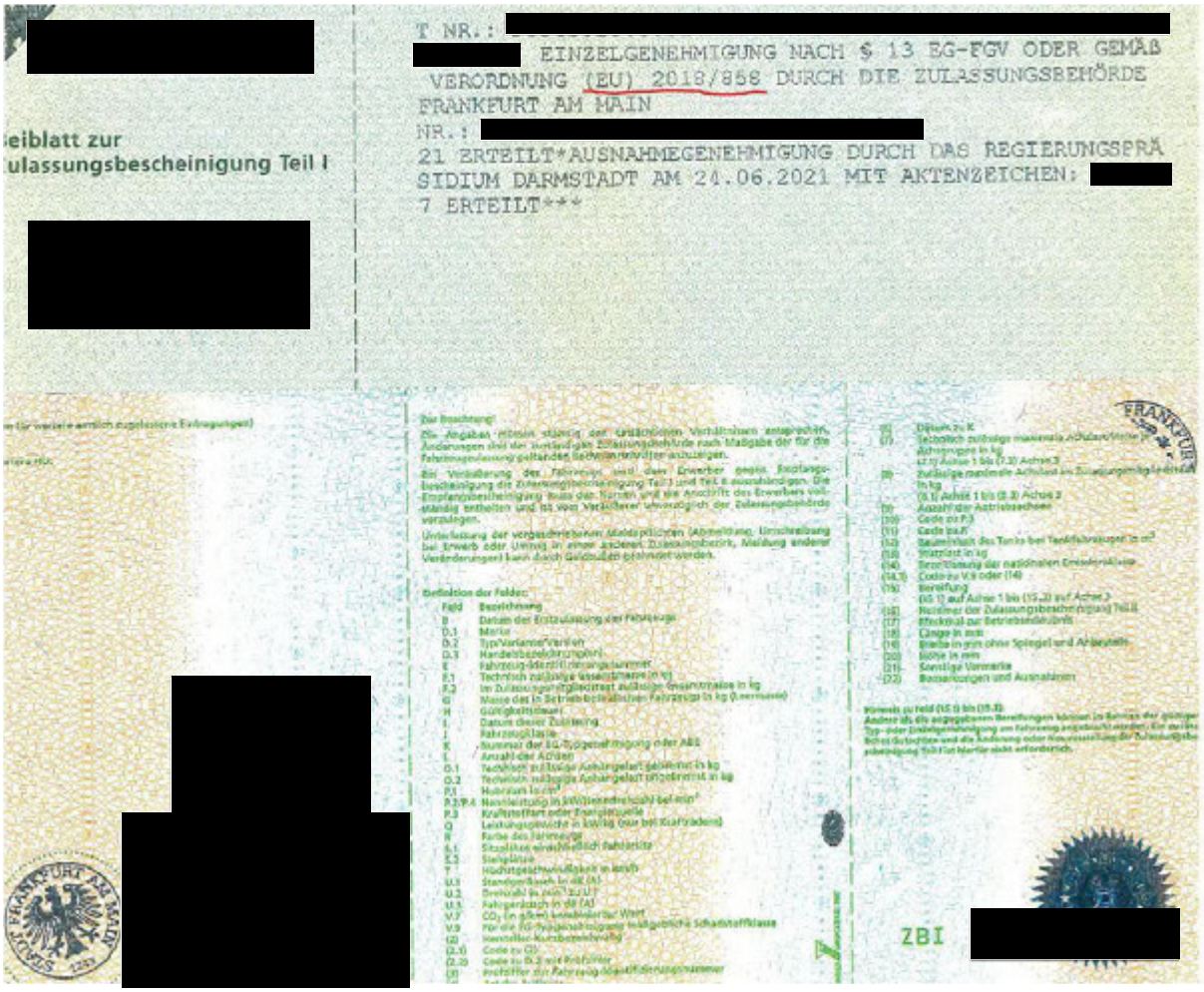


**Figure 1**

## 2. Establishing a National Automated Access System (NAAS)

### Impacts of Current Road Access Restrictions on Crane Productivity

Under current laws, mobile cranes face some of the most restrictive access conditions of any heavy vehicle type:

- **Permit requirements are excessive and inconsistent.** Operators often face up to 28 days turnaround times for simple road movements, even on roads repeatedly used.
- **State-by-state differences create complexity and inefficiency.** A crane allowed on a route in one state may require fresh assessment in another.
- **Weight and dimension constraints don't reflect modern crane engineering.** Many cranes exceed general access limits despite being safe by design, forcing permit reliance.
- **Productivity is significantly reduced.** A crane that cannot reach site on time can delay concrete pours, lifts, shutdowns, and critical-path construction activities.

### Specific Challenges for Crane Companies

**Mass limits**

Mobile cranes often have axle loads that exceed prescriptive standards due to the need to carry counterweights, booms, and safety systems onboard. This is then increased if the crane is a hybrid or electric model.

**Bridge assessments**

Repeated individual assessments for roads and bridges already proven safe for crane movements slow productivity.

**First/last kilometre inconsistencies**

Even when major arterial routes are approved, access to industrial estates or construction precincts is often restricted by local governments or third parties (rail owners). The first and last kilometre remains one of the most intractable barriers for cranes. While state roads may be accessible under notice or permit, local government roads are often blocked by inconsistent rules or lengthy approvals. This fragmented approach creates uncertainty, delays, and increased costs (See Industry Case Study 2 on page 15).

**Last-minute permit refusals**

This creates major project delays, operational complications and additional cost for clients.

**Curfews in urban areas**

Limits on movement times increase congestion impacts and reduce efficient machine utilisation.

## Benefits of Increased Access and a National Automated Access System

A well-designed NAAS would deliver substantial benefits:

- **Near-instant automated access decisions** for the majority of common routes.
- **Consistent national rules** that remove cross-border discrepancies.
- **Higher mass limits and broader pre-approved networks** that reflect modern crane engineering and real-world road capability.
- **Significant productivity gains:** quicker mobilisation, fewer delays, lower labour costs, reduced project slippage.
- **Reduced emissions:** fewer permit-related detours, fewer double-handling movements, and higher utilisation rates of modern, efficient cranes.

The Heavy Vehicle Access Management System (HVAMS) has already proven successful in Tasmania[2] from both an operational and economic standpoint, leading to its adoption and expansion to other vehicle classes and jurisdictions[3]. It provides a centralised and automated platform for assessing heavy vehicle access on road networks, streamlining the process for both road managers and operators.

HVAMS collects detailed vehicle configuration data and evaluates it against road asset data to provide real-time access decisions and tailored route maps, increasing efficiency and productivity for the heavy vehicle industry. Whilst resource intensive to establish, it then enables consistent and

[2] Tasmanian Department of State Growth 2022, *Heavy Vehicle Access Management System (HVAMS) Cost–Benefit Analysis: Final Report for Special Purpose Vehicles*, 16 November, Tasmanian Government, viewed 4 December 2025, https://www.transport.tas.gov.au/__data/assets/pdf_file/0012/405003/HVAMS_CBA_Final_Report_16_Nov_22.pdf

[3] Tasmanian Department of State Growth 2022, *Heavy Vehicle Access Management System (HVAMS) Approach and Attributes*, Tasmanian Government, viewed 4 December 2025, https://www.transport.tas.gov.au/__data/assets/pdf_file/0011/405002/HVAMS_Approach_and_Attributes.pdf

harmonised access decisions across state and local road networks, eliminating inconsistencies and operational inflexibilities caused by individual permit assessments.

HVAMS reduces administrative burdens and costs associated with permit applications for both operators and road managers. It provides road managers with a holistic view of their road network capabilities and deficiencies, enabling better asset management and investment planning based on heavy vehicle demand data. The system has been developed through strong collaboration between road managers, the heavy vehicle industry, and their respective associations, ensuring it meets the needs of all stakeholders.

The NAAS is being pushed as nationwide reform, however CICA has some concerns that overcomplicating the road management system by adding multiple layers of bureaucracy risks creating a burdensome and unwieldy framework that stifles progress and undermines efficiency.

For example, the Heavy Vehicle Structural Assessment Program (HVSAPS) being rolled out in Victoria and proposed for New South Wales and South Australia, may offer faster processing times for road access requests, but it still fundamentally relies on the existing NHVR portal infrastructure. While this brings some welcome efficiency, it does not deliver the kind of transformational change that HVAMS offers and that industry has been expecting.

In contrast, the Heavy Vehicle Access Management System (HVAMS) promises true instantaneous access - removing the delays, manual steps, and administrative overheads that continue to limit productivity and restrict operators' ability to plan with certainty. The gap between "quicker approvals" and "real-time access" remains significant, and HVSAPS does not yet bridge that divide.

Further complicating matters is the lack of clarity around how HVSAPS will interact with, or feed into, the National Automated Access System (NAAS). Industry has not been provided a coherent explanation, leaving operators uncertain about long-term integration, data flow, or consistency of access outcomes.

Compounding this, is the apparent freedom given to individual states to develop their own approaches, which risks creating silos, fragmentation, and systems that function well locally but fail to deliver national uniformity. Without clear governance, shared standards, and a commitment to excellence rather than minimum viable products, Australia's heavy vehicle access landscape may become even more complex, when the goal should be simplification and a seamless national system.

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The NAAS based on the HVAMS model can streamline access, improve safety, and enhance productivity, but only if resources and attention are directed toward its successful implementation rather than dissipated across a maze of overlapping regulations and systems.

## Industry Case Study – Access to [redacted]

**Background:**

In 2025, a crane operator sought access [redacted], NSW, to deliver critical lifting services for a major infrastructure project. The process of securing permits for this access revealed systemic inefficiencies in the current road access framework.

The challenges faced were excessive.

**Excessive Administrative Burden:**

The operator was required to commission multiple independent bridge assessments (at a cost of approximately $5,000) using reference vehicles. This was done in the hope of resolving the seven-year access issue to [redacted]. However, despite confirming that the bridge structure could safely accommodate various cranes, the local council imposed additional, unnecessary control measures, including separate permissions, traffic management applications, and fees for every crossing. These were eventually withdrawn after industry intervention, but only after more than 50 emails, numerous phone calls, to coordinate with council officers, independent consultants, industry representatives and the road regulator (National Heavy Vehicle Regulator NHVR).

**Inconsistent Standards:**

While similar or heavier vehicles such as semi-trailers were granted unrestricted access, cranes faced severe limitations due to being classified as “oversize freight” (the permitting and access framework treats cranes as oversized freight rather than recognising them as essential plant).

Despite the independent assessment demonstrating structural capacity, the council has not updated NSW Special Purpose Vehicle maps, forcing operators to continue applying for individual permits. This inconsistency undermines expert evidence and perpetuates administrative inefficiency.

**Operational Impact:**

The protracted process caused delays to project timelines, diverted staff resources from critical

planning tasks, and increased operational costs - illustrating how the current system inhibits productivity and predictability.

## If we transpose HVAMS on this case study

There would have been a remarkably different outcome. All stakeholders, including councils, would have been required to rely on the same engineering evidence and automated access rules. This would have prevented the imposition of unnecessary, inconsistent control measures such as repeated crossing applications, separate traffic management approvals, and additional fees. HVAMS' automated decision-making framework would also have removed the need for the more than 50 emails, multiple phone calls, and extensive coordination between council officers, consultants, industry representatives, and the NHVR.

Furthermore, HVAMS corrects the inconsistency in how cranes are currently treated as "oversize freight" rather than essential plant. By incorporating accurate vehicle data, risk-based classifications, and real-world performance envelopes, HVAMS ensures that cranes are managed on the same evidence-based footing as comparable or heavier vehicles that already have unrestricted access. Where a bridge or road is safe for semi-trailers or other approved heavy vehicles, HVAMS would automatically reflect this, updating maps and network information in real time, removing the need for repeated, individual permit applications.

Operationally, this would have delivered substantial productivity gains, turning this seven-year ordeal into a streamlined, coherent access framework that would have saved a lot of time, money and frustration.

## The Crane Industry Council of Australia (CICA) recommends:

**Investment and resources into creating a true 'National' system** based on the HVAMS rather than the HVSAPS model, ensuring that HVAMS delivery reflects the operational and financial realities of heavy vehicle operators and their clients.

This can only be done with a:

**Commitment to collaboration** – Ongoing, genuine engagement with industry over the life of the program to deliver promised outcomes, and;

**Strengthened governance** – Appointment of a whole-of-program Sponsor, enforcing national alignment, rather than permitting NAAS to be undermined by parallel state-based systems. Clear accountability is needed or this reform risks becoming piecemeal, 'Minimum Viable Product' that won't really address the legacy issues of road access or create a strong future proof framework.

NAAS represents a once-in-a-generation opportunity to deliver a modern, nationally consistent access framework. Strong leadership, industry buy-in and State alignment are essential to ensure the program delivers real benefits for productivity, asset protection, and the efficient delivery of major national projects.

## 3. Accelerating the National Heavy Vehicle Driver Competency Framework

### Impacts of Current Driver Competency Frameworks

Mobile crane operators and crane drivers require highly specialised skills that are not adequately reflected in standard heavy vehicle licensing models. Unlike conventional truck drivers, crane operators must understand complex counterweight systems, load charts, slew restrictions, outrigger deployment, boom configuration, dynamic stability, and on-site lift planning. These operational requirements go far beyond the competencies assessed under current heavy vehicle licence classes (HR, HC, MC), resulting in a regulatory gap where the licensing system does not fully evaluate the real-world capabilities needed to safely operate mobile cranes. As a result, employers must rely heavily on internal training, industry programs such as CrewSafe, and extensive mentoring, creating inconsistent skill levels and increasing onboarding times for new operators.

The situation is further complicated by the upcoming national changes to the High-Risk Work Licence (HRWL) framework, which are currently awaiting rollout across Australia. These reforms are intended to modernise competency expectations and ensure that HRWL classes better reflect the skills required for high-risk industries. While these changes are welcomed by industry, they will also require significant transition planning, updated training materials, assessor capability-building, and consistent implementation across jurisdictions. Alignment between HRWL reforms, the National Heavy Vehicle Driver Competency Framework, and crane-specific competency programs, could greatly streamline administration and improve safety outcomes.

Workforce mobility is currently restricted by inconsistent training and competency requirements across Australian states and territories. Each jurisdiction applies differing expectations for crane

driving and heavy vehicle licensing, making it difficult for operators to move between states or for companies to redeploy staff where demand is highest. This contributes directly to the national shortage of skilled crane operators and drivers.

### The Crane Industry Council of Australia (CICA) recommends

A harmonised, nationally consistent driver and operator competency system - one that recognises the specialised nature of crane operations and the development of crane-specific skills (e.g., counterweight loading, preparation for road travel, escort requirements); supports workforce mobility; integrates with forthcoming HRWL reforms.

A unified framework would improve safety outcomes, reduce duplication, and help address chronic workforce shortages across the crane and construction sectors.

## 4. Removing Barriers to Zero-Emission Heavy Vehicle Adoption

### Currently

Crane companies face a distinct set of challenges in adopting zero-emission heavy vehicles, and these barriers limit the sector's ability to transition despite strong industry interest in cleaner, lower-noise technology.

**Lack of charging infrastructure near industrial areas, depots, wind farms, and construction zones**

Crane operations often occur in high-demand industrial precincts, renewable energy sites, ports, and major construction projects, i.e. areas where heavy-vehicle charging infrastructure is currently scarce or entirely absent. Unlike point-to-point freight operations, cranes may need to deploy multiple times per day across varied locations, making access to high-capacity chargers essential.

**Mass penalties for battery-electric vehicles (BEVs)**

Battery systems add substantial weight to heavy vehicles. For the crane sector, where platforms already operate at or near the legal mass and axle limits, this additional weight can eliminate available payload capacity or make the vehicle ineligible for access under existing regulations. Without mass concessions or harmonisation of axle weight limits, early adoption of BEVs is effectively discouraged. Even incremental increases in tare weight can prevent cranes from carrying essential components such as counterweights or telescoping booms, forcing operators to use additional trucks and adding cost, emissions, and road movements.

**Higher purchase costs compared to diesel units**

Electric and hybrid heavy vehicles currently cost significantly more to purchase than their diesel equivalents. The crane industry faces even higher capital costs due to the specialised engineering required for hybrid crane platforms. Without targeted incentives, transitional rebates, or mass-limit flexibility, the upfront investment remains prohibitive, particularly for small and medium crane operators who dominate the Australian market.

**Regulatory limits on noise and curfew rules that should otherwise benefit cleaner, quieter vehicles**

Curfew restrictions in metropolitan areas compound these challenges. Because cranes are often classed as oversize or overmass vehicles, many local governments impose strict movement windows, typically early mornings or late evenings. These narrow timeframes force operators to schedule mobilisation during periods associated with greater fatigue risk, reduced visibility, and a heavier reliance on pilot vehicles and support crews. This leads to higher overtime costs, more resource-intensive transport operations, and inefficient fleet utilisation. Crane travel schedules are impeded by waiting for allowable curfew windows rather than in productive use on job sites, reducing overall industry productivity.

Zero-emission and hybrid heavy vehicles are substantially quieter than traditional diesel cranes and support trucks. However, current road access curfews do not differentiate between diesel and zero-emission vehicles, meaning operators cannot take advantage of the noise and environmental benefits these new technologies offer. Retaining rigid curfews removes one of the key operational advantages of low-noise vehicles, reducing the business case for adoption.

**Uncertainty about performance in remote, hot, or high-demand work environments**

Crane companies operate across Australia's harshest environments, from remote mining regions to high-temperature construction sites and wind farms spread across long distances. There is currently limited evidence demonstrating how electric or hybrid crane platforms perform under sustained load, on unsealed access roads, or in extreme heat. Concerns remain about range, battery temperature management, power draw during extended crane utilisation, and access to emergency charging in remote areas. These uncertainties delay investment decisions and discourage early uptake.

## Potential Productivity and Safety Benefits

Adopting zero-emission heavy vehicles, supported by targeted reforms such as mass-limit adjustments, harmonised access, and curfew flexibility, would deliver substantial productivity, safety, and environmental benefits for the crane industry.

**Extended operating hours**

Quieter, cleaner zero-emission vehicles would allow operators to move cranes and support vehicles outside traditional curfew windows, particularly in metropolitan areas where noise restrictions currently limit mobilisation. This would enable early-morning or evening deployments without disturbing local residents, improving project scheduling flexibility and reducing idle time for equipment and staff. Longer operating windows would also allow for more efficient coordination of multi-crane lifts or sequential projects, minimising delays and overall project duration.

**Lower operational costs**

Reduced fuel consumption translates into significant savings on energy costs over the life of the vehicle, particularly for crane support trucks that frequently undertake long haul movements.

**Emissions reduction**

The crane industry relies heavily on transport between construction sites, industrial hubs, and renewable energy projects. Transitioning support vehicles and cranes to zero-emission platforms could reduce emissions, particularly on long-haul movements.

## The Crane Industry Council of Australia (CICA) recommends

**Funding research**

Evidence on the performance of zero emission vehicles in remote, hot, or high-demand work environments and the availability of charging infrastructure, would give the industry confidence and an increased appetite for change.

**Increase axle limits**

The nationwide harmonisation of a 12-tonne per axle limit, aligns with global standards and the design philosophy of modern All Terrain Cranes. Increasing mass limits to 12-tonne per axle would allow many cranes to travel without an additional prime mover and trailer, immediately reducing the number of vehicles on the road. This delivers measurable benefits: lower emissions, reduced road and

bridge wear, improved road safety, and faster, more efficient crane setup on site, cutting project costs and time while supporting safer operations.

**Special dispensations for hybrid cranes**

Providing an additional 2–3 tonnes (5%) on five-axle units to account for battery weight, would enable early adoption of cleaner technology without requiring EV charging infrastructure. Allowing a tolerance of up to 1 tonne (only 8%) for each axle limit would provide crane designers with the flexibility to incorporate the battery systems into their vehicle packaging.

Given the very small volume of hybrid cranes in the Australian fleet, the impact on the road network would be negligible, while the productivity and emissions benefits would be significant. Together, these reforms would remove unnecessary regulatory barriers and create a practical, low-risk pathway toward zero- and low-emission crane technologies**.**

## 5. Sensible Timeframes and Priority Areas

The following timeframes would be seen by industry as reasonable.

**Immediate (0–2 years)**

- Mutual recognition of international standards for crane import approvals
- Increase mass limits for zero-emission heavy vehicles
- Expand pre-approved networks for crane access
- Fast-track NAAS pilot corridors
- Research on the positioning of charging infrastructure and performance of zero emission cranes in extreme environments

**Medium term (2–5 years)**

- National harmonisation of crane driver competencies
- Establishment of dedicated charging hubs in industrial zones
- Refined access rules for EV and hybrid cranes
- Integrated national digital permit-free access across all jurisdictions

**Long term (5–10 years)**

- Transition pathways for low- and zero-emission mobile cranes

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## Conclusion

The crane industry is central to Australia's construction, infrastructure, energy, and industrial sectors. Reforming heavy vehicle regulation, particularly in respect to road access, driver competency, zero-emission readiness, and vehicle import processes, will deliver measurable benefits in productivity, safety, and emissions reduction.

CICA strongly supports a modernised, nationally consistent, technology-enabled regulatory framework that recognises the unique characteristics of mobile cranes and allows them to operate safely and efficiently on Australia's road network.

We welcome further engagement with the Productivity Commission and Government to progress these reforms.