

NTC Heavy Vehicle Roadworthiness Review

Transport for NSW response

to the NTC's Regulatory Impact Statement (January 2015)

1. Executive Summary

In October 2013, there was a major fatal heavy vehicle crash at Mona Vale. As a consequence, the Minister for Roads and Ports wrote to the National Heavy Vehicle Regulator (NHVR) and the National Transport Commission (NTC) requesting the consideration of a national approach to heavy vehicle maintenance and roadworthiness and a review of the existing National Heavy Vehicle Accreditation Scheme (NHVAS). The NTC and NHVR's success in delivering the Regulatory Impact Statement (RIS) in a timely manner is a testament to the hard work of their respective staff.

NSW currently has the nation's most rigorous approach to ensuring heavy vehicle roadworthiness. All heavy vehicles in NSW (other than those enrolled in NHVAS) are required to be inspected at least annually to ensure their roadworthiness. In addition, Roads and Maritime Services (RMS) has by far the nation's largest and most targeted team of heavy vehicle enforcement officers that currently ensure compliance with the Heavy Vehicle National Law (HVNL) as authorised officers of the NHVR.

The NSW Centre for Road Safety (CRS) conducts a heavy vehicle roadworthiness survey every three years. The results of these surveys consistently demonstrate that heavy vehicles registered in NSW have a higher standard of roadworthiness than those registered in other jurisdictions.

While TfNSW is open to reviewing different roadworthiness processes, the first priority is to ensure that roadworthiness levels among the heavy vehicle fleet are not reduced. Whichever option is applied, there has to be a minimum level of compliance and enforcement assurance for a safe community.

The RIS discusses four options for approaches to roadworthiness, of these Option 4 best fits with the current practice of NSW. However, TfNSW supports a broad general duty on parties in the Chain of Responsibility (CoR) and that this duty include maintenance rather than the specific roadworthiness duty recommended as part of Option 4.

TfNSW strongly supports the proposals in the RIS for a standardised approach to inspection procedures, as well as issuing and clearing defect notices (as given in Option 3 and 4). However, TfNSW does not consider that embedding the standardised approach in law is appropriate. This would significantly minimise regulatory flexibility and responsiveness, especially given the long lead time for amendments to the Heavy Vehicle National Law. Instead, the National Heavy Vehicle Inspection Manual (NHVIM) should be referenced within the HVNL.

The following table outlines how TfNSW preferred elements of the options options presented in the RIS.

	Option 1: status quo	Option 2: non- regulatory package	Option 3: regulatory and quasi-regulatory measures (preferred option)	Option 4: regulatory standardisation
Scheduled inspections	No change.		NHVR would have the power to require scheduled inspections based on determinations of risk.	Scheduled inspections for all heavy vehicles at prescribed intervals
Roadworthiness standards (under NHVIM)	No change.		NHVIM referenced under the HVNL	Roadworthiness standards incorporated into regulation under the HVNL
Chain of responsibility (CoR)		Overarching duty to ensure the safety of transport operations, so far as reasonably practicable, for all parties in the chain of responsibility and executive officers.	Specific duty in vehicle standards business practices that will ensure vehicles are not used when unroadworthy.	A general duty for chain of responsibility parties to ensure vehicles are roadworthy.
Standardised inspection types	No change.	Standardised inspection types: Implemented administratively (as guidance)	Referenced under the HVNL	Prescribed under the HVNL
Criteria for assessing major or minor defects	No change.	Clearer and more precise criteria: Implemented administratively (as guidance)	Referenced under the HVNL	Prescribed under the HVNL
Defect clearance process	No change.	Standardised requirements and procedures: Implemented administratively (as guidance)	Referenced under the HVNL	Prescribed under the HVNL
NHVAS	No change.	Operational NHVAS improvements – for example changing business rules to ensure that the Maintenance Module is a pre-requisite for operators wanting mass	Robust accreditation improvements (operational and regulatory) including NHVR responsibilities and criteria for mandating accreditation (common to options 3 and 4). Changing business	Robust accreditation improvements (operational and regulatory) including NHVR responsibilities and criteria for mandating accreditation (common to options 3 and 4). Changing business
		concessions.	rules to ensure that the Maintenance Module is a pre-requisite for operators wanting mass concessions.	rules to ensure that the Maintenance Module is a pre-requisite for operators wanting mass concessions.
Guidance material	No change.	Harmonised guidance material.		

Further work to improve the quality of this RIS should include:

- An assessment of the benefits of each proposal;
- An identification of the baseline of current roadworthiness in each jurisdiction; and
- Cost-Benefit Analysis to be updated to include scenario analysis for each of the options based on whether or not Western Australia and the Northern Territory participate in the reform.

Without these improvements the cost benefit analysis of each option does not realistically discuss their net impact on the community.

2. Current NSW approach to heavy vehicle roadworthiness

This section provides information on the NSW vehicle fleet and an overview of the registration and inspection processes that are impacted by option 3C. It then outlines how roadworthiness of a heavy vehicle is determined through a safety inspection.

NSW heavy vehicle fleet

In 2014, the NSW heavy vehicles fleet totalled 165,7271 vehicles. There were nearly 13,000 buses and 7,895² heavy vehicles licensed to carry dangerous goods. Twenty four percent (24%) of the fleet had been manufactured over 20 years ago and 36% manufactured over 15 years ago. Twelve percent (12%) of heavy vehicles were under four years old.

At the end of 2014, there were 23,624 NSW registered vehicles enrolled in the National Heavy Vehicles Accreditation Scheme (NHVAS) maintenance module. As these are not subject to inspections prior to renewal, the pool of heavy vehicles eligible for annual inspections in NSW is reduced to 142,463.

Profile of heavy vehicles in NSW in 2014

Vehicles by type		Sub categories of vehicles	
No. of vehicles (Heavy trucks)	91,016	Over 20 years old	40,385
No. of vehicles (Prime movers)	18,797	Over 15 years old	60,473
No. of vehicles (Heavy plants)	4,642	Under 4 years old	20110
No. of vehicles (Heavy Trailers)	38,280	Vehicles carrying dangerous goods	7,895
No. of vehicles (Buses)	12,992	Vehicles in Maintenance module	23,264
No. of vehicles (Total)	165727		

Figure 1 – Heavy vehicles registered in NSW by type and category

NSW registration process

Section 57 of the Road Transport (Vehicle Registration) Regulation (2007) determines the frequency of roadworthiness inspections. All vehicles, excluding light vehicles less than 5 years and vehicles regulated under the *NSW Passenger Transport Act*, must be inspected for registration at least once a year. A safety inspection is conducted in these instances. Vehicles regulated under the *Passenger Transport Act (1990)* are inspected twice a year. Vehicles participating in the NHVAS mass and maintenance modules are exempt from inspections prior to renewing their registration.

Roadworthiness inspections are carried out by either RMS authorised officers under the Heavy Vehicle Inspection Scheme (HVIS) or by third party providers accredited in the Heavy Vehicle Authorised Inspection Scheme (HVAIS).

A risk assessment logic has been built in the Drivers and Vehicles System (DRIVES) to identify low risk vehicles and direct them to the HVAIS for roadworthiness inspections. All high risk vehicles are directed to HVIS.

In determining the risk, the system takes into account the vehicle's age, shape, mass, configuration and customer type, e.g. public passenger and channels a vehicle for the relevant inspection. It is also possible to tag a specific vehicle or group of vehicles and redirect them to HVIS if their risk profile is heightened.

¹ Data obtained from the official RMS registration figures for calendar year 2014 by year of manufacture.

² The Environment Protection Authority (EPA) provided information about the number of licences they issued in 2014 for the transport of dangerous goods.

Currently RMS systems do not identify a vehicle by its load, (e.g. where it is carrying dangerous goods). Thus vehicles which carry dangerous goods are inspected annually in a similar manner to the rest of the fleet. A record of vehicles licensed to carry dangerous goods is maintained by the NSW Environmental Protection Authority. The information is currently shared informally at irregular intervals with the RMS Compliance Operations Branch.

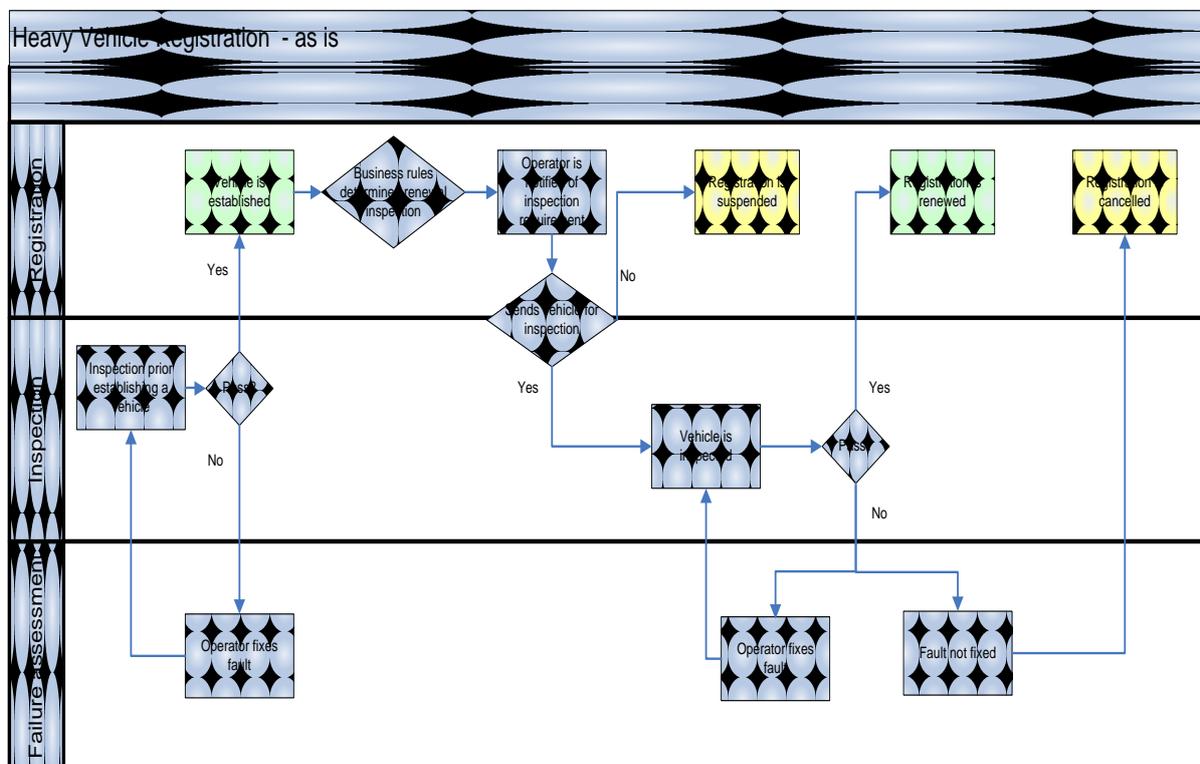


Figure 2 – Overview of current interactions across registration and inspection.

NSW Inspection process

During the period April 2013 to March 2014, 219,344 heavy vehicle inspections were conducted through the HVIS and the HVAIS with 61% of total inspections carried out by the HVAIS. Over seventy percent (73.4%) of all vehicles inspected passed the roadworthiness inspection on first presentation.

Irrespective of the scheme under which the inspection is being conducted, there are similarities in the processing. Prior to periodic registration renewal, heavy vehicle operators will receive a letter confirming the scheme through which an inspection will be conducted. The operator will make a booking over the phone or online and arrange for the vehicle to be inspected at the appointed location and time. Inspections will result in either a pass or a fail. A HVIS inspection may also result in a formal warning or defect notice being issued. Areas of failure and defects must be remedied before a re-inspection can occur.

Heavy Vehicle Inspection Scheme

HVIS is managed within the RMS Compliance Operations Branch. In the period April 2013 – March 2014, 83,668 inspections occurred across 146 Heavy Vehicle Safety Stations (HVSS) staffed by 350 inspectors authorised under the HVNL. Currently RMS inspects all heavy vehicles over 12 tonnes Gross Vehicle Mass (GVM) as well as tow trucks and public passenger vehicles.

The NTC's cost benefits analysis assumed the cost of an inspection to RMS as \$300. From the number of inspections conducted, it is estimated that the current cost of inspections through HVIS to RMS is \$25m in 2013/14. Revenue from inspection fees is projected at \$16m annually with an average fee of \$200³ charged per HVIS roadworthiness inspection.

RMS authorised officers have broad powers to enforce under the HVNL as well as under the *Roads Act* and other NSW legislation. Under the HVNL, RMS authorised officers may issue warnings or defect notices for breaches of roadworthiness. When inspecting a vehicle, authorised officers use the NHVR inspection guidelines for determining safety and a range of industry standards, such as the Australian Design Rules (ADRs) and Australian Standards for design verification. RMS authorised officers complete a 6-month induction training and qualify for a Certificate IV in Government (Road Transport Compliance). On average, a roadworthiness inspection takes an authorised officer between 50 to 60 mins to examine a heavy vehicle.

Heavy Vehicle Authorised Inspection Station

HVAIS are third party inspection examiners accredited by RMS under the Authorised Inspection Scheme to conduct safety, design and identity inspections as well as defect clearance inspections.

There are 3,500 examiners across 970 stations across NSW. During the 12 months covering April 2013 and March 2014, 135,676 inspections were conducted by HVAIS examiners in total. This figure includes roadworthiness inspections as well as inspections to establish a vehicle registration or as part of a change of ownership. Fifty three percent (53%) of the HVAIS inspections are related to the annual roadworthiness inspections needed for the renewal of registration.

The average fee charged by an HVAIS is \$131 per inspection. The revenue accruing to HVAIS across NSW over the 2013/14 period is estimated to be slightly under \$18m for all inspections, including approximately \$9 million for roadworthiness inspections.

HVAIS examiners are also responsible for clearing defects identified by HVIS or road side inspections. A total of 82,483 defect notices⁴ were issued in April 2013 – March 2014 at a maximum of \$69 per clearance. This supplemented the HVAIS revenue by an additional \$5.6m.

HVAIS examiners are licensed after completing relevant training at TAFE and other enrolment requirements. HVAIS examiners follow the Authorised Inspection Scheme Rules based on ADRs and vehicle standards when undertaking a safety, design or identity inspection. Accredited examiners take on average 40 minutes to conduct an inspection of a heavy vehicle. They can only pass or fail a vehicle or clear a defect.

NSW roadworthiness management

A vehicle in NSW is deemed to be roadworthy if it has passed the safety inspections conducted by either HVIS or HVAIS, or if defects identified in the course of those inspections have been checked and cleared.

In the period March 2013-Apr 2014, 161,961 vehicles passed inspection. This represents 73% of the 219,344 vehicles inspected (see Figure 3).

³ The \$200 inspection fee was arrived at by compiling the published annual fees by type of vehicle in the fleet and averaging.

⁴ Refer to the table in Appendix 9.2

HVAIS are only able to fail a vehicle if it is assessed a vehicle is not compliant with safety standards. Authorised officers within HVIS have the powers to issue a formal warning or a defect notice identifying minor or major defects. A defective vehicle must be fixed before registration can proceed. Defects identified within a registration period must be fixed within 28 days for a minor defect or within a specified timeframe for major defects (hours or 1-2 days). The vehicle is then inspected and cleared. In the event the defect is not cleared within the time specified in a defect notice, the vehicle's registration will be suspended.

HVIS inspectors also identify defects through on road enforcement, special operations or HVSS. Appendix 9.2 breaks down the defects issued by severity and enforcement time for the period 1 March 2013 to 30 April 2014.

Inspection type	Total	Pass	Fail	% Failure
HVAIS for establishment	14,118	11,751	2,367	16.3%
HVAIS for renewal	72,575	52,507	20,068	27.7%
HVAIS for change of records	48,983	48,929	54	0.0%
HVIS periodic inspections	83,668	47,774	35,894	42.9%
Total	219,344	160,961	58,383	26.6%

*To avoid multiple counting of failed outcomes, the fail count was arrived at by subtracting the passes from the total count.

Figure 3 Inspection by type and outcome

The majority of unroadworthy vehicles, 95.9%, were identified as a result of periodic inspections conducted by HVAIS and HVIS stations rather than other triggers for inspection.

Inspection at renewal	Total	Pass	Fail	% Failure
HVAIS	72,575	52,507	20,068	
HVIS	83,668	47,774	35,894	
Outcome	156,243	100,281	55,962	
Renewal failure as a % of total HVAIS & HVIS failure				95.9%

Figure 4 – Safety failures identified through inspections for registration renewal

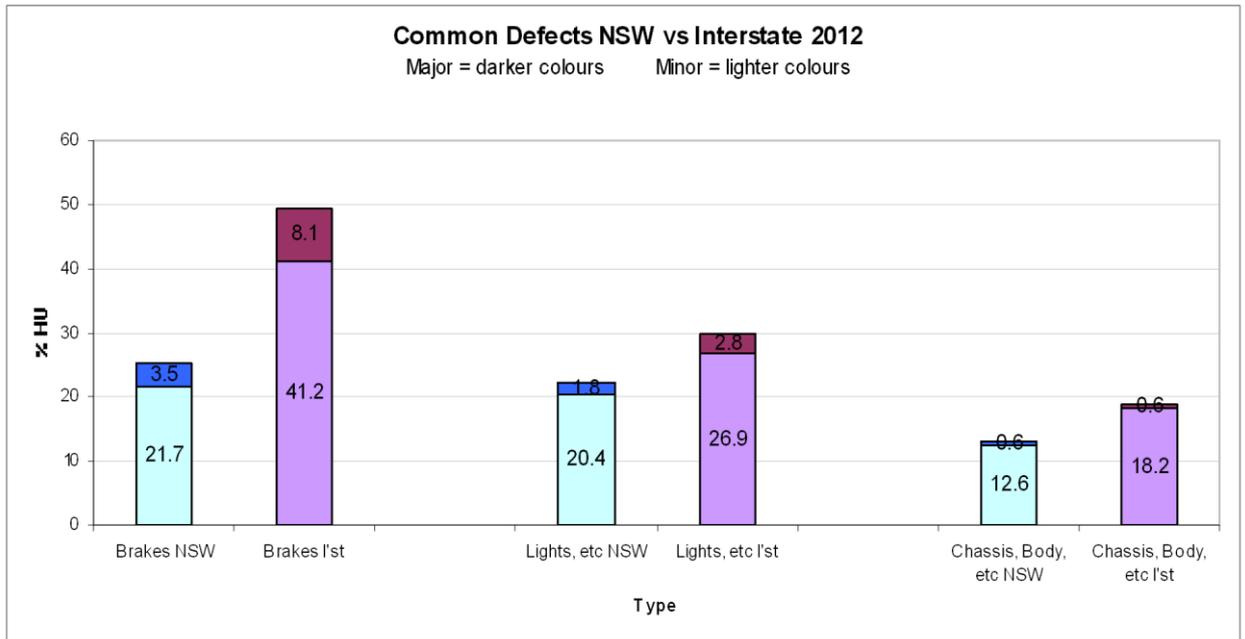
Inspection standards

Examiners operating under both the HVIS and the HVAIS use a common inspection manual when undertaking inspection. The project to implement the current version of the National Heavy Vehicle Inspection Manual (NHVIM) was initially part of the planned roll out of the NHVR, however it was put on hold pending the current review in roadworthiness. It was identified during the requirement gathering that the changes from the AIS rules to the current version of the NHVIM are minor.

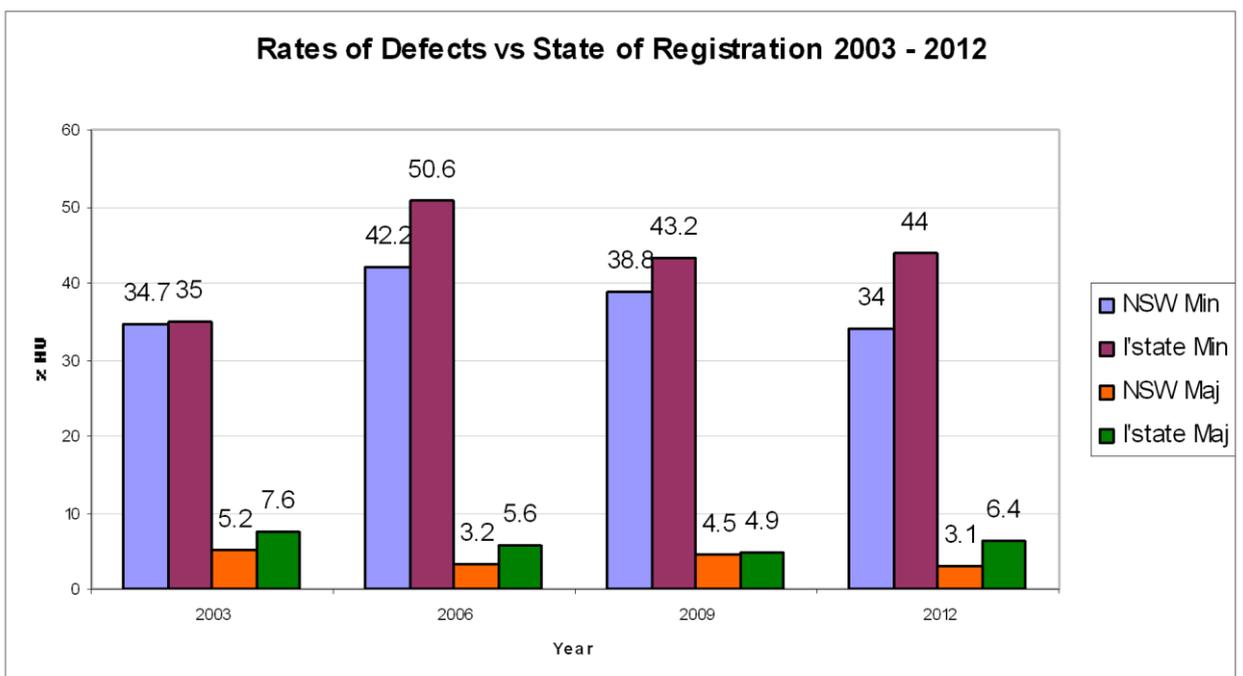
3. Roadworthiness survey data for NSW versus interstate heavy vehicles.

CRS conducts a roadside survey of *randomly selected* heavy vehicles every three years. The data from the 2012 survey of 1645 heavy vehicle hauling units and 1173 trailer units across 35 sites were analysed and found:

- The rates of defects for interstate registered hauling units in 2012 followed previous survey trends of being comparatively higher than NSW figures. In 2012, hauling units registered in NSW were less likely than hauling units registered interstate to have a major defect (3.1% vs 6.4%), and to have any defect overall (37.1% vs 50.4%), see figure below.



Interstate hauling units were more likely to have major and minor vehicle defect for the three most common types of defects (brakes, lights, chassis/body), see figure below.

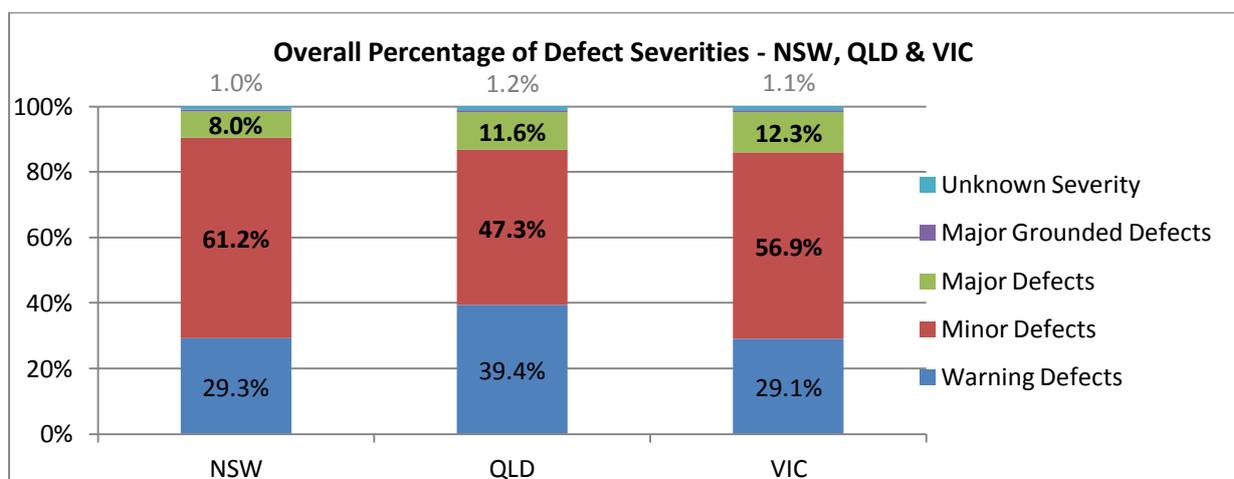


RMS Compliance Data – Defect notices to vehicle unit intercept rates (1 Jan 2011 – 30 Sept 2014).

This analysis is based on intercepts and notices issued by RMS roadside inspectors between 1/01/2011 and 30/09/2014 to heavy vehicles as part of on-road enforcement and HVSS only. It is a *targeted* sample, not random as per the Roadworthiness Survey. A comparison of the mechanical compliance rates of vehicle units by jurisdiction of registration show:

- Over the last 4 years, an average of 12.4% of all heavy vehicles were issued with a defect notice;
- Over the last 4 years, 14.3% of all NSW registered heavy vehicles intercepted were issued with a defect. As a comparison 9.9% of VIC and 7.6% QLD units were issued with a defect; and
- While NSW units were more likely to receive a defect notice, generally there was a greater chance that it would be of a lower defect severity when compared to VIC & QLD heavy vehicles. 61.2% of defects issued to NSW heavy vehicles were minor with 8.0% major. VIC heavy vehicle defects were 56.9% minor with 12.3% major and QLD heavy vehicle defects were 47.3% minor with 11.6% major.

State of registration	Percentage of Defects				
	Warning Defects	Minor Defects	Major Defects	Major Grounded Defects	Unknown Severity
ACT	19.4%	72.8%	7.1%	0.2%	0.5%
NSW	29.3%	61.2%	8.0%	0.5%	1.0%
NT	66.7%	22.8%	8.8%	0.0%	1.8%
QLD	39.4%	47.3%	11.6%	0.6%	1.2%
SA	41.6%	43.0%	13.2%	0.7%	1.5%
TAS	21.7%	61.9%	14.3%	0.8%	1.2%
VIC	29.1%	56.9%	12.3%	0.6%	1.1%
WA	30.0%	55.7%	12.9%	0.4%	1.0%
TOTAL	30.1%	59.3%	9.1%	0.5%	1.0%



Note: Major grounded defects were <1% for all jurisdictions.

A heavy vehicle can be issued with multiple defect notices during an intercept i.e. a major defect notice & a minor defect notice.

4. Context for TfNSW position

Background

TfNSW strongly supports the Roadworthiness Review. Improving the roadworthiness of the nation's heavy vehicle fleet is an essential component of regulatory activity to reduce safety incidents on our roads. TfNSW has provided ongoing support to the project, including a secondee in late 2013 and early 2014 and will continue to support the development of options to improve heavy vehicle roadworthiness which align with key policy objectives.

In October 2013, a fuel tanker crashed on the Northern Beaches of Sydney, resulting in the death of two people and injuries to five others. As part of its response package, and taking into account concerns that the crash was not an isolated incident, NSW asked the NTC to review the nation's heavy vehicle inspection regimes. At the same time, NSW asked the NHVR to review the Maintenance Module of NHVAS. The hybrid project which has produced the RIS to which this paper responds, the Roadworthiness Review, was formed as consequence.

Policy principles

TfNSW's assessment of the RIS is informed by a set of principles which have been established to ensure that there are no unintended adverse consequences resulting from the proposal. TfNSW will lend support to a proposal which:

- Improves roadworthiness outcomes, on average, across participating jurisdictions (as indicated by the number of vehicles inspected);
- Does not diminish roadworthiness outcomes in NSW (as indicated by the number of vehicles inspected);
- Improves the use of available resources (targeted, evidence based, data driven etc.); and
- Provides appropriate legislative responsibilities for all parties in the contracting chain.

The following summary table⁵ shows how each of the options in the RIS is likely to perform against TfNSW's policy principles:

	Option 1	Option 2	Option 3A	Option 3B	Option 3C	Option 3D	Option 3E	Option 4
Improved national roadworthiness	Status quo	Status quo	No	No	Yes	No	No	Yes
Improved NSW roadworthiness	Status quo	Status quo	No	No	Status quo	No	No	Status quo
More efficient use of resources	Status quo	Status quo	Yes	Yes	Yes	Yes	Yes	Yes
Appropriate legislative powers	Status quo	Status quo	No	No	No	No	No	No

⁵ The first two rows of the table are based upon the raw number of vehicles which are expected to be inspected under the relevant option. The third row is based upon the level of harmonisation which is proposed. The fourth on whether a general duty is proposed. The table excludes the impact of proposals on Western Australia. It should be noted that Western Australia does not currently apply the Heavy Vehicle National Law in its jurisdiction, nor is it a signatory to the Intergovernmental Agreement on Heavy Vehicle Regulatory Reform. While it is ideal that Western Australia should participate in the reform, the inclusion of modelling figures including Western Australia have a significant impact on the total impact for several of the options. Referring to Table 8 on page 60 of the RIS, Option 3B would result in 47,647 fewer inspections nationally if Western Australia were excluded. In a similar vein, the number of additional inspections, and consequently the additional cost, for Option 3C is almost halved once Western Australia is taken out of the calculation.

5. Chain of Responsibility

Regardless of which of the options is chosen, TfNSW is of the view that the inclusion of a broad, positive duty to promote vehicle safety as a general duty under the HVNL is the best mechanism for managing CoR under the new scheme.

While public safety is an explicit objective of the HVNL, individual/specific duties do not adequately focus on the core factors that promote safety in the heavy vehicle industry and they also make enforcement of the law more difficult.

As previously stated by TfNSW through the CoR taskforce and in response to the recent CoR issues paper, the introduction of general duties would better promote safety by encouraging cultural change within transport companies and innovative business practices. Implementation of specific duties can encourage a “tick the box” attitude to compliance which may inadvertently direct the efforts of parties in the chain towards avoiding detection, rather than improving safety. Instead, a general duties approach encourages parties in the chain to assess each situation uniquely and take reasonable steps to ensure safety.

A general duties approach would also give the NHVR and the courts the flexibility to deal with offences in a way that more appropriately reflects the seriousness of the offending behaviour. For example, systematic maintenance contraventions could be charged as a single offence with multiple events forming the particulars of the offending conduct, rather than as a series of individual offences which may be considered undesirable before the court. A general duties approach would also include a significantly higher penalty than we currently see against offences in the HVNL.

TfNSW considers that the introduction of a broad positive duty for road transport operations would make the addition of a specific duty, such as a duty regarding vehicle standards, unnecessary. The general duty for road transport operations would include, but not be limited to, the specific performance standards set out in the Regulations. These prescriptive requirements currently include: mass, dimension, loading, speed, fatigue and vehicle standards. Further standards could be added in the future. Under this approach, maintenance would be one aspect of an inclusive general duty.

6. Analysis of options

Summary of conclusions

Of the four options being proposed by the NTC, Option 4 is the most applicable solution for TfNSW, noting that the inspection framework proposed in this option closely matches arrangements already in place within NSW. Additionally, Option 4 would represent an opportunity for improvement through the application of a general duty for parties in the contracting chain. Importantly, Option 4 is the only option which includes standardised annual inspections for all heavy vehicles, a regime which has proven to be effective in NSW.

A limitation of Option 4 is that it suggests a chapter specific general duty instead of a broader general duty covering the entirety of the HVNL. Arguments about a broad general duty to be applied to the entirety of the HVNL are being pursued through the separate NTC CoR Review, however it should be noted that a TfNSW prefers the broader, non-chapter specific approach.

With the proven success of annual inspections in 'Option 4' noted, TfNSW acknowledges that other jurisdictions may not have the resources or experience in place to implement an annual inspection requirement for all heavy vehicles.

As previously noted, TfNSW supports a general duty approach across the whole HVNL and under these circumstances vehicle standards specific provisions (as anticipated in Option 4 and requested for Option 3) would be unnecessary. Under a broad approach, a court would be able to consider a vehicle standards related breach as one aspect of a larger offence.

Option 1 – Maintaining the status quo

Option 1 retains the current status of each jurisdiction participating in the NHVR reform and therefore reflects the continuation of different practices for heavy vehicle registration, inspection and defect. For TfNSW, this implies maintaining roadworthiness inspections as part of registration renewal.

While weaker, non-legislative programs may be implemented as part of this option, TfNSW considers that opportunities to enhance safety and better distribute regulatory resources far outweigh the risks avoided through the retention of the status quo. TfNSW would not support this option.

Option 2 - Non-regulatory package

Option 2 involves the implementation of "voluntary remedies" that would entice operators to improve the roadworthiness of their heavy vehicles. Under this option there would be no inspection required prior to registration renewal.

This option presents a significant challenge to TfNSW where the annual inspection is highly regulated and tightly integrated to the registration of a vehicle. Customer surveys conducted by RMS indicate a great deal of community support for yearly heavy vehicle inspections amongst the NSW community and it has been consistently demonstrated that the existing annual inspection regime results in better vehicle maintenance outcomes in NSW when compared to other jurisdictions.

For the above reasons TfNSW would not be supportive of the non-regulatory framework being proposed in Option 2.

Impact on NSW business operations

Under Option 2, it would be possible for RMS to reassign the authorised officers away from the HVIS where they conduct periodic roadworthiness inspections to roadside enforcement. This would be appropriate as roadside enforcement would be the only way defective vehicles would be identified.

The HVIS infrastructure which is currently under lease by RMS would be surrendered resulting in savings to RMS of \$2.8m⁶. However, as operators cover the cost of inspections a year in advance at the time of the registration renewal, the savings may be offset several times over by fee refunds of approximately \$16.7m⁷ if annual inspections were to be removed before a full year's cycle could be complete.

This option would also have downstream effects on third party businesses. For example, the NSW Heavy Vehicle Authorised Inspection Scheme (HVAIS) would experience a substantial decrease in revenue as they would only undertake inspections for vehicles being established or for instances of change of records. It is projected that HVAIS inspection revenue will fall from \$17.7m to \$8.2m.

In addition, the HVAIS would experience loss of business from defect clearance. Approximately 50% of all defects in NSW during March 2013 and April 2014 were detected at HVIS roadworthiness inspections. Should HVIS roadworthiness inspections not continue, that proportion of 50% of defects would not be detected and HVAIS operators would forgo approximately \$2.5 million for the clearance of these defects.

These impacts mean that consideration should be given to the development of a structural adjustment package for industry and a longer transition period to accompany Option 2. It is estimated that 970 inspection stations would be impacted to varying degrees as inspection figures vary across the state.

NSW system impacts

The RMS DRIVES system currently captures the business rules for registration and roadworthiness for both light and heavy vehicles. To deliver Option 2, it is proposed to identify and "turn off" functionality relating to inspections of heavy vehicles. This approach represents a moderate impact it is estimated that would take 5-8 months with a \$900K maximum spend.

Costs

TfNSW has identified that significant effort would be required to analyse the legal impact of removing periodic roadworthiness inspections. RMS estimates that procuring legal advice to identify and redraft necessary legislation would cost upwards of \$50,000.

Option 3: Regulatory and quasi-regulatory measures

The RIS considers a number of variants for Option 3. These sub-options are:

- 3A – Scheduled inspections of heavy vehicles over 20 year of age only;
- 3B - Scheduled inspections of heavy vehicles over 15 year of age only;

⁶ In the 2013-14 budget, approximately \$3m were allocated for the operations of the inspection stations.

⁷ This sum is calculated from the number of vehicles attending HVIS multiplied by the \$200 average inspection fee.

- 3C—Annual inspections with some exemptions in NSW, QLD and NT and inspections of dangerous goods vehicles over 20 year of age in other states;
- 3D – Scheduled inspections of dangerous good vehicles only; and
- 3E – Scheduled inspections of dangerous good vehicles and those with poor compliance records.

TfNSW considers that Option 3C is the preferred sub-option. Option 3C would allow TfNSW to maintain its existing very similar annual inspection scheme while allowing other jurisdictions to pick up additional inspections as they developed the regulatory systems required to implement them. Notably, vehicles under 4 years of age would only be inspected every two years.

The risk-based approach proposed within Option 3C is worthy of further development as a means of directing regulatory resources where they can have the maximum impact on outcomes. It may be of benefit to clearly articulate different models in further detail so that they can be better considered by jurisdictions.

Before unqualified support is given to this option, TfNSW would require further detail regarding the intention of all participating jurisdictions in relation to the uptake of additional inspection requirements. It is assumed that implementation of Option 3C would require the change of ownership inspection requirements in some jurisdictions to be modified and TfNSW would require clarification of the intentions of those jurisdictions when making these changes.

If a more comprehensive risk based approach is to be implemented, TfNSW would recommend the following criteria as potentially measurable indicators of compliance risk:

- Age – figures can be justified based on the NSW Roadworthiness Survey which is undertaken by the NSW Centre for Road Safety (CRS) (2009 – update with 2012 figures), which has generally found that newer vehicles (vehicles ages 2-4 years) had a major defect rate of 3.1%, this figure increased with age and older vehicles (10-13 years) had a major defect rate of 4.4%. It should be noted that vehicle age is considered to be a relatively blunt indicator of roadworthiness, as some well-maintained vehicles that are used less frequently will be more roadworthy than younger vehicles that are used for longer, more frequent trips. However, age is still a factor which should be considered.
- Type of load – can be justified for dangerous goods and other kinds of high-risk loads. It should be noted that RMS does not currently store data relating to load within the DRIVES system and that a method for managing this criteria would need to be developed.
- Compliance history – could be based on on-road enforcement results and collected compliance data. This may be hampered by jurisdictions which have not conducted extensive on-road enforcement and which have not collected sufficient data.

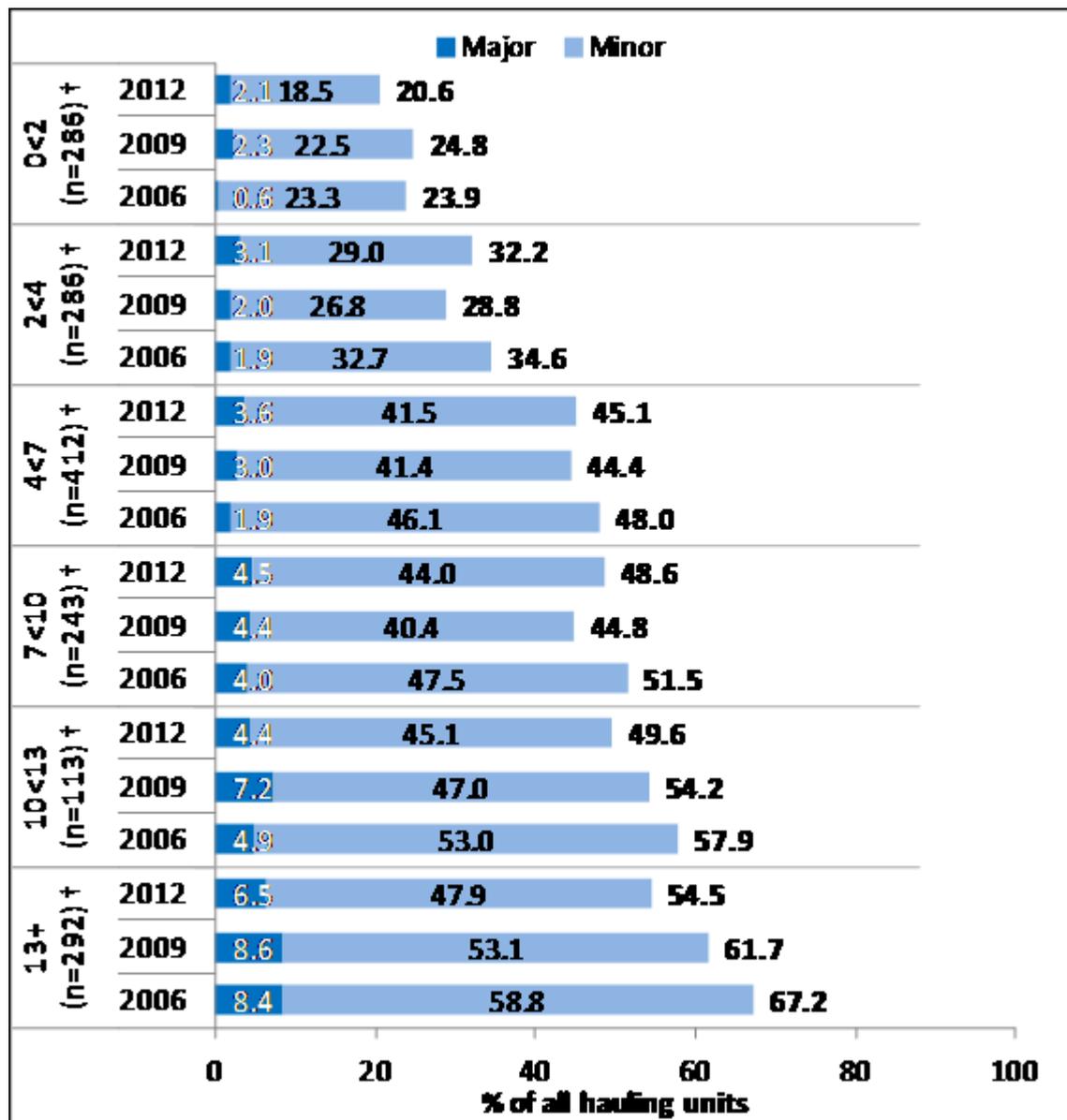


Table 4 – Vehicle Age vs Defects⁸

If a risk-based approach is developed, then the interplay with compliance with the other aspects of the HVNL will need to be considered when developing the risk framework. For example, if an operator is found not to comply with fatigue requirements, then vehicle maintenance may also be an issue and that may place an operator into a higher risk category.

Chain of Responsibility

Under the options listed in the RIS, the NTC is recommending that all sub-options of Option 3 be supported by a specific duties model for CoR, to be implemented under the HVNL.

TfNSW is strongly of the view that Option 3, and particularly Option 3C, would be better supported by the general duties approach to CoR being proposed to accompany the 'regulatory

⁸ NSW CRS Heavy Vehicle Roadworthiness Survey 2012/ 2009/ 2006.

standardisation' solution proposed as Option 4. More information on the TfNSW position regarding CoR can be found in Section 5 of this paper.

Impact on NSW business operations

The impact to inspections under Options 3A, 3B and 3D would be similar to Option 2 as low numbers of inspections are forecasted. Moreover, the vehicles targeted under those options would be channelled to the HVIS as they are deemed high risk. Under Option 3C, the number of inspections being undertaken in NSW would continue at a level similar to the status quo and could continue to be shared across existing HVAIS and HVIS resources.

Currently, business rules based on shape, Gross Vehicle Mass (GVM), seating capacity (for buses), usage (private or commercial), number of axles, nominated configuration code, vehicle age, and customer type (e.g. buses) identify heavy vehicles at risk in DRIVES. In the model (Appendix 9.1), it has been assumed that similar criteria would prevail under Option 3E resulting in a fleet of vehicles at risk totalling 69,888. Usage of these criteria to determine risk factors would minimise the necessary changes to NSW systems.

If mandatory enrolment in the NHVAS maintenance module was implemented for operators accredited under the mass module, there would be a minor impact on the processing of NHVAS enrolment in NSW. It can be assumed from the numbers in the table below that data entry and related processing would increase. There is currently only 1 full time employee (\$50k at current market rate) assigned to enter data this data in RMS systems and this FTE will not be able to absorb the projected increase in maintenance membership.

State Operators	Mass	Maintenance	BFM	AFM	Total
NSW	1102	712	707	8	2529

NSW Regulatory impact

All sub options, 3A to 3E, would require NSW legislation to be amended to do away with periodic inspections and the existing links between inspection and registration. It is estimated that securing legal expertise to conduct the review and put in place a revised regulatory framework would cost TfNSW upwards of \$50,000.⁹ Even Option 3C would require amendments to the Road Transport (Vehicle Registration) Regulation to schedule the inspections of vehicles under 4 years old every 2 years.

Changes to Road Transport (Vehicle Registration) Regulation would also be required to stipulate that vehicles carrying dangerous goods undertake twice yearly inspections. This will be relevant for Options 3C-3E.

NSW systems impact

The introduction of age as a criterion for assessing the need for inspection in Options 3A and 3B could be implemented in NSW by switching off business rules pertaining to current periodic inspections and introducing new rules determined by age of the vehicle. These system changes have been estimated by RMS to cost an estimated \$1 - \$2m.

⁹ Cost calculated for one resource at \$1,500 per day, part-time over 4 months.

Options 3C to 3E would require systems to be modified so that they record information pertaining to the relevant risk criteria, including the identification of vehicles carrying dangerous goods. RMS estimates that this core application would cost \$2.5 - \$5m but could be built and managed nationally for cost efficiencies across participating jurisdictions. Jurisdictions would build interfaces between the core application and their respective systems. For RMS these interfaces have been estimated at the following amounts:

- Option 3C \$2-4m
- Option 3D \$1.5 - \$3m
- Option 3E \$2-4m.

Option 4: Regulatory Standardisation

Option 4 would represent all participating jurisdictions moving to annual inspections and aligning with the existing NSW practice. As such it would be possible for RMS to maintain the status quo where inspections, regulations and systems are concerned.

Within NSW there would be no major impact to regulations, systems or business operations or road safety if it was determined that Option 4 would be implemented nationally.

This option has the benefit of introducing across all participating jurisdictions an objective criterion for conducting heavy vehicle inspections. It also allows an inspection scheme to be implemented which has been tested and proven successful within NSW.

Additionally, Option 4 is the only option being presented which the NTC recommends be supported by a general duties approach to CoR. This approach is strongly supported by TfNSW and would be supported for inclusion in any of the four options.

Impact on NSW business operations

Option 4 would allow NSW to retain its existing systems as long as the registration of the vehicle continued to be directly linked to the requirement that an annual inspection be undertaken.

7. Approach to cost and benefit analysis

TfNSW supports the RIS's stated objective of establishing a national heavy vehicle roadworthiness system that has systemic integrity and supports a rigorous risk-based approach to assuring the roadworthiness of heavy vehicles in Australia.

Developing a proposal which can deliver this system requires a rigorous regulation impact assessment of all the feasible policy options available to address the identified problem. According to the COAG Best Practice Regulation guidelines decision makers should adopt the option which provides the greatest net benefit to the community¹⁰. Decisions about whether regulatory action is in the public interest should be informed by an assessment of the effectiveness of the proposed action in meeting the identified objective, and the costs and benefits of the proposed action for the community as a whole.

The RIS makes a fair assessment of the likely cost implications of the various options. However, to ensure that decision making is based upon 'the greatest net benefit to the community', the RIS would benefit from improved efforts to quantify the following benefits and costs:

- The current levels of roadworthiness;
- Regulatory costs to government;
- Benefits to be derived from each of the proposed options; and
- Scenario analysis to account for the current non-participation of Western Australia and the Northern Territory from the national heavy vehicle regulatory system.

Current state of roadworthiness

The COAG Best Practice Regulation Guidelines state that:

The RIS should clearly identify the fundamental problem(s) that need to be addressed. This part of the analysis must:

- *present evidence on the magnitude (scale and scope) of the problem;*
- *document relevant existing regulation at all levels of government, and demonstrate that it is not adequately addressing the problem;*
- *if the problem involves risk, identify the relevant risks and estimate the probability of an adverse outcome, including where no new or amended regulations are made and where government action would reduce the risk; and*
- *present a clear case for considering that additional government action may be warranted, taking account of existing regulation and any risk issues.*

TfNSW is concerned that this RIS has not sufficiently addressed this key step under the COAG Guidelines. The level of roadworthiness of the heavy vehicle fleet nationally is not clearly known and the level of major defects in each jurisdiction as a baseline has not been determined.

In NSW, large scale surveys of roadworthiness of heavy vehicles have been conducted over many years, of which, the last seven surveys have been conducted in 1992, 1995, 1998, 2003, 2006, 2009 and 2012. The aim of these surveys is to collect information from a subset of the population in a controlled manner that then allows, through statistical and mathematical theory, inferences to be made about the full population with a known degree of accuracy.

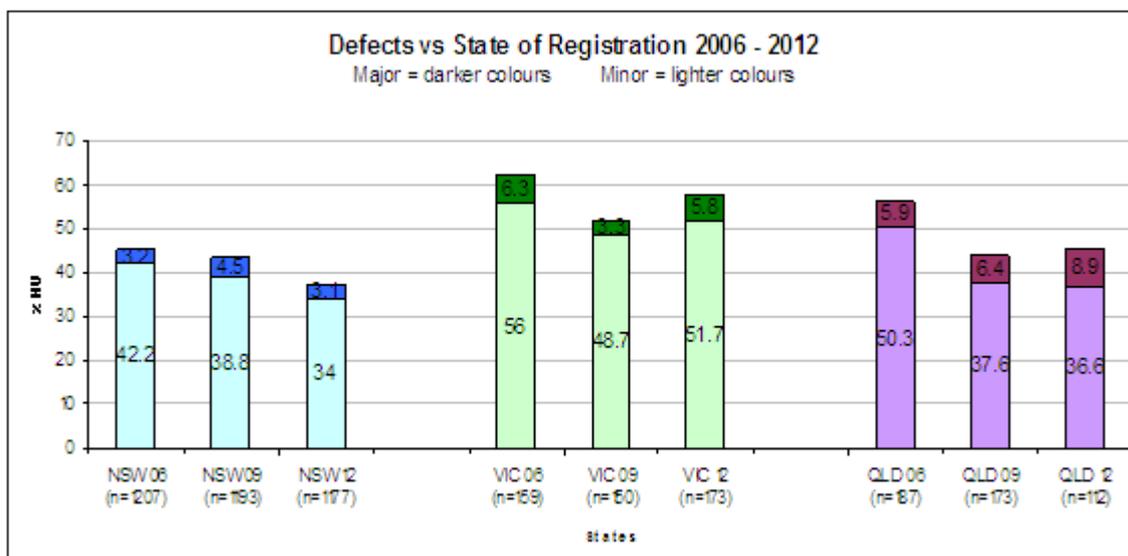
¹⁰ https://www.coag.gov.au/sites/default/files/coag_documents/COAG_best_practice_guide_2007.pdf, p. 55

The methodology of these surveys has been uniquely designed to provide a true representation of the roadworthiness of the heavy vehicle fleet operating in NSW. Important aspects of the survey such as the severity of the defects detected, sample sizes, geographic regions, vehicle categories and vehicle selection method have been pre determined and have been followed for many decades. This is a key difference to normal enforcement operations where higher risk heavy vehicles are targeted for on road inspections.

In terms of the severity of defects the level of major defects is an important indicator of the mechanical condition of the heavy vehicle fleet. A major defect is where the nature of the defect is severe enough that the vehicle would constitute an imminent safety risk. For example, this could be poorly maintained brakes that increase the stopping distance required and poses a significant safety risk or equally a fault in a steering component that renders the drivers' ability to safely control the vehicle.

The surveys are useful in revealing a true snapshot of the roadworthiness, the level of major defects, of heavy vehicles operating in NSW, and continuing to record statistical trends for comparisons. The chart below shows the following:

- Of the three most populous states of Australia, only NSW registered hauling units had improved their defect rates since 2006; and
- Both Victorian and Queensland registered hauling units operating in NSW were more likely to have a major defect in 2012 than in 2009.



The NSW Roadworthiness Surveys have not attempted to quantify the level of roadworthiness of heavy vehicles operating in other jurisdictions. The results of these surveys have to be treated cautiously for vehicles registered in other jurisdictions, as only a subset of interstate registered vehicles travel through NSW. Unlike the assumption made in the Frontier Economic report on page 41 that the roadworthiness level is nationally consistent, these results cannot be extrapolated nationally because of the differences in heavy vehicle enforcement programs across the jurisdictions. It is also not clear what level of roadworthiness is acceptable on a national level to ensure that the safety of the community is upheld.

Regulatory costs to government

The RIS considers the “related issue” (p. 21) of compliance and enforcement. It considers this issue as part of the RIS because:

to assess the reform impacts (costs and benefits of in-scope roadworthiness reforms), it is necessary to assess how these in-scope changes would impact on the roadworthiness-related operations of the NHVR, police and other regulators.

Therefore, to ensure that the national roadworthiness reforms are robust and effective, compliance and enforcement resourcing requirements for each option in the RIS need to be taken into consideration. For example, in Chapter 3 the paper states that a less reactive risk-based approach is needed to have better targeted enforcement, which would include profile information on operator’s financial status and compliance history. This data is already collected and analysed in some jurisdictions, such as NSW, but the extent of some other jurisdictions current practice in this area is likely not to support a fully fledged risk based approach. RMS has estimated the cost of developing a national application to support this approach at \$2.5-5 million.

In the section of this paper addressing each option, an analysis of each option’s impact upon RMS’s operations is provided. This information could be used as a starting point for the collection of similar information from other jurisdictions.

Benefits

The objectives of periodic inspection programs are primarily to improve road safety. That is, to reduce the number of vehicle crashes through the reduction of the number of defective vehicles in the fleet, and through the improved mechanical condition of the vehicle fleet. To determine this it is important to understand if:

1. Periodic inspections lead to an improved condition of the fleet, and
2. Periodic inspections are associated with reduced crashes.

Addressing the first point, roadworthiness surveys conducted since the 1990s have shown NSW registered vehicles which are subject to periodic inspections have a lower rate of defects compared to interstate registered heavy vehicles. That is, periodic inspections improve the condition of the fleet. The 2012 Roadworthiness Survey also showed that public passenger vehicles, which require two inspections as a condition for annual registration have a much lower rate of defects compared to the rest of the existing fleet. That is, the frequency of periodic inspections improves the condition of the fleet.

The 2012 Roadworthiness Survey also showed that vehicles subject to periodic inspections have a lower rate of major and minor defect compared to vehicles operating under the NHVAS. This variation may be greater than the figures presented in the roadworthiness survey, given the assumption that interstate operators tend to send their newer and better maintained vehicles into NSW.

In answer to the second point, the assumptions which underpin periodic inspection schemes are complex and are rarely recognised and subject to scrutiny. However, the Canadian study referred to in the Frontier Economics paper revealed the following:

- Police reports underestimate the role that mechanical defects play and the actual percentage is greater than the claimed 3 to 5 percent of crashes;
- The true value is approximately 13 percent of crashes involving heavy vehicles result from non-complying mechanical components from those vehicles;
- The annual periodic inspection seems to prevent crashes caused by mechanical defects for a subsequent period of 2 to 3 months;
- Heavy vehicles affected by major non-complying components have a propensity to be involved in crashes that is five times higher than that of complying vehicles; and
- Periodic inspections have an important role to play in ensuring vehicles; particularly those working in the highly competitive section of the industry, and vehicles owned and operated by individuals, remain safe. It is unlikely to expect that the operators of those vehicles will adopt a safety management approach.

Unfortunately, the cost benefit analysis, by its own recognition, ‘primarily focuses on the costs associated with the implementation of the options’¹¹. It is recognised that it is challenging to apportion benefits with respect to the options presented. However, it is TfNSW’s opinion that the cost benefit analysis does not meet one of its fundamental objectives: the identification of benefits arising from the proposals. As presented, the financial impacts of each of the options are the result of a cost analysis. Presenting only the costs for each option is not consistent with good practice, nor does it assist decision makers in adopting, in line with COAG guidelines, proposals which have the greatest net benefit to the community.

The analysis does not account for cost savings of properly maintaining the vehicle compared with costs of ongoing repairs to poorly maintained vehicles. Data from the 2009 NSW Roadworthiness Survey indicates that vehicles registered in NSW are, on average, more roadworthy and older than vehicles registered in other jurisdictions. If those two measurements are causal, there is more productivity derived from the heavy vehicle asset as a consequence of good maintenance. The following table compares the differences between the samples of NSW and non-NSW registered vehicles:

	Registered in NSW	Registered outside NSW
Rate of major defects	4.5%	4.9%
Rate of any defects	43.3%	48.1%
Rate of brake defects	3.2%	4.3%

Surveyed freight vehicles registered outside NSW were, on average, 1.7 years older than those registered in NSW. Yet their rate of defects was lower, as outlined in the table above. This demonstrates a significant productivity benefit for industry, with vehicles running safely for a longer period of time. This could be attributed to the necessity for regular maintenance and repairs in order to be successful in complying with annual inspection requirements. It is further assumed that the higher levels of regulatory enforcement conducted within NSW force interstate operators to send newer and better maintained vehicles into NSW, and that the actual variance in defect rates between NSW and interstate registered vehicles may be greater than indicated above.

Some crashes are due to the catastrophic failure of components such as tyre blowouts and driveline failures. More common are defects that reduce the performance of the vehicle and hence the

¹¹ Frontier Economics p. vi

inability to take evasive action to avoid a crash. If a crash is unavoidable, reduced performance can increase the severity of the crash. For example, poorly adjusted brakes can limit the ability of the vehicle to stop in sufficient time in an emergency. Therefore, the benefits of avoiding crashes or reducing crash severity need to be considered in the RIS.

A number of issues also arise when trying to estimate the contribution of defects to heavy vehicle crashes. When investigating crashes it is often very difficult to determine whether a mechanical defect contributed to the crash and to what extent. Defects found during a crash investigation may have been present before the crash or as a result of the crash. However, where in-depth crash studies have investigated vehicle factors in the crash causal chain, the more detailed the study and greater the level of expertise of the investigators, the greater the proportion of crashes identified where vehicle factors have played a role. Generally, the safety benefits of reduced defects need further development in the RIS (6.2.4.p.70, and Frontier Economics).

Additionally, there are positive externalities as a consequence of the reduced rate of emissions from well maintained heavy vehicles. An attempt to quantify these benefits may better inform a future version of this RIS.

Costs

There are two key issues with the manner in which costs are calculated in the RIS: the calculation of the cost of an inspection; and the inclusion of non-participating jurisdictions in the cost benefit analysis.

The report uses the figure of \$2,194 as the base cost to an operator for a heavy vehicle inspection. This amount is considered significantly high considering a roadworthiness inspection, of 50-60 minutes, would only take the vehicle, including travel time, off the road for a quarter of a day and possibly half a day once scheduling is included. It is unlikely to be representative given that the estimated opportunity cost of a roadworthiness inspection has been derived from responses received from 90 operators only. The Safe Rates website's *Truck Operating Cost Calculator*¹² estimates that the daily costs of running a B-double are approximately \$2,300, including a profit margin and all financing costs. Using that figure as a basis for the calculation, the figure used in the RIS looks like a significant overestimate.

The figure of \$2,194 is also called into question by other estimates used in the paper. For example, on page 32, it is suggested that a B-double inspection costs \$656. However, a B-double consists of three vehicles; a hauling unit and two trailers on average this equates to \$218 per vehicle unit.

Comparing the opportunity cost of inspections across borders is a fraught process. For example, the VicRoads inspection requirement is a very comprehensive and timely inspection representing a significant opportunity costs. The survey results have not quantified the different jurisdictional approaches and their impact.

Inclusion of non-participating jurisdictions

The cost benefit analysis for each of the options includes the costs and benefits for Western Australia and the Northern Territory, jurisdictions which do not currently apply the Heavy Vehicle National Law. For several of the options, the inclusion of these jurisdictions has a significant impact

¹² <http://www.saferates.com.au/Calculators/TruckOperatingCostCalculator/tabid/535/Default.aspx>

upon the national net change in number of vehicle inspections. A more rigorous approach would be to include scenario analyses to take into account circumstances in which Western Australia and/or the Northern Territory participate in the reform.

For example, the following table demonstrates the impact of including Western Australia and the Northern Territory on the national net change in the number of vehicle inspections for Options 3:

	Net increase/(decrease) with WA and NT	Net increase/(decrease) without WA and NT	Change without WA and NT
Option 3A	-64,522	-29,654-	+34,868
Option 3B	+4,953	-43,982	-48,935
Option 3C	+91,598	+51,453	-40,145
Option 3D	-242,220	-236,860	+5,360
Option 3E	-222,072	-219,278	+2,794

As demonstrated above, there is a significant difference in the national net change in number of heavy vehicle inspections depending on whether or not Western Australia and the Northern Territory are included in the calculations. The variation is of the greatest significance for Option 3A, Option 3B and Options 3C. Using the RIS figure of \$2,194 cost for each scheduled inspection, Option 3C would be \$88 million more attractive in the scenario which does not include Western Australia or the Northern Territory. A difference of that amount should certainly be accounted for in a RIS of this significance.

8. Detailed comments on the RIS

Heavy Vehicle Roadworthiness Program Consultation Regulatory Impact Statement January 2015	
Reference	TfNSW comments
p. 13 – 2.1 The existing regulatory framework third dot point – “the current framework is reactive ...”	<p>The analysis does not clearly separate on-road enforcement from annual inspections.</p> <p>The preference is to issue a defect notice and require its certification rather than issue a fine.</p>
p. 16 “While the HVNL, regulators and police have demonstrated some capability in this type of responsiveness, there is scope for increasing it. The NTC has assessed that this is a symptom of a compliance and enforcement approach associated with insufficient access to compliance data and information, or insufficient capacity to exploit such data, in a manner generating a more responsive approach.”	<p>This assessment needs to be verified with evidence to support claims about the current compliance framework and to be clear on which jurisdictions or current systems this applies to.</p>
p. 53. “It is not possible to differentiate between the benefits delivered by accreditation versus an inspection system in terms of the attributable impact they have on safety risks relative to the baseline.”	<p>The data from the NHVAS suggests that this is not the case, and seems to contradict the recognition that this scheme was not working well. The NSW Roadworthiness Survey data also supports the argument that an inspection system can lead to safer outcomes (comparison of defect rates). However, it is accepted that an accreditation scheme can function well – but the regulator still requires a level of assurance through a robust audit regime.</p>
Appendix B – Economic assessment of options for the ensuring compliance with heavy vehicle roadworthiness standards.	
Reference	TfNSW comments
p. 5 – 2.1 Costs associated with lack of roadworthiness	<p>The basis of the assertion that “International studies have estimated that between 1-5% of fatal crashes involve a defective heavy vehicle.” is questioned. The 1% value should be clarified or contextualised by indicating it is based on a specific type of crash – fatal crashes resulting from a loss of control type manoeuvre. In fact footnote 39 on p. 42 states “This study only considers crashes associated with loss of control type manoeuvre and so is likely to be an underestimate.”</p> <p>This only represents a small subset of the full array of crash movements. This figure should also not be used to determine the lower boundary. (see later comments below)</p>

p.36 - 4.4 Benefits from improved targeting of on-road/random inspections	The example used on this page is based on a NSW survey, during this survey the majority of inspections were conducted on vehicles that were subject to periodic inspections and is not representative of the national roadworthiness level. The 2012 survey, showed the following major defect levels: NSW 3.1% QLD 8.9%, VIC 5.8 %, SA 11.1% and ACT 10.0%, placing most of the other jurisdiction in or near the high defect –risk category.
p. 42 – Lower bound	As previously outlined the use of the US Federal Motor Carrier Safety Administration report is used inappropriately as it only considered one type of manoeuvre and one type of crash severity. Research by Elvik ¹³ from Norway suggests 5 to 10 % crash rate elimination by inspections. The central estimate for the lower bound is more appropriate at 5.5%.
p.45 – 4.6.3 The costs associated with heavy vehicle breakdowns	It is unclear if clean up costs are considered in the cost of breakdowns.
p. 47 - 4.6.4 Summary	Costs of crashes and break downs (lower and upper) should be recalculated based on comments on page 42 (above). Research by Elvik from Norway suggests 5 to 10 % crash rate elimination by inspections.
p.49 – <i>Inspection vs. Accreditation</i> and p. 48 - <i>Increase in the number of scheduled inspections</i>	The paper indicates “There is limited evidence concerning the relative effectiveness of these approaches (in terms of improving road worthiness).” (p.49) [inspection vs accreditation]. This assessment is questioned based on the evidence outlined immediately prior which indicates “There is evidence to suggest that heavy vehicles subjected to scheduled inspections have fewer defects...” (p. 48) These findings are not just limited to the last NSW roadworthiness survey conducted in 2012, but the surveys conducted in 2003, 2006 and 2009. Vehicles subjected to more frequent inspections had fewer defects through all these surveys.
p. 50 last dot point under <i>Inspection vs. accreditation</i> heading	Discussion of limitations to the effectiveness of inspections should also consider that Work health and Safety requirements place limitations on what can be practically inspected on a vehicle at roadside inspection.
p. 53 – 5.1 Option 2	Figures require revision in accordance with comments on p. 42 and p. 47 (see above)
p. 55 – Table 12	The costs in Table 12 need to be reconsidered based on comments on p.42 lower bound limits (above).
p. 59 Figure 4	The figures used need to be reconsidered based on comments for page 47 (above).
p. 64 - 5.3 Option 4	Reference to costs and benefits should also consider breakdown costs.
p. 64 5.3 Option 4 6 th paragraph	Upper bound needs to be reconsidered based on comments on p.47.

¹³ Christensen P, Elvik R (2006) Effects on accidents of periodic motor vehicle inspection in Norway, *Accident Analysis and Prevention* 39:pp. 47-52.

9. Responses to NTC's specific questions

Question 1: Is there further information or data that may help more clearly assess the link between mechanical defects and heavy vehicle crash risk?

This question is addressed in the 'Approach to cost and benefit analysis' and 'Roadworthiness survey data for NSW versus Interstate heavy vehicles' sections of this paper.

Question 2: What benefits will developing more nationally-standardised procedures for different inspection types and defect clearing provide? What, if any, problems have you experienced with existing variations in these matters?

Nationally standardised procedures would:

- Provide operators with the reasonable expectation that they would be subject to the same treatment irrespective of the jurisdiction in which they were being inspected;
- Allow operators to ensure their vehicles comply with the types of checks likely to be undertaken in the course of an inspection; and
- Provide better harmonised structure to inspections, allowing for improved data collection and analysis by regulatory agencies.

They would not, however, result in behavioural change leading to better maintained heavy vehicles.

Question 3: To what extent do you expect operational reforms – such as improvements to regulatory practices under the existing HVNL powers – to achieve the objectives of improved heavy vehicle roadworthiness?

The impact of operational reforms is limited to increased consistency and improved transparency. It is unlikely that operational reforms would be sufficient to motivate behavioural change among non-compliant operators. Improved risk-based targeting of industry segments, such as that proposed under Option 3C, would be the most effective method of motivating behavioural change. A detailed analysis of the option is provided earlier in this paper.

Question 4: How are industry members who may provide heavy vehicle inspections and repairs positioned to support any increase in demand for these services? Is sufficient skilled labour available?

None of the options presented proposes an increase in the number of heavy vehicle inspections to be conducted in NSW. There is sufficient skilled labour available in NSW to meet current demand.

10. Areas for future work

Further consolidation of practices

Ideally the management of heavy vehicle roadworthiness should be undertaken using a consistent national approach which provides regulation where it is most efficiently used, at a cost to be fairly shared amongst all jurisdictions.

Given the possibility for extensive differences between jurisdictions, the development of a roadmap to achieve consistency should be a priority for the NTC, particularly if option 3C results in the continuation of existing arrangements where large discrepancies exist in the practices undertaken by each jurisdiction.

TfNSW suggests that the process for consolidating local variations within the HVNL could be used as a process template.

Future research

As mentioned in section 7, TfNSW recommends that further work be undertaken to better quantify the benefits to be gained through the increase of roadworthiness standards across the national HV fleet. This will allow development of a best practice approach which will be used to justify the consolidation of practices.

TfNSW also recommends the undertaking of a national roadworthiness survey similar to the TfNSW Heavy Vehicle Compliance Survey. The most recent NSW survey was undertaken in 2012 and is the most recent in a series of surveys tracking the roadworthiness and compliance of heavy vehicles using NSW roads. Six previous large scale compliance surveys have been undertaken in 1992, 1995, 1998, 2003, 2006 and 2009.

The 2012 research method was similar to the earlier surveys and measured both roadworthiness and other compliance issues such as mass, loading, work and rest hours, licensing and registration. A total of 1,645 heavy vehicles were randomly selected and inspected by RMS Inspectors. Quotas were set for seven vehicle types including rigid trucks, articulated trucks, B-doubles, road trains, buses, coaches and plant vehicles for each of the six RMS Regions.

The TfNSW survey provides significant data which is used to monitor roadworthiness trends within the heavy vehicle industry. TfNSW may be able to provide assistance to the NTC/ NHVR in undertaking a national survey.

11. TfNSW Comments sent through in Dec 2014

Page	Section	Comment
v	Executive Summary	The Executive Summary needs to be reworked to ensure that it contains an overview of the issues and the options being presented for consideration.
V	Executive Summary	The Executive Summary should make it clear that components of options are not mutually exclusive. For example the general duties approach should not be exclusive to option 4 and may be combined with components from option 3.
viii	RIS impact assessment table	<p>The most recent draft reduces the benefits of option 4 to ‘++’.</p> <p>An additional cost of unroadworthy vehicles has been included in the new RIS - cost of breakdowns from unroadworthy vehicles (see Table 10 page 77 and table 13 page 82), but is this included in the final impact analysis?</p> <p>We also note that the breakdown component does not include cost to network congestion due to breakdowns in the Individuals and broader society.</p> <p>Similarly now that industry is on a just-in-time basis what are the costs to industry of deliveries not arriving on time?</p>
viii	RIS impact assessment table	The table could be clearer. In particular, what Option 3 is used here (A-E)? It appears from the economic analysis paper that the analysis includes both Option 3D and Option 3C, but Table 1 in the Exec Summary does not explain why and what these figures mean.
viii	RIS impact assessment table	Noted that the Impact Table does not apply any weightings to each individual cost/benefit, though it is noted in the body of the paper that safety benefits should be weighted higher.
52	Figure 7	The figures in this chart are far too high and appear to be incorrect. Please review.
68	Table 8	<p>The RIS does not adequately quantify several factors when undertaking cost/benefit analysis:</p> <ul style="list-style-type: none"> • Cost savings to industry by maintaining a level playing field. If the risk of detection is lowered then compliant operators are commercially disadvantaged. • Growth in the repair industry if the number of inspections is increased in Vic, SA etc so more defects are detected. • This section has not taken into account potential benefits to government: <ul style="list-style-type: none"> ○ Reduced emergency services costs ○ Reduced health costs ○ Efficiency gains from improvements to productivity. • The benefits from reduced emissions have also not been adequately quantified.