Question today
Imagine tomorrow
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Review of Oversize Overmass (OSOM) Access Arrangements

Department of Infrastructure, Regional Development and Cities

September 2018

wsp

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ABBREVIATIONS

ABS	Australian Bureau of Statistics
ACT	Australian Capital Territory
ALGA	Australian Local Government Association
AS	Australian Standard
CGE	Computable General Equilibrium
CICA	Crane Industry Council of Australia
CSIRO	Commonwealth Scientific and Industrial Research Organisation
DPTI	Department of Planning Transport and Infrastructure
DSG	Department of State Growth (Tasmania)
DSRC	Dedicated Short Range Communication
DTMR	Department of Transport and Main Roads
GCM	Gross Combination Mass
GCW	Gross Combination Weight
GDP	Gross Domestic Product
GSP	Gross State Product
HVNL	Heavy Vehicle National Law
IAP	Intelligent Access Program
IIMM	International Infrastructure Management Manual
IPWEA	Institute of Public Works Engineering Australasia
LGAQ	Local Government Association of Queensland
MDL	Mass, Dimension and Loading
NHVR	National Heavy Vehicle Regulator
NSW	New South Wales
NT	Northern Territory
NTC	National Transport Commission
OSOM	Oversize Overmass
PBPL	Port of Brisbane
PBS	Performance-Based Standard
PP	Period Permits
QLD	Queensland
QPS	Queensland Police Service
RAVRAT	Restricted Access Vehicle Route Assessment Tool
RMS	Roads and Maritime Services
RPEQ	Registered Professional Engineer of Queensland
SA	South Australia
SPV	Special Purpose Vehicle
STP	Single Trip Permits
TAS	Tasmania
VIC	Victoria
VLM	Vehicle Limits Manual
WA	Western Australia

EXECUTIVE SUMMARY

IMPROVING THE SYSTEM

The Australian road freight task is projected to be 1.8 times its 2008 level by 2030 which represents a 2.7 per cent per year average annual growth rate[1]. As part of this growth there will be an increase in demand for movement of Oversize Overmass (OSOM) freight. OSOM freight approvals have strained the capacity of the National Heavy Vehicle Regulator (NHVR) and State and Local Road Managers, with significant waiting periods encountered in gaining approvals by transport operators. This Review was commissioned by the Deputy Prime Minister to examine how better coordination and planning systems within Government could address OSOM movement capacity constraints.

Drawing on 16 submissions, and one-on-one meetings with over 100 individuals including Road Managers (59), peak industry bodies and businesses, the Review recommends 38 immediate and long-term responses to improve current processes, to better support the issue of OSOM permits within a reasonable timeframe without compromising safety. The Review examined the entire permit process from the time of submission to delivery of a decision, including the influence of the NHVR, Road Authorities and Road Managers, inter/intra state travel, freight type, especially resource and agricultural freight, as well as regional and remote freight.

The Review has shown how important and essential the movement of OSOM loads is to Australia's economic prosperity, and confirmed that a national approach by all tiers of government and industry is required to address the barriers that are preventing timely assessment and processing of access requests.

The Review has aimed to assess and, where possible, quantify the productivity, asset management and safety impacts of existing access arrangements for OSOM vehicles. Extensive consultation has occurred with a variety of stakeholders including with the Heavy Haulage, Construction, Crane and Agriculture Industries as well as the National Heavy Vehicle Regulator and Road Managers, including Local Councils, State and Territory Road Authorities.

The freight industry is not constrained by borders. Providing consistency and predictability for heavy vehicle access to improve OSOM movements and productivity should be the underlying objective. End user experience should be of a high quality and consistent regardless of the jurisdiction or the route being proposed.

During the stakeholder engagement process, a number of issues were raised where operators of some restricted-access heavy vehicles have been required to wait for several months for permits and escorts assessment and processing to allow them to access the road network.

The major themes that emerged from the issues raised in the consultations include (but are not limited to):

- Process – application, assessment and response
- Communication between Road Managers – for routes with multiple assessing managers
- Technology improvements – available but under utilised
- Inconsistencies of rules – across different jurisdictions and assessment paths
- Capacity for Road Managers to assess permits – quantity and capability of road managers to assess
- Data reporting – on assessment processes and availability of historical route and load data
- Capability and training – relating to process and assessment

[1] Department of Infrastructure and Transport, Bureau of Infrastructure, Transport and Regional Economics – Road freight estimates and forecasts in Australia: interstate, capital cities and rest of state - Report 121, 2010.

- Legislation – perceived shortfalls in the current arrangements.

NEED FOR ACTION

A recurring theme from the review has been the need to improve the current arrangements. This has ranged from claims the whole system is broken, to identifying areas of good practice that could usefully be applied more widely to improve those current arrangements.

While the system is not broken – evidenced by the ongoing movement of OSOM loads across the country, the review has identified that there is considerable scope to improve systems that support the efficient assessment and operation of the OSOM transport task.

During the conduct of this Review, various participants in the industry including state authorities, the mining sector and the transport industry have all demonstrated the capacity to respond quickly to deliver some of the desired efficiencies to improve OSOM movements, while mitigating their impacts on other road users and their safety.

Continuing to achieve these improvements as the number of movements expands significantly over time will require the continuing co-operation, focus and resource commitment of all participants, especially during the next two years as the processes are refined and improved.

Failure to achieve the efficiencies could harm the National economy significantly. OSOM load requirements are driven by the key mining and agriculture industries where investment and employment are dependent on economically feasible projects. Improved OSOM processes can help ensure the viability of these projects.

RECOMMENDATIONS

NUMBER	RECOMMENDATION	THEME	TIMEFRAME	RESPONSIBILITY
1	Transport and Infrastructure Council agree that improving safe and timely OSOM access is a national priority, and agree to urgently implement measures to facilitate safe and productive access.		Short	TIC
2	Transport and Infrastructure Council agree to direct DIRDaC to work collaboratively with relevant partners to prepare a program of implementation and ongoing monitoring.		Short	DIRDaC
3	Transport and Infrastructure Council agree to reduce permit volumes by 30% by 2020, through pre-approvals, notices or gazettal.	Process	Medium	TIC
4	Transport and Infrastructure Council agree Transport Agencies maintain current delegation approaches, prior to the short-term recommendations being implemented.	Legislation & Regulation	Medium	TIC
5	The NHVR introduce a new communication policy that allows for transport operators to speak to Case Managers, or equivalent, to clarify questions and progress their application.	Communication	Short	NHVR
6	NHVR to improve staff training to boost skill and capabilities in addressing technical issues during the application process.	Capacity	Short	NHVR
7	The NHVR to work with States, Territories and Local Government to introduce a Project Specific permit, which allows for multiple movements and configurations for the same application.	Process	Short	NHVR
8	Transport and Infrastructure Council agree approvals that were pre-existing prior to 2014 be reinstated by NHVR and relevant Road Managers.	Consistency	Short	TIC
9	Transport and Infrastructure Council agree to consistent permit durations for period permit to 12 months.	Consistency	Short	TIC
10	Transport and Infrastructure Council agree the NHVR deliver the National Class 1 Agricultural Vehicle and Combination Notice with three zones throughout each jurisdiction, within six months.	Consistency	Short	TIC
11	The NHVR introduce new arrangements to deal with emergency situations, including escalation process.	Process	Medium	NHVR
12	The NHVR implement regional teams to work with Road Managers, this should include co-location with State Road Manager.	Capability and Training	Medium	NHVR

NUMBER	RECOMMENDATION	THEME	TIMEFRAME	RESPONSIBILITY
13	The Approved Guidelines for Granting Access is fully reinstated with the guiding principles a key feature in access decisions.	Process	Short	NHVR
14	Transport and Infrastructure Council to agree the NHVR investigating alternative permit approaches, including higher fees for expedited/guaranteed turnaround times.	Process	Medium	NHVR
15	Transport and Infrastructure Council agree to develop and implement an industry-centric triaging system for bridge assessments, within 12 months.	Process	Medium	NHVR
16	Transport and Infrastructure Council agree the publication and systemic use of the Vehicle Limits Manual. This Manual to be published on jurisdictional websites by end of 2018.	Process	Short	TIC
17	Transport and Infrastructure Council agree to implement harmonised national standards for pilot and escort vehicle arrangements.	Consistency	Medium	TIC
18	Transport and Infrastructure Council agree to harmonise inconsistencies around accreditation for Pilot drivers by 2020.	Consistency	Medium	TIC
19	Transport and Infrastructure Council agree to simplify pilot and escort process to remove layers to the consent process. NHVR, DTMR and QPS to undertake a process improvement project.	Process	Medium	TIC
20	Transport and Infrastructure Council to agree that the NHVR works with Austroads to refine the proposed OSOM envelopes to establish infrastructure bridge loading limits in the standards	Process	Medium	TIC
21	Transport and Infrastructure Council agree an envelope approach is taken for low risk OSOM vehicles, with NHVR and Road Managers to agree a common envelope within six months.	Process and Consistency	Short/Medium	TIC
22	All permits have an automatic empty return trip attached as a condition of permit, which does not require a new assessment.	Consistency	Short	NHVR
23	Transport and Infrastructure Council to agree that low risk OSOM vehicles be provided a 48-hour turnaround time (on average), within 12 months after the envelope approach is agreed.	Process	Medium	TIC

NUMBER	RECOMMENDATION	THEME	TIMEFRAME	RESPONSIBILITY
24	Transport and Infrastructure Council agree to progress consideration of the following: **a** Road Managers to assess cranes using a dynamic load allowance appropriate for hydro pneumatic suspension. (reduce from 0.4 to .01~). **b** Road Managers to assess cranes using a load certainty factor appropriate for non-load carrying mobile plant. (reduce from 1.6 to 1.5). **c** Create network access maps for all cranes where possible. **d** Add 6 and 7 axle and dolly combinations to maps, where they outperform current vehicle designs. **e** Add 8-9 axle crane carriers (no boom) to existing maps due to their low axle weights and superior swept path performance. **f** Investigate opportunities to introduce a SPV 12t per axle notice.	Process	Medium	TIC
25	Transport and Infrastructure Council agree harmonisation for dimensions and requirements across jurisdictions through the Multi-State Class 1 Load Carrying Vehicles Dimension Exemption Notice 2016, within 12 months.	Consistency	Short	TIC
26	Transport and Infrastructure Council agree the NHVR, together with industry associations, introduce a Heavy Haulage Accreditation module, as part of considerations from the Medlock Review.	Process and Technology	Medium	TIC

NUMBER	RECOMMENDATION	THEME	TIMEFRAME	RESPONSIBILITY
27	This Review recommends the NHVR maintains a feature list for improvements to the NHVR Portal and prioritises and implements features in a timely manner. This review recommends the feature list include the following: **a** Introducing business rules on the application page to capture mistakes or out of range values. **b** Preload information capability, including: **i** Vehicle configurations and details. **ii** Previously applied for permits with routes and configurations. **iii** Transport operator details. **iv** Reference previous applications with similar routes or configurations. **v** Link permits – including project specific movement with multiple movements of the same type or route. **c** Flexibility to: **i** Make minor changes or amendments to the application without rejection resubmitting a new application. **ii** List multiple prime movers or trailers on permits to allow flexibility.	Technology	Short	NHVR
28	NHVR undertake a project of data cleansing and working on the data quality of the NHVR Portal. This Review recommends that NHVR lead a project to work with Road Managers to encourage data sharing to increase overall transparency, this will lead to increased confidence in the data that may assist and allow further routes to be approved including targeting of network pinch points.	Technology	Medium	NHVR
29	The NHVR to support transport operators to use State/Territory Road Manager mapping tool to journey plan, with the NHVR Journey Planner used only to identify affected Road Managers.	Technology & Data	Short	NHVR
30	The NHVR to: **a** Progress internal project to incorporate all mapping data from state Road Manager's mapping tools into the Journey Planner. **b** Work with relevant State/Territory Road Managers to automate collection and storage of current infrastructure capability.	Technology and Data	Medium	NHVR

NUMBER	RECOMMENDATION	THEME	TIMEFRAME	RESPONSIBILITY
31	In conjunction with other telematics related initiatives, the Transport and Infrastructure Council to commission a project to consider possible policy/regulatory changes to facilitate the sharing of telematics data between local governments, to better track OSOM movements on their network.	Technology	Medium	TIC
32	Transport and Infrastructure Council agree a project team be set up within the NHVR to investigate possible technology solutions for the better management of movement data.	Technology	Medium	NHVR
33	Transport and Infrastructure Council agree the NTC, in conjunction with relevant partners, undertake work to progress consideration toward policy/regulatory settings to boost the uptake and use of telematics in OSOM heavy vehicles.	Technology	Medium	NTC

34	Transport and Infrastructure Council agree: To ensure local government can provide timely advice on OSOM assessment by incorporating by using asset management systems. **a** Introduce a recognised and established asset management framework for local governments to apply throughout their business to ensure consistency and a system for recording important infrastructure data. This will assist in gaining an understanding of their network and assist access decisions. This could be done by NHVR and Institute of Public Works Engineering Australasia (IPWEA) partnering to deliver an education program to implement the International Infrastructure Management Manual (IMM). This provides a baseline on 'what to do' and 'how to do' in terms of applying standards for infrastructure asset management, this includes tools and frameworks that can be easily applied to local governments. **b** Introduce and encourage the adoption of a tool that provides local government guidance in assessing access consents. This could be done by implementing the Australian Road Research Board - Restricted Access Vehicle Route Assessment Tool (RAVRAT). This tool allows for local government to undertake a consistent route assessment process, focused specifically upon the road infrastructure assessment criterion, including OSOM movements. **c** NHVR and state Road Managers to provide guidance on access and resources to local government Road Managers, this could include creating a NHVR team who can be accessed to undertake independent bridge and route assessments consisting of certified structural engineers, in QLD will need to be a Registered Professional Engineer of Queensland (RPEQ). **d** NHVR and state Road Managers to encourage strategic partnerships that develop freight networks and identify pinch points that can be targeted for funding. **e** Introduce technology options like telematics to enable local government to be able to track movements on their network, this should include increased data sharing to demonstrate evidence of compliance, **f** Implement the following recommended priorities from the Inquiry into National Freight and Supply Chain Priorities specifically: Critical Action Area 3 - planning for current and future needs: **i** Promote training and reskilling of employees in the freight industry appropriate to current and future needs, within the context of technological advancement, for example, increasing automation.	Capability and Process	Short & Medium	TIC NHVR

NUMBER	RECOMMENDATION	THEME	TIMEFRAME	RESPONSIBILITY
	ii Undertake a review to identify any potential gaps in existing infrastructure investment programs to allow funding for smaller, collective packages of investment in freight projects that could lift regional productivity, which may not otherwise be considered for commonwealth funding. g NHVR to replicate the Local Government Association of Queensland (LGAQ) model for funding Heavy Vehicle Access Liaison Officers, to work with Local Government to deliver proactive approaches for OSOM access. h NHVR to issue further business rules and guidance material to Road Managers that outlines conditions, access processes etc. i NHVR have an existing function in their access team referred to as 'Hypercare,' this should be expanded to include technical assistance to Road Managers in addition to transport operators. j NHVR to work with Road Managers to identify pinch points in their network, NHVR to consolidate this information into their Portal and Mapping tools.			
35	NHVR to initiate an education program to work with Road Managers to ensure the Guidelines are used consistently	Capability and Training	Short	NHVR
36	The NHVR examine opportunities for staff co-location with State/Territory/LGA/LG Road Manager.	Capacity	Medium	NHVR
37	The Transport and Infrastructure Council agree the following recommendations be included into the National Transport Commission's Review of the Heavy Vehicle National Law: a Section 156 of the HVNL is reviewed, with prescribed time limits more appropriately structured. b Review and harmonise the definition of 'indivisible', to deliver consistency across jurisdictions c Section 661 of the HVNL be reviewed and changed to provide a trigger clause for the NHVR to manage when there is no response from Road Managers for consent. d Section 158 of the HVNL is reviewed to appropriately recognise third parties and make improvements to streamline the consenting process.	Legislation	Medium	TIC
38	The Transport and Infrastructure Council agree that all relevant policy and regulatory agencies commit to identifying and highlighting best practice, to deliver 48-hour (on average) OSOM turnaround time by 2021.	Process	Medium	TIC

1 INTRODUCTION

1.1 CONTEXT OF THE REVIEW

The Australian Government announced an independent review into why some transport operators, specifically undertaking Oversize Overmass (OSOM) movements, are experiencing economic impacts and delays in being granted OSOM road access permits. An oversize/overmass vehicle is a heavy vehicle or combination which alone, or together with its load, exceeds prescribed mass or dimension requirements, and is a class 1 heavy vehicle carrying, or designed for carrying, a large indivisible item[2]. This does not include road trains or B-doubles, or vehicles carrying a freight container designed for multi-modal transport. Examples of OSOM vehicles include a combination of prime movers, low loaders, low loader dollies, platform trailers and jinkers.

The review was initiated by the Deputy Prime Minister and Minister for Infrastructure and Transport, the Hon Michael McCormack MP, following concerns raised by industry regarding significant waiting times for restricted-access heavy vehicles to access the road network. The focus of this review is restricted-access heavy vehicles undertaking OSOM movements, these movements require special authority to travel on the network due to safety of other road users and to protect infrastructure. The review focuses on the permit approval timing being experienced by transport operators to gain access to the road network.

The aim of the review was to identify the factors that are preventing timely assessment of access permits, propose short and medium-term actions and improvements to remove or decrease the process barrier impacts, thus allowing the issue of OSOM permits within a reasonable timeframe without compromising safety.

The Review was guided by an industry Expert Reference Group (ERG) comprising:

- Ms Coralie Chapman, Transport Supervisor, Linfox Australia
- Mr Andrew Stubbs, WA Heavy Haulage Operations Manager, Toll Group
- Dr Neil Temperley, Consultant — Future Cities; Transport and Logistics; Clusters and Living Labs; Data and Technology.

The purpose of the ERG was to:

- Liaise with WSP on the Review
- Provide advice to WSP on stakeholder engagement in regard to the Review
- Provide guidance to WSP on the Review in general
- Review the draft Review report and provide feedback to WSP and comments where required.

RECOMMENDATION 1

Transport and Infrastructure Council agree that improving safe and timely OSOM access is a national priority, and agree to urgently implement measures to facilitate safe and productive access.

[2] A large indivisible item means an item that cannot be divided without extreme effort, expense or risk of damage to it, or cannot be carried on any heavy vehicle without contravening a mass requirement or dimension requirement.

1.2 SCOPE OF REVIEW

The Review has summarised the current context including a focus on permit approval times, current practices and principles and incorporate stakeholder consultation to provide further insight. The review comprises the following:

- Current access arrangements for OSOM vehicles and permit approval times, including Heavy Vehicle National Law (HVNL) designated roles, processes and responsibilities
- Current practices and principles used by Road Managers to understand the key considerations that underpin the assessment of risk and risk-mitigation decisions
- The factors that contribute to approval times from application to issuing access permits, including route and asset assessments, the IT systems and tools used, and third-party consultation
- The impact on industry and Road Managers from existing OSOM access arrangements
- Attributes or components of equivalent best practice arrangements
- Variations in OSOM access arrangements and permit approval processes between states, territories and local governments, and communication processes for changes to operational policies
- Priority matters to be considered by the National Transport Commission Review of the HVNL
- Strategies to reduce the number of access permits issued or to reduce the time taken to issue permits, and their effectiveness in improving OSOM access arrangements.

Without compromising safety, the review will consider recommendations which are more quickly implementable on:

- The greater use of technology and data in improving OSOM access arrangements
- Improved reporting arrangements for industry, Road Managers, and governments including regular timely reporting and more accessible statistics
- More streamlined and visible permit approval processes
- Better identification and strategies to support the uptake of best practice
- Improving OSOM access outcomes through better industry planning and engagement
- Improving arrangements for sector-specific vehicles, such as agriculture
- Improving permit approval timeframes
- Harmonised police and/or pilot arrangements between jurisdictions.

1.3 APPROACH

WSP undertook the following approach for this Review:

- Discovery –Process review to assess and where possible quantify the productivity, asset management and safety impact of existing access arrangements for OSOM vehicles.
- Engagement – Undertook significant engagement with industry, the National Heavy Vehicle Regulator and Road Managers.
- Reporting – Prepared and delivered a Draft and Final OSOM Review Reports. The Report incorporates all discovery research, findings and recommendations. The recommendations consider the benefits of short or long-term implementation. This report also incorporates suggestions from the OSOM Expert Reference Group.

The objective of this Review has been to assess and where possible quantify the productivity, asset management and safety impact of the existing OSOM access arrangements on a national level and identify improvements to better manage OSOM activities.

1.4 ENGAGEMENT

This review included significant stakeholder engagement over an eight-week period including the following:

- NHVR – The national regulator responsible for granting permits for OSOM movements.
- State Road Managers – State transport agencies responsible for the state road networks and granting access.
- Local Government Associations – Associations that represent the Local Government Road Managers responsible for the local road networks and granting access.
- Transport Peak bodies – Associations that represent transport operators.
- Agricultural Peak bodies – Organisations that represent different agricultural industries.
- Transport operators - from the heavy haulage, construction and crane sectors.

The format of the engagements was targeted small group face to face meetings as well as phone interviews. This gave an opportunity for individuals to provide their views discretely. It also provided a more targeted approach to delve in more detail on specific issues.

1.5 RELATED WORK

This Review acknowledges the significant bodies of work that have already been undertaken that deal with Heavy Vehicles in Australia. This includes inclusion of relevant work and their recommendations that are applicable in forming possible solutions to assist the issue. The key publications considered were:

INQUIRY INTO NATIONAL FREIGHT AND SUPPLY CHAIN PRIORITIES

On 18 May 2018, the Hon Michael McCormack MP, Deputy Prime Minister and Minister for Infrastructure and Transport, released the report of the Inquiry into National Freight and Supply Chain Priorities. The Inquiry was conducted by a four-member expert panel to inform the development of a National Freight and Supply Chain Strategy through the COAG Transport and Infrastructure Council[3].

The key critical action area that directly relates to this Review is the integrated approach, however some other key critical action areas are also referenced.

A nation-wide, consistent and integrated approach to freight and supply chain issues is needed to enhance the efficiency of the movement of freight. Other than where completely vertically integrated supply chains exist, freight modes and operators need to work together for the whole network to be efficient.

A national approach to freight that encompasses planning, infrastructure investment and regulation is important to maximise benefits to Australia and enhance international competitiveness.

Future challenges and opportunities which require a national approach include: harmonisation, streamlined regulation and cross-border planning among Commonwealth, state, territory and local governments.

[3] Department of Infrastructure, Regional Development and Cities, Inquiry into National Freight and Supply Chain Priorities, May 2018

AUSTROADS RESEARCH REPORTS

Research Report (AP-R559-18) Local Road Access for Higher Productivity Freight Vehicles[4]: This Report outlined the many challenges local Road Managers face when assessing roads for access are impeding Australia's progression towards safer and more efficient road freight transport. Noting that this is mainly aimed at Higher Productivity Freight Vehicles however are transferrable to OSOM.

Research Report (AP-R521-16) Future Challenges of Changing Agricultural Equipment[5]: This Report reviewed jurisdictions' policies on agricultural vehicle mass and dimensions, identified discrepancies between the policies and the current/future agricultural fleet, and conducted technical assessments to investigate the impacts.

NATIONAL TRANSPORT COMMISSION DISCUSSION PAPERS

National Transport Commission (NTC) has undertaken large bodies of work to address identified issues with the heavy vehicle industry with reviews that outline findings and recommendations, this Review references the following:

- Harmonisation of Pilot and Escort Vehicle Driver Requirements – National Accreditation Scheme (January 2014)[6]
- Review of Regulatory Telematics (March 2018)[7].

[4] Austroads, Research Report (AP-R559-18) Local Road Access for Higher Productivity Freight Vehicles, February 2018

[5] Austroads, Research Report (AP-R521-16) Future Challenges of Changing Agricultural Equipment, July 2016

[6] National Transport Commission, Harmonisation of Pilot and Escort Vehicle Driver Requirements – National Accreditation Scheme, January 2014

[7] National Transport Commission, Review of Regulatory Telematics, March 2018

2 ISSUES

Key excerpts of what industry has said include the following:

> *Delays granting permits for OSOM vehicle movements are proving particularly costly for many parts of the industry. The flow-on effects are felt throughout the entire economy, most acutely in the mining resources, agricultural and construction sectors…*[8]

> *The heavy vehicle permit approval system for road access within the states is a barrier to productivity and investment, particularly for oversize/overmass operators*[9]

> *…it can take more than 80 days to get a permit to transport OSOM steel products on the tollways, because the toll operator and NHVR processes do not work in parallel. A company seeking to move OSOM mining equipment from the Pilbara to Weipa waited more than 100 days for a permit to move the equipment by road through Queensland. In the end, the company transported the equipment to Darwin by road and then barged it to Weipa*[10].

New permit required for each move of the same load, same configuration and same routes

> *The current OSOM system has been nothing short of a debacle, with carriers forced to apply for a new permit, on a case by case basis, even though they're seeking approval for the same type of load, for the same vehicle and for the same destination*[11].

2.1 EXISTING ACCESS FRAMEWORK

The Heavy Vehicle National Law (HVNL) commenced on 10 February 2014 in the Australian Capital Territory, New South Wales, Queensland, South Australia, Tasmania and Victoria. Each of these regions either passed a law that adopted or duplicated the HVNL[12]. Western Australia and the Northern Territory did not adopt the HVNL, however all heavy vehicles crossing into states and territories that have adopted the HVNL must comply.

Prior to the introduction of the HVNL and the NHVR, for OSOM Permits transport operators requested access directly with the relevant State/Territory, Local Government and private owner Road Managers, resulting in a lack of consistency in approvals, approval times, and approval conditions. The HVNL therefore sought to address these issues by providing a single national framework, with standard conditions or processes in place.

The number of permits issued in the participating jurisdictions in Australia is approximately 46,000 through the formal process. Approximate volumes are:

- QLD – 22,000
- NSW – 9,000
- NHVR, which includes VIC, TAS and SA – 15,000.

The following principles are to be followed to meet the intent of the HVNL, resulting in promotion of public safety, management of infrastructure, environment and public amenity, and promotion of industry productivity and efficiency.

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8 http://www.austlogistics.com.au/wp-content/uploads/2018/07/OSOM-Review-A-Win-For-Industry.pdf

9 https://www.ownerdriver.com.au/industry-news/1805/4-5-million-days-lost-waiting-for-approvals-each-year

10 http://www.primemovermag.com.au/news/article/independent-review-into-over-sized-truck-permit-delays-kicks-off, note that certain companies have been removed

11 https://www.fullyloaded.com.au/industry-news/1806/urgent-need-for-osom-review-rfnsw

12 National Heavy Vehicle Regulator, Heavy Vehicle National Law and Regulations, August 2018. https://www.nhvr.gov.au/law-policies/heavy-vehicle-national-law-and-regulations

These principles are as follows:

- Issue notices rather than permits
- Try to minimise the number of notices by grouping similar activities
- Promote vehicles offering higher productivity
- Routes are appropriate for vehicle
- Consider route and network-wide benefits
- Use template conditions on notices and permits
- Pro-active approach to managing access.

The overall aim for Road Managers is to understand their assets, both road network as well as road infrastructure, and release the latent capacity of their assets to allow for increased access whilst responsibly managing the road transport infrastructure asset and public safety.

The HVNL is not intended to prohibit the use of restricted access vehicles but to facilitate the use of such vehicles if public safety, road infrastructure and public amenity are not adversely affected. The broad philosophy underpinning these guidelines is the encouragement of innovation, productivity and efficiency in the road transport sector, whilst having the utmost regard to public safety and minimising the impact of restricted access vehicles on road infrastructure and public amenity.

2.1.1 PERMIT PROCESS

The purpose of the permit process is twofold. The NHVR satisfies itself that a restricted access vehicle will not pose a significant risk to public safety, and the Road Managers assess whether the restricted access vehicle can operate safety in the environment of the roads for which it is responsible. The permit process includes the following steps:

- Transport operator applies through an online portal with required information so NHVR and Road Managers can properly assess the movement,
- NHVR assesses the following:
  - Size and mass of the vehicle and configuration
  - Distribution of mass,
  - Suitability of vehicle to task
- Once assessed, NHVR issue to Road Manager for their assessment (not an exhaustive list):
  - Vehicles ability to interact with surrounding traffic
  - Vehicles ability to interact with the infrastructure and road environment
  - Dimensions of the road that the vehicle will move on.
- Affected Road Managers then issue their assessment to NHVR
- NHVR consolidate and issue assessment, either permit issued or rejected.
- At any stage in its process, NHVR and Road Managers can request information from transport operators, including requests for third party approvals.

Since 2014, the NHVR processes all permit applications in HVNL adopting jurisdictions, including coordination of the required information, request for consent to affected Road Managers, consolidation of consent and condition and then issue of permits. Under the HVNL, the NHVR is not a road owner and is unable to make an access decision on the Road Managers behalf.

Permit process – For the NHVR under the NHVL, a standard OSOM access process is as follows:

1. Obtain consent from all relevant road managers.
2. Satisfy itself that all other required consents are given.
3. Satisfy itself that the vehicle does not pose a significant risk to public safety.

The NHVR as the first point of contact for operators for all heavy vehicle enquiries and access applications, should expedite the application to the Road Managers as quickly as possible, subject to the permit application details being correct. Any queries on vehicle specifications be rectified by setting the expectation envelopes for the vehicle's GCM, registration requirements and roadworthiness, as required under law.

While the NHVR is responsible for undertaking all consultation and liaison with Road Managers, transport operators should be encouraged to build direct relationships with road managers and other parties in order to obtain prior consent for access.

This is not about deviating from established process, but about supporting better industry and Road Manager understanding of circumstances and requirements, ultimately leading higher standard of permit applications.

2.1.2 PERMIT TYPES — GENERAL

The national definition of OSOM, as defined under the HVNL Section 116, a heavy vehicle carrying, or designed for the purpose of carrying, a large indivisible item, including, for example, a combination including a low loader. A large indivisible item means an item that:

- Cannot be divided without extreme effort, expense or risk of damage to it; and
- Cannot be carried on any heavy vehicle without contravening a mass requirement or dimensions requirement[13].

Restricted Access Vehicles (RAV) include Class 1, 2 or 3 vehicles that operate under a notice or permit and vehicles operating under higher mass limits (HML) that can generally only access certain parts of the road network. The Classes are[14]:

- Class 1: Common class 1 heavy vehicles include: agricultural vehicles, Oversize Overmass vehicles and special purpose vehicles.
- Class 2: Common class 2 heavy vehicles include: freight-carrying vehicles (B-doubles, B-triples, road trains), buses, vehicle carriers, livestock vehicles and Performance-Based Standards (PBS) vehicles.
- Class 3: A class 3 heavy vehicle is a heavy vehicle which, together with its load, does not comply with prescribed mass or dimension requirements and is not a class 1 heavy vehicle.

There are different types of permits that transport operators can request they include:

- Single Trip Permits
- Period Permits.

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13 Queensland Government, Heavy Vehicle National Law, Section 116, July 2018.

14 National Heavy Vehicle Regulator – Road Access – Mass, Dimension and Loading – Classes of heavy vehicles. https://www.nhvr.gov.au/road-access/mass-dimension-and-loading/classes-of-heavy-vehicles, August 2018

2.1.3 OTHER ACCESS

There are different types of access arrangements that Road Managers can implement they include preapproval and notices.

A Road Manager can submit to the NHVR a pre-approved route that can be used by specified vehicles, including OSOM. When the NHVR receives a permit application for movement on a local road that is pre- approved by the relevant Road Manager for the vehicle type, the NHVR does not need to seek additional consent from the Road Manager before issuing a permit. The NHVR will supply a copy of the permit to the Road Manager. Pre-approval of routes is used to streamline processes, reduce administrative burden for local government and reduce turnaround times. The pre-approval process targets routes expected to experience large numbers of (particularly Oversize Overmass, but not exclusively) vehicle movements such as roads in industrial areas and access routes connecting existing approved routes or State controlled roads.

A Notice can be created by a Road Manager and NHVR that allows for increased access for specific vehicles on networks. A transport operator, if they meet the requirements as listed in the publicly available notices, does not need to submit a permit application to the NHVR or Road Manager to access the network, it allows for free travel on the network.

RECOMMENDATION 2

Transport and Infrastructure Council agree to direct DIRDaC to work collaboratively with relevant partners to prepare a program of implementation and ongoing monitoring.

RECOMMENDATION 3

Transport and Infrastructure Council agree to reduce permit volumes by 30% by 2020 through pre-approvals, notices or gazettal.

RECOMMENDATION 4

Transport and Infrastructure Council agree Transport Agencies maintain current delegation approaches, prior to the short-term recommendations being implemented.

2.1.4 GUIDELINES FOR GRANTING ACCESS

The NHVR Approved Guidelines for Granting Access[15] (February 2014) outlines how and what Road Managers should consider granting a mass or dimensions authority, make a Higher Mass Load (HML) declaration or grant a HML permit (Sections 118(2), 124(2), 139(2), and 145(2) of the HVNL and sections 13(2) and 22(2)). Note that this Guideline is currently being updated by the NHVR. This Guideline, under Section 653 of the HVNL, is a mandatory (Section 156(4)) guideline that Road Managers must have regard when making access decisions, this has also been approved by the Responsible Ministers under Section 653(1)(c), 653(1)(d) and 653(1)(j).

The guidelines also stipulate that the NHVR will provide reasonable assistance to the operators to obtain such consents and must inform the operators that a grant of access cannot be made until all such consents are obtained. This does not preclude operators engaging directly with other entities where processes allow this to happen efficiently for both parties. In these instances, the NHVR will play a coordinator role and ensure consents are responded to in a timely manner.

[15] National Heavy Vehicle Regulator, Guidelines for granting access, February 2014.

It is also expected that where a law requires that the other entity be consulted, but not necessarily required to consent, about a proposed grant of access that the NHVR will assist the operator of the restricted access vehicle to engage with that entity and if appropriate undertake that consultation directly.

This Guideline is meant for distribution to Road Managers, transport operators and other persons interested in the access decision making process to understand how and why access decisions are made. It is important to note that this Guideline does not consider the delegation of responsibility back to the State Road Managers and assumes the NHVR 'One Stop Shop' approach is in place.

This Guideline outlines an optimal process that if followed would alleviate some current issues being encountered. Observation and analysis undertaken during this Review suggests that although there is widespread knowledge about the existence of the Guidelines, it is not being used consistently (as was intended), nor is its use being actively promoted or mandated.

2.1.5 GUIDING PRINCIPLES FOR ACCESS DECISIONS

The Guideline outlines the principles that both NHVR and Road Managers must meet:

- Be made by the responsible agency or its delegate and not at the direction of an outside body.
- Consider the relevant matters specified by the HVNL for each decision – for example the NHVR must decide whether a proposed access decision would pose a significant risk to public safety when making an access decision.
- Be made without consideration of irrelevant factors – for example a Road Manager could not decide to deny access after consideration of only the general level of community dissatisfaction about the use of heavy vehicles on roads. Specific aspects of the dissatisfaction, as specified by the HVNL, would need to be cited.
- Be made in the times required by the HVNL.
- Be justified with reasons (in some cases), including relevant evidence, being provided in writing.

The NHVR and Road Managers must provide transport operators or applicants, access to any particular concerns or issues identified as part of the access decision, including an opportunity to respond and be heard.

Although the Guidelines provide a solid basis for timely assessment and decision making, inconsistent use, is actively contributing to delays and poor operator experiences.

2.2 END USER EXPERIENCE

Over the course of this review, end-users have identified a number of issues, including the following.

2.2.1 APPLICATION

The NHVR as the first point of contact for operators for all heavy vehicle enquiries and access applications, should expedite the application to the Road Managers as quickly as possible subject to the permit application details being correct. This approach underlines a key design rationale behind heavy vehicle safety reforms - to provide greater national consistency.

2.2.2 COMMUNICATION

The NHVR web portal is the first communication point for the operator to interact with the NHVR, including understanding requirements and process for approvals.

Current communication is undertaken within the NHVR Portal with requests for information issued back to transport operators with an email notification. There are examples where this digital communication has caused significant delays to permits where a phone call could have resolved the issue more quickly.

Communication with the Road Managers is imperative to obtain local knowledge of the road network and underpins the common understanding for all stakeholders.

The NHVR website is intended to be the main platform for communication at an industry level and for delivering updates on heavy vehicle matters.

2.2.3 CASE MANAGEMENT

Whilst the NHVR is responsible for contacting Road Managers about application for access, transport operators should be encouraged to build relationships with the relevant Road Managers to obtain prior consent which can be processed by the NHVR. The NHVR is the only organisation that can issue a mass or dimension permit, the NHVR should encourage operators and Road Managers from having direct contact with each other if they wish to do so.

The NHVR facilitates a range of access applications from start to finish by liaising directly with road managers (both state and territory road authorities and local government) to manage the application process and the issue of permits.

The NHVR will assist operators of OSOM vehicles to obtain consents from other entities required by state or territory legislation outside the HVNL. At a minimum, the assistance should involve notification to the operator on which other entities require consultation and/or consent, and who will undertake the liaison.

2.2.4 LACK OF ONE STOP SHOP

The philosophy of implementing the NHVR was a 'One Stop Shop' service, for operators of restricted access vehicles to only must deal with one agency in applying for access. However, the one stop shop approach is very difficult to meet when the legislation does not impose responsibility on the NHVR for making decisions about whether to grant access. The current process requires all relevant Road Managers and other entities to consent to grant access. This process still encourages silo behaviour making it difficult for the transport operator to coordinate and does not take into consideration the end user experience.

The HVNL currently mandates that Road Managers need to respond within 28 days of receipt of application from the NHVR, with requests for information in effect stopping this clock until a response is provided, Road Managers can request extensions of time up to six months. The Guideline states that all Road Managers should make decisions within a reasonable time to minimise the impact of delays noting that many OSOM movements are routine and common.

The HVNL does not impose time limits on the NHVR's role in access decision making. This is different to the time limits required for Road Managers. The 28-day timeframe starts when the NHVR sends the application to the Road managers. The reasons for the HVNL not expressly imposing time limits on the NHVR are as follows:

- The NHVR is not able to make its access decision until all consents from Road Managers and other entities have been received. Some Road Managers may respond within the default 28 days while others may take up to six months (if requested by the Road Manager and agreed by the NHVR). Furthermore; time periods for consents from other entities are not specified in the HVNL and may be prescribed by other legislation.
- Sometimes further information will be required before the NHVR, Road Managers and other entities can consider the application. It may take some time to obtain this information.
- An application for access may evolve as the applicant, NHVR and Road Managers negotiate on the possible routes and conditions.

Stakeholders have identified issues around the lack of ability to prefill and for the application form to identify mistakes or out of range entries. An example of this is outlined in the case study below. Future improvements to the NHVR Portal should start to consider increased automation that frees up NHVR staff for more value-added activities.

Stakeholders also identified that in practice, the NHVR is not the "one stop shop" for journeys that require assessment by non-HVNL regulated entities. These include energy utilities asset owners with applicants, following assessment by the NHVR/Road Manager, are then required to seek further approval through relevant asset owners, adding complexity and (more importantly) processing time.

Currently there is no ability for minor changes to be made without a permit application being rejected and the process having to restart. This has resulted in transport operators who have made a mistake in the application flowing down through to consents being issued then having their permit becoming invalid.

An example of the NHVR Portal requiring improvement is when a transport operator entered their vehicle configuration details into the NHVR Portal with a tyre size that was outside of the allowable range by 200mm – 250mm. An error like this should be captured at the start of the process prior to issue to Road Managers.

All communication is undertaken within the NHVR Portal with requests for information issued back to transport operators with an email notification. There are examples where this digital communication has caused significant delays to permits when a phone call could have resolved the issue very quickly.

CASE STUDY: NHVR PORTAL COMMUNICATION

A transport operator submitted an OSOM application on 10 April 2018, NHVR requested information 12 April 2018 requesting update of the vehicle details, advised to decrease the weight on the Steer axle and provide the GVM. There are four back and forth notifications between NHVR Case Officer and the transport operator within a few hours. NHVR then issued another information request that requested third party approvals. These exchanges took place over 5 hours in a single day which meant that the transport operator had to be at their desk to progress requests for this Permit to meet all requirements, noting that some of the information should have been provided on application a short phone conversation would have been able to address these issues in a timelier manner.

RECOMMENDATION 5

The NHVR introduce a new communication policy that allows for transport operators to speak to Case Managers, or equivalent, to clarify questions and progress their application.

RECOMMENDATION 6

NHVR to improve staff training to boost skill and capabilities in addressing technical issues during the application process.

RECOMMENDATION 7

The NHVR to work with States, Territories and Local Government to introduce a Project Specific permit, which allows for multiple movements and configurations for the same application.

This Review investigated the average response times for State Road Managers and NHVR and found that approximately 50% of the time the response was within a reasonable timeframe of less than one day. This data reflects both NHVR and Road Manager staff following the Access Guidelines, intent and process.

This review recommends the guidelines be re circulated so as many applications for access can be made routine transactions and it is expected that such applications be processed quickly.

CASE STUDY: BLANKET APPROVALS

A transport operator was engaged to transport CAT 793 Mining Trucks for repair from mines located Central QLD to the CAT servicing facility located in Mackay and return trips after repair to the mine. There was a total of 57 movements of CAT 793 chassis cabs, not including trays, loads and identical routes utilising the same infrastructure. 45 of these movements consisted of the chassis cab on with the 4 wheels on equalling a payload weight of 132 tonnes with a gross weight of 202.5 tonne. The dimensions of the load were:

- Width: 8.49m
- Height: 6.4m
- Length: 40m
- The configuration was 10 x 8 and 2 x 8.

The exact same routes from the mines were taken into Mackay to the CAT servicing facility and return trip as shown in Figure 2 1.

For each of these movements a new permit was required, including consent from DTMR and Local Government, this caused significant burden of administration and delays to travel. Previously Mackay Council provided a blanket permit for this work, however blanket permits are no longer accepted the NHVR. [16]

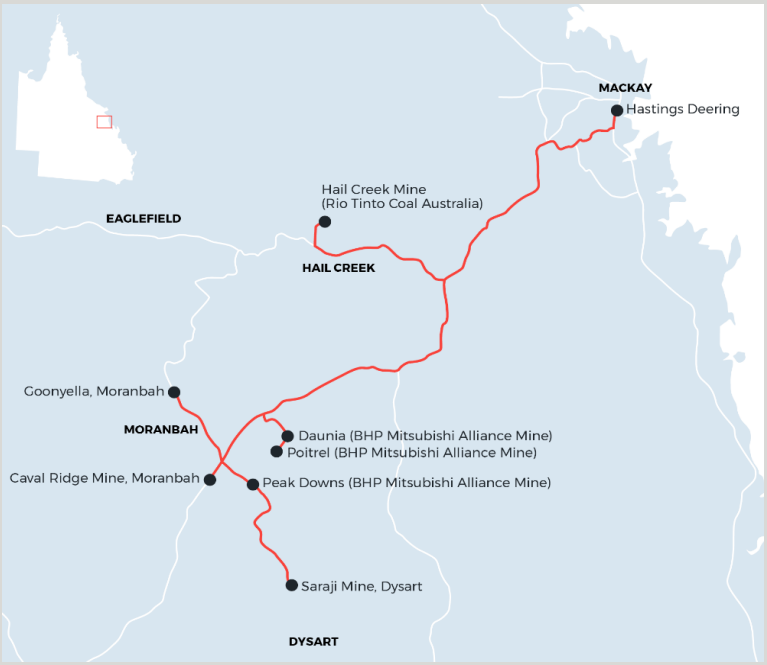

Figure 2-1: CAT 793F Mining Truck Repairs

RECOMMENDATION 8

Transport and Infrastructure Council agree approvals that were pre-existing prior to 2014 be reinstated by NHVR and relevant Road Managers.

RECOMMENDATION 9

Transport and Infrastructure Council agree to consistent permit durations for period permit to 12 months.

2.3 SECTOR SPECIFIC ISSUES

The Transport Sector require OSOM movements for the large indivisible items that are required for many different applications some examples are:

- Road Maintenance: this ranges from asphalt machines to graders that are required for rehabilitation and maintenance of roads.
- Transport of dwellings: this ranges from cabins to prefabricated homes.
- Transport of plant: including earthmoving plant and equipment.

[16] This statement was anecdotally advised from a transport operator.

The demand for the construction sector in one of quick turnaround times and obtaining as many roads as possible of the network through a 12 month or longer period permit or gazettal. Transport operators can be required to move within hours of notification of work or even when the machine breaks down on site and requires mechanical intervention.

2.3.1 AGRICULTURE

The Agriculture Sector forms a large component of OSOM movements in Australia with many agricultural vehicles and equipment being oversize and some overmass. These OSOM movements are different compared to the other forms as farmers own a wide range of different vehicles and combinations that are only transported within a small radius from their base. Another key difference is the requirement or ability to transport agricultural vehicles and equipment in a timely and sometimes immediate manner, with the aim to allow for farmers to move their machinery from paddock to paddock and in response to seasonal demands. Currently each state has their own Notice or Gazettal that covers agricultural vehicles and equipment, outlined in further detail in Appendix B.

The table in Appendix B outlines the many differences applied by each State for Agricultural vehicles and equipment. These individual State requirements do not take into account the increasing dimensions of agricultural vehicles and equipment. GrainGrowers, national grain farmers representative body, undertook a survey that investigated the dimensions and configurations of the heavy vehicle fleet operating in the grains industry, this had approximately 800 responses[17]. This survey outlined some key findings:

- Approximately 30% of single vehicles are under 15m in length with the average length being 20m, most tractors and headers would comply with a 15m limit
- Approximately 54% of augers or conveyors are under 19m in length, with the average length being 19m. Noting that 25m limit would cover approximately 80%
- Approximately 47% of combinations are under 25m in length, with the average length being 26m. Noting that a 31m limit would cover approximately 80%
- Non-dimensional finding was that approximately 68% of respondents advise that night travel is important.

Austroads undertook a Research Report (AP-R521-16) Future Challenges of Changing Agricultural Equipment that outlined the discrepancies between current policies and the trend of increased mass and dimensions in agricultural vehicles and equipment. This Report also outlined other aspects including safety requirements, braking performance and impacts on infrastructure. A key recommendation from this Report was to introduce harmonisation across jurisdictions.

The NHVR together with state Road Managers have been working to develop a National Class1 Agricultural Vehicle and Combination Notice for agricultural operations. The aim of this notice is to replace transitional arrangements in all states, and to harmonise the dimension limits and standard operating conditions. The key positions are[18]:

- Use of consistent definitions as set out in the Heavy Vehicle National Law and Heavy Vehicle (Mass, Dimension and Loading) National Regulation (MDL Regulation).
- Maintain and expand the range of agricultural vehicles and combinations allowed to operate under notice.
- Implementation of a new national limit classification system for the determination of agricultural vehicle and combination access within the currently established state areas/zones (currently considering 5 classes).
- Improved consistency of access conditions.
- Use of Schedule 8 of the MDL Regulation regarding warning devices requirements.
- Improved consistency of night travel requirements.

[17] GrainGrowers, Heavy Agricultural Vehicles and Combinations Survey, June 2017.

[18] NHVR, National Class 1 Agricultural Vehicle and Combination Notice, National Harmonisation Program, 2018

- Consistent limits for length, height, width and rear overhang developed around the limit classification system. In some instances, these dimensions may be increased.
- Speed restrictions while towing an implement with no brakes will be as per Schedule 8, Section 24 of the MDL Regulation.
- Harmonised mass limits.
- Improved consistency of load carrying conditions and braking requirements (conditional to implementation of towed ratios).

Each State Road Manager has submitted their response to the NHVR, along with various industry bodies. Stakeholders are mostly supportive of the proposed uniform national limit system. There is still further work to be undertaken as part of this Project with agreement between the State Road Managers. Farmers have advised that they prefer 7.5m widths which would cover approximately 80% of agricultural implements. It has been advised that most State Road Managers are willing to set a width dimension of 6.5m, the State Road Managers are currently negotiating the width dimension across regions. There are some State Road Managers who have pre-existing approvals of access greater than 6.5m wide which should be incorporated into the Notice.

Each State has separated regions into Zones, with most having an urban zone and an agricultural zone or zones with a different set of requirements for each zone, introducing consistency quickly forms part of the National Class 1 Agricultural Vehicle and Combination Notice. It is important to have consistency with the classification of Zones between States and Territories to get better alignment for Farmers.

RECOMMENDATION 10

Transport and Infrastructure Council agree the NHVR deliver the National Class 1 Agricultural Vehicle and Combination Notice with three zones throughout each jurisdiction, within six months

Recently there have been positive examples of the NHVR and Road Managers working together to quickly respond to significant issues, this was demonstrated with the recent Drought Assistance work. The ability to continue to achieve efficiencies for day to day operations will require further collaboration and cooperation of all participants. Failure to do so will have an adverse impact on the transport industry and the economy.

RECOMMENDATION 11

This Review recommends that NHVR introduces a new process to deal with emergency situations, this could include an escalation process.

2.3.2 CONSTRUCTION

The construction sector represents a small percentage of overall OSOM movements. However, they represent more complex movements. Some examples of OSOM movements for the Construction Sector include:

- Transport of wind turbine blades and towers: These are sometimes 70m long and require specially designed vehicles.
- Transport of bridge beams: Bridge beams are both oversize and overmass.

A small percentage of OSOM movements in this sector are what is referred to as superloads, these are OSOM movements that require significant planning and implementation of significant safety mitigations and transport processes. An example of this is the transport of a power station generator from country Victoria to Port Melbourne, this item weighed about 650 tonnes, was 6.5m wide and 108m long (combined). This required temporary changes to traffic lights and signs.

2.3.3 MINING

The mining sector represents a small percentage of overall OSOM movements however represent the more complex movements. Some examples of OSOM movements for the Resource Sector include:

- Transport of Mining Trucks: Mining Trucks are both oversize and overmass and require OSOM movements for recurring movements, this includes recalls and standard maintenance.
- Transport of large mining excavators: These excavators are very large and need to be taken apart for OSOM movement, i.e. bucket removed, cabin removed etc.

2.3.4 AUSTRALIAN DEFENCE FORCE

Defence currently request the largest number of Class 1 Permits to the NHVR and have a dedicated resource seconded to the NHVR who processes all their requests. Most of their vehicles are not road certified and must be transported using low loaders or platforms. Some examples of OSOM movements for Defence include:

- Main battle tanks and other armoured vehicles
- Recovery vehicles.

2.4 ROAD MANAGER EXPERIENCE

Road Managers are declared in the application laws of the HVNL in each participating state or territory and include road authorities, local governments and usually some other road owners.

The Road Manager is responsible for deciding whether to consent to the use of restricted access vehicles on its roads and may, when consenting, require that travel conditions and road conditions must be included in a mass or dimension authority.

Road Managers have special access to the NHVR Portal where they can undertake their assessment utilising tools inbuilt into the Portal. Other tools that Road Managers require include state specific mapping tools. Road Managers are provided guidance from both NHVR through processes and instruction including being able to call up to ask questions of Case Officers. Road Managers have access to support through a Hypercare service and access to material that include videos, FAQs and ‘how to’ guides to walk through everything from basic solution navigation to performing specific tasks in the Portal. They are also offered additional support through face to face portal training, online webinar training and a call centre.

Road Managers receive the application from the NHVR after their preliminary assessment focussed on public safety, Road Managers undertake their own assessment and provide their response through the NHVR Portal, this can include requests for more information to the transport operator.

Road Managers have their own specific document that outlines vehicle configurations and their related permit conditions. The Vehicle Limits Manual outlines allowed configurations of RAVs and it is designed to assist with ensuring the correct configuration for OSOM movements with their loads. It is used to assess applications for OSOM movements and provide related permit conditions that are uniform. The Vehicle Limits Manual was developed by Department of Transport and Main Roads.

2.4.1 PRO-ACTIVE APPROACH TO MANAGING ACCESS

The NHVR and Road Managers should, wherever possible, pro-actively plan strategies for restricted access vehicles to enable safe and efficient access. This can occur, for instance, through the analysis of access applications to identify routes and areas where a suitable network may be established and certain vehicles put under a longer duration permit or notice.

An example of this is outlined in Appendix E: Proactive Planning Map for Class 1 OSOM Vehicles with overlays with the following:

- Construction
- Mining
- Agriculture Zones.

Outlining that using a mapping tool being able to identify whether appropriate notices, pre-approved routes or gazettal are in place to service the sectors that require OSOM movements.

The Inquiry into National Freight and Supply Chain Priorities reinforces planning for current and future needs as a critical action area. Focus area reform outlines the following priorities:

- Review and map current and proposed future key freight routes for all freight modes to include freight corridors, intermodal terminals, ports, airports, industrial areas, shipping lanes and flight paths, which if not appropriately managed, can create inefficiencies in the freight system. These maps would inform funding decisions and land use planning processes.
- Review supply chains and identify any points on the key freight routes where they could be significantly impacted by disruption (for example from climate change or other actions). In the absence of alternative supply chain options, enable mitigation strategies to be put in place to ensure ongoing freight accessibility.
- Ensure all tiers of government integrate appropriate land use planning protections for existing freight related activities such as: preservation of industrial land; buffer zones around key freight hubs to allow 24 hour freight operations; protection of corridors and buffer zones (including sea channels to ports, pipelines and air corridors to airports) and sites for future freight purposes; protecting existing freight areas from urban encroachment; improving communication on current and future noise issues; and identifying land for current and future logistics uses, including urban freight facilities and consolidation centres.
- Freight related development assessments and conditions of approval issued by all tiers of government should consider impacts on efficiency of freight operations and the need to optimise utilisation of infrastructure, such as the ability for freight activities to grow by avoiding throughput limits and restrictions to operating hours.
- Local governments should work with their state and territory counterparts to develop coordinated urban freight plans for major cities, to ensure city wide freight outcomes are met, such as access to key freight routes, last mile access, buffers and industrial land preservation. Coordinated urban freight plans such as the London Freight Plan provide an example of this approach.

2.4.2 GROUPING OF PERMITS AND LOADS (PROJECT SPECIFIC)

A key goal for all Road Managers and the NHVR is to reduce the number of permits and notices. This should include consideration of whether existing notices should be modified to allow for a proposed grant of access rather than issuing a new notice. If a proposed access decision can be accommodated by making minor or simple amendments to an existing notice then this option should be affected over the option of making a new notice.

2.4.3 ROUTES ARE APPROPRIATE FOR VEHICLE AND CONSIDER ROUTE AND NETWORK-WIDE BENEFITS

Promote the creation of strategic freight networks designed for restricted access vehicles, including OSOM movements, where outside of this network is required risk mitigation strategies to be put in place. NHVR and Road Managers to ensure that a whole of network approach is considered for access decisions, where some OSOM movements can cover large distances with some elements of the route causing delays due to narrow focus. This applied to land use planning with regards to the construction and development of freight hubs or industrial areas.

A possible solution to aid this is using CSIRO's TraNSIT tool that analyses transport and logistics options for agriculture to identify potential cost savings[19]. This tool is currently focussed on agriculture supply chain and considers:

- Every possible combination of transport routes and modes
- Road condition
- Temporary closures and diversions
- Availability of supporting facilities such as truck stops and holding yards.

The tool can also be used by Local Government to assist with justification of upgrades in their strategic freight plans.

2.4.4 USE OF TEMPLATE CONDITIONS ON NOTICES AND PERMITS

The use of template conditions in mass or dimension authorities is encouraged to ensure equity, fairness and consistency for restricted access vehicle operators and to prevent them from incurring unreasonable compliance costs. It is not acceptable to require operators to comply with slightly different conditions that have the same intent or outcome. NHVR currently has the Conditions Library that is open to transport operators and should be maintained.

2.4.5 REGIONAL TEAMS

NHVR has an office in SA that mainly focusses on Safety and Compliance however work with DPTI for access issues. Even though NHVR and DPTI are not collocated they collaborate to work through issues and respond to industry. This local office provides industry with a local contact who they can speak to.

RECOMMENDATION 12

The NHVR implement regional teams to work with Road Managers, this should include co-location with State Road Manager.

2.5 APPROVED GUIDELINES FOR GRANTING ACCESS

The Inquiry into National Freight and Supply Chain Priorities outlines the critical action area, 'an integrated approach,' this includes a recommended priority stating, 'Streamline the route permit approval process (including responsibility for decision making, and funding) for heavy vehicles (including OSOM mass vehicles) by local governments and associated regulations, with a view to establishing a national design standard/policy and reducing the approval period to 24 hours on key freight routes in line with national best practice.'

To facilitate this outcome this Review recommends that the Approved Guidelines for Granting Access being fully reinstated with the guiding principles a key feature in access decisions. Part of this is to encourage extension or creation of notices to include a wider range of vehicles and movements while ensuring public safety and infrastructure quality. As an added measure, the NHVR should initiate an education program to work with Road Managers to ensure the Guidelines are used appropriately.

RECOMMENDATION 13

The Approved Guidelines for Granting Access is fully reinstated with the guiding principles a key feature in access decisions.

[19] CSIRO, Transport Network Strategic Investment Tool (TraNSIT), April 2018.

RECOMMENDATION 14

Transport and Infrastructure Council to agree the NHVR investigating alternative permit approaches, including higher fees for expedited/guaranteed turnaround times.

Noting the critical importance of local government resourcing, any investigation of fee–based expedited permits must consider how additional funds paid by industry are commensurately passed back to local government Road Managers.

2.5.1 GRANTING ACCESS

The Guideline outlines that the Road Manager may decide not to give consent if satisfied that the mass or dimensions authority will, or is likely to:

- Cause damage to road infrastructure
- Impose adverse effects on the community from noise, emissions or traffic congestion
- Pose significant risks to public safety arising from heavy vehicle use that is incompatible with road infrastructure or traffic conditions.

Prior to not giving consent, the Road Manager must satisfy itself that it is not possible to grant access, with the Road Manager being responsible for determining whether the restricted access vehicle can be used safely on its road network. It is the NHVR's responsibility that the Heavy Vehicle complies with the HVNL and Standards.

The NHVR cannot grant an authority until all affected entities are consulted with and consent is given, this applies to third parties, which may include police, rail infrastructure managers, utilities, private road owners and forestry agencies. Road Managers do not require this to provide consent it is NHVR's responsibility.

A key role of the NHVR is to aid Road Managers in making access decisions, it is encouraged that Road Managers who need assistance actively engage with the NHVR. It is also encouraged that Road Managers who can assist other Road Managers who may not have the capacity to meet their obligations should assist.

2.5.2 BRIDGE ASSESSMENT

A core component of OSOM movements and Class 1 Permits is assessment of the infrastructure that the OSOM move will interact with, this includes roads, bridges and associated structures. Bridges need focussed assessment and review for OSOM movements, particularly overmass, due to the possibility of catastrophic failure if a load is significantly higher than the designed limit. The approach for assessment by most Road Managers is to undertake an assessment as per the Australian Standard 5100: Bridge Design, key steps include:

- Investigate load effects for the nominated vehicle, configuration and load characteristics
- Investigate bridge capacity
- Investigate capacity reduction factors for elements being subject to deterioration
- Review of bridge drawings and any previous inspection reports
- Calculation of assessment ratios
- Summarise assessment ratios for each loading scenario.

If this identifies deficiencies a further, more detailed analysis may be undertaken that may include:

- Advanced analysis including non-linear and plastic analyses
- benchmarking using international standards and methods.

The result is to provide findings from scenarios with a consent for access, with applicable conditions, or rejection with reason.

RECOMMENDATION 15

Transport and Infrastructure Council agree to develop and implement an industry-centric triaging system for bridge assessments within 12 months.

Some Road Managers are proactive in undertaking routine assessments of their bridges and using that information for access decisions. DSG undertook a significant body of work provide access to all roads with appropriate conditions applied to roads and bridges, they undertook bridge capacity assessments to understand the capacity and capability of their infrastructure and then apply conditions to manage the risks around it. This data is all managed through an online mapping tool that is transparent and easily accessible.

2.5.3 PRE-APPROVED ROUTES

A Road Manager can submit to the NHVR a pre-approved route that can be used by specified vehicles, including OSOM. When the NHVR receives a permit application for movement on a local road that is pre- approved by the relevant Road Manager for the vehicle type, the NHVR does not need to seek additional consent from the Road Manager before issuing a permit. The NHVR will supply a copy of the permit to the Road Manager. Pre-approval of routes is used to streamline processes, reduce administrative burden for local government and reduce turnaround times. The pre-approval process targets routes expected to experience large numbers of (particularly Oversize Overmass, but not exclusively) vehicle movements such as roads in industrial areas and access routes connecting existing approved routes or State controlled roads.

CASE STUDY: PORT OF BRISBANE PRE-APPROVALS

The Port of Brisbane (PBPL) is a Third Party that owns certain roads within the high-volume Port area at Fisherman's Island. As part of this pre-approval for access for OSOM vehicles Port of Brisbane has included a wide range of Class 1 Vehicle Types:

- Special Purpose Vehicles – Cranes ranging from 5 axles all terrain crane to Pick and Carry Cranes.
- Load Carrying 1, 2 & 3 – Ranging from single axle low loaders to Dolly with low loaders.
- Platform Trailers.
- Low Loader Dollies.

Figure 2-2: Port of Brisbane OSOM Pre-approved roads *Source: A1463616*

As a Road Manager under the HVNL, PBPL cannot grant a mass or dimension authority, issue a permit or make a notice. This permit or notice must be issued through NHVR, however PBPL have been proactive in creating a pre-approval that covers a broad range of OSOM vehicles that acts as an enabler for ease of movement through the area and on to the State controlled network. As part of this pre-approval PBPL have taken a risk management approach that considers the impact on road infrastructure and the community.

RECOMMENDATION 16

The Transport and Infrastructure Council agree the publication and systemic use of the Vehicle Limits Manual. This Manual to be published on jurisdictional websites by end of 2018.

2.5.4 PILOT AND ESCORT VEHICLES

Undertaking OSOM movements within Australia sometimes requires traffic management and increased safety measures that assist with progressing the OSOM movement from origin to destination while managing traffic and safety risks. This includes the use of Pilots and Escorts that work together to manage traffic both ahead and behind the OSOM Vehicle. In Australia, each State and Territory has different requirements for the pilots and escorts required for OSOM movements, the differences are around the numbers of pilots and escorts required and accreditations of pilots and escorts.

There are many requirements for OSOM movements to cross borders between jurisdictions, transport operators need to liaise with multiple organisations and manage the complex resourcing that is required for these movements with regards to pilots and escorts. Nationally the inconsistencies between jurisdictions when it comes to pilots and escorts adds another complex layer on an already complex system.

INCONSISTENCY OF NUMBERS FOR PILOTS AND ESCORTS

To outline the different requirements in numbers between States and Territories SOURCE shows the complexities in planning interstate travel. SOURCE outlines the requirements as stated in the Guideline for Excess Dimension: . Vehicles Carrying Indivisible, Articles, Special Purpose Vehicles, Vehicles that require a Pilot or Escort in Queensland (Form 4). This table is accompanied in Form 4 by many caveats on exceptions.

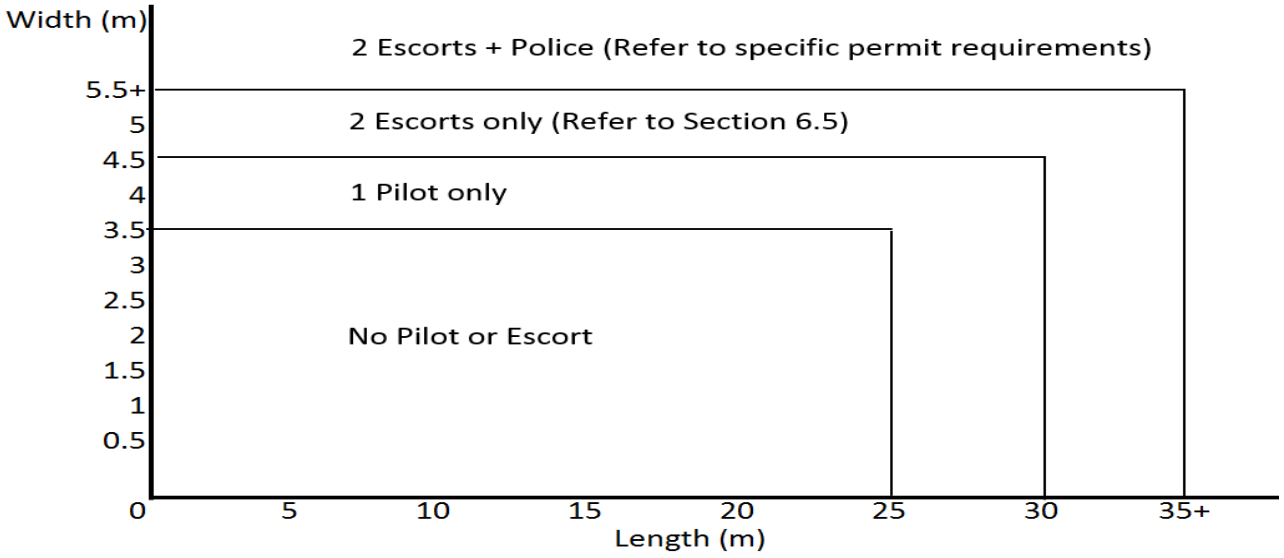

Figure 2-3: QLD Pilot or escort or police escort requirements – width and length

Figure 2-4 outlines the Victorian requirements for Pilots and Escort, this graph is accompanied by many caveats on exceptions including: when travelling on a freeway outside the Melbourne and Geelong Urban Areas, only one Certified Pilot Vehicle is required, number of pilot/escort vehicles required may depend on variable circumstances and will be considered on a case by case basis and over 6m wide or 60m long - a combination of certified pilots and/or VicRoads escort vehicles will be required.

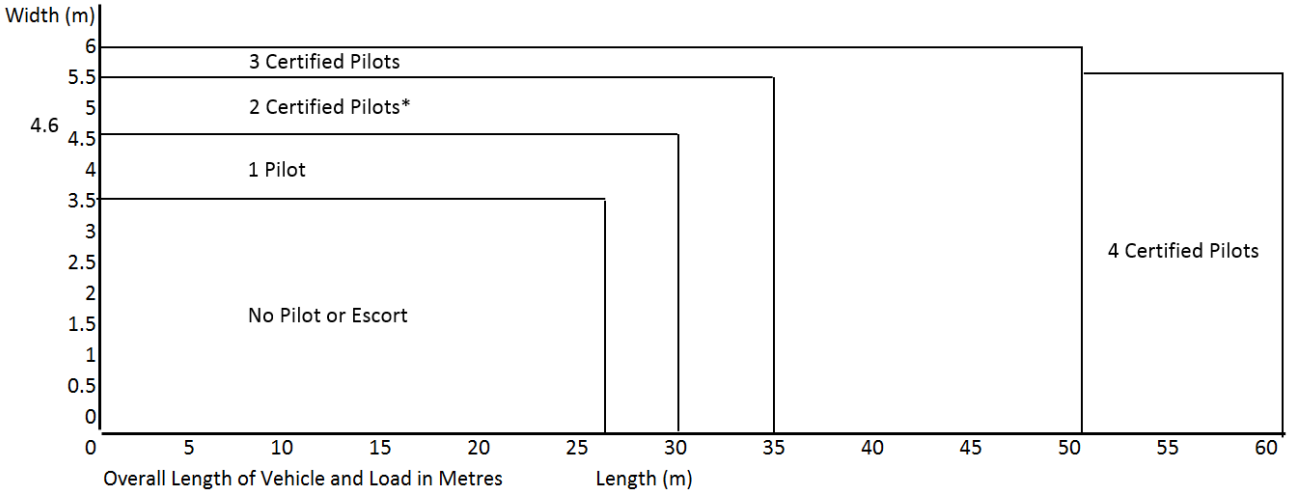

Figure 2-4: VIC Pilot and Escort Graph Guide

Figure 2-5 provides a case study on how the different requirements for the number of vehicles of pilots and escorts can affect an OSOM movement interstate. This outlines that an OSOM movement that travels from QLD to SA requires many different combinations of pilots and escorts.

This case study does not consider special conditions that may be applied to a permit or apply for some areas of movement. This case study uses the available information from the State Road Manager websites that outline the requirements. There are many caveats and exceptions in these documents that may change the numbers of pilots and escorts.

The function of police agencies providing escort services in jurisdictions has led to a major cost component of OSOM movements being the escort, when compared to the cost of the actual OSOM movement, cost of Prime Mover, trailer, driver etc.

This inconsistency results in significant coordination with each State and Territory to organise escorts and pilots that meet the requirements as well as managing the timeliness and costs of the movements.

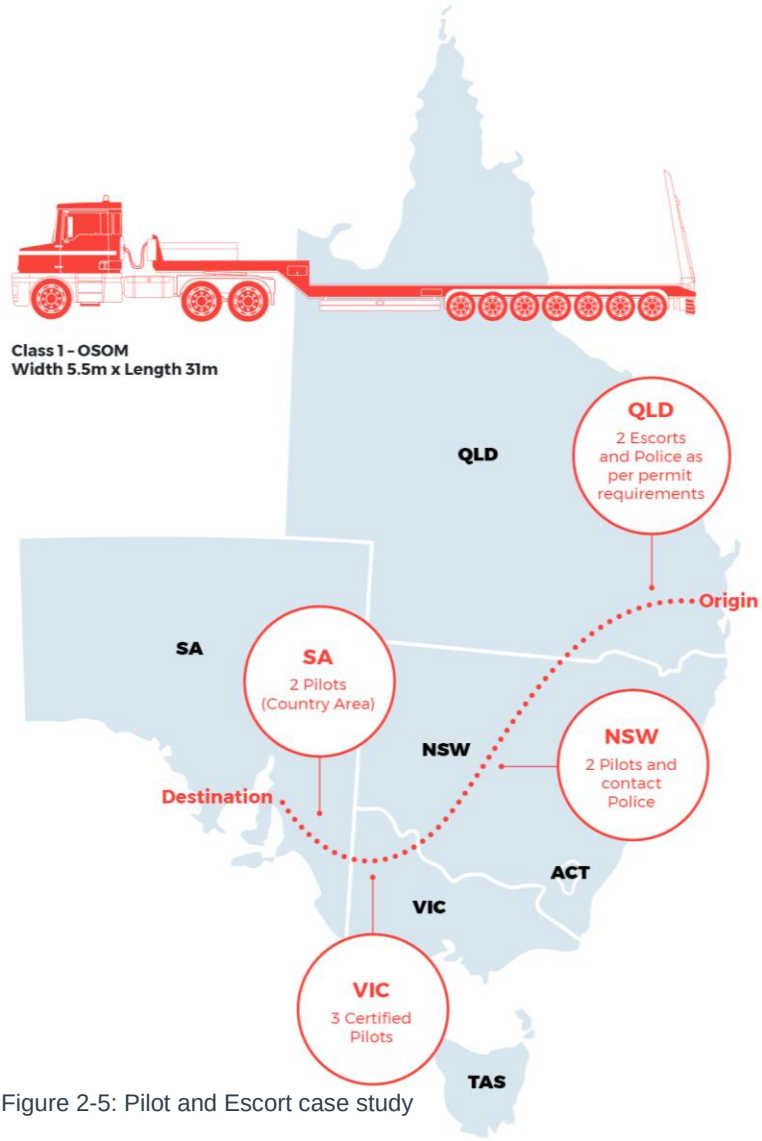

Figure 2-5: Pilot and Escort case study

RECOMMENDATION 17

Transport and Infrastructure Council agree to implement harmonised national standards for pilots and escort vehicles.

INCONSISTENCY OF ACCREDITATION AND TRAINING OF PILOTS AND ESCORTS

Different states and territories have different training and accreditation requirements for pilot and escort vehicle drivers, yet there are no formal arrangements to recognise driver accreditation when loads are moved across state and territory borders. This inconsistency creates inefficiencies and frustrations for transport operators as it complicates an already complicated process.

A large body of work has been completed by the NTC to develop a national accreditation scheme to harmonise the roles and qualifications of pilot and escort drivers across Australia. This resulted in the issue of the discussion paper 'Harmonisation of Pilot and Escort Vehicle Driver Requirements – National Accreditation Scheme' issued in February 2014.

This Review recommends that this discussion paper's findings and arrangements are considered for implementation, including the following recommended outcomes:

- Any pilot previously operating as a Level 2 pilot in the NT, QLD or VIC, or as a pilot in WA will be recognised as an Accredited Pilot and permitted to conduct both Accredited and Registered Pilot operations nationally.
- Any pilot previously operating as a Level 1 pilot in Queensland or with significant operational experience as a non-accredited pilot (in a jurisdiction currently not requiring accreditation) will be recognised as a Registered Pilot under the national scheme, and permitted to conduct applicable duties nationally.
- The option of developing localised conditional piloting arrangements may be considered to ensure no disruption to piloting arrangements for specific purposes, such as short distance agricultural equipment moves.
- Pilots will not be automatically recognised and will need to opt-in, to ensure that current active pilots are recognised under the new scheme.

INVOLVEMENT OF POLICE AS ESCORTS

In some jurisdictions, the Police provide the function of Escort for OSOM movements, this includes:

- QLD – QPS provides the function state wide
- NSW – NSW Police provide the function
- VIC – VicRoads provides this function through the Transport Safety Service
- SA – SA Police provide the function through a dedicated unit, this includes sworn and unsworn officers
- TAS – DSG provides this function
- WA and NT – WA use Traffic Escort Wardens run through Main Roads WA and NT uses NT Police when needed.

QPS form a component in the consent process and then rely on this to manage OSOM movement escorts. QLD is the only jurisdiction that has the Police, via the Commissioner, as a component in consent. QLD has an established accreditation scheme that provides traffic management training, this is at two tiers, Escort Officer and then Escort Supervisor.

As clear inconsistencies across jurisdictions adds complexity and increases burden on all related parties, harmonisation of pilots and escorts is required and needs a national approach.

RECOMMENDATION 18

Transport and Infrastructure Council agree to harmonise inconsistencies around accreditation for Pilot drivers by 2020.

RECOMMENDATION 19

Transport and Infrastructure Council agree to simplify pilot and escort process to remove layers to the consent process. NHVR, DTMR and QPS to undertake a process improvement project.

3 IMPROVING THE OSOM SYSTEM

3.1 PROPOSED OSOM ENVELOPE FOR PERMITS

There are multiple types of access permits that are issued that could be decreased by taking a considered approach using a tiered system. By partnering the Approved Guidelines for Granting Access with a proactive approach for harmonisation access there will be a significant improvement in OSOM access arrangements.

By using the principle that OSOM movements should be able to operate on previously consented routes with similar configurations the below vehicle envelope approach would decrease the number of permits required nationally significantly. Table 3-1 outlines a proposed envelope approach to capture as many OSOM movements as possible, this has been adapted from a NHVR Presentation from 2015, this table uses permit data from 2015.

Table 3-1: Proposed OSOM Envelopes (Envelopes are equal or less than)

PROPOSED ENVELOPE				NHVR	STATE ROAD MANAGER	LOCAL ROAD MANAGER	AVERAGE
WIDTH	HEIGHT	LENGTH	WEIGHT				
3.5m	5.2m	25m	150t	29%	18%	24%	24%
4.5m	5.2m	30m	150t	31%	21%	44%	32%
5.5m	5.2m	35m	150t	34%	44%	25%	34%
TOTAL				**94%**	**83%**	**93%**	**90%**

This approach considers that most applications are approved, most journeys have, in part, been travelled before so the risks are known, historical approvals on a route should be used to streamline future approvals.

The current system needs to be realigned so that there are more routes and configurations under notices or gazettal with pre-approvals as a stepping stone, not a permanent solution, these should be allowed for a short timeframe then converted to a gazetted route unless there are valid concerns.

RECOMMENDATION 20

Transport and Infrastructure Council to agree that the NHVR works with Austroads to refine the proposed OSOM envelopes to establish infrastructure bridge loading limits in the standards.

RECOMMENDATION 21

This Review recommends an envelope approach is taken for OSOM vehicles, with those vehicles within envelope provided in Table 3-1 having a 48-hour turnaround time on average. The proposed envelope is preliminary with NHVR to confirm through consultation.

CASE STUDY: EMPTY TRAVEL DUE TO UNCERTAIN APPROVAL TIME

A transport operator undertook an OSOM movement from NSW to WA, a journey of 6,000kms, travelling under a Gazette Notice. To increase productivity and efficiency a return OSOM load was found, this was a crane. This OSOM movement would have required a Permit for the SA component of the trip. With no guarantee of timeframe for the Permit, the transport operator weighed up the benefits of undertaking the return OSOM movement with the possibility of waiting at the SA Border for the permit with no timeframe known or returning empty.

RECOMMENDATION 22

This Review recommends that all permits have an automatic empty return trip attached as a condition of permit, which does not require a new assessment.

3.2 LOW LOADER NOTICE

A common OSOM movement consists of a Prime Mover with a Low Loader, with or without a dolly, many jurisdictions already have notices that cover most common configurations. A harmonised approach should be taken to ensure consistency across jurisdictions.

Table 3-2: Proposed Low Loader Mass Limit Envelopes (Envelopes are equal or less than)

AXLE GROUP	# OF TYRES PER AXLE	MASS LIMIT
Steer Axle	2 tyres per axle (single steer)	7 tonnes
	2 tyres per axle (tandem steer)	10 tonnes (non-load sharing suspension)
	2 tyres per axle (tandem steer)	11 tonnes (load sharing suspension)
Single Axle Group	4 tyres per axle	9 tonnes
Tandem Axle Group (prime mover drive group only) Tri Axle group for Prime Mover	4 tyres per axle	18.5 tonnes 27.0 tonnes
Tandem Axle Group (dolly only)	4 tyres per axle 8 tyres per axle	18 tonnes 30 tonnes
Tri Axle Group (dolly or trailer)	4 tyres per axle 8 tyres per axle	27 tonnes 45 tonnes
Quad Axle Group (trailer only)	4 tyres per axle 8 tyres per axle	36 tonnes 54 tonnes

RECOMMENDATION 23

Transport and Infrastructure Council to agree that low risk OSOM vehicles be provided a 48-hour turnaround time (on average), within 12 months after the envelope approach is agreed.

3.3 SPECIAL PURPOSE VEHICLES

The focus of this Review is OSOM, however there is an overlap with other Class 1 vehicles including mobile cranes. This Review recognises that a similar envelope approach could be taken for SPV as outlined above, noting that cranes have superior suspension and a better dynamic load response than other similar vehicles.

CASE STUDY: INDUSTRY WORKING WITH NHVR AND ROAD MANAGERS

The Crane Industry Council of Australia (CICA) is currently working on the implementation and adoption by Local Government of the National Class 1 Special Purpose Vehicle (SPV) Notice 2016. This notice establishes a consistent framework for SPV operations by harmonising access and vehicle standards exemptions conditions in all participating jurisdictions, the purpose of the notice is to reduce the number of permits required to operate SPVs in Australia. CICA alongside NHVR are working with Local Government to adopt the notice as many have not signed up to the notice meaning that the full harmonisation effect is not yet in place. The notice covers cranes up to 40t and allows permit free travel as often as required for a set list of vehicles.

RECOMMENDATION 24

Transport and Infrastructure Council agree to progress consideration of the following:

- **a.** Road Managers to assess cranes using a dynamic load allowance appropriate for hydro pneumatic suspension. (reduce from 0.4 to .01~).
- **b.** Road Managers to assess cranes using a load certainty factor appropriate for non-load carrying mobile plant. (reduce from 1.6 to 1.5).
- **c.** Create network access maps for all cranes where possible.
- **d.** Add 6 and 7 axle and dolly combinations to maps, where they outperform current vehicle designs.
- **e.** Add 8-9 axle crane carriers (no boom) to existing maps due to their low axle weights and superior swept path performance.
- **f.** investigate opportunities to introduce a SPV 12t per axle notice.

3.4 THE MULTI-STATE CLASS 1 LOAD CARRYING VEHICLES DIMENSION EXEMPTION NOTICE 2016

The purpose of this Notice is to consolidate in a single dimension exemption a range of schemes under which dimensions' exemption are currently provided to Class 1 OSOM in NSW, SA and VIC. This notice covers each jurisdiction:

- Vehicles and vehicle categories
- Maximum permissible dimensions condition
- Areas or routes to which this Schedule applies
- Operating conditions
- Pilot and escort vehicle requirements
- Additional restrictions.

This Notice in part goes to assist in reducing complexity for interstate travel and reducing the 'red tape' encountered, this notice should be expended to include more configurations with harmonised dimensions and requirements.

The NHVR Multi-State Class 1 Load Carrying Vehicles Mass Exemption Notice 2016 allows an 8-tyred spread axle quad float in NSW a maximum of 48t on the quad axle (3.6m GCW). In QLD, a period permit (PP) allows only 43t: additional mass requires an STP, which are, per one operator, rarely if ever refused. This increases the complexity of the system and reduces fleet flexibility, requires operators to either get multiple STPs, or use a higher cost platform trailer, which often require one or two pilots (because length > 26m), increasing costs again.

Across jurisdictions there are inconsistencies for Ground Contact Width resulting in non-compliance for transport operators working across jurisdictions.

RECOMMENDATION 25

Transport and Infrastructure Council agree harmonisation for dimensions and requirements across jurisdictions through the Multi-State Class 1 Load Carrying Vehicles Dimension Exemption Notice 2016, within 12 months.

3.5 HEAVY HAULAGE ACCREDITATION MODULE

Throughout this Review there has been a common theme around enabling access to networks for OSOM movements, to do this there needs to be set systems in place that increases trust between Transport Operators and Road Managers.

Certain sectors within the OSOM industry have asked for an accreditation module do be introduced, to lift the standard of the industry and provide confidence for Road Managers that the necessary systems and plans for the safe movement of OSOM loads are in place. This must be accompanied by Road Managers providing a greater network for operators who can provide demonstrated evidence of the system working effectively through the design of comprehensive traffic management plan as part of the module leading to high productivity benefits, whilst providing a safe and efficient network through Road Managers.

Consideration should be given to establishing mandatory accreditation requirements based on establishing comprehensive Accreditation module with appropriate standards, business rules and governance requirements.

In considering the introduction of an Accreditation module, industry will need to be consulted to weigh the costs and benefits across the OSOM industry. Aligned with considerations from the Medlock review into heavy vehicle Accreditation Systems in the harmonising accreditation systems nationally.

RECOMMENDATION 26

Transport and Infrastructure Council agree the NHVR, together with industry associations, introduce a Heavy Haulage Accreditation module, as part of considerations from the Medlock Review.

4 TECHNOLOGY AND DATA

4.1 INTRODUCTION

The efficiency challenge is to assist multiple parties to work together in a holistic matter. Thoughtful design and application of technology will greatly assist this task in a future-proof way. Understanding what requirements of what a future system may look like that benefits a wide range of stakeholders is important in planning solutions and implementing recommendations. Developing a preliminary vision of what the ideal future solution looks like is key, focussing on a generic use case of a heavy vehicle on public roads.

Developing a solution based system for heavy vehicle operators will have a positive impact on the movement of OSOM loads.

4.2 NHVR PORTAL

The NHVR Portal, launched in August 2016, is the focal point for Class 1 OSOM permits. For all Interstate movements as well as States that have returned their delegation transport operators must submit their application via this system. This system is used as 'One system one permit' where transport operators submit their application and NHVR assesses and coordinates all consents for the OSOM Movement.

- Transport operator submits application including details on:
  - Vehicle and load configuration
  - Loaded axle mass and spacing
  - Vehicle list
  - Permit details
  - Permit period
  - Route details.
- NHVR then undertake preliminary assessment, request or change information if required and issue to Road Managers affected.
- Road Manager received application and start assessment, request or change information if required and issue consent or reject application with reason.
- NHVR then consolidate consents or rejections from all affected Road Managers and issue to transport operator.

Noting that the NHVR Portal is constantly being improved there are identified issues around the lack of ability to prefill and for the application form to capture mistakes or out of range entries, an example of this is outlined in the below case study. Currently there is no ability for minor changes to be made without a permit application being rejected and the process having to restart.

RECOMMENDATION 27

This review recommends the NHVR maintains a feature list for improvements to the NHVR Portal and prioritises and implements features in a timely manner. This review recommends the feature list include the following:

- **a** Introducing business rules on the application page to capture mistakes or out of range values.
- **b** Preload information capability, including:
  - **i** Vehicle configurations and details.
  - **ii** Previously applied for permits with routes and configurations.
  - **iii** Transport operator details.
  - **iv** Reference previous applications with similar routes or configurations.
  - **v** Link permits – including project specific movement with multiple movements of the same type or route.
- **c** Flexibility to:
  - **i** Make minor changes or amendments to the application without rejection resubmitting a new application.
  - **ii** List multiple prime movers or trailers on permits to allow flexibility.

4.3 DATA

The NHVR Portal is functional for searching and navigating around access permits however there are issues with downloading of the data to other formats. Noting that NHVR internally use PowerBI software for reporting. This is not available to Road Managers or customers.

The NHVR Portal and the associated reporting tools have been reported to have incorrect data when reporting on average time with Road Managers and similar items that are core to measuring performance of access permits. There is currently low confidence in the data that the NHVR Portal presents.

CASE STUDY: NHVR PORTAL REPORTING INCORRECT TIMING

A transport operator submitted their permit on 11 October 2017, NHVR issued for consent to RMS on 26 October 2017. Rejection from RMS was issued 2 November 2017 due to Oversize travel not being permitted through tunnels. This timeframe being a 6-day turnaround time, the NHVR Portal states a much longer time with the Road Manager at 18 days.

RECOMMENDATION 28

NHVR undertake a project of data cleansing and working on the data quality of the NHVR Portal. This Review recommends that NHVR lead a project to work with Road Managers to encourage data sharing to increase overall transparency, this will lead to increased confidence in the data that may assist and allow further routes to be approved including targeting of network pinch points.

4.4 MAPPING

Planning an OSOM movement is a core component to assessing whether a movement is feasible, technology plays an important role when planning movements as it can outline the optimal routes to use to ensure increased safety. All Class 1 Permits require a route to be submitted as part of the application process, this is completed online within the NHVR Portal through the Route Planner. This assessment also requires transport operators to undertake due diligence on the route including ensuring that the OSOM movement can travel without interfering with infrastructure and making sure there are no dimensional clashes along the route, this includes height clearances, swept paths and width clearance.

The NHVR Portal uses Journey and Route Planner that plots a route from Start Address to Destination Address. This route is normally assigned to heavy vehicle routes available including B-Double approved routes. Journey and Route Planner has functionality that works to improve user experience including layers that outline pre-approved, under notice, consent granted and excluded routes. Journey and Route Planner also outlines OSOM networks, restrictions, approved routes and restricted zones. The route summary is then incorporated into an OSOM application which uses the roads and then Road Managers affected to request consents. There is a clear disclaimer with Journey and Route Planner that states, "*Please note: the networks shown are indicative only and should be confirmed using the relevant state road transport authority mapping site*."

State and Territory Road Managers have their own online Restricted Access Vehicle Network that outlines certain features of their network ranging from approved OSOM routes or roads, restricted structures and travel conditions. The various online mapping tools are outlined below.

Table 4-1: State and Territory Mapping Tools

REGION	ONLINE SYSTEM NAME AND TECHNOLOGY	CONDITIONS AND REQUIREMENTS
ACT	Approved Routes for Oversize & Overmass (OSOM) Vehicles. Portable Document Format (PDF)	Outlines approved routes with restrictions and conditions along each route.
NSW	NSW Oversize Overmass Load Carrying Vehicles Network map. Online Adaptive Mapping System	Outlines routes, Travel Conditions, Restricted Structures & Railway Level Crossings
QLD	Multi-combination routes and zones in Queensland – Maps. Portable Document Format (PDF)	Outlines routes & Exclusions zones
SA	RAVnet - Restricted Access Vehicles Map. Online Adaptive Mapping System	Outlines routes, Travel Conditions & Restricted Structures
TAS	Tasmanian Load Carrying Vehicles Class 1 Network Map Online Adaptive Mapping System	Outlines routes, Travel Conditions & Restricted Structures
VIC	Victoria's Oversize/Overmass (OSOM) Network. Online Adaptive Mapping System	Outlines routes, Travel Conditions, Restricted Structures & Railway Level Crossings

These online mapping tools have significant information and layers that can be overlayed to assist transport operators and Road Managers to assess if routes are feasible for OSOM movements.

Currently transport operators must use relevant tools to meet their obligations, including Journey and Route Planner within the NHVR Portal as well as relevant State and Territory online mapping tools, in addition to undertaking their own analysis of the planned route.

There are instances of the Journey and Route Planner providing sub-optimal and sometimes unsafe route guidance that has led to frustration in the process, the following case study outlines an instance of this. There are also examples where the Journey and Route Planner as well as the relevant Road Manager did not pick up roadworks that have had an impact on the OSOM movements route, this has led to issues during the movement that caused delays.

CASE STUDY: JOURNEY AND ROUTE PLANNER PROVIDING UNSAFE ROUTE

A transport operator was engaged to transport a Dozer from Lonsdale, SA to Truganina, VIC, a journey of over 750kms. The dimensions of the load were: 4.5m Wide, 28m Long. 5m High. The vehicle weighed approximately 135 tonnes (total mass) and the vehicle used was a Prime Mover and Platform Trailer.

The Journey started south west of Adelaide with the planned journey to travel past the Adelaide Airport and join Port Wakefield Road then head out of the Adelaide Metropolitan area using the Northern Expressway with the aim to travel across the SA – VIC border at Pinnaroo. This route is an established interstate route however the turn by turn instructions include instructions that are not feasible or correct for an OSOM movements including:

- Make sharp left or right turn at a constrained intersection
- Make U-Turn on a major highway
- Arrive and Depart from arbitrary locations.

NHVR are currently undertaking a project to coordinate with the State and Territory Road Managers to incorporate their mapping information into the NHVR Portal, however the delivery timeframe is not known, this project should create a 'single point of truth' for Road Managers and transport operators. The overall aim is for Road Manager to publish up-to-date information on infrastructure constraints via an API that other systems can easily interrogate. For example, a bridge 'owner' to publish via API the current capability of a bridge (its constraints regarding weight limits, dimensions, truck speed etc) and its availability (current status and planned closures due to events or maintenance). This is vital, fundamental, future-proof information (data infrastructure) as input to transport planner's routing decisions.

RECOMMENDATION 29

The NHVR to support transport operators to use State/Territory Road Manager mapping tool to journey plan, with the NHVR Journey Planner used only to identify affected Road Managers.

RECOMMENDATION 30

The NHVR to:

a Progress internal project to incorporate all mapping data from state road manager's mapping tools into the journey planner.

b Work with relevant state/territory road managers to automate collection and storage of current infrastructure capability.

4.5 TELEMATICS

The OSOM movements should be considered in the broader strategy of the national road network. Depending on the objectives of this strategy, there are different technical solutions that can be considered and developed. These are:

- Using current roadside infrastructure

- Using vehicle-based systems
- Combining roadside and vehicle-based solutions.

The Review notes the extensive work being undertaken in this emerging area, such as the National Transport Commission's *Review of Regulatory Telematics* (March 2018), which identifies issues with the heavy vehicle industry with reviews that outline findings and recommendations.

RECOMMENDATION 31

In conjunction with other telematics related initiatives, the Transport and Infrastructure Council to commission a project to consider possible policy/regulatory changes to facilitate the sharing of telematics data between local governments, to better track OSOM movements on their network.

RECOMMENDATION 32

Transport and Infrastructure Council agree a project team be set up within the NHVR to investigate possible technology solutions for the better management of movement data.

RECOMMENDATION 33

Transport and Infrastructure Council agree the NTC, in conjunction with relevant partners, undertake work to progress consideration toward policy/regulatory settings to boost the uptake and use of telematics in OSOM heavy vehicles.

5 CAPABILITY AND RESOURCING

5.1 INTRODUCTION

A Road Manager's role is important and core to the permit process for all classes of vehicles, this role requires an understanding of their network as well as vehicle types and impacts of movements. Some Road Managers have specific teams that are dedicated to reviewing applications and working to progress them with NHVR and transport operators, however there are many Road Managers that do not have a dedicated resource or a good understanding of the network or vehicles. This presents an issue with regards to being able to effectively process and progress permits for restricted access vehicles.

5.2 LOCAL GOVERNMENT

Local governments own and manage approximately 75 per cent of Australia's road network by length. Local government Road Managers consider potential impact on infrastructure, safety and a need to balance a wide range of responsibilities to the community, including access to homes, safety and amenity of its citizens and businesses.

Prior to the HVNL being introduced Local Government were seldom consulted for consent for OSOM movements by transport operators. Previously transport operators would request consent through the State Road Manager. The State Road Manager's permit included consent for their network with a condition to consult the Local Government for access to their network however this did not happen.

At present, most Local Government Road Managers receive requests for consent from the NHVR through the NHVR Portal. In QLD DTMR request consent and coordinate this, in NSW transport operators request consent directly, in other jurisdictions State Road Managers assist and help educate Local Government Road Managers on access.

The key issues identified as part of this review:

- Capacity: Local Governments do not have the resources to assess Class 1 Permits issued by NHVR, most Local Governments do not have a dedicated resource for Heavy Vehicle Permits. Most delegate this responsibility to their Road Manager or Engineering Team who are also responsible for all other civil engineering projects including road maintenance, water systems, bridges and buildings.
- Capability: For Local Government to provide consent they need to make a decision on the capacity of their road network and key assets including bridges. These decisions need to take into consideration the asset condition, there may be little to no data on the asset condition and formal assessments may be required. Most Local Governments may not the capability or funding to undertake a detailed bridge assessment, in addition to not having a whole understanding of their assets.
- Knowledge: Some Local Governments do not have an established asset management system that contains information on their road network and key assets including bridges. This also includes no ability to assess OSOM movements in a clear, transparent and repeatable way.
- Funding: With limited available funds for Local Governments, with no incentives to increase access for OSOM vehicles, there is a focus on reconstruction and maintaining of their road network. OSOM movements may have an impact on road condition with no ability for Local Government to receive funding. There is little or no incentive to be cooperative to approve an OSOM movement that ultimately will be disruptive to their constituents.

The NHVR has worked in close collaboration with industry and Local Government to ensure freight networks are enhanced while still allowing for the safety of other road users and infrastructure protection. However, business rules are required to provide clarity for both state and local Road Managers as there is year-on-year increases in large movements. The current process adds additional burden of administration on customers as there is a need to synchronize multiple

agencies for a move which adds to delays, extra costs and most of all frustration all round. The Review identified a number of blanket approvals or known access arrangements for first and last mile that the transport Industry had access to, these need to be placed on the network and formalised.

With the identification of the above issues there have already been significant bodies of work to create and formalise solutions, an example of this is the Australian Local Government Association's submission for the 2018-19 Federal Budget outlining that further investment is required for Local Government to not only maintain but to improve their network as to increase the productivity of key freight routes. Some of the recommendations include:

- Creating a Local Freight Productivity Investment Plan, funded at $200 million per annum for five years, to ensure that first mile/last mile and freight connectivity issues are addressed.
- Improving the safety and management of local bridges by making the Bridges Renewal Program permanent.
- To fund councils to undertake regional transport plans, including permit processing and demand forecasting on key freight routes.

There are many examples of Local Government forming strategic partnerships to develop regional transport strategies that identify key freight networks in consultation with State Road Managers and industry. These strategies take the approach that Local Government supports freight but require increased investment to ensure their network can be sustainable while increasing access. An example of this outlined in the First and Last Mile Pilot Project Case Study.

With Local Governments working together, including State Road Managers and the NHVR, there is an ability to address issues as a network rather than individual roads, by taking a network approach there is the ability to better define pinch points and focus funding to address them. This approach will enable more efficient and effective network development by addressing issues such as connectivity, consistency and equity. This approach also lends itself to undertaking assessments then enabling common routes to come under a notice or pre-approval.

CASE STUDY: PRE-APPROVAL FOR MINE ACCESS FOR SPECIFIC HIGH FREQUENCY VEHICLES

NHVR and LGAQ worked with the Central Highlands Regional Council to create pre-approvals that covered increased access for mining vehicles. This pre-approval included:

- Class 3 Rigid truck and trailer carrying water up to 5m high
- SPV5 and all SPVs that meet DTMR's PP requirements
- OSOM LC3 and any OSOM load carrying configuration that meets the requirements of a DTMR STP.

This pre-approval is valid for a 3-year period and covers key routes that are required for mining access from Emerald and Blackwater, key mining towns in the region. LGAQ advised that these pre-approvals will significantly reduce the number of permits from 1500 permits a year decreasing administrative burden on the transport industry.

There are 547 Local Governments[20] in Australia. Being able to provide clear, transparent and repeatable assessments for OSOM movements is currently difficult. To enable this outcome technology solutions are required, there are many options available to do this however this review has identified two solutions that will enable clear, transparent and repeatable assessments.

[20] Department of Infrastructure, Regional Development and Cities, Local Government, August 2018.

CASE STUDY: FIRST AND LAST MILE PILOT PROJECT

The First and Last Mile Freight Pilot Project integrated DTMR's Heavy Vehicle Network Plan with existing and future land-use, identifying and analysing key first and last mile deficiencies on Local Government controlled roads. Through this project, 34 high priority routes were assessed across the study area21. This Project produced a medium to long term freight strategic plan which aligned freight networks incorporating Higher Productivity Vehicle access, this allowed for increased funding requests through the Bridges Renewal Program with identified deficient bridges renewed or replaced. This project enabled larger, heavier and more productive freight vehicles access on adjoining state highways to use local roads, even though not specifically aimed at OSOM Vehicles, this is a proactive approach that can be applied to Class 1.

This Project was an initiative with Toowoomba and Western Downs Regional Councils with support from the Local Government Association of Queensland (LGAQ). The National Heavy Vehicle Regulator works closely with the LGAQ in addition to funding the position of LGAQ Heavy Vehicle Access Liaison Officer who works with Local Government to educate and ensure proactive approaches for access are taken.

Austroads have published a Research Report (AP-R559-18) Local Road Access for Higher Productivity Freight Vehicles[22] that even though not specifically focussed on OSOM movements has transferrable and applicable recommendations that should also be considered as part of the Review. These include:

- Facilitate better knowledge and understanding of the Performance-Based Standards (PBS) Scheme by Road Managers - Develop and deliver nationally co-ordinated education campaigns and supporting tools targeting local Road Managers and regional state Road Managers.
- Outsource road asset audit & assessment - Provide a mechanism by which local councils can apply for funding to outsource bridge asset auditing and geometric or structural route assessments to third-party professionals.
- Funding for structural upgrades/replacements - Targeted funding to upgrade or replace critical structures so that high-productivity freight vehicles such as 50.5-tonne PBS quad axle semi-trailers and 85.5-tonne PBS A-doubles—can access priority freight routes.
- Improve the governance of, and confidence in, in-principle access decision-making - Consider legislative amendments to introduce binding decisions within a statutory timeframe when requests are made for access prior to a PBS Vehicle Approval being issued.
- Incentivise on-time access approval - Amend the legislation or provide other forms of support to better enable access approval within an acceptable timeframe.
- Strengthen Section 156(3) of the HVNL.
- Implement independent appeals process - Identify options for, and implement, an independent appeals process to handle appeals against adverse access decisions, to improve confidence in the delivery of due process.
- Implement better journey planning - Improve the NHVR Journey Planner so that (a) automatically-generated routes between origins, waypoints and destinations take into account the vehicle classification, the various road classifications, and other considerations that can easily be built into the tool, and (b) it reflects in a timelier manner the updates that are frequently made to online maps managed by the state road authorities.
- Implement cost recovery options - Develop a suite of practice-ready cost recovery options to compensate for additional infrastructure consumption or to fund infrastructure upgrades.
- Update route assessment tools - Update the PBS Network Classification Guidelines to reflect the more advanced route assessment guidelines used by state road authorities and to include additional considerations specific to local councils. Update the Restricted Access Vehicle Route Assessment Tool (RAVRAT) to reflect the changes.

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[21] Local Government Association of Queensland, Inquiry into National Freight and Supply Chain Priorities Submission (July 2017)

[22] Austroads, Research Report AP-R559-18 Local Road Access for High Productivity Freight Vehicles, February 2018.

RECOMMENDATION 34

Transport and Infrastructure Council agree:

To ensure local government can provide timely advice on OSOM assessment by incorporating by using asset management systems.

a. Introduce a recognised and established asset management framework for local governments to apply throughout their business to ensure consistency and a system for recording important infrastructure data. This will assist in gaining an understanding of their network and assist access decisions. This could be done by NHVR and Institute of Public Works Engineering Australasia (IPWEA) partnering to deliver an education program to implement the International Infrastructure Management Manual (IMM). This provides a baseline on 'what to do' and 'how to do' in terms of applying standards for infrastructure asset management, this includes tools and frameworks that can be easily applied to local governments.

b. Introduce and encourage the adoption of a tool that provides local government guidance in assessing access consents. This could be done by implementing the Australian Road Research Board - Restricted Access Vehicle Route Assessment Tool (RAVRAT). This tool allows for local government to undertake a consistent route assessment process, focused specifically upon the road infrastructure assessment criterion, including OSOM movements.

c. NHVR and state Road Managers to provide guidance on access and resources to local government Road Managers, this could include creating a NHVR team who can be accessed to undertake independent bridge and route assessments consisting of certified structural engineers, in QLD will need to be a Registered Professional Engineer of Queensland (RPEQ).

d. NHVR and state Road Managers to encourage strategic partnerships that develop freight networks and identify pinch points that can be targeted for funding.

e. Introduce technology options like telematics to enable local government to be able to track movements on their network, this should include increased data sharing to demonstrate evidence of compliance,

f. Implement the following recommended priorities from the Inquiry into National Freight and Supply Chain Priorities specifically: Critical Action Area 3 - planning for current and future needs:

   i Promote training and reskilling of employees in the freight industry appropriate to current and future needs, within the context of technological advancement, for example, increasing automation.

   ii Undertake a review to identify any potential gaps in existing infrastructure investment programs to allow funding for smaller, collective packages of investment in freight projects that could lift regional productivity, which may not otherwise be considered for Commonwealth funding.

g. NHVR to replicate the Local Government Association of Queensland (LGAQ) model for funding Heavy Vehicle Access Liaison Officers, to work with Local Government to deliver proactive approaches for OSOM access.

h. NHVR to issue further business rules and guidance material to Road Managers that outlines conditions, access processes etc.

i. NHVR have an existing function in their access team referred to as 'Hypercare,' this should be expanded to include technical assistance to Road Managers in addition to transport operators.

j. NHVR to work with Road Managers to identify pinch points in their network, NHVR to consolidate this information into their Portal and Mapping tools.

RECOMMENDATION 35

NHVR to initiate an education program to work with Road Managers to ensure the Guidelines are used consistently.

RECOMMENDATION 36

The NHVR examine opportunities for staff co-location with State/Territory/LGA/LG Road Manager.

6 LEGISLATION

The Heavy Vehicle National Law (HVNL) was introduced in 2014. The NHVR administers one set of laws for heavy vehicles under the Heavy Vehicle National Law, delivering services under a regulatory framework which also requires every road manager to consent to heavy vehicle access on its roads. There are several changes to the HVNL that will need to be carefully considered that will assist in the improvements to streamline the consenting process.

The HVNL currently mandates that Road Managers need to respond within 28 Days of receipt of application from the NHVR, with requests for information in effect stopping this clock until a response is provided, Roads Managers can request extensions of time up to 6 Months. The Guideline states that all Road Managers should make decisions within a reasonable time to minimise the impact of delays noting that many OSOM movements are routine and common.

RECOMMENDATION 37a

This Review recommends that Section 156 of the HVNL is reviewed to replace the current prescribed timeframe with schedules delivering incremental and consistent permit performance improvements.

6.1 CARRYING MULTIPLE OVERSIZE LARGE INDIVISIBLE ITEMS

A vehicle carrying an oversize large indivisible item should be able to carry additional oversize large indivisible items, if the additional items does not result in the vehicle exceeding a dimension limit that was not already exceeded by the first oversize large indivisible item.

A vehicle carrying an oversize large indivisible item may carry other items provided that the items are contained within the confines of the vehicle, the items that form part of a modular load, that are constructed as a module or are packaged together for transport; and are also carrying other items with an Oversize Large Indivisible Item.

RECOMMENDATION 37b

Transport and Infrastructure Council agree the definition of indivisible is reviewed to increase consistency across jurisdictions, including for multiple loads on a single OSOM movement as long as the prescribed mass and size dimensions are not exceeded.

6.2 DELEGATION

Local Government are the owner and Road Manager of approximately 75% of Australia's road network by length, they are a key component of freight transport and as such an important stakeholder for OSOM movements. Local Government Road Managers assessment for access needs to consider impact on infrastructure safety.

When the HVNL was introduced it formalised Local Government as a Road Manager that was required to provide consent for OSOM movements to be able to access their network. This resulted in an influx of permits application that most Local Governments were not ready to process.

In circumstances where access is not given or there is no reason attached to the decision for not granting access, operators must have a course of action to take under the HVNL for the NHVR to act on behalf of the applicant to assess the application and grant access to the network.

RECOMMENDATION: 37c

Transport and Infrastructure Council agree that Section 661 of the HVNL be reviewed and changed to provide a trigger clause for the NHVR to manage when there is no response from Road Managers for consent and the risk is low.

RECOMMENDATION: 37d

Transport and Infrastructure Council agree Section 158 of the HVNL is reviewed to appropriately recognise third parties and make improvements to streamline the consenting process.

CASE STUDY: HYPERBARIC CHAMBER COMPLEX OSOM MOVEMENT FROM QLD TO TAS (QLD COMPONENT ONLY)

A transport operator was engaged to transport a Hyperbaric Chamber from Wamuran, QLD to Hobart, TAS, a journey of nearly 2,500km. The dimensions of the load were:

- 4.4m Wide
- 28.4m Long
- 5.2m High
- Weighing approximately 144.5 tonnes (total mass)
- The vehicle used was a Prime Mover with a gooseneck platform 8 axles.

The transport operator submitted two applications for the same movements, one to DTMR and one through NHVR for the rest of the journey, this was done as they expected DTMR to turn around their application including Local Governments quicker than if under the NHVR permit. The permit was approved for the QLD component of the trip in 13 days with no issues.

This review recognises that during delegation there should be no difference in approval times no matter which pathway is taken with business rules implemented to guarantee permit delivery times. This should be implemented by the NHVR, including tracking interstate and intrastate time periods with Road Managers and reporting to transport agency CEO's on discrepancies.

7 FUTURE STATE

Understanding what future requirements of what a future system may look like that benefits a wide range of stakeholders is important in planning solutions and implementing recommendations. Developing a preliminary vision of what the ideal future solution looks like is key, focussing on a generic use case of a heavy vehicle on public roads.

There are several Road Agencies and Local Governments that are servicing the OSOM moves within a shorter time frame, between 2 to 5 days and quicker assessment processes for bridges and critical infrastructure. An opportunity exists for the NHVR to identify and highlight these best practices for wider adoption.

Under a 'Chain of Responsibility' approach it is the client's responsibility to ensure that the:

- Journey is conducted safely
  - Speed and route
  - Vehicle size and weight related hazards are managed e.g. by using pilots
  - Load is safe and properly lashed.
- Driver is safe and competent for the task. (Licence, fatigue management)
- Truck is safe and suitable for the task (maintenance and type)
- Infrastructure is not damaged: roads, bridges, over passes, wires, etc.

Note that the permit process addresses of some but not all requirements.

It is reasonable for a stakeholder to expect that proof of all these elements should be provided at journey's end. Under the current trend in technology development this is a plausible and reasonable future expectation. For example, many transport operators already track speeds, routes and the driving behaviours of their drivers. Electronic diaries log driver fatigue compliance and it is reasonable to expect that in the future vehicle maintenance logs will be readily available as machine-readable electronic records.

Note also that while technology may change, the fundamental data related to a safe journey plan and proof of a safe execution of that plan, is unlikely to shift. Therefore, such data and information is future proof. Such data is called 'data infrastructure'[23] to empathize it's fundamental and enduring nature as well as the concept that like physical infrastructure ideally it should be planned for and provided in advance of the need.

Data infrastructure has value to stakeholders that extend well beyond OSOM movements. A properly designed future system for OSOM provides even more value to the nation. Some applications could be:

- The same system can be used to plan, monitor and ensure the safety of all heavy vehicle movements not just OSOM movements.
- Such data is highly valuable to road network designers and planners who struggle to have sufficient quality data to make good evidence-based decisions.
- Innovators can search data to develop tools that better predict the maintenance requirements on road network infrastructure.
- Innovators can analyse the data to better understand the risk factors that affects safety and devise the appropriate countermeasures.

[23] Neil Temperley, The OSOM Challenge, September 2018.

Such a system has such far reaching benefits that it becomes a national asset. This national asset not only brings benefit in solving problems specific to Australia, it can be used as a platform to build new capabilities and new products and services with export markets.[24]

RECOMMENDATION 38

The Transport and Infrastructure Council agree that all relevant policy and regulatory agencies commit to identifying and highlighting best practice, to deliver 48-hour (on average) OSOM turnaround times by end of 2021.

[24] Dr Neil Temperley, September 2018.

8 LIMITATIONS

This Report is provided by WSP Australia Pty Limited (WSP) for Department of Infrastructure, Regional Development and Cities (Client) in response to specific instructions from the Client and in accordance with WSP's proposal dated 26/06/18 and agreement with the Client dated 26/06/18 (Agreement).

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