

Gap Analysis between FIFWA
Safety and Health Code for Native
Forest/Hardwood Logging and
Plantation Logging and the
Forestry Log Haulage Registered
Code of Practice

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**South West Timber Hub / Forestry Industries
Federation WA**

FIFWA Code Gap Analysis

Gap Analysis between FIFWA Safety and Health Code for Native Forest/Hardwood Logging and Plantation Logging and the Forestry Log Haulage Registered Code of Practice

“SWTH and FIFWA commissioned this gap analysis between the scope of the FIFWA Safety and Health Code for Native Forest/Hardwood Logging and Plantation Logging against the draft Forestry Log Haulage Registered Code of Practice and various relevant corresponding Western Australian and Federal legislation. This is in recognition of the fact that since the WA Logging Code was last reviewed, the draft Forestry Log Haulage Registered Code of Practice has been prepared in accordance with the National Heavy Vehicle Regulator guidelines. The analysis also includes a review of the legislative framework in WA, including comparison between the established approach to Codes of Practice as made under section 57 of the Occupational Safety and Health Act 1984 and the implications of the yet to be proclaimed provisions of the Work Health and Safety Act 2020.”

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Executive Summary

The FIFWA Safety and Health Code for Native Forest/Hardwood Logging and Plantation Logging (FIFWA Code) is an approved code made under the Western Australia (WA) Occupational Safety and Health Act 1984 (OSHA). It deals with a comprehensive range of safe work practices for all Western Australia forest logging operations, containing specific guidelines for hardwood and plantation logging. The Code is over twenty years old but has been subject to regular review and reissue by Forest Industries Federation WA (FIFWA) and the WA logging industry. The last review was completed in 2016. The Code requires that it be reviewed every 5 years and is due for industry review again in 2021.

Although the Code has benefited from strong industry support, to maintain its currency and effectiveness the WA government has undertaken to supersede the OSHA legislative scheme for ensuring work-related safety with an entirely new Act and scheme. The Work Health and Safety Act 2020 (WHSa) was passed by the WA Parliament in November 2020. It is intended that the WHSA will come into effect once the regulations are ready sometime in 2021. Consequently, the legislative referencing and key definitional concepts of the FIFWA Code are superseded. Although the Code's effect may be preserved by transitional arrangements made under the WHSA, this will have an end date.

Also, the advent of the National Heavy Vehicle Regulator (NHVR) and the Heavy Vehicle National Law (HVNL) in 2012 is also having an impact. A new national Code of Practice for log haulage is being developed and is awaiting approval. This Code of Practice potentially offers a lot more technical detail to the haulage component of the FIFWA code that could substantially strengthen haulage safety (subject to WA adoption).

These are important considerations for FIFWA in determining the future of the Code. By necessity, the Code can no longer remain in its current form. FIFWA are aware of the implications of the passing of the WHSA and its new scheme for ensuring work health and safety. By initiating this review, FIFWA seek to gain a fuller understanding of the implications of the new laws, undertake a gap analysis of the FIFWA Code with the Forestry Log Haulage Code (LHC), including the potential for its adaptation, and determine the options and recommendations for the future of the Code.

Key issues

The FIFWA Code consists of two parts. Part 1 outlines responsibilities in accordance with the OSHA requirements. Part 2 details safe work practices for all logging operations and contains safety guidelines for hardwood and plantation logging.

The passing of the WHSA in November 2020 is the culmination of a review of WA workplace health and safety laws based on the adoption of the Safe Work Australia model laws. The new laws represent a fundamental change from the scheme established by the OSHA. Consistent with the model laws approach, the WHSA introduces new concepts for defining the workplace and its key participants. No longer will the terms 'employer', 'principal' and 'contractor' (used extensively in the FIFWA Code) be referenced in the law. Instead WHSA defines a person conducting a business or undertaking (PCBU) as the 'principal safety duty holder'. It introduces the concept of an 'officer' someone who must maintain due diligence to ensure compliance – a concept not defined in the OSHA – and a 'worker', more broadly defined than an employee. These changes recognise that safety issues arise from work activities and not just the workplace; that safety duties should not be constrained to those that 'do' but also those that influence; and they apply regardless of establishment of a contract between the employer and employee. These fundamental shifts in

meaning have a direct impact on the relevance of the FIFWA Code and, along with its self-determined 5-year expiry, compel the need for its review.

It is clear from the objectives of the WHSA and from its supporting documentation that the conduct of risk assessment is a critical component in responding to the hazards and risks arising from workplace activity. This is in common with the Safe Work Australia view of the model law's operation. There are model Codes of Practice to support an organisation in coming to terms with the conduct of risk assessment, and this can be applied to develop mitigations and controls to hazards and risks. Codes of Practice are an opportunity for industry, through risk assessment, to define for itself safe practices that can be commonly applied across an industry to the benefit of all. For the regulator, this is a co-regulatory approach – industry motivating its own culture of compliant behaviour and reducing the need and cost of compliance monitoring and enforcement. Applying a risk assessment methodology to the review of the FIFWA Code will greatly assist its transition to an alignment with the new scheme and concepts under the WHSA.

The FIFWA have recognised that although the FIFWA Code does address haulage safety, a draft national Forestry Log Haulage Code has been submitted by the Australian Forest Contractors Association (AFCA) to the NHVR for approval. This code offers considerable technical engineering depth in its treatment of log haulage safety, particularly in the areas of loading and load restraint. This is beyond the current scope of the FIFWA Code. Although WA is not an adherent to the HVNL, nor is the code able to be directly applied to WA in its current form, there is considerable potential for the code to bring safety benefits to WA log haulage operations, subject to its review and of adaptation to WA law, vehicles and conditions. This report considers a gap analysis between the FIFWA Code and the LHC with a view to better informing the FIFWA of the potential of the code and its benefits, together with options for how it might be adapted to fit within the WA legal framework for codes of practice under WHSA.

Options

Four options have been identified in the report for the review of the FIFWA Code in response to its expiry and superseding by the new WHSA work safety scheme, and are summarised below. Option 1 is not recommended; Option 2 is worthy of further investigation; and Options 3 and 4 are both supported as recommended, with Option 3 being preferred.

Option 1 Summary: Non-authorised guideline

This investigates whether the FIFWA Code could be devolved to an industry-sponsored and administered guideline outside of the authority expressed by the WHSA. This would involve stripping the Code of all of its legislative referencing and leaving only the detail that represents industry's view of safety actions that can be taken. This may appear to have some benefits in that it could be done with a relative minimum of effort and cost, and to a standard defined by industry rather than the WHSA.

There are some strong disadvantages – most notably that it represents a move out of step with the objectives of the WA government in introducing the WHSA and the scheme it represents for workplace safety. The absence of any meaningful correlation to the law may mean the guideline will not adequately address safety obligations and duties, and could create an exposure if it is found to be misleading or false. Unlike a code or guidance sheet approved under the WHSA, a non-authorised guideline may have less effect in any court proceeding in an evidentiary capacity. It may not be possible to adopt national codes like the LHC through a method of devolving them to a non-authorised guideline.

Option 2 Summary: Authorised guidance notes

Both Safe Work Australia and the WorkSafe WA authorise guidelines (or guidance notes) as an effective means to promote work safety in addition to the operation of Acts, Regulations and Codes of Practice.

There is an extensive array of guideline material on both authorities' websites, including over a dozen forestry-related guidelines published by Safe Work Australia. These cover many of the topics covered within the FIFWA Code and share some of the same terminology, similar phrasing, diagrams and illustrations.

Subject to consultation with WorkSafe WA, it may be possible to consider devolving the content of the FIFWA Code to approved guidance notes made under the WHSA. It may be unlikely that the LHC would be suitable for representation as a guidance sheet(s), given its recognition by the NHVR as a draft code under the HVNL. It should be noted that there are haulage safety aspects addressed in one of the model forestry guidelines published by Safe Work Australia, and this may be worthy of consideration in conjunction with the current haulage aspects of the FIFWA Code.

Option 3 Summary: Realignment of Existing Codes

This option involves building an updated FIFWA Code that aligns to the Codes of Practice model prescribed by the WHSA. This option does not require a 'ground up' or 'first principles' approach to conduct a fundamental risk assessment. It assumes the work done to date by the FIFWA Code covers the key risk areas, and it involves a methodology to adapt selected LHC components to reflect a WA context.

Both harvesting¹ (scoped from the FIFWA Code) and haulage (scoped from a WA interpretation of the LHC) are assumed to be the central components for a new code to be developed under this approach. There are several key steps identified, including:

1. Confirming the desired scope through a selective industry-led process;
2. Reviewing the 'in scope' areas of the FIFWA Code and the LHC to ensure currency and technical alignment to industry's current view of the WA operating context;
3. Developing any new technical content as may be identified in step 2, and updating any standards or other model code references;
4. Aligning all code sections to the WHSA legislative framework, including an introduction to the scheme and its concepts.

A benefit to this approach is that it requires much less new development from a 'first principles' examination of technical content, and uses existing information as much as is practical. Industry expertise can be used at key points rather than conducting a full workshop-based approach. It capitalises on existing industry support for the FIFWA Code and its acceptance is likely to benefit from the familiarity that industry can identify in its origins.

Option 4 Summary: Developing a new code from first principles

Option 4 proposes a complete rewrite of the Code from a 'first principles' perspective. This is a more fundamental response to the expiry of the Code and its superseding by the new safety scheme under the WHSA. A primary consideration in taking up this option is that it will obviously take some considerable time and resources. There is time, however, to consider this approach given that the

¹ In this report the term 'harvesting' has been used to broadly categorise safety issues relating to the work more closely related to harvesting logs.

FIFWA will likely be preserved for a time under transitional arrangements, and that the regulator continues to work on the new regulations before proclamation of the WHSA can occur.

In terms of steps required, there is much in common with Option 3, with the addition of a much more considered review of scope that looks more critically at potential subject matter, acknowledging the need to focus on an effective and comprehensive response to the critical risk areas such as harvesting and haulage.

In addition, there is a further major step required – to conduct a full risk assessment of all hazards in order to establish a fresh view of mitigations and controls and to fully embrace the new concepts of PCBU, officer and work accountabilities.

By definition, this option contemplates a much more inclusive and exhaustive consultation and engagement program that will have a strong bearing on time and resources consumed. This will be a critical consideration for FIFWA on the viability of this option.

Recommendations Summary

Option 3, the Realignment of Existing Codes, is nominated as the preferred option, based on the analysis conducted in this report, subject to any further investigatory steps that may be taken outside of its scope. This option strikes a balance between utilising the strengths of the current FIFWA Code, reflecting many years of industry development and input, with the need to transition to the new legislation scheme for work safety brought in by the WHSA. Under this option it will also be possible to consider the amalgamation of the national LHC, subject to its review for application to WA conditions.

This approach will not require the same scale of time and resources as might be expected with a ‘first principles’ approach to a new code. By reviewing the scope from existing codes and adapting the safety actions to the legislative framework of the WHSA, it should be possible to draw more selectively from industry on the inputs required to ensure meeting regulator expectations about consultation and quality of product.

Option 3 provides the best opportunity to establish a new code under FIFWA’s administration that will also fit within a 2021 delivery timeframe. It will serve as a meaningful foundation for future review and iteration of code development, whether that be to enhance detail, reflect further innovation or incorporate new subject matter. This minimises FIFWA exposure to a Code that is due, under its own terms, to expire and that has been superseded by law.

Review of Legislation Framework

This review considers the key legislative frameworks that influence and impact on the review of the FIFWA code. This includes:

- WA Occupational Safety and Health Act 1984, and the subsequent WA Work Health and Safety Act 2020
- Heavy Vehicle National Law Act 2012
- WA Road Traffic (Vehicles) Act 2012, and the
 - WA Road Transport Association Code of Practice – WACOP
 - WA Forest Industries Code of Practice – FICOP
- Work Safe Australia model law (guidelines)

N.B. Where an extract from legislation or explanatory notes is included in this report, this may not reflect the full text of the section or subsection, but is provided to help explain a key concept or meaning.

WHS Act 2020 v OSHA 1984

Background

The impetus for the OSHA originated in the publication of the highly influential Report of the British Committee on Safety and Health at Work (the 'Robens Report') in the United Kingdom in 1972. The Robens Report identified a number of weaknesses in occupational health and safety legislation then in place.

As the Australian statutory regime had used the English regime as a model, the same criticisms were applicable to the legislation in Australia. The two key reform objectives identified by the Robens Report were:

"[T]he creation of a more unified and integrated system to increase the effectiveness of the state's contribution to safety and health at work...[and] more importantly, creating the conditions for more effective self-regulation."

The recommendations of the Robens Report were incorporated into Convention Nos. 155 and 164 of the International Labour Organisation in 1980. Throughout the early 1980s, all Australian states moved to implement the recommended reforms. In Western Australia, the Occupational Health, Safety and Welfare Bill 1984 was introduced both to implement the Robens recommendations and to comply with the ILO Convention in order to allow for its ratification.

On 3 July 2008, the Council of Australian Governments formally committed to harmonising the occupational safety and health (OSH) laws in Australia by signing the Intergovernmental Agreement for Regulatory and Operational Reform in Occupational Health and Safety.

A review of the model WHS laws, for adoption in Western Australia, was conducted by the Ministerial Advisory Panel for Work Health and Safety Reform (MAP) from July 2017 to April 2018. The membership of the MAP included representatives of unions, employers, regulators and the Government.

The WHSA was assented to on 10 November 2020, but will not commence until proclamation. The WHS regulations have to be finalised before proclamation occurs. Work on the WHS regulations will progress through 2021.

Objectives

The objectives of the WHSA are stated as:

- to make provision about, and in connection with —
- the health and safety of workers; and
- health and safety at workplaces; and
- risks to health and safety arising from work.

This is elaborated in section 3 as:

(1) The main object of this Act is to provide for a balanced and nationally consistent framework to secure the health and safety of workers and workplaces by —

(a) protecting workers and other persons against harm to their health, safety and welfare through the elimination or minimisation of risks arising from work;

including:

(i) maintaining and strengthening the national harmonisation of laws relating to work health and safety and to facilitate a consistent national approach to work health and safety in the State.

(2) In furthering subsection (1)(a), regard must be had to the principle that workers and other persons should be given the highest level of protection against harm to their health, safety and welfare from hazards and risks arising from work as is reasonably practicable.

The explanatory notes provide:

“Subclause 3(2) extends **the object of risk management** set out in subclause 3(1)(a) by applying the overriding principle that workers and other persons should, so far as is reasonably practicable, be given the highest level of protection against harm to their health, safety and welfare from hazards and risks arising from work.”

It is reasonable to surmise that the WHSA clearly has an objective of applying a risk management approach to establishing protections against hazards and risks from work, and that this will be in accord with a balanced and nationally consistent framework such as that established by the Safe Work Australia model law.

This can be compared to the objectives of the OSHA which are stated as:

- (a) to promote and secure the safety and health of persons at work;
- (b) to protect persons at work against hazards;
- (c) to assist in securing safe and hygienic work environments;
- (d) to reduce, eliminate and control the hazards to which persons are exposed at work.

This does not refer to risk as such, focussing on hazards ‘at work’ rather than risks ‘from work’ and does not seek to operate with national consistency – an objective of the WHSA meant to assist WA employers working in multiple jurisdictions.

It should be noted that the Regulation made under the OSHA does refer to assessing risk relating to hazards and the means by which it may be reduced (refer Section 3.1)

Principal duty holder vs general duty holder

The principal duty holder under the WHSA is a person conducting a business or undertaking, known as a PCBU. This is a fundamental concept defined in Section 5.

The explanatory notes for Section 5 provide that a person may be a PCBU whether:

- the person conducts a business or undertaking alone or with others (e.g. as a partner in a partnership or joint venture) or
- the business or undertaking is conducted for profit or gain or not.

The term 'person' is not defined, but covers persons including individuals and bodies corporate.

Whether a person conducts a business or undertaking is a fact to be determined in each case.

Usually:

- A business is conducted with a view to make a profit and have some organisation, system and continuity.
- An undertaking will have some organisation, systems and possible continuity, but are usually not profit making or commercial

Under the OSHA, a general workplace duty for employers is established under Division 2 of the Act.

An employer is defined to mean — (a) a person that employs an employee under a contract of employment.

Section 23D, inserted in 2004, makes further specific provision about contract work arrangements. Briefly, the person who engages a contractor to carry out work is referred to as the principal and can be considered as the employer. The contractor and any person employed or engaged by the contractor can be considered as employees of the principal.

In this way, under the OSHA, 'employer' embraces the term 'principal' particularly as it relates to contract work, and it is this concept of 'principal' which is more predominantly identified in the safety duties of Part 1 of the FIFWA Code.

In summary, the principal duty holder under the WHSA is the PCBU, whereas for OSHA it is the employer. The difference is that PCBU is meant to reflect the changing nature of work organisation and relationships, meaning that many who perform work activities do so under the effective direction or influence of someone other than a person employing them under an employment contract. For this reason, the WHSA provides a broader scope for the primary duty of care for those who control or influence the way work is done in order to protect the health and safety of those carrying out the work.

This fundamental differentiation in definition would need to be considered in any modernisation of the FIFWA Code beyond simply changing duty holder statements from 'principal' to 'PCBU'.

Primary duty of care v general workplace duty

Under the WHSA, Section 19 states:

Primary duty of care

(1) A person conducting a business or undertaking must ensure, so far as is reasonably practicable, the health and safety of —

(a) workers engaged, or caused to be engaged, by the person; and

(b) workers whose activities in carrying out work are influenced or directed by the person, while the workers are at work in the business or undertaking.

(2) A person conducting a business or undertaking must ensure, so far as is reasonably practicable, that the health and safety of other persons is not put at risk from work carried out as part of the conduct of the business or undertaking.

The explanatory notes provide:

Unlike the duty owed to workers in subclause 19(1), the duty owed to others is not expressed as a positive duty, as it only requires that persons other than workers 'not [be] put at risk'.

However, the general aim of both subclauses 19(1) and (2) is preventative and both require the primary duty of care to be discharged by managing risks.

The primary duty of care is not limited to physical 'workplaces'. The primary duty of care is tied to the work activities wherever they occur and is not limited to the confines of a physical workplace.

There are specific elements of the primary duty nominated in the Act. Section 19(3) outlines the key things a person must do in order to satisfy the primary duty of care. The list does not limit the scope of the duties in subclauses 19(1) and (2).

A person conducting a business or undertaking must ensure, so far as is reasonably practicable —

(a) the provision and maintenance of a work environment without risks to health and safety; and

(b) the provision and maintenance of safe plant and structures; and

(c) the provision and maintenance of safe systems of work; and

(d) the safe use, handling and storage of plant, structures and substances; and

(e) the provision of adequate facilities for the welfare at work of workers in carrying out work for the business or undertaking, including ensuring access to those facilities; and

(f) the provision of any information, training, instruction or supervision that is necessary to protect all persons from risks to their health and safety arising from work carried out as part of the conduct of the business or undertaking; and

(g) that the health of workers and the conditions at the workplace are monitored for the purpose of preventing illness or injury of workers arising from the conduct of the business or undertaking.

Division 2 of the OSHA describes a general workplace duty under Section 19, including the following:

Duties of employers

(1) An employer shall, so far as is practicable, provide and maintain a working environment in which the employees of the employer (the employees) are not exposed to hazards and in particular, but without limiting the generality of the foregoing, an employer shall —

(a) provide and maintain workplaces, plant, and systems of work such that, so far as is practicable, the employees are not exposed to hazards; and

(b) provide such information, instruction, and training to, and supervision of, the employees as is necessary to enable them to perform their work in such a manner that they are not exposed to hazards;

(2) In determining the training required to be provided in accordance with subsection (1)(b) regard shall be had to the functions performed by employees and the capacities in which they are employed.

In summary, the WHSA attributes a primary duty to ensure safety upon the PCBU whereas the OSHA refers to establishing a general duty on the employer to provide a safe workplace. The principal is the same – both establish a positive primary duty to ensure safety – but the application differs.

Under WHSA the wider interpretation of a PCBU applies, reflecting workplace relationships and activities outside of a traditional contract of employment between employer and employee as made under OSHA.

Therefore, a PCBU needs to be mindful of their primary duty of care for all work activities, by all persons at risk where there is influence and control on the part of the PCBU, and not just the hazards at a workplace for employees. Understanding this would be critical to the conduct of any risk assessment with industry groups as part of the development or review of a code of practice.

Duty of officers

Section 27 of the WHSA defines the duty of officers, casting a positive duty on officers of a PCBU to exercise ‘due diligence’ to ensure that the PCBU complies with any duty or obligation under the Act.

The term ‘officer’ is defined (Section 4A) by reference to the ‘officer’ definitions in section 9 of the Corporations Act 2001 (Cth), but does not include a partner in a partnership. It also includes ‘officers’ of the Crown and ‘officers’ of public corporations.

Generally, an officer could be considered as someone who:

- makes, or participates in making, significant decisions that affect the whole, or substantial part, of the business, or
- has the capacity to significantly affect the business’ financial standing.

The explanatory notes provide that:

The positive duty requires officers to be proactive and means that officers owe a continuous duty to ensure compliance with duties and obligations under the WHSA. There is no need to tie an officer’s failure to any failure or breach of the relevant PCBU for the officer to be prosecuted under the Act. This change from the OSHA helps to clarify the steps that an officer must take to comply with the duty under Section 27.

Section 27(5) contains a non-exhaustive list of steps an officer must take to discharge their duties under this provision, including acquiring and keeping up-to-date knowledge of WHS matters and ensuring the PCBU has, and implements, processes for complying with any duty or obligation the PCBU has under the WHSA.

An officer must have high, yet attainable, standards of due diligence. These standards should relate to the position and influence of the officer within the PCBU. What is required of an officer should be directly related to the influential nature of their position. This is because the officer governs the PCBU and makes decisions for management. A high standard requires persistent examination and care, to ensure that the resources and systems of the PCBU are adequate to comply with the duty of care required by the PCBU. This also requires ensuring that they are performing effectively. Where the officer relies on the expertise of a manager or other person, that expertise must be verified and the reliance must be reasonable.

Under the OSHA there is no equivalent provision for due diligence obligations on the part of officers as a defined term.

The FIFWA Code has no direct attribution to 'officer'. This role and the duty of due diligence would be a consideration of any review of the Code in order to identify and clarify officer responsibilities under the WHSA. It should be noted that due diligence has a different interpretation to that of the primary duty which must ensure health and safety for prescribed matters.

Duty of workers vs employees

Section 28 of the WHSA sets out the health and safety duties of workers.

Workers have a duty to take reasonable care for their own health and safety while at work and also to take reasonable care so that their acts or omissions do not adversely affect the health and safety of other persons at the workplace.

The explanatory notes provide:

The duty of care, being subject to a consideration of what is reasonable, is necessarily proportionate to the control a worker is able to exercise over his or her work activities and work environment.

Section 28(c) makes it clear that workers must comply so far as they are able with any reasonable instruction that is given by the PCBU to allow the PCBU to comply with the Act.

Section 28(d) provides that workers must also cooperate with any reasonable policy or procedure of the PCBU relating to health or safety at the workplace that has been notified to workers.

Whether an instruction, policy or procedure is 'reasonable' will be a question of fact in each case. It will depend on all relevant factors, including whether the instruction, policy or procedure is lawful, whether it complies with the Act and regulations, whether it is clear and whether affected workers are able to co-operate.

The concept of 'reasonable care' is common to the OSHA but it is an important distinction from the nature of the primary duty of care under both Acts.

The OSHA states the duties of employees as:

(1) An employee shall take reasonable care — (a) to ensure his or her own safety and health at work; and (b) to avoid adversely affecting the safety or health of any other person through any act or omission at work.

(2) Without limiting the generality of subsection (1), an employee contravenes that subsection if the employee —

(a) fails to comply, so far as the employee is reasonably able, with instructions given by the employee's employer for the safety or health of the employee or for the safety or health of other persons; or

(b) fails to use such protective clothing and equipment as is provided, or provided for, by his or her employer as mentioned in section 19(1)(d) in a manner in which he or she has been properly instructed to use it; or

(c) misuses or damages any equipment provided in the interests of safety or health; or

(d) fails to report forthwith to the employee's employer —

(i) any situation at the workplace that the employee has reason to believe could constitute a hazard to any person that the employee cannot correct; or

(ii) any injury or harm to health of which he or she is aware that arises in the course of, or in connection with, his or her work.

(3) An employee shall cooperate with the employee's employer in the carrying out by the employer of the obligations imposed on the employer under this Act.

The WHSA adopts a broad definition of 'worker' instead of 'employee' as found in the OSHA to recognise the changing nature of work relationships and to ensure health and safety protection is extended to all types of workers.

Section 7 defines the term 'worker' as:

a person who carries out work in any capacity for a PCBU, including work in any of the capacities listed in the provision.

N.B. The examples of 'workers' in the provision are illustrative only and are not intended to be exhaustive.

The term 'work' is not defined in the Act but is intended to include work, for example, that is carried out under a contract of employment, contract of apprenticeship or contract for services; or as an officer of a body corporate, member of the committee of management of an unincorporated body or association, or member of a partnership.

Section 7(3) clarifies that a self-employed person may simultaneously be both a PCBU and a worker for purposes of the Act.

[Duties of other persons at the workplace](#)

The WHSA establishes a duty upon all other persons at a workplace.

The explanatory notes provide:

Similar to the duties of workers, all other persons at a workplace must take reasonable care for their own safety at the workplace and take reasonable care that their acts or omissions do not adversely affect the health and safety of others at the workplace. Other persons at a workplace must also comply, so far as they are reasonably able to, with any reasonable instruction that is given by the PCBU to allow the PCBU to comply with the Act.

WHSA application to public health and safety

The primary purpose of the WHSA is to protect persons from work-related harm. The status of such persons is irrelevant. It does not matter whether they are workers, have some other work-related status or are members of the wider public. They are entitled to that protection. At the same time, the Act is not intended to extend such protection in circumstances that are not related to work. There are other laws, including the common law, that require such protection and provide remedies where it is not supplied.

Duty holders, the management of risks and what is reasonably practicable

The WHSA provides elaboration on some key points.

In relation to duty holders, section 14 states that duties are not transferable, section 15 states that a person may have more than one duty, and section 16 confirms that more than one person can have a duty. In this situation, a PCBU must discharge their duty to the extent to which they have influence and control over the matter.

This illustrates the concept of 'influence and control' – understanding this will help to practically translate how duties might apply in a workplace.

For risk management, section 17 specifies that a duty holder can ensure health and safety by managing risks, which involves:

- eliminating the risks, so far as is reasonably practicable, and
- if not reasonably practicable, to minimise the risks, so far as is reasonably practicable.

This illustrates the concept of 'reasonably practical' and also the consideration of elimination versus minimisation of risk.

Section 18 covers in great detail 'What is reasonably practicable in ensuring health and safety'.

The explanatory notes provide:

The standard of 'reasonably practicable' has been generally accepted for many decades as an appropriate qualifier of the duties of care in most Australian jurisdictions. This qualifier is well known and has been consistently defined and interpreted by the courts.

To determine what is (or was at a particular time) reasonably practicable in relation to managing risk, a person must take into account and weigh up all relevant matters, including:

- the likelihood of the relevant hazard or risk occurring;
- the degree of harm that might result;
- what the person knows or ought reasonably to know about the hazard or risk and the ways of eliminating or minimising the risk; and
- the availability and suitability of ways to eliminate or minimise the risk.

After taking into account these matters, only then can the person consider the cost associated with available ways of eliminating or minimising the risk, including whether the cost is grossly disproportionate to the risk.

Understanding the nature of duties, influence and control, elimination and minimisation, reasonably practical, likelihood, degree of harm, what a person knows or ought to know, and suitability of ways of control are all critical elements that would likely be important parts of any risk assessment process suitable for code development and/or code application by industry.



Figure 1: Risk Management Process²

Burden of proof and codes as evidence

Under the WHSA the burden of proof (beyond reasonable doubt) rests entirely upon the prosecution in matters relating to non-compliance with the duties imposed. This includes whether the defendant failed to do what was reasonably practicable to protect the health and safety of the persons to whom the duty was owed.

In regard to the operation of Codes of Practice as evidence, the explanatory notes provide:

Under the WHSA codes of practice provide practical guidance to assist duty holders to meet the requirements of the Act. A code of practice applies to anyone who has a duty of care in the circumstances described in the code. In most cases, following an approved code of

² Safe Work Australia, Code of Practice: How to manage work health and safety risks, May 2018, p.8, also Master Code – V1.0 A registered industry code of practice under section 706 of the Heavy Vehicle National Law

practice would achieve compliance with the health and safety duties in the Act, in relation to the subject matter of the code.

Duty holders can demonstrate compliance with the Bill by following a code or by another method which provides an equivalent or higher standard of health and safety than that provided in a code. This allows duty holders to take into account innovation and technological change in meeting their duty and to implement measures most appropriate for their individual workplaces without reducing safety standards.

Section 275(2) provides that a code of practice is admissible in proceedings as evidence of whether or not a duty or obligation under the Act has been complied with.

Section 275(3) enables a court to use a code of practice as evidence of what is known about hazards, risk, risk assessment and risk control. A code may also be used to determine what is reasonably practicable in the circumstances to which the code relates.

Section 275 does not prevent a person introducing evidence of compliance with the Act apart from the code of practice—so long as this provides evidence of compliance at a standard that is equivalent to or higher than the code of practice (section 275(3)).

This is similar to the operation of codes of practice under model law and the HVNL.

The OSHA (Section 57) states:

(8) Where it is alleged in a proceeding under this Act that a person has contravened a provision of this Act or the regulations in relation to which a code of practice was in effect at the time of the alleged contravention —

(a) the code of practice is admissible in evidence in that proceeding; and

(b) demonstration that the person complied with the provision of the Act or regulations whether or not by observing that provision of the code of practice is a satisfactory defence.

The model laws, HVNL and WHSA do not adopt this approach but rather cite that codes can be used by a court to establish what is known about hazards, risk, risk assessment and control.

Control of a workplace

Both the OSHA and the WHSA have provisions concerning duties for the control of a workplace.

The WHSA (Section 20 – Duty of persons conducting businesses or undertakings involving management or control of workplaces) states:

(1) In this section — person with management or control of a workplace means a person conducting a business or undertaking to the extent that the business or undertaking involves the management or control, in whole or in part, of the workplace but does not include —

(a) the occupier of a residence, unless the residence is occupied for the purposes of, or as part of, the conduct of a business or undertaking; or

(b) a prescribed person.

(2) The person with management or control of a workplace must ensure, so far as is reasonably practicable, that the workplace, the means of entering and exiting the workplace and anything arising from the workplace are without risks to the health and safety of any person.

The explanatory notes provide:

The duties of a person who owns and controls a workplace and the duties of a person who occupies and manages that workplace differ. For example, the owner of an office building has a duty as a person who controls the operations of the building, to ensure it is without risks to the health and safety of any person. The owner is required to ensure people can enter and exit the building and that anything arising from the workplace is without risk to others. Concurrently, a tenant who manages an office premises in the building has a duty to ensure people can enter and exit those parts of the premises. For example, this could include entry into facilities for workers.

This may be a consideration for plantation owners in terms of entry and exit requirements as part of a risk assessment.

Model Codes of Practice adoption under WHSA

From its website the current intention of the WA Government is to use the national model WHS codes of practice, with editorial changes to reflect the amendments to the model WHS laws made in Western Australia. However, it is expected that only a small number of changes to the model codes of practice will be required. This might include the model codes such as:

- Work health and safety consultation, co-operation coordination;
- How to manage work health and safety risks;
- Managing risks of plant in the workplace.

This would be a consideration in determining the scope of any new codes covering forestry operations in WA, and might have some benefits akin to the operation of the master code of practice for the HVNL.

Also, the WA Commission for Occupational Safety and Health is in the process of reviewing codes of practice that are unique to Western Australia with a view to adapting them for use under the WHS Act. Substantive work on the codes of practice cannot commence until the underlying WHS regulations have been finished.

WHSA consultation requirements

Sections 274 and 275 of the WHSA require that codes of practice are developed through consultation with unions and employer organisations. These sections in relation to the codes of practice are the same as the model WHSA adopted in other Australian jurisdictions, and are consistent with the existing requirements in the OSHA and *Mine Safety Inspection Act 1994*.

Any review and/or remake the FIFWA Code would require consideration of this consultation requirement.

HVNL v Road Traffic (Vehicles) Act 2012

An explanation of the operation of the HVNL legislative scheme is provided in the subsequent section on NHVR Codes of Practice.

Both the WSHA and the HVNL share their codes of practice approach with the model laws developed by Safe Work Australia. This centres on establishing a primary duty to ensure safety as a positive obligation. For the WHSA this applies to the PCBU as the duty holder. For the HVNL a primary duty to ensure safety is applied to all the (defined) parties of the Chain of Responsibility (CoR). There is no equivalent application in the Road Traffic (Vehicles) Act 2012. Although this Act contains chain of responsibility provisions, they do not incorporate the application of primary duties to ensure safety.

This is an important consideration in looking at the Log Haulage Code and its potential for application in WA. Although many of the hazards, risks and controls identified in the LHC have correlation and potential application in WA, they are framed to serve the legislative obligations of the HVNL. Therefore, any application of the LHC to WA would need to recast the entire legislative framework of the Code to properly reference the legislative scheme and the obligations it serves.

WACOP/FICOP codes of practice

The Western Australia Road Transport Association Code of Practice (Parent Code) WACOP(P) establishes itself as a parent code of practice aimed at helping the transport industry to meet the CoR obligations established by the introduction of the Road Traffic (Vehicles) Act 2012 – referred to in the code as the Compliance and Enforcement Bill. It incorporates, as a ‘child code of practice’, the FICOP which focusses on forest industry specifics in relation to the obligations of a range of parties within the CoR.

There is no explicit recognition of codes of practice in the Road Traffic (Vehicles) Act 2012, nor is there any provision for their approval or registration like that found in the WHSA. Therefore, it would appear that the WACOP and FICOP are industry-sponsored codes of practice with their own scheme of establishment, recognition, operation, audit and review.

The action statements identified in the FICOP are categorised amongst CoR parties such as driver, consignor, etc. These generally operate at a high level and give guidance on what should be considered when addressing CoR obligations. The WACOP and FICOP operate independently of the FIFWA Code and its establishment under the OSHA. Their coverage of CoR obligations could be considered similar to that of the Master Code of Practice established by the NHVR.

In this sense they may compliment codes established under WHSA which focus on safety duties rather than mass, dimension, and loading and restraint requirements. It may be possible, however, that a code of practice made under the WHSA that contains safety controls for CoR-like parties might also serve to contribute to a ‘reasonable steps’ defence for a prosecution under the Road Traffic (Vehicles) Act 2012. This would need legal advice for confirmation.

Safe Work Australia and WorkSafe WA use of guidelines (guidance notes)

Both Safe Work Australia and WorkSafe WA authorise guidelines (or guidance notes) as an effective means to promote work safety in addition to the operation of Acts, Regulations and Codes of Practice.

There is an extensive array of guideline material on both websites, including over a dozen forestry-related guidelines published by Safe Work Australia. These cover many of the topics that are within the FIFWA Code and LHC and share some of the same terminology, similar phrasing, diagrams and illustrations:

- Forestry operations – guidance material
- Forestry operations – definitions
- Forestry operations – general guide
- Growing and managing forests
- Cable logging
- Coupe and harvesting site access and preparation
- Timber harvesting operations

- Log landings
- Log extraction
- Loading, transporting and unloading logs
- Infield processing of forest products
- Plant and equipment for forestry operations
- General hazards in forestry operations, and
- Other general hazards of forestry operations.

Subject to consultation with WorkSafe WA, it may be possible to consider using a guidance sheet approach to the review of the FIFWA and LHC Codes of Practice. Safe Work Australia state that guidance documents can help duty holders to comply with the law, but differ from authoritative advice of a code of practice by allowing duty holders wider discretion to choose the options that best suit their circumstances. Guidance material contributes to the overall state of knowledge regarding hazards, risks and controls and may be tendered as evidence in court proceedings (this would need confirmation in a WA context).

Although there is no guideline dedicated to log haulage, it is addressed in the guideline ‘Loading, transporting and unloading logs’. The following is an extract of the haulage components to give an indication of the level of detail available. There is more diagrammatic information available, and this is worthy of examination in consideration of the potential of this option. N.B. Further consideration of some potential issues in moving to a ‘guidance sheets’ approach is covered in Recommendations - Option 2.

High risk forestry activity	Loading, transporting and unloading logs
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Table 1 Common hazards and risks associated with loading, transporting and unloading logs

Hazards and risks
<ul style="list-style-type: none"> ■ driver being hit by falling, rolling or sliding logs ■ rollover of log truck due to the high load or load movement ■ working alone ■ loads with extreme overhang ■ slips, strains and falls getting in and out of machine or checking load ■ other road users struck by logs or other material falling off truck ■ struck by log when releasing load restraints ■ crushed or struck by logs ■ back strain from throwing log restraint straps or chains, and ■ logs moving in transit creating risk to driver and other workers when unloading.

Figure 2: Loading transport and unloading logs guideline excerpt

Control measures

4. Safely secure the load.

- Do not enter the machine's work area until the operator has given you permission.
- Do not lash or unlash a bay while another bay is being loaded or unloaded.
- Ensure load binding equipment e.g. chains, webbing and tensioners are in working order before use.
- If using chain lashings consider an alternative to an over-centre lever style load binder or dog. Consider using a turnbuckle tensioner or another type of non-rebounding tensioner. Extension bars used to increase tension are dangerous as they can rebound quickly during tightening and releasing resulting in a risk of striking workers.
- Check the load for stability and security before placing load lashings.
- Log loads should be restrained by lashings capable of holding the particular load weight and secured to comply with the national load restraint performance measures, contained in guidelines and road regulations.
- Outer logs should be secured by at least two lashings.
- Short logs should be cradled between longer logs.
- Ensure the load is crowned with the load lashing in contact with all logs on the outside of the load.
- A minimum distance of 300 mm between the end of a log and a load restraint device e.g. a stanchion or lashing should be maintained (see Figure 3).
- Prior to leaving the site, dual wheels should be inspected to ensure there are no rocks or foreign material lodged between the tyres that could dislodge at speed and create a hazard for other road users.

5. Check the load in transit.

- The load and load lashings should be manually checked shortly after leaving the landing or loading site.
- Available safety equipment like handrails and steps should be used while carrying out checks.
- Visually check the load lashings regularly while in transit regardless of whether they are self-tensioning or not.

Figure 3: Guideline control measures example

NHVR Codes of Practice Overview

The Heavy Vehicle National Law (HVNL) was enacted in Queensland (as host jurisdiction) in 2012, commencing operation on 10 February 2014. It was established following a lengthy consultation and engagement process to harmonise State and Territory heavy vehicle law. The reform originated from a Council of Australian Governments (COAG) agreement arising from an initiative of the Commonwealth Government in 2007 to establish national regulation of the transport sector.

Similarly, a COAG reform process was initiated for the harmonisation of Workplace Health and Safety laws. The outcome was the establishment of agreed model laws published and administered by Safe Work Australia in 2011. In both cases, to give effect to these laws each jurisdiction must pass its own Act and Regulations. Western Australia (WA) has not adopted the HVNL, but in 2020 passed the Work Health and Safety Act, with regulations to follow in 2021.

From the outset, both the HVNL and the model workplace health and safety laws have incorporated the concept of a three-tiered regulatory approach integrating an Act, Regulations and Codes of Practice to give effect to their objectives. Fundamental to the approach is a risk management-based approach to identify hazards and risks, and to mitigate or eliminate them through controls.

HVNL Legislative Scheme Summary

The HVNL imposes a wide range of duties and obligations on those involved in the day to day conduct of the transport and logistics industry for all heavy vehicles over 4.5 tonnes Gross Vehicle Mass (GVM).

These duties and obligations seek to regulate behaviour and serve the primary objectives of the Act which include (under section 3) the promotion of safety and also safe business practices.

‘Transport activities’ is a key term defined within the HVNL and includes business practices, making decisions and a range of practical interpretations such as driving, consigning, loading, maintaining vehicles, scheduling, etc.

A foundation to the HVNL’s approach to imposing safety duties is the establishment of the principle of shared responsibility. Section 26A states:

- 1) The safety of transport activities relating to a heavy vehicle is the shared responsibility of each party in the chain of responsibility for the vehicle.
- (2) The level and nature of a party’s responsibility for a transport activity depends on —
 - (a) the functions the person performs or is required to perform, whether exclusively or occasionally, rather than —
 - (i) the person’s job title; or
 - (ii) the person’s functions described in a written contract; and
 - (b) the nature of the public risk created by the carrying out of the transport activity; and
 - (c) the party’s capacity to control, eliminate or minimise the risk.

As with the Workplace Health and Safety model law (and this is reflected in WA’s 2020 adoption), the HVNL establishes the concept of a primary safety duty. Section 26C states:

(1) Each party in the chain of responsibility for a heavy vehicle must ensure, so far as is reasonably practicable, the safety of the party's transport activities relating to the vehicle.

(2) Without limiting subsection (1), each party must, so far as is reasonably practicable —

(a) eliminate public risks and, to the extent it is not reasonably practicable to eliminate public risks, minimise the public risks; and

(b) ensure the party's conduct does not directly or indirectly cause or encourage —

(i) the driver of the heavy vehicle to contravene this Law; or

(ii) the driver of the heavy vehicle to exceed a speed limit applying to the driver;
or

(iii) another person, including another party in the chain of responsibility, to contravene this Law.

(3) For subsection (2)(b), the party's conduct includes, for example —

(a) the party asking, directing or requiring another person to do, or not do, something; and

(b) the party entering into a contract —

(i) with another person for the other person to do, or not do, something; or

(ii) that purports to annul, exclude, restrict or otherwise change the effect of this Law.

An executive of a legal entity that has safety duties associated with transport activities must exercise due diligence to ensure the legal entity complies with the safety duty. An executive can be an executive officer, partner or management member.

Due diligence includes taking reasonable steps —

(a) to acquire, and keep up to date, knowledge about the safe conduct of transport activities; and

(b) to gain an understanding of —

(i) the nature of the legal entity's transport activities; and

(ii) the hazards and risks, including the public risk, associated with those activities;
and

(c) to ensure the legal entity has, and uses, appropriate resources to eliminate or minimise those hazards and risks; and

(d) to ensure the legal entity has, and implements, processes —

(i) to eliminate or minimise those hazards and risks; and

(ii) for receiving, considering, and responding in a timely way to, information about those hazards and risks and any incidents; and

(iii) for complying with the legal entity's safety duties; and

(e) to verify the resources and processes mentioned in paragraphs (c) and (d) are being provided, used and implemented.

In addition to the primary safety duty for each party in the chain of responsibility and the due diligence obligations of an executive, there are four core HVNL regulatory areas requiring compliance:

- speed;
- fatigue management;
- mass, dimensions and loading;
- vehicle standards.

Failure to comply with the HVNL and its regulations, depending on the category of offence, is subject to fines or imprisonment or both.

Under the HVNL, a driver is not considered part of the chain of responsibility. Chain of responsibility parties are defined to include:

- (a) if the vehicle's driver is an employed driver—an employer of the driver;
- (b) if the vehicle's driver is a self-employed driver—a prime contractor for the driver;
- (c) an operator of the vehicle;
- (d) a scheduler for the vehicle;
- (e) a consignor of any goods in the vehicle;
- (f) a consignee of any goods in the vehicle;
- (g) a packer of any goods in the vehicle;
- (h) a loading manager for any goods in the vehicle;
- (i) a loader of any goods in the vehicle;
- (j) an unloader of any goods in the vehicle.

Notwithstanding that a driver is not part of the defined chain of responsibility they have direct safety duties and obligations under the HVNL, particularly as it relates to compliance with the four core regulatory areas. As a responsible person (this is also a term defined in the Act), drivers play a pivotal, if not front-line, role in ensuring the safety of transport activities. However, the philosophy of the Chain of Responsibility laws means that any party in the chain who has the capacity to influence and control transport activity is responsible for the safety of transport activities, not just the driver.

Beyond the direct obligations and duties imposed under the Act and regulations, codes of practice are the third tier of the regulatory schema and are meant to empower industry to take responsibility for promoting compliant and safe business practices.

Section 705 establishes that the regulator may make guidelines about industry codes of practice.

Industry codes of practice are registered under Section 706 of the HVNL. Codes of practice must be reviewed after a stated period and they must be maintained by a stated person including updating to ensure they reflect best practice.

Section 751 provides that codes that are not subject to review expire after 3 years.

Section 632A establishes that a registered code of practice is admissible as evidence of whether or not a duty or obligation under the law has been complied with. The 2016 insertion of section 632A removed use of codes of practice as part of a 'reasonable steps' defence, and introduced the concept that a court may have regard to the code as evidence of what is known about a hazard or risk, risk assessment, or risk control and may rely on the code in determining what is reasonably practicable in the circumstances to which the code relates.

It does not preclude a person from presenting evidence of compliance in a way that differs from the code, as long as it is equivalent or of a higher standard.

It should be noted that under Section 18 of the HVNL, Work Health and Safety laws in each jurisdiction are referred to as the primary WHS law and the HVNL ensures that, wherever relevant, WHS obligations must be met in addition to or even to the exclusion of the HVNL if it is not possible to meet both.

Scope of Industry Codes of Practice

The HVNL imposes safety duties and obligations on drivers and chain of responsibility parties as participants in the heavy vehicle transport and logistics industry. The chain of responsibility applies so that a number of relevant parties, and not just drivers, are required to consider their transport activity risks. The following information is derived from feedback provided by the NHVR in response to the draft LHC'.

The primary safety duty established for chain of responsibility parties, is a general duty to ensure safety as far as reasonably practical. It includes both a positive element (what parties must do) and a negative element (what they must not do).

The positive obligation is to apply risk assessment methods to transport activities to ensure safety. The definition of safety includes defined concepts such as public safety, safety risk and public risk, which together incorporate prevention of damage to property, vehicles and loads, protection of the road infrastructure, and protection of the environment. This is in addition to what would normally be understood by the term 'safety', i.e. people's physical safety.

The negative obligation is to ensure that the conduct of parties to the chain of responsibility does not induce or encourage a driver, or another party in the chain of responsibility, to contravene the HVNL. Broadly speaking, the hundreds of offence provisions in the HVNL apply mainly to drivers and operators, although some apply to other specified parties. Chain of responsibility parties' obligations to comply with those provisions (where they are not specifically named as a party) are only via the application of the primary safety duty – either because of their positive duty to ensure safety, or the prohibition against causing or encouraging other parties to breach the HVNL.

Objective of (HVNL) Industry Codes of Practice

An industry code of practice registered by the National Heavy Vehicle Regulator (NHVR) is a practical guide to improving the standards of heavy vehicle safety and compliance required under the HVNL. A registered industry code of practice can be made to apply to anyone who has a safety duty in the circumstances described in the code.

Adopting a code is a voluntary choice by a party in the industry specified by the code. It offers a proactive way to take responsibility for the safety of transport activities. Industry codes of practice

can be especially useful in educating executive officers, as parties in the chain of responsibility, as to their due diligence obligations under law.

While applying a code is not mandatory, it should be noted that a distinguishing and advantageous feature of a registered industry code of practice is its evidentiary role in court proceedings. While complying with a code will not afford a defence as such, the contents of the code will be a way of admitting evidence of what is known about risks and controls and could be used by a court to determine what is reasonably practicable in the circumstances to which the code relates.

Transport industry parties who use registered industry codes of practice to develop and apply risk-based systems in their everyday business practices will improve the safety and legal compliance of their own activities and contribute to continuous improvement in best practice within their industry. This is in accord with the primary objectives of the HVNL and the organisational objectives of the NHVR.

Operation of Industry Codes of Practice

The inclusion of risk as a key component of the HVNL's safety duties regime is integral to the operation of industry codes of practice. Incorporating the skill and experience of industry participants, industry codes of practice offer a means of translating the safety and risk requirements of the law into a practical methodology incorporating best practice for all participants of the specified industry.

To meet the requirements for registration, an industry code of practice must be a high-quality document suitable for consideration before a court, applicable to the chosen industry sector, and adaptable for all participants in that industry. The code (under a requirement of the guidelines) must include a detailed risk management process to be followed in accordance with AS/NZS ISO 31000:2009 *Risk management – Principles and guidelines*. As such, the code must require adopters to identify risks, assess risks, and describe the types of controls that could be applied to the identified risks.

An industry code of practice can only identify risk types. It cannot anticipate every possible risk to which an industry entity is exposed due to a range of factors that might include its location, environmental conditions, load and equipment types, organisational structures and business environment. To fill this gap, the industry code of practice must explain to adopters of the code how they can use the risk management process to identify, assess and treat risks within their own circumstances.

A key function of an industry code of practice is to correlate its application to the duties and obligations of the HVNL that it seeks to satisfy. Overall, it must address:

- the relevant parts of the HVNL that apply to each activity,
- the transport activities performed by participants in the sector,
- the types of risk that arise in relation to each activity,
- the duties and obligations identified in the HVNL, and
- the range of controls that may be used to achieve the safety outcomes expected in the HVNL.

It is important that the code clearly link each risk and control to specific provisions of the HVNL that it intends to address. As such, the code developer must have a detailed understanding of the scope of the HVNL and its application in order to understand and correlate the parts that are relevant to

the code of practice. A code must make clear, where appropriate, the specific roles and responsibilities of parties involved in the transport task.

It should be noted that the safety obligations of the HVNL relate to activities that are conducted and are not constrained by role definition. Therefore, a person's role may not necessarily specify an activity that they have undertaken, but under the HVNL this would not diminish their accountability to meet safety duties and obligations.

Development and Administration of Industry Codes of Practice

The NHVR has published extensive guidelines to assist those seeking to develop an industry code of practice. This includes a formal process for initiation based on the submission of a 'notice of intention' publicly identifying the subject matter and scope. Parties who wish to be consulted as part of the development process have 28 days to nominate their interest. The NHVR appoints a liaison officer who may make suggestions and request more information.

Once directed to proceed by the NHVR, the code developer must:

1. Research and consult with the relevant industry sector and show it has incorporated regulatory, technical, industry body and operator advice and experience.
2. Set out the purpose and scope including intended outcomes.
3. Develop the content using a risk management process in accordance with AS/NZS ISO 31000:2009 *Risk management -Principles and guidelines*.
4. Identify risk types rather than specific instances of risk.
5. Assess the risks considering the range and gravity of its consequences. N.B. As an ancillary document, a separate risk assessment methodology report must be included.
6. Suggest measures to control risk, avoiding prescription that could exclude industry participants.
7. Provide guidance to the code adopter to develop and document their own risk management process, including a system for monitoring, feedback and review.
8. Ensure the code demonstrates alignment to the HVNL.
9. Appoint an administrator who can manage the review of the code.

When the finished draft of the code is submitted for assessment, it is uploaded to the NHVR website and displayed for public feedback for a period of 28 days.

During the publication period, the NHVR appoints a panel to assess the submitted industry code of practice. The panel consists of NHVR employees and may include consultants. Once the panel makes its recommendation, the code can be registered (this may include conditions) and published. The code must be reviewed in accordance with the Act within 3 years.

Master Code of Practice

The main purpose of the Master Code of Practice is to assist each party in the Chain of Responsibility, and their executives, to ensure the safety of transport activities and to comply with relevant provisions of the HVNL. The Code supports the object of the HVNL and provides practical guidance to assist all parties in the Chain of Responsibility. The Code is a means of admitting evidence of what is known about risks and controls. It may be used by a court to determine what is reasonably practicable in the circumstances to which it relates (see Section 632A of the HVNL).

It is intended to be used by all persons and businesses involved in the transport activity of a heavy vehicle. The Code applies to all types of heavy vehicles and loads covered by the HVNL and addresses the risks associated with the four core responsibilities of CoR regulated under the HVNL.

Further explanation of the operation of the NHVR's Master Code of Practice and its interaction with industry codes is provided in the Forestry Log Haulage Code section.

Summary of HVNL Codes of Practice Operation

An advantage of the NHVR's consultation requirements for codes of practice is the opportunity to gain wide-ranging support for adoption of the code and to identify meaningful responses to industry concerns. A disadvantage is that this takes time – the Log Haulage Code 'notice of intention' was published in early March 2017 and it remains to be registered by the NHVR.

One of the challenges is that key industry contributors may consider their controls to be proprietary and/or the only appropriate method of achieving safety. A risk arises that a code can become prescriptive and restrictive, stifling industry innovation and flexibility in meeting safety challenges. This works against an objective of the legislation scheme to encourage, through codes of practice, a continually evolving and improving 'best practice' standard for safety.

One of the considerations highlighted by the development of a code of practice is identifying the accountability and ownership of the parties for safety activities and their control. The HVNL is explicit in its provisions that a safety duty cannot be transferred to another person (see Section 26B (4)). Equally this can be a concern in regard to perceptions associated with contracting to third parties, where an understanding of the HVNL chain of responsibility concepts may not be well understood.

It is a daunting proposition for an industry participant to come to grips with legislative schemes across both the HVNL and the model WHS laws, even though they share many core concepts centred on a primary safety duty and the use of codes of practice under an Act/Regulation scheme umbrella.

Forestry Log Haulage Code of Practice

The development of the Forestry Log Haulage Code of Practice is being managed by the Australian Forest Contractors Association (AFCA). As per the requirements of the NHVR's code of practice guideline, a formal 'notice of intention to register' was published on 17 March 2017. The Australian Forest Products Association (AFPA) has been nominated as the code administrator and they are also a co-developer. Technical oversight is being provided by Engistics, a specialised engineering consultant in load restraint and logistics.

Consultation

The following is an extract from the 'notice of intention to register' and gives an indication of the wide-ranging extent of the consultation undertaken to initiate the code.

"There have been three industry presentations made to the Australian Forest Products Association (AFPA) cross-industry forums which involve senior executives from across the country and the supply chain. The project outline and governance model has been prepared with support from the AFPA Safety Sub Committee via a working group. The Safety Committee is a subcommittee of the so-called Growers Chamber which is the organisation within AFPA representing forest owners.

In addition, a Steering Committee has been formed which includes industry stakeholders from:

- Forest Management/Forest Ownership*
- Harvest and Hauliers*
- Hardwood manufacturers and softwood processors*
- Pulp and paper sector and*
- Ports and export facilities*

This Steering Committee is proposed to lead the project and ensure industry wide involvement in the preparation of the risk assessment and development of the Registered Code of Practice.

In addition, the General Manager, AFCA has also been widely involved in discussions across the industry on the preparation of the FLHR CoP including at regional industry meetings, ForestWorks meetings (the national training organisation for the industry), forums, state ministerial committees and other forums wherever possible. Discussion has also been held with those with technical expertise in the manufacturing of log truck trailers and researchers with capabilities and an interest in being involved in the process."

The strength of engagement is illustrated by one of the Log Haulage Code workshops held in early 2019, where there were over 60 industry representatives from forest management, forest contracting and equipment manufacturers and suppliers. This level of interest and engagement is consistent with the NHVR code guidelines which require that the developer must consult comprehensively with the relevant industry sector and show that it has incorporated regulatory, technical, industry body, and operator advice and experience.

LHC Scope

The Forestry Log Haulage Code (LHC) considers risks that are specific to the transportation of logs from forestry operations across the forest industry supply chain. The code defines log haulage as the 'specific task of the movement of the raw timber material, forestry trees or log species, which have been harvested from the tree stump in the forest and all related tasks associated with the movement of this tree or log to an end point for processing'.

The LHC does not address all matters of risk assessment, elimination and control with respect to the safety duties and obligations of the HVNL. The LHC has specifically focussed on risks related to forestry log haulage and a means of managing these risks in order to comply with the duties and obligations of the HVNL.

In order to consider all duties and obligations under the HVNL, both the Master Code of Practice (MCP) and the LHC should be read and applied together. Details of the risk controls of the MCP are not included in the LHC in order to avoid duplication. This approach of codes targeting specific risks to be used in conjunction with the MCP is consistent with the intended framework for codes of practice.

The establishment of the LHC does not prevent a person from introducing evidence of compliance with the HVNL in a way that differs from the LHC, but that provides a standard of safety or protection equivalent to or higher than the standard required in the LHC.

Objective

The primary objective of the code is to improve industry-wide safety in log haulage loading and transport, an area identified by the industry participants themselves as a priority safety concern. The code seeks to raise the standard and consistency of safety practices across the industry. Historically many different approaches to safe practice have evolved, varying often by the scale and nature of the industry participant. The code seeks to bring on board all industry participants, regardless of their scale of operation, to reconsider their safety approach and to make the changes necessary to fulfill their lawful safety duties and obligations under the HVNL.

A focus of the code is the complex engineering requirements to safely load and transport logs by road haulage. Given the complexity and disparity of practice, an objective of the code is to create a commonly adopted and accepted engineering standard applicable to the practical aspects of log haulage operation. This includes activities such as log stacking and tie-down, through to stanchions, bolsters and grip plate specifications. The code also offers a holistic view ranging from aspects of freight task planning, such as route specification and loading site requirements, through to training and community engagement. Combined with the NHVR's MCP, the Log Haulage Code offers a comprehensive approach to improving safety outcomes.

Operation

From the industry consultation, nine key log haulage risk areas were agreed as a priority to be addressed by the code:

- Rollover and/or full loss of load
- Loss of control of log (load/unload)
- Manual handling
- Loss of control of the vehicle
- Load shift
- Materials Handling Equipment (MHE) crash or crush

- Partial loss of load
- Loss of debris
- Third party collision.

N.B. MHE crash or crush and manual handling are not addressed, but are left to the WHS framework as it applies in each jurisdiction.

Control theme groupings were identified, and these are used to structure the code in sections:

- Freight task management
- Equipment
- Load Construction and Restraint
- Training
- Community engagement.

Responsible parties are identified using a symbol set to aid readability of the code.



Figure 4: LHC Responsible Parties

N.B. an additional symbol for Executive Officer has also now been created.

The depiction broadly correlates to the chain of responsibility parties defined by the HVNL. However, a symbol for driver and executive officer has been added. This allows the code to depict, across the themed control areas, a more comprehensive framework identifying statements of hazard, risk areas, and control activities for those responsible parties typically familiar to the reader as an industry participant. For example:

HAZARD SCENARIO	RISK AREA	LHC RESPONSIBLE PARTY	CONTROL ACTIVITY
Bolsters (the horizontal sections of a bay) fitted to the trailer chassis are not strong enough to support the weight of the logs.	2. Loss of control of log (load/unload) 5. Load shift 7. Partial loss of load	Transport Operator Loader Driver	Refer Equipment section Bolsters

Figure 5: LHC Example Hazard, Risk and Control by Responsible Parties

The code acknowledges that under Section 26A of the HVNL, the level and nature of a party's responsibility for a transport activity depends on the functions the person performs or is required to perform, whether exclusively or occasionally, rather than the person's job title or the person's functions described in a written contract.

Notwithstanding this legal consideration, the Log Haulage Code has chosen to use role statements (i.e. responsible parties) as the most practical and readable format for informing industry participants in a quick and easily referenced manner about the types of hazards, risks and controls

that may be familiar and relevant to them. This approach is also demonstrated in the NHVR's own MCP and the draft Crane Code of Practice currently being assessed for registration by the NHVR.

Applying Risk Assessment

The code recommends that a risk assessment process should be completed as part of the adopter's consideration of their log haulage task. This is suggested as the best way to determine the measures that they should implement to control risks relevant to their business.

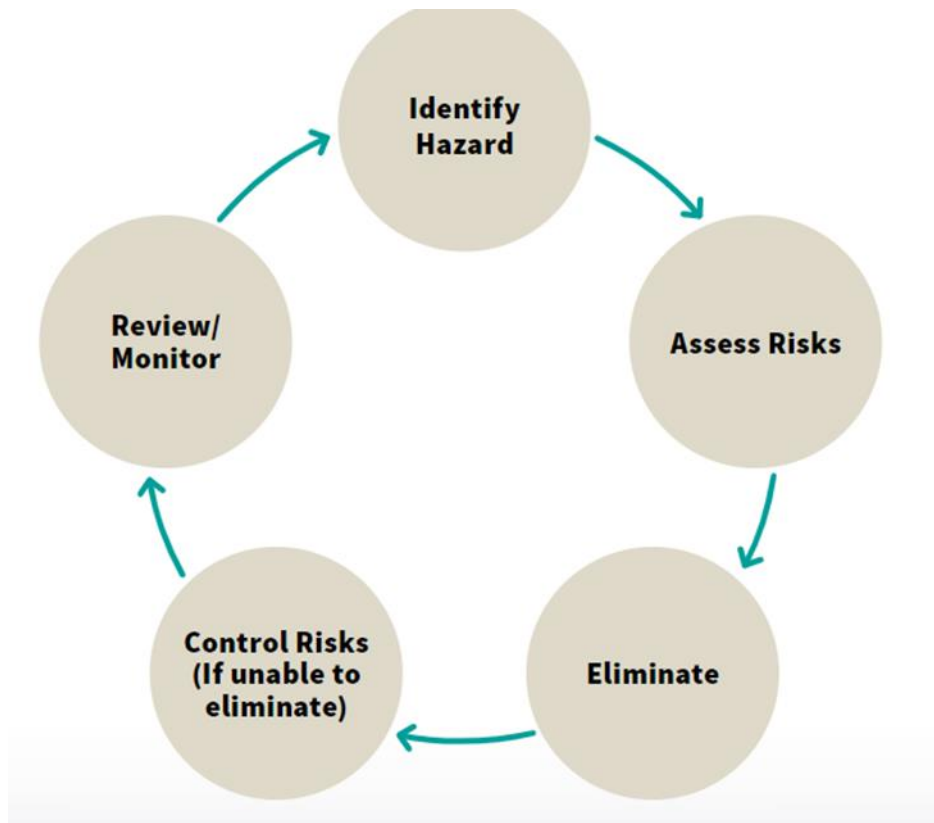


Figure 6: LHC Risk Assessment Model

A benefit of requiring each adopter to conduct a risk assessment is that it involves considering, in a recognised and methodical way, what could happen if someone is exposed to a hazard and the likelihood of it happening. It also assists to determine:

- how severe a risk is,
- whether any existing control measures are effective,
- what action should be taken to control the risk, and
- how urgently the action needs to be taken.

The code assists the industry to formalise and document their risk assessment consistent with AS/NZS ISO standards. The code then offers advice on control measures that can be adopted that are relevant to their business, proven, and consistent with industry best practice. This information can also be especially useful where the control is technical in nature requiring, for example, specialist engineering advice that might otherwise not be available without considerable expense.

For the NHVR, this is a demonstration of how a registered code of practice, as part of the 3-layered model for regulation (as also adopted by the WHS model laws), can serve to fulfill the objectives of the HVNL to improve safety and safe business practices.

For the code adopter, a documented risk assessment may be a critical component in a court of law's consideration of evidence of what is known about a hazard or risk, any control measures, and what is reasonably practicable in the circumstances.

The LHC also directs the reader to the NHVR's MCP as it provides further comprehensive 'how to' guidance specific to the heavy vehicle transport industry, including a step-by-step process for completing and documenting a risk assessment process in an NHVR-recognised way.

N.B. The LHC also refers users to Safe Work Australia's model *Code of Practice: How to manage work health and safety risks*.

Log Haulage Code of Practice – 5 Key Sections

There are 5 main sections constituting the LHC. These are outlined as follows.

1. Freight Task Management

- Freight Task Planning
 - Access and landing area configuration
 - Selection and evaluation of parties for freight task
 - Load and vehicle compatibility
- Freight Task Monitoring
 - Load audits
 - Equipment maintenance and vehicle standards
 - Risk lead indicators and incident reporting
 - Training status of parties
 - Route planning for log haulage

2. Equipment

- Load Restraint Equipment
 - Stanchions
 - Bolsters
 - Grip plates
 - Blocking
 - Cab guards
 - Lashing types
 - Lash tensioning systems
- Trailer design
- Active vehicle monitoring systems
- Passive vehicle monitoring systems
 - On-board mass systems
 - In-vehicle monitoring systems

3. Load Construction and Restraint

- Building the load
- Restraint
 - Blocking
 - Tie down
 - Restraint quantities – unblocked
 - Restraint quantities – blocked

4. Training

- Key content and audience
 - Load construction
 - Load restraint
 - Heavy vehicle stability and control
 - Heavy vehicle standards
- Delivery
- Competency
- Frequency

5. Community engagement

- Key content

N.B. There is consideration for future inclusion of emergency response provisions.

LHC-MCP Interaction

The LHC is designed to be implemented in conjunction with the application of the NHVR-developed Master Code of Practice (MCP). In this way the Log Haulage Code is able to focus on the control measures specific to its scope, without being so narrow in its application that its effectiveness is diminished or distorted within the wider consideration of objectives of the HVNL's safety objectives of applying a risk management approach.

The MCP states that it presents:

“a risk-based approach to managing safety. It encourages all CoR parties to implement controls appropriate to the size and nature of their transport activities. The Code provides all parties with an understanding of the risk management process so that they can take steps to control, eliminate or minimise risks within their business (Section 3 of this Code).”

The MCP seeks to secure the commitment of executives to assist in driving a top-down approach, believing that effective risk management starts with the commitment to safety from those who manage and control the transport activities.

The MCP includes recommendations for:

- documenting operating policies and procedures,
- training, and
- contract management practices.

Its major components are aligned to the four key regulatory areas of the HVNL in order to help duty holders develop general controls for:

- speed compliance (chapter 1A of the HVNL);
- fatigue management (chapter 1A and chapter 6 of the HVNL);
- mass, dimension and loading (chapter 1A and chapter 4 of the HVNL);
- vehicle standards (chapter 1A and chapter 3 of the HVNL).

In these sections the MCP comprehensively considers all of the legislative safety obligations of the HVNL, allowing industry to broadly tailor their response to the scope of their transport activities and operations.

The key to the application of the MCP is the use of a recognised risk management approach and the application of this discipline to bridge lawful safety obligations, through documentation to the practical application of control activities used in everyday transport operations. Training, open communication and response and review are all then contributors to the entrenchment of compliant behaviours that reinforce and improve safety across the industry.

By way of example in considering mass, dimension and loading compliance, the MCP asks the adopter to consider:

- what is the risk (e.g. in regard to loading)?
- what does the law say (e.g. refer HVNL Section 26C – Primary safety duty and Section 111 – Compliance with loading requirements)?
- what can you do (subcategorised into the COR parties) and why (apply the controls)?

It provides a comprehensive summary of suggested considerations, for example:

“7.3.6 Loading Manager, Loader and Unloader

Why do it?

To make sure:

- *the vehicle or combination is fit for task*
- *accurate weights of goods, including container weights, are known*
- *loaded vehicles comply with gross and axle/axle group weights*
- *loads are placed to maintain vehicle stability and safety*
- *loads are secured to prevent them falling or being dislodged from the vehicle*
- *an appropriate method has been used to restrain the load on a heavy vehicle*
- *loads are restrained in a way that meets the loading performance standards”*

What you can do	Consider
Provide drivers with accurate load weights and dimensions at the point of loading (refer sections 186 and 187 of the HVNL)	<ul style="list-style-type: none"> ○ consignment notes, despatch documents, container weight declarations. For sealed loads, provide operators and drivers with a load declaration, the same as a container weight declaration

LHC Summary

The LHC demonstrates that it is possible to identify a core component of an industry’s activity and apply a focussed risk assessment to identify priority areas or themes for the application of best practice safety controls. Nor is it necessary to consider all aspects of the four core regulatory areas of the HVNL – for example, the LHC is predominantly focussed on loading.

A strength of codes of practice is their ability to apply in-depth research on technical data and engineering practices. The LHC deals extensively with transport equipment and loading equipment. It demonstrates safety controls through high quality diagrams and illustrations. It contains many tables of data in regard to loading masses and limitations. This required the application of a dedicated and specialist engineering consultant, and took considerable time and resources to develop. By using an independent consultant, AFCA was able to develop complex engineering-based safety controls beyond any proprietary or bias concerns, and make this information widely available.

The NHVR's initiative to establish the MCP offers several advantages to industries interested in using codes of practice to improve safety. It gives guidance to core safety concepts and the scheme for achieving safety under the HVNL. It provides a practical start-up to conducting a formalised risk assessment, and puts transport industries on a consistent footing. Any new code must consider the practical need for industry participants to consider the MCP before its adoption.

The LHC makes no real consideration of its interface with WHS laws. Similarly, the relationship to the MCP is largely by referral. Although this ensures no undue overlap, further clarity around this interface/interaction is perhaps an area for further consideration as the code matures, and no doubt presents a challenge for all codes under development.

Gap Analysis: FIFWA Code – Log Haulage Code

This section provides a review of the level of alignment between the two codes to help establish if and how the Log Haulage Code might contribute to the development of an updated FIFWA Code.

Scope commonality and differences

At the highest level, the scopes of the FIFWA code and LHC are defined by the objectives and constraints of the legislative schemes under which they are authorised. For the FIFWA Code this is the soon-to-be redundant Occupational Safety and Health Act 1984, and for the LHC it is the HVNL.

The OSHA seeks to address safety primarily through regulating the safety of workers by their activities in a workplace. The HVNL focusses on the safety of heavy vehicle transport activities by responsible persons wherever they may occur and extends to property, road infrastructure and the environment. The HVNL definition of safety includes concepts such as public safety and public risk.

This influences the scope of the codes. The FIFWA Code is primarily workplace and worker safety focussed. The LHC addresses broader concepts of safety and risk extending to public infrastructure, public roads and road users. This public safety exposure was one of the primary motivators for the code to focus on log haulage. One of the key risk areas it identifies is 'loss of load' and its correlation to public risk.

More literally though, the scope of the LHC and the FIFWA Code share a similar ambit which is to address a range of critical safety issues identified and agreed as a priority by the forestry industry participants involved in their development.

The FIFWA scope by its own definition is wider – it seeks to encompass a fuller interpretation of safe forestry operations, whereas the Log Haulage Code, as its name implies, focusses on the safety of haulage – 'the movement of the raw timber material, forestry trees or log species.' This reflects the FIFWA Code's attempt to broadly cover safety duties imposed by the OSHA. The LHC is advantaged by the NHVR's MCP which broadly addresses the safety obligations of the HVNL, allowing it to focus its scope on selected areas of transport activity and law.

Consideration of their respective scopes also warrants a brief examination of a key aspect of their detail. Both codes contain provisions relevant to log haulage and loading. However, the LHC addresses this activity in significantly greater breadth and technical depth, covering haulage equipment, loading construction and restraint. The LHC does not address tree-felling practices, whereas this is a primary area of technical focus for the FIFWA Code. (N.B. Further detail of content differences is provided in the Coverage Section)

Throughout their scopes, both codes exhibit areas of technical and operational strength, providing strong value for the contribution they offer to improving industry safety outcomes. It is also fair to say that a disadvantage of the breadth of scope of the codes is that in some areas, safety controls reflect more of a catalogue of high-level positive action statements based on role rather than risk and/or law reference. A consideration for code developers is the breadth of scope relative to the comprehensiveness of their detail operationally, and their diligence to risk assessment methods and their legislative schemes.

Objectives and coverage

Both codes seek similar outcomes to improve industry safety overall by providing direction and guidance on specific industry-identified areas of hazard and risk.

The FIFWA Code cites five main objectives:

1. To promote and secure the safety and health of people at work in logging operations.
2. To minimise the risk of hazards for people at work in the logging industry.
3. To reduce, eliminate and control hazards in the logging industry.
4. To foster cooperation and consultation on health and safety matters between principals, contractors and in-forest workers in the logging industry.
5. To enable the logging industry to self-regulate occupational safety and health in conjunction with legislation.

The LHC states:

“The objective of the LHC is to promote safety specifically in the transport activities of the forestry and log haulage industry. This is achieved by grouping industry-identified risks into themed control areas detailing practical activities responsible parties in the forestry log haulage industry can adopt to eliminate or control those risks.”

The LHC statement essentially reflects the first 3 objectives of the FIFWA Code, noting a differing emphasis on ‘safety at work’ compared to ‘safe transport activities’.

In regard to objective 4, the LHC relies predominantly on the application of the MCP in regard to promoting cooperation and consultation between responsible parties. (Refer section 2.4.2 – Consultation, Cooperation and Coordination)

A stated objective of the LHC is to ensure that:

“Under Section 632A of the HVNL, the LHC is admissible as evidence of whether or not a duty or obligation under the HVNL has been complied with. In addition, a court may have regard to the LHC as evidence of what is known about a hazard or risk, risk assessment, or risk control, to which the code relates; and rely on the code in determining what is reasonably practicable in the circumstances to which the code relates.”

This is reflective of objective 5 of the FIFWA Code in regard to enabling self-regulation. The LHC seeks to play its part in enabling industry to self-regulate through the use of the code to demonstrate to a court what is reasonably practicable in meeting safety obligations. This is where the conduct of a documented risk assessment may become a critical requirement.

Unlike the FIFWA Code, it is not the objective of the LHC to address all matters of risk elimination and control with respect to the safety duties and obligations of the HVNL. The LHC advises that in order to consider all duties and obligations under the HVNL, both the Master Code of Practice (MCP) and the LHC should be read and applied together.

The following tables summarise key areas of commonality and difference in coverage by topic:

FIFWA Code	LHC equivalent	Comments
<i>Part 1 – OSHA responsibilities</i>	<i>Freight Task Management and Training chapters</i>	The equivalent of Part 1 of the FIFWA Code can be referenced to the Freight Task Management and Training chapters of the LHC. Albeit that the HVNL allocates a primary safety duty to its named and defined parties of the CoR as distinct to the OSHA approach of generalising to principal, contractor, employee. N.B. a driver is not a CoR party in HVNL and Executive has a duty of due diligence.
Principal	Executive Officer Consignor Consignee	
Contractor	Transport Operator	
Employee	Driver Loading Manager Loader Scheduler	

Figure 7: FIFWA – LHC Scope comparison (Part 1)

FIFWA Code	LHC equivalent	Comments
Part 2 – Safe Work Practices for all Logging Operations	LHC (all chapters variously)	
Log Landing Standards	Freight Task Management	
9 Hazard Management – Process of Managing Tree Hazards and Unauthorised Visitors	No equivalent	Although termed Hazard Management this section does not infer the conduct of a broad risk-based assessment of logging operations, unlike the LHC and MCP.
10 Chainsaw Operating Standards	No equivalent	This is an area of significant detail extending to 12 pages predominantly covering chainsaw operator and feller roles.
11 Mobile Plant – including terms such as contractor, plant operator, front end loader, excavator, skidder, grader/bulldozer driver, mechanical harvester/feller bunchers, and forwarder	Freight Task Management, Load Construction Equipment and Load Construction and Load Restraint	Many aspects of the use of mobile plant are described in the LHC, with the exception of equipment associated directly with felling.
12 Cable Logging	No equivalent	
13 Personal/Personnel Vehicles	No equivalent	
14 Haulage including loading and unloading and design construction and use of trailers	All aspects of the LHC	The FIFWA Code covers the roles of driver and contractor, whereas the LHC uses all of the HVNL-defined CoR parties including driver. There is no real technical detail in the FIFWA Code except referring to the Load Restraint Guide. The driver appears to bear the majority of responsibility.
15 First Aid/Medical	No equivalent	
16 Personal Protective Equipment	No equivalent	
17 Fire Safety Standards	No equivalent	
18 Communications	No equivalent	
19 Standard Signals	No equivalent	
20 Manual Handling	No equivalent	
21 Fatigue Management	No equivalent	This refers to fatigue in forestry operations such as felling, not fatigue requirements for heavy vehicle drivers.

Figure 8: FIFWA – LHC Scope comparison (Part 2)

FIFWA Code	LHC equivalent	Comments
Appendix 1 Notification of injury and certain diseases		These are OSHA requirements which may have some equivalent in other jurisdictions but are not addressed in the LHC
Appendix 2 Assessing risk of working alone	No equivalent	
Appendix 3 Manual handling risk	No equivalent	
Appendix 4 Induction proforma	No equivalent	
Appendix 5 Worksafe guidelines for working close to overhead power lines	No equivalent	
Appendix 6 WA Road Traffic (Vehicles) Regulations 2014 extract	No equivalent	
Appendix 7 Risk Assessment Register Template	LHC – Applying Risk Assessment	Although Appendix 7 appears to be a generic template for risk assessment, it does not appear to correlate to broader risk assessment concepts explained as part of the code methodology

Figure 9: FIFWA – LHC Scope comparison (Appendices)

Methodology of approach

One method for an industry to consider their safety obligations is to begin by examining the provisions of an Act or regulation that governs safety, whether it be workplace health and safety

laws, and/or more industry-specific laws like the HVNL. Understanding a legislative scheme by reading sections of an Act can be difficult. Distilling critical sections and understanding their meaning and linkages from the contents of a much broader Act risks misinterpretation. Many smaller industry participants may not have the time, resources or skills necessary to start with an examination of their safety obligations as is written in law. Engaging legal counsel or safety specialists can be prohibitive in cost.

Codes of practice are intended to offer a different starting point or methodology. Both the FIFWA Code and the LHC offer the industry participant direct operational guidance on what positive actions can be taken to eliminate or minimise risks to industry safety across a broad range of subject areas. An industry participant can quickly identify a hazard for themselves within the codes and consider their own operations and the actions that can be taken. This does not necessarily mean that they have a broader understanding of their safety obligations under the law or the legislative safety scheme under which they operate.

The LHC recommends as part of its methodology that a documented risk assessment should first be conducted by an industry participant seeking to apply the code, and from this basis they can consider the controls offered by the code and apply what is relevant to them.

The FIFWA Code is not as direct. It does contain a Hazard Management section including a definition of hazard and an example hazard management template (Appendix 7). However, this is not a broadly encompassing approach to risk management. There is, for example, an emphasis on tree hazards and unauthorised visitors, which no doubt reflect key hazards but are not illustrative of the requirement for a systematic approach to a risk assessment of forestry operations.

For the LHC, in addition to its own risk assessment methodology, it has the benefit of drawing on the MCP which focusses in great detail on explaining the theory and the steps required for the practical application of a risk assessment to AS/NZS ISO standards which would be relevant for the new WHS Act purposes.

The FIFWA Code approach is in two parts. The first addresses responsibilities in accordance with the OSHA safety model of general duties for principal, contractor and employee. The second part details safe work practices across workplace activity areas. Generally what follows, to varying degrees of detail, is responsibility statements by role. In some cases, these are at a high level without depiction of the 'how' but there is also ample detail of the 'how' particularly in aspects of work practices such as tree felling.

The LHC identifies 9 key risk areas then groups these into activity themes – for example equipment, load construction and load restraint. This methodology is more in accord with an initial risk assessment-based approach, although this discipline was not fully adhered to in the construction of the detail of the early drafts of the code. As a consequence, like the FIFWA Code, there remain parts of the LHC that contain responsibility statements based more on role as opposed to law reference, hazard statement, risks, controls, and responsible parties.

[Intended effect, nature of operation, strengths and weaknesses](#)

The intended effect of the codes is to build, through their voluntary adoption, strong and effective cultures of safety-compliant behaviour that continually improve through review and reflection. The codes are meant to be adaptable to the needs of all participants (subject to their scope), regardless of the scale or nature of their operations. In this way the intended effect of the codes is to broadly improve safety outcomes across industry.

One of the key challenges for the LHC was addressing traditional views on what was considered 'adequate' in terms of safety, and this was often reflected by long-standing industry participants. Shifting these practices and the views that sustained them is critical to delivering the positive effect intended of the code. Strong industry engagement through code development helps to promote the effects of a code in changing behaviour, and this is reflected in the requirements of the guidelines established by the NHVR.

For the FIFWA Code the intended effect is to influence the work practices of those in the forestry industry workplace. In Part 1 this focuses, in accord with the OSHA legislative model, on a 3-tiered layering of principal, contractor and employee. In this way the Code operates by allowing an industry participant to identify themselves in the Code and then to consider their behaviour relative to the obligations and requirements listed in the Code. Part 2 of the FIFWA operates similarly but focusses on safe work practices subcategorised extensively into themed areas and role statements. This is much like the approach adopted by the LHC. However, the LHC goes further in identifying law references, hazards, risks and then applying the control according to responsible parties. N.B A tabulated summary of code areas is provided in the Coverage Section.

Figures 10 and 11 are screen shots from the LHC to illustrate its approach to hazard identification, risk areas, legislative referencing to the HVNL, and the attribution of key activity statements. It should be noted that this is not fully reflective of the detail contained in the LHC 'Blocking' section.

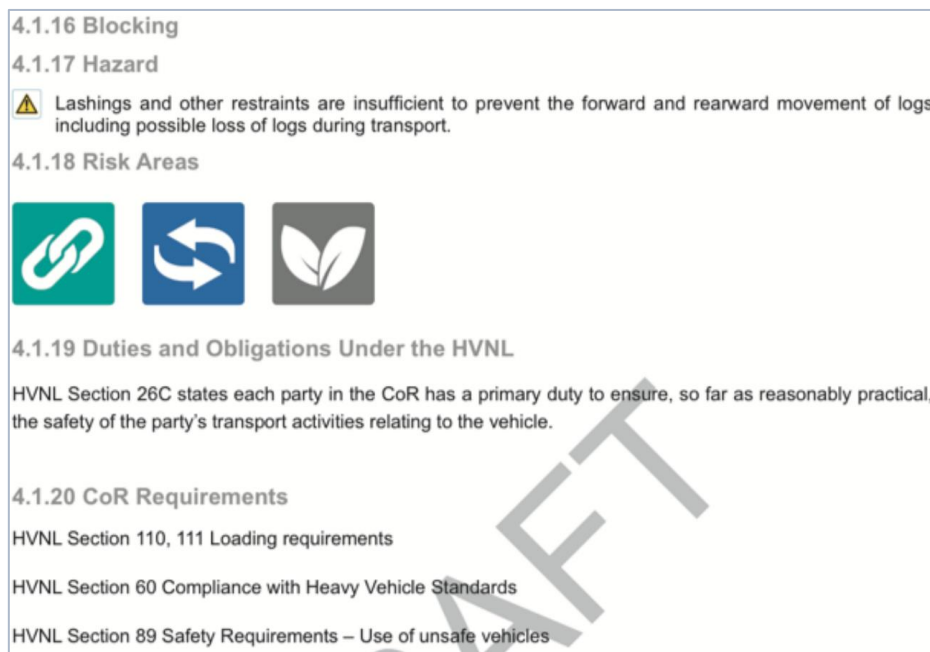


Figure 10: Log Haulage Code 'Blocking' Excerpt

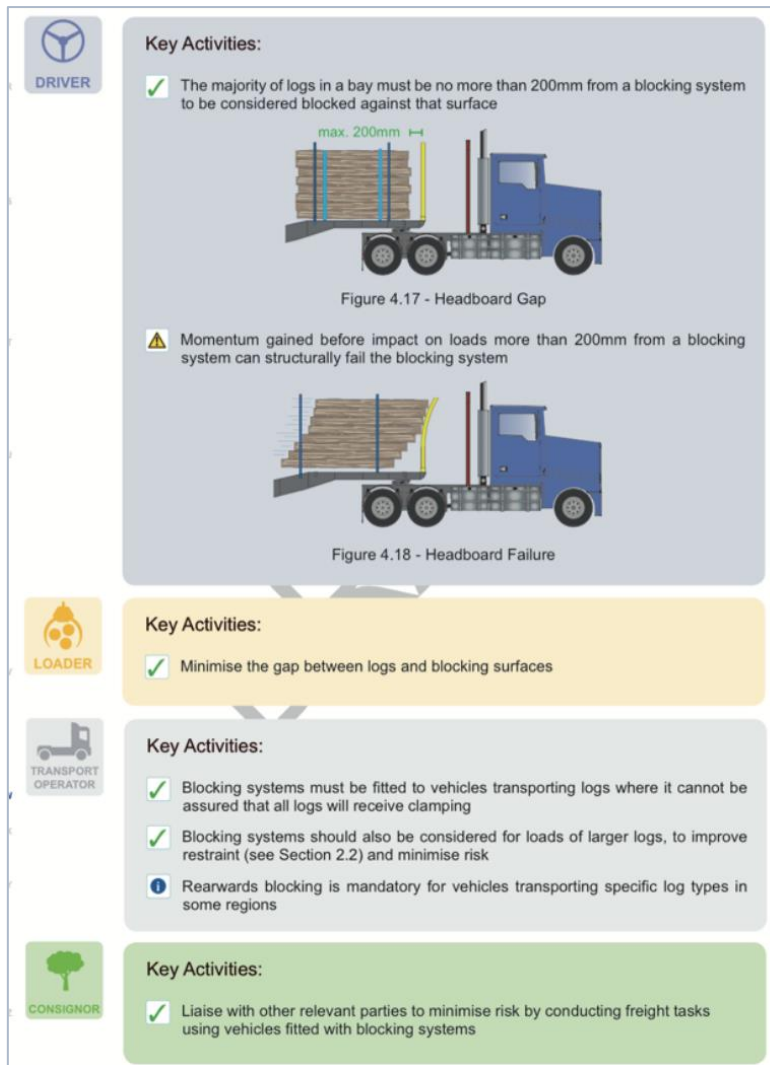


Figure 11: Log Haulage Code 'Blocking' Activities

Figures 12 and 13 are extracts from Part 1 of the FIFWA Code showing OSHA obligations by role, and from Part 2 showing safe work practices for chain saw operation.

1.0 The principal will:

1.1 Tender

1.1.1 Include in all tender documents and/or agreements the requirement for contractors to:

- ensure compliance with safety and health legislation and this Code, and;
- prepare a safety management plan including a hazard management process.

1.2 General Safety

1.2.1 Ensure the contractor has an adequate and reliable means of communication with all workers in accordance with this Code.

1.2.2 Monitor the contractor's obligations to provide an adequate and reliable means of communication with all workers in accordance with this Code.

1.2.3 Ensure that the contractor documents first aid facilities and procedures for emergencies and evacuation of workers at all times, in accordance with appendix 5.

1.2.4 Monitor the contractor's obligations to provide appropriate first aid facilities and procedures for evacuation of workers at all times, in accordance with this Code.

1.2.5 Monitor the contractor's compliance with this Code.

Figure 12: FIFWA Code – OSHA Part 1 – Obligations by Role

10. SAFE WORK PRACTICES

10.1 Chainsaw Operating Standards

Note All manufacturers' recommendations may not be followed or endorsed in this section of the Code in recognition that people in the tree felling profession are trained and endorsed to follow industry standards. Industry endorsements through an accredited training provider are required for workers wishing to follow procedures outside manufacturers' recommendations.

10.1.1 The chainsaw operator will:

(i) Ensure all chain saws used for timber harvesting meets Australian Standard 3574 - 1988 - SAA Forest Safety Code.

(ii) Maintain the saw in safe working order and in accordance with Australian Standard 2727 - 1997 Chainsaws - Guide to safe working practices regarding the:

- chain brake,
- chain catcher,
- anti-vibration mounts,
- front and rear hand guards,
- safety throttle lock, and
- spark arrester.

(iii) Refuel only with the motor stopped.

Figure 13: FIFWA Code – OSHA Part 2 – Safe Work Practices for Chainsaw operation excerpt

For both codes, some categories or themes are significantly more detailed and more technical in elaboration, for example, the sections of the FIFWA Code that cover tree felling, mobile plant operation and cable logging. Similarly, the LHC has extensive technical detail on equipment and load construction and restraint for log haulage. Inherently these areas are a strength of the codes, reflecting strong industry input and in the direct value they provide to improving the take-up and consistency of safety practices and outcomes industry-wide. Providing it remains current, this is a value to industry that is likely to prevail regardless of the risk management and legislative schemes that surround it.

Both codes seek to provide a broader industry ambit. THE FIFWA Code does cover log haulage, for example. However, by comparison it identifies general actions at a much higher level, focussing only on the contractor and driver. No doubt the focus of the codes, and their emphasis, by and large reflects the inputs and prioritised concerns of the industry representatives involved in their construction and maintenance. It would be fair to say that, for both codes, their attempt to broadly cover a range of themed industry activity areas demonstrates both some strengths where industry technicality, practicality and input are high and relatively some areas of weakness where generalities and are more evident.

Stakeholder participation and representation

The introduction to the FIFWA Code states that the code was developed through the Forest Industries Federation, using a safety committee drawn from industry, government and union representatives. Reviews have variously been conducted, but all involve strong industry representation. This commitment is reflective of the OSHA guidelines for the development of codes of practice. Although the means by which issues were identified and prioritised is unclear from the Code, the format of the Code indicates a legislative interpretation of general duties in Part 1, with Part 2 focussing on safe key work practices, no doubt informed by industry.

Similarly, under an AFPA and AFCA lead, the forestry log haulage industry prioritised 9 key risk areas for the LHC and then set about to address those areas through a consultative engagement process, examining, refining and collating industry practice into themed areas. An engineering consultancy provided independent analysis on technical aspects of equipment and load restraint, which had been determined as critical themes for safety improvement. This reflects a risk-based assessment of safety.

The advantage of both of these approaches is that they connect directly to industry practices that are proven and well understood, and bring industry support through the code development stages.

A risk to this approach is that the result can be a catalogue of action statements based on theme and role. Depending on the nature of the safety issue, these statements can pitch alternately at a very high level or can be very prescriptive and technical. There can also be inconsistency about the use of role statements, the attribution of activities, identifying hazard statements, their risks, likelihood and who is accountable and to what extent.

Drawing directly from engagement on industry practices may not link back to the groundwork established through a genuine risk assessment process. This detracts from the benefit of first working through a documented discipline of identifying hazard statements, risks, likelihoods, eliminations, and controls, making it difficult to ensure that the whole code maps back to the complex legislative safety schemes and their obligations found in Acts like the HVNL or the new WHSA. This is an issue that provided challenges for the LHC's development and applies to the review of the FIFWA Code, with a strong bearing on the options and considerations for its future.

Administration and review

Administration and review requirements for codes of practice are dealt with by the Acts that authorise them. Further detail can be included in guidelines developed under the Act. Although the WHSA has been passed (although not yet proclaimed), there are no regulations or guidelines currently available.

The OSHA states that a code of practice may, upon the recommendation of the Commission for Occupational Safety and Health, be approved by the Minister. The HVNL empowers the NHVR to register (approve) codes. It is notable that the NHVR is governed by an independent board through shareholding Ministers. The NHVR guidelines stipulate that codes are subject to an NHVR-appointed assessment panel to determine their suitability for registration.

The HVNL requires the nomination of someone to maintain the code – the guidelines refer to this as an administrator, who must be nominated as part of the registration process. A commitment to regular review is also a requirement of the Act. HVNL codes expire after three years if not subject to review and renewal.

For the FIFWA Code, the guidelines state:

‘The Commission recommends that industries review their codes of practice at least every five years.

To maintain approval of the code by the Minister, it should be revised whenever there are significant changes to the work practices in the industry.’

The FIFWA Code itself states that the Code will be reviewed every 5 years or as required. It also confirms that any changes shall be done through a consultative process, and that formal committee structures established within industry shall be the forums for any changes or recommendations to the Code.

The NHVR guidelines include a procedure for review. 12 months before the review date, the NHVR asks the developer whether they wish to review. The answer is published. The developer must submit the review no later than 6 months before the review date. If there are no changes, the developer must advise why. A review may include a panel review process. Once approved, a new date for review is set. It can be seen that the NHVR guidelines are much more detailed and prescriptive than those for the FIFWA Code.

In accordance with the OSHA guidelines, the FIFWA Code has been through several reviews, the latest being in 2016. The LHC is yet to be approved for registration.

Both codes are administered by industry associations. FIFWA, AFPA and AFCA are relatively lightly-resourced organisations and do not retain technical and operational expertise on staff as part of their core function. Therefore, review processes typically require strong industry participation and the assistance of external parties such as consultants.

Legislative references to administration and review of codes of practice under the WHSA are addressed in the following section.

Legislative empowerment

Both codes seek to provide some understanding of the legislative frameworks under which they operate. The FIFWA Code refers to the Occupational Health and Safety Act 1984 and regulations which remain relevant until the proclamation of the WHSA.

Both codes attempt to summarise the key legislative concepts around the imposition of safety duties, albeit that the models and application differ markedly. The MCP and the LHC code reflect in detail the HVNL and its modern risk-based safety concepts, largely replicated from the model laws enacted by Safe Work Australia. The new WHSA also applies this modern approach, and its proclamation will render the legislative framework cited under the FIFWA Code redundant.

Unfortunately, this also has implications for the defined terms within the FIFWA Code and the structuring of Part 1 of the Code which identifies general safety duties based on a principal, contractor, and employee layering. These terms and their use to attribute safety duties and actions are not consistent with the terms of the new WHSA approach. This is not to say that the action statements themselves are no longer relevant, but more that the methodology of approach no longer has a direct relation to the defined terms and structuring of the new laws.

For example, the WHSA follows model law and uses the principles of a person conducting a business undertaking (PCBU), worker and officer. The primary duty of care attaches to the PCBU which moves away from traditional employment relationship definitions. Officers must proactively show, as a positive duty, due diligence that the PCBU is meeting their safety duties. Workers, which are defined more broadly than employees, must take reasonable care including care for other persons in the workplace. Also, there are duties of care for those who influence.

It should be noted that the WHSA states in section 420 that:

‘A code of practice that, immediately before commencement day, is in effect under section 93 of MSIA or section 57 of OSHA continues in effect as if it had been approved under section 274, and the code of practice may be varied or revoked under that section accordingly.’

On this basis, it is likely that a transitional period has been allowed for codes to be reviewed and this is supported by the following extract from the Explanatory Notes to the Bill for the WHSA:

‘While this ensures the continuity of codes of practice currently in place, a separate transitional process will be undertaken to approve new codes of practice that are consistent with the provisions of the Bill, and to revoke the codes they replace.’

Further examination of the legislation is provided in the Legislation Analysis section.

Operational Technical Applicability of LHC in Western Australia

To assist in the initial considerations of the potential application of the LHC, the following sections make observations about the likely alignment of content. Figure 14 illustrates the scope and breakdown of subject matter in the LHC. It delineates between what might be termed more general topics (i.e. CoR overview, and Freight Task Planning) from more specific technical sections such as load restraint equipment and load construction. It is helpful, then, to look at these key sections and identify parameters that are likely to pose impediments to easy adoption in WA.

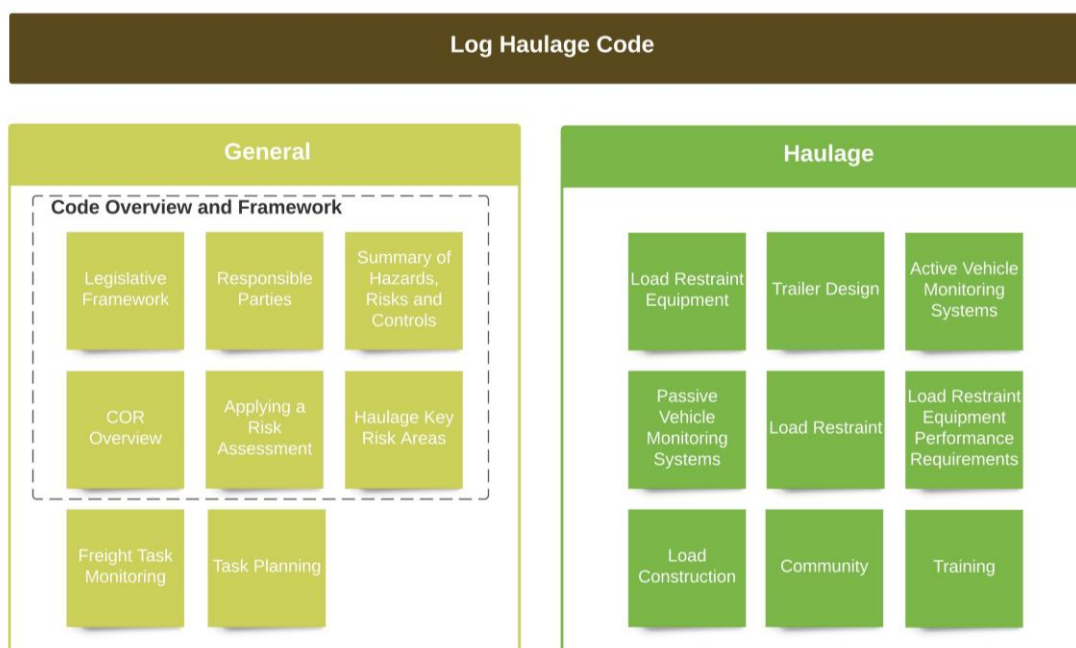


Figure 14: Log Haulage Code – Scope Overview

Responsible Parties

The introductory section on Responsible Parties will not likely be required as these considerations will be applied in overarching statements in an updated FIFWA Code/Guide. However, the allocation of duties and guidance to parties throughout the LHC are likely to be instructive in any broader translation of the technical information into an WHSA format.

Haulage Key Risk Areas

This content is likely to have a high degree of overall transferability, with areas of exception and addition being required to align to the WA context.

Applying a Risk Assessment

This information is likely to be reasonably relevant to the WA context, but is likely to be superseded by language better aligned to the WHSA framework.

Task Planning

Task planning contains instruction of a reasonably general nature and is likely to contain a medium to high degree of useful content for WA application. It has a degree of overlap with existing FIFWA haulage content.

Freight Task Monitoring

This section is similar to Task Planning, in that it contains instruction of a reasonably general nature that may be useful in supplementing existing FIFWA haulage content.

Load Restraint Equipment

This section provides material of different technical depth. The following are some observations about the Load Restraint Equipment items:

- Stanchions – general information on the risks they help mitigate and how to utilise. May only need moderate tailoring.
- Bolsters – contains some more technical information but aligned to NTC Load Restraint Guide and may not present significant concerns to WA industry.

- Grip Plates – some general information, but also contains specific strength requirements relative to the ability to restrain 80% of the bay mass.
- Lashing Types – contains general information and a degree of technical information that may be contentious in WA operations. References to Australian Standards are likely to be acceptable. Aspects mandating non-rebounding tensioner, and specification of pre-tensioning force will require consideration for applicability, for example.
- Automatic Tensioning Lashing Systems - auto-tensioning systems are not required in the LHC, but noted to *“greatly improve the consistency of tension throughout the journey by automatically re-tensioning as the load settles”*.
- Manual Lashing Tensioning Systems – the LHC highlights that manual tensioning systems require manual application of tension by the operator. These automatic and manual tensioning elements are considered likely to trigger significant consultation but may not require local engineering analysis.
- Lashing System Tensioning Configuration – this section provides general instruction on how to successfully utilise these systems.
- Lashing Tensioning System Performance – this section provides specific tension forces and describes minimum crowning angle for loading. There may be some risk that aspects of this may not align with WA operational contexts.
- Blocking – while much of the information in this section is likely to provide useful instructive material that could enhance the existing FIFWA haulage section, there are likely to be contentious elements. The LHC notes that blocking systems such as headboards and tailboards can play a significant role in supplementing the restraint force applied by other restraints. This section of the LHC goes on to say that, ‘where adequate restraint cannot be applied by restraints (such as lashings and chains), blocking is required’. It indicates, diagrammatically, log configurations where voids prevent the application of consistent force as situations and where, therefore, blocking is required. These elements are likely to require WA-specific engineering investigations and significant consultation.
- Cab Guards – the discussion in this section outlines the benefits of cab guards in protecting the driver in a rollover occurrence, and the need for their design to maximise the cabin strength. It also notes that cab guards have limitation in their ability to prevent loss of load. This section is not considered to present significant challenge to application in WA.

Trailer Design

The key element in this section is the ‘should’ requirement that heavy vehicles be designed such that each unit in a combination achieves a minimum Static Roll Threshold of 0.35g for all expected load configurations. This is derived from the NTC Load Restraint Guide. Instructional information and diagrams refer to ‘Standard’ and ‘Stepped’ Skel trailers and make reference to the benefit of low-profile tyres in lowering Centre of Gravity. It is not considered that these aspects are likely to require a high degree of adaptation for the WA vehicle fleet and trailer design, but this will require further exploration.

Active Vehicle Monitoring Systems

Vehicle Stability discussion in this section outlines the benefit of Rollover Stability Control and Electronic Stability Control systems and notes that “Stability Control Systems should be installed when procuring new vehicles”. The benefits of Fatigue Monitoring Systems are discussed, but advice is limited to evaluating opportunities to retrofit or install in new fleet purchases.

Passive Vehicle Monitoring Systems

This section discusses the benefits of on-board mass systems but does not make requirement statements. It outlines how to use such systems to ensure accurate measurement.

In-Vehicle Measurement Systems that measure key parameters including speed, position and acceleration are also outlined, with instruction that these be considered when procuring new vehicles, and that retrofit opportunities should be explored.

Load Construction

In relation to 'building the load', the LHC has a range of specifications that outline numbers of stanchions and dimensions for particular circumstances. For example, it specifies "*all logs must be restrained by at least two stanchions (or other containment systems) and extend at least 300mm past the stanchions at both ends to ensure they remain constrained...*" These requirements may present a misalignment with current WA practice and operational conditions that require a new analysis or approach to describe best practice.

Similarly, this section requires that where a crowning angle of 20° is not achieved, loads should have other risk management controls such as additional lashings or blocking systems. It is noteworthy that this was an area of considerable discussion in the development of the LHC.

Load Restraint

Some key areas have been identified that might present challenges in the WA operational context:

- The LHC identifies that cab guards do not provide the blocking requirements necessary for certain restraint modes.
- Restraint quantities and types linked to bay masses and friction levels (applying to different log types) are described here and linked to detailed tables in appendices. These specifications are reasonably likely to require review for the WA operating context.
- Permissible bay masses and tensioner categories for softwood and hardwood with different diameter dimensions are specified in multiple tables. Another table provides friction assumptions. These areas will potentially require specific WA development if attempting to adopt the approach within the updated FIFWA Code.
- The capacity of blocking systems is designated for bay masses up to 15,000kg (for masses above this, it points to the need for the need to consult with a qualified engineer)

Training

This section aligns with the HVNL, but there is unlikely to be much within this section that is not applicable from an operational context.

Community

This section also aligns with the HVNL and is unlikely to contain much that is not applicable from an operational context.

Load Restraint Equipment Performance Requirements

This section contains a significant portion of the engineering value of the LHC and ties back to support the 'controls' approaches outlined in the Equipment sections:

- Stanchions – minimum strength requirements are specified
- Bolsters – strength requirements are specified under various loading scenarios

- Grip Plates – specifies a strength performance requirement
- Blocking – Calls up Australian Standards Steel/Aluminium construction of blocking systems, and describes minimum design loads for various bay masses.

Some or all of these performance requirements might be affected by the different vehicle specifications and timber types in the WA timber industry context. However, it appears unlikely that all of these would need independent analysis for the WA context.

Options for Updating FIFWA Code

The effect of the incoming WHSA and supporting regulations presents some challenges with respect to the continuing efficacy of the FIFWA Code. These include:

- WHSA clearly has an objective to apply a risk management approach to establishing protections against hazards and risks from work;
- A broadening of application risk locations from the workplace to areas and activities “*arising from work*”;
- Changes in definition of roles and duty holders under the WHSA, including PCBU, officer and worker;
- The attribution of a primary duty to ensure safety upon the PCBU beyond the general duty on the employer to provide a safe workplace;
- WHSA application to Public Health and Safety.

In the following sections, this report discusses four options for the WA timber industry, stewarded by FIFWA and SWTH, to consider in responding to the challenges that arise from the changed legal framework supporting the existing Code. They have been deliberately set up to present different levels of effort and complexity in order to provide flexibility in considering pathways that improve safety and support legislative compliance.

Option 1: Non-authorised guideline

This option explores whether it is possible to respond to the superseding of the FIFWA Code by devolving its content to an industry-sponsored guideline that is approved and administered by arrangements outside of the authority expressed under the WHSA.

For the FIFWA, at its most basic level, this option would entail stripping the Code of all of its legislative references and preserving only its directory statements about activities that can be undertaken to mitigate safety risks. This would be done in a manner suitable only to industry and not legislative interpretation. This would mean that the roles and responsibilities attributions do not necessarily have a direct correlation to the terms defined in the WHSA, nor reference to its scheme of operation and the specific duties and obligations it imposes. What is preserved are collective statements of industry’s view on what constitutes safe and compliant behaviours for the subject matter and parties it identifies.

Ideally under this option, an industry-sponsored guideline would represent some form of consultative approach that is broadly representative and supported. It may seek to mirror the same forms of governance as that expressed by the WHSA in respect to the manner of its making, administration and review. It is difficult to imagine an industry-sponsored guideline existing without some form of support from WorkSafe WA. This is especially so given that approved guidance sheets are an existing feature of the OSHA laws, they exist extensively (as guidelines) under Work Safe Australia authority and are certainly likely to be mirrored in concept and application under the WHSA.

Approving codes and guidelines under an Act allows a standard to be established and provides a rigour to their operation. It allows the regulator to play a role in their development through establishing guidelines and compelling consultation and engagement. They can be obligated to cycle through review, be subject to conditions and/or amendment, and withdrawal. These powers strike a balance between devolving regulatory power and retaining diligence to the authority of the Act and the intent of the Parliament that made it. Acts like the WHSA that explicitly provide for recognition

of the use of codes of practice before a court provide an incentive for their adoption, but at the expectation of an evidentiary standard. Similarly, authorised guidance sheets, although not explicitly recognised by the WHSA, may still be tendered as evidence and have an expectation about their standard of creation.

To suggest that it is feasible to translate the FIFWA Code to an industry-sponsored guideline may appear to have some benefits. The Code can be reviewed and stripped of legislative detail with relatively minimum effort and to a standard and through a consultative mechanism that is largely defined by industry rather than the WHSA requirements. It could be said that the guideline would retain the integrity of the practical control aspects of the former Code. It could broadly assist industry awareness of safe practices for some of the more critical aspects of forestry logging and haulage activity. Its development and administration could be tailored in a way that requires less resources. It may not require FIFWA to pay, or pay as much, for consultants whether it be engineering, risk assessment, legal and legislative and/or workplace health and safety policy expertise. Industry may be more favourably predisposed to support a guideline that is very familiar to their known practices and does not require an understanding of the referencing to a safety legislation scheme.

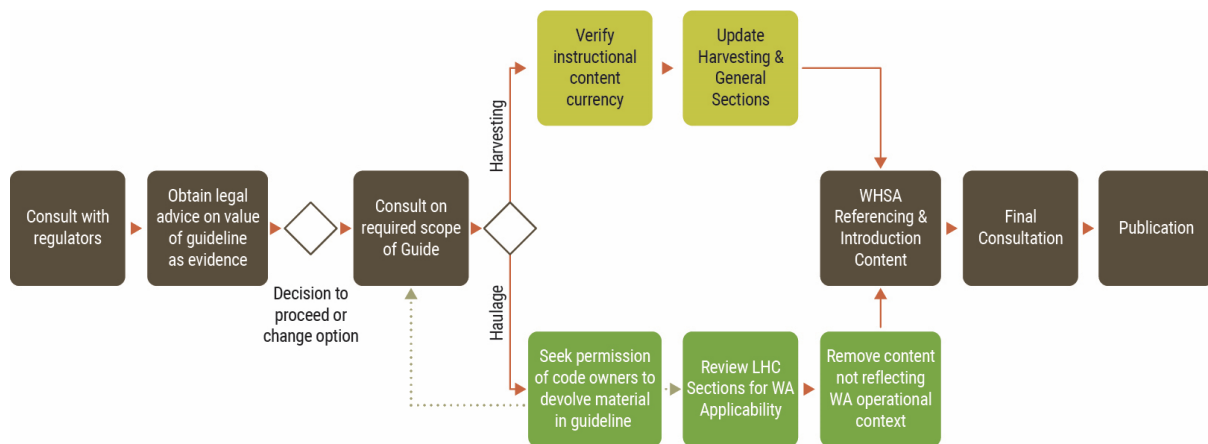


Figure 15: Non-authorized Guideline Process Steps

There are several disadvantages to an industry-sponsored guideline:

1. The guideline will not be explicitly recognised by the WHSA as evidence in a court of what may have been known about a hazard and what is reasonable in response. Legal advice would be required to determine the potential value of a non-authorized guideline in a court matter.
2. It will be out of step with the co-regulatory model envisaged by the WHSA and will be a departure from the regulators' attempt to nationally harmonise workplace health and safety law. It may be difficult to gain the support of regulators to this approach.
3. The absence of legislative and defined terms referencing may mean the guideline does not adequately serve the safety obligations and duties of the law. This could be an exposure if it is found that the guideline is misleading or false.
4. If a risk assessment is not associated with the guideline, it may not be comprehensive in terms of identifying hazards and controls. A benefit of a risk assessment is its capacity to

discover aspects of safety hazards, mitigation and roles that may not be evident from an examination of known practices.

5. There will need to be some form of replication of the WHSA requirements for how a code is developed, administered and reviewed. Without this rigour, the guideline may risk becoming a 'shelf-sitter' that does not deliver tangible benefits to improving safety outcomes.
6. It may not be possible to adopt national codes like the Log Haulage Code through a method of devolving them to a guideline. This would need consultation with the code owners.
7. A guideline will not better position the WA forestry industry for any future evolution of WA heavy vehicle law that may further embrace a 'model safety law' approach to log haulage safety obligations for chain of responsibility parties.

On balance, Option 1 – devolving the FIFWA Code content to an industry-sponsored guideline that is approved and administered by arrangements outside of the codes of practice authority expressed under the WHSA – is not recommended as a desirable option.

It is difficult to envision how this option could obtain the support of regulators who may see its operation as totally contrary to the intent of the WHSA reform principles. It risks doing a poor job of identifying all hazards and the full potential of the controls, and will almost certainly misalign safety duties and responsibilities to the scheme outlined by the WHSA provisions.

Option 2: Authorised guidance notes

Both Safe Work Australia and WorkSafe WA authorise guidelines (or guidance notes) as an effective means to promote work safety in addition to the operation of Acts, Regulations and Codes of Practice.

There is an extensive array of guideline material on both authorities' websites including over a dozen forestry-related guidelines published by Safe Work Australia (refer to the Legislation Review section). These cover many of the topics that are within the FIFWA Code and share some of the same terminology, similar phrasing, diagrams and illustrations.

Subject to consultation with WorkSafe WA, it may be possible to consider devolving the content of the FIFWA Code to a guidance sheet or series of guidance sheets. Safe Work Australia state that guidance documents can help duty holders to comply with the law but differ from the authoritative advice of a code of practice by allowing wider discretion to duty holders to choose the options that best suit their circumstances. Guidance material contributes to the overall state of knowledge regarding hazards, risks and controls and may be tendered as evidence in court proceedings (this would need confirmation in a WA context).

Safe Work Australia indicate (from their Codes of Practice and Guidance Material information sheet) the criteria outlined in Figure 16 for determining whether a code of practice is the appropriate level of response.

Criteria for determining a code of practice	
1.	Guidance is a necessary part of enabling compliance with the duties contained in the WHS Act and/or Regulations, particularly to support legislative provisions that are outcome focussed or do not provide much detail.
2.	There is clear evidence of a significant risk or widespread work health and safety problem where evidentiary status of a code will elevate the importance of the issue.
3.	There are certain preferred or recommended methods to be used (or standards to be met) to achieve compliance.
4.	The information on the hazard, risks and control measures is well-established, reflects the state of knowledge and therefore will not require frequent updating.

Figure 16: Safe Work Australia Criteria for determining a code of practice

From this it would seem clear that the FIFWA Code continues to largely fulfill these criteria. If they remain consistent with the interpretation made by WA regulators in their adoption of the WHSA laws, then it may be questionable whether a guidance sheet will be seen as the appropriate response to the WHSA safety duties. Nonetheless, it may be worth seeking clarification from WA regulators regarding the potential of this option, given that there is clearly a lot of information shared between the FIFWA Code and the Safe Work Australia guidelines on forestry. In this way FIFWA can consider whether this is a plausible option.

It should be noted that it would be unlikely that the LHC would be suitable for representation as a guidance sheet(s), given that it has already been recognised by the NHVR as a draft code under the HVNL. Also, by the nature and extent of its detail in regard to recommendations for fulfilling safety duties for log haulage, it seems to strongly meet the criteria for a code of practice (by Safe Work Australia’s measure). It may be difficult to extract a satisfactory representation of the LHC that could be interpreted or used as the basis for guidance material authorised by WorkSafe WA. This would need consultation with WorkSafe WA and the LHC owners and intellectual property holders.

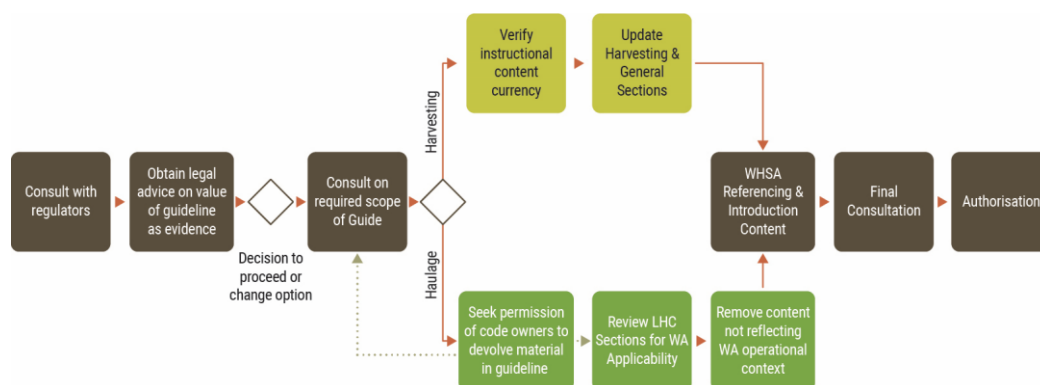


Figure 17: Authorised Guideline Process Steps

In addition to devolving the FIFWA Code (and potentially the LHC), there are a number of alternate pathways that could be taken with a guidance sheet approach. It may be possible to consider the guidelines about forestry made under the Safe Work Australia model laws to be entirely adequate for WA requirements and seek to have this authorised under the WHSA by WorkSafe WA.

Alternatively, it could be considered that the model guidelines serve as a basis for additional review and rewriting for a WA application. Finally, a fresh approach could be adopted that seeks to build a set of guidance sheets based on first principles and working through a ground-up industry consultation process.

Option 3: Realignment of Existing Codes

This approach is an evolution from Option 2, in that it involves building an updated Code that will be aligned with the 3-tiered co-regulatory model envisaged by the WHSA. However, this option does not require an extensive 'ground-up' effort to analyse the sector's risks and hazards and identify new mitigations. It assumes that the extensive work done with industry by FIFWA in developing the existing Code has covered the large majority of key risks pertaining particularly to the harvesting dimension of the forestry sector's work elements. It also involves a methodology to adapt the national LHC haulage components to reflect the legislative, and operational context of the WA industry to address the key risks pertaining to the haulage component of the scope. It utilises this combined material to align with the risk assessment framework required by WHSA.

Option 3 relies on the premise that both harvesting and haulage are necessary scope for a future code, and that significant risk areas can be addressed by incorporating content aspects that exist within the draft national LHC. While it is feasible to develop two codes that separate haulage from harvesting and related components, for ease of industry use we are recommending under this option that this be developed in a single code, with discrete sections.

The likely set of steps to execute this approach at a high-level are outlined below. While this is mostly sequential, there are opportunities to undertake some aspects either in parallel or sequentially, particularly with respect to the haulage and harvesting components of the code.

1. Confirm desired scope

Through industry-led processes, determine the scope of the FIFWA Code in the future considering aspects of log haulage, harvesting and broader 'work-related' risk and hazard areas. This process will determine whether a future code or codes is focussed on harvesting and/or haulage activities, and how it relates to WACOP/FICOP.

2. Review 'In-Scope' areas of the FIFWA Code and LHC for currency and technical alignment to WA operating context.

- a. Update and verify instructional content within the existing Code pertaining to harvesting and other non-haulage components.

There is likely to be a high degree of the detailed instructional information that can continue to be used in a future code. However, it should be verified as continuing to reflect best practice, and any related Standards should be checked for currency. Ideally this validation and updating happens at a thorough level before moving to alignment with the WSHA risk assessment framework.

- b. Review LHC to determine which technical components are of relevance to WA conditions but require technical alignment.

There is likely to be a high level of scope applicability of the LHC for WA risks and hazards relating to forestry log haulage. A technical review should be undertaken to establish which areas of the technical and engineering guidance can either be applied directly in WA or require specific engineering analysis and documentation to account for

local operational or legislative issues. The types of issues likely to require close analysis are:

- The heavy vehicle combination and trailer configurations used in the LHC may not be representative of the WA logging fleet and vehicles permitted under WA Transport regulations. This is considered more likely to affect roll-over prevention and load restraint technical guidance material³.
- The timber types, including hardness, and moisture content considerations may affect load restraint and similar issues.

3. Develop new technical content (harvesting and haulage).

- a. Update the harvesting aspect of the FIFWA Code to reflect any practice changes and/or apply updated Australian Standards or ISO Standards currently referenced.

Considering the last review of the Code was only 4-5 years ago, it is anticipated that this will not be an overly intensive task.

- b. Commission any required new engineering analysis as determined in step 2(b) for the LHC.

This is potentially the most complex undertaking in this exercise and is expected to involve industry groups working closely with an engineering consultancy to review technical analysis and findings.

4. Align all new Code sections to the WHSA legal framework, incorporating a full hazard and risks control approach.

- a. Harvesting aspects of the existing Code should be modelled into a structure that outlines for the Code user:

- the work-related activities, the hazard statements and risks ;
- the relevant legislation pertaining to the risk area;
- relevant duties for PCBU, officers, and workers that mitigate and control risks;
- instructional material that describes the method to eliminate or reduce the risk by role type; and
- guidance for the Code adopter to develop risk management processes specific to their undertaking.

This approach requires less new development from 'first principles' to establish a comprehensive new set of hazards and risks. It uses existing guidance material to fashion into the structure required by the WHSA. Industry expertise can be used strategically at key points to review the material to ensure that all risks and hazards are correctly described.

³ ADC have not conducted an engineering analysis and have not formed a technical opinion on the materiality of these technical differences.

- b. Adapted LHC technical guidance material edited to align with WHSA legal framework.

As the LHC has been constructed under the HVNL, with a similar structure to the WHSA, this becomes a relatively straightforward task. It involves invoking correct legal references and ensuring the risk-control structure is consistently maintained.

5. Replace OSHA/HVNL references with WHSA.

This step involves developing new front-end sections that introduce the WHSA framework to the code reader and outline the risk principles, duty holder, etc. It will also involve addressing introductory paragraphs throughout the detailed sections to reflect WHSA legislative referencing.

6. Reference Model Codes.

On passage of the WHSA regulations, several model codes may also be approved for WA (after any adaption to meet WA requirements). These may include, for example:

- Work health and safety consultation, co-operation coordination;
- How to manage work health and safety risks;
- Managing risks of plant in the workplace.

Also, there are model codes from the OSHA that may also be preserved under WHSA:

- First aid-workplace amenities-personal protective clothing;
- Managing noise at workplaces;
- Manual tasks;
- Safeguarding of machinery and plant.

It is likely to be of benefit for an updated FIFWA Code to reference these codes as part of assisting industry in meeting their broader obligations under WHSA. The consideration of these model codes is likely to influence the scope considerations suggested at item 1.

7. Consultation.

While consultation with industry is expected to occur at all stages of this process, WHSA has specific requirements for consultation that will include industry and union consultation.

8. Registration.

The WHSA provides that the Minister may approve a code of practice. This occurs after review, and on the recommendation of the regulator. There will likely be some formality to the review process, and it will include some form of independent assessment to ensure the suitability of the code for registration. Detail of these requirements will form part of the guidelines that will be published for WHSA and will need to be taken into consideration in producing a timeline for code development.

Option 3 benefits from requiring much less new development from 'first principles' of technical content. It allows the use of this existing information property and consultation to efficiently establish a risk-control framework that aligns with the WHSA requirements. Industry expertise can

be used at key points to review the material to ensure that all risks and hazards are correctly described. It is recommended as an efficient approach to construct a Code that provides evidentiary benefit. That is, it will be recognised by the WHSA as evidence in a court of what may have been known about hazards and what is reasonable in response. It will align with the 3-tiered co-regulatory model envisaged by the WHSA.

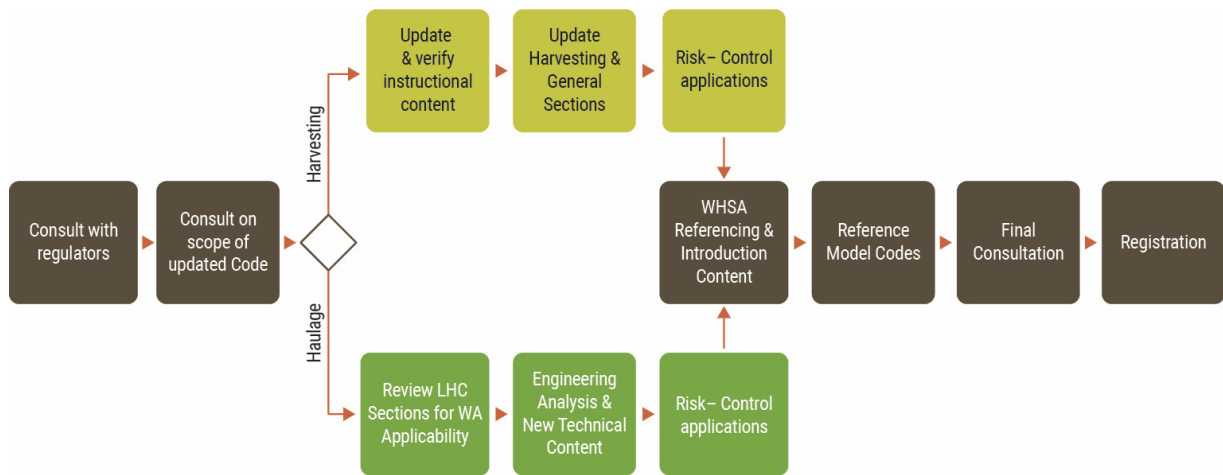


Figure 18: Realignment of Existing Codes Process

Option 4: Developing a new code (from first principles)

Option 4 is based on a view that the FIFWA Code needs a complete rewrite, both from an industry practice and legislation viewpoint. It follows on from the fact that the Code is due for its 5-year industry review and that the legislation to which it refers is about to be repealed and replaced by an entirely new safety scheme under the WHSA. Although the WHSA will likely preserve, as a transitional arrangement, existing codes like the FIFWA, this will likely have an end date. The lack of statutory relevance to the WHSA will become an increasingly critical issue to its credibility and usefulness, particularly when the WHSA and its regulations are proclaimed to take effect (scheduled in 2021).

If a view is taken that a completely new Code is required, then this will obviously take some considerable time and resources. There is opportunity now to commit to this option while the WHSA remains passed as an Act but not proclaimed into effect until the regulations are ready. This time can be used to begin the pathway to a new Code that is fully up to date with the WHSA intentions and ready in time for the WHSA proclamation. Work on the Code can be done concurrently with the regulators who are likely giving consideration to guideline development and code format and consultation requirements. Initiating development work early with regulators will be beneficial in relationship building and timely code approval.

In terms of the major steps likely to be required in executing a new Code, there is much commonality with the approach taken in Option 3.

1. Confirm desired scope.

One of the considerations in looking at the FIFWA Code in detail has been the broad extent of its scope, ranging from first aid practices and use of personnel vehicles to chainsaw operation, mobile plant, haulage and fatigue management. For a scope review, it may be relevant to consider that the

WA regulator has indicated its intention to consider adopting some of the model codes from Work Safe Australia. For example, this could include (after any adaptation required for WA):

- Work health and safety consultation, co-operation coordination;
- How to manage work health and safety risks;
- Managing risks of plant in the workplace.

Existing WA-specific model codes that may be transferred from the OSHA include, for example,

- First aid, workplace amenities, personal protective clothing;
- Managing noise at workplaces;
- Manual tasks;
- Safeguarding of machinery and plant.

The adoption of these may allow some scope areas to be addressed by these codes. In this way there would potentially be a family of codes that are more subject-specific and work collectively to help industry to inform safety compliance requirements based on their specific needs.

It may also be desirable to initially focus any new Code more narrowly on critical hazard areas and in this way prioritise time and resources to establishing a Code that is comprehensive and completely up to date with industry practice and legal requirements. This would particularly benefit industry consultation timeframes, and help to get a Code up and running sooner. This can then be matured and widened if needed through iteration.

If a 'first principles' approach is taken to the review of scope, there is a question over whether harvesting and haulage would remain as part of one code or whether it may be appropriate to split them into two codes. This decision may be influenced by the differing work required, and whether one should be done before the other.

For haulage, if we assume that the LHC is to be reviewed and modified for adoption in WA, then there is a different workflow associated with this compared with a review of the harvesting components of the FIFWA Code. It may be a challenge to manage the conduct of two separate work streams on harvesting and haulage review concurrently. Equally it is known that there is concern about the absence of an up-to-date approach to haulage safety similar to the detail that exists in the LHC and that this is likely to remain a priority.

Consequently, a decision would be required as part of the scope review on whether to include harvesting and haulage in the same code and, if so, whether this should be done contemporaneously in the first iteration.

2. Conduct fundamental risk assessment.

The objective of this step is to identify, from a new perspective, all the relevant hazards, risks and potential controls including considerations of likelihood, accountability (within the meaning of the WHSA) and capacity to influence and control activities and events. This would most appropriately be

conducted through facilitated representative workshops involving all key stakeholder groups drawn from industry, unions and government in accordance with the expectations of the WHSA. Given a 'first principles' approach, it is likely that this would require a series of workshops to be timetabled and for a complete consultation and engagement plan to be developed.

This step is a strength to this option. It provides the opportunity to completely reappraise hazard assessment independent of past assumptions and perspectives. Its independent facilitation could help promote innovation in safety management and give strong participative support and a sense of ownership to industry from inception. This helps to ensure that the take up of the code is strong and that its impacts will be tangible in improving the breadth, consistency and effectiveness of safety practices across industry.

For haulage, this step could be undertaken prior to, or as part of, a technical review of the relevance of the LHC to WA conditions, and may be influenced by whether a new code scope is inclusive of both haulage and harvesting from the outset.

3. Review "In-Scope" areas of FIFWA Code and LHC for technical currency and alignment to a WA operating context.

This is largely the same as Step 2 in Option 2. However the purpose here is to ensure that, where the fundamental risk assessment identifies a hazard, then the technical controls that are considered for application from the existing FIFWA Code and LHC are current and align to a WA operating environment.

- a. For the FIFWA Code – update and verify instructional content within the existing Code pertaining to harvesting and other non-haulage components (that are in scope).

There is likely to be a high degree of the detailed FIFWA Code instructional information that can continue to be used in a future code, subject to the scope review in Step 1. However it should be verified as continuing to represent best practice, and any related Standards should be checked for currency.

- b. Review LHC to determine which technical components are of relevance to WA conditions but require technical alignment.

There is likely to be a high level of scope applicability of the LHC for WA risks and hazards relating to forestry log haulage. A technical review should be undertaken to establish which areas of the technical and engineering guidance can either be applied directly in WA or require specific engineering analysis and documentation to account for local operational or legislative issues. The type of issues likely to require close analysis are:

- The heavy vehicle combination and trailer configurations used in the LHC may not be suitably representative of the WA logging fleet and vehicles permitted under WA Transport regulations. This is considered more likely to affect roll-over prevention and load restraint technical guidance material.

- The timber types, including hardness, and moisture content considerations may affect load restraint and similar issues.

4. Develop new technical content (harvesting and haulage).

- a. Update the harvesting aspect of the FIFWA Code to reflect any practice changes and/or apply updated Australian Standards or ISO Standards currently referenced.

Considering that the last review of the Code was only 4-5 years ago, it is anticipated that this will be a relatively minor undertaking.

- b. Commission any required new engineering analysis as determined in step 3(b) for the LHC.

This is potentially the most complex undertaking in this exercise, and is expected to involve industry groups working closely with an engineering consultancy to review analysis and findings.

5. Align all new Code sections to the WHSA legal framework, incorporating a full hazard and risk control approach. The Code should be modelled into a structure that outlines for the Code user:

- the work-related activities, the hazard statements and risks;
- the relevant legislation pertaining to the risk area;
- relevant duties for PCBU, officers, and workers that mitigate and control risks;
- instructional material that describes the method to eliminate or reduce the risk by role type; and
- guidance for the Code adopter to develop risk management processes specific to their undertaking.

6. WSHA references.

This step involves developing new front-end sections that introduce the WSHA framework to the Code reader and that outline the risk principles, duty holder concepts and other key legislative concepts. It will also involve addressing introductory paragraphs throughout the detailed sections to reflect WSHA legislative referencing.

7. Reference Model Codes.

On passage of the WSHA regulations, several model codes are expected to be approved for WA (after any adaptation to meet WA requirements). Any new code will need to consider appropriate referencing to these codes as part of assisting industry in meeting their broader obligations under WHSA. The consideration of these model codes is addressed as part of the scope considerations suggested at Step 1.

8. Consultation.

While consultation with industry is expected to occur at all stages of the development and workshopping process, WHSA has specific requirements for consultation that will include industry,

union and regulator consultation. Consultation requirements are likely to be a key consideration of any new code of practice guideline released by the regulator, and these will need to be adhered to before registration can occur.

9. Registration.

The WHSA provides that the Minister may approve a code of practice. This occurs after review and on the recommendation of the regulator. There will likely be some formality to the review process, and it will include some form of independent assessment to ensure the suitability of the code for registration. Detail of these requirements will form part of the guidelines that will be published for WHSA and will need to be taken into consideration in producing a timeline for code development.

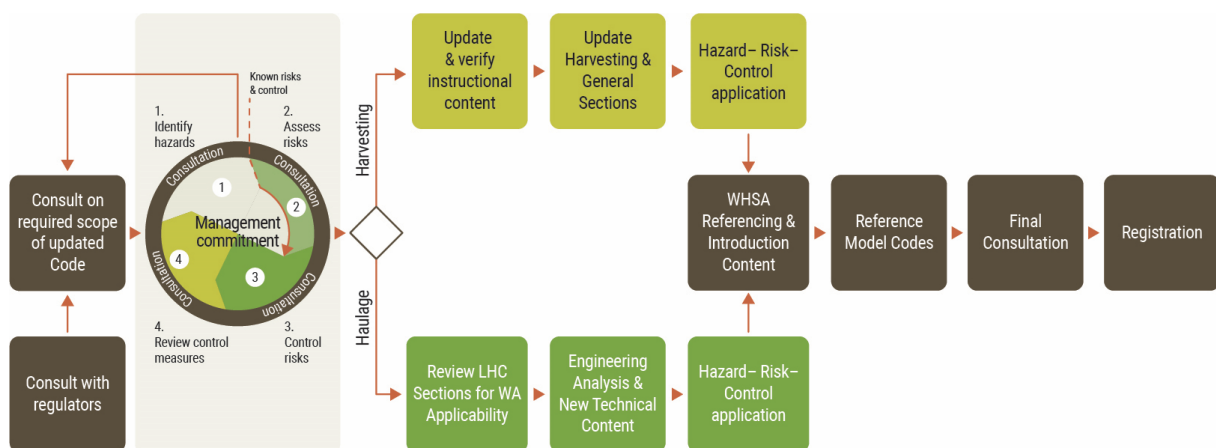


Figure 19: Log Haulage Code – Scope Overview

Option 4 is a comprehensive response to the need to review and replace the FIFWA Code in response to the passage of the WHSA. By adopting a first principles-based approach, there is significantly more work required to progress this option. Consideration of the additional cost, time and resources, and the commitment required from all stakeholders in comparison to Option 3 will be the critical factor in opting for one over the other. The major advantage in Option 4 is that it commits to a complete modernisation of the current FIFWA Code, which has been in existence for over 20 years.

Sub-Options relating to use of existing Log Haulage Code

For each of the Options, when considering use of LHC technical material to support content depth in the FIFWA Code haulage sections, there is the possibility of adjusting the breadth and depth of application. That is, it may be helpful to adopt or adapt only those aspects that are both relevant as addressing key WA risks and that apply controls and mitigations that are technically aligned to WA operational contexts. For other areas it may then be viable to not have content on those matters, or to address them at a different level of specificity or at a later date as part of a maturation cycle.

This would mean that, in areas where it is deemed that the LHC content is not suitable for application to the WA operational environment, three options exist:

1. Develop new technical content using engineering analysis and broad industry consultation.
2. Develop content that provides more general guidance about the risks and the categories of mitigation responses that are available.

3. Determine that the LHC material is not addressing a key risk for WA and omit the item in the revised FIFWA Code.

The 'Operational Technical Applicability of LHC in Western Australia' section provides a high-level analysis of the areas where the operational issues, including heavy vehicle fleet parameters and timber differences, may present hurdles to the application of the LHC elements in WA.

Next Steps to assist Option Determinations

There are some important considerations as 'next steps' which can play a critical role to assist determining the potential of the recommended Options.

Firstly, it will be critical to begin consultation with the WA regulators such as WorkSafe WA and the departments responsible for main roads and transport matters. The purpose of this engagement would be to address considerations such as:

- more information about the WHSA code of practice guidelines (detail and release);
- timing of and access to the draft WHSA regulations;
- indicative timing of the WHSA proclamation;
- confirming that the FIFWA Code is to be preserved under transitional arrangements (and for how long). N.B. The FIFWA is not currently represented as an approved code on the WorkSafe WA website – for the purposes of this analysis, we have worked with the assumption provided that it is an approved code;
- potential acceptance of a guidance notes approach (Option 2);
- feasibility of the FIFWA Code update approach (Option 3);
- discussion of the interaction with the Chain of Responsibility parent-child codes made by the WA Road Transport Association.

In regard to the LHC, some further enquiry and investigation would be useful in regard to:

- LHC code owners (AFCA and AFPA) – consultation on potential use of code;
- WA regulators and industry acceptance and views on options for LHC integration;
- Feasibility of engineering review – who, timeframe and costs – as to practicality of combining harvesting and haulage work streams under Option 3.

Legal advice could be sought on the evidentiary value of guidance sheets versus codes of practice, and particularly whether it is feasible to consider that a WHSA-approved code or guidance sheet can contribute to a 'reasonable steps' defence to a chain of responsibility prosecution under the Road Traffic (Vehicles) Act 2012.

One of the challenges to Option 3 is determining what would constitute a select industry engagement process. It is questionable whether this could be realistically maintained to the satisfaction of the WA regulators and broader industry interests without sliding toward a full consultation and engagement process, as one would expect under Option 4.

Also, Option 3 assumes that much of the current FIFWA Code of Practice risk and control measures remain applicable both technically and in terms of industry practice, as the FIFWA Code has been in existence for some time.

Any code of practice authorised under the WHSA requires union consultation, and this will need to be included as a part of the consultation plan for any of the recommended options.

Finally, if the scope of the FIFWA Code is to be reduced or modified, the approach and rationale to the coverage of those elements which have been discarded will need to be addressed.

Conclusion

This report has identified that the significant changes to work health and safety laws associated with the incoming WHSA will require a revision to the FIFWA Code of Practice for forestry operations. The WHSA introduces a new scheme for ensuring work safety with an emphasis on a risk management approach to hazard and risk identification, mitigation, and control. No longer will the terms 'employer', 'principal' and 'contractor', which are used extensively in the FIFWA Code, be defined in law. Instead, the WHSA defines a PCBU as the principal safety duty holder. It introduces the concept of an 'officer' as someone who has a duty to maintain due diligence to ensure safety, and a 'worker' more widely defined than an 'employee'. These changes recognise that safety issues arise from work activities and not just the workplace. Safety duties are not constrained to those that do work tasks, but those who influence and exert control, and apply beyond traditional concepts of employer and employee relations. This report provides a detailed review of the legislation impacts, including a comparison of the key changes from the previous OSHA laws under which the FIFWA Code was drafted.

Codes of practice are a feature of the HVNL. Although this law does not apply in WA, a new draft code of practice specifically for log haulage has recently been submitted by the AFCA to the NHVR for approval. FIFWA recognise that this code has the potential to offer significantly greater breadth and technical depth to the treatment of log haulage safety than that covered by the FIFWA Code. This report examines the LHC and its potential for adoption within a WA legal framework, providing a gap analysis and exploring options and recommendations.

In order to better understand the national context, summary sections have been prepared that explain codes of practice as they are intended to operate under the HVNL and examine in detail the nature and operational intent of the draft LHC. One of the important differences under the HVNL is that the primary safety duties that it applies are identified within the context of the chain of responsibility law, unlike the FIFWA Code of Practice which responds to the safety duties expressed by the OSHA. The CoR laws contained in the WA Road Traffic (Vehicles) Act 2012 are not cast in the same manner in regard to the imposition of a primary safety duty. It is not possible to simply adopt the LHC 'as is' into a WA legal framework. The legislative framework of the code would need to be rewritten.

This is not the only consideration. The LHC contains substantial technical engineering-related detail. It is evident that in some areas this detail may not be suitable for direct application in WA, given differing vehicle standards, operational environments and practices. The potential of the LHC would require further investigation in addition to considerations of its legal framework and review in light of WA laws.

In terms of the review of the FIFWA Code itself, this report identifies 4 options. The first two centre on the potential to move the FIFWA Code to a guideline. Option 1 proposes a guideline outside of WHSA approval, while Option 2 proposes a guidance note or series of notes that would be submitted for WorkSafe WA authorisation and publication. Option 1 is not supported as a recommended option given that it is contrary to the intent of the WHSA's establishment. Option 2 is worthy of further investigation and consultation with key stakeholders such as Work Safe WA before a final decision is arrived at.

Options 3 and 4 are closely related in that they both recommend establishing a new Code. Option 3 suggests using existing safety controls as much as possible to lessen the costs, time and resources

involved. Option 4 goes beyond this, seeking a grass roots approach with a full consultation and engagement program and a fresh appraisal of hazards, risks and controls.

Option 3 is the preferred option. This option strikes a balance between utilising the strengths of the current FIFWA Code, reflecting many years of industry development and input, with the need to transition to the new legislation scheme for work safety brought in by the WHSA. Under this option it will also be possible to consider the amalgamation of the national LHC, subject to its review for application to WA conditions.

This approach will not require the same scale of time and resources as might be expected with a 'first principles' approach to a new code. By reviewing the scope from existing codes and adapting the safety actions to the legislative framework of the WHSA, it will be possible to draw more selectively from industry on the inputs required to ensure meeting regulator expectations about consultation and quality of product.

Option 3 gives the best opportunity to establish a new code under FIFWA's administration that will fit within a 2021-2022 timeframe. It will serve as a meaningful foundation for future review and iteration of code development whether that be to enhance detail, reflect further innovation or incorporate new subject matter. This minimises FIFWA exposure to a Code that is due, by its own terms, to expire and that has been superseded by law.

As indicated, some of these options would benefit from further investigation and consultation which is beyond the scope of this report. This report provides a legislative and analytical context to the review of the FIFWA Code both in response to its expiry and superseding by the WHSA, and to the advent of a national Log Haulage Code of Practice that may offer significant advances in forestry industry safety.