Reforms to Heavy Vehicle National Law (HVNL)

Decision Regulation Impact Statement (RIS)

National Transport Commission Review | July 2024

Report outline

Title	Reforms to Heavy Vehicle National Law Decision Regulation Impact Statement
Type of report	Decision regulation impact statement
Purpose	For approval by the Infrastructure and Transport Ministers' Meeting
Abstract	This Decision Regulation Impact Statement (RIS) assessed the impact of supported policy changes in fatigue management and to general mass and dimension limits (slight increases to vehicle height and length) for heavy vehicles, and regulatory settings to support a new National Audit Standard (NAS) to build on recent changes to heavy vehicle accreditation. Analysis of proposed options, balanced with feedback from stakeholders provided to the 2023 Consultation RIS has led the NTC to make several recommendations for consideration by ministers.
Attribution	This work should be attributed as follows, Source: National Transport Commission, Reforms to Heavy Vehicle National Law Decision Regulation Impact Statement. If you have adapted, modified or transformed this work in anyway, please use the following, Source: based on National Transport Commission, Reforms to Heavy Vehicle National Law Decision Regulation Impact Statement.
Key words	heavy vehicle national law, national heavy vehicle regulator, national heavy vehicle accreditation scheme, heavy vehicle safety
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Contents

Executive summary

The review of the Heavy Vehicle National Law (HVNL) led by the National Transport Commission (NTC) and subsequent consultation processes have identified a series of changes to the HVNL that are critical for the law to accommodate the current and future needs of Australia's heavy vehicle industry.

This Decision Regulation Impact Statement (RIS) assessed the impact of supported policy changes in fatigue management and to general mass and dimension limits (slight increases to vehicle height and length) for heavy vehicles, and regulatory settings to support a new National Audit Standard (NAS) to build on recent changes to heavy vehicle accreditation.

If approved for implementation, the policies addressed by this Decision RIS will improve heavy vehicle safety and productivity.

Context

The HVNL applies to heavy vehicles over 4.5 tonnes of gross vehicle mass. The HVNL consists of the Heavy Vehicle National Law and five sets of regulations. A first principles review of the HVNL was undertaken in 2019, and the NTC subsequently published a Decision Regulation Impact Statement (Decision RIS) that outlined high level changes to the HVNL regulatory framework, principally primary law, to create a modern platform for future reforms to HVNL policy (referred to as Decision RIS (2023) henceforth). The proposed amendments to the HVNL recommended in Decision RIS (2023) were endorsed by ministers at the 9 June 2023 Infrastructure and Transport Ministers Meeting (ITMM).

The NTC published a Consultation Regulatory Impact Statement (Consultation RIS (2023)) with policy proposals to amend fatigue management, slightly increase mass and dimension limits for general access vehicles and regulatory settings to support the new NAS which aimed to deliver outcomes which will help to improve the HVNL. The NTC conducted significant consultation to gain an understanding of stakeholder views on the policy options in the Consultation RIS (2023), including multiple bilateral and joint consultations with Australian governments, industry stakeholders, the National Heavy Vehicle Regulator (NHVR), union and police representatives, public information webinars and presentations for members of key industry associations, online survey targeting operators and drivers. Fifty-two formal submissions were received through this process.

Options for consideration

This Decision RIS assesses policies recommended for inclusion in the future HVNL with consensus support.

Fatigue Management

Record-keeping Requirements for Written Work Diaries (WWD)

Without available technology to test a driver's actual fatigue level, managing fatigue by setting work and rest requirements is currently the best tool to ensure safety, and an official Work Diary is used as evidence of compliance. This Decision RIS proposes several changes to record-keeping requirements to support industry requests that requirements should be risk-based and not exceed what is required to focus on significant risks. While agreed in

principle, there were challenges in identifying specific information that could be excluded from the diary and not adversely impact the evidentiary value of the WWD. Police also raised safety concerns around the risk of fraudulent behaviour such as manipulation of work and rest hours by drivers using parallel work diaries if provisions and requirements around lost, stolen or exhausted work diaries were removed.

The proposal is to remove three (relatively minor) duplicative requirements from driver work diaries e.g. make recording total work and rest hours on the daily sheet not subject to an offence under the HVNL(Option 1a). The administrative process requirements (e.g. for when a work diary is lost) have been removed (Option 1b). The overall impact of this proposal is some improvement to regulatory burden to industry and no adverse impact on safety.

Scope of Fatigue Regulated Vehicles

None of the options to change the cohort of vehicles included under prescriptive fatigue requirements presented in the C-RIS (2023) are recommended for further analysis or exploration at this stage. The qualitative and quantitative impact analysis conducted in the Consultation RIS (2023) had methodological limitations, and the analysis yielded limited evidence to support any of the options. There is insufficient evidence (in terms of fatigue incidents) that fatigue risk is not being adequately managed under the current legislative arrangements. Therefore, stakeholders generally supported the view that the regulatory burden associated with the proposed prescriptive rules cannot be justified.

Maintaining the status quo (Base Case 2) is the NTC's preferred position.

Notwithstanding the above, the definition of a fatigue regulated heavy vehicle will be moved to regulations so it can be more readily changed if there is evidence that additional heavy vehicles should be covered by the prescriptive rules in the future. This aligns with the approach to increase responsiveness and adaptiveness of the HVNL set out in the Decision RIS (2023). In the meantime, operators of heavy vehicles between 4.5 tonnes and 12 tonnes must manage fatigue risk under the HVNL primary duty and WHS legislation.

Roadside Fatigue Enforcement

The options proposed in the Consultation RIS (2023) to enable a more risk-based approach to roadside fatigue enforcement and proportionate responses to minor breaches yielded significant differences of views between government stakeholders and police agencies and industry.

A key option in the Consultation RIS (2023), strongly promoted by industry, was to limit the time period for which an infringement can be used as a compliance tool to 14 or 28 days (Option 3a), but this was strongly opposed by state and territory governments, police and the NHVR. Concerns raised include the unorthodox legal construction of the option, potential for increasing prosecutions for historical, low-level offences, and limitations on Authorised Officer discretion. The NTC sought agreement for a timeframe limit of 28 days, mirroring the scope of the 'compliance view' of an Electronic Work Diary, avoiding some of the legal concerns raised by jurisdictions, the perceived risk of increased driver prosecution and not impacting officer discretion (as enforcement tools are available).

Participating state and territory jurisdictions indicated a preference for a balanced mix of prescriptive and performance-based compliance tools, with prescriptive requirements complemented by duties-based requirements, over the model proposed in the Kanofski package.

The qualitative review and stakeholder feedback of other options to change enforcement of fatigue (3b,3c, and 3d) in the Consultation RIS (2023) yielded challenges around increased complexity to operators and governments, and resourcing requirements, and were not supported.

This Decision RIS proposes changes that take a practical approach in response to concerns that changes may undermine roadside enforcement and result in adverse safety outcomes.

The proposal is to allow Authorised Officers (including police) to issue formal warnings rather than fines for administrative offences relating to work diaries (Option 3e). This will provide Authorised Officers greater discretion to issue formal warnings and encourage a more risk-based approach to enforcement. A national system for police and the NHVR to record formal warnings is desirable for national visibility but not essential, given that the NHVR can use its current system, and police can use existing arrangements for cautions.

The Decision RIS also proposes a change to allow for a formal education 'order' to be issued in lieu of a fine for Work Diary administrative breaches (Option 3f). This proposal addresses industry requests that punitive action should focus on deceptive conduct not driver oversights. A supporting system would need to be cost effective to deliver and administer and could be based on an existing system (e.g. NHVR system) or a commercial off-the-shelf learning management system, and will not require change to (or integration with) driver licensing systems.

Heavy vehicle mass and dimension limits for general vehicle access

The overall aim of this set of reforms is to relax the definition of a 'general access vehicle' (that can use roads without needing to seek a permit or exemption notice), such that slightly heavier, higher or longer vehicles qualify, to improve productivity and safety outcomes.

Mass

This Decision RIS qualitative and quantitative impact analysis demonstrated that the proposal to increase General Mass Limits (GML) creates significant potential for productivity benefits. This amounts to productivity benefits of $107.8 million per annum, which is significantly greater than the estimated cost of pavement wear of $10.2 million per annum, 2024 price year. Accepted parameters have been used to estimate road damage costs, however, a more robust jurisdiction-specific network analysis that considers pavement types, gradients, and quality could provide further clarity on the exact impact of the additional weight on road assets. For this reason, headline NPV and BCR figures have not been calculated as part of the analysis.

It is also noted that there are a number of benefits, such as administrative cost savings associated with potentially not requiring enrolment in the current National Heavy Vehicle Accreditation Scheme (NHVAS), which is required for access to Concessional Mass Limits (CML) that have not been included in the analysis due to data/information or scope limitations. Further it is noted that while the analysis assumes a complete uptake of the allowable weight under the current CML arrangements by the impacted fleet, if the uptake is partial this will not only reduce the estimated productivity benefits but will also reduce road wear costs. In the absence of access to detailed network-wide road damage analysis that suggests otherwise, the analysis indicates that the benefits of increasing mass limits are likely to outweigh the costs.

The results of the impact analysis address the recent introduction of Euro VI technology through ADR 80/04 and the complementary *Heavy Vehicle (Mass, Dimension and Loading) National Amendment (Emission Control) Regulation 2024*. This ensures that the proposal considers the effect of the new regulation and does not reduce the relative productivity of Euro VI trucks over trucks with older emission control systems.

The proposal is to increase mass limits for general access vehicles by up to five per cent, such that the current Concessional Mass Limits (CML) become the new norm (GML) (Option 4b). It is understood that increased general mass limits will increase road funding and maintenance requirements and that there will be flow on implications for the road user charge.

Height

This Decision RIS qualitative impact analysis suggested that there are likely to be productivity and red-tape benefits from increasing the general access vehicle height limit to 4.6 m. Industry and government stakeholders support this proposal in-principle but raised concerns regarding the potential increased safety risk of vehicle rollover due to impacts of height on vehicle stability. The NHVR is undertaking technical work to better understand potential safety risks and controls to mitigate these.

Participating state and territory governments and local government also cited concerns about increased risks of overhead structure and vegetation strikes and subsequent costs to address damage. Limited data is available to assess this potential issue. A case study provided a high-level assessment, which highlighted that in select participating states a relatively small proportion of bridges and roads with overhead structures on state-owned networks would experience height constraints.

The proposal is to increase the vehicle height limit from 4.3 m to 4.6 m, subject to technical analysis of safety risks by the NHVR and identification of suitable risk controls that may be applied as safety conditions (Option 5a). Once controls and related conditions are developed, the impacts of these may be tested via a Decision RIS addendum.

Length

This Decision RIS qualitative impact analysis considered the different stakeholder views from the Consultation RIS (2023) on potential options to apply an extra meter of length to a prescribed 19m vehicle. Some stakeholders proposed an increase in the length of a sleeper cab berth and others focused on increased trailer length (payload). Both scenarios appear to offer benefits such as improved driver amenity and better rest (longer sleeper cab) or increases in volumetric load capacity and hence productivity (longer trailer). Industry strongly supported the length increase and flexibility to determine how it is applied.

Concerns were raised by participating state and territory and local governments regarding the potential impact of longer vehicles on swept path movements and short stacking at intersections, and therefore safety risks and costs of infrastructure damage. The NHVR is undertaking technical work to identify suitable controls to manage swept path within acceptable limits.

The proposal is to an increase the vehicle length limit from 19 m to 20 m, subject to technical analysis of safety risks by the NHVR and identification of suitable risk controls that may be applied as safety conditions (Option 6a). Once controls and related conditions are developed, the impacts of these may be tested via an addendum to this Decision RIS.

National Audit Standard (NAS)

The proposal is that the NAS requirements should be defined in primary law, to enable a new NAS to be developed and be approved by ministers. This allows the NHVR to maintain flexibility to adapt and update NAS without legislative change. This proposal also enables a tailored approach to meet the needs of the heavy vehicle industry and potentially enable faster implementation.

The NTC would like to acknowledge the assistance of industry and government stakeholders who have collaborated in developing these policies.

Recommendations

Analysis of proposed options, balanced with feedback from stakeholders provided on the Consultation RIS (2023) has led the NTC to make several recommendations for consideration by ministers. These are set out in the callout box below.

Recommendation 1: That the requirements for the Work Diary (WD) be changed to:

a) Make recording the day of the week on the daily sheet not subject to an offence under the HVNL

b) Make recording the total work and rest hours on the daily sheet not subject to an offence under the HVNL

c) Introduce a default for the 'hours option' in the WD that is the standard hours for a solo driver of a fatigue regulated heavy vehicle.

Recommendation 2: Consolidate the following offences under 'Recording information under the national regulations – general' (s296):

a) How information is to be recorded (s301) - noting that some requirements will be removed from the law altogether and covered in the WD instructions only

b) Failing to record specific information regarding odometer reading (s298)

c) Time zone of a driver's base must be used (s303).

Recommendation 3: Remove s308(1)(b)(ii) and s308(1)(c) so that a found or returned WWD, after a replacement has been issued, is no longer required to be returned to the Regulator, noting that a driver will still be required to notify the Regulator using the approved form and to cancel any unused daily sheets in the WWD.

Recommendation 4: Remove requirements relating to returning an existing WWD with an application for a new one (s339(3)) and replace these with a new requirement for a driver to cancel any unused daily sheets in the existing WWD.

Recommendation 5: Remove s308(2) and s339(4), which contains the requirements relating to what the Regulator will do with returned WWD.

Recommendation 6: That the definition of a fatigue regulated heavy vehicle (as defined in the HVNL) remains unchanged.

Recommendation 7: Remove s590(1)(b) of the HVNL, to broaden the application of formal warnings by Authorised Officers as a compliance tool for fatigue record-keeping breaches and other breaches under the HVNL.

Recommendation 8: That the HVNL include provisions to enable formal education as an additional enforcement option for Work Diary administrative offences, subject to confirming a pathway that minimises implementation and ongoing administration costs to participating jurisdictions, police agencies and industry.

Recommendation 9: Increase the current General Mass Limits (GML) to match the current CML (inclusive of the ADR 80/04 (Euro VI) mass limit increase approved by ministers), repeal the current CML, and make no changes to HML.

Recommendation 10: Increase the general access heavy vehicle height limit from 4.3 m to 4.6 m, subject to technical analysis by the NHVR to confirm appropriate controls to reduce rollover risks.

Recommendation 11: Increase the general access heavy vehicle length limit from 19 m to 20 m, subject to technical analysis by the NHVR to confirm suitable swept path controls.

Recommendation 12: That the required provisions for the National Audit Standard (NAS) be introduced into the primary law only.

Next Steps

If approved, the changes to the HVNL can be prepared.

Upon completion of the NHVR technical analysis for proposed increases to general access vehicle height and length, further impact analysis on any proposed conditions will be required.

1 Context

Key points

- This Decision RIS has been prepared to assist the NTC and, ultimately, to inform Infrastructure and Transport Ministers in considering options for future improvements to the HVNL, in line with the package of NTC reforms that were agreed to be progressed by ministers in August 2022.
- This document progresses the next phase of a series of reforms in recent years to improve the HVNL.
- The Decision RIS focuses on Infrastructure and Transport Ministers Meeting (ITMM) reform package policy areas not considered in the previous Decision RIS (2023) and carries forward preferred options as determined by stakeholders through the Consultation RIS released in October 2023.

This Decision Regulation Impact Statement (Decision RIS) has been prepared by the NTC to inform the Infrastructure and Transport Ministers Meeting (ITMM) about options for future improvements to the Heavy Vehicle National Law (HVNL). This document expands on the broad policy HVNL reforms ministers agreed to progress in August 2022.

This Decision RIS is based on the outcomes of a Consultation Regulation Impact Statement (Consultation RIS 2023) that was issued for public review in October 2023. The Consultation RIS considered various options for improving fatigue management and proposed increases to general mass and dimension limits for heavy vehicles. It also recommended modifications to the National Audit Standard (NAS), building upon the approved changes intended to enhance heavy vehicle accreditation, as outlined in the Decision RIS (2023) and endorsed by transport ministers in 2023.

1.1 Background

1.1.1 Overview of the HVNL Review to date

The HVNL is administered by the National Heavy Vehicle Regulator (NHVR) and applies to vehicles in Australia that exceed 4.5 tonnes in gross vehicle mass. It is established through a cooperative applied law scheme involving standard provisions promulgated through the Queensland Parliament. The HVNL is then applied in each participating jurisdiction as if it were a law made in that jurisdiction. The HVNL has been adopted across participating states and territories including Queensland, New South Wales, the Australian Capital Territory, Victoria, Tasmania, and South Australia. However, Western Australia and the Northern Territory are not regulated under the HVNL.

While the HVNL has improved road safety and laid the foundation for a streamlined national system for heavy vehicles, it has faced criticism for being overly prescriptive, inflexible, and complex.

These concerns about the HVNL prompted ITMM to direct the NTC in 2018 to review the HVNL and its supporting regulations, which comprise what is known as ‘The Review’. Since

this time, several notable events and workflows have been delivered to progress The Review, including[1]:

- Between March 2019 and October 2019, the NTC produced a series of seven issues papers for public consultation exploring key issues identified within HVNL across several policy areas
- A HVNL Consultation RIS was published in June 2020. Referred to in this document as 'Consultation RIS (2020)', it analysed an extensive suite of reform options informed by responses to the issues papers
- In 2021, ministers agreed that the HVNL review should transition to a programmatic approach, known as the Safety and Productivity Program, incorporating six agreed-upon reform streams
- In February 2022, ITMM appointed Mr Ken Kanofski to lead further stakeholder consultation on the HVNL Safety and Productivity Program and report to ministers via ITMM on further work required to deliver a new law
- In August 2022, ministers agreed to progress the recommended legislative and non-legislative changes to improve safety and productivity in the heavy vehicle sector, known as 'the ITMM reform package'
- In response to the ITMM reform package, the NTC prepared a Decision RIS, referred to in this document as 'Decision RIS 2023', which outlined the necessary changes to the regulatory framework (principally the primary law). Proposed amendments to the HVNL recommended in the Decision RIS (2023) were endorsed by ministers at the June 2023 ITMM.

1.1.2 Consultation Regulation Impact Statement (Consultation RIS 2023)

In October 2023, the NTC published its Reforms to Heavy Vehicle National Law Consultation RIS (referred to in this document as 'Consultation RIS (2023)') to test specific changes contained in the ITMM reform package beyond what was considered in the previous Decision RIS (2023). The Consultation RIS (2023) built upon the package of NTC reforms that ministers agreed to progress in August 2022 and was informed through engagements with over 50 organisations spanning more than 180 meetings.

The Consultation RIS (2023) tested three specific policy changes to the HVNL: Fatigue management; mass and dimension limits for general access; and additional changes to the National Heavy Vehicle Accreditation Scheme (NHVAS) audit framework. The relevance of each of these reform areas is described below:

- **Fatigue management** – Fatigue management has consistently been identified as a key concern for the heavy vehicle industry, government agencies, police and the National Heavy Vehicle Regulator (NHVR). A range of fatigue proposals (pre-2022) have been considered through the HVNL review process. However, the proposals did not receive sufficient support from stakeholders. Fatigue management remained a central consideration during stakeholder engagement sessions chaired by Mr Kanofski and forms part of the September 2022 ITMM reform package.
- **Access –** The Consultation RIS (2020) highlighted industry concerns about inefficiencies in current arrangements for managing heavy vehicle access. Mr Kanofski's report to

[1] Note, further detail about each of the events and publications outlined in the following dot points can be found in the Chapter 2 of the Consultation RIS (2023), available on the NTC website.

ITMM concluded that many of industry's concerns about heavy vehicle access regulation are largely a matter of operational system deficiencies rather than problems inherent in the law. The Consultation RIS (2023) further considered access-related regulatory reforms to increase prescribed vehicle mass and dimension limits for general access to the road network. It also reviewed the merit of new limits for inclusion under the future HVNL.

- **Enhanced operator assurance –** The Decision RIS (2023) introduced a new approach to alternative compliance endorsed by ministers. Under this new approach, operators accredited under the National Heavy Vehicle Accreditation Scheme (NHVAS) can access alternative compliance options issued by the regulator, provided they demonstrate a Safety Management System (SMS) and any additional requirements that may be exercised through accreditation modules. To strengthen this new approach, changes have been made to the NHVAS to create a more comprehensive and robust scheme, with safety at the forefront. A significant part of this reform is the introduction of a National Audit Standard (NAS). The NAS focuses on SMS-based audits that continuously improve audit outcomes for the NHVAS. Additionally, to encourage their operators to meet HVNL primary duty obligations, other SMS-based heavy vehicle accreditation schemes may adopt the NAS. The Consultation RIS (2023) investigated the implementation options for the NAS at a legislative and principles-based level.

The Consultation RIS (2023) assessed options under these three reform areas through a qualitative and, where possible, quantitative impact assessment. Stakeholders were invited to explore and provide comments on the Consultation RIS via formal submissions and completion of an online survey. This process is described in more detail in Section 1.2.1.

1.2 About this Decision Regulation Impact Statement

This Decision Regulation Impact Statement (RIS) represents the next phase of work towards an updated HVNL. It builds upon the proposals presented in the Consultation RIS (2023) and more recent stakeholder feedback to present recommendations under each reform area considered in the Consultation RIS.

The consultation process that has informed the development of this Decision RIS involves matters both within and outside of its scope. The structure of this document is described below.

1.2.1 Consultation process that has informed this Decision RIS

After the public release of the Consultation RIS (2023), the NTC consulted widely to gather and understand feedback on proposals. This involved bilateral and joint consultations with Australian governments, industry stakeholders, the NHVR, union and police representatives from 8 October to 23 November 2023. Public information webinars and presentations were also conducted for members of key industry associations during the consultation period.

The NTC also conducted workshops in Melbourne with industry and government members of the NTC's Reform Advisory Committee on 3 November 2023 and met with police representatives on 2 November 2023. The workshops were well attended.

During the consultation period, all stakeholders were strongly encouraged to provide evidence and information through formal submissions to improve the analysis of the proposed reforms.

Fifty-two submissions were received from diverse stakeholders, including state and territory jurisdictions, safety regulators, local government, police, unions, agricultural organisations, heavy vehicle, third-party providers and bus sector representatives. A list of stakeholders that provided submissions is outlined in Appendix A as part of the stakeholder engagement record.

The NTC conducted a survey with 84 responses to gather additional information to complement formal submissions. Exploring the underlying assumptions and choices outlined in the Consultation RIS, the survey focused on the 'time commitment' for written and electronic work diaries. While the survey was primarily targeted at heavy vehicle operators, it also included questions relevant to drivers. The findings from the survey have played a supplementary role in informing the development of the Decision RIS. A summary of results can be found in Appendix C, with key findings highlighted in call-out boxes throughout this document.

The NTC has considered the views gathered from previous submissions, survey results, and extensive workshop consultations to inform the development of this Decision RIS. Feedback from stakeholders is summarised throughout this document.

1.2.2 Matters in scope

This Decision RIS assesses regulatory reform options included in the Consultation RIS (2023), including options to:

- address limitations within the HVNL that currently contribute to ineffective fatigue management
- improve access arrangements for heavy vehicles by reducing administrative burden and productivity impacts
- improve confidence across industry in the robustness of the NHVAS and provide consistency between accreditation schemes.

1.2.3 Matters out of scope

The ITMM Reform Package included a wide range of reform propositions that addressed the overall structure of the HVNL, access, fatigue management, duties and driver health, enforcement, penalties and offences, accreditation, technology and data, the primary duty, registration, and delegation of authority in the HVNL. Many identified reforms were categorised as "non-legislative" and, therefore, were not subject to a formal regulatory impact analysis process.

The previous impact analysis process (Decision RIS 2023) involved considering reforms to the structure of the HVNL, duties and driver health, accreditation, technology, data, and delegation of authority, and these reforms were agreed upon. Currently, work is underway to develop the necessary details for drafting instructions for the Office of Parliamentary Counsel to draft amendments to the HVNL for approval by transport ministers.

Consistent with the Consultation RIS (2023), this work falls outside of the scope of this Decision RIS and includes:

- work to be carried out in close consultation with the NHVR to ensure a smooth transition from the current NHVAS to the future SMS-based scheme, including work on ensuring the transition of the existing NHVAS accreditation streams, under the requirements made by responsible ministers concerning heavy vehicle operations that may be subject to

alternative compliance accreditation, as well as developing new alternative compliance options

- work to finalise the details of the technology and data framework
- a comprehensive review of penalties under the HVNL; and
- the recent announcement by the Australian Government to increase the overall width limit of new trucks that are fitted with a number of safety features from 2.5 m to 2.55 m.

1.2.4 Document Structure

This Decision RIS outlines the need for change and recommends preferred fatigue management, access, and accreditation options. It summarises the feedback and issues raised by stakeholders in response to the Consultation RIS (2023) and presents a set of preferred options for ministers to consider. This document also includes an analysis of the potential impact of each option, either quantitatively or qualitatively, building on previous analysis conducted in the Consultation RIS (2023).

This document has been prepared to address critical questions identified by the National Regulatory Impact Analysis Guide for Ministers' Meetings and National Standard Setting Bodies.[2] Responses to the questions have been used to develop this Decision RIS, with a preferred option recommended to ministers under each reform area.

The document is structured as follows:

- A definition of the problem(s) this Decision RIS is intended to address and the case for government intervention (Chapter 2)
- An overview of Decision RIS objectives and potential barriers to reform (Chapter 3)
- Fatigue management options, analysis, stakeholder feedback and recommendations (Chapter 4)
- Access options, analysis, stakeholder feedback, and recommendations (Chapter 5)
- Accreditation options, analysis, stakeholder feedback and recommendations (Chapter 6)
- Evaluation approach (Chapter 7)
- Summary of recommendations and next steps (Chapter 8).

[2] Commonwealth of Australia, Department of the Prime Minister and Cabinet (2023), Regulatory Impact Analysis Guide for Ministers' Meetings and National Standard Setting Bodies.

2 Problem statement and need for government intervention

Key points

- The review of the HVNL identified several major issues with its structure and design, creating obstacles to effective and adaptable regulation.
- This Decision RIS aims to address several key issues within the HVNL, including:
  - **Problem statement 1:** Several limitations to the HVNL contribute to ineffective fatigue management.
  - **Problem statement 2:** Limits to general access to the road network under the HVNL impact on the regulatory burden of the freight industry and productivity.
  - **Problem statement 3:** Confidence in the robustness of the current NHVAS could be improved; there is a lack of consistency or recognition between different accreditation schemes and a regulatory environment where operators are faced with multiple and duplicative assurance audits.
- Governments are responsible for facilitating reform to address these issues to help protect road users in the community from the safety risks associated with sharing the road with heavy vehicles.

2.1 Purpose of this chapter

The purpose of this chapter is to outline:

- The problem this Decision RIS seeks to address
- The need for government intervention to address it.

2.2 The problem

The policy proposals in the Consultation RIS sought to address several key issues, including:

- **Problem statement 1:** Several limitations to the HVNL contribute to ineffective fatigue management.
- **Problem statement 2:** Limits to general access to the road network under the HVNL impact on freight industry regulatory burden and productivity.
- **Problem statement 3:** Confidence in the robustness of the current NHVAS could be improved; there is a lack of consistency or recognition between different accreditation schemes and a regulatory environment where operators are faced with multiple and duplicative assurance audits.

Below is feedback from stakeholders on these problem statements, followed by the NTC's response to this feedback and revised problem statements.

2.2.1 Stakeholder feedback on the problem

The NTC requested feedback from stakeholders on how well the Consultation RIS (2023) accurately portrayed the problem to be addressed within the identified issues and other relevant factors in the problem statement. Although not all stakeholders responded, a summary of their comments is below.

Several stakeholders, mainly industry representatives such as operators and drivers, believe the problem is accurately described and does not require amendment. They agree that the new HVNL needs greater flexibility and that reducing the administrative burden on the industry while maintaining road safety is an important focus of reform. Some industry submissions have called for these issues to be addressed urgently.

Various stakeholders have expressed concerns about the issues discussed during The Review and suggested expanding the problem statement. One jurisdiction indicated that the problem statement was too narrow to undertake a full assessment and only considered specific issues driven by those put forward by Mr Kanofski. Some industry stakeholders shared this view, and two trucking associations, the Victorian Trucking Association (VTA) and Queensland Trucking Association (QTA), submitted a joint statement suggesting that the Consultation RIS reflected a "narrowing of issues compared to the original scope of The Review presented five years ago". While NatRoad expressed disappointment in the review's "lack of ambition", it acknowledged that the proposals present an opportunity to reduce administrative burden, improve enforcement, and enhance access conditions, which represents forward progress. Some stakeholders in the heavy vehicle industry, including operators, drivers, and representatives, expressed concern over the lack of consideration of issues specific to the heavy vehicle workforces in the problem statements. These issues included driver retention, an ageing workforce, a lack of skilled workers and driver shortages. Some stakeholders discussed specific issues experienced by drivers, including seat vibrations, thermal loading, and sunlight glare. The Transport Workers' Union (TWU) also noted the lack of consideration of driver welfare. Due to increasing economic pressures, the HVNL had created a culture whereby industry now works to the maximum number of allowable hours because it is legal to do so, not necessarily because it is safe. Finally, some industry stakeholders highlighted that the HVNL is not in place in the Northern Territory and Western Australia, seeing this as an issue that was not raised in the Consultation RIS.

Rail industry representatives, including the Australian Rail Track Corporation (ARTC) and the Office of the National Rail Safety Regulator (ONRSR), raised some issues not addressed in the problem statement. These include considering issues related to the under-pricing of heavy vehicle access and the resulting market failure. Additionally, these stakeholders comment that there are safety challenges associated with the interaction between heavy vehicles and trains at level crossings, which are likely to worsen with expanded vehicle access.

Some stakeholders disagreed with the problem statement as presented, suggesting that the burden on industry has been overrepresented. Representatives from one police group submitted that the argument that 'current prescriptive fatigue requirements are onerous for drivers and operators' overstates the complexity of recording basic information and fails to recognise the accuracy and reliability of driver records, which are critical in effective fatigue management.

Other police and jurisdictional representatives expressed that the Consultation RIS (2023) focused too heavily on minimising record-keeping and work and rest breaches to address industry concerns. They emphasised the importance of enforcing record-keeping and work

and rest breaches as essential for monitoring compliance and enforcement of fatigue requirements in the absence of other suitable measures or roadside tests to determine drivers' fatigue levels. This perspective was echoed in a submission from Gas Energy Australia (GEA), which highlighted that the fatigue policy lever in the HVNL places too much emphasis on work diaries and may not effectively achieve the intended purpose of ensuring safety and alertness in those drivers unaffected by fatigue.

Local council representatives had concerns about certain parts of the problem statement, particularly regarding access. The Municipal Association of Victoria (MAV) pointed out that vehicle safety is not the primary consideration when providing access across the road network. Instead, it suggested that councils are responsible for maintaining local road infrastructure. The association also noted that funding from the federal and state governments to support asset maintenance and defray infrastructure costs has decreased in recent years despite the deteriorating condition of local road infrastructure.

Representatives from the bus industry argued that the scope of the problem statement predominantly focused on the heavy vehicle industry and did not fully recognise the unique aspects of the bus and coach industry and the task of moving people associated with it. The Bus Industry Confederation (BIC) pointed out that the long-distance tourist and charter sector of the bus and coach industry also undertakes long distance interstate journeys and that buses and coaches greater than 4.5 tonnes are subject to fatigue regulations. This indicates that this group felt it was not adequately reflected in the Consultation RIS (2023) discussion of fatigue-related problems.

Industry stakeholders raised several other issues in submissions. Section 7.2 describes and responds to these further.

2.2.2 NTC response

Feedback from stakeholders in response to the problem statements presented in the Consultation RIS (2023) has informed the revised problem statements in the subsections below.

In response to concerns raised by stakeholders about the scope of issues covered in the Consultation RIS (2023), the ITMM reform package policy areas agreed to be progressed by ministers in August 2022, which were not addressed in the previous Decision RIS (2023), remain the NTC's key focus. These areas include fatigue management, certain elements of prescribed vehicle mass and dimension limits, and potential changes to the National Audit Standard (NAS) to support enhanced accreditation. Therefore, issues raised by stakeholders outside these reform areas will not be explored in this Decision RIS. The NTC's response to individual issues raised by stakeholders outside of the scope of this process is provided in Section 7.2.

The concerns raised by police representatives about the Consultation RIS (2023) overstating the administrative burden placed on operators by fatigue requirements are also shared by some operators throughout the Review and have emerged again in feedback on the Consultation RIS (2023). Without available technology to test a driver's actual fatigue level, managing fatigue by setting work and rest requirements is currently the best enforcement tool to ensure safety. This Decision RIS aims to explore various options to ensure such requirements deliver strong safety outcomes at a minimised cost to operators and enforcement bodies.

This reform process does not aim to address reduced federal and state funding for local councils as a barrier to improved access for heavy vehicles. However, the NTC acknowledges the associated cost of expanding heavy vehicle access for road managers, and this is considered in the assessment of access options provided in Section 5. Cost is also acknowledged as a potential barrier to reform, as described in Section 3.3.2 of this Decision RIS.

For other feedback provided by stakeholders, key amendments to the problem statements include:

- Where possible, problem statements have been streamlined to focus on key elements relevant to the reforms explored in this Decision RIS.
- Problem statement 1 has been modified to reflect that heavy vehicles over 12 tonnes, including vehicles moving freight and long-distance tourist and charter sectors of the bus industry, are subject to prescriptive fatigue requirements under the HVNL.
- Problem statement 1 has been modified to note that due to the inability to conduct a test to monitor a driver's actual fatigue level, heavy vehicle driver fatigue is currently best managed through the prescription of work and rest hours.

2.2.3 Problem statement 1: There are several limitations to the HVNL that contribute to ineffective fatigue management.

Driver fatigue is a major risk to road safety. Operating a heavy vehicle while fatigued increases the chances of a crash, and ongoing fatigue can leave long-term impacts on the driver's physical and mental well-being. In 2009, fatigue management requirements were introduced in the Australian road freight industry and were incorporated into the HVNL. The main goal of these HVNL fatigue requirements is to provide for the safe management of the fatigue of drivers of fatigue-regulated heavy vehicles. Additionally, operators and other chain of responsibility (CoR) parties must ensure that drivers are not fatigued as part of their primary duty (s26C). This means that CoR parties are obligated to take all reasonably practicable measures to ensure the safety of transport activities, including managing driver fatigue.

As it is challenging to measure or conduct a roadside test to monitor a driver's fatigue level, currently, the best available tool for monitoring fatigue is the prescription of work and rest hours set under the HVNL. However, drivers note challenges with this, as further described below.

If drivers work for longer than the maximum work time allowed by law or rest for less than the minimum required time, they may be penalised. Some drivers must also complete a National Driver Work Diary as evidence of their work and rest hours. Failure to carry and use a work diary can result in fines and penalties. Alternatively, operators can opt for more flexible work and rest options through the NHVAS Fatigue Management Module (options include Basic Fatigue Management (BFM) and Advanced Fatigue Management (AFM)). To utilise these options, operators must demonstrate effective management of their driver's fatigue risks.

However, despite fatigue management requirements, driver fatigue remains Australia's leading cause of fatal single-vehicle crashes. The 2020 NTARC report found that fatigue is still the biggest cause of driver deaths, accounting for 34.8 per cent of fatalities that year.[3]

[3] NTI (2020), *Major Incident Investigation Report.*

This Decision RIS addresses several issues related to heavy vehicle fatigue under HVNL. It builds upon previous work and seeks to rectify the documented fatigue issues in previous NTC publications.[4] Key issues are summarised below:

- **Controls under the HVNL focus on long-haul journeys but not risks associated with short-haul journeys** – The HVNL focuses on enforcing fatigue regulations for long-haul journeys involving large vehicles, such as those carrying freight and operating in the bus industry's long-distance tourist and charter sectors. However, it does not impose prescriptive requirements on smaller vehicles weighing less than 12 tonnes. It assumes that drivers of lighter vehicles face lower fatigue risks due to their typically shorter-distance work. Recent research suggests, however, that fatigue risk is similar for long-distance and short-distance heavy vehicle drivers.[5] It should also be noted that driving a non-fatigue-regulated vehicle does not count towards work hours under the HVNL, which can pose a safety risk.
- **Prescriptive work and rest requirements reduce drivers' ability to actively manage their fatigue** – In addition to the general duty to not drive while fatigued, drivers of fatigue regulated heavy vehicles must comply with certain maximum work and rest limits set by the standard hours schedule, unless they are working under BFM or AFM accreditation. Some drivers are critical of the inflexibility of fatigue management requirements, noting they do not support the entire range of tasks and variability of day-to-day work in the industry. Drivers have reported that they construct their work schedules around the prescribed hours, which makes them feel forced to sleep and drive at specific times that don't align with their circadian rhythms. This can cause them to drive while tired and rest while awake and alert. It can be particularly challenging for drivers to meet fatigue requirements when unforeseen circumstances may result in running out of driving hours before reaching their home base, potentially forcing drivers to take a long rest break in unsuitable (or less suitable) conditions that do not support quality rest.
- **Current record-keeping requirements are complex and onerous for heavy vehicle drivers –** The HVNL sets out extensive and complex requirements for maintaining a work diary. A whole division of the HVNL is dedicated to these requirements, which detail how to obtain, fill in, and carry out a work diary. There are also additional work diary requirements in the regulations, and the work diary itself provides specific instructions for filling it in. In some cases, due to extensive requirements, some drivers may make mistakes when filling in their diaries. While these mistakes may not necessarily affect work and rest times or undermine the diary's function as an evidentiary document, they are still punishable under the HVNL. For example, poor writing, crossing the page in a different direction or not connecting lines as prescribed can be penalised and could result in a fine of $189 – at minimum.
- **Fatigue enforcement and compliance focuses on whether drivers conform to prescriptive rules** – Some feedback suggests that enforcement efforts sometimes prioritise addressing past violations rather than addressing immediate fatigue risks. Some operators and drivers feel that focusing on minor administrative or historical breaches is frustrating and does not lead to improved safety. Certain stakeholders believe the current approach fails to identify and address systemic risky behaviours, such as requirements from specific operators that may encourage their drivers to operate while fatigued. Some stakeholders have proposed that roadside enforcement should

[4] Namely, Consultation RIS (2020), D-RIS (2023) and in issues paper developed by the NTC in 2019.

[5] Williamson, Ann, and Rena Friswell (2013), "The Effect of External Non-Driving Factors, Payment Type and Waiting and Queuing on Fatigue in Long Distance Trucking." *Accident Analysis and Prevention* Vol. 58, p.26–34.

focus less on procedures and administration and instead on risk-based safety measures that actively target deliberate and systemic behaviours.

2.2.4 Problem statement 2: Limits to general access to the road network under the HVNL creates an administrative burden and impacts freight industry productivity.

Truck routes and operating conditions are regulated through a complex, multi-tiered access regime in the HVNL, influenced by jurisdictional freight initiatives.

The current heavy vehicle access regime allows general access to the road network for vehicles within specified mass and dimension limits. This means they can travel on the entire road network (all roads) where it is safe unless otherwise signposted. General access vehicles do not exceed 2.5 m wide (increasing to 2.55 m), 19 m long (articulated combination), and 4.3 m high, and general mass limits (GML) are applied by vehicle type.[6] Limited controls and oversight are needed for these vehicles. The HVNL provides general access for vehicles within prescribed mass and dimension requirements, and operators of these general access vehicles do not require a permit or a notice to operate on the road network.

Vehicles that do not fall within general access limits have restricted access to the road network. These vehicles are considered higher risk and require particular risk controls and management. As set out in the call-out box below, there are multiple pathways for achieving higher mass or dimension limits for road operators.

Pathways to access higher mass or dimension limits for road operators include:

- Mass limit schemes: Concessional Mass Limits (CML) and Higher Mass Limits (HML) are provided through exceptions to the General Mass Limits (GML) and on condition that operators hold mass management accreditation via the NHVAS (amongst other conditions for HML). CML and HML allow NHVAS members to operate at mass limits above the national general mass limits subject to several conditions. Vehicles operating under CML have access to the same network as applies to that vehicle when operating at GML. To access the scheme, a transport operator must apply through the NHVR, pay a fee, and maintain their accreditation, auditing, and renewals.

- Commodity-specific schemes: Concessional schemes also exist for specific commodities to enable vehicles to exceed prescribed mass limits under specific circumstances, for example, the movement of grain (Grain Harvest Management Scheme in NSW, VIC, QLD and SA) or livestock (Livestock Loading Schemes). These schemes are an industry necessity from a practical point-of-view and risks are managed due to the seasonal operation of the freight task. Eligible vehicles must operate under the scheme's conditions and only travel on approved routes for that vehicle type as per any road manager conditions. Some of these commodity-specific schemes may permit mass concessions higher than CML.

[6] Refer to the NHVR website for further details on all general access vehicle mass and dimension limits, at https://www.nhvr.gov.au/road-access/access-management. Also note that some vehicles are allowed general access at different dimensions (e.g. PBS Level 1 vehicles can operate at 20 m long).

- Access authorisation by notice: Operators may access specific parts of the road network under a notice. A notice is published in a Commonwealth Government gazette that notifies operators that certain types of vehicles have been granted access to specific roads under certain conditions. Notices can be national or involve one or more jurisdictions and require the NHVR to work with road managers to agree on the terms of the notice. Operators prefer notices as they remove the need for individual vehicle permits and provide more access certainty. Operators may be required to obtain permits to travel on roads that connect to routes identified in notices (often referred to as the 'last mile').

- Access authorised by permit: Heavy vehicle permits grant a vehicle access to a particular route or network, allowing operators to operate above the prescribed general access limits. To receive a permit, an operator must apply to the NHVR. The NHVR will assess the vehicle and determine who the relevant road managers are (e.g., state and territory road authorities and local councils). The NHVR refers the application to the relevant road manager(s) to gain consent to use the route. Relevant road managers will consider the application and provide their decision to the NHVR. If all road managers provide consent, the NHVR will issue a permit. This process can take up to 28 days and sometimes longer. Operators have identified that the permit application process is administratively cumbersome, often uncertain and inconsistent and takes significant time to make decisions. The NHVR has set a goal of targeted elimination of permits and a future where permits are required by exception rather than as a rule.[7] ITMM has also set a 50 per cent permit reduction target in three years and 90 per cent in five years.

- Performance Based Standards (PBS) Scheme: Operators can also take advantage of the PBS scheme administered by the NHVR, which enables industry to use the latest systems and technologies to design innovative vehicles for specific freight tasks to operate on suitable networks for their level of performance. Most PBS vehicles have access to specific road networks. PBS Level 1 vehicles (up to 20 m in length) have recently been granted general access for GCMs less than the GML for the PBS vehicle combination. Under the HVNL, PBS vehicles can receive a range of exemptions, including vehicle length, height limitations, and overall vehicle mass restrictions.[8]

Given considerable improvements in vehicle safety and efficiency over the last several decades, industry has argued that there is a strong basis for additional modest increases to mass and dimension limits for general access vehicles to better reflect enhancements to road safety and support the growing freight task. Despite the various schemes and mechanisms that allow operators to take advantage of higher mass and dimension limits under specific circumstances, feedback from industry suggests that requirements to access these schemes create a significant administrative burden, take time, and, in some instances, create uncertainty and inconsistency of access decisions across different road networks.

[7] Refer to the NHVR (2020), *Heavy Vehicle Productivity Plan 2021 – 2025* and NTC (2019), *Easy access to suitable routes Issues Paper* and the NHVR website for further details on the permit process.

[8] Typically, PBS vehicles have individual axle group mass that are the same as prescriptive vehicles, however PBS combinations are allowed increased Gross Combination Mass (GCM) compared to the prescriptive fleet. The additional GCM often comes from the increased vehicle dimensions and additional axle groups.

Options presented in this Decision RIS aim to address several key issues relating to general access and industry regulatory burden and productivity, including:

- **Despite the fast-growing national freight task and improvements in vehicle safety over time, this has not been reflected in expanded general access** – Most general access limits have not changed since the 1990s. However, considerable advancements in the heavy vehicle fleet have made them considerably safer. For example, the introduction of crash avoidance technologies (e.g., braking and vehicle stability systems), protective technologies (e.g., cabin strength standards and seatbelt and fatigue monitoring devices) and general safety features (e.g., improved cabin design, and better suspensions, such as 'road friendly suspension') have made a proven contribution towards reducing the number and severity of heavy vehicle crashes.[9] In parallel, the national road freight task has grown significantly and is likely to grow by another 77 per cent by 2050.[10] As such, the HVNL review has identified that general access conditions may be amended to better optimise productivity, safety and sustainable infrastructure factors, given advances in vehicle designs that ensure safety and minimise pavement wear.
- **The current access regime is complex and challenging for operators to understand compliance requirements, available concessions, available networks, and access requirements** – The many pathways available to operate above general mass and dimension limits create considerable complexity for operators navigating the current access regime. Whilst the diversity of heavy vehicle operations is recognised, there is considerable red tape in seeking access, and operators must sometimes follow lengthy and onerous processes and meet specific requirements, which can have a high administrative cost. For example, the general access length limit for semi-trailers and prime movers is 19 m under the law. However, some vehicles have general access with 20 m limits, for example, PBS Level 1 vehicles and truck and dog vehicles that come under a new notice. Similarly, for vehicle height, certain commodities, such as livestock carriers, can operate with general access at 4.6 m under certain conditions. There are also notices for 4.6 m height road networks for vehicles such as curtain-siders (or taut liners), which have operating requirements to address the higher centre of gravity and consequent roll-over risk. Notices such as these vary by state.
- **There is a potential missed opportunity to improve operator productivity in prescriptive vehicle combinations** – The current access arrangements under the HVNL aim to balance the safety risk, amenity, and road wear costs of heavy vehicles with the need for productive and efficient freight movements. Ideally, the controls on heavy vehicle access should enable access to roads close to 'optimal' levels – where the marginal social benefits balance the marginal social costs of access.[11] The pathways to access higher mass and dimension limits described above effectively manage risk for higher risk freight movements, allowing road managers to assess vehicle movements on a case-by-case basis, outweighing the cost of compliance to operators. However, there is a case for exploring red tape reduction surrounding low-risk, prescriptive combinations that are regularly granted access under these schemes and, as such, already operate widely on the national freight network. Finally, modest improvements to general access

[9] NSW Government (2020), *Safety features and technologies in heavy vehicles,* and NHVR (2020), *Vehicle Safety and Technology Uptake Plan.*

[10] BITRE (2022), *Australian aggregate freight forecasts – 2022 update (summary),* p.3.

[11] See the Kanofski report to ministers for discussion regarding the philosophical approach to access decision making of roads fulfilling a significant economic purpose of moving people and freight, an approach adopted by the Tasmanian Government, online at https://www.infrastructure.gov.au/sites/default/files/documents/ken-kanofski-advisory-report-tominister-on-hvnl-public-release-version-accessible.docx.

limits could provide efficiency and productivity benefits and reduce the need for individual notices and schemes.

2.2.5 Problem statement 3: Confidence in the robustness of the current National Heavy Vehicle Accreditation Scheme could be improved; there is a lack of consistency or recognition between accreditation schemes and a regulatory environment where operators are faced with multiple and duplicative assurance audits.

The NHVAS provides an alternative pathway for complying with certain HVNL requirements. It is a national formal process for recognising operators with robust safety management systems administered by the NHVR. Accreditation schemes such as NHVAS are intended to provide confidence and trust that a regulated party can comply, and is complying, with the law or other requirements.[12]

In 2018, Fellows Medlock and Associates reviewed heavy vehicle accreditation schemes as commissioned by the NHVR (The Medlock Report).[13] The report concluded that available evidence pointed to improvements in operational safety performance through membership in an accreditation scheme (or multiple schemes). This was evident in lower crash rates, insurance claim rates, and the incidence of non-conformities and major defects. However, the report found limitations with the current accreditation model and opportunities for improvement. Similar concerns were later echoed by stakeholders in a consultation held by Mr Kanofski.

Key concerns were related to the quality and consistency of audits across schemes, lack of mutual recognition between schemes and lack of recognition of accreditation standards by enforcement authorities.

The recommendations endorsed by ministers in the Decision RIS (2023) enabled a high-level regulatory framework for a new NHVAS, which included a compulsory SMS accreditation requirement and a new audit framework. Importantly, changes set for future law allow ministers to approve a NAS developed by the regulator. Additionally, the law will set new SMS standards to improve audits and audit outcomes for operators in SMS-based accreditation schemes.

This Decision RIS aims to build on previous work to improve the NHVAS and address the following key limitations of the current approach:

- **Audits can be improved to increase reliability and confidence** – The current NHVAS auditing regime checks compliance with NHVAS Business Rules and Standards for relevant modules (mass, maintenance, fatigue). However, NHVAS audits are not based on outcomes and proactive risk management, limiting their effectiveness in promoting continuous improvement of operators' systems over time. Furthermore, there are concerns that current audits may not provide sufficient assurance regarding safety competency and outcomes, leading to operators facing multiple third-party customer audits across the chain of responsibility. The current approach does not align with international standards prescribed under ISO 19011 Guidelines for Auditing (Safety) Management Systems. This assessment outlines new changes to the law that empower responsible ministers to approve the regulator's development of a NAS for the purposes

[12] NTC (2019), *Assurance Models Issues Paper.*

[13] Fellows Medlock and Associates (2019), *Analysis of Heavy Vehicle Accreditation Schemes in Australia.*

of accreditation. While the law will not specify IS019011, the NTC can confirm that the regulator has agreed to construct its NAS based on this international best practice standard. Adherence to IS019011 also ensures that NHVAS audits, auditors, and audit programs reflect measures to assess the operator's safety system's effectiveness in achieving the accreditation scheme's desired outcomes.

- **Auditor competency requirements may not be fit-for-purpose for the new NHVAS SMS requirements** – The new HVNL will impose stricter auditing requirements to align with the enhanced NHVAS. Under the new law, NHVAS audits will be carried out under the oversight of the NAS. The NAS will facilitate outcomes-based reviews of operators' SMS for new NHVAS entrants. Existing NHVAS operators will have three years from the commencement of the new law to develop their NHVAS-compliant SMS. For operators applying for or maintaining NHVAS accreditation, the level of independent, robust, and comprehensive audit processes will be determined based on the operational-specific risks associated with their unique operations. This demonstrates the scalability of the NHVAS and SMS-based auditing. Auditors must be capable of conducting SMS audits for operations of varying sizes, types, nature, and freight-task complexities. An impartial and competent third-party auditor instils confidence and trust in the assurance system, thereby giving value to the assurance scheme.[14] The effectiveness of an operator's SMS in achieving desired safety outcomes and ensuring system compliance will require auditors with additional expertise and activities beyond the current audit framework. Recent stakeholder feedback highlights that existing competency requirements will need significant scaling up to meet the demands of the enhanced NHVAS regime and the NAS.
- **There is a lack of consistency and capacity for mutual alignment of accreditation schemes across Australia** – In Australia, heavy vehicle operators can participate in regulatory accreditation schemes to obtain certain regulatory concessions. For example, operators using restricted access vehicles in Western Australia must join the Western Australian Heavy Vehicle Accreditation Scheme (WAHVAS). Similarly, operators looking for regulatory concessions in HVNL states can join the NHVAS, which is administered by the NHVR. This means operators involved in cross-border freight tasks may need to join multiple schemes to access different concessions. This can lead to additional audit requirements and increases the financial and administrative burden on operators, for instance, by paying multiple scheme membership and audit fees, as well as increased time commitments.[15]

2.3 Need for government intervention

The rationale for government action to implement the reforms in the Consultation RIS (2023) remained unchanged from the rationale presented in the previous Consultation RIS (2020) and Decision RIS (2023). This is based on the belief that governments have a responsibility to attempt to protect road users in the community.

We asked stakeholders whether we had provided sufficient evidence to support the case for government intervention in response to the Consultation RIS (2023) and what other factors should be considered. Below is feedback from stakeholders, followed by justification for government intervention.

[14] NTC (2019), Assurance Models Issues Paper.
[15] Ibid.

2.3.1 Stakeholder feedback

Most stakeholders who responded to the need for government intervention believed that a strong case had been made and an intervention was justified. Therefore, the changes in the justification for government intervention in this Decision RIS aim to simplify and strengthen this argument.

2.3.2 Justification

Heavy vehicles are involved in a disproportionate number of severe crashes due to their size, time on the road and distance driven. These crashes tend to be more severe than those involving light vehicles. In the year to June 2023, 14.5 per cent of all fatal crashes involved heavy vehicles.[16] However, it's important to note that this statistic doesn't necessarily mean the heavy vehicle driver is at fault. It is estimated that in approximately 70-80 per cent of fatal crashes involving heavy vehicles, the driver was not at fault.[17] These crashes often result in death or severe injury, particularly for vulnerable road users such as pedestrians, cyclists, and drivers of passenger cars, due to the size and mass of the heavy vehicle.

The costs associated with a heavy vehicle crash extend beyond direct costs to road users. Costs can be indirect and include broader socioeconomic impacts, ongoing medical costs, environmental costs and costs relating to road closures, which may further impact access for emergency services vehicles at critical times. As such, governments are fundamentally obligated to ensure their citizens' public safety and well-being. Measures to achieve this outcome must be justified regarding benefits exceeding costs.

Self-regulation of heavy vehicle activities is not considered an acceptable alternative to government regulation. This is because the structure of the heavy vehicle industry is typically commercial, market-oriented, and naturally competitive. If not regulated effectively, activities of markets and industries can lead to perverse outcomes. Often, a small cohort of unscrupulous operators may seek an unfair competitive advantage by ignoring regulations intended to support safety and compliance.

Heavy vehicles also create a range of impacts in their day-to-day operations. Key examples are impacts on road infrastructure, including pavement wear, traffic congestion, and the environment.

The HVNL serves as a national regulation for overseeing the use of heavy vehicles on roads. Its primary focus is to ensure the safety of heavy vehicles and their drivers, as well as to minimise risks to public safety by ensuring operators utilise suitable routes. The HVNL also aims to manage the impact of heavy vehicles on the environment, road infrastructure and public amenity. The Decision RIS seeks to identify opportunities for improving critical aspects of the HVNL to reduce the risks associated with heavy vehicles and to safeguard other road users in the community.

[16] Derived from BITRE (2023), *Road deaths in crashes involving heavy vehicles – quarterly bulletin, Apr-Jun 2023,* online at https://www.bitre.gov.au/sites/default/files/documents/heavy_bulletin_jun2023.pdf.
[17] Commonwealth of Australia (2021), *National Road Safety Strategy 2021-30 and NTI Data.*

3 Objectives and potential barriers to reform

Key points

- This Decision RIS presents a series of policy proposals, the outcomes of which aim to help improve the HVNL so that it better meets its object.
- Overcoming and responding to existing and emerging constraints and barriers will be critical to ensuring that proposed reforms successfully address the problems identified in the previous chapter.

3.1 Purpose of the chapter

The purpose of this chapter is to outline:

- Objectives of reforms proposed in this Decision RIS; and
- Potential constraints that could impact the success of proposed reforms.

3.2 Objectives

This Decision RIS presents a series of policy proposals, the outcomes of which aim to help improve the HVNL to meet its overarching objectives across key policy areas, as set out below.

The HVNL has a single object with four component parts, set out as follows[18]:

> *The object of this Law is to establish a national scheme for facilitating and regulating the use of heavy vehicles on roads in a way that –*
>
> *a) promotes public safety; and*
>
> *b) manages the impact of heavy vehicles on the environment, road infrastructure and public amenity; and*
>
> *c) promotes industry productivity and efficiency in the road transport of goods and passengers by heavy vehicles; and*
>
> *d) encourages and promotes productive, efficient, innovative, and safe business practice.*

[18] Heavy Vehicle National Law (NSW), Chapter 1, Part 1.1, Section 3.

3.3 Potential barriers to successful reform

The Consultation RIS (2023) outlined a series of constraints that could impact the success of delivering policy proposals. Here, stakeholders were asked to identify any other impediments that could impact the successful implementation of the options presented.

Below is a description of stakeholder feedback, followed by an updated overview of potential barriers and constraints that may impact the success of the reforms proposed under this Decision RIS.

3.3.1 Stakeholder feedback

Stakeholders generally supported the barriers and constraints discussed in the Consultation RIS (2023), however in some cases, additional barriers to reform were raised for further consideration.

Several stakeholders suggested that while the intent of reforms was generally clear, their success may be limited by human factors relating to the driver workforce. The Bus Industry Confederation (BIC) commented that a shortage of drivers, driver retention, lack of skilled workers in the heavy vehicle sector, and an ageing driver workforce may limit the progress of reforms. Bonaccord Group suggested that the reforms would likely uniquely affect each heavy vehicle industry sector.

Various stakeholders have highlighted those external factors, such as the social and economic climate, that are likely to influence the success of industry reforms by imposing additional pressures. For example, the Transport Workers' Union (TWU) has underscored that escalating economic pressures have fostered a culture where industry feels compelled to work to the maximum number of allowable hours. The TWU maintains that this will continue to impact the extent to which changes to fatigue laws can enhance safety outcomes. Furthermore, a submission from a jurisdiction and police representative has cautioned about extraneous macroeconomic constraints, such as recent major weather events and the anticipated rise in heavier electric vehicles, as factors that may influence jurisdictional considerations of options affecting infrastructure, such as proposed mass increases and the impact on pavement wear.

Some industry stakeholders, including those from the Commercial Vehicle Industry Association of Australia (CVIAA) and individual drivers, argued that the success of reforms would depend upon clear and regular communication between the NTC and other reform bodies, as well as heavy vehicle transport companies, businesses, peak operators, and supplier associations. These stakeholders advocated for a routine consultation process, suggesting that awareness of reforms across the industry could be expanded with clear communication.

3.3.2 Barriers and constraints

The NTC agrees with the additional barriers raised by stakeholders in response to the Consultation RIS (2023) and suggests that they should be considered further in this Decision RIS.

Incorporating stakeholder feedback, constraints that could impact the success of the policy proposals set out in this Decision RIS are discussed below:

- **Changes to general access to the road network by increasing vehicle mass and dimension limits will impact road infrastructure** – For example, higher vehicles may increase the risk of strikes to overhead power lines, vegetation and bridges, and longer vehicles create potential swept path issues and result in short-stacking at rail crossings and intersections. Mr Kanofski noted that road managers, as the asset owners, are ultimately responsible for access decision-making and the performance of roads.[19] Additionally, road managers are generally concerned about the balance of heavy vehicle access, road degradation, and road funding. For instance, the Australian Local Government Association (ALGA) has stated that councils manage around 77 per cent of Australia's roads by length. In their 2023-24 pre-budget submission, they sought a commitment of $300 million per year for local governments to improve freight productivity on their road networks and support the implementation of the HVNL reforms. This commitment includes providing route and asset assessment support to councils to better understand the infrastructure condition for more informed access decisions and fixing, upgrading, and maintaining key route infrastructure to support increased productivity on first and last-mile freight networks.
- **Some matters explored in this Decision RIS are outside the influence of HVNL** – The HVNL aims to improve the Australian heavy vehicle industry's productivity, efficiency, and safety. The policy proposals in this Decision RIS are intended to ensure that the object of the law is met. However, some matters raised in the HVNL review process are outside the influence of HVNL. For example, the key determinants for heavy vehicle productivity are likely to be the prioritisation of infrastructure spending and efficient road pricing, which are beyond the scope of heavy vehicle regulation. Therefore, while the policy proposals in this Decision RIS are likely to assist in reducing red tape and minimising road safety risk, they will improve productivity, efficiency, and safety only to the extent enabled by the scope of the HVNL.
- **The HVNL's scope does not encompass the Northern Territory or Western Australia**, which means it has limited capacity to resolve issues in these states.
- **Labour availability and skills shortages are continually challenging issues for the freight and logistics industry –** Historically, the industry has often been viewed as labour-intensive, dangerous, and male-dominated. The COVID-19 pandemic exposed major labour shortages across the industry and presented challenges across supply chains, many of which persist today. A "two-speed crisis" has been identified, with immediate job vacancies and long-term structural issues, including high employee turnover, skills shortages, and an ageing workforce.
- **Australia's environmental, political and economic climate will likely influence the success of reforms to the HVNL.** Unforeseen weather events, continuing economic and cost of living pressures and other events can influence the extent to which reforms to the HVNL will deliver intended outcomes.
- **Some parts of the heavy vehicle industry are less exposed to communications regarding reforms to HVNL than others.** The success of reforms will depend upon clear and regular communication between the NTC and other reform bodies, heavy vehicle transport companies, business and peak operators and supplier associations.

[19] Note, third parties e.g. rail asset owners also make access decisions where there are interactions between their assets and the road network.

4 Fatigue management

Key points

- The purpose of this chapter is to outline the regulatory impact of policy options proposed in the Consultation RIS (2023) to improve fatigue management under the HVNL and present recommendations to ministers of reforms that should be progressed.
- Several reforms within the record-keeping and enforcement policy areas are recommended for progression.

4.1 Purpose of this chapter

The chapter describes feedback from stakeholders on the suite of policy options proposed in the Consultation RIS (2023) to improve fatigue management under the HVNL and presents recommendations to ministers for reforms that should be progressed through this Decision RIS.

The intent of each option is summarised below, followed by an overview of stakeholder feedback, and a response from the NTC. Recommended fatigue management policy reforms are presented in Section 4.10.

Record-keeping

There were two options proposed in the Consultation RIS (2023) to streamline record-keeping requirements:

- Option 1a: Removing duplicative prescriptive work diary requirements and streamlining offences.
- Option 1b: Remove administrative process requirements and offences.

These options are not mutually exclusive in that both could be implemented if desired.

Stakeholders broadly supported options to streamline record-keeping requirements under the HVNL, but some changes were suggested through submissions and follow-up targeted NTC consultation. The NTC has responded with several small but important changes to Options 1a and 1b. The primary focus of the changes is to achieve a balance between reducing administrative burden and streamlining offences while ensuring safety and a robust fatigue compliance approach.

4.2 Option 1a: Removing duplicative prescriptive work diary requirements and streamlining offences

This option proposed in the Consultation RIS (2023) focuses on removing duplicative prescriptive work diary requirements in the law (particularly around how information is recorded) and streamlining offences relating to these requirements.

Compared to the base case, this means:

- There would be a single requirement in the law that the driver must record the required information in the driver's work diary in the manner and at the time prescribed by the national regulation, like the current s296. There would be different risk categories and associated penalty levels for this single requirement to reflect the seriousness of the offending.
- Separate offence provisions for failing to record specific information (s298) when information is to be recorded (s297) and how information is to be recorded (s301) would be removed from the law.

4.2.1 Impact analysis

In the Consultation RIS (2023), the impacts of options proposed to simplify record-keeping requirements under the HVNL were assessed and compared using a multi-criteria analysis (MCA). This approach is commonly used where the full monetisation of costs and benefits is not appropriate or possible, according to OIA cost-benefit analysis guidelines. Due to a lack of information and data regarding the cost of compliance with current record-keeping requirements, a quantitative impact analysis has not been undertaken.

See Appendix B for a description of the approach to the MCA and an overview of impact categories.

The analysis demonstrated that the option would improve the current state. Drivers and operators required to complete a work diary would likely benefit from the consolidation of information required in the work diary as it would be likely to reduce the risk of errors by drivers, thereby reducing the risk of committing an administrative offence.

The results of the qualitative impact analysis presented in the Consultation RIS (2023) are shown below.

Table 1. Summary of Option 1a impact analysis

Overall Impact	Public Safety	Efficiency and Productivity	Regulatory burden to industry	Regulatory Costs to government	Asset Management	Flexibility and responsiveness
Improvement.	Neutral.	Neutral.	Improvement. Reduced time taken for record-keeping.	Neutral.	N/A	Improvement. NHVR has more flexibility to make changes to some aspects of the work diary

4.2.2 Stakeholder feedback

Option 1a was well supported by industry groups, including heavy vehicle peak bodies, bus industry representatives, agricultural groups, and smaller operators and drivers. These groups see the benefits of the option in reducing the regulatory burden on heavy vehicle drivers. Some groups suggested that it may aid in retaining professional and skilled staff and drivers. Two industry groups suggested that the positive impacts of the option on drivers

were understated. Industry groups highlighted recent driver consultation findings that indicated the WWD is complex and difficult to use.

Participating state and territory jurisdictions also recognised the potential benefits of this option for drivers and operators, supporting it either in full or in principle in submissions to the NTC. State and territories that provided in-principle support called for clarity regarding the exact requirements to be removed from the work diary and requested confirmation of governance arrangements. Some states and territories suggested sections that should be retained while certain prescriptions should be removed from others. Jurisdictions raised concerns that making some data points mandatory but not others could create confusion for industry and enforcement agencies. Jurisdictions also raised concerns that making data points optional sends a poor message to industry about the importance of maintaining full and accurate records.

Police groups were less supportive of this option, suggesting that the impact analysis underestimated the potential public safety risk. Police noted that the evidentiary value of WWD should not be undermined by any changes to the requirements. Police cited concerns that reducing mandatory requirements in work diaries would increase the safety risk to other road users as the ability to manage and enforce fatigue effectively would be reduced. Police felt this was incongruent with state or federal government road safety priorities and public expectations. Regarding streamlining offences, two police groups highlighted different penalties associated with s297, s298, s296 and s301. Police highlighted that these offences have different associated risk levels, making consolidation difficult.

The NHVR supported streamlining offences to a single offence that controls how diaries are filled out. The NHVR did not support changes to the WWD, noting that they may impact the evidentiary value of the WWD. The NHVR also raised the issue that adopting EWDs would address challenges relating to simplifying unnecessary information contained in the WWD.

4.2.3 NTC response

Feedback from stakeholders highlights the challenges for reforms to driver record-keeping requirements in the WWD. Stakeholders felt that WWD requirements must be sufficient to demonstrate compliance with driver work and rest hours and to uphold the evidentiary value of the WWD. In addition, reducing the administrative burden and complexity of WWD record-keeping requirements for drivers was seen as a high priority.

Based upon feedback received and additional consultation with stakeholders, several changes to Option 1a were made. Changes reduce the potential safety risks highlighted by police and participating states and territories. Conversely, they also reduce potential regulatory-based administrative benefits to industry. As a result, the qualitative impact assessment will likely remain unchanged without a substantial shift in improvement from the current record-keeping requirements as analysed and presented in the Consultation RIS (2023).

4.2.4 Concluding comments and recommended option

It is recommended that a revised proposal be made that achieves a policy intention similar to Option 1a.

Revised Option 1a:

- Make recording the day of the week on the Work Diary (WD) daily sheet not subject to an offence under the HVNL. The field for day of the week would be retained on the WD

daily sheet, but completing the field would not be mandatory under the instructions in the WD.

- Make recording the total work and rest hours on the WD daily sheet not subject to an offence under the HVNL. The fields for total work and rest hours would be retained on the WD daily sheet, but completing the fields would not be mandatory under the instructions in the WD.
- Introduce a "default for the hours" option in the WD. The default would be standard hours for a solo driver of a fatigue regulated heavy vehicle. A driver would only be required to record their hours options on the daily sheet if they operate under standard hours for a fatigue regulated bus, accreditation hours (including under an Alternative Compliance Option), or exemption hours.
- Move the following requirements to regulations and consolidate the offences under 'Recording information under the national regulations – general' (s296).
  - How information is to be recorded (s301) - noting that some requirements will be removed from the law altogether and covered in the WD instructions only
  - Failing to record specific information regarding odometer reading (s298)
  - Time zone of a driver's base must be used (s303).
- Retain the separate offence for information is to be recorded at the start of work (s297).

This revised Option 1a is described in more detail below.

The primary purpose of the proposed changes is to ensure that only the record-keeping requirements necessary to ensure the law is enforceable are included in the HVNL. Other 'non-essential' requirements should be removed from the law and marked as optional for the driver to complete in a WWD. This approach is already taken in the current WWD, with fields such as "number plate change and comments" and "calculate your work and rest hours" marked optional. Drivers are not fined for not completing or making a mistake in the optional fields in a WWD. **The proposed additional optional fields are the day of the week and total work and rest**.

It is also proposed that there be **a default for the hours option**. The default would be standard hours for a solo driver of a fatigue regulated heavy vehicle. A driver would only be required to record their hours options on the daily sheet if they operate under standard hours for a fatigue regulated bus, accreditation hours (including under an Alternative Compliance Option), or exemption hours. This is similar to the approach taken for driving arrangements in that the driver only has to indicate when they are working under two-up arrangements (i.e. the default is solo driver arrangements). Having default information means less opportunity for a driver to be fined for forgetting to 'tick a box'.

It is noted that the proposed changes would require changes to the WWD instructions to take effect. As part of the implementation of the 'default hours option', work diary instructions would need to be revised to clearly communicate to drivers the effect and operation of the default hours option. It's intended that there would be an offence provision in the amended HVNL covering non-compliance with work diary instructions.

Other proposed changes relate to how information is recorded in the WWD, including removing from the law some of the detailed requirements that are better placed and already covered in the WWD instructions. The detailed requirements that will be removed from the law are:

- Reference to a daily sheet that has not been cancelled *by the Regulator* (see option 1b)
- Using sheets in turn from front (to be covered in the WWD instructions)

- Writing with enough pressure to be readable on duplicate sheets (to be covered in the WWD instructions)

Many work diary requirements will be moved from the primary law to regulations without changes to the requirements themselves.

However, the offences for these requirements will be consolidated under s296 where possible. These include s298, s301 and s303. Information to be recorded immediately after starting work (s297) will remain separate to ensure the different risk levels associated with failing to comply with these requirements are reflected in the penalty level. Requirements relating to obtaining a WWD and the form of the WWD will also be moved to regulations, along with counting time requirements. Penalty levels for these offences will be reviewed as part of the penalty review project.

4.3 Option 1b: Remove administrative process requirements and offences

This option focuses on removing unnecessary administrative processes from the law. Compared to the base case, this means:

- Requirements for drivers and record keepers, if a work diary is filled up, lost, stolen, or destroyed, are removed from the HVNL
- The requirement to keep supplementary records if a work diary is filled up, lost, stolen, or destroyed would be retained in the HVNL
- The format of supplementary records would be defined by the NHVR.

4.3.1 Impact analysis

A qualitative multi-criteria impact analysis was used to assess the impacts of options proposed to simplify record-keeping requirements in the Consultation RIS (2023). A quantitative analysis was not undertaken due to insufficient data and information.

The analysis demonstrated that Option 1b would improve the current state and identified an opportunity to streamline the law, reduce red tape and ensure the right balance of record-keeping requirements where a work diary is lost or stolen.

The table below presents the results of the multi-criteria analysis as presented in the Consultation RIS (2023). See Appendix B for a description of the approach to the MCA and an overview of impact categories.

Table 2. Summary of Option 1b impact analysis

Overall Impact	Public Safety	Efficiency and Productivity	Regulatory burden to industry	Regulatory Costs to government	Asset Management	Flexibility and responsiveness
Improvement.	Neutral. The requirement is being enforced at a low level now with limited	Neutral	Improvement. Limited evidence to suggest that drivers and	Neutral.	N/A	Neutral.

	evidence to suggest that this is having an adverse impact on road safety.	operators are returning/reporting stolen or lost diaries now; however some burden may be removed.

4.3.2 Stakeholder feedback

There was a varied level of support from stakeholders for Option 1b.

Option 1b received strong support from industry groups, including heavy vehicle peak bodies, bus industry representatives, agricultural groups, and smaller operators and drivers. Some large industry groups believe that the positive impacts of this option have been understated and that the reduction in regulatory burden to industry would be significant. One large industry group suggested that this option should be implemented through a minor new policy process rather than an option in a major review.

Participating states and territories provided a varied response to Option 1b. Two participating states and territories were not supportive due to concerns around drivers using multiple diaries if the requirement to notify the NHVR of a lost or stolen diary is removed. Another jurisdiction was partially supportive but wanted the impacts of the change to be tested for adverse outcomes. One jurisdiction fully supported the option. There was some support amongst these stakeholders to streamline the administrative process requirements relating to what a driver must do if a lost or stolen written work diary (WWD) is found or returned. Additionally, there were suggestions among states and territories that the development of a national database for WWD/ EWDs would be required, which could support the identification of fraudulent activity.

Police opposed aspects of this option. Like the states and territories, police raised concerns around the risk of fraudulent behaviour such as manipulation of work and rest hours by drivers using parallel work diaries if provisions and requirements around lost, stolen or exhausted work diaries were removed, and disagreed that public safety would be unaffected. There was support among police for a transparent, national, real time work diary management system, via electronic register, which would help to identify where multiple diaries are in use at one point in time.

The NHVR supported this option in principle, acknowledging that the current process is burdensome for industry and the regulator. The NHVR emphasises that adoption of EWDs provides a simpler and less burdensome approach to supporting the recording of work and rest hours and that NHVR platforms including the Safety and Compliance Regulatory Platform (SCRP) and Roadside Compliance Monitoring Solution (RCMS) could be utilised to support compliance of fatigue record-keeping, rather than the creation of another database.

4.3.3 NTC response

As discussed above, feedback received from stakeholders on Option 1b was varied. Industry stakeholders supported the option, while states, territories and enforcement agencies did not support the complete removal of these administrative processes from the law. However, there was some support amongst these stakeholders to streamline the administrative process requirements relating to what a driver must do if a lost or stolen WWD is found or returned.

4.3.4 Concluding comments and recommended option

Based on the feedback received, an alternative proposal is recommended that achieves a similar policy intention to Option 1b.

Revised Option 1b:

- Retain the legislative requirements around WWDs that are filled up, lost, stolen, or destroyed. Drivers would still be required to notify the Regulator in the approved form of that happening (s306).
- If the WWD is found or returned after a replacement work diary has been issued, the driver will still be required to notify the Regulator in the approved form and to cancel any unused daily sheets in the WWD. However, they will no longer be required to return it to the Regulator (i.e. remove s308(1)(b)(ii) and 308(1)(c))).
- Requirements relating to what the Regulator will do with returned diaries will also be removed (308(2)).
- Requirements relating to returning an existing WWD with the application for a new one (s339(3)) will also be removed and replace with a requirement for the driver to cancel any unused daily sheets in the existing WWD.

These changes will still allow authorised officers to check compliance with work diary and supplementary record requirements, and the Regulator to monitor the issuing of work diaries in the future.

The NTC acknowledges that some stakeholders have expressed a preference for creating formal arrangements to track work diaries, such as a database of work diaries, and that the NHVR would be best placed to do this. This feedback has been noted and taken into consideration during the development of the proposal to streamline these requirements. The aim is to ensure that the proposed changes do not undermine the potential to develop a database in the future. However, it is important to note that the development of a work diary database is not required for this option to proceed.

Scope of Fatigue Regulated Heavy Vehicles (FRHVs)

Options to change the scope of fatigue regulated heavy vehicles were included in the Consultation RIS (2023) to consider the impact of changes to the cohort of vehicles included under prescriptive fatigue requirements. Broadly, there was low support from stakeholders to change the scope of FRHVs, with many stakeholders calling for a better understanding of the fatigue risk posed by vehicles between 4.5 tonnes and 12 tonnes.

Five options were proposed to change the scope of FRHVs:

- **2a)** Prescriptive fatigue requirements for HVs >12 tonnes only, full work diary requirements for HVs >12 tonnes.
- **2b)** Prescriptive fatigue requirements for HVs >12 tonnes only, ‘lite’ diary requirements for lower risk operations.
- **2c)** Prescriptive fatigue requirements for all HVs over 4.5 tonnes, full work diary requirements for all operations.
- **2d)** Prescriptive fatigue requirements for all HVs over 4.5 tonnes, work diary exemption for local work (all HVs)

- **2e)** Prescriptive fatigue requirements for all HVs over 4.5 tonnes, 'lite' work diary requirements for lower risk operations.

4.4 Impact analysis

Impact analysis conducted as part of the Consultation RIS (2023) highlighted that changes to the scope of FRHVs would have varying impacts for operators of different cohorts of freight vehicles. Namely, vehicles over 12 tonnes, vehicles over 12 tonnes undertaking local work <100km, and vehicles between 4.5 tonnes and 12 tonnes. These options are also likely to positively impact road safety, noting that a direct causal link between fatigue management intervention and safety outcomes is difficult to demonstrate. A summary of findings from the qualitative analysis conducted as part of the Consultation RIS (2023) is provided below:

- It can be assumed that by expanding the scope of vehicles required to manage fatigue through prescriptive work and rest hours (currently the best available mechanism to measure and mitigate fatigue-related risks), all options considered under this reform area have the potential to improve road safety outcomes by reducing fatigue-related crashes.
- All options would have the lowest impact on the fleet of heavy vehicles over 12 tonnes (22 per cent of total heavy vehicle fleet[20]). This is because these vehicles are already subject to fatigue requirements under the schedule of standard hours, which requires completing a work diary and retaining work diary records. Only Option 2e, has any implication for this cohort of vehicles whereby introducing the 'lite' work diary could reduce the time taken to record work and rest times for vehicles considered 'lower risk' (e.g., undertaking daytime operations).
- There would be considerable impact for vehicles over 12 tonnes undertaking local work (i.e., operating <100km from base), which currently have no requirement to maintain a work diary—approximately 47 per cent of the heavy vehicle fleet.[21]
- There would be significant implications for the cohort of vehicles between 4.5 tonnes and 12 tonnes (31 per cent of the heavy vehicle fleet[22]). These vehicles are not currently subject to prescriptive work and rest rules, work diary requirements, or record-keeping requirements.
- There is an impact on bus drivers in the removal of the work diary exemption for local work (<100km).

Quantitative breakeven analysis was also conducted as part of the Consultation RIS (2023) to understand what percentage reduction in fatigue-related heavy vehicle crashes would be required to offset the costs associated with each proposed option. While the analysis was constrained by limitations in terms of data availability and lack of evidence to draw a strong link between work diaries and crash rates, key findings are detailed as follows:

- The cost estimates show that proposed changes to expand the scope of FRHVs will result in an increased operator compliance burden in all the proposed options compared to the base case.
- No estimated breakeven rate could be calculated for Option 2a, 2c and 2e because the estimated incremental costs of these options were greater than the total cost of fatigue-related heavy vehicle crashes. This means that crashes would need to be reduced by

[20] NTC (2019), *Effective Fatigue Management*, p.31.
[21] Ibid.
[22] Ibid.

greater than 100 per cent to break even with the costs associated with operator work diary compliance burden, which is impossible.

- Current fatigue-related crash rates would need to reduce by 84 per cent for Option 2b to deliver a positive net economic benefit and 72 per cent for Option 2d to do the same. These are substantial crash reductions that would be challenging to achieve in reality. Both options are characterised by a comparatively lower operator compliance burden of filling out work diaries.

The following sections provide stakeholder feedback in response to the options and analysis, and the NTC's response is provided for all options collectively.

4.5 Stakeholder feedback

Peak industry bodies were generally not supportive of options to alter the scope of FRHVs. These groups opposed options to increase and change work diary requirements for vehicles >12 tonnes (Options 2a and 2b) amid concerns that this would create a high additional cost burden for operators and that it would fail to address fatigue issues in a largely unregulated 4.5 tonne to 12 tonne cohort. Representatives from the bus industry also rejected these proposals due to the additional administrative cost burden it would place on bus operators. In contrast, representatives from the agribusiness sector raised the issue that, unlike other commercial operators where the additional costs can be passed on to consumers, those in the 'primary industry' transport sector cannot transfer the increased transport cost. These operators would be forced to absorb the costs in an already low-margin industry.

One peak industry body provided support for Option 2d, arguing that evidence[23] has shown that fatigue is a substantial or major problem for vehicles under 12 tonnes undertaking local work, pointing to extending the level of prescriptive requirement to cover 4.5 tonne to 12 tonne vehicles. The peak body suggests that Option 2d would deliver strengthened regulation at the lowest cost to industry.

Most peak industry bodies also rejected Options 2c to 2e on the basis that there is little credible evidence to suggest that a fatigue safety problem exists for heavy vehicles between 4.5 tonnes and 12 tonnes, and that the additional cost burden for operators is too high. However, some smaller industry representatives support the proposals, stating that a 'one-size-fits-all' model would reduce complexity by simplifying compliance training and managing drivers across a multi-tonnage vehicle fleet.

Participating states and territories also generally did not support proposals to change the scope of FRHVs. Most states and territories rejected the proposals on the basis that the Consultation RIS (2023) failed to make a sufficient case that the proposal would achieve road safety benefits that outweigh the costs of implementation and that the cost to drivers and operators, including bus fleets under this proposal would be significant, and called for detailed analysis of cost impacts. States and territories also raised the issue that introducing the concept of 'lite' work diaries and 'lower risk' operations creates additional complexity and is poorly defined. Some states and territories supported the consideration of an expanded scope of FRHVs but considered it inappropriate for industry operators outside the scope of current fatigue regulations to be onboarded by adopting a retrograde system of written record-keeping. States and territories indicated such an approach may disincentivise the

[23] Friswell, R, A Williamson and N Dunn (2006), *Road transport work and fatigue: a comparison of drivers in the light and long distance heavy vehicle road transport sectors.*

uptake of EWDs. Some states and territories called for an additional option to expand the scope of FRHVs to above 8 tonnes.

Police representatives provided mixed feedback on the proposals. Some rejected the proposals, while others provided conditional or full support. Where support was provided, this was on the basis that it would bring the definition of an FRHV in line with the GVM for Fatigue Regulated Buses (FRB) and would improve road safety through greater fatigue management of all heavy vehicles. One police group supported the proposals in principle. However, it raised the issue that without a comparable increase in enforcement capacity, there will likely be no effective change as current enforcement practices would likely continue. Additionally, there would likely be a reduction in the enforcement of high-risk vehicles due to the allocation of finite resources across an expanded fleet.

The NHVR did not provide a definitive view of any option, stating that further work is required to understand the fatigue risk posed by heavy vehicles between 4.5 tonnes and 12 tonnes before any changes to the scope of FRHVs could be supported. The NHVR also argued that more work is needed to identify the nature of operations of the sectors that will be captured by this change.

4.6 NTC response and concluding comments

None of the options proposed within the scope of FRHVs are recommended for further analysis or exploration at this stage, maintaining the Base Case 2 is the NTC's preferred position. The qualitative and quantitative impact analysis conducted in the Consultation RIS (2023) had methodological limitations, and the analysis yielded limited evidence to support any of the options. Overall, stakeholders expressed agreement with the possible impacts of the options presented in the Consultation RIS (2023).

There is insufficient evidence (in terms of fatigue incidents) that fatigue risk is not being adequately managed under the current legislative arrangements. Therefore, the regulatory burden associated with the proposed prescriptive rules cannot be justified. Allowing for reduced work diary requirements for lower risk operations did not sufficiently reduce the regulatory burden, and stakeholders generally thought this would add complexity to the fatigue management regime.

The NTC explored alternative data options from universities and insurance companies, which did not yield additional information or datasets that could be analysed to enhance our understanding of heavy vehicle fatigue crash risk by different vehicle weights and freight tasks and impacts of proposed interventions.

Although some transport agencies wanted to test the case for changing FRHVs to > 8 tonnes, no evidence was provided to support the need for such a change.

Notwithstanding the above, the definition of a fatigue regulated heavy vehicle will be moved to regulations so it can be more readily changed if there is evidence that additional HVs should be covered by the prescriptive rules in the future. This aligns with the approach to increase responsiveness and adaptiveness of the HVNL set out in the D-RIS (2023).

In the meantime, operators of HVs between 4.5 and 12 tonnes must manage fatigue risk under the HVNL primary duty and WHS legislation.

Enforcement

Options to enable a more risk-based approach to enforcement were included in the Consultation RIS (2023) to support industry in seeking more proportionate responses to minor work and rest and administrative offences that do not impact on safety.

The proposed options for consultation were:

- Option 3a: Limit on the timeframe for issuing a work and rest breach infringement
- Option 3b: Risk profile for work and rest breaches
- Option 3c: Enable a review of fines for 'trifling' work diary offences
- Option 3d: Driver defence for minor administrative errors.
- Option 3e: Support the use of formal warnings for administrative offences relating to work diaries.
- Option 3f: Allow for a formal education option in lieu of a fine.

Regarding the Consultation RIS (2023), the Office of Impact Analysis (OIA) advised that under its guidelines, changes in offences are not within the scope of the regulatory impact assessment process, and therefore the analysis conducted to assess enforcement options focused on the advantages and disadvantages of each option compared against the base case. A summary of findings from this analysis is presented against each of the options.

4.7 Options 3a to 3d

Four options within the fatigue enforcement proposals received limited support from stakeholders and will not be subjected to further analysis or consideration through this Decision RIS process. These include:

- Option 3a: Limit on timeframe for issuing a work and rest breach infringement
- Option 3b: Risk profile for work and rest breaches
- Option 3c: Enable a review of fines for 'trifling' work diary offences
- Option 3d: Driver defence for minor administrative errors.

4.7.1 Impact analysis

A summary of the advantages and disadvantages of these options as presented in the Consultation RIS (2023) is provided below:

Table 3. Summary of advantages and disadvantages of Options 3a to 3d

Summary of advantages	Summary of disadvantages
Option 3a: Limit on the timeframe for issuing a work and rest breach infringement	
Encourages risk-based approach to enforcement and may reduce regulatory burden for operators for minor work and rest breaches that no longer pose an immediate safety risk.	May encourage greater use of judicial system and may create an incentive for non-compliant behaviour by drivers, particularly in areas where the likelihood of being intercepted at the roadside within the timeframe is low.

Option 3b: Risk profile for work and rest breaches	
Encourages a risk-based approach to enforcement by building a more sophisticated risk-based approach for breach of work and rest rules.	Increases the complexity of the HVNL and may be more resource intensive than current state, requiring tracking of incidents to inform new breach levels.
Option 3c: Enable a review of fines for 'trifling' work diary offences	
Encourages a risk-based approach to enforcement by providing drivers with an opportunity to challenge fines.	May be more resource intensive, authorities may need additional time to review fines. There may also be implementation challenges in establishment of a national approach.
Option 3d: Driver defence for administrative errors	
Encourages a risk-based approach to enforcement by providing drivers with an opportunity to challenge fines.	May be more resource intensive, as an officer would need to consider the driver's defence when issuing a fine.

Stakeholder feedback in response to the option and qualitative analysis presented in the Consultation RIS (2023) is summarised below.

4.7.2 Stakeholder feedback

Option 3a

Option 3a focussed upon limiting the time period for which an infringement can be used as a compliance tool to 14 or 28 days. This was not supported by participating state and territory jurisdictions, police or the NHVR. Concerns raised include the unorthodox legal construction of the option, potential for increasing prosecutions for historical, low-level offences, and limitations on Authorised Officer discretion.

The NTC developed an alternative to option 3a to address the concerns raised. The alternative proposal would limit the timeframe for roadside inspections of a National Work Diary to 28 days, mirroring the scope of the 'compliance view' of an Electronic Work Diary. This alternative option is consistent with the intent of the Ken Kanofski Package Proposition 3.5 but avoids some of the legal concerns raised by jurisdictions or the perceived risk of increased driver prosecutions. Similarly, this alternate option does not impact officer discretion as it does not alter the available enforcement tools.

Participating State and Territory jurisdictions indicated a preference for a balanced mix of prescriptive and performance based compliance tools, with prescriptive requirements complemented by duties based requirements, over the models proposed in the Kanofski package.

Summary of survey results – Option 3a

In relation to Option 3a, stakeholders were asked the survey question "Which of the fatigue enforcement options do you agree would deliver a fairer regulatory approach?".

Eighty-four stakeholders from across several industry groups and sectors responded to this survey question. Key findings are as follows:

- Out of 20 responses, 60 per cent of business representatives either agreed or strongly agreed that this option provides a fairer regulatory approach, with 20 per cent in disagreement. (Note: 5 per cent of business representatives did not respond to this option)
- Out of 32 responses, 53 per cent of drivers either agreed or strongly agreed that this option provides a fairer regulatory approach, with 6 per cent in disagreement. (Note: 25 per cent of drivers did not respond to this option)
- Out of 19, 47 per cent of owner-operators either agreed or strongly agreed that this option provides a fairer regulatory approach, with 11 per cent in disagreement. (Note: 26 per cent of owner-operators did not respond to this option)
- Out of 13, 54 per cent of other stakeholders either agreed or strongly agreed that this option provides a fairer regulatory approach, with 15 per cent in disagreement. (Note: 8 per cent of these stakeholders did not respond to this option)

For further information on survey results, please see Appendix C.

Option 3b

Option 3b is not supported by stakeholders. There was general concern from most stakeholders, including participating state and territory jurisdictions, the police and industry, that Option 3b undermines the aim of the HVNL of simplifying the law by introducing unnecessary complexity and creating a costly and inflexible enforcement approach. Some stakeholders also state that there is a lack of data driven analysis to demonstrate that road safety would improve through the new set of breach levels, and that any further development of this option would need to explain how the risks associated with the option could be managed appropriately.

The NHVR also does not support Option 3b, agreeing with other stakeholders that the proposal would overly complicate enforcement and reduce flexibility. It suggests the proposal also has the potential to increase the duration of intercepts at the roadside, reducing the total number of vehicles that an authorised officer can intercept over time and reducing safety outcomes. It is the NHVR's view that risk profiling of work and rest breaches is best managed through regulatory operational policy rather than through legislative provisions.

Summary of survey results – Option 3b

In relation to Option 3b, stakeholders were asked the survey question "Which of the fatigue enforcement options do you agree would deliver a fairer regulatory approach?".

Eighty-four stakeholders from across several industry groups and sectors responded to this survey question. Key findings are as follows:

- Out of 20 responses, 50 per cent of business representatives either agreed or strongly agreed that this option provides a fairer regulatory approach, with 30 per cent in disagreement. (Note: 5 per cent of business representatives did not respond to this option)
- Out of 32 responses, 43.8 per cent of drivers either agreed or strongly agreed that this option provides a fairer regulatory approach, with 12.5 per cent in disagreement. (Note: 28.1 per cent of drivers did not respond to this option)

- Out of 19, 36.8 per cent of owner-operators either agreed or strongly agreed that this option provides a fairer regulatory approach, with 15.8 per cent in disagreement. (Note: 31.6 per cent of owner-operators did not respond to this option)
- Out of 13, 30.8 per cent of other stakeholders either agreed or strongly agreed that this option provides a fairer regulatory approach, with 15.4 per cent in disagreement. (Note: 7.7 per cent of these stakeholders did not respond to this option)

For further information on survey results, please see Appendix C.

Option 3c

There was mixed feedback from stakeholders on Option 3c. Option 3c was well supported by small industry groups, including bus industry representatives and heavy vehicle drivers and operators; however, it was less supported by participating state and territory jurisdictions and police. Industry groups supported options that reduce work and rest requirements for heavy vehicle drivers and operators. Peak heavy vehicle industry bodies also supported this option, but under some conditions.

Most state and territory jurisdictions did not support this option. Some jurisdictions indicated that they already had mechanisms in place that allowed for a review of infringements. Some state and territory jurisdictions emphasised that it is likely to increase regulatory burden on industry to initiate an administrative review or legal proceedings, and on the government and judicial system in undertaking reviews. Police were also not supportive of this option, arguing that the impact would be to limit the ability of authorised officers to respond to driver behaviour, resulting in adverse safety outcomes.

The NHVR supported this option in principle, suggesting that legal advice is needed to understand the extent to which HVNL may alter the operation of a jurisdiction's infringement legislation to provide reviews of trifling offences.

Summary of survey results – Option 3c

In relation to Option 3c, stakeholders were asked the survey question "Which of the fatigue enforcement options do you agree would deliver a fairer regulatory approach?".

Eighty-four stakeholders from across several industry groups and sectors responded to this survey question. Key findings are as follows:

- Out of 20 responses, 50 per cent of business representatives either agreed or strongly agreed that this option provides a fairer regulatory approach, with 20 per cent in disagreement. (Note: 5 per cent of business representatives did not respond to this option)
- Out of 32 responses, 46.9 per cent of drivers either agreed or strongly agreed that this option provides a fairer regulatory approach, with 6.3 per cent in disagreement. (Note: 25 per cent of drivers did not respond to this option)
- Out of 19, 57.9 per cent of owner-operators either agreed or strongly agreed that this option provides a fairer regulatory approach, with 5.3 per cent in disagreement. (Note: 26.3 per cent of owner-operators did not respond to this option)

- Out of 13, 46.2 per cent of other stakeholders either agreed or strongly agreed that this option provides a fairer regulatory approach, with 15.4 per cent in disagreement. (Note: 7.7 per cent of these stakeholders did not respond to this option)

For further information on survey results, please see Appendix C.

Option 3d

There was limited support for Option 3d with the exception of smaller industry groups which viewed the proposal as an opportunity to reduce regulatory burden on drivers and operators. Bus industry representatives also provided support, stating that drivers face harsh penalties for minor work diary infringements, sometimes harsher than the penalties given for dangerous driving activities. Heavy vehicle industry bodies generally supported the intention of this proposal although they provided support for other options as a preference.

The NHVR did not support this option as allowing for driver defence at the roadside may increase complexity for enforcement, as well as increased time required for intercepts. These issues were echoed in submissions from state and territory jurisdictions and police representatives.

Summary of survey results – Option 3d

In relation to Option 3d, stakeholders were asked the survey question "Which of the fatigue enforcement options do you agree would deliver a fairer regulatory approach?".

Eighty-four stakeholders from across several industry groups and sectors responded to this survey question. Key findings are as follows:

- Out of 20 responses, 65 per cent of business representatives either agreed or strongly agreed that this option provides a fairer regulatory approach, with 15 per cent in disagreement. (Note: 5 per cent of business representatives did not respond to this option)
- Out of 32 responses, 53.1 per cent of drivers either agreed or strongly agreed that this option provides a fairer regulatory approach, with 3.1 per cent in disagreement. (Note: 25 per cent of drivers did not respond to this option)
- Out of 19, 47.4 per cent of owner-operators either agreed or strongly agreed that this option provides a fairer regulatory approach, with 10.5 per cent in disagreement. (Note: 31.6 per cent of owner-operators did not respond to this option)
- Out of 13, 30.8 per cent of other stakeholders either agreed or strongly agreed that this option provides a fairer regulatory approach, with 30.8 per cent in disagreement. (Note: 7.7 per cent of these stakeholders did not respond to this option)

For further information on survey results, please see Appendix C.

4.7.3 NTC response and concluding comments

Option 3a and the alternative Option 3a proposed by the NTC were strongly supported by industry, however opposed by participating state and territory transport agencies, the NHVR

and police who favour maintaining the existing arrangements. Option 3a will not be progressed.

Options 3b, 3c and 3d will also not be progressed further due to limited support from stakeholders in response to the Consultation RIS (2023).

4.8 Option 3e: Support the use of formal warnings for administrative offences relating to work diaries

Under this option, the law would be amended to provide authorised officers with broader abilities to issue formal warnings. This could be applied to administrative offences relating to work diaries.

Compared to the base case, this means:

- Removal of the clause "The person has exercised reasonable diligence to prevent the contravention and was unaware of the contravention" from s590 of the HVNL.

A qualitative analysis conducted in the Consultation RIS (2023) found that the option may encourage a risk-based approach to enforcement by providing authorised officers with broader abilities to issue formal warnings and may mean drivers are less likely to receive a fine. However, implementation would require consideration of a formal warning national database.

Below is summarised stakeholder feedback on the option and qualitative analysis presented in the Consultation RIS (2023).

4.8.1 Impact analysis

The table below compares the advantages and disadvantages of Option 3e against the base case, as per analysis presented in the Consultation RIS (2023). See Appendix B for a description of the approach to the MCA and an overview of impact categories.

Table 4. Advantages and disadvantages of Option 3e

Option	Advantages	Disadvantages
Option 3e: Support the use of formal warnings for administrative offences relating to work diaries	▪ **Encourages a risk-based approach to enforcement –** Authorised officers would be provided with broader abilities to issue formal warnings, providing less complexity in decision making.	▪ **Implementation challenges –** To achieve the full benefits of this reform, a formal warning national database should be considered. Police stakeholders have indicated that they do issue warnings and cautions for work diary offences at the roadside. In some state and territory jurisdictions, police record these warnings within a database. However, if a driver receives multiple formal warnings from police and the NHVR across different state and territory jurisdictions, an authorised officer

will not have visibility of this roadside.

4.8.2 Stakeholder feedback

Stakeholders are broadly supportive of Option 3e.

Industry stakeholders are supportive of the proposal, which encourages officers to use discretion for lower-level offences by providing an additional form of sanction.

Participating state and territory jurisdictions are also generally supportive of this proposal, the majority providing full or partial support. Those that provide partial support advocate for the development of an accessible national database available to all officers in real time so that officers can determine whether prior warnings have been issued for similar offences. One jurisdiction recommends that the NTC should consult with jurisdictions on the scope of formal warning allowances.

Police agencies showed general support for the option. One noted that the use of formal warnings is already an important component of an officer's discretionary powers in their jurisdiction - in the 2022/23 FY, SA Police officers issued 2,342 infringement notices for heavy vehicle offences of which 1,043 were caution notices. This is a 45 per cent caution rate for heavy vehicle offences. Some police groups called for a national database if this option were implemented to enable officers to track traffic histories to inform considerations as to whether issuance of a warning is warranted and will achieve the desired improvement in a driver's behaviour and, ultimately, road safety.

The NHVR is supportive of the proposal, stating that the HVNL does not currently provide fully, flexible, fit-for-purpose enforcement options that achieve optimal safety outcomes, and therefore the NHVR supports reform on the use of formal warnings. Regarding a database to track formal warnings, the NHVR also suggests that there could be consideration of the use of the NHVR Safety and Compliance Regulatory Platform (SCRP) which is accessed and updated on the roadside in real time by NHVR Safety and Compliance Officers through the Roadside Compliance Monitoring Scheme (RCMS).

Summary of survey results – Option 3e

In relation to Option 3e, stakeholders were asked the survey question "Which of the fatigue enforcement options do you agree would deliver a fairer regulatory approach?".

Eighty-four stakeholders from across several industry groups and sectors responded to this survey question. Key findings are as follows:

- Out of 20 responses, 90 per cent of business representatives either agreed or strongly agreed that this option provides a fairer regulatory approach, with 5 per cent in disagreement.
- Out of 32 responses, 53 per cent of drivers either agreed or strongly agreed that this option provides a fairer regulatory approach, with 3 per cent in disagreement. (Note: 22 per cent of drivers did not respond to this option)

- Out of 19, 58 per cent of owner-operators either agreed or strongly agreed that this option provides a fairer regulatory approach, with 5 per cent in disagreement. (Note: 26 per cent of owner-operators did not respond to this option)
- Out of 13, 69 per cent of other stakeholders either agreed or strongly agreed that this option provides a fairer regulatory approach, with no responses in disagreement. (Note: 8 per cent of these stakeholders did not respond to this option)

For further information on survey results, please see Appendix C.

4.8.3 NTC response, concluding comments and recommended option

The legislative amendment that removes a barrier for NHVR officers to issue formal warnings rather than fines as per Option 3e should be progressed.

Transport agencies and police feedback focused on the need for a national database accessible by authorised officers at the roadside to record formal warnings to support the better use of these enforcement tools. While NTC agrees this non-legislative initiative would support delivery of the option, it is not essential to the successful implementation. As noted by the ATA in its submission, authorised officers have the opportunity to make notes in a work diary and could choose to note any warnings given.

Establishing a national database or adding extra functionality to RCMS will not be costed in the Decision RIS; however, it may be a desirable future feature.

4.9 Option 3f: Allow for a formal education option in lieu of a fine

Under this option, it is proposed to embed an education requirement in the law for specific minor, low risk offences by first-time offenders. This would allow an authorised officer to issue a requirement that an offender undertake mandatory education, in lieu of a fine.

Compared to the base case, this means:

- An education requirement would be embedded in the law for specific minor, low risk offences. This would allow officers to issue a requirement that an offender undertake mandatory education, in lieu of a fine.

Qualitative analysis conducted in the Consultation RIS (2023) found that the option may encourage a risk-based approach to enforcement by providing an option for formal education to be issued by authorised officers instead of traditional compliance practices. However, the option would also require the creation, management (e.g., updating) and administration of 'formal education' modules of tools to facilitate formal education, which may be resource intensive.

Stakeholder feedback in response to the option and qualitative analysis presented in the Consultation RIS (2023) is summarised below.

4.9.1 Impact analysis – advantages and disadvantages

The table below compares the advantages and disadvantages of Option 3e against the base case, as per analysis presented in the Consultation RIS (2023).

Table 5. Advantages and disadvantages of Option 3f

Option	Advantages	Disadvantages
Option 3f: Allow for a formal education option in lieu of a fine	▪ **Encourages a risk-based approach to enforcement –** Recognises that education and the encouragement of better safety management practices can be just as powerful as enforcement and provides an option for formal education by authorised officers instead of traditional compliance practices. ▪ **Reduced regulatory burden for operators –** authorised officers would be able to issue a requirement that an offender undertake mandatory education, in lieu of a fine.	▪ **Resource intensive –** Requires the creation, management (e.g., updating) and administration of 'formal education' modules of tools to facilitate formal education. May also require the tracking of the completion of formal education, to ensure compliance.

4.9.2 Stakeholder feedback

Stakeholders provided broad support for Option 3f, with different views provided on whether education needs to be formalised in the law.

Industry peak bodies were generally not supportive of the option as a mandatory provision. One heavy vehicle peak body stated that this proposal should not be considered further as it creates additional complexity and requires the development of a national database. In its current form, the option would impose more demands on drivers, including the effort involved in proving that they didn't need the training or had already done it. Another industry body suggested that, instead, an option should be considered whereby penalties for non-safety breaches, such as record-keeping breaches, are reduced.

Smaller industry groups, bus industry groups and the transport workers union were more supportive of the proposal, emphasising that this would help to remove punitive measures against drivers and create a greater educative focus.

Participating state and territory jurisdictions provided a mixed response to Option 3f. Some supported the proposal to include a mandatory education requirement in law; however, they called for more work to describe the operational features of the proposal, including:

- The need to undertake further analysis to determine likely costs and method of implementation and operation.
- The need for a comparison of issues such as imposition of time, travel and other costs of training in the event of being allocated a formal education penalty as opposed to the quantum of the infringement notice to understand likely benefit.

One jurisdiction and police agency raised concerns about the proposal, arguing that using education as part of the overall compliance and enforcement strategy is preferred as Option 3f only applies *in lieu of a fine,* and that the issuing of an infringement should establish a level of intent or recklessness that negates the value of non-punitive education. This stakeholder consider that the education direction power would more appropriately accompany a formal warning.

Two participating state and territory jurisdictions rejected the proposal on the basis that further information on the impact of the option is required. One jurisdiction called for a cost-benefit analysis to determine the viability of the proposal, suggesting that the costs may be significant and perpetual.

Other police agencies supported the proposal, contingent upon several criteria:

- Creation of a national register to track attendance and enable enforcement officers to have visibility over previous offending actioned via training and training completed.
- New offences surrounding failure to attend mandatory education would need to be developed.

The NHVR supports the concept of education to change driver behaviour. However, due to the potential costs and implementation challenges, the NHVR does not support providing a formal education option in lieu of a fine within the HVNL. The NHVR states it will continue advocating for informal education as part of its compliance and enforcement strategy.

Summary of survey results – Option 3f

In relation to Option 3f, stakeholders were asked the survey question, "Which of the fatigue enforcement options do you agree would deliver a fairer regulatory approach?".

Eighty-four stakeholders from across several industry groups and sectors responded to this survey question. Key findings are as follows:

- Out of 20 responses, 70 per cent of business representatives either agreed or strongly agreed that this option provides a fairer regulatory approach, with 10 per cent in disagreement. (Note: 5 per cent of business representatives did not respond to this option)
- Out of 32 responses, 50 per cent of drivers either agreed or strongly agreed that this option provides a fairer regulatory approach, with 3 per cent in disagreement. (Note: 28 per cent of drivers did not respond to this option)
- Out of 19, 42 per cent of owner-operators either agreed or strongly agreed that this option provides a fairer regulatory approach, with 10.5 per cent in disagreement. (Note: 26 per cent of owner-operators did not respond to this option)
- Out of 13, 77 per cent of other stakeholders either agreed or strongly agreed that this option provides a fairer regulatory approach, with no responses in disagreement. (Note: 8 per cent of these stakeholders did not respond to this option)

For further information on survey results, please see Appendix C.

4.9.3 NTC response and concluding comments

A formal education requirement, as an alternative to an infringement for Work Diary administrative offences, should be enabled under the HVNL regulatory framework. This could be to enable an administrative scheme managed by the NHVR, or a framework specified in the law.

Under this option, the alternative of undertaking formal education in lieu of paying an infringement would be created. This would provide an opportunity for Work Diary

administrative offences to be addressed through an enforcement pathway that focuses on providing drivers with the skills and knowledge to prevent further offending.

For Option 3f to be viable and successful, there are three key implementation principles:

1. The administrative systems supporting the education options (e.g. training delivery, payment (if required), and recording who has been offered/accepted/completed formal education) must be cost effective and not impose a significant operating cost burden on transport or police agencies and the NHVR.
2. The option needs to be administratively simple for authorised officers so that it is used in appropriate circumstances at the roadside.
3. The education option needs to be easy and low cost for an offender to access so that formal education is a lower cost option than paying an infringement.

Some considerations remain to be resolved that have legislative and/or operational cost implications, including:

1. Discretion of an authorised officer to offer (or not) the formal education.
2. The implications of not successfully completing the formal education.

Ministers should ask the NTC to work with state government agencies, the NHVR and police to develop an implementation pathway consistent with the above principles and considerations.

4.10 Recommended fatigue management policy reforms

Recommendations in relation to fatigue management policy reforms are set out below.

Recommendation 1: That the requirements for the Work Diary (WD) be changed to:

a) Make recording the day of the week on the daily sheet not subject to an offence under the HVNL

b) Make recording the total work and rest hours on the daily sheet not subject to an offence under the HVNL

c) Introduce a default for the 'hours option' in the WD that is the standard hours for a solo driver of a fatigue regulated heavy vehicle.

Recommendation 2: Consolidate the following offences under 'Recording information under the national regulations – general' (s296):

a) How information is to be recorded (s301) - noting that some requirements will be removed from the law altogether and covered in the WD instructions only

b) Failing to record specific information regarding odometer reading (s298)

c) Time zone of a driver's base must be used (s303).

Recommendation 3: Remove s308(1)(b)(ii) and s308(1)(c) so that a found or returned WWD, after a replacement has been issued, is no longer required to be returned to the Regulator, noting that a driver will still be required to notify the Regulator using the approved form and to cancel any unused daily sheets in the WWD.

Recommendation 4: Remove requirements relating to returning an existing WWD with an application for a new one (s339(3)) and replace these with a new requirement for a driver to cancel any unused daily sheets in the existing WWD.

Recommendation 5: Remove s308(2) and s339(4), which contains the requirements relating to what the Regulator will do with returned WWD.

Recommendation 6: That the definition of a fatigue regulated heavy vehicle (as defined in the HVNL) remains unchanged.

Recommendation 7: Remove s590(1)(b) of the HVNL, to broaden the application of formal warnings by Authorised Officers as a compliance tool for fatigue record-keeping breaches and other breaches under the HVNL.

Recommendation 8: That the HVNL include provisions to enable formal education as an additional enforcement option for Work Diary administrative offences, subject to confirming a pathway that minimises implementation and ongoing administration costs to participating jurisdictions, police agencies and industry.

4.11 Implementation

Implementing the fatigue policy recommendations as above will require:

- Updates to systems and processes for the NHVR and enforcement officers
- Education and communication of key changes with industry
- Training of enforcement officers.

A summary of key actions for implementation is provided in the table below:

Table 6. Fatigue management changes implementation actions

Updates to systems and processes	▪ Developing and printing a revised WWD by the NHVR (to be introduced once current WWD stock is exhausted) ▪ Confirming a low-burden pathway for implementing the formal education option. ▪ System updates to accommodate new offence codes across police and jurisdictional systems. ▪ Updates to operating procedures for enforcement officers.
Industry education and communication	▪ NHVR to develop guidance material for industry to support release of the updated WWD. ▪ NHVR to communicate key legislative changes.
Training of enforcement officers	▪ NHVR to communicate legislative changes, and changes to the WWD to police, AOs and participating state and territory jurisdictions. ▪ NHVR to offer training to police, AO and jurisdiction as to how to use new systems and processes, either via online modules or an in-person training session.

It is anticipated that the fatigue management changes will be implemented through a phased rollout approach with a phase of preparation for the new enforcement practices and communication of changes, followed by a period of trial and feedback.

See chapter 7 for details of how these reforms will be evaluated.

5 Access

Key points

- The purpose of this chapter is to outline the regulatory impact of policy options proposed in the Consultation RIS (2023) to improve access arrangements for heavy vehicles under the HVNL, analyse impacts and present a set of recommendations to ministers of reforms that should be progressed.
- Based upon the findings of consultation and analysis conducted as part of the development of this Decision RIS, several reforms are recommended for progression.

5.1 Purpose of this chapter

This chapter describes the suite of policy options and the regulatory impact of the options proposed in the Consultation RIS (2023) to improve access arrangements for heavy vehicles by reducing administrative burden and productivity impacts. Policy options considered in the Consultation RIS (2023) include changes to the following prescribed mass and dimension vehicle limits:

- Options for an up to five per cent increase in general mass limits allowed for all heavy vehicles to establish a new general mass limit (GML). The new GML will effectively replace the current Concession Mass Limits (CML). This change will result in only two mass limits under the HVNL: a new GML and Higher Mass Limits (HML). The options consider the implications of potential mass increases for vehicles meeting ADR 80/04 (Euro VI) emissions control standards.
- Options for increasing the prescribed height limit of vehicles from 4.3 m to 4.6 m.
- Options for increasing the prescribed length limit of vehicles currently limited to 19 m to 20 m.

It is noted that increasing GML, height and length prescribed limits will benefit general access vehicles, though strictly speaking these prescribed limits also apply to some vehicles with restricted access. For simplicity, this report is focused on the benefits to general access vehicles. The policy intent of each option is summarised below, followed by an overview of stakeholder feedback.

Following consultation and additional analysis, recommended access policy reforms are presented in Section 5.6.

5.2 Approach to analysis

The analysis of the access options proposed in the Consultation RIS (2023) has been refined where possible in response to stakeholder feedback.

Parties impacted by this reform are consistent with those identified in the Consultation RIS (2023). To assess the impacts of the reform options it is important to identify the individuals and groups affected by the reform. Table 7 outlines the key groups and individuals that are likely to be affected by the reform options.

Table 7. Groups impacted by RIS impact category

Consultation RIS (2023) Impact Category		Group impacted
a)	Public Safety	▪ Heavy vehicle drivers and other road users (who may be killed or injured) including vulnerable road users such as cyclists, motorcyclists and pedestrians ▪ Chain of responsibility parties ▪ General public (through wider costs of crashes) ▪ Public and private providers of transport, emergency response, health, infrastructure, and insurance services (secondary beneficiaries) ▪ Enforcement agencies, including police and the NHVR.
b)	Productivity and Efficiency	▪ Heavy vehicle drivers, operators, and businesses ▪ Off-road chain of responsibility parties (reduced costs of moving goods) ▪ General public (through reduced costs of moving goods).
c)	Regulatory burden to industry	▪ Heavy vehicle drivers, operators, and businesses ▪ Off-road chain of responsibility parties.
d)	Regulatory costs to government	▪ Australian government ▪ State and territory governments ▪ Local government ▪ Enforcement agencies, including police and the NHVR.
e)	Asset management	▪ State and territory governments ▪ Local governments and other road managers ▪ Heavy vehicle drivers, operators, and businesses ▪ the Australian community.
f)	Flexibility and responsiveness	▪ Heavy vehicle drivers, operators, and businesses ▪ Off-road chain of responsibility parties ▪ Vehicle suppliers ▪ Vehicle safety (and other) technology suppliers.

The benefits and costs of each of the options in the Consultation RIS (2023) were assessed using qualitative and quantitative analysis, and this approach has been applied in the Decision RIS.

The qualitative analysis reported in the Consultation RIS (2023), using MCA analysis, is applied again in this Decision RIS.

A summary of costs and benefits considered in the quantitative analysis are shown in Table 8 below. Additional quantitative analysis has been conducted from the analysis presented in the Consultation RIS (2023) to further quantify the potential impact of proposed options where possible and some case studies have been developed. These costs and benefits are presented here in summary and described in detail in relevant sections of this Decision RIS below.

Table 8. Costs and benefits considered in the quantitative analysis

Reform area	Consultation RIS (2023) Impact Category					
	Public Safety	**Productivity and Efficiency**	**Regulatory burden to industry**	**Regulatory costs to government**	**Asset management**	**Flexibility and responsiveness**
Changes to general access limits to increase mass	Changes in crashes	Changes in vehicle operating costs, travel time, and externalities and emissions	-	-	Changes in road wear costs	-
Changes to general access limits to increase height	Case study investigating the potential impact on height constrained bridges	Case study investigating potential diversions caused by height constrained bridges	Changes in costs associated with permit applications	-	-	-
Changes to general access limits to increase length	Case study investigating the potential for changes in crashes as a result of productivity benefits of a longer trailer. Case study investigating the potential fleet impacted by uptake of a longer sleeper berth	Case study investigating the potential for changes in vehicle operating costs, travel time, and externalities and emissions, as a result of a productivity benefits of a longer trailer.	Changes in costs associated with permit applications	-	-	-

5.3 Options 4a and 4b: Increase general access vehicle mass limits

Two policy options were proposed in the Consultation RIS (2023) to increase general access vehicle mass limits, compared to the Base Case:

- **Base Case 4**: Current state whereby access to additional mass allowance beyond GML requires operators to, e.g., seek accreditation for a scheme, or authorisation by notice or permits, or PBS.
- **Option 4a**: Establish a new GML in the HVNL by increasing the current GML by up to 5 per cent to match the current CML. An additional mass allowance is provided for ADR 80/04 (Euro VI) vehicles (steer and/or drive axles) to account for an increase in the prime mover/truck tare mass, but this doesn't translate to a GVM limit increase above current CML.
- **Option 4b**: Establish a new GML in the HVNL by increasing the current GML by up to five per cent to match the current CML. An additional mass allowance is provided for ADR 80/04 (Euro VI) vehicles for their higher tare weights, which translates to an up to 5 per cent increase to GVM, so there is no productivity loss for Euro VI vehicles.

ADR 80/04 (Euro VI) Compliant Vehicles

The current minimum noxious emission standard for new heavy vehicles in Australia is based on the international standard commonly known as Euro V. However, the Australian Government has recently adopted a new Australian Design Rule 80/04, mandating Euro VI standards for all newly approved heavy vehicle models supplied from 1 November 2024, and all existing models supplied from 1 November 2025, to reduce noxious emissions from the road transport sector.[24]

Newer trucks that meet Euro VI standards are heavier than equivalent Euro V trucks due to the additional mass and space required by the upgraded emission systems, which may include batteries or storage tanks (e.g., natural gas, hydrogen, diesel emission fluid e.g., AdBlue). Under current general mass limits, this higher tare weight (unladen weight) may reduce the amount of freight that heavy vehicles can legally carry, which impacts on productivity and profitability of advanced emissions vehicles.[25, 26]

Euro VI compliant vehicles include zero emission vehicles such as battery electric and hydrogen fuel cell vehicles.

Proposals to improve access for heavy vehicles by raising mass allowances for general access vehicles received divergent views from industry versus participating state and

[24] See media release October 2022 "Cleaner emissions standards for trucks and buses", online at: https://minister.infrastructure.gov.au/c-king/media-release/cleaner-emissions-standards-trucks-and-buses.

[25] Department of Infrastructure, Transport, Regional Development, Communications and the Arts (2022), *Questions and answers on the new ADR 80/04*

[26] NHVR (2020), Vehicle Safety and Environmental Technology Uptake Plan, Truck Industry Council Budget Submission 2019/20

territory jurisdictions and local councils responsible for managing and maintaining the road asset.

Preliminary impact analysis was included in the Consultation RIS (2023) to highlight the potential impacts, costs and benefits of the proposal. This analysis has been further developed as part of this Decision RIS, and stakeholder feedback, impact analysis, and the NTC's response is presented below.

5.3.1 Stakeholder feedback

Industry stakeholders generally supported an increase in mass limits. Several stakeholders, particularly smaller industry players, provided support for both options. These stakeholders consider the proposal to be a simplification of current mass allowances and suggest that the relative increases in heavy vehicle mass are of little impact and should be adopted to reduce the frequency of heavy vehicle movements.

Several stakeholders, including those from peak heavy vehicle industry bodies and smaller industry groups, provided explicit support for either Option 4a or Option 4b. Option 4b was generally better supported than 4a, with stakeholders pointing to key benefits, including delivery of a strong productivity and efficiency benefit for industry, and simplification of current rules while providing industry with the opportunity to transition to a more carbon neutral environment. Some stakeholders provided support for Option 4a but noted that it was not their preferred option. One heavy vehicle industry peak body emphasised that if Option 4b was adopted, an industry-wide productivity improvement would be maintained as the fleet is upgraded, by contrast the productivity benefits of Option 4a would dwindle over time.

Transport agencies and local government road managers raised several issues with the proposal, particularly the costs associated with increased road infrastructure wear, which includes pavements and structures (e.g., bridges and culverts). These issues included:

- Increased road and infrastructure damage due to the operation of heavier vehicles across the network, and associated costs
- Complication of existing routes and network access arrangements
- Removing CML downplays the importance of auditing and assurance for safety and would make existing investment in mass management modules obsolete overnight
- Any change to mass limits that increase pavement wear could be reflected in higher road user charges to registered operators.

Two participating state and territory jurisdictions raised concerns that the analysis presented in the Consultation RIS (2023) underestimated the costs to road managers of the increased pavement wear, arguing that the methodology used was inadequate for assessing the impact, and called for a cost-benefit analysis of the options.

Some specific jurisdictional comments were that:

- The analysis was conducted on aggregate effects across all HVNL-participating jurisdictions and did not specify the costs and benefits as they applied to each jurisdiction.

It was important that the analysis incorporated the effects of mass increases associated with heavier ADR 80/04 (Euro VI) vehicles. (i.e., principally on the steer axle) and that the complexity of incorporating Euro VI increases was considered. Some participating state and territory jurisdictions requested that the Decision RIS address concerns with how existing

mechanisms for recovering increased costs resulting from implementing the proposed mass increase(s) may result in capital shortfalls for road managers.

Other jurisdictional stakeholders provided conditional support for one or more of the proposals; however, they also called for further analysis to be undertaken to understand the safety risk of increased mass allowances, relative to the productivity and environmental benefits expected to be achieved.

Local government representatives were not supportive of the proposals unless council road managers could be guaranteed that the additional cost impacts of adopting either Option 4a or Option 4b would be offset through the provision of additional road funding to local government.

Comparatively, some police stakeholders provided strong negative feedback for changes to mass allowances for general access vehicles. This view was shared by rail industry groups, highlighting the potential for increased safety risk where higher mass heavy vehicles may interact with trains at level crossings.

The NHVR provided support for Option 4b over Option 4a on the basis that it does not disadvantage safer and more efficient vehicles. The NHVR agreed with the findings in the Consultation RIS (2023). The NHVR highlighted that in allowing vehicles to carry greater mass, this reform would potentially reduce the total number of journeys a vehicle would take, reducing the number of vehicles on the road network, which, in turn, would be likely to reduce risk and increase safety.

5.3.2 NTC response

Policy developments in allowances for ADR 80/04 (Euro VI) vehicle mass since the release of the Consultation RIS (2023) need to be taken into account for the Decision RIS. Ministers' commitment to mandate Euro VI for new vehicles has been followed by recent approval to amend the HVNL (*Heavy Vehicle (Mass, Dimension and Loading) National Amendment (Emission Control) Regulation 2024)*, providing for an allowance of up to 0.5 tonnes associated with Euro VI, to accommodate the additional mass from the emissions equipment. This is effectively a new Euro VI GML and therefore a new flow-on CML limit for Euro VI vehicles. To account for this new development in the Decision RIS, the base case has been updated to be more nuanced, in that the impact of the Euro VI 0.5 tonne allowance at GML is incorporated into the base case (Option 4). Options 4a and 4b remain unchanged. Options 4 is now defined as:

- **Base Case 4**: Current state whereby access to additional mass allowance beyond GML requires operators to e.g. seek accreditation for a scheme, or authorisation by notice or permits, or PBS. It is assumed that an additional mass allowance is provided for ADR 80/04 (Euro VI) vehicles (steer and/ or drive axles) to account for an increase in the prime mover/ truck tare mass.

It is acknowledged that the additional 0.5 tonne allowance associated with Euro VI will increase wear to pavements and structures (e.g., bridges and culverts) and that the cost of this wear is not captured in this analysis. Further details on this have been provided in Section 5.3.3. Some participating states and territory jurisdictions expressed concern that removing a condition for operators to be accredited with the NHVAS mass management module at current CML would likely reduce safety and mass compliance. It is unclear whether, or to what extent, any such adverse outcomes would result. Many, if not most operators are accredited for other reasons – particularly for access to Higher Mass Limits. They would likely remain accredited and would be required to comply with accreditation rules

– even when operating at GML. While there would almost inevitably be some degree of non-compliance with the proposed increased mass limits, it is reasonable to conclude this would be at a similar rate to that which occurs under the current GML.

Considering stakeholder feedback on proposals to increase mass presented in the Consultation RIS (2023), the qualitative impact analysis is considered adequate to reflect the impacts with minor improvements, as shown below (Section 5.3.3).

For the quantitative impact analysis, several enhancements have been made to better understand the potential impacts of the proposed changes, as called for by stakeholders in submissions to the Consultation RIS (2023). Key refinements have been incorporated into the quantitative mass analysis to better represent potential impacts, and to align with feedback received from stakeholders. Key refinements include:

- A more targeted approach to define the impacted fleet – In the Consultation RIS (2023), it was assumed that all mass constrained rigid and articulated trucks will be impacted. Further development and definition of the options has allowed refinement which includes applying the analysis to "representative truck types" to more accurately calculate how the options will impact different vehicle cohorts. This has resulted in reducing the size of the impacted vehicle fleet, which in turn has reduced the magnitude of the costs and benefits of the options, as compared to the Consultation RIS (2023) analysis. These truck types are detailed in Section 5.3.4.
- A more nuanced application of changes in mass limits for representative truck types as a result of the proposals – In the Consultation RIS (2023), it was assumed that all impacted vehicles would benefit from the maximum allowable increase in mass limits (a 5 per cent increase), with the weight of Euro VI technology accounting for half of this increase in Options 4a and 4b. Stakeholders recommended including details on axle configurations and groupings to better define the changes to mass limits in the analysis. This has been reflected in this Decision RIS through a refinement of this approach, with the most common axle configuration being defined for each selected heavy vehicle combination, and an exact increase in mass being defined for each axle group and consequently the overall vehicle. Nuance related to mass limit caps mandated by the Heavy Vehicle (Mass, Dimension and Loading) National Regulation Schedule 2 has been reflected in the analysis.[27] This targeted application of mass increases has resulted in a further reduction in the magnitude of costs and benefits as compared to the Consultation RIS (2023) analysis. Further details on the exact changes in mass can be found in 5.3.4.
- Refinement to road damage calculations – Due to the lack of available information on the impact on road wear associated with the increase in mass limits, in the Consultation RIS (2023) a weighted cents/tonne assumption was tested based upon a simplified scaled analysis. For road damage, the established study parameter was that all vehicles would be 1t heavier in Option 4a and 1.5t heavier in Option 4b. Consultation on this approach with stakeholders highlighted that road wear was underestimated. In the Decision RIS, an alternative approach has been taken to attempt a more accurate road wear costs

[27] The CML mass of heavy vehicle must not be more than -
(a)if the maximum mass permitted for the heavy vehicle under the general mass limits is 55t or less—1t more than the maximum mass permitted for the heavy vehicle under the general mass limits; or
(b)if the maximum mass permitted for the heavy vehicle under the general mass limits is more than 5]5t—2t more than the maximum mass permitted for the heavy vehicle under the general mass limits

estimation. Transport for NSW (TfNSW) road wear parameters have been used in the base case (Option 4) as in the Consultation RIS (2023). However, these parameters have been proportionally scaled up and adjusted to account for the heavier vehicles in Options 4a and 4b. These adjustments have been informed by the NHVR Pavement Impact Comparison Calculator which was published post Consultation RIS (2023) publication. It is noted that the use of the calculator has been to provide high-level percentage increases, without accounting for detailed road variables. As compared to the Consultation RIS (2023), this refinement in road wear calculations has resulted in an increase in the magnitude of road wear costs (as compared to the benefits).

Further details on the above refinements, approach, and results are presented in the sections below.

5.3.3 Qualitative impact analysis

Qualitative multi-criteria analysis conducted to assess Options 4a and 4b in the Consultation RIS (2023) concluded that the proposal had the potential for improved productivity as a result of increased mass limits, particularly for those operators not currently accessing CML. Further, based on stakeholder feedback, the productivity gains for Option 4a would decline over time as the proportion of the ADR 80/04 (Euro VI) fleet increased, and by comparison Option 4b would deliver sustained productivity benefit.

It was determined that increasing GML to current CML levels could result in cost savings for operators relating to statutory fees, NHVAS auditing services, and complying to other accreditation standards. Public safety was also qualitatively investigated as a potential impact of operating heavier vehicles under general access.

A summary table of the qualitative analysis is provided below. See Appendix B for a description of the approach to the MCA and an overview of impact categories.

Table 9. Summary of qualitative assessment of the impacts of changes to GML against Base Case 4

Overall Impact	Public Safety	Efficiency and Productivity	Regulatory burden to industry	Regulatory Costs to government	Asset Management	Flexibility and responsiveness
Option 4a New GML effectively replaces CML. No additional mass allowance is provided for Euro VI vehicles.						
Improvement. General freight vehicles overall benefits. Benefits would be greater for Euro VI vehicles.	**Improvement**. Increased mass may have negligible impacts in most cases and in some cases may contribute to greater risk (e.g. loads with a higher centre of	**Improvement**. Proposed options are assumed to increase take-up of higher general mass limits (i.e. equivalent to the current CML). There may be lower administrative costs, which	**Improvement**. Reduced regulatory requirements for operators currently accessing concessional mass limits.	**Improvement**. Reduced number of operators in the (mass) accreditation scheme.	**Negative Impact**. Increased costs of road wear from assumed greater uptake of concessional mass limits. However, if there are fewer trips then this may	**Improvement**. Removal of accreditation requirements simplifies and improves flexibility for CML operators.

	gravity), but it is likely that this would be offset by reductions in vehicle movements.	improves efficiencies. Would deliver productivity gains, but these would diminish over time as the fleet upgrades to Euro VI.			reduce the impacts. If operators leave the accreditation scheme, there is a potential for greater variability in loading.	
Option 4b New GML effectively replaces CML. The new GML allows for Euro VI increased tare mass.						
Improvement. General freight vehicles overall benefits. Benefits would be greater for Euro VI vehicles.	**Improvement**. Increased mass may have negligible impacts in most cases and in some cases may contribute to greater risk (e.g. loads with a higher centre of gravity), but it is assumed that this would be offset by reductions in vehicle movements.	**Improvement**. Proposed options are assumed to increase take-up of higher general mass limits (i.e. equivalent to the current CML). There may be lower administrative costs, which improve efficiencies. Improvement sustained over time as the fleet upgrades to Euro VI.	**Improvement**. Reduced regulatory requirements for operators currently accessing concessional mass limits.	**Improvement**. Reduced number of operators in the (mass) accreditation scheme.	**Negative Impact**. Increased costs of road wear from assumed greater uptake of concessional mass limits. However, if there are fewer trips then this may reduce the impacts. If operators leave the accreditation scheme, there is a potential for greater variability in loading.	**Improvement**. Removal of accreditation requirements simplifies and improves flexibility for CML operators.

5.3.4 Quantitative impact analysis

As with the Consultation RIS (2023), the **primary benefits** being investigated as part of the quantitative analysis in the impact analysis of Options 4a and 4b relate to the potential increase in productivity for operators that currently operate under GML.

The **primary costs** relate to the impact on road damage because of increased axle group mass limits. It is noted that regulatory requirements currently associated with those operating at CML or HML as part of the National Heavy Vehicle Accreditation Scheme (NHVAS) may restrict take-up of these increased mass limits. These impacts are assessed as part of sensitivity testing and can be seen inTable 14 Table 14.

Defining impacted fleet and changes to allowable mass for each truck type under Option 4a and 4b, and vehicle kilometres travelled.

In taking a more targeted approach towards defining the impacted fleet, a series of truck types along with their axle configurations were identified. These were identified as vehicles that exist in the largest numbers and are likely to most benefit from the mass proposals. The combinations include:

- Rigid trucks with a tandem drive axle

- Prime movers towing tri-axle semi-trailers

- 26 m B-doubles with a tri-axle trailers

- A-double road trains with tri-axle trailers, and a tandem-axle dolly

For each of the above truck types and combinations, an exact increase in mass has been defined for each axle group and consequently the overall vehicle. Nuance related to mass limit caps mandated by the Heavy Vehicle (Mass, Dimension and Loading) National Regulation Schedule 2 has been reflected in the analysis.[28] The purpose of selecting these representative combinations is to reflect the different impacts the options will have on a spectrum of vehicles depending on the vehicle size, mass and axle groups. The additional mass impacting productivity and road damage as a result of the increased mass limits under the current status quo and each project option is detailed in the table below, using semi-trailers as an example:

Table 10. Additional mass impacting productivity and road damage, for a semi-trailer

Option	Total mass (t)	Additional mass impacting productivity (t)	Additional mass impacting road damage (t)	CML mass as a percentage of GML	Euro VI mass as a percentage of GML
Semi-trailers					
4 (Euro VI included in GML)	43.5	n/a	n/a	n/a	n/a
4a (Euro VI included in new GML (CML))	44.0	0.5	0.5	2.33%	n/a

[28] The CML mass of heavy vehicle must not be more than - (a) if the maximum mass permitted for the heavy vehicle under the general mass limits is 55t or less—1t more than the maximum mass permitted for the heavy vehicle under the general mass limits; or (b) if the maximum mass permitted for the heavy vehicle under the general mass limits is more than 55t—2t more than the maximum mass permitted for the heavy vehicle under the general mass limits. Mass has not been increased past these limits, even if the sum of individual group limits are greater than limits allowed as per this schedule.

4b (Euro VI provision)	44.5	1.0	1.0	2.33%	1.16%

In the above example, the semi-trailer would get an additional 0.5 tonne of weight included in the new GML (Option 4), which means in Option 4a, half of the additional tonne provided by the higher GML will taken up by Euro VI. The truck will therefore not be able to use the total additional mass offered for productivity by the new GML under Option 4a. Under Option 4b, however, the truck will be able to utilise the full tonne offered under the new GML due to the provision available for the mass associated with Euro VI technology. This means that Option 4b will have a greater impact on road damage as compared to Option 4a, due to the vehicle being 0.5 tonne heavier (on account of the Euro VI provision).

The impacted Vehicle Kilometres Travelled (VKT) for the above truck combinations were sourced from the Survey of Motor Vehicle Use, 2020 (Australian Bureau of Statistics) (SMVU). In addition to identifying representative truck combinations, the analysis also targets select commodities that were identified as being mass constrained and therefore would benefit from the proposal. The rationale behind this approach is that under Base Case 4, mass constrained commodities would reach their mass limit before volumetric limits, and therefore could take on more payload if they were presented with increased axle group mass limits in the project case. The commodities available in the SMVU that were identified as mass constrained include:

- Food and live animals
- Beverages and tobacco
- Crude materials inedible, except fuel
- Mineral fuels, lubricants and related materials
- Animal and vegetable oils, fats and waxes
- Chemicals and related products not elsewhere specified.

The commodities above identified to be mass constrained and expected to be impacted by the mass options make up approximately 20 per cent of the total VKTs travelled by the reference vehicles. Filtering the VKT data available in the SMVU by the truck combinations and commodities identified above results in the fleet and associated VKT that is likely to be impacted by the mass proposals. It is noted that the SMVU reports on vehicles at a point in time for the year 2020. The VKT data has therefore been escalated to 2024 figures using assumptions detailed in the list of assumptions below. This results in the number of VKT by the impacted fleet in Base Case 4.

This analysis seeks to calculate the magnitude of the potential impact on VKT as trucks are allowed to carry higher payloads as a result of increased mass limits under Options 4a and 4b. It is assumed that as trucks get heavier and overall freight throughput remains the same, fewer trips are required which translates to a reduction in VKT. The percentage increase associated with the additional mass provided for productivity is used to adjust and scale down the VKT by the impacted fleet in both project case options.

Assumptions and limitations

The following general assumptions underpin the analysis:

- Assessing the impacts of changes in general mass limits requires consideration of the road freight task that is mass constrained – i.e., freight which may use all mass allowable

for the vehicle/trailer but not necessarily the volumetric capacity. While studies and surveys are periodically undertaken for specific supply chains, there is limited general data available on road freight movements and mass utilisation of vehicles. Commodities that are assumed to be mass constrained have been determined through consultation

- Determining the uptake of mass concessions is challenging with limited data availability. Although impacted fleet assumptions have been refined, due to there not being any information on the likely uptake of the higher mass, it is assumed that each vehicle type takes on the maximum allowable weight under each option. In other words, it is assumed that the entire impacted fleet operates at GML in Base Case 4 and takes advantage of the increased mass limits associated with CML in Option 4a and 4b. Allowances for participation in mass modules and management schemes is accounted for through sensitivity testing as seen in Table 14.
- It is assumed that overall freight throughput remains constant in Base Case 4 and Options 4a and 4b.
- It is assumed that the percentage increase in the mass of a vehicle directly translates to a percentage decrease in laden vehicle kilometres required to transport a fixed volume of freight.
- Only data on mass constrained laden trips is used, which implicitly assumes that every VKT is a part of a full trip, and that partially loaded trips are not impacted. In reality this is likely not the case.
- The state of registration of vehicles is used to apportion data to each state. While this does not accurately account for trucks operating out of their state of registration, these volumes are expected to be marginal.
- As previously mentioned, there has been further progress on the introduction of Euro VI policy since the Consultation RIS (2023) was developed. Ministers have now approved the *Heavy Vehicle (Mass, Dimension and Loading) National Amendment (Emission Control) Regulation 2024.* This impact analysis does not consider the impacts of Euro VI vehicles in terms of safety and environmental benefits as these have been covered by separate reforms[29] and are not the focus of this Decision RIS. This Decision RIS investigates the impacts of increased mass allowance proposed by Mr Kanofski and in the Consultation RIS (2023), it is complicated by the introduction of Euro VI vehicles, which by virtue of increased mass on the steer axle for equipment have a productivity disadvantage to other vehicles with higher emissions. To assist with policy decision-making on options to increase mass allowances, the analysis investigates the impact Euro VI technology has on vehicle mass limits, and therefore impacts on productivity gains. Given that the technology's environmental impacts are not being quantified, and the fact that Euro VI policies have received ministerial approval since the publication of the Consultation RIS (2023), the analysis employs a simplifying assumption of including the mass of Euro VI onto vehicles in Base Case 4. This is for the purposes of the analysis only and does not imply a change in option definition. This effectively means that the incremental impact of Euro VI on environmental benefits, and the incremental impact of the technology's mass on road damage, is not investigated in this analysis;

[29] See Department of Infrastructure, Transport, Regional Development, Communications and the Arts website for further information https://www.infrastructure.gov.au/infrastructure-transport-vehicles/vehicles/vehicle-safety-environment/questions-and-answers-new-adr-8004

however, the impact of Euro VI on mass limits, and the resulting impact on productivity and road damage, is being investigated.

- The analysis assumes that 100 per cent of the impacted fleet complies with Euro VI standards in the analysis year. In practice, it would be expected that there would be a ramp-up or turnover period where Euro VI compliant vehicles replace older vehicles across the fleet. For Option 4a, this would result in productivity likely reducing over several years as Euro VI standards are slowly incorporated into the fleet, and flat line when a 100 per cent of the fleet is compliant, as the technology will constrain the mass allowed under GML and CML. However, in the uptake years leading to 100 per cent Euro VI compliance, all the current and older vehicles (Euro V and below) will incur the full benefit of CML in Option 4a. This benefit is not quantified because the uptake and environmental benefits associated with Euro VI are out of scope of this Decision RIS. Given that this analysis aims to provide an indicative magnitude of the extent of annual potential impacts of the reform, assuming a 100 per cent uptake allows the analysis to estimate a theoretical steady-state annual impact of the reform.
- Euro VI additional emissions systems/technology is assumed to weigh 0.5 tonnes.
- VKT data from 2020 has been escalated at a growth rate of 1.8 per cent per annum[30] to estimate the freight task for 2024, assuming that growth in kilometres travelled is directly proportional to the growth in the size of freight throughput.
- There are challenges in estimating the costs of increased road pavement wear which can be specifically attributed to the delta increase in heavier vehicles, because there are vehicles currently operating at these higher masses under various regulatory arrangements including the CML. Further, pavement wear will be impacted differently based on the axle group that will incur the additional mass. Road managers may be impacted by increased mass of heavy vehicles on the general access road network, but this may be offset to some degree by reduced numbers of heavy vehicle movements.
- In the absence of robust data to inform a targeted appraisal of the reforms, the theoretical nature of the impact analysis should be noted. While the assumptions employed might not exactly reflect the conditions observed in practice, the use of simplified parameters helps in providing an indicative monetised value of the costs incurred in Base Case 4, and the potential for improvement through the reform.
- Due to the general assumptions listed above, the results are limited to an annual estimate, with a price year of 2024. This avoids uncertainties involved in forecasting road wear costs and productivity benefits. It is noted that all costs and benefits are expected to occur on an annual basis.

In addition to the general assumptions detailed above there are a series of parameter values used in the analysis. Parameters underpinning the **benefits calculations** are provided in Table 11.

Table 11. Key parameters used for benefit calculations

Key parameter	Core analysis value	Source
Travel time costs savings assumptions		
Average speed	80km/hr	Study parameter

[30] BITRE, Australian aggregate freight forecasts – 2022 update (2022).

Key parameter	Core analysis value	Source
Travel time value – Rigid trucks	$43.10 per vehicle hr	Calculated values based on occupancy rates and ATAP PV3 Road Parameter Values, various sources
Travel time value – Semi-trailers	$34.55 per vehicle hr	
Travel time value – B-doubles	$35.06 per vehicle hr	
Travel time value – Road trains	$35.06 per vehicle hr	
Vehicle operating costs (VOC) savings assumptions		
VOC	$2.52 / vkt	Calculated parameter using average speed and freeway model coefficients sourced from Austroads
Emissions and externalities cost savings assumptions		
Externalities unit cost	$161.96 / 1000 vkt	Calculated parameter using ATAP PV5 Environmental Parameter Values
Emissions unit cost	$67.36 / 1000 vkt	
Crash cost savings assumptions		
Average crash rates - fatal	0.9 crashes / 100M vkt	Calculated crash rates using crash data received from Dept. of Transport and Main Roads (QLD), Dept. of Infrastructure and Transport (SA), the Heavy Vehicles Crashes dashboard (NSW), and DataVic Road Crash Data (DataVic).
Average crash rates – serious injury	4.96 crashes / 100M vkt	
Average crash rates – hospitalized injury	7.28 crashes / 100M vkt	
Average crash rates – minor injury	5.38 crashes / 100M vkt	
Value of Statistical Life (VSL)	$5.4 million / death	Value of Statistical Life Guidance Note, Office of Impact Assessment
Value of Serious Injury (VSI)	$ 607,355.52 / crash	ATAP, PV2 Road Transport, Crash Costs, WTP approach
Value of Hospitalized Injuries (VHI)	$ 117,885.37 / crash	
Value of Minor Injuries	$ 44,920.94 / crash	

Conversely, a series of road damage parameters were used for cost calculations. TfNSW road damage parameters have been used in the base case (Option 4), and these parameters have been proportionally scaled up and adjusted to account for the heavier vehicles in the project cases (Options 4a and 4b). These adjustments have been informed by the NHVR Pavement Impact Comparison Calculator which was published post Consultation RIS (2023) publication. For each truck combination, weight specifications were entered into the Calculator to determine the percentage increase in road damage under Base Case 4 and Options 4a and 4b. These percentage increases were then used to escalate the TfNSW road damage parameters to calculate road damage costs in Options 4a and 4b. Given that TfNSW parameters are used across Australian jurisdictions to inform public investment appraisals, they were considered the most appropriate parameters to use in this study. TfNSW's road damage unit costs are calculated using a methodology based on research by the NTC, and include road expenditure data for the following categories:

- Road servicing and operating
- Road pavement and shoulder construction
- Bridge maintenance and rehabilitation
- Road rehabilitation
- Road safety and traffic management
- Asset extension and improvements.

It is noted that consultation was carried out to determine a more detailed impact of the proposals on road damage and asset maintenance costs; however, due to limited access to work done in this area by participating state and territory jurisdictions, and scope limitations of this Decision RIS, the escalation approach was deemed most appropriate due to the use of accepted TfNSW parameters and an escalation method rooted in reviewed pavement impact studies.

Road damage parameters underpinning the cost calculations are provided in Table 12.

Table 12. Key road damage unit cost parameters used for cost calculations (cents per vkt)

Vehicle type	4	4a	4b
Rigid truck	11.95	16.30	16.96
Semi-trailer	22.90	30.16	30.98
B-double	29.91	39.14	40.08
Road train	33.66	34.69	35.32

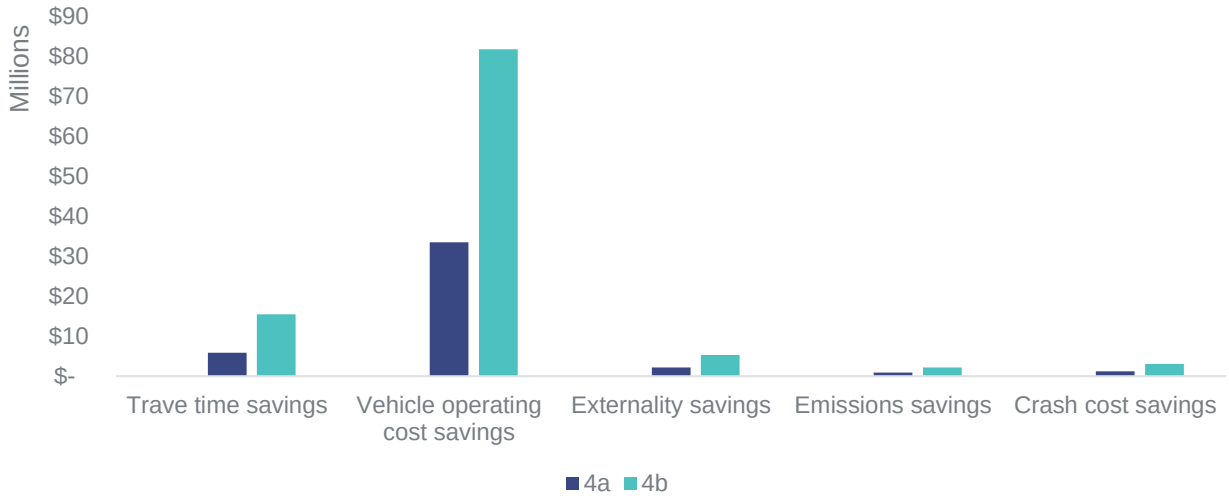
Benefits quantified

This analysis quantifies benefits realised as a result of increased productivity and fewer kilometres travelled due to higher general mass limits. The main benefit streams include:

- Travel time savings – benefits provided by reductions in the amount of time spent on travel.
- Vehicle operating cost (VOC) savings – benefits provided by reductions in the cost of operating heavy vehicles. These costs include vehicle-based components such as fuel, tyres, oil, maintenance, etc. and take road-based factors into consideration as well, such as gradient, speed, curvature or pavement quality.
- Externality and emissions savings – benefits associated with reductions in the environmental impact of reduced vehicle kilometres travelled. Externality costs include air, noise, soil and water, and nature and landscape pollution, along with biodiversity and urban effects. Emissions costs include climate change and well-to-tank emissions.
- Crash cost savings – benefits associated with reduced estimated crashes as a result of reduced vehicle kilometres travelled.

Figure 1 presents an overview of the estimated productivity benefits associated with the two mass limit options.

Figure 1. Productivity benefits schedule associated with increasing mass limits

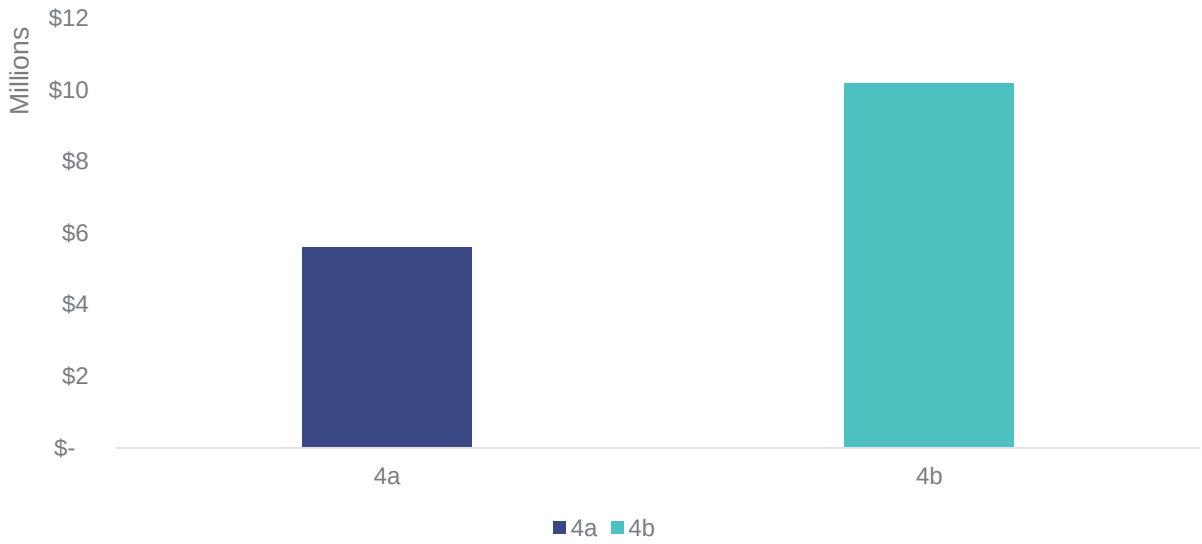


VOC savings are comprised of the largest share of potential economic benefits associated with changes to the mass limits, followed by travel time savings. This is attributed to the fact that the VOC parameters are the largest per VKT parameters in magnitude as compared to others used in the analysis. This is due to the benefit stream encompassing a wide variety of expensive vehicle-based components. Furthermore, the fact that freight vehicles tend to be lower occupancy vehicles influences the relatively lower travel time savings as compared to the VOC savings. It is acknowledged that VOC savings could be offset by an increase in road maintenance costs as a result of increased mass; however, this offsetting impact has not been adjusted onto the savings themselves. Road damage costs are calculated and reported separately in the next section.

Road wear costs

Road wear caused by the increased mass limits is identified as the main cost impact of CML replacing GML. Although there are road wear savings associated with fewer vehicle kilometres travelled, the impact of the additional mass outweighs these savings.

Figure 2. Total incremental road wear costs associated with increasing mass limits



As shown in Figure 2, road wear costs associated with Option 4b are approximately 82 per cent higher than those associated with Option 4a. This can be attributed to Option 4b including an allowance for Euro VI in addition to the increase in mass associated with CML replacing GML. As noted in the assumptions, this cost profile is based on a theoretical steady state where all heavy vehicles are Euro VI compliant.

Summary of quantitative analysis

The results of the quantitative analysis are presented using two key metrics:

- Estimated incremental road wear costs – this is the estimated increased cost impact of running heavier trucks on the freight network as a result of the new GML (replacing CML), as compared to Base Case 4.
- Estimated incremental productivity benefits – these are benefits realised as a result of increased productivity and fewer kilometres travelled due to a higher GML, as compared to the Base Case 4.

Table 13. Summary of results (2024 dollars)

Option	Incremental productivity benefits ($M)	Incremental road wear costs ($M)
4	-	-
4a	$ 44.7	$ 5.6
4b	$ 107.8	$ 10.2

The results in Table 13 show that there is significant potential for productivity benefits to be achieved from a new GML replacing CML, with both options resulting in estimated benefits that are significantly larger than the increase in road wear costs. This indicates that the reforms are likely to deliver economic benefits that are greater than the costs associated with damage to infrastructure due to heavier vehicles.

It is acknowledged that the absolute value of the incremental road wear costs in Table 13 is significantly less than those calculated in the Consultation RIS (2023). As discussed earlier in this chapter – that is substantially due to Ministers approving ADR 80/04 (Euro VI) mass increases in the period between the Consultation RIS (2023) and development of this Decision RIS. With that mass increase, and those costs no longer part of Options 4a and 4b, the absolute value of the estimated costs have decreased. That being said, as mentioned in early in Chapter 5.3.4, refinement of road damage cost parameters has resulted in these costs representing a higher proportion of the NPV, as compared to the benefits (i.e., the benefits to cost ratio is lower in this Decision RIS, as compared to the Consultation RIS (2023).

Option 4a results in certain vehicles (for e.g. tri-axle semi-trailers), receiving only partial benefit due to a portion of the additional mass allowed under the new higher GML being taken up by Euro VI technology. It is noted that heavy vehicles with a smaller number of axle groups could receive diminished productivity benefits if their CML limits are equal to or smaller than Euro VI mass.

Option 4b ensures that each vehicle is able to take advantage of the full mass offered at CML. The allowance of Euro VI in Option 4b is an important driver of benefits realisation as it ensures that future uptake of cleaner technology will not come at a cost of lost productivity.

It is important to note that while there is a clear potential for productivity benefits to be achieved through greater mass limits, the impact on road wear has been challenging to estimate. Although accepted parameters have been used to estimate road damage costs, a more robust jurisdiction-specific network analysis that considers pavement types, gradients, and quality could provide further clarity on the exact impact of the additional weight on road assets. For this reason, headline NPV and BCR figures are not calculated as part of this analysis to avoid misrepresenting the potential impact.

The results do not necessarily mean that these options are the most efficient way of addressing mass-related efficiencies in the freight supply chain. As mentioned above, this analysis is subject to limitations regarding data availability, with high-level assumptions made regarding the proportion of fleet impacted by the reform, vehicle type, uptake of additional available mass, and compliance with Euro VI. If uptake of the increased mass limits is lower than expected, this would lower both the benefits and costs. If the ratio of costs and benefits does not change significantly, it is likely that benefits would exceed costs even if the uptake is lower. Competitive pressure between operators is likely to drive an optimal level of uptake over time.

Sensitivity testing

The main results do not account for vehicles that are currently operating under CML and therefore might not incur the productivity benefits of Options 4a and 4b. This is due to a lack of accurate information on the size of this unimpacted cohort. The only data point that has been made available for this analysis is the number of current prime movers nominated in the mass modules as of 2023 – 51,286.[31] Accreditation for the mass module under the NHVAS allows vehicles increased mass at CML or HML, and in practice, the relative take-up of CML and HML across these vehicles is not known. Further, in practice the usage may be dynamic for fleet operators to adjust to different mass allowance to meet specific freight tasks. Assuming an average vehicle utilisation rate of 80 per cent, and that 30 per cent of

[31] Figure provided by the NHVR.

nominated prime movers take up the accreditation to solely operate at CML[32], an estimated 12,300 prime movers will not receive productivity benefit from the mass proposal as they are already enrolled in CML.

Assuming a weighted annual average VKT of 30,800 km[33] per prime mover, it is estimated that prime movers currently enrolled in the NHVAS mass modules for sole access to CML account for roughly 380 million VKT (around 28 per cent of the fleet impacted by Options 4a and 4b). As per the assumptions and approach used in the mass analysis, this proportion should be excluded from the impacted fleet as they will not be impacted by Options 4a and 4b.

Due to a lack of detail on how current sole CML users are distributed across truck types and mass-constrained commodities, this sensitivity analysis assumes a uniform distribution across the entire impacted fleet defined earlier in this section. This adjustment leads to the following results:

Table 14. Summary of sensitivity results (2024 dollars)

Option	Incremental productivity benefits ($M)	Incremental road wear costs ($M)
4	-	-
4a	$ 31.2	$ 4.0
4b	$ 77.2	$ 7.3

This sensitivity test shows that accounting for current CML operators reduces the benefits and costs due to a smaller impacted fleet; however, these reductions are proportional. The ratio between benefits and costs remains the same, and the magnitude of incremental impact decreases. This approach and its results imply that if current CML VKT are underestimated in this sensitivity, the benefits incurred will also be smaller; however, they will continue to outweigh the costs. Conversely, if CML VKT are overestimated, then benefits and costs will be larger; however, the ratio between the two will remain constant.

It is noted that there is potential for administrative savings to be realised by operators currently operating at CML. These fees include:

- **Statutory fees payable to the NHVR:** These would be fees for maintaining accreditation ($101) and per heavy vehicle ($37).[34]
- **The cost of periodically procuring the services of an NHVR-registered NHVAS auditor:** Operators must engage a NHVAS auditor, nominally once each accreditation period (two years). This cost is at prices set by the market and vary with an operator's

[32] Operators who enrol in the mass module to operate at HML are out of scope as this proposal does not impact HML.
[33] Calculated using annual VKT figures for rigid and articulated trucks from the SMVU (2020).
[34] 2023-2024 fee values, National Heavy Vehicle Accreditation Scheme, NHVR, https://www.nhvr.gov.au/safety-accreditation-compliance/national-heavy-vehicle-accreditation-scheme/fees

accreditation scope. For a single vehicle operator, an audit fee may be as low as $600.[35] This amount would increase by multiples for businesses with more expansive operations and large vehicle fleets.

- **The cost of complying with the accreditation standards themselves:** There are the practical measures taken by an operator to ensure their heavy vehicles are operating within mass limits – such as weighing them. Aside from just meeting accreditation standards, complying with mass limits remains an obligation under HVNL primary duties and mass requirements – so it is assumed that this cost would be substantially unchanged for an operator who discontinued their accreditation.

5.3.5 Concluding comments and recommended option

Impact analysis conducted as part of this Decision RIS demonstrates a significant potential for productivity benefits to be achieved through increasing general mass limits under Option 4a and 4b.

While a technical jurisdiction-specific network analysis could provide more detailed estimates of road damage impacts, it is also noted that there are a host of benefits, such as administrative cost savings, associated with enrolment in NHVAS, and emissions benefits associated with ADR 80/04 (Euro VI) that have not been included in this analysis due to data/information or scope limitations. Further it is noted that while this analysis assumes a complete uptake of the allowable weight under CML by the impacted fleet, if the uptake is partial this will not only reduce the estimated productivity benefits, it will also reduce road wear costs. In the absence of access to detailed network-wide road damage analysis that suggests otherwise, it is therefore assumed that the benefits of increasing mass limits are likely to outweigh the costs.

The results of this impact analysis also indicate that option 4b provides greater productivity benefits by retaining the additional mass allowances for ADR 80/04 compliant vehicles provided for in the *Heavy Vehicle (Mass, Dimension and Loading) National Amendment (Emission Control) Regulation 2024*.

It is understood that increased general mass limits will increase road funding and maintenance requirements and that there will be flow on implications for the road user charge.

It is also noted that changing the GML to current CML will likely impact notices and permits, which will need to be reviewed and amended. This will also impact non-HVNL states such as Western Australia, where current GML settings match HVNL states, presenting an opportunity for these states to align with the HVNL.

As a result of these conclusions, the NTC recommends Option 4b as the preferred option.

- **Option 4b**: Establish a new GML in the HVNL by increasing the current GML by up to five per cent to match the current CML. An additional mass allowance is provided for ADR 80/04 (Euro VI) vehicles for their higher tare weights, which translates to an up to five per cent increase to GVM, so there is no productivity loss for Euro VI vehicles.

[35] Anecdotal information as supplied by an operator.

5.4 Option 5a: Increase general access vehicle height limits

One policy option was proposed in the Consultation RIS (2023) to increase general access vehicle height limits, compared to the Base Case:

- **Option 5a: Height increase for general access vehicles from 4.3 m to 4.6 m.** Under this option, the general access vehicle height limit for heavy vehicles is increased by 0.3 m to 4.6 m.

The proposal is to increase standard height limit from 4.3 m to 4.6 m. All heavy vehicles subject to the current standard 4.3 m height limit would be subject to a 4.6 m limit, were the proposal approved and implemented. It is noted that this proposal won't be applied to some heavy vehicles – e.g., the HVNL restricts double decker buses to 4.4 m height. This will remain unchanged. Any heavy vehicle subject to a height condition (under permits or notices) would need to comply with that condition – regardless of whether that condition is lesser than or greater than the 4.6 m HVNL general access limit.

While it is noted that the HVNL currently has provisions for 4.6 m semi-trailers, this proposal is aimed at complementing this provision subject to meeting conditions to mitigate against increased rollover propensity similar to those that currently exist for 4.6 m semi-trailers operating under the current HVNL provisions.

Preliminary analysis was included in the Consultation RIS (2023) to provide a high-level overview of key impacts of the proposal. This included a qualitative multi-criteria analysis to consider the potential for the proposal to impact on bridges and other infrastructure. Limited quantitative analysis was also conducted to consider the administrative savings associated with fewer permit requirements.

In line with stakeholder feedback and to expand on the impact analysis conducted as part of the Consultation RIS (2023), a case study has been developed to better understand potential impacts of the proposal. Stakeholder feedback is summarised below, followed by the NTC response and updated impact analysis.

5.4.1 Stakeholder feedback

Stakeholders provided mixed support for Option 5a, with most stakeholders calling for further analysis to understand the risks and potential impacts of the proposal.

Smaller industry stakeholder groups including those from the agricultural industry were generally supportive of the proposal, pointing to potential productivity benefits – for example, in enabling a three-level mezzanine height trailer to be viable for livestock, or for parcel haulers on main highways.

Other groups, including larger peak bodies, were supportive of the proposal; however, they raised concerns over potentially reduced road safety outcomes due to increased risk of rollover, and damage to overhead infrastructure including bridges, powerlines, and trees. Concerns were also raised regarding the ability for mapping software to identify routes that would allow the use of higher vehicles. For example, if mapping software was not updated, then an operator may be routed along a part of the network where an unknown low bridge or other infrastructure may require a driver to backtrack or detour to reach their destination, with additional time and costs associated with this. One peak body suggested that to mitigate against potential safety risks, measures should be taken to understand and to counter rollover risk, while others called for further assessment of potential reductions in infrastructure access limits.

Participating state and territory jurisdictions also provided a mixed response. Some supported the proposal in principle, subject to an assessment of the risk of vehicle rollovers, and damage to infrastructure, powerlines, overhead cables, and trees, which could result in significant costs.

Other participating state and territory jurisdictions responded negatively to the proposal, pointing to an increased potential for vehicle rollover, and impacts on road and roadside infrastructure and lower clearance vegetation. This view was shared in police feedback.

One jurisdiction highlighted that many states and territories have structures with a clearance of less than 4.6 m. It was noted that there would be a likely increase in the number of infrastructure strikes, as the proposal would likely result in a greater number and proportion of the heavy vehicle fleet operating at 4.6 m. It is acknowledged that this risk already exists, with the Victorian submission on the HVNL Consultation RIS (2023) noting that the reported cost to taxpayers of a single bridge strike is approximately $100,000.[36] This is presumed to include direct costs but exclude broader costs (such as productivity and inconvenience costs), and is therefore expected to be an underestimate.[37] Similarly, South Australia Police has reported an average of two powerline/telecommunication line strikes per month. However, it is noted that the increase as a result of Option 5a was not able to be identified, and a call for empirical evidence as part of this stakeholder consultation did not result in learnings.

Another jurisdiction pointed to the limited analysis of impacts on productivity, vegetation management, infrastructure strikes, and cost to police, and disagreed with the proposed option on this basis.

Local government representatives strongly disagreed with the proposal, arguing that the risks to infrastructure and road safety would appear to outweigh any productivity benefit that may be derived from an increase in vehicle heights.

The NHVR supported, in principle, the height limit increase to 4.6 m for general access vehicles; however, it suggested that further consideration would need to be given to the impact of infrastructure constraints and vehicle centre of gravity to understand likely rollover risk.

Summary of survey results – Option 5a

In relation to Option 5a, stakeholders were asked the survey question “Regarding the proposal to increase height limits for general access vehicles from 4.3 m to 4.6 m, which of the following statements best describes your view?”

Eighty-four stakeholders from across several industry groups and sectors responded to this survey question. Key findings are as follows:

[36] Montague St displaced as Melbourne’s most-struck bridge, Big Rigs, < https://bigrigs.com.au/2022/01/31/montague-st-displaced-as-melbournes-most-struck-bridge/>

[37] Reforms to Heavy Vehicle National Law Consultation Regulation Impact Statement, Confidential Submissions from the Department of Transport and Planning Victoria

- Of the 20 responses from business representatives, 55 per cent indicated that this proposal will provide some form of benefit for their operations.
- Of the 32 responses from drivers, 44 per cent indicated that this proposal will provide some form of benefit for their operations. (Note: 13 per cent of these drivers did not respond to this question)
- Of the 19 responses from owner-operators, 63 per cent indicated that this proposal will provide some form of benefit for their operations. (Note: 5 per cent of these owner-operators did not respond to this question)
- Of the 13 responses from other respondents, 54 per cent indicated that this proposal will provide some form of benefit for their operations.

Respondents were also able to provide comments on the proposal. Common themes arose within the responses. These are outlined below:

- Some drivers and business representatives commented that only a minor benefit would be experienced from this proposal. Most stakeholders in compliance related positions and some owner-operators commented that they already operate with increased height (for oversized machinery and livestock freight) and have already made provisions for this increased height; therefore, the significant benefit gained from this proposal would be likely to be related to reductions in administrative burden.
- Some stakeholder responses expressed that many locations, vehicle servicing sites and customer sites would face height restrictions; and this option would make these sites now inaccessible. Furthermore, certain commodity freight such as fuel tankers or refrigerated freight cannot take advantage of the increased heigh limits due to mass constraints or restrictions on customer sites. Stakeholder comments also expressed safety concerns around increased rollover risk and damage to existing infrastructure and stated a preference for keeping their vehicles 4.3 m high regardless of this proposal.

For further information on survey results, please see Appendix C.

5.4.2 NTC response

Two key issues raised by stakeholders regarding impacts on infrastructure and increased safety risk of increased vehicle heights are addressed.

Feedback from stakeholders on the Consultation RIS (2023) emphasised that the potential impact on infrastructure could be high, with flow on impacts for road managers. In response, a case study has been included to provide a high-level assessment of the potential impact of an increase in general access vehicle height to 4.6 m on road infrastructure and vehicle access. The case study methodology has been selected over a cost-benefit analysis or another form of analysis due to limited availability of complete data relating to road infrastructure constraints. This approach provides a high-level indication of the potential impact of a height increase on road infrastructure and vehicle access. The case study aims to provide a better representation of the potential impact of Option 5a, building upon the qualitative multi-criteria analysis and administrative savings estimates presented in the Consultation RIS (2023). The qualitative impact analysis is detailed in Section 5.4.3, below.

Stakeholders also emphasised that there are likely to be considerable safety risks associated with the proposal including potential for increased vehicle rollover, with some stakeholders only conditionally supporting the proposal, subject to the inclusion of safety conditions. While quantitative analysis has not been possible to assess the potential impact of the proposal in terms of vehicle rollover, the NTC has considered these issues further, and two key eligibility conditions for the 4.6 m height increased have been suggested. These are for eligible heavy vehicles to be fitted with vehicle and/or rollover stability functions. These functions are defined in Australian Design Rules (ADRs):

1. For motor vehicles (i.e. prime movers, rigid trucks): ADR 35/06 Commercial Vehicle Brake Systems (and any later versions)
2. For trailers: ADR 38/05 Trailer Brake Systems (and any later versions).

Vehicle and rollover stability functions are required by these ADRs on new heavy vehicles. The rules were phased in starting July 2019 with full application from January 2022.

Effectiveness of these technologies for heavy vehicles was assessed by the US National Highway Transport Safety Administration (NHTSA) in a 2015 study. A summary of findings is:

- Roll stability function is effective in:
    - 37-53 per cent reduction of rollover crashes
    - 2 per cent reduction in loss of control crashes
- Electronic stability function is effective in:
    - 40-56 per cent reduction of rollover crashes
    - 14 per cent reduction in loss of control crashes.

The ADRs require applicable heavy vehicles (trucks and trailers) to be fitted with both roll and electronic stability functions (i.e., jointly). The electronic stability function results above are most applicable to heavy vehicles supplied to and operating in Australia.

In order to address the rollover risk issue, the NTC has sought technical advice from the NHVR in relation to the magnitude of the risk and options to mitigate against it, which is being undertaken at the time of this report.

5.4.3 Impact analysis

Preliminary analysis was included in the Consultation RIS (2023) to provide a high-level overview of key impacts of the proposal. This included a qualitative multi-criteria analysis to consider the potential for the proposal to impact on bridges and other infrastructure. Limited quantitative analysis was also conducted to consider the administrative savings associated with fewer permit requirements.

Qualitative analysis

Multi-criteria qualitative analysis conducted to assess Option 5a in the Consultation RIS (2023) concluded that the proposal had the potential to improve productivity by increasing volumetric loads for some freight tasks without the associated regulatory burden of applying for individual permits. However, the analysis acknowledged that there were some safety concerns regarding rollover stability and a risk of strikes to infrastructure. This qualitative analysis was consistent with stakeholder feedback.

A summary of the qualitative analysis as presented in the Consultation RIS (2023) is provided below (Table 15). See Appendix B for a description of the approach to the MCA and an overview of impact categories.

Table 15. Summary of the impacts of Option 5a against the base case

Overall Impact	Public Safety	Efficiency and Productivity	Regulatory burden to industry	Regulatory Costs to government	Asset Management	Flexibility and responsiveness
Improvement.	**Negative Impact**. Increased risk of crashes common to higher vehicles (e.g., increased rollover risk) due to more over-height vehicles. Further, there would be more road safety risks if road infrastructure were struck in a manner that puts debris on the surrounding roads and pathways.	**Improvement.** Proposed option is assumed to increase take-up of up to 4.6m high vehicles, which increases volumetric load capacity. However, it is noted that there could be indirect impacts (accrued by the public) including productivity costs and personal inconvenience if roads were to be closed at greater frequency due to increased risk of overhead infrastructure strikes.	**Improvement.** Reduced regulatory requirements for 4.3-4.6m height vehicles.	**Improvement**. Reduced number of permits. Potentially less administration associated with current Notices.	**Negative Impact**. Increased risk of damage to roadside infrastructure from assumed greater uptake of 4.3-4.6m vehicles and associated costs. These are direct impacts (which road managers must address through public funding) which include the repair costs of the damaged infrastructure. Further, introduction of cost component associated with the increased requirement for signage and other warning mechanisms for drivers.	**Improvement**. Removal of requirements simplifies and improves flexibility for operators.

It is also noted that the proposal may bring high costs to road managers, including due to the need to assess road networks and sign-post road infrastructure with insufficient height clearance. Feedback from road managers on this option has suggested that these additional costs will be created by the effects of a greater number of 4.6 m high heavy vehicles operating on their roads because of the proposal being approved and implemented. However, these mitigations are not novel as there are already large numbers of 4.6 m high heavy vehicles operating. As such, road managers have incurred some of these costs already and future costs would not be attributable solely to outcomes of this proposal.

Quantitative analysis

Due to limited information available to assess the impacts of potential height limit increases across the road network, in the Consultation RIS (2023), **quantitative analysis** of the proposal focused on the reduction in regulatory costs to industry and burden to government. It was assumed that under Option 5a, 4.6 m height permits would no longer be required as 4.6 m high vehicles would have general access, contributing to a regulatory burden saving for industry.

While it is noted that access for 4.6ım high heavy vehicles is already provided by a notice or permit, the proposal offers key advantages over these mechanisms. Permits require road manager consent and inevitably result in greater road network restrictions as compared to Option 5a. This benefit associated with administrative savings is a key benefit of the proposal. Analysis in the Consultation RIS (2023) suggested that the proposal could result in administrative savings for operators who have applied for permits for moving freight in vehicles over 4.3 m but no more than 4.6 m high. Based on the cost of access permits at the time ($83), these savings were estimated to amount to **$95,000** in the financial year ending 2023. However, it should be noted that operational costs to permit applicants associated with delays to their business operations while waiting for permit approval, and the burden this imposes on having to plan their operations sufficiently in advance of the likely permit decision, are potentially much greater than what has been quantified here.

Additional analysis has been conducted which provides a case study of a high-level assessment of the proportion of bridges that may be constraints on access to the state road network of four states under Option 6a.

The case study is provided below.

Case study: Proportion of bridges that may constrain access on the state road network of key HVNL states under Option 6a

A case study has been developed to provide a high-level assessment of the potential impact of an increase in general access vehicle height to 4.6 m on road infrastructure, and vehicle access for operators across several key HVNL states that may choose to uptake the additional 0.3m. An increase in general access height limits would be likely to increase the risk of damages to bridges and overhead structures on the road network. Productivity benefits and the associated road wear costs of increased height for heavy vehicles have not been quantified due to a lack of available data or information on uptake of the extra height for productivity gains.

This case study investigates the proportion of these bridges and overhead structures that would become restricted under Option 6a due to minimum height clearances. In this scenario, current freight routes may be impacted and there may be additional costs for road managers in assessing their current road network for high-risk infrastructure.

Approach and limitations

The approach to developing the case study is as follows:

- The potential impacted fleet was identified

- Available height clearance data from available jurisdictions was collated on bridges and overhead structures
- Spatial plotting was used to map bridges and overhead structures to understand how the network may be impacted
- Parts of the network and freight routes that may be impacted by an increase in vehicle height were investigated
- Qualitative analysis was carried out on the impact of restricted bridges and overhead structures on operators.

Due to the availability and completeness of data, the analysis is subject to a series of limitations and assumptions. These include:

1. Height data used in this case study is the most recent publicly available data; however, its comprehensiveness is subject to the data collection methodology used by each of the jurisdictions.

2. Data on bridges[38] and the minimum height clearances was available for all HVNL states except Queensland[39] (where data was only available for the city of Brisbane), however, importantly this data only captured bridges and overhead structures on state-owned networks.

3. To target the impact of the proposal, the impacted fleet was identified by method of transport – i.e., containerised, liquid bulk, solid bulk. Solid bulk commodities have been assumed to be most likely to benefit from Option 5a. The following transport methods have been excluded from the analysis:
   - Liquid bulk – these commodities are typically mass constrained, and therefore cannot take on more weight regardless of the increase in volumetric capacity.
   - Containerised commodities – these commodities are typically shipped in containers with standardised dimensions.

4. The *Road Freight Movements (2014)* ABS dataset has been used as it provides historical data on freight movements within HVNL states and distinguishes between methods of transport for each commodity group. Although established freight movement patterns are unlikely to have changed since 2014, there is a risk that throughput data from this period might not reflect the current volumes.

[38] Note, Bridges include road bridges, rail bridges, pedestrian bridges, overpasses, underpasses, tunnels and gantries. Other overhead structures include lights, signage and wires etc.

[39] Data sources:
- NSW bridge data - NSW Government – 'NSW State Roads Vertical Clearances' (2024)
- VIC bridge and other overhead structures data - VIC roads – 'Height clearance on roads' (2024)
- SA bridge data - Government of South Australia, Department of Infrastructure and Transport – 'Height Clearances On and Under Structures' (2023)
- TAS bridge data - Tasmanian Government – 'Height clearance under overhead structures map' (2024)

5. Due to the absence of accurate and current freight route data by origin and destination, it is challenging to accurately estimate the changes in travel time that an operator may experience, therefore this analysis has not been included.

Case study results

If vehicle operators were to uptake the increase in general access vehicle height limits under this proposal, certain roads and bridges would be 'restricted' – i.e., these vehicles would no longer fit under the minimum vehicle height clearance without the risk of bridge strikes or collisions with overhead structures. Consequently, operators may need to detour from current routes to accommodate the additional height. This may result in additional VKTs and travel times for operators, contributing to disbenefits in terms of travel time savings, vehicle operating costs, emissions, externalities, and higher risk of crashes due to the increased risk associated with more time spent on roads. Where operators are required to spend additional time on the road, this has the potential to offset any productivity benefits gained through the increased volumetric capacity.

In order to capture the impact of Option 5a, bridges and overhead structures greater than 4.3 m were identified and plotted across the road network. Structures lower than 4.3 m have been excluded from the analysis as these are currently lower than general access height in the base case and are not considered to be impacted by the proposal.

Based on data available for state roads, it was found that under this proposal:

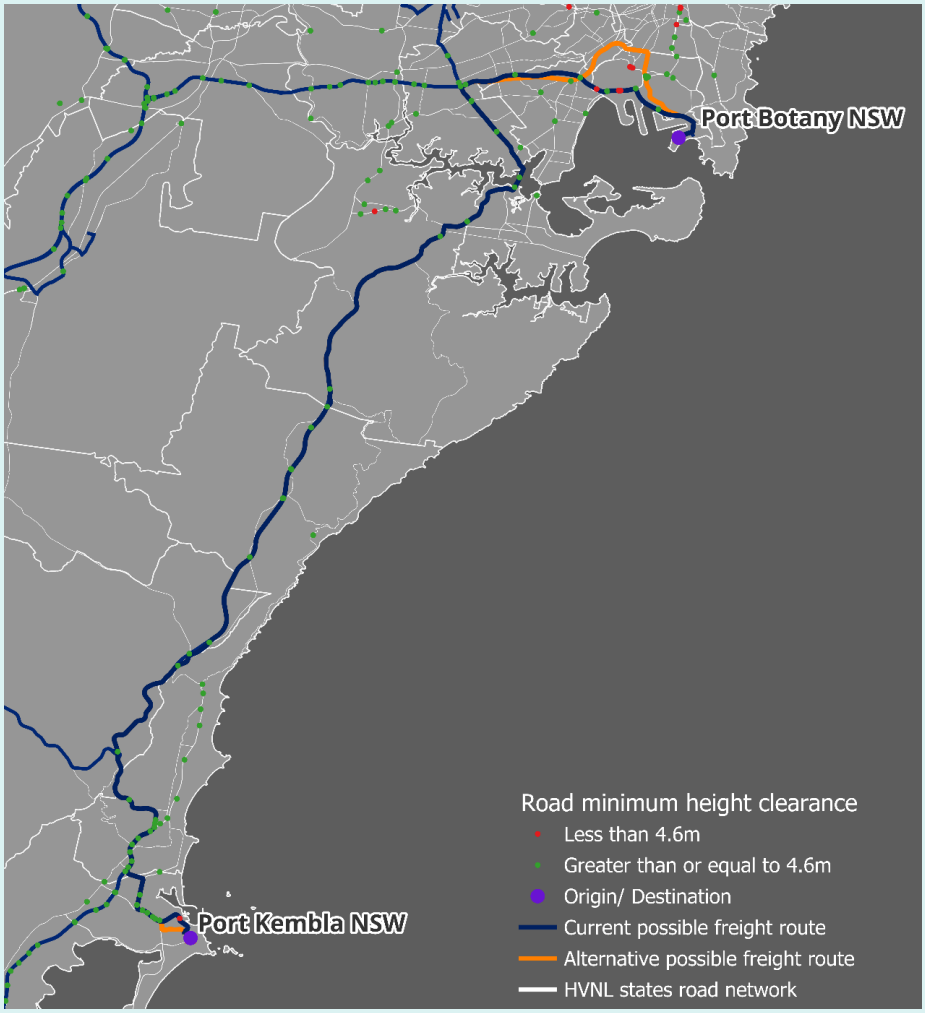
- 12 per cent of bridges (138) in Tasmania would be restricted
- 5 per cent of bridges (1057) in New South Wales would be restricted
- 3 per cent of bridges and overhead structures (854) in Victoria would be restricted
- Less than 1 per cent of bridges (422) in South Australia would be restricted.

These figures highlight that, in select HVNL states, a relatively small proportion of bridges and roads with overhead structures on state-owned networks would experience height constraints. Spatial analysis of bridges and overhead structures across South Australia, Victoria, and Tasmania shows that most of the restricted bridges and overhead structures are concentrated within urban areas. Conversely, restricted bridges and overhead structures in New South Wales are relatively spread across both urban and non-urban areas along key national freight routes.

The concentration of height constrained bridges in urban areas could imply that operators performing long haul or non-urban freight movements using national key freight routes in regional areas would be largely unaffected; however, there is potential for first and last-mile movements within urban areas to be impacted.

As an example of a height restriction resulting in a detour, this case study investigates the impact of bridges and overhead structures for a select freight route between Port Botany and Port Kembla in NSW to provide an indication of how general access freight may be impacted in an urban setting. The freight route between Port Botany and Port Kembla for a general access vehicle is approximately 95km and passes under several bridges and other overhead structures, four of which have 4.3 m clearance or below. This example has referenced the Key Freight Routes identified by the Commonwealth, while also accounting for heavy vehicle access defined by NHVRs National Network maps for 4.6 m high vehicles.

Typically, as an operator leaves Port Botany, they would follow Botany Road and then take Foreshore Road and turn onto the M1 highway, passing through Sydney Kingsford Smith Airport and three tunnels with a minimum height clearance less than 4.6 m; the airport tunnel and extended airport tunnel on General Holmes Drive (both 4.52 m) and the tunnel under Cooks River (4.36 m). However, under this proposal an operator would instead have to continue along Botany Road and turn off at Gardeners Road to eventually turn onto the M8 highway and circumvent the tunnels that have now become inaccessible for a 4.6 m high vehicle under Option 5a. Similarly, an operator would need to avoid the railway bridge on Old Ports Road with a minimum height clearance of 4.5 m and instead take Five Islands Road to reach Port Kembla. As such, the proposal to increase the height of general access vehicles would require 4.6 m vehicles to detour, and travel along an alternate route, adding an additional 3km to their trip, contributing to increased vehicle operating costs and travel time. The additional distance may be outweighed by the productivity benefits derived from the increased volumetric capacity; however, this would change on an ad hoc basis and would depend on the detour, commodities and mass carried, traffic conditions, etc. The map below plots the example route described above:



Summary

This case study indicates that Option 5a is likely to impact a small proportion of bridges and overhead structures across the freight network on state road networks. The impact on council-owned and regional road networks, however, is unknown due to the lack of asset data. Height constraints are most significant in urban areas where a potential need may arise for an operator to detour from their current freight routes to avoid bridges with minimum height clearances of 4.3 m which no longer accommodate the increase in general access vehicle height limits.

Where general access vehicles would be restricted by bridges and other overhead structures on key freight routes, there would be a cost component associated with the requirement for road managers to place signage and other tools to warn drivers. Failing to do so would cause significant risk of damage to infrastructure and create road and community safety risks, with a higher likelihood of adverse events such as bridge strikes.

It is noted that operators are well-informed about the routes they take, and about limitations associated with said routes. If operators know a number of well-frequented routes to be height constrained, they are unlikely to uptake higher vehicles that would struggle with access under these structures unless there were clear and large productivity benefits to be gained. Road managers may also face pressure to assess and expand current signage and improve existing infrastructure to accommodate this proposal because of safety obligations to operators.

5.4.4 Concluding comments and recommended option

The proposal to increase the general access height limit received a mixed response from industry. It was generally accepted that there are productivity and red-tape benefits from increasing the general access vehicle height limit to 4.6 m, and there are already vehicle types operating at 4.6 m high, such as livestock vehicles, car carriers and curtain siders (or 'taut liners').

However, jurisdictions and some industry stakeholders expressed concerns in relation to increasing the general vehicle height limit to 4.6 m. These concerns focused on road clearance and an increased risk of overhead infrastructure and vegetation strikes, and increased vehicle rollover risk.

To address the rollover risk issue, the NTC has sought technical advice from the NHVR in relation to the magnitude of the risk and options to mitigate against it.

In relation to the risk of overhead infrastructure and vegetation strike, most jurisdictions are of a view that these risks can be adequately managed using existing controls. The key exception is Tasmania, which has a significant percentage of structures with clearances of 4.6 m or less, and accordingly considers that increasing the vehicle height limit creates an unacceptable risk. Given that few trucks cross the Bass Strait, the impact on the reform if it is not applied in Tasmania is low.

As such, the NTC recommends that Option 5a is supported, subject to technical analysis of safety risks and the identification of effective and practical rollover risk controls that may be applied as safety conditions:

- **Option 5a: Height increase for general access vehicles from 4.3 m to 4.6 m.** Under this option, the general access vehicle height limit for heavy vehicles is increased by 0.3 m to 4.6 m.

5.5 Option 6a: Length increase for general access vehicles from 19 m to 20 m

One policy option proposed in the Consultation RIS (2023) was to increase general access vehicle length limits, compared to the Base Case:

- **Option 6a: Increase prescribed length limit to 20 m for vehicles currently limited to 19 m length** Under this option, for general access, the length limit for prescriptive heavy vehicles currently limited to 19 m length is increased by one metre to 20 m.

Option 6a did not specify how the extra metre in vehicle length could be applied to the vehicle. Preliminary impact analysis was included in the Consultation RIS (2023) to highlight the potential impacts, costs and benefits of the proposal. A qualitative assessment of this proposal on public safety, efficiency and productivity, regulatory costs to government, asset management and flexibility and responsiveness was completed. The Consultation RIS (2023) also qualitatively investigated the impact of the option with regard to potential safety concerns, risk of damage to roadside infrastructure and additional network assessment costs for road managers. The previous quantitative analysis of this option in the Consultation RIS (2023) was limited to determining the administrative savings associated with fewer permit requirements.

The analysis in this Decision RIS has been replaced by case studies to address stakeholder feedback, and key findings are presented in subsections below, and in the NTC response.

5.5.1 Stakeholder feedback

Stakeholders are broadly supportive of Option 6a.

Industry stakeholders are generally supportive of the proposal to increase length for 19 m general access vehicles, acknowledging the benefits particularly for volume constrained freight operators, with several highlighting that there are already a significant number of 20 m vehicles on the roads.

Peak heavy vehicle industry bodies provide strong support, calling for additional elements of the proposal to be included, i.e.:

- The B-double length limit of 26 m should also be increased to 27 m as part of the proposal.
- Any additional vehicle length should be used to improve driver comfort by providing an additional metre in the prime mover (sleeper cab), with some suggesting that this should be a condition of the proposal.

In some cases, smaller industry players also raised or provided support for these proposed additional elements, with particular emphasis on the use of the additional metre in the sleeper cab of the vehicle. A small number of heavy vehicle industry groups and individuals disagreed with the proposal, citing concerns with swept path effects and vehicle stability, claiming that 19 m vehicles are already unable to stay in marked lanes in many instances.

Some participating state and territory jurisdictions and local governments have expressed concerns that increasing the length of general access vehicles may potentially create difficulties manoeuvring within the geometric constraints of a road, impacting on road performance. At intersections there may be increased risks associated with the swept path that may result in damage to road lighting poles, signs and traffic signals. The length of

heavy vehicles affects the distance and time required for faster vehicles to overtake heavy vehicles, which may adversely affect road safety outcomes, particularly on undivided roads. Participating state and territory jurisdictions also flagged the increased risk of short-stacking[40] at intersections and level crossings, which is the risk of queuing at an intersection or signal, with the rear of the combination extending into a through lane.

Participating state and territory jurisdictions generally supported the proposal in principle, with conditions. These conditions broadly aim to mitigate against or better outline the risks associated with longer vehicles accessing the network. Conditions suggested by participating state and territory jurisdictions include:

- Vehicles 20m long would need to have safety features including blind spot information systems, side underrun protection, and advanced braking systems, cabin strength and conspicuity markings.
- Analysis of vehicle swept path and road infrastructure damage, including:
  - Analysis of swept paths to assess potential risks and impacts, including the risk of longer vehicles encroaching on footpaths or cycle lanes when travelling through intersections.
  - Full network-wide traffic and infrastructure assessment to determine the impact on the state-controlled network.
  - The number and impact of vehicles that meet the proposed 20m length limit criteria but do not comply with current PBS standards need to be assessed, and relevant Austroads road design guidance will need to be reviewed.
- Some participating state and territory jurisdictions provided comment on the use of the additional length for sleeper cabs. One argued that this would minimise the productivity benefit, and in the urban context and smaller jurisdictions, it may not provide an overall benefit to drivers. While another jurisdiction supported the consideration of vehicle length increases to allow for larger sleeping berths in prime movers.

While not raised as an option in the Consultation RIS (2023), one jurisdiction commented on the potential for B-double length to be increased from 26 m to 27 m, strongly disagreeing with the suggestion, and setting out a range of requirements and issues that would need to be addressed if this proposal were raised in the future.

Representatives from local government did not support the proposal, citing risks to road infrastructure as the biggest concern. These groups argued that if the option to increase heavy vehicles to 20 m long was progressed, a thorough assessment of the suitability of vehicles moving across the network, including the local road network would need to be undertaken.

The NHVR supported the length limit increase to 20 m for general access vehicles, noting that this would be utilised by industry to support increased length to the sleeper cab to support driver well-being and improve productivity in the use of trailers.

[40] Short-stacking is where the road conditions require a long heavy vehicle to stop after passing over a crossing or intersection, with the rear of the vehicle remaining withing the bounds of the crossing or intersection, disrupting unencumbered movement of other vehicles or trains through the crossing or intersection.

Summary of survey results – Option 6a

In relation to Option 6a, stakeholders were asked the survey question, “Regarding the proposal to increase length limits for general access vehicles from 19 m to 20 m, which of the following statements best describes your view?”.

84 stakeholders from across several industry groups and sectors responded to this survey question. Key findings are as follows:

- Of the 20 responses from business representatives, 70 per cent indicated that this proposal will provide some form of benefit for their operations.
- Of the 32 responses from drivers, 63 per cent indicated that this proposal will provide some form of benefit for their operations. (Note: 13 per cent of these drivers did not respond to this question)
- Of the 19 responses from owner-operators, 74 per cent indicated that this proposal will provide some form of benefit for their operations. (Note: 11 per cent of these owner-operators did not respond to this question)
- Of the 13 responses from other respondents, 54 per cent indicated that this proposal will provide some form of benefit for their operations.

Respondents were also able to provide comments on the proposal. Common themes arose within the responses, these are outlined below:

- Some comments were that the preferred application of the increased length allowance would be longer sleeper cabins by drivers and owner-operators, who believe it will greatly increase driver comfort and reduce fatigue, instead of increasing carriable footage.
- Drivers and other respondents within compliance roles commented that an increase in general access length limits provides the opportunity to add more safety features to their vehicles (e.g. bull bars or docking buffers) which are typically forgone under current length limits due to compliance issues. Similarly, this proposal will also lead to a reduction in requirements for gazette notices, permits and PBS certifications, therefore reducing compliance issues for operators.
- Lastly, some respondents commented that this proposal may be more relevant or should also be applied to B-double configurations.

For further information on survey results, please see Appendix C.

5.5.2 NTC response

Stakeholders provided diverse views on how an extra metre in length could be applied, with some arguing that it should be used to increase the width of a sleeper cabin, and others focused on increased trailer length for increased payload.

In response to participating state and territory jurisdictions comments on risks involved with longer vehicles, the NHVR is currently undertaking a technical analysis to determine what controls would be necessary to mitigate against safety risks associated with increasing heavy vehicle length to 20 m – with a focus on risk arising from any increase in swept path. Potential mitigating conditions may include:

1. Dimensional controls. Amendments to HVNL internal dimension requirements would be necessary to allow for heavy vehicles to be designed and built to the increased 20 m length. There are several dimension requirements that could be amended to accommodate that outcome, such as prime mover wheelbase and the 'S-dimension' (which is the wheel base for a dog trailer and is the distance between the king pin and the centre of the rear of the axle group for a semi-trailer). These will be developed in a way to minimise adverse effects (i.e. any increase in) swept path.

2. Side underrun barriers. These are physical barriers fitted to the sides of heavy vehicles, forming a barrier against any road users or vehicles passing beneath a heavy vehicle and being struck by its wheels. They have been mandated by the Australian Design Rules for heavy motor vehicles built to greater than 2.50 m (i.e. up to 2.55 m) width.

With regards to participating state and territory jurisdictional concerns regarding short-stacking, the NTC assesses the risk to be negligible, as currently 20 m and longer length vehicles operate on the broader road network.

Further, in response to stakeholder feedback on the proposed option to increase the general access vehicle length limit from 19 m to 20 m, two case studies have been developed:

- **Longer sleeper cab berth** – This case study aims to provide an indicative estimate of the proportion of the freight movements that could potentially benefit from a longer sleeper berth and improved amenities.
- **Increased trailer length** – This case study aims to estimate the productivity benefits associated with the potential reduction in vehicle kilometres travelled (VKT) that could be achieved from providing additional length to vehicle trailers.

These case studies aim to provide a better representation of the potential impact of the proposal, building on the multi-criteria analysis and administrative savings estimates presented in the Consultation RIS (2023). The impact analysis is detailed in 5.5.3 below.

5.5.3 Impact analysis

Qualitative analysis

Multi-criteria analysis conducted to assess Option 6a in the Consultation RIS (2023) concluded that the proposal had the potential to improve productivity by increasing volumetric loads for some freight tasks without the associated regulatory burden of applying for individual permits. However, the analysis acknowledged that there were some safety concerns regarding damages to roadside infrastructure.

A summary of the qualitative analysis presented in the Consultation RIS (2023) is provided below. See Appendix B for a description of the approach to the MCA and an overview of impact categories.

Table 16. Summary of the impacts of Option 5a applied to longer trailers and longer sleeper cabin against the base case

Overall Impact	Public Safety	Efficiency and Productivity	Regulatory burden to industry	Regulatory Costs to government	Asset Management	Flexibility and responsiveness
Scenario of increased trailer length **Improvement.**	**Negative Impact**. Increased risk of crashes for 20m vehicles due to expanding access to road network.	**Improvement**. Proposed option is assumed to increase take-up of 20m long vehicles which increases volumetric load capacity.	**Improvement**. Reduced regulatory requirements for 20m long vehicles.	**Improvement.** Reduced number of permits.	**Negative Impact**. Increased risk of damage to road infrastructure from assumed greater uptake of 20m vehicles.	**Improvement**. Simplifies and improves flexibility for operators.
Scenario of longer sleeper cabin **Improvement**	**Improvement**. Potential for drivers to have better rest, reducing safety risk of fatigue and decreased risk of crashes	**Neutral**	**Improvement.** Increased driver comfort with longer sleeper cabs improves driver experience	**Neutral**	**Neutral**	

Quantitative analysis

Due to limited information available to assess the impacts of potential length increases across the road network, in the Consultation RIS (2023), previous quantitative impact analysis of this proposal was limited to determining the administrative savings associated with fewer permit requirements and a reduction in administrative burden for industry. Increasing general access length limits could lead to savings for operators on the cost of permits and time savings due to the reduction in operator compliance burden associated with permit applications and reductions in inefficiencies associated with processing times. It was assumed that under Option 6a, 20 m length permits would no longer be required as 20 m long vehicles would have general access, contributing to a regulatory burden-saving for industry.

Analysis in the Consultation RIS (2023) suggested that the proposal could result in administrative savings for operators who have applied for permits for moving freight in vehicles over 19 m but no more than 20 m long. Based on the cost of access permits at the time ($83), these savings were estimated to amount to **$15,000** in the financial year ending 2023.

Feedback from stakeholders on the Consultation RIS (2023) emphasised that the potential impact on infrastructure could be high, with flow-on impacts for road managers, with calls for further analysis to assess the impact. Two studies reported in submissions analysed the

impacts of longer vehicles on swept path movements.[41] Engineering modelling of swept paths undertaken for the ATA and reported in their submission did not support the concerns raised about safety and roadside infrastructure damage. Given the small size of the dimensional increase, overall length was not considered to be a major hurdle by the ATA and modelling of five 20 m combinations showed positive safety results in line with Performance Based Standards Level 1 performance standards. This conclusion is also supported by NHVR analysis of swept path impacts reported in their submission. This analysis compared the use of 19 m and 20 m vehicles; it was found that there is minimal difference between the performance of the two vehicles. Therefore, concerns around longer vehicle swept paths will most likely not become an issue.

However, road managers may still face additional costs to assess their networks to determine high risk parts of the road network; signpost restrictions for longer vehicles at intersections, stacking distances at rail crossings and other areas of the road network might need to be assessed.

Considerations for developing Case Studies for Option 6a

As noted in 5.5.2, two case studies have been developed to address stakeholder feedback – one that investigates the use of the proposal for longer sleeper bed berths, and another that investigates the use of the proposal for increased trailer length (and therefore increased productivity).

In practice, if an operator were to uptake the entire additional metre in the trailer this would preclude them from adding an additional metre to the sleeper cab. The opposite holds true for sleeper cabs. There could also be scenarios where operators use a proportion of the additional length for longer sleeper cabs, and the rest for productivity gains.

Industry preference for applying the length increase to the trailer or the cabin is unclear, and likely uptake for each scenario by the market is unknown. Both case studies therefore assume that the entirety of the additional length is taken up for the two respective uses. Given that the extent of uptake of the proposal is unknown, it is challenging to estimate the implications of the proposal on increased load uptake by volumetrically constrained operators, and consequently the resulting productivity benefits and road damage costs. We have also assumed that these scenarios are mutually exclusive; however, in reality a variety of combinations of these options could be taken or the extra length could be applied for other vehicle functions or to other parts of the heavy vehicle configuration.

Furthermore, while jurisdiction feedback on the need for detailed costs profile calculations has been acknowledged, estimating costs associated with the proposal has been challenging. In addition to ATA and NHVR modelling suggesting that damage to infrastructure due to increased swept path will be limited, there is also limited data on length-related safety implications such as frequency of incidents as a result of insufficient clearance at level crossings or slower lane changing.

For the above reasons, a case study approach has been adopted as an appropriate approach to provide additional context and evidence to test the options.

[41] National Transport Commission, Submissions, <https://www.ntc.gov.au/submission/951>

Case study for Option 6a: Potential impact of longer sleeper cabin berth

This case study highlights the impact where an operator has chosen to apply the 1m increase in the 19m general access vehicle to the sleeper cab of the heavy vehicle. An additional 1 m in the sleeper cabin would allow for improvements in the space and amenities available in the sleeper cab, which may allow for better comfort and sleeping conditions, helping to reduce fatigue and fatigue-related crashes.

Approach and limitations.

The approach to developing this case study is as follows:

- The potential impacted fleet was identified
- Gathered historical Origin and Destination VKTs by SA3 from the Road Freight Movement (2014) (RFM) ABS census dataset
- Spatial analysis was conducted to calculate the straight-line distance between the centroids of each Origin and Destination SA3 pair
- Identified freight movements that are long distance to calculate the proportion of the impacted fleet that may benefit from this proposal.

This analysis is subject to a series of assumptions and limitations:

1. Typically, most sleeper cabs are fitted in prime movers. Given that the proposal aims at increasing general access dimensions for 19m long vehicles only, the primary impacted combinations are likely to be semi-trailers; a single trailer tri-axle vehicle (semi-trailer) configuration has been identified as the representative heavy vehicle.
2. Long distance trips are defined as any journey greater than 500km or an interstate journey (Road Transport Long Distance Operations Award, 2020)
3. It has been assumed that all operators uptake the increase in general access length limits by adding an additional 1m to the prime mover.
4. Origin and destination data from the RFM is used, which provides historical freight movements by Origin and Destination SA3s. The base year of this data (2014) limits this analysis to a high-level and may not reflect new freight routes that have been established since 2014.
5. Historical VKT was extracted for our impacted fleet from the RFM.
   - VKTs taken from the RFM were escalated and scaled to 2024 figures utilising a CAGR of 1.8 per cent derived from the BITRE research report *Australian aggregate freight forecasts – 2022 update (2022).* Tonnage was escalated from the SMVU's base year (2014) to 2024. The percentage increase in tonnages reflects the percentage in increase in VKTs.
6. Due to the lack of available freight route distance data, straight-line distances were calculated to approximate route distances
7. Centroids of each origin and destination SA3 were used as proxy point coordinates for this case study as the RFM does not provide exact locations of the ODs within the SA3s.

Case study results

RFM data was used to determine how the fleet moves between origins and destinations within HVNL states. Analysis shows that:

- Articulated trucks constitute 44 per cent of all freight movements across HVNL states
- Single trailer tri-axle vehicles constitute 45 per cent of articulated truck freight movements across HVNL states.

In relation to the entire fleet:

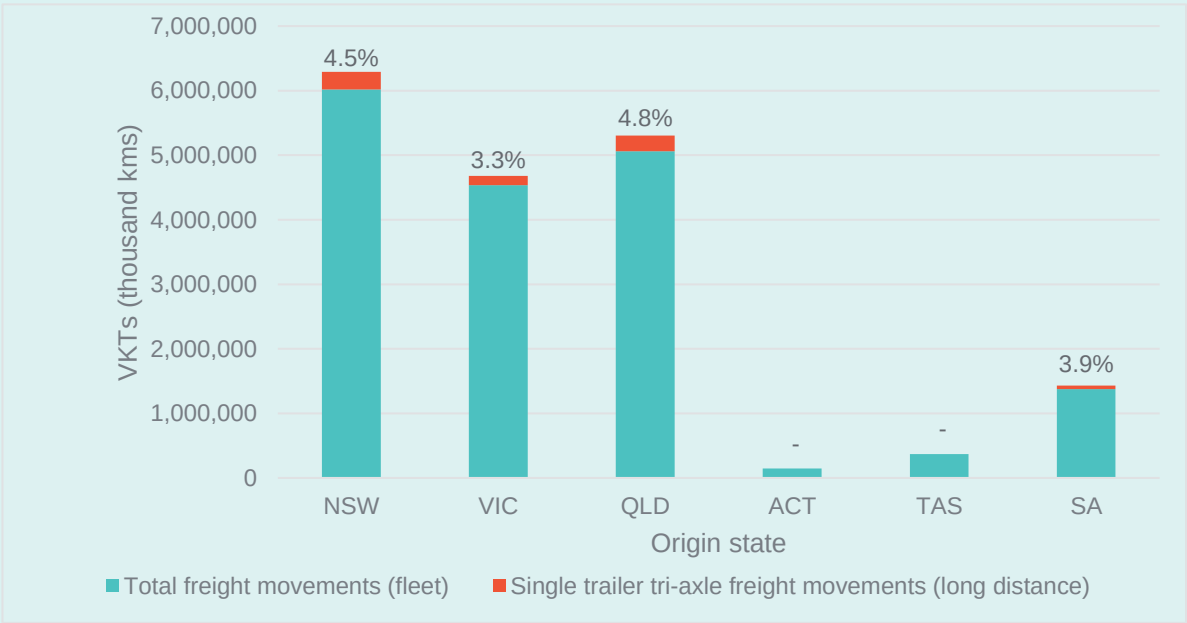
- Single trailer tri-axle vehicles constitute 20 per cent of all freight movements across HVNL states.

However, the benefits of larger sleeper cabs will most likely be realised by operators whose freight movements are considered to be long distances and therefore will require mandated rest stops. It was found that:

- 20 per cent of single trailer tri-axle vehicles freight movements are considered long distance
- 4 per cent of all freight movements are long distance and were performed by single trailer tri-axle vehicles.

The analysis has shown that semi-trailers, which are the vehicles most likely to benefit from increased sleeper cab length, support a relatively small proportion of the long-distance freight task in terms of distance travelled – approximately 4 per cent of the overall freight task in 2024. The chart below reflects how this is distributed across states, with the highest proportion in QLD.

Figure 3. Proportion of semi-trailer freight movements that could potentially benefit from an additional 1 m added to the sleeper cabin by origin state in 2024



Option 6a may be used for longer trailers, and consequently increased productivity gains, as detailed in the case study below.

Case study for Option 6a: Potential impact of an increase in vehicle trailer length

This case study applies to cases where an operator decides to use the 1 metre length increase to a 19 m general access vehicle trailer. Overall vehicle length is a driver of freight vehicle productivity, particularly for those vehicles with loads that are volumetrically constrained *(Austroads, 2012).* The analysis aims to quantify the maximum possible productivity benefit if the uptake was consistent across all possible vehicles. This case study aims to quantify the potential reduction in vehicle kilometres travelled (VKT) that could be achieved from providing additional length to vehicle trailers. Productivity benefits are realised as a result of increased volumetric capacity due to an increase in vehicle trailer length; however, only commodities that are volumetrically constrained are able to take advantage of a greater payload.

Approach and limitations

The approach to developing this case study is as follows:

- The potential impacted fleet was identified
- Extracted latest VKT figures for volumetrically constrained commodities from the Survey Motor Vehicle Use (2020) (SMVU) ABS census dataset
- Determined the reduction in VKT between the base case and Option 6a
- Calculated incremental productivity benefits associated with increased general access vehicle length limits.

This analysis is subject to a series of assumptions and limitations:

1. Given that the proposal aims at increasing general access dimensions for 19 m long vehicles only, the primary impacted combinations are likely to be semi-trailers with dimensions 19 m by 2.5 m by 4.3 m (LxWxH) in the base case.

2. The productivity analysis was conducted utilising the SMVU, which provides historical tonnages and VKT freight data by state and commodity group. This dataset was used as it provides the most up to date information on freight movements that can be filtered for certain volumetrically constrained commodity groups carried by semi-trailers.

3. To address the limitation of out-of-date data, historical tonnage and VKTs for our impacted fleet from the SMVU were escalated from 2020 to 2024 figures utilising the same method as the sleeper cabin case study.

4. The average payload per truck taken from the SMVU is for all articulated truck types, not just semi-trailers.
   - This may overestimate the average payload per truck and therefore underestimate the reduction in VKTs, which produces a conservative estimate of productivity benefits. However, due to the lack of available alternative data for these representative vehicles the SMVU average payload per trip for articulated trucks have been used.

Table 17. Average payload per trip (HVNL states) – Base Case

	NSW	VIC	QLD	SA	TAS	ACT
Average payload per trip for articulated trucks (tonnes)	23.5	23.6	26.2	26.6	25.5	19.0

5. The productivity analysis has also been limited to commodities that are volumetrically constrained. A list of all commodity groups is provided in the SMVU. The following three commodity groups have been identified as being volumetrically constrained:
   - Food and live animals
   - Manufactured goods
   - Miscellaneous manufactured articles
6. No road infrastructure costs associated with an increase in vehicle length are quantified within this case study.
7. Under the base case, the volumetric dimensions of a semi-trailer were calculated as 83.5m^3.
   - Total VKTs, number of trips and VKT per trip were calculated using 2024 escalated tonnages and VKTs
8. Under the option case, it is assumed that the impacted fleet uptake the full additional metre in length, increasing the volumetric dimensions of a semi-trailer to approximately 90.5m^3 with dimensions 13m x 2.4m x 2.9m (LxWxH)
   - The percentage increase in volume in the option case was applied to calculate the average payload per trip under the new general access length limit (see table below)
   - Total VKTs, number of trips and VKT per trip were calculated using 2024 escalated tonnages and VKTs

Table 18. Average payload per trip, by HVNL state (Option 6a Case)

	NSW	VIC	QLD	SA	TAS	ACT
Average payload per trip for articulated trucks (tonnes)	24.8	24.8	27.5	28.0	26.8	20.0

Case Study Methodology

This case study determined the reduction in VKTs from an additional metre in general access length limits to estimate the associated incremental productivity benefits.

Assuming that all operators in the impacted fleet uptake the full additional metre under the proposed increase in general access length limits, the estimated potential reduction in VKT that could be achieved through the proposal has been calculated as follows:

$$VKT\ (base\ case) - VKT\ (option\ case)$$

Based on the analysis, calculations suggest that there could be a theoretical estimated potential reduction in VKTs of approximately 8 per cent for the impacted fleet carrying

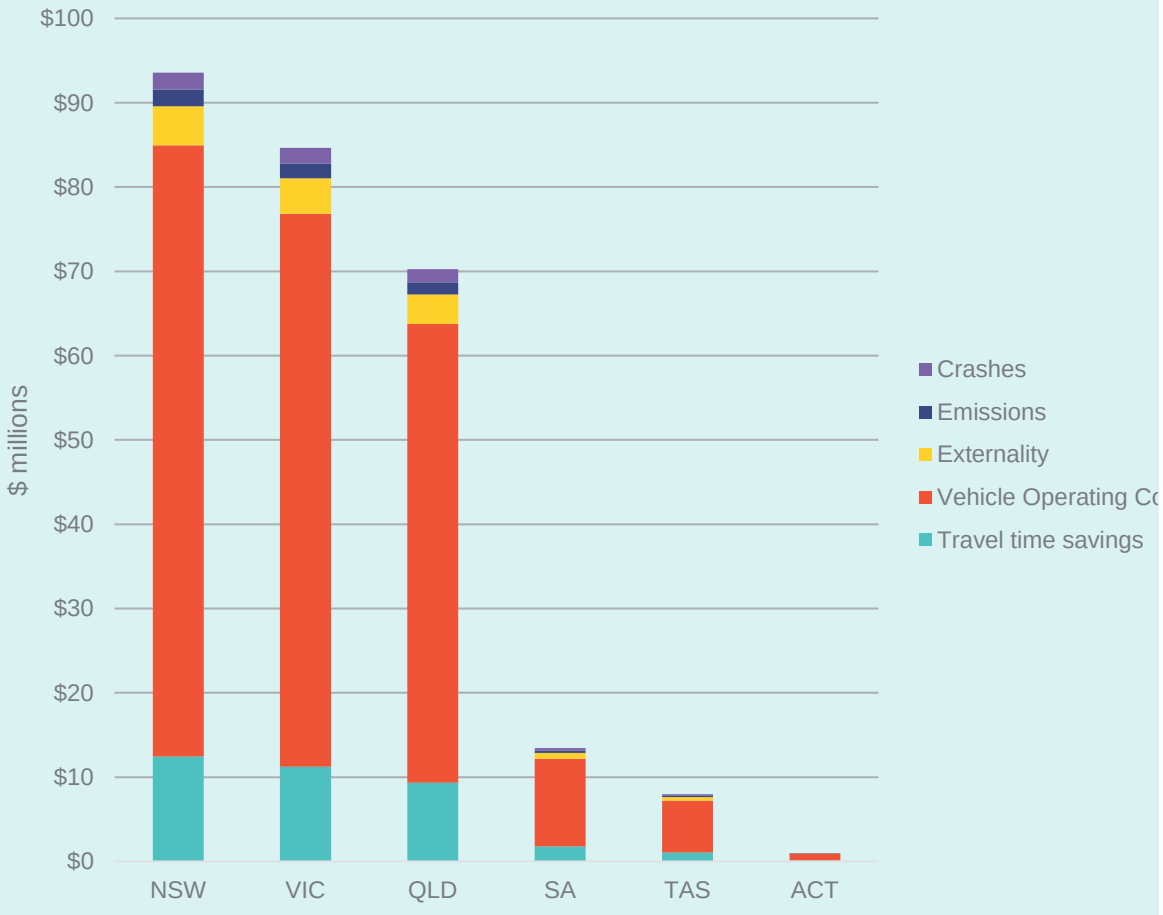
volumetrically constrained commodities. If an operator chooses to apply the 1 metre to the trailer of a 19 m general access vehicle, this ultimately means that the volumetric capacity of these vehicles will be increased, allowing them to carry more tonnage per trip. Therefore, a reduction in VKTs travelled can be seen between the base case and option case as fewer trips need to be made to transport the same tonnage due the increased tonnage capacity. The following productivity benefits have been quantified through this analysis using parameter values used in the mass analysis (described in detail previously in Section 5.3.4).

- Travel time savings
- Vehicle operating cost savings
- Externality cost savings
- Emissions cost savings
- Crash cost savings

Case study results

The following estimated incremental benefits are realised by all vehicles within the impacted fleet carrying volumetrically constrained commodities and it is assumed that these operators uptake the full additional metre under the increased general access vehicle length limits. In other words, this case study highlights the estimated potential benefit that can be realised for the respective benefit streams.

Figure 4. Productivity benefits of Option 6a



As seen in Figure 4 above, the majority of incremental productivity benefits can be attributed to travel time savings and vehicle operating costs with the highest total incremental productivity benefits being experienced by operators registered in NSW, VIC and QLD due to larger VKT volumes. This highlights that under this option, if the additional metre is added to the trailer configuration for semi-trailers carrying volumetrically constrained commodities, productivity benefits could be experienced.

This case study demonstrates greater efficiency for operators as the increase in volumetric capacity results in larger tonnages that can be carried per trip, therefore benefiting operators. This reduction in trip numbers will also lead to less maintenance and operational costs of heavy vehicles for operators, improved longevity of the freight fleet, a reduction in the impact on the environment and potentially fewer crashes and injuries because of less time spent on roads. Potential road infrastructure costs are not quantified due to a lack of data on the impact of increased vehicle trailer length on road wear costs.

Note, in order to provide robust estimates for the productivity benefits in these case studies, granular and up to date data on freight tonnages and VKTs for heavy vehicles configurations that are currently 19m long and are carrying commodities that are volumetrically constrained would be needed. Information would also be required on the percentage of operators that would uptake the additional metre in length for the vehicle trailer and how much of the additional metre they would use on increasing vehicle trailer length. Data on additional road wear costs associated with length would also be required. Furthermore, an extensive network analysis on the costs of potential safety concerns and damage to roadside infrastructure would be required as it is difficult to identify an average cost for incidents involving intersections or roadside infrastructure as they would need to be assessed on a case-by-case basis. To understand the real impact of this proposal if the additional length was added to the vehicle trailer, a benefit to cost ratio would need to be derived so that the options feasibility could be compared.

Further data would also be required to quantify the benefits and costs associated with a longer sleeper cabin. A longer sleeper cabin will allow for better amenities which could potentially reduce truck driver fatigue and fatigue related crashes. For robust analysis, the potential benefits associated with improved amenities, including a theoretical causal link to fatigue risk and management and ultimately crash risk, would have to be quantified. To calculate the proportion of the fleet that is performing long distance trips, precise data on route origin and destination point coordinates as well as route distances would also be needed. Up to date data on freight tonnages and VKTs between origins and destinations for existing and new freight routes would also be required to replace the RFM data currently used. Like the productivity case study, information on the percentage of operators that would uptake the additional metre in length for the sleeper cabin and how much of the additional metre would also need to be gathered. The costs of installing or refitting current sleeper cabins in prime movers or purchasing a new prime mover with a larger sleeper cabin and the associated road wear costs would also have to be accounted for in this analysis.

5.5.4 Concluding comments and recommended option

An increase to maximum vehicle length (from 19 m to 20 m) is supported by most stakeholders, with the high-level case studies in this Decision RIS demonstrating that there is benefit to the proposal both in terms of freight productivity if the additional length was included in the trailer, and driver comfort and amenity if the additional metre was included in the prime mover (sleeper cab). However, it is noted that the case studies do not provide a comprehensive or holistic analysis of the potential impact of this proposal. Instead, it

provides a high-level understanding of the estimated potential benefits of Option 6a for operators.

The key operational impediment to the length increase is the potential impact on vehicle swept path. The wider the swept path, the higher the risk of damage to roadside infrastructure and other road users when a truck is turning at an intersection. To address these concerns, the NTC has sought technical advice from the NHVR on the potential to control swept path and this work is in progress. Early indications are that practical controls, in the form of internal dimensions, are feasible and can keep swept path generally consistent with current 19 m long vehicle fleet performance.

As such, the NTC recommends that Option 6a is supported, subject to technical analysis and identification of suitable controls that manage vehicle swept path and the associated safety and infrastructure damage risks.

- **Option 6a: Increase the prescribed length limit to 20 m for vehicles currently limited to 19 m long.** Under this option, for general access, the length limit for prescriptive heavy vehicles, which are currently limited to 19 m long, is increased by one metre to 20 m.

5.6 Recommended access policy reforms

Recommendations in relation to access policy reforms are set out below.

Recommendation 9: Increase the current General Mass Limits (GML) to match the current CML (inclusive of the ADR 80/04 (Euro VI) mass limit increase approved by ministers), repeal the current CML, and make no changes to HML.

Recommendation 10: Increase the general access heavy vehicle height limit from 4.3 m to 4.6 m, subject to technical analysis by the NHVR to confirm appropriate controls to reduce rollover risks.

Recommendation 11: Increase the general access heavy vehicle length limit from 19 m to 20 m, subject to technical analysis by the NHVR to confirm suitable swept path controls.

5.7 Implementation

The implementation of the recommendation to increase general mass limits to the level of CML would include:

- Consideration of road wear costs in road user pricing work and road maintenance funding under the FFA
- Updates to prescribed limits for all applicable vehicle types
- Education and communication of key changes with industry and road managers, including guidance materials.

A streamlined process for operators currently participating in the current NHVAS mass module who may wish to make changes to their engagement with the scheme due to the new GML should be considered by the NHVR.

The implementation actions for recommendations to increase general access vehicle height to 4.6 m and length from 19 m to 20 m will be determined in further detail once the technical analysis by the NHVR is complete, and any conditions (if applicable) are tested and approved. It is expected that similar to the mass increase changes, the main implementation activity will be education and communication of the changes with industry and road managers.

See chapter 7 for details of how these reforms will be evaluated.

6 Enhanced accreditation

Key points

- The purpose of this chapter is to outline the impact of the proposed regulatory settings to support a new National Audit Standard (NAS) and the handling of NAS requirements under the new law.
- It is the NTC's recommendation that new provisions are introduced to primary law to enable a new NAS to be developed and require Ministers to approve the NAS.

6.1 Purpose of this chapter

This chapter examines options regarding proposed regulatory settings to support a new National Audit Standard (NAS) and the handling of NAS requirements under the new law. The following options proposed in this chapter are directly linked to the August 2023 Decision RIS:

- Recommendation 8: To support mutual alignment pathways and scheme robustness, a NAS should be developed by the regulator and approved by ministers.
- Recommendation 6a: which establishes an enhanced NHVAS.

The need for a NAS is also evident due to restructured arrangements for alternative compliance and accreditation under the Decision RIS:

- Recommendation 2a: Ministers will no longer be required to approve accreditation business rules.

Considering this change, Decision RIS (2023) Option 2b further specified that as part of enhancements to accreditation, ministers would be empowered to approve a NAS to be applied as part of the enhanced National Heavy Vehicle Accreditation Scheme (NHVAS) as other eligible schemes and third parties.

The option's intent is summarised below, followed by an overview of stakeholder feedback and potential impact. Recommended accreditation policy reforms are presented in Section 6.2.4.

6.1.1 Background

Under the HVNL, accreditation allows heavy vehicle operators to demonstrate compliance with safety and operational standards. Accreditation schemes like the NHVAS provide requirements, specifications, and guidelines for operators to qualify for accreditation and remain qualified. Suitably accredited operators can apply to access alternative fatigue management regimes and exemptions from certain inspections via the appropriate mechanisms and channels.[42] However, issues identified in the NHVAS include perceptions of its lack of robustness and inconsistencies in application, leading to calls for improved regulation of accreditation and improved auditors.

[42] For instance, exemptions for certain inspections are delivered through State-based registration schemes in some jurisdictions.

While the HVNL provides the overarching legal framework, specific details about the NHVAS, including audit frequencies, processes, and requirements, are typically detailed in guidelines and regulations supporting the HVNL implementation. This means that while the HVNL establishes the legal basis for the NHVAS, the practical details of audit requirements are often found in accompanying documents and resources provided by the regulator which administers both the HVNL and the NHVAS. Under the current HVNL regulatory framework, NHVAS auditing requirements are only referenced in the Standards and Business Rules, with the regulator also providing oversight through the relevant NHVAS Audit Framework and Auditor Code of Conduct. Ministers currently approve the NHVAS Standards and Business Rules.

6.2 Options to enhance operator assurance and accreditation

Recommendation (8) of the Decision RIS (2023) was approved by ministers in June 2023:

> *That, to support mutual alignment pathways and scheme robustness, a national audit standard be developed by the regulator and approved by ministers.*

The Consultation RIS (2023) tested an option to consider whether NAS requirements should also be included in regulations. This option was compared with the base case. Options tested in the Consultation RIS (2023) were as follows:

- **Base Case 7:** A NAS is prescribed in primary law, to be approved by ministers. No requirements in regulations.[43]
- **Option 7a:** A NAS is prescribed in primary law. Broad NAS requirements are included in regulations.

Both the Base Case and Option 7a align with recommendation 8, endorsed by ministers as part of the Decision RIS.

Base Case 7 prescribes a NAS in primary law only. To simplify the law, the regulations do not specify any standards or requirements for the NAS. This option allows the NHVR to maintain flexibility in developing the NAS and any guidance documents that outline operational details.

Under Base Case 7, ministers would no longer approve accreditation business rules. Instead, the law should empower ministers to approve the NAS developed by the NHVR to ensure proper oversight.

Option 7a offers a different approach that sets regulatory requirements for NHVAS audits. Under this option, broad NAS requirements would be included in regulations, and the NHVR would be required to develop the NAS in line with these requirements. The HVNL would define a NAS approved by ministers, with regulations outlining the general requirements for developing the NAS.

Following the Consultation RIS (2023) publication, drafters from the Parliamentary Counsel (PC) have identified that creating NAS regulations may result in unnecessary duplication, as ministers must also approve a NAS in law. PC advised that ministerial approval of a NAS

[43] While this remains consistent with the Base case 7 as presented in the Consultation RIS (2023), the wording has been updated to clarify meaning.

provides the same level of oversight as a NAS broadly defined in regulations, and therefore, requiring approval of both is duplicative and overly prescriptive.

The full extent of the impact of incorporating NAS requirements into regulations has yet to be realised. However, potential impacts are forecast below.

6.2.1 Impact analysis

Base Case 7:

Benefits:

- **Flexibility:** This approach would allow more flexibility in adapting and updating NAS standards without undergoing the legislative changes required within the HVNL framework.
- **Tailored Approach:** Standards can be more closely tailored to the specific needs and realities of the heavy vehicle industry, potentially leading to more practical and effective NAS requirements.
- **Speed of Implementation:** Implementing standards outside of the HVNL might be faster, as it could bypass some bureaucratic processes associated with legislative changes.

Costs:

- **Lack of Uniform Enforcement:** Without the legislative weight of the HVNL, enforcement may lack uniformity and potentially be less effective across different state and territory jurisdictions.
- **Regulatory Fragmentation:** Operating outside the HVNL could lead to a fragmentation of standards if not all states and territories align with the NHVR's guidelines. This would be mitigated by the fact that participants would need to be accredited and subject to standards and requirements imposed by the regulator.
- **Reduced Transparency:** Operating outside the formal legislative framework might reduce transparency and public input into the standard-setting process; consultation would be required.

Option 7a:

Benefits:

- **Enhanced Safety and Uniformity**: Establishing broad regulations can improve safety standards and uniformity across all participating state and territory jurisdictions, reducing accidents and enhancing public safety.
- **Clarity and Compliance**: Clear, consistent regulations help ensure that all operators and auditors understand compliance requirements.
- **Regulatory Oversight**: Embedding the standards within the HVNL ensures strong governmental oversight and enforcement, potentially leading to higher compliance rates.

Costs:

- **Increased Operational Costs**: Operators may face higher costs due to the need for new technologies, systems, and training to comply with broader regulations.

- **Complexity in Implementation**: The broad scope of regulations may be difficult to implement effectively, particularly in the initial stages.
- **Potential for Over-regulation**: There is a risk of over-regulation, which could stifle innovation and efficiency within the industry.

Option 7a was considered further during the Consultation RIS (2023) discussions, and its potential impacts were discussed. However, a full quantitative analysis was not feasible or practical due to a lack of data and difficulty quantifying or forecasting dollar impacts.

The NTC agrees that the anticipated benefits of 7a do not outweigh the foreseeable associated costs and supports an alternative pathway in which the regulator has the flexibility, reflexivity, and scope to develop a NAS outside of strict regulations and over a phased period. The development of a NAS outside of regulations would be subject to consultation with key government stakeholders whom the regulator considers relevant.

6.2.2 Stakeholder feedback

Stakeholders were supportive of both the Base Case and Option 7a.

Some stakeholder groups, including the police, peak industry bodies, participating state and territory jurisdictions, and industry groups, supported Option 7a with neutral support for the Base Case. These stakeholders suggested that the current audit system is flawed and that including NAS requirements in regulations would create certainty and improve the scheme's effectiveness by creating more stringent guidelines.

However, several industry bodies and government agencies, including a peak industry body, one jurisdiction, and the NHVR, expressed disagreement with this proposal. The jurisdiction disagreed with the proposal on the basis that a NAS can be carried out effectively through existing mechanisms, such as a ministerially approved NAS document referenced by the HVNL and developed and carried by the NHVR.

Importantly, the NHVR does not support Option 7a, stating that it would require preserving an inflexible static instrument to outline auditing requirements and that inflexible instruments often result in an inflexible regulatory framework. Additionally, the NHVR believes that its board is best placed to consider appropriate auditing requirements and a workable framework.

6.2.3 NTC response

While stakeholders provided some support for Option 7a, industry, one jurisdictional stakeholder, and the NHVR, strongly supported retaining the Base Case as it supports operational flexibility and a controlled roll-out of new NAS requirements that will significantly impact operators and auditors.

Additionally, PC has recommended that including broad NAS requirements in regulations would not add value; instead, it would create unnecessary prescriptions and an inflexible regulatory instrument that does not support the goal of streamlining the HVNL. Furthermore, the broad regulatory requirements proposed in 7a replicated the fundamental auditing principles under ISO 19011. As the regulator has agreed that its NAS will adhere to this standard and that ministers can approve the NAS under law, duplicating these broad requirements in regulation does not add value or increase ministerial oversight or governance. The NTC generally agrees with this view.

6.2.4 Recommended enhanced accreditation policy reforms

Recommendations in relation to enhanced accreditation policy reforms are set out below.

Recommendation 12: That the required provisions for the National Audit Standard (NAS) be introduced into the primary law only.

6.2.5 Implementation

The NHVR will implement Base Case 7 and has agreed to develop the NAS in accordance with international ISO 19011 principles.

As the national regulator, the NHVR will be responsible for the NAS's ongoing evaluation, including monitoring the effectiveness and reliability of the audit program. See chapter 7 for further details of how this reform will be evaluated.

7 Evaluation

Key points

- The purpose of this chapter is to describe the approach to evaluating reforms recommended in this Decision RIS, including an evaluation of the implementation process and reform outcomes.

7.1 Approach

It is anticipated that two forms of evaluation will be required:

- An evaluation of the implementation process by the NHVR
- An evaluation of reform outcomes by the NTC

7.1.1 Process evaluation (12 months to five years)

As the key delivery agency, it will be the NHVR's responsibility to monitor and evaluate the effectiveness of the process of implementing the recommended reforms. It is anticipated that a process evaluation should be undertaken within 12 months to five years of implementation.

As per the NHVR's *Monitoring and Evaluation of Regulatory Activities (MERA)*[44] Framework, a process evaluation investigates how the regulatory activity is delivered. The evaluation may consider alternative delivery methods and assess whether regulatory activities are being executed as intended.

Key focus questions may include:

- Has the reform package been implemented as planned?
- Should the reform package be continued, expanded, modified, discontinued?
- Could the process used to deploy the reform be transferred or recreated on a bigger scale or different location?
- Are there better ways to achieve the same result?
- Can resources be allocated more efficiently in the future?

The NHVR could consider these questions in relation to the three areas of implementation as described above: system and process updates, industry education and communication and training for authorised officers.

It is recommended that the process monitoring, and evaluation framework developed to evaluate the reforms, aligns with the key principles underpinning the MERA Framework.

A monitoring and evaluation plan should be developed by the NHVR in the implementation of the reform package in consultation with key stakeholders to identify requirements necessary to undertake the evaluation.

[44] NHVR (2022), *Monitoring and Evaluation of Regulatory Activities.*

7.1.2 Outcomes evaluation (5+ years)

It is recommended that the NTC undertake an outcome evaluation after five years to evaluate whether the reforms have delivered key outcomes as intended.

As per the NTC's *National Transport Reforms Evaluation Framework*[45], an outcome evaluation should examine whether the reform has led to changes and how these outcomes compare to what was originally intended prior to the reform being implemented. The reviewer should consider how the reform meets anticipated objectives including time saving for operators, reduced regulatory burden, improved compliance, and more targeted enforcement.

Key focus questions may include:

- What are the actual changes (outcomes) delivered by the reform (and for different impacted groups)?
- How do the actual changes (outcomes) compare to what was originally intended or reflected in the reform logic?
- When are outcomes being realised and how does this compare with what was originally intended?
- How has the reform contributed to broader transport objectives of government?

An evaluation plan should be prepared by the NTC in consultation with key stakeholders prior to or during implementation of proposed reforms to enable suitable baseline information and data to be collected. Availability of data and information to determine the realisation of benefits can be a challenge, and therefore consideration should be given to consultation with stakeholders to seek relevant information, as well as potentially the development of a planned research methodology. A planned research methodology would help to build a better evidence base for the evaluation including potentially developing data sources that aren't currently collected.

Stakeholders consulted as part of the evaluation could include freight operators, peak industry bodies, enforcement agencies (police and NHVR) and government agencies.

[45] NTC (2023), *National Transport Reforms Evaluation Framework.*

8 Conclusions

Key points

- This Decision RIS has been prepared to assist ITMM in considering options for future improvements to the HVNL.
- This Decision RIS makes several recommendations as to key policy reforms for consideration by ministers.
- Several issues which fall outside the scope of this Decision RIS were raised by stakeholders in submissions to the Consultation RIS (2023). These issues have been responded to by the NTC to provide stakeholders with an update and explain next steps.

8.1 Summary of recommendations

This Decision RIS has been prepared to inform transport ministers in considering options for future improvements to the HVNL in line with reforms agreed to be progressed by ministers in August 2022.

This Decision RIS builds on the findings of a Consultation RIS released in October 2023 for public consultation. The Consultation RIS (2023) considered options to improve fatigue management and increases to general mass and dimension limits for heavy vehicles, as well as changes to the NAS to build on the proposed changes to heavy vehicle accreditation that was presented in the previous Decision RIS (2023).

Analysis of proposed options, balanced with feedback from stakeholders provided on the Consultation RIS (2023), has led the NTC to make several recommendations for consideration by ministers. These are set out in the callout box below.

Recommendation 1: That the requirements for the Work Diary (WD) be changed to:

a) Make recording the day of the week on the daily sheet not subject to an offence under the HVNL

b) Make recording the total work and rest hours on the daily sheet not subject to an offence under the HVNL

c) Introduce a default for the 'hours option' in the WD that is the standard hours for a solo driver of a fatigue regulated heavy vehicle.

Recommendation 2: Consolidate the following offences under 'Recording information under the national regulations – general' (s296):

a) How information is to be recorded (s301) – noting that some requirements will be removed from the law altogether and covered in the WD instructions only

b) Failing to record specific information regarding odometer reading (s298)

c) Time zone of a driver's base must be used (s303).

Recommendation 3: Remove s308(1)(b)(ii) and s308(1)(c) so that a found or returned WWD, after a replacement has been issued, is no longer required to be returned to the

Regulator, noting that a driver will still be required to notify the Regulator using the approved form and to cancel any unused daily sheets in the WWD.

Recommendation 4: Remove requirements relating to returning an existing WWD with an application for a new one (s339(3)) and replace these with a new requirement for a driver to cancel any unused daily sheets in the existing WWD.

Recommendation 5: Remove s308(2) and s339(4), which contains the requirements relating to what the Regulator will do with returned WWD.

Recommendation 6: That the definition of a fatigue regulated heavy vehicle (as defined in the HVNL) remains unchanged.

Recommendation 7: Remove s590(1)(b) of the HVNL, to broaden the application of formal warnings by Authorised Officers as a compliance tool for fatigue record-keeping breaches and other breaches under the HVNL.

Recommendation 8: That the HVNL include provisions to enable formal education as an additional enforcement option for Work Diary administrative offences, subject to confirming a pathway that minimises implementation and ongoing administration costs to participating jurisdictions, police agencies and industry.

Recommendation 9: Increase the current General Mass Limits (GML) to match the current CML (inclusive of the ADR 80/04 (Euro VI) mass limit increase approved by ministers), repeal the current CML, and make no changes to HML.

Recommendation 10: Increase the general access heavy vehicle height limit from 4.3 m to 4.6 m, subject to technical analysis by the NHVR to confirm appropriate controls to reduce rollover risks.

Recommendation 11: Increase the general access heavy vehicle length limit from 19 m to 20 m, subject to technical analysis by the NHVR to confirm suitable swept path controls.

Recommendation 12: That the required provisions that allow for a National Audit Standard (NAS) be introduced into the primary law only.

8.2 Reform next steps

If approved, the changes to the HVNL can be prepared.

Upon completion of the NHVR technical analysis for proposed increases to general access vehicle height and length is complete, further impact analysis on any proposed conditions will be required.

8.3 Matters for future consideration

Several issues which fall outside the scope of this Decision RIS were raised by stakeholders in submissions to the Consultation RIS (2023). These issues either have a separate stream of work associated with them, or it is the NTC's view that these should be considered further in future work programs. Key issues raised are described in the table below.

Table 19. Out of scope matters for future consideration

Issue raised	NTC response
Electronic work diaries	Use of electronic work diaries (EWDs) and the merits and burdens associated with mandating EWDs was raised and discussed frequently by stakeholders in submissions to the Consultation RIS (2023). The majority of stakeholders who discussed use of EWDs were supportive of the transition away from the written work diary, suggesting that use of EWDs would be a positive step for road safety and fatigue management if used correctly. Strong support for EWDs is demonstrated by participating state and territory jurisdictions, police and the NHVR stakeholders. Fewer industry groups provide comment on EWDs; however, multiple industry groups including one heavy vehicle peak industry body, and representatives from other industry and smaller driver/operators also provided support for a transition to EWDs. However, not all industry players are supportive. One peak body representing agricultural road transport businesses cautioned against mandatory EWDs given the potential cost to operators, and impacts caused by inconsistent network coverage in regional and rural areas. Approval for the NTC to consider this issue would be required by ITMM (or ITSOC if responsibility was delegated).
High monetary penalties under the HVNL	As part of delivering a new HVNL that is risk-based and proportionate to harm, the NTC is carrying out a comprehensive review of all HVNL monetary penalties, as well as demerit point amounts and infringeability of offences (the Penalties Review). The Penalties Review will involve an assessment of severity impact for safety risks associated with each offence. Key criteria, including unfair commercial advantage, frustration of enforcement, false and misleading conduct, undermining confidence in the regulatory framework, and systemic behaviour, are also considered as part of this assessment. The Penalties Review will involve close consultation with industry, jurisdiction agencies, regulators, and police. It is intended that the Review will be finalised, ready for a draft amendment bill in December 2024.

Appendix A. Stakeholder engagement record

The below lists the submissions received by the NTC in response to the Consultation RIS (2023):

- AgForce Queensland Farmers Limited
- Alex Barrett
- Australian Livestock and Rural Transporters Association (ALRTA)
- Australian Local Government Association (ALGA)
- Australian Logistics Council (ALC)
- Australian Lot Feeders' Association (ALFA)
- Australian Rail Track Corporation (ARTC)
- Australian Trucking Association (ATA)
- Bonaccord Group
- Brad Mull
- Bus Industry Confederation (BIC)
- Bus Victoria
- C Wong
- Commercial Vehicle Industry Association of Australia (CVIAA)
- Coulton Transport
- Department for Infrastructure and Transport (South Australian Government)
- Department of State Growth (Tasmanian Government)
- Department of Transport and Main Roads (Queensland Government)
- Department of Transport and Planning (Victorian Government)
- Dr Arnold McLean
- Gas Energy Australia (GEA)
- Grain Trade Australia (GTA)
- Heavy Vehicle Industry Australia (HVIAA)
- Kate Austin
- Ku-ring-gai Council
- Local Government Association of Queensland (LGAQ)
- Mark Bott
- Michael Strickland
- Municipal Association of Victoria (MAV)
- National Farmers' Federation (NFF)
- National Heavy Vehicle Regulator (NHVR)
- National Road Transport Association (NatRoad)
- Nick Twidale
- Office of the National Rail Safety Regulator (ONRSR)
- Peter Goudie
- Queensland Farmers' Federation (QFF)
- Queensland Police Service
- Queensland Transport and Logistics Council (QTLC)
- Rod Hannifey
- South Australian Freight Council (SAFC)
- South Australia Police (SAPOL)
- South Australian Road Transport Association (SARTA)
- Stuart Greig
- Tasmanian Transport Association (TTA)
- Transport Canberra and City Services (ACT Government)
- Transport for NSW and NSW Police Force (NSW Government)
- Transport Workers' Union (TWU)
- Trevor Warner
- Truck Industry Council (TIC)
- Victoria Police
- Victorian Transport Association (VTA) and Queensland Trucking Association (QTA)

Stakeholder engagement post-public consultation

Following analysis of all submissions received throughout public consultation, the NTC continued to engage with a number of government and industry organisations in support of developing the Decision RIS, and to inform its recommendations.

Primarily, the NTC continued to meet most weeks with its government working group, in drafting the Decision RIS. This group includes representation from all Australian road transport departments, the National Heavy Vehicle Regulator, state police, the Australian Local Government Association and Transport Certification Australia.

Additionally, there was ongoing engagement with the NHVR in conducting thorough technical assessments in response to stakeholder feedback. This included analysis of potential increases in vehicle length and height, and exploring options to mitigate any risks identified by stakeholders.

The NTC also maintains its Reform Advisory Committee (RAC+) for the purpose of engagement with industry. Since hosting an in-person workshop with RAC+ members in Melbourne on 3 November to work through the options detailed within the Consultation RIS, the NTC convened this group a further five times (as of 21 June 2024).

Specific to the development of the Decision RIS, the NTC presented for discussion to RAC+ members a preliminary assessment of submission feedback across all Consultation RIS options (December 2023), as well as the results from the C-RIS supplementary survey (February 2024), which ran between December 2023 and January 2024.

Additional ad-hoc meetings with industry representatives, RAC+ and others, were convened to help further inform supporting detail within the Decision RIS.

Furthermore, the NTC convened meetings with senior government officials, most notably Infrastructure and Transport Senior Officials' Committee (ITSOC) Deputies. These meetings aimed to refine policy recommendations, particularly in the areas of fatigue management and access, in order to gain support from participating State, Territory and Commonwealth governments.

Appendix B. Multi-criteria analysis methodology

The impacts of most proposed options are assessed and compared using a qualitative, multi-criteria impact analysis. This approach is commonly used where full monetisation of costs and benefits are not appropriate or possible, consistent with the OIA cost-benefit analysis (CBA) guidelines.

For some options, use of the multi-criteria analysis has not been possible. Where this is the case, explanation is provided, and an alternative approach is taken.

The NTC selected six impact categories for multi-criteria analysis, modelled on the C-RIS (2020) and D-RIS (2023). The impact categories are as follows:

a) **Public safety** – Having safe vehicles on Australian roads is a fundamental accepted standard under existing regulation and will continue to be under any changes to fatigue management, changes to mass and dimension for general access vehicles, or assurance of the accreditation schemes for alternative compliance.

b) **Productivity and efficiency** – The performance of the freight supply chain operating on Australian roads is critical to Australia's future economic success and competitiveness.

c) **Regulatory burden to industry** – Changes to fatigue management regulation have the potential to create additional administrative burden on the heavy vehicle industry. If costs are too high, there may be detrimental effects to the sustainability of heavy vehicle businesses.

d) **Regulatory costs to government** – Changes to fatigue management regulation and the introduction of a NAS will have some upfront and ongoing costs to government. These costs need to be proportionate to the benefits.

e) **Asset management** – Road infrastructure has large investment and maintenance costs, and road networks support safe and efficient movement of people and goods.

f) **Flexibility and responsiveness** – The heavy vehicle industry is operating in a dynamic environment with rapid advances in technology and business practices. Any modern regulatory framework needs to be sufficiently flexible to adapt to realise opportunities.

Table 20 provides further information about the criteria used in the analysis. This assessment is conducted at a national level, considering all participating states and territories that have applied the HVNL.

Table 20. Assessment criteria for each Decision RIS impact category

Impact Category	Assessment Criteria
a) Public Safety	▪ Ensures responsibility sits with the party best able to manage the risk ▪ Addresses emergent safety risks that may not have been specifically identified or considered.

		▪ Enables targeted compliance and enforcement options, including sanctions and penalties for non-compliance ▪ Provides community assurance that heavy vehicle safety risks have been comprehensively addressed ▪ Supports industry to develop and invest in safer technology and safer management practices.
b)	Productivity and Efficiency	▪ Enables more efficient scheduling and business practices ▪ Enables industry to develop and deploy innovative technology and practices to lower costs ▪ Reforms apply regulatory requirements equitability across the industry and support competition.
c)	Regulatory burden to industry	▪ Results in low upfront and ongoing compliance, administrative and delay costs ▪ Provides clear and consistent regulatory expectations to industry about its responsibilities and what is required to comply ▪ Supports an approach that is consistent across all jurisdictions.
d)	Regulatory costs to government	▪ Minimises upfront structural, organisational, and regulatory change to implement the model, including a minimal impact on existing processes and minimal regulatory layers ▪ Supports efficient ongoing administrative and operational processes.
e)	Asset Management	▪ Ensures the impact on road infrastructure – including bridges, other structures and pavements – is sustainable and services the needs of all road users, including all general access and restricted access heavy vehicles ▪ Minimises the impact on community amenity.
f)	Flexibility and responsiveness	▪ Allows flexibility for industry by focusing on safety outcomes, minimizing prescriptive requirements ▪ Allows flexibility for government in addressing emerging safety risks ▪ Reflects and supports the diversity of the heavy vehicle industry across different freight tasks, geographical areas, and scale and type of operations.

Individuals and groups likely to be affected

To assess the impacts of the reform options it is important to identify the individuals and groups affected by the reform. Table 21 outlines the key groups and individuals that are likely to be affected by the reform options.

Table 21. Groups impacted by each Decision RIS impact category

Impact Category		Group impacted
g)	Public Safety	▪ Heavy vehicle drivers and other road users (who may be killed or injured) including vulnerable road users such as cyclists, motorcyclists and pedestrians. ▪ Chain of responsibility parties

		▪ General public (through wider costs of crashes) ▪ Public and private providers of transport, emergency response, health, infrastructure, and insurance services (secondary beneficiaries) ▪ Enforcement agencies, including police and the NHVR.
h)	Productivity and Efficiency	▪ Heavy vehicle drivers, operators, and businesses ▪ Off-road chain of responsibility parties (reduced costs of moving goods) ▪ General public (through reduced costs of moving goods).
i)	Regulatory burden to industry	▪ Heavy vehicle drivers, operators, and businesses ▪ Off-road chain of responsibility parties.
j)	Regulatory costs to government	▪ Australian Government ▪ State and territory governments ▪ Local Government ▪ Enforcement agencies, including police and the NHVR.
k)	Asset management	▪ State and territory governments ▪ Local governments and other road managers ▪ Heavy vehicle drivers, operators, and businesses ▪ the Australian community.
l)	Flexibility and responsiveness	▪ Heavy vehicle drivers, operators, and businesses ▪ Off-road chain of responsibility parties ▪ Vehicle suppliers ▪ Vehicle safety (and other) technology suppliers.

Assessing the options

Table 22. Scale for the comparative advantage or disadvantage of options

Significant negative impact	Negative impact	Neutral	Improvement	Large improvement
The option would most likely result in a **large decline** compared with the baseline option.	The option would most likely result in **some (limited or moderate) decline** compared with the baseline option.	The option would most likely have a **negligible impact** compared with the baseline option.	The option would most likely result in **some (limited or moderate)** improvement compared with the baseline option.	The option would most likely result in a **large improvement** compared with the baseline option.

Appendix C. Consultation RIS (2023) survey results

Please see overleaf.


National
Transport
Commission
HVNL Consultation RIS
Survey Results

Overview

The Consultation Regulatory Impact Statement (Consultation RIS) for the Heavy Vehicle National Law (HVNL) explores various options for modifying the HVNL.

In addition to the formal submissions received from stakeholders, the NTC published a **short survey** to complement the feedback process and provide an alternative avenue for input. This survey was specifically tailored for engagement with heavy vehicle operators, presenting a series of specific questions related to the fundamental assumptions and options outlined in the Consultation RIS. The stakeholders' participation in the survey is deemed crucial, as the responses collected played a pivotal role in refining and enhancing the proposed options. Furthermore, the insights obtained was instrumental in conducting a more in-depth analysis of the comparative costs and benefits associated with these options, ultimately contributing to the development of the Decision Regulation Impact Statement (D-RIS).

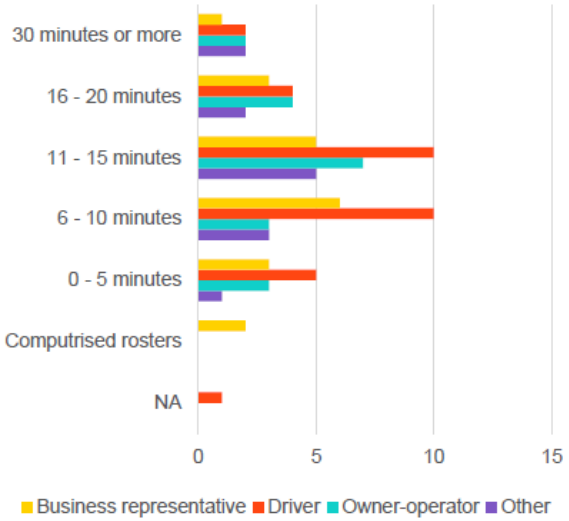
The survey is divided into two parts, with the initial section including general enquiries about the nature of the of the business and industry. The subsequent section involves questions addressing the assumptions laid out in the Consultation RIS. The responses have been carefully analysed and a summary for each of the survey questions is provided. Eighty-four respondents completed the survey provided by the NTC. These respondents have been grouped into 4 position types; Business representative (23.8%), Driver (38.1%), Owner-operator (22.6%) and Other* (15.5%). An overview of these respondent categories is provided in the table below.

Respondent category	Number of respondents	Respondent industries	Transport locations			Number of operator vehicles							
			Interstate	Intrastate	Local	1	2 to 10	11 to 20	21 to 50	51 to 100	101 to 200	200+	NA
Business representative	20	Parcels, Dangerous goods, General freight, Waste, Construction/ landscape products, Containers, Refrigerated, Buses, Specialist tanker and logistics, Training, Biproduct/ carcasses and pet food production, Refrigerated freight	8	6	6	0	1	1	2	1	4	8	3
Driver	32	Dangerous goods, General freight, Primary production/ farming, Waste, Oversize, Construction/ landscape products, Mixed, Containers, Mining, Refrigerated freight, Furniture removal, Logging, Buses	15	8	9	0	6	5	5	3	3	2	8
Owner-operator	19	General freight, Primary production/ farming, Oversize, New machinery and agricultural supplies, General, Construction, Primary produce, Grain, Mining, Livestock, Maintenance services, Meat, General agricultural machinery and farm supplies, ICT	7	8	4	9	8	0	0	0	0	0	2
Other*	13	Compliance, Government, Multi Modul National, General freight, Primary production/ farming, Rural transport, Grocery, Training	6	3	4	0	3	0	2	0	0	4	4
Total	**84**		**36**	**25**	**23**	**9**	**18**	**6**	**9**	**4**	**7**	**14**	**17**

** Other includes Compliance related roles, Government, Equipment Design etc*

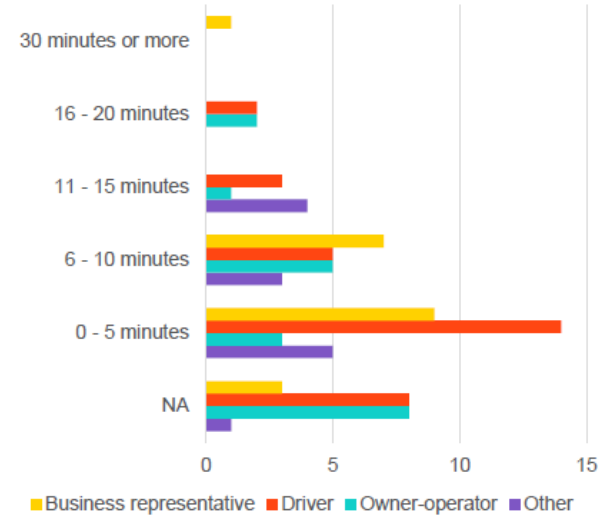
Question 1-3 responses

1) Could you estimate the amount of time a driver will spend daily completing a written work diary?



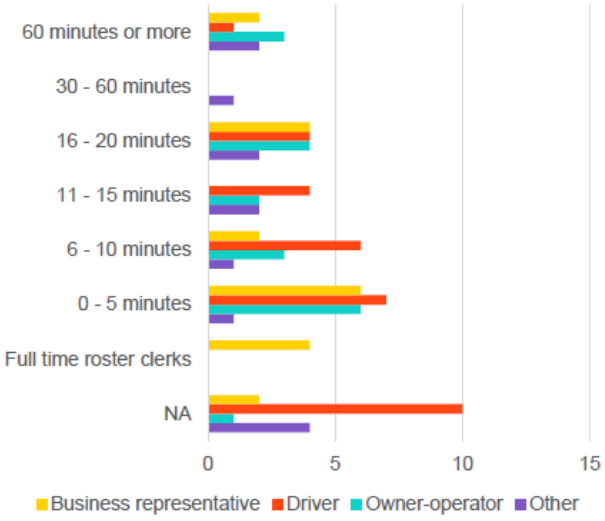
As illustrated above, most drivers anticipate that it would take approximately 6 - 15 minutes to complete a written work diary. Business representatives, owner-operators and other positions also hold similar views. Business representatives have also indicated the use of computerised rosters. A few responses have specified that a driver may spend more than 30 minutes a day filling out a written work diary, however, the majority of responses for each respondent category lies within the 5 - 20 minute range.

2) Could you estimate the amount of time a driver will spend daily completing an electronic work diary (compared to the written work diary)?



As illustrated above, most drivers anticipate that it would take approximately 0 - 10 minutes to complete an electronic work diary. However, quite a few drivers and owner-operators have indicated that they don't have an electronic work diary available or have never used one in the past. Overall, the majority of responses for each respondent category lies within the 0 - 10 minute range.

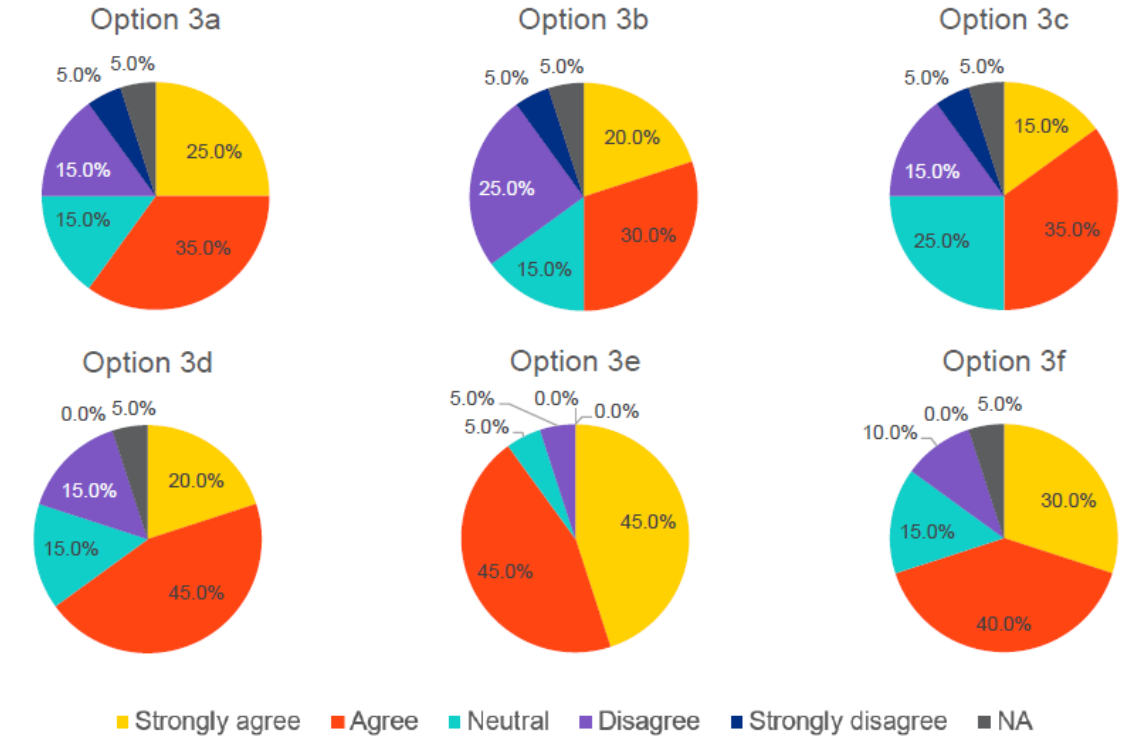
3) How much time is spent by a record keeper in your business managing work diary records (per driver per day)?



As illustrated above, a wide range of responses have been provided for this survey question. The majority of responses show that record keeping takes anywhere between 0 - 20 minutes. However, some drivers are either not involved in the record keeping process or have not indicated a response. A few respondents have indicated that time spent on managing work diary records can exceed 60 minutes. Business representatives have also specified the use of full time roster clerks.

Option 3 responses: Business representative

Q: Which of the fatigue enforcement options do you agree would deliver a fairer regulatory approach?

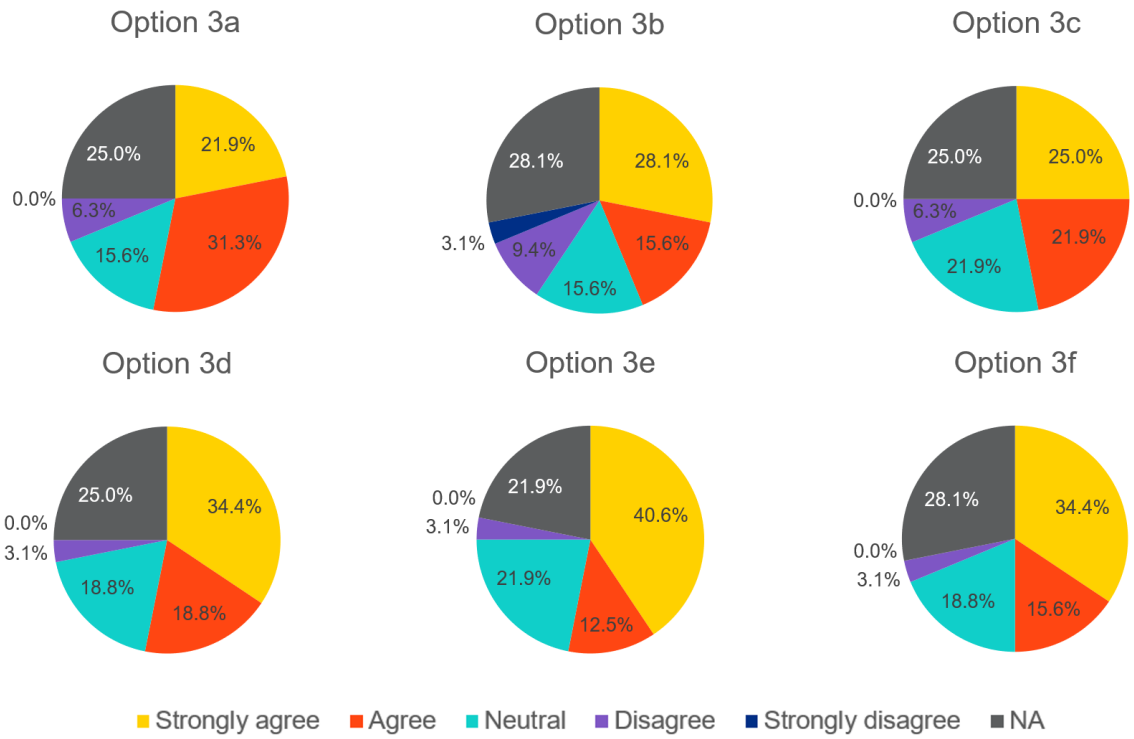


The following figures highlight that business representative responses are largely in support of Option 3a-3f. Twenty business representative stakeholder responses were collected from this survey, noting that respondents could select multiple options. Their response to each option is as follows:

- **Option 3a:** 60% of business representatives either agreed or strongly agreed that this option provides a fairer regulatory approach, with 20% in disagreement. (Note: 5% of business representatives did not respond to this option)
- **Option 3b:** 50% of business representatives either agreed or strongly agreed that this option provides a fairer regulatory approach, with 30% in disagreement. (Note: 5% of business representatives did not respond to this option)
- **Option 3c:** 50% of business representatives either agreed or strongly agreed that this option provides a fairer regulatory approach, with 20% in disagreement. (Note: 5% of business representatives did not respond to this option)
- **Option 3d:** 65% of business representatives either agreed or strongly agreed that this option provides a fairer regulatory approach, with 15% in disagreement. (Note: 5% of business representatives did not respond to this option)
- **Option 3e:** 90% of business representatives either agreed or strongly agreed that this option provides a fairer regulatory approach, with 5% in disagreement.
- **Option 3f:** 70% of business representatives either agreed or strongly agreed that this option provides a fairer regulatory approach, with 10% in disagreement. (Note: 5% of business representatives did not respond to this option)

Option 3 responses: Drivers

Q: Which of the fatigue enforcement options do you agree would deliver a fairer regulatory approach?

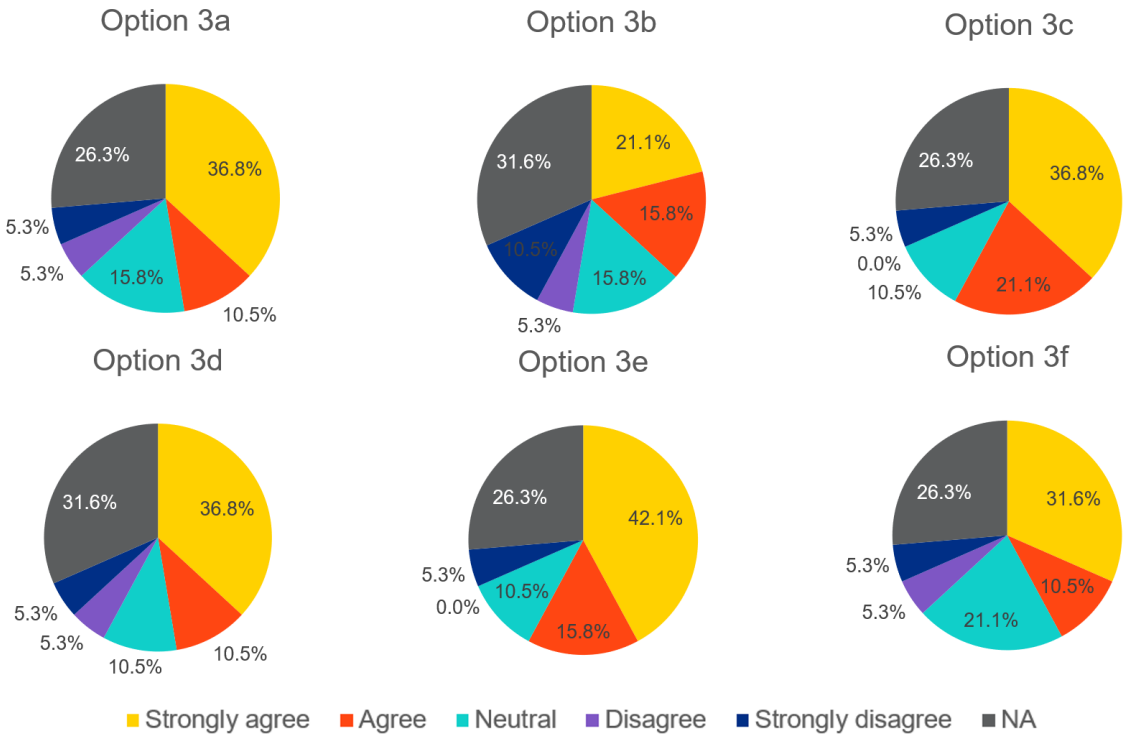


The following figures highlight that drivers' responses are largely in support of Option 3a-3f. Thirty-two driver stakeholder responses were collected from this survey, noting that respondents could select multiple options. Their response to each option is as follows:

- **Option 3a:** 53.1% of drivers either agreed or strongly agreed that this option provides a fairer regulatory approach, with 6.3% in disagreement. (Note: 25% of drivers did not respond to this option)
- **Option 3b:** 43.8% of drivers either agreed or strongly agreed that this option provides a fairer regulatory approach, with 12.5% in disagreement. (Note: 28.1% of drivers did not respond to this option)
- **Option 3c:** 46.9% of drivers either agreed or strongly agreed that this option provides a fairer regulatory approach, with 6.3% in disagreement. (Note: 25% of drivers did not respond to this option)
- **Option 3d:** 53.1% of drivers either agreed or strongly agreed that this option provides a fairer regulatory approach, with 3.1% in disagreement. (Note: 25% of drivers did not respond to this option)
- **Option 3e:** 53.1% of drivers either agreed or strongly agreed that this option provides a fairer regulatory approach, with 3.1% in disagreement. (Note: 21.9% of drivers did not respond to this option)
- **Option 3f:** 50% of drivers either agreed or strongly agreed that this option provides a fairer regulatory approach, with 3.1% in disagreement. (Note: 28.1% of drivers did not respond to this option)

Option 3 responses: Owner-operator

Q: Which of the fatigue enforcement options do you agree would deliver a fairer regulatory approach?

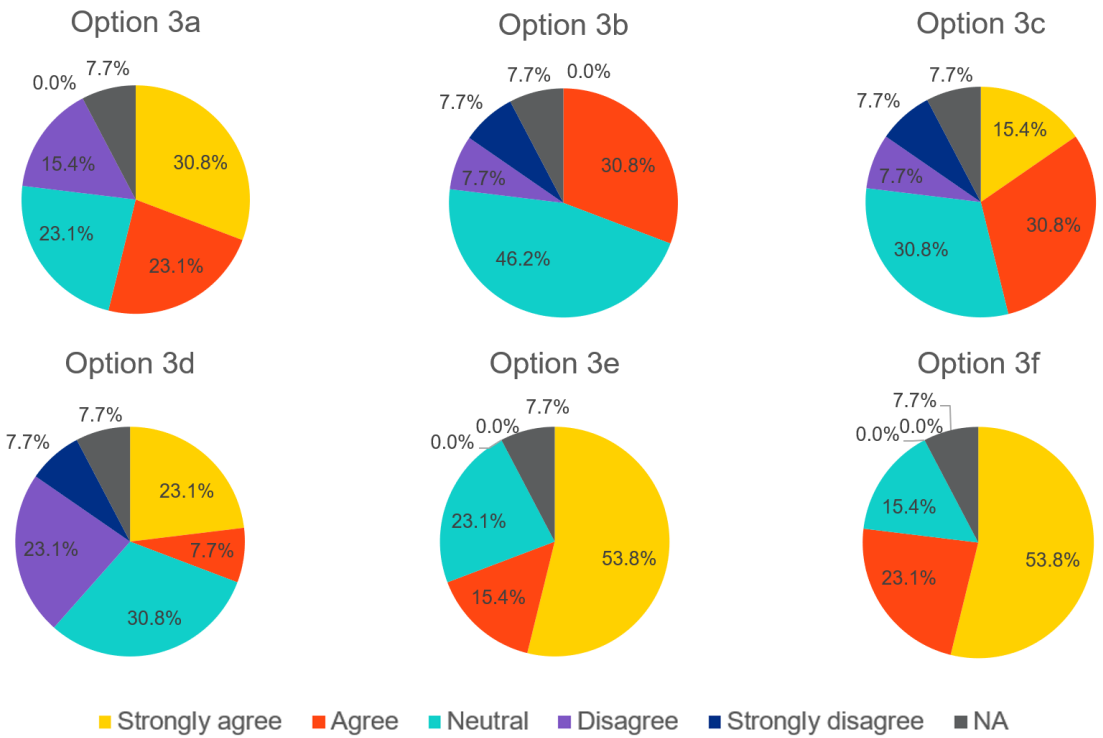


The following figures highlight that owner-operator responses are largely in support of Option 3a-3f. Nineteen owner-operator stakeholder responses were collected from this survey, noting that respondents could select multiple options. Their response to each option is as follows:

- **Option 3a:** 47.4% of owner-operators either agreed or strongly agreed that this option provides a fairer regulatory approach, with 10.5% in disagreement. (Note: 26.3% of owner-operators did not respond to this option)
- **Option 3b:** 36.8% of owner-operators either agreed or strongly agreed that this option provides a fairer regulatory approach, with 15.8% in disagreement. (Note: 31.6% of owner-operators did not respond to this option)
- **Option 3c:** 57.9% of owner-operators either agreed or strongly agreed that this option provides a fairer regulatory approach, with 5.3% in disagreement. (Note: 26.3% of owner-operators did not respond to this option)
- **Option 3d:** 47.4% of owner-operators either agreed or strongly agreed that this option provides a fairer regulatory approach, with 10.5% in disagreement. (Note: 31.6% of owner-operators did not respond to this option)
- **Option 3e:** 57.9% of owner-operators either agreed or strongly agreed that this option provides a fairer regulatory approach, with 5.3% in disagreement. (Note: 26.3% of owner-operators did not respond to this option)
- **Option 3f:** 42.1% of owner-operators either agreed or strongly agreed that this option provides a fairer regulatory approach, with 10.5% in disagreement. (Note: 26.3% of owner-operators did not respond to this option)

Option 3 responses: Other

Q: Which of the fatigue enforcement options do you agree would deliver a fairer regulatory approach?



The following figures highlight that compliance related and other positions responses are largely in support of Option 3a-3f. Thirteen stakeholder responses from compliance related or other positions were collected from this survey, noting that respondents could select multiple options. Their response to each option is as follows:

- **Option 3a:** 53.8% of these stakeholders either agreed or strongly agreed that this option provides a fairer regulatory approach, with 15.4% in disagreement. (Note: 7.7% of these stakeholders did not respond to this option)
- **Option 3b:** 30.8% of these stakeholders either agreed or strongly agreed that this option provides a fairer regulatory approach, with 15.4% in disagreement. (Note: 7.7% of these stakeholders did not respond to this option)
- **Option 3c:** 46.2% of these stakeholders either agreed or strongly agreed that this option provides a fairer regulatory approach, with 15.4% in disagreement. (Note: 7.7% of these stakeholders did not respond to this option)
- **Option 3d:** 30.8% of these stakeholders either agreed or strongly agreed that this option provides a fairer regulatory approach, with 30.8% in disagreement. (Note: 7.7% of these stakeholders did not respond to this option)
- **Option 3e:** 69.2% of these stakeholders either agreed or strongly agreed that this option provides a fairer regulatory approach, with no responses in disagreement. (Note: 7.7% of these stakeholders did not respond to this option)
- **Option 3f:** 76.9% of these stakeholders either agreed or strongly agreed that this option provides a fairer regulatory approach, with no responses in disagreement. (Note: 7.7% of these stakeholders did not respond to this option)

Response to increase in length limits

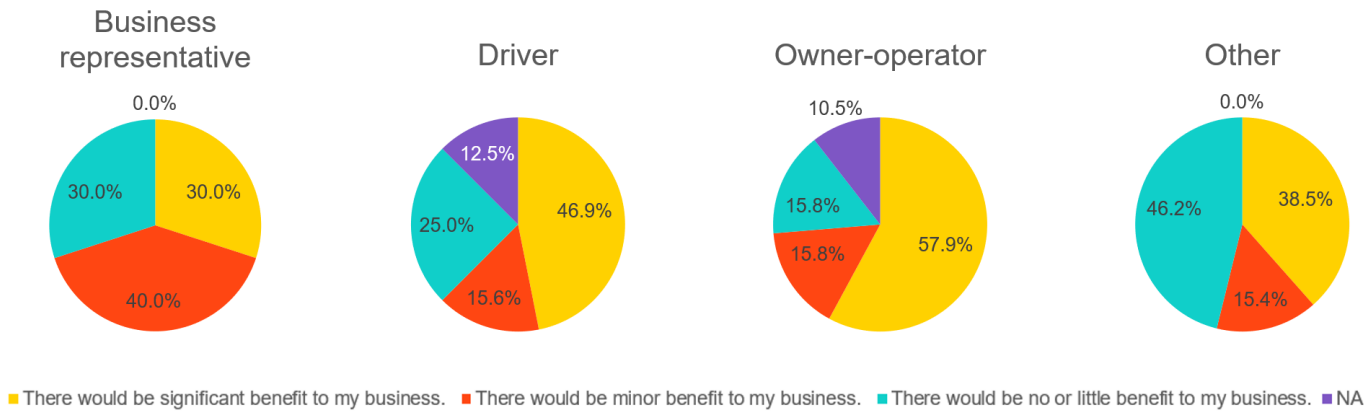
Q: Regarding the proposal to increase length limits for general access vehicles from 19m to 20m, which of the following statements best describes your view? Please use the text box below to provide detail.

The following figures below indicate that the majority of all respondent categories believe that increasing length limits for general access vehicles to 20m will be relatively beneficial for their operations:

- Of the 20 responses from business representatives, 70% indicated that this proposal will provide some form of benefit for their operations.
- Of the 32 responses from drivers, 62.5% indicated that this proposal will provide some form of benefit for their operations. (Note: 12.5% of these drivers did not respond to this question)
- Of the 19 responses from owner-operators, 73.7% indicated that this proposal will provide some form of benefit for their operations. (Note: 10.5% of these owner-operators did not respond to this question)
- Of the 13 responses from other respondents, 53.8% indicated that this proposal will provide some form of benefit for their operations.

Respondents were also able to provide comments on the proposal. Common themes arose within the responses, these are outlined below

- Respondents mentioned that the preferred application of the increased length allowance would be wider sleeper cabins by drivers and owner-operators, who believe it will greatly increase driver comfort and reduce fatigue. Some support has also been shown by drivers for increased trailer length to increase carriable footage.
- Drivers and other respondents within compliance roles have expressed that an increase in general access length limits provide the opportunity to add more safety features to their vehicles (e.g., bull bars or docking buffers) which are typically forgone under current length limits due to compliance issues. Similarly, this proposal will also lead to a reduction in requirements for gazette notices, permits and PBS certifications; therefore, reducing compliance issues for operators.
- Lastly, respondents have indicated that this proposal may be more relevant or should also be applied to B-double configurations.



Response to increase in height limits

Q: Regarding the proposal to increase height limits for general access vehicles from 4.3m to 4.6m, which of the following statements best describes your view?

The following figures below indicate that the majority of all respondent categories believe that increasing length limits for general access vehicles to 20m will be relatively beneficial for their operations:

- Of the 20 responses from business representatives, 55% indicated that this proposal will provide some form of benefit for their operations.
- Of the 32 responses from drivers, 43.8% indicated that this proposal will provide some form of benefit for their operations. (Note: 12.5% of these drivers did not respond to this question)
- Of the 19 responses from owner-operators, 63.2% indicated that this proposal will provide some form of benefit for their operations. (Note: 5.3% of these owner-operators did not respond to this question)
- Of the 13 responses from other respondents, 53.8% indicated that this proposal will provide some form of benefit for their operations.

Respondents were also able to provide comments on the proposal. Common themes arose within the responses. These are outlined below:

- Most drivers and business representatives have indicated that only a minor or no or little benefit will be experienced from this proposal. Most stakeholders in compliance related positions and some owner-operators indicated that they already operate with increased height (for oversized machinery and livestock freight) and have already made provisions for this increased height; therefore, the significant benefit gained from this proposal is likely to be related to reductions in administrative burden.
- Most stakeholder responses indicate that they will be unable to take advantage of the increase to general access vehicle height limits. All respondent categories have expressed that many locations, vehicle servicing sites and customer sites face height restrictions; which makes these sites now inaccessible. Furthermore, certain commodity freight such as fuel tankers or refrigerated freight cannot take advantage of the increased heigh limits due to mass constraints or restrictions on customer sites. Some stakeholders also expressed safety concerns around increased rollover risk and damage to existing infrastructure and have stated a preference for keeping their vehicles 4.3m high regardless of this proposal.