

Discussion Paper
Clear heads: options to reduce the risks
of alcohol-and drug-related impairment in
aviation, maritime and rail

March 2015



Ensuring our transport system
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Section three – the commercial sector

Section three – the commercial sector

Option 1: status quo

Option 1	<ul style="list-style-type: none">▶ Some existing controls▶ Some (usually large) aviation, maritime and rail organisations already have well-functioning drug and alcohol management plans
Status quo	<ul style="list-style-type: none">▶ Workplace testing is at the discretion of each organisation and determined by its own risk profile▶ Enhanced education

Points to consider

- ▶ Are current and already planned legislative requirements (such as the Health and Safety in Employment Act 1992 and the new Health and Safety at Work Bill) enough to minimise risks from impairment in the commercial sector (the status quo)?
- ▶ Should sectors that appear to be currently well regulated be subject to further regulation?
- ▶ Should the government undertake more education campaigns to highlight the risks associated with alcohol or drug impairment and the responsibility of operators to monitor and manage these risks?
- ▶ Is there a need for more guidance on the voluntary development of alcohol and drug policy as part of existing legislation?

3.1 In New Zealand, the risk arising from alcohol and drug impairment in the commercial aviation, maritime and rail sectors is currently managed through a combination of health and safety in employment legislation, transport Acts¹ and transport rules². Operators are best placed to manage and minimise their own safety risks.

3.2 In all commercial sectors, operators must already comply with the Health and Safety in Employment Act 1992 (the HSE Act). The HSE Act requires employers to take “all practicable steps” to ensure the safety of employees and other people in the vicinity of the place of work. The HSE Act also requires employees to take “all practicable steps” to ensure both their own safety and that no action or inaction of the employee while at work causes harm to any other person. The HSE Act will soon be replaced. The Health and Safety at Work Bill is currently before the House. Maritime New Zealand and the Civil Aviation Authority have designated powers for parts of the aviation and maritime sectors under the HSE Act in their respective sectors.

¹ The Civil Aviation Act 1990, the Maritime Transport Act 1994 and the Railways Act 2005.

² Transport rules are a form of regulation. The Minister of Transport is empowered by primary legislation to make transport rules (Rules) on issues covering land transport, civil aviation, maritime safety and marine protection.

- 3.3 Many transport operators, particularly those who provide public transport, already have drug and alcohol management plans in place in the workplace. Operators regard this as good business practice and meeting the duties of employers and employees as set out in the HSE Act. Some operators that are involved in safety-sensitive activities, such as Air New Zealand, KiwiRail and Maersk Line, already have alcohol and drug management plans involving testing regimes that are consistent with international best practice.
- 3.4 Although there is no regime of random testing, there has been a range of recent legislative responses in different sectors intended to reduce risks from impairment. A number of these have been introduced since the Carterton balloon accident in 2012.
- 3.5 In August 2012, the government agreed to amendments to the Health and Safety in Employment (Adventure Activities) Regulations 2011 and equivalent changes to aviation and maritime rules³, in order to improve safety in the adventure tourism sector. Operators are now required to include a description of how they will manage the safety risks associated with alcohol or drug impairment in their safety plans (Organisational Management Systems for aviation, Safe Operational Plans for maritime, and Rail Safety Cases for the rail sector).
- 3.6 To assist maritime operators, Maritime New Zealand has produced safety guidelines for managing risks related to alcohol and other drugs for raft and jet boat operators.
- 3.7 The Civil Aviation Authority has worked closely with adventure aviation operators to support the development and implementation of drug and alcohol management plans that include testing. A detailed advisory circular for adventure aviation operators outlines the expectations for alcohol and drug monitoring and management, and what acceptable policies should include⁴. These management plans and policies must be acceptable to the Director of Civil Aviation for an operator to operate.
- 3.8 In October 2013, the Maritime Transport Amendment Act 2013 came into force. The Act uses the internationally applicable alcohol limit⁵ (50mg of alcohol per 100ml of blood and breath alcohol level equivalent) for commercial operators on all large vessels other than fishing vessels.
- 3.9 For all maritime operators, section 65 of the Maritime Transport Act places a general requirement on operators not to operate “any ship or maritime product in a manner which causes unnecessary danger or risk to any other person or to any property, irrespective of whether or not in fact any injury or damage occurs”⁶. Although not widely used, this provision

³ Civil Aviation Rule Part 115, Adventure Aviation; Maritime Rule Part 82, Commercial Jet Boat Operations – River. Maritime Rule Part 81, Commercial Rafting Operations, was amended in 2011 and is included as part of the Adventure Maritime activities.

⁴ See <https://www.caa.govt.nz/rules/ACs.htm>.

⁵ Established by the 2010 amendments to the International Convention on Standards of Training, Certification and Watchkeeping (STCW) for Seafarers, 1995.

⁶For example, successful prosecutions were made under section 65 in the *MNZ v Batchelor*, District Court Timaru, 7 June 2012, an incident in which a passenger died on a fishing trip where all members had consumed alcohol.

can be used to prosecute in cases of impairment. Although not further discussed in this paper, section 65 could be amended to include a specific reference to impairment.

3.10 The government is also moving to clarify and strengthen the requirements on operators to manage alcohol and drug risks. Commercial maritime operators are required to comply with the new Maritime Operator Safety System (MOSS) under Part 19, which is being phased in over 4 years from 1 July 2014.

3.11 In aviation, new rules are being developed that will require operators to have safety management systems (SMS) in place. Both MOSS and SMS aim to improve detection and resolution of operators' safety issues, which could include impairment.

Table 5 outlines the current provisions in place to address impairment by alcohol or drugs.

	Targeted group	Explicit drug and alcohol policy	Post-occurrence testing allowed	Reasonable cause testing allowed	Random testing allowed	Maximum limits	Maximum penalties for breaching	Requirements for employees	Requirements for passengers	Requirements for recreational
Health and Safety in Employment Act 1992	All employers and employees	Minimise hazards	As per DAP ^ψ	As per DAP ^ψ	As per DAP ^ψ	No	\$250,000 fine	Yes	No	No
Adventure Tourism*	Adventure activity operators	Yes	As per DAP ^ψ	As per DAP ^ψ	As per DAP ^ψ	No	Cancelled registration	Yes	Yes	No
Civil Aviation Act 1990	Aviation document holders	No. Fit and proper person	No	No	No	No	Cancelled document	No	No	Yes
Part 19 Transition Rules	Crew member	Requires crew to be unimpaired	No	No	No	No	\$5,000 for acting in unsafe manner. Cancelled licence	Yes	No	Yes
Part 61 Pilot Licences and Ratings	Pilots	No. Fit and proper person and Part 19 requirements	No	No	No	No	Cancelled licence	Yes	No	Yes
Part 63 Flight Engineer Licences and Ratings	Flight engineer	No. Fit and proper person	No	No	No	No	Cancelled licence	Yes	No	No
Part 65 Air Traffic Service Personnel Licences and Ratings	Air traffic personnel	No. Fit and proper person	No	No	No	No	Cancelled licence	Yes	No	No
Part 66 Aircraft Maintenance Personnel Licensing	Aircraft maintenance	No. Fit and proper person	No	No	No	No	Cancelled licence	Yes	No	No
Part 67 Medical Standards and Certification	Aviation document holders	Considers as part of medical certification	No	No	No	No	Cancelled licence	Yes	No	Yes
Part 115* Adventure Aviation	Adventure aviation	Yes	As per DAP ^ψ	As per DAP ^ψ	As per DAP ^ψ	No	Cancelled certification	Yes	Yes	No

^ψ Drug and alcohol management plan

* Introduced since the 2012 Carterton hot-air balloon accident

	Targeted group	Explicit drug and alcohol policy	Post-occurrence testing allowed	Reasonable cause testing allowed	Random testing allowed	Maximum limits	Maximum penalties for breaching	Requirements for employees	Requirements for passengers	Requirements for recreational
Part 121 Air Operations – Large Aeroplanes	Certificated Operators	No [◊] and Part 19 requirements	As per voluntary DAP ^v	As per voluntary DAP ^v	As per voluntary DAP ^v	No	As per voluntary DAP ^v	Yes, as per voluntary DAP	No	No
Part 125 Air Operations – Medium Aeroplanes	Certificated Operators	No [◊] and Part 19 requirements	As per voluntary DAP ^v	As per voluntary DAP ^v	As per voluntary DAP ^v	No	As per voluntary DAP ^v	Yes, as per voluntary DAP	No	No
Part 135 Air Operations – Helicopters and Small Aeroplanes	Certificated Operators	No [◊] and Part 19 requirements	As per voluntary DAP ^v	As per voluntary DAP ^v	As per voluntary DAP ^v	No	As per voluntary DAP ^v	No, as per voluntary DAP	No	No
Maritime Transport Act 1994										
Section 45	Maritime document holder	Fit and proper person	No	No	No	No	Cancelled document	No	No	No
Part 4A	STCW Vessels	Yes	Yes	Yes	No	250µg or 50mg	Max 12months/ 10,000	Yes	No	No
Section 65	All vessels	No, but there is a requirement not to cause unnecessary danger or risk	No	No	No	No	Max 12 months/ 10,000. 100,000 for corporates	Yes	No	Yes
Part 19 Maritime transport operator – certification and responsibilities	Maritime operators	Yes	As per MTOP ⁺	As per MTOP ⁺	As per MTOP ⁺	No	Cancelled licence	Yes	No	No
Part 21 Safe Ship Management Systems	SOLAS ships	No	As per SMS [!]	As per SMS [!]	As per SMS [!]	No	Cancelled certificate	No	No	No
Part 31 Crewing and Watchkeeping	General crewing	Fitness for duty	No	No	No	No	Cancelled document	Yes	No	No
Part 34 Medical Standards	All seafarers	Medical fitness	No	No	No	No	Cancelled document	Yes	No	No
Part 81 Marine Craft Involved in Adventure Tourism	Commercial rafting	Yes, as part of the wider impairment definition	As per SOP [^]	As per SOP [^]	As per SOP [^]	No	Cancelled registration	Yes	Yes	No
Part 82* Commercial Jet Boat Operations – River	Commercial jet boat	Yes, as part of the wider impairment definition	As per SOP [^]	As per SOP [^]	As per SOP [^]	No	Cancelled registration	Yes	Yes	No
Railways Act 2005	All rail operators	Yes, as part of the wider impairment definition	Unspecified	Unspecified	Unspecified	No	Cancelled licence	Yes	No	No
National Rail System Standards	NRS operators	Yes	Unspecified	Unspecified	Unspecified	No	Unspecified	Yes	No	No

* Introduced since the 2012 Carterton hot-air balloon accident

+ Maritime Transport Operator Plan

! Safety Management Plan

^ Safety Operator Plan

◊ There is a fit and proper person test for senior personnel which considers drug and alcohol use where known

- 3.12 Alongside the current legislation, in the maritime sector regional councils are authorised to make navigation bylaws to govern safe boating and water-based activities in their region. Different regions hold different bylaws on the need to be free from alcohol and drug impairment. The Auckland Council introduced a bylaw in 2014 stating a “person must not be in charge of a vessel while under the influence of alcohol or a drug, or both, to such an extent as to be incapable of having proper control of the vessel”.
- 3.13 Keeping the status quo may be sufficient in sectors that are already highly regulated and have good safety systems in place to address risk.
- 3.14 Retaining the status quo for all commercial operators would not be consistent with the Commission’s recommendations, or the approach taken in a range of comparable jurisdictions, including Australia and the United Kingdom.

Enhanced education

- 3.15 It is clear from the road transport sector that it has taken at least a generation to achieve a culture change in attitudes and behaviour towards drink-driving. Achieving this culture change has entailed a wide range of strategies beyond penalties. Public education has been an important feature of this change. However, the education works best in conjunction with penalties, to alert people to the increased risk of being caught through a wide enforcement regime.
- 3.16 A new or expanded advertising campaign in the aviation, maritime and rail sectors could increase the benefit of the already established programmes aimed at reducing impairment. The advertising campaign would also need to form part of the implementation of any of the other options discussed in this paper. The costs of an educational programme would need to be determined.
- 3.17 Education and increasing awareness can highlight the risks associated with alcohol or drug impairment. They can also emphasise the importance of monitoring and managing these risks in both the commercial and recreational sectors.
- 3.18 Education could include enhanced training for commercial operators on how to develop alcohol and drug management plans and manage risks of impairment in the workplace.

Option 2: drug and alcohol management plan

Require commercial operators to develop and implement specific drug and alcohol management plan, including appropriate testing requirements, as part of their safety management systems

Option 2	<ul style="list-style-type: none">▶ No new primary legislation
Operators to develop drug and alcohol management plan	<ul style="list-style-type: none">▶ All aviation, maritime and rail organisations required to have a drug and alcohol management plan which is approved by the regulator▶ Workplace testing will be at the discretion of each organisation and be determined by its risk profile▶ Drug and alcohol management plans will be audited by a Crown agency

Points to consider

- ▶ Should the government explicitly require development of drug and alcohol management plan by all aviation, maritime and rail transport operators?
- ▶ What would the key elements of a drug and alcohol management plan be?
- ▶ Would it impose a cost on commercial operators, in particular small operators, to develop specific drug and alcohol management plan?
- ▶ How long should operators be allowed to develop drug and alcohol management plans and should some sectors be targeted first (for example, those considered to be of higher risk)?
- ▶ What additional guidance or training on the development of drug and alcohol management plans would be required to successfully implement these?

3.19 The Commission proposed the government should require commercial operators to implement drug and alcohol detection and deterrence regimes. All operators are required under the HSE Act to provide and maintain a safe working environment and develop procedures for dealing with any hazards that may arise. In order to comply with the Act, they need to have systems in place to isolate, eliminate or minimise any hazards in the workplace. These hazards include impairment by alcohol and drugs.

3.20 The commercial sector recognises the need to manage alcohol and drug impairment. However, the Commission's recommendation is for the government to clearly define what is required. This could be similar to the adventure tourism operators, who are already required to have drug and alcohol management plans.

- 3.21 Many operators, especially larger ones, may already fulfil the proposed requirements to manage alcohol- and drug-related impairment risks. For example, in rail, the NRSS⁷ requires all organisations to have a Safety Case, including an alcohol and drug management plan. However, there is no specific legal provision of what those plans should include.
- 3.22 Part 21 of the Maritime Transport Act requires all ships subject to the Safety of Life at Sea (SOLAS) Convention⁸ to implement a safety management system that complies with the International Safety Management Code. The system is to include management of risks posed by fatigue, alcohol and/or drug impairment.
- 3.23 For this option, we propose that the regulation framework introduced in 2012 for adventure aviation⁹ and maritime operators¹⁰ could be expanded to apply to all commercial operators in the aviation, maritime and rail sectors.
- 3.24 Under this approach, regulatory and rules-based changes would be made to existing legislation requiring all operators to prepare specific drug and alcohol management plans. The regulators would publish guidance on what is required and sign off the plans once the director of the overseeing agency is satisfied it meets the agency's requirements.
- 3.25 The responsible agency would check and verify the policy as part of the current monitoring processes. If relevant, this would be done by a safety auditor. Plans could be scaled to suit the size and relative risk of the operations being undertaken.
- 3.26 Implementing a testing regime would depend on the risk profile of the organisation. In a similar vein to the adventure tourism sector, which has specific policies on testing, the plans should include policies on employment relations processes. These would include disciplinary processes, stand-down periods and reinstatement.
- 3.27 The focus of the plans must be to ensure the immediate safety of all involved. In the event of any concerns, a plan should note follow-up actions with employees, such as education, disciplinary action and, ideally, rehabilitation. The operator and the regulator or auditor would agree the content of the plan.
- 3.28 Operators would benefit from knowing what must be explicitly done when managing alcohol and drug impairment risk. This is particularly useful for small and medium-sized operators, who may need assistance to understand and meet requirements. It would also support stronger monitoring of compliance by the regulator.

⁷ NRSS 7 – Rail Operations Interoperability, Section 13.1 and NRSS 3 – Health Assessment of Rail Workers.

⁸ The international convention for merchant shipping.

⁹ http://www.caa.govt.nz/rules/Part_115_Brief.htm.

¹⁰ <http://maritimenz.govt.nz/Rules/List-of-all-rules/Part81-maritime-rule.asp> and <http://maritimenz.govt.nz/Rules/List-of-all-rules/Part82-maritime-rule.asp>.

3.29 The option is aimed at reassuring the regulator and transport users that alcohol and drug impairment is being consistently and effectively managed across the transport sector.

Costs

3.30 The level of additional work to prepare and operate a drug and alcohol management plan would vary depending on the specific requirements adopted by operators. The costs for an organisation would include developing the policy, training staff on the implementation, implementation costs and monitoring compliance.

3.31 It is important that operators are able to comply with any new regulation. It is also important that requirements are relevant to organisations that will vary in scale from large, international commercial organisations to small, volunteer groups.

3.32 Due to the scope of the existing laws in the commercial aviation, maritime and rail sectors, larger operators are unlikely to face high additional costs or significantly increased workloads.

3.33 When new requirements came into effect for the adventure tourism sector, operators, especially from smaller organisations, faced new costs (primarily in staff time) and required additional resources and training to assist them to comply. Some adventure tourism operators have engaged a consultant to advise them on how to manage alcohol and drug safety risks and develop a policy.

3.34 If implemented, a staged approach may be appropriate to ensure all operators can develop and implement their plans successfully.

3.35 The Crown agencies responsible for enforcing the requirements to develop drug and alcohol management plans may also face new costs from any additional oversight role. These extra costs are unlikely to be significant and could be met from current budgets.

3.36 A requirement to have a drug and alcohol management plan does not automatically encourage best practice. Some operators may still continue to operate below optimal safety levels. In particular, a plan developed as a compliance exercise is unlikely to be implemented effectively. There is a risk that operators will develop a plan to achieve compliance, but will not carry out the actions necessary to make that plan effective. Having processes in place such as regular audits should help ensure the plans are implemented.

3.37 The most effective way to manage the use of alcohol and drugs is through the organisation's safety culture. To achieve this safety culture, best practice is to develop alcohol and drug management plans in consultation with employees or their representatives to ensure there is wide buy-in.

3.38 The need to balance the reason for an employer to test against employees' rights is relevant to all options. This will require developing organisational policies outlining what is expected from both sides. Alcohol and drug management plans will set out how the employer undertakes testing when conducted on health and safety grounds. The criteria for testing must be included in the employment agreement and must not contravene employees' rights, including their privacy. This requires organisations to act in good faith towards their employees. To do this, plans will usually include:

- ▶ the basis on which testing will be undertaken, for example:
 - ▶ if testing is to be random
 - ▶ the method that will be used to determine who will be tested
 - ▶ how prevalent testing will be (for example, 50 percent of the workforce over a calendar year)

- ▶ the methods and process that will be used for testing, for example:
 - ▶ who will carry out the testing
 - ▶ what testing method will be used
 - ▶ what levels would be considered a breach of the policy

- ▶ the consequences and process that will be followed when an employee returns a positive test, including any steps the employer agrees to take to support the rehabilitation of an employee who returns a positive test.

3.39 The requirement to develop alcohol and drug management plans could also be part of any of the other options discussed in the rest of this paper.

Including random testing in alcohol and drug policy

Points to consider

- ▶ Should there be any mandatory requirements for the content of drug and alcohol management plan?
- ▶ Should transport operators be required to randomly test staff as part of their drug and alcohol management plan?
- ▶ What staff should be tested?
- ▶ Should mandatory minimum quality requirements of testing devices and procedures be part of implementing mandatory drug and alcohol management plan?

- 3.40 The Commission recommended that “detection and deterrence regimes” should include random testing. This document discusses two types of random testing: random testing by employers for health and safety reasons, and random testing by Police for enforcement purposes. This section refers to random testing by an employer.
- 3.41 Effective management of alcohol and drug impairment would ideally include random testing of staff. However, in some circumstances (for example, owner-operators or small volunteer organisations) random testing can be difficult to carry out and monitor cost effectively.
- 3.42 As discussed in section two, rules came into effect in 2012 requiring aviation and maritime operators involved in adventure activities to have a drug and alcohol management regime. As part of the Aviation Rule and the associated Advisory Circular, all adventure aviation operators are required to undertake random testing. Some maritime operators who do not use random testing carry out pre-employment, reasonable cause and post-occurrence testing. These types of testing help operators ensure they are employing the right people and can take appropriate action where a specific risk is suspected, or an incident has occurred.
- 3.43 Pre-employment, reasonable cause and post-occurrence screening tests (a test for the presence of a substance, but not the absolute levels) can be carried out by the operator purchasing a kit or taking a sample to a lab. A test by an accredited agency for presence of both alcohol and drugs (up to five classes¹¹) can cost less than \$100 per individual¹². Generally a separate fee applies if the tester has to travel to the organisation.
- 3.44 For genuinely random testing to occur, a smaller operator may need to engage the services of a third party to carry out the testing, which would increase costs. Larger organisations may be able to carry out some or all of their own testing, which may reduce their costs.

¹¹ Amphetamine, benzodiazepines, cocaine, cannabis, methamphetamine, opiates.

¹² Collection of an evidential grade blood test may cost over \$300 to perform (not including travel time). Subsequent processing and analyses will also incur costs, which can be over \$600 per sample for drug testing.

Option 3.1: drug and alcohol management plan with mandatory post-occurrence testing

Require the commercial operator to conduct post-occurrence testing for impairment as part of its drug and alcohol management plan to determine the causes and circumstances of the accident

Option 3.1	<ul style="list-style-type: none"> ▶ All aviation, maritime and rail organisations will be required to have a drug and alcohol management plan
Drug and alcohol management plan with mandatory post-occurrence testing	<ul style="list-style-type: none"> ▶ Mandatory post-occurrence testing for impairment from alcohol or drugs by the commercial operator to determine the causes of the incident ▶ No additional penalties for impairment beyond those that exist now (status quo), but new penalties for operators not carrying out post-occurrence testing

Points to consider

- ▶ Should a requirement to have a drug and alcohol management plan include an explicit requirement to carry out post-occurrence testing?
- ▶ What circumstances should (or should not) be covered by any legal definition used for post-occurrence?
- ▶ What type or standard of testing would be required if testing was not to be used for enforcement?
- ▶ How should the costs be funded for any training requirements, or any other costs likely to be incurred, if operators are required to carry out post-occurrence testing?
- ▶ How would organisations with few staff or run by volunteers carry out this post-occurrence testing?

3.45 The Commission recommended that legislation should specify post-occurrence testing requirements for alcohol and drugs. This was partly because the Commission does not have any powers to require persons involved in an accident investigation to undergo alcohol and/or drug testing.

3.46 Alcohol and drug tests are routinely performed in post-mortem examinations ordered by the Coroner, but these are not carried out for all accidents. If the Commission's investigator suspects that alcohol or drug impairment may have been a factor in the incident or accident, they will ask survivors to take an alcohol and/or blood test, but it is not compulsory. In these circumstances, impaired or intoxicated people will be less likely to agree to submit to a voluntary test than unimpaired or sober people.

3.47 The Commission's legislated purpose is to determine the circumstances and causes of incidents or accidents, with a view to avoiding similar occurrences in the future, rather than to

ascribe blame to any person. The Commission has reported that this inability to require mandatory alcohol and drug tests limits its ability to accurately fulfil this purpose.

What is an occurrence?

- 3.48 Different sectors and different countries use slightly different terms to describe what an 'occurrence' is. We are using the term 'occurrence' to cover incidents and accidents (and any other equivalent defined term).
- 3.49 This option proposes that post-occurrence testing would be made a compulsory requirement of a drug and alcohol management plan, with appropriate standards of testing prescribed. The Commission would be able to access results from testing, carried out by an operator for accident investigation purposes, without needing to establish any new testing process or powers.
- 3.50 Operators need to conduct post-occurrence testing to a high standard. However, testing to determine the causes and circumstances of the accident does not necessarily have to be conducted with the full rigour and formal processes that might be required if the results were to be used in court proceedings.
- 3.51 With this option, regulators would not be given any additional powers to require testing or to access results of tests by operators for enforcement purposes. However, they could still use existing powers to enforce existing legislation. Importantly, under this proposal, there would be no legally prescribed offence of being impaired from having more than a prescribed level of alcohol in a person's blood (or breath). This means there is a greater likelihood that any person found to be impaired would be referred for treatment rather than being prosecuted, as happens under most current drug and alcohol management plans.

Additional statistical reporting

- 3.52 With this option, it would be possible to actively require operators to carry out the post-occurrence testing for all occurrences, including minor incidents, and then submit the results on a regular basis to an agreed party, such as the Ministry of Transport or a safety investigator. In this way, data would be made available from a much wider range of occurrences than just those that are investigated by the Commission. This data would provide a more solid evidence base for the size of any impairment problem in New Zealand. If data is collected for statistical purposes, some controls would need to be put in place to ensure an individual's privacy and protection from enforcement.

Costs

- 3.53 Beyond the costs associated with option 2, the advantage of requiring the operator to carry out post-occurrence testing is the relatively low cost and intrusiveness of the powers required for the Commission to obtain more complete information. In particular, it does not require the establishment of an offence regime and the associated costs of enforcement.
- 3.54 To be implemented successfully, additional training may be needed to ensure operators carry out testing to a high standard. There would also be costs for organisations to test, collate results and send data for statistical purposes.
- 3.55 Because it would not impose any new penalties for impairment, this option on its own may not be a significant deterrent to impaired behaviour. However, it should be noted that operators may have employment penalties, which would act as a significant deterrent.
- 3.56 Some organisations (for example, volunteer groups, and operators with only one or two staff) may not have the organisational ability and structures in place to carry out this testing in all circumstances. With reporting for statistical purposes, privacy issues would need to be managed.

Option 3.2: drug and alcohol plan with mandatory third party post-occurrence testing

Require post-occurrence testing for impairment to determine the causes and circumstances of the accident, with testing carried out by an approved third party

Option 3.2	<ul style="list-style-type: none"> ▶ All aviation, maritime and rail organisations will be required to have a drug and alcohol management plan
Drug and alcohol management plan with mandatory third party post-occurrence testing	<ul style="list-style-type: none"> ▶ Changes to the Transport Accident Investigation Commission Act to allow it to conduct post-occurrence testing for alcohol or drug impairment ▶ No additional penalties for impairment beyond those that exist now (status quo). New penalties would be needed for people who refuse testing

Points to consider

- ▶ Should the government enable the Commission, or any other agency, to require samples from people following an incident to determine cause and circumstances (and not for enforcement)?
- ▶ Should testing conducted for the Commission include testing for the presence of drugs?
- ▶ If testing is to be conducted for the Commission (and not for enforcement), what agency or agencies should be allowed to carry out such testing and what powers should they have?
- ▶ Should post-occurrence testing by an independent third party be mandatory for certain types of events, such as fatalities?
- ▶ Who should be tested to determine the cause and circumstances of an occurrence?
- ▶ Who should pay for post-occurrence testing?
- ▶ Should government agencies be able to access any data collected for or by the Commission as part of any investigations?

3.57 This option would allow the Commission to conduct its own post-occurrence testing, or through an external agency. With this option, as with option 3.1, the purpose would be to assist the Commission to determine the causes and circumstances of an incident or accident. The results would not be used for enforcement purposes. This testing could be in addition to requiring post-occurrence testing by an operator.

3.58 As with option 3.1 above, the Commission would use testing only for its safety investigation purposes. Regulators would not be given any new powers to collect or use any data.

3.59 New primary legislation would be required if testing was to be conducted by a third party or a suitably qualified private testing company approved by the Commission. The legislation would need to set out when such testing was required, the testing procedures to be used, and the powers of any organisation to detain people and to take samples. If a person refused to be tested, offences and suitable penalties would need to be established.

3.60 Privacy legislation and relevant national and international standards for testing procedures would be adhered to in order to safeguard the integrity and accuracy of the testing, and to protect the privacy, confidentiality and rights of individuals.

Costs

3.61 Further work is required to assess and quantify the costs to implement and administer a post-occurrence testing regime. It is likely the Commission would require any testing to be carried out to a high standard. The number of tests would be expected to be for a smaller number of occurrences than for the enforcement-focused options discussed in section 4. The Commission would only test the accidents it investigates rather than all incidents. This would make it less costly and intrusive than the other options.

3.62 A stand-alone post-occurrence testing regime would provide a number of benefits:

- ▶ The collection of aggregated test result data would provide valuable research on the level of alcohol and drug impairment involvement in occurrences within the aviation, maritime and rail sectors in New Zealand. This would better inform future policy options.
- ▶ There would be improved occurrence investigation findings by determining whether or not alcohol or drug use has been a contributing factor in an occurrence. However, depending on the quality of testing, the data available may not be of consistent quality.

3.63 Post-occurrence testing would cover a significant section of the transport community where, at present, the authorities cannot administer any form of testing for impairment from alcohol or drugs.

Option 4: enforce maximum legal limits for alcohol

Prescribe maximum limits for alcohol and prescribe specific alcohol-related offences and penalties and then enforce maximum legal limits for commercial operators

Points to consider

- ▶ Should the government set maximum alcohol limits for aviation, maritime and rail commercial operators?
- ▶ Should any legislated blood alcohol content (BAC) limit(s) for aviation, maritime and rail commercial operators be the same as for road transport or should different modes set different limits?
- ▶ Would there be any concerns with setting a BAC limit, within each sector's drug and alcohol management plans, that is higher than is current practice by existing individual operators?
- ▶ Should legislated BAC limits apply only to roles equivalent to that of driver, or should they apply to all safety-sensitive roles?
- ▶ Should the same legislated BAC limits apply to all safety-sensitive roles (see separate discussion) or should some roles have different limits?
- ▶ Should the term 'safety-sensitive employee' (or any equivalent term) be defined in law and, if so, how?
- ▶ Should penalties for exceeding legislated BAC limits be equivalent to those for road transport?
- ▶ If different modes or different roles had different legislated blood alcohol limits, would different penalties need to apply?
- ▶ Are there any circumstances where specific penalties should apply to the organisation as well as the individual who is over a legislated BAC limit?
- ▶ Should penalties such as cancellation of the equivalent of a driver's licence or the equivalent of 'vehicle impoundment' be considered?

3.64 Outside the road transport sector, only merchant seafarers covered by the Maritime Transport Amendment Act 2013 are required to abide by legally prescribed maximum limits for the presence of alcohol¹³. The Commission recommends the government prescribe allowable maximum levels of alcohol for the aviation, maritime and rail sectors. This would involve setting maximum levels of alcohol that can be detected either on a person's breath or in their blood, as currently happens for road transport.

3.65 If the government is to set maximum alcohol limits, there are several broad questions to address:

¹³ 50mg of alcohol per 100ml of blood.

- ▶ What are the appropriate limits?
- ▶ Who should these limits apply to?
- ▶ What penalties should apply if an offence is committed, that is, if the person exceeds the prescribed limit?

3.66 The following paragraphs discuss how limits would be enforced.

What are the appropriate maximum limits for alcohol in the aviation, maritime and rail sectors?

3.67 There is a good body of evidence from both accident data and laboratory research about what levels of alcohol are likely to cause a person to be impaired to the extent they cannot safely operate a motor vehicle. However, there is limited data for what alcohol levels might constitute impairment for a person operating an aircraft, vessel or rail vehicle.

3.68 The prescribed alcohol limits and impairment offences for road transport are set out in Appendix Two.

Setting legal limits for alcohol

3.69 For road, a BAC limit of 80 milligram (mg)/100 millilitres (ml) of blood is currently applicable to drivers 20 years old and over (also referred to as a limit of 0.08 or sometimes as 8 percent). A zero alcohol limit now applies to drivers under the age of 20 years, with infringement penalties applying for low alcohol level offences (30mg/100ml of blood, 0.03 or 3 percent or below). Parliament recently reduced the limit for adults to 50mg/100ml of blood. The Act states that drivers whose alcohol levels are between the new and the old limits (51–80mg/100ml of blood (inclusive)) will incur infringement penalties. Offences involving alcohol levels in excess of 80mg/100ml of blood will continue to be criminal offences that are dealt with by the courts.

3.70 In the absence of sector-specific data for aviation, maritime and rail, jurisdictions that have legislated blood alcohol concentration limits have generally adopted the same level as the road transport limit for adult drivers (usually 50mg per 100ml of blood (50mg/100ml))¹⁴. In New Zealand, recent amendments to the Maritime Transport Act implemented the internationally applicable alcohol limit¹⁵ of 50mg/100ml of blood and breath alcohol level equivalent for commercial operators on all merchant ships (other than fishing vessel operators).

¹⁴ Although this section only discusses blood alcohol levels, comparable equivalent breath alcohol limits used in road transport would also apply.

¹⁵ Established by the 2010 amendments to the International Convention on Standards of Training, Certification and Watchkeeping for Seafarers, 1995.

- 3.71 For operators in the aviation sector involved in the carriage of passengers, some jurisdictions have legislated for a zero alcohol limit (usually defined as less than 20mg/100ml¹⁶). In New Zealand, many organisations already voluntarily set a 'zero tolerance' limit of 20mg/100ml for relevant staff under their existing safety management plans.
- 3.72 If maximum limits for alcohol are to be set for the non-road transport sectors, it would be simpler if the limits and testing procedures mirrored those for road transport. This is because the current equipment and testing procedures used for on-road enforcement have been refined and calibrated for these limits. Procedures have also evolved to respond to previous legal challenges to breath and blood alcohol testing. A separate and different system could potentially give rise to uncertainty and increased costs, at least until new case law became established.
- 3.73 However, as noted, some operators and jurisdictions have decided that lower blood alcohol limits are appropriate for some tasks, especially safety-sensitive roles¹⁷. This is particularly relevant to these sectors where there is large and potentially dangerous equipment being moved, or where the potential consequences result in high levels of risk.
- 3.74 Setting a legal limit above a zero tolerance level may also undermine some company or sector safety strategies which aim for zero tolerance of impairment. We suggest it is appropriate to set different limits for different sectors or different roles within sectors.
- 3.75 Regardless of the legislated limit, alcohol and drug management plans could still set lower limits for operators' own testing requirements.

¹⁶ 20mg/100ml is used rather than zero to allow for testing processes and small amounts of alcohol in some products such as cough mixtures and other sources.

¹⁷ See following section for further discussion of this term.

Who should these limits apply to?

- 3.76 In road transport, the driver of a motor vehicle on a public road is the only person who is legally required to comply with blood alcohol limits and can be tested by the Police. However, in the aviation, maritime and rail sector more people can be responsible for the safe operation of an aircraft, vessel or rail vehicle. For this reason, most jurisdictions use a broader definition of those who are required to be unimpaired than the equivalent of 'driver'. Other jurisdictions have legislation that requires all employees who perform, or are available to perform, safety-sensitive¹⁸ roles to comply with blood alcohol limits.
- 3.77 In New Zealand, the idea of a safety-sensitive employee is already used in alcohol and drug policy. In that context, the definition of which roles it refers to is up to the individual organisation to determine. If offences for being impaired by alcohol were to apply to all safety-sensitive roles, then safety-sensitive transport activities would need to be defined in legislation.
- 3.78 In the adventure tourism sector, recent guidance documents¹⁹ define safety-sensitive tasks as "ones where impaired performance, for whatever reason, could result in an incident affecting the safety of staff or participants".
- 3.79 In aviation, the International Civil Aviation Organization (ICAO) defines safety-sensitive employees as "persons who might endanger aviation safety if they perform their duties and functions improperly".
- 3.80 In jurisdictions that have legislation that refers to safety-sensitive roles (and equivalent terms), the legislation usually contains lists of job titles or descriptions of tasks rather than seeking to define them more generically²⁰.
- 3.81 Some employees, such as managers and supervisors, may also be qualified for safety-sensitive jobs, but are not currently performing them. If that employee is asked at short notice or in an emergency to perform a safety-sensitive activity, they could be subject to legal limits. Equally, all types of employment would need to be covered, including full-time, contractors, part-time and temporary employees, volunteers, and any individuals in training, regardless of the level of their supervision.
- 3.82 If offences for having excessive blood alcohol levels are to apply to safety-sensitive employees, a wide definition may better ensure the safety of passengers. However, the wider the definition, the more people may be affected. The powers needed to detain people and to take invasive samples risk being seen as disproportionate to the offence committed. The costs to the operator and to any enforcement agency would also be higher.

¹⁸ Sometimes also referred to as 'safety critical' or other similar terms.

¹⁹ <http://www.business.govt.nz/worksafe/information-guidance/all-guidance-items/guidance-for-managing-drug-and-alcohol-related-risks-in-adventure-activities/managing-drug-alcohol-related-risks-adventure-activities.pdf>.

²⁰ See annex five for an example of other legislation.

Offences and penalties

- 3.83 Setting a maximum blood alcohol level limit implies there is a defined offence and an associated penalty. Penalties must be set if offences are created. As with the option of setting maximum blood alcohol levels, the simplest solution is to adopt the same scale of penalties used in road transport. However, it may not be practical across the different sectors.
- 3.84 While it may be possible to set penalties such as fines and imprisonment at the level as set out in Appendix Three, not all roles have the equivalent of a driver's licence that can be suspended. Whether to give different penalties to different roles needs to be considered. It may not be appropriate for all offenders to be disqualified from 'driving', especially if the offender is in a safety-critical role. Penalties, especially non-financial penalties, would need to be specific to the different modes to take account of their specific circumstances and would need to reflect proportionality²¹.
- 3.85 In the road transport sector, the Police can impound vehicles, at least in part to ensure the person does not continue to operate the vehicle while intoxicated. There may be situations where this would be an appropriate option for the aviation, maritime and rail sectors. However, in the commercial sectors, in many cases seizing a large vessel, aircraft or rail vehicle would raise considerable practical difficulties and be unnecessary if others were able to continue to operate it safely. Seizure may also raise issues around proportionality. The value of the items confiscated could be worth many hundreds of thousands of dollars and there would be resulting commercial losses from being unable to operate.
- 3.86 As well as offences for the person exceeding any limit, it may be appropriate to consider whether there should also be penalties that might apply to the person's employer. In the prosecution that followed the 2012 sinking of the *Easy Rider* vessel, one of the company directors was found guilty of a range of offences under maritime and health and safety legislation, although she was not on the vessel.
- 3.87 Most court-based alcohol offences for driving allow for a fine or possible prison sentence and disqualification from driving for a minimum period. We note that with the introduction of offences or penalties there are flow-on implications on:
- ▶ the relevant prosecution agency
 - ▶ the courts and associated services such as legal aid
 - ▶ the costs of sentencing.

²¹ The punishment of an offender should fit the crime.

Options to enforce maximum legal blood alcohol limits for commercial operators

- 3.88 If maximum alcohol limits are to be set in law, they will only be effective as a deterrent if the Police are given the powers and the practical ability to test people to ensure compliance, if the agency does not already have these.
- 3.89 This paper suggests that the enforcement agency would be the Police. If the Police are given this power, they would need to have sufficient financial resources to carry out the task properly. The required resources and operational implications have not been assessed. These could vary greatly depending on how limits are enforced. Costs may also vary by mode as it would potentially be more difficult and therefore expensive to enforce limits in some environments, for example the open seas, than it is on the side of a public road.
- 3.90 In the road transport sector, Police undertake the enforcement of blood alcohol limits and this is funded from fuel taxes and related charges. The Police currently have limited powers regarding the other modes. As this would be a new enforcement regime, it may be appropriate for other agencies, including government agencies, to be given powers to carry out enforcement activities in addition to or instead of the Police.
- 3.91 Aviation, maritime and rail testing procedures to enforce compliance with maximum alcohol limits would be based on procedures used by the Police for testing drivers on public roads.
- 3.92 Compliance with testing for enforcement would need to be compulsory. People refusing to take a test could be charged with an offence. Offences and suitable penalties would need to be established for testing violations such as refusal or failure to be tested, and interfering with test results or samples. It would be appropriate to replicate the procedures and offences for non-compliance that apply in the road sector.
- 3.93 Privacy legislation and relevant national and international standards for testing procedures would need to be adhered to in order to safeguard the integrity and accuracy of the testing, and to protect the privacy, confidentiality and rights of individuals.
- 3.94 We have identified two broad options for enforcing legal limits on blood alcohol levels. These are 'post-occurrence' and when there is 'good cause to suspect' impairment. These sub-options are discussed in sections 4.1–4.2.

Option 4.1: post-occurrence testing for enforcement

Enable the Police to test for alcohol impairment following an incident or accident (post-occurrence)

Option 4.1	<ul style="list-style-type: none"> ▶ Changes to the Civil Aviation, Maritime Transport and Railways Acts to reflect legal maximum levels for alcohol ▶ All safety-sensitive roles in the aviation, maritime and rail sectors will be subject to maximum alcohol limits ▶ The Police will be able to test for the presence of alcohol after a defined occurrence ▶ Penalty regime established 	Alcohol Only
Post-occurrence testing for enforcement		

Points to consider

- ▶ Should the Police have powers to carry out post-occurrence testing of a commercial operator's safety-sensitive staff to enforce maximum alcohol limits?
- ▶ What would constitute an occurrence where staff can be tested?
- ▶ Should only safety-sensitive staff be tested?
- ▶ What agency (or agencies) should carry out post-occurrence testing for enforcement and what powers would they need to carry out their task?
- ▶ What would the costs be and who should pay for post-occurrence testing for enforcement?

3.95 Under this option, the Police would be able to test people in safety-sensitive roles after an occurrence, to determine if legislated maximum blood alcohol limits had been exceeded. The purpose of testing would primarily be for enforcement, rather than to assess the causes and circumstances of an accident. The Police could only test those parties to whom limits applied. They would not have any legal ability to test a person involved in the occurrence if they were not in a safety-sensitive role.

3.96 The Police would not have the resources to attend minor occurrences. We therefore propose the trigger for post-occurrence testing be clearly defined. The Police would need to have a very clear definition as to when they can test. Otherwise, they could face legal action for wrongly detaining a person and requiring them to undergo the alcohol testing process.

Costs

3.97 Introducing any form of testing for enforcement will create significant new costs for the Police. It will be important that the Police can test in the legally prescribed manner and maintain the chain of custody to reduce the likelihood that results are challenged in court.

Both of these tasks may be significantly more difficult than the equivalent role of the Police in the road sector. Post-occurrence testing would require the lowest level of new powers and funding of the two sub-options under option 4.

Option 4.2: ‘good cause’ testing for enforcement

Enable the Police to test for alcohol impairment where they have ‘good cause to suspect’ impairment for commercial operators

Option 4.2	<ul style="list-style-type: none"> ▶ Changes to the Civil Aviation, Maritime Transport and Railways Acts to reflect legal maximum levels for alcohol ▶ All safety-sensitive roles in the aviation, maritime and rail sectors will be subject to maximum alcohol limits ▶ The Police will be able to test for the presence of alcohol if ‘good cause’ presents ▶ Penalty regime established 	Alcohol Only
‘Good cause’ testing for enforcement		

Points to consider

- ▶ What would constitute ‘good cause to suspect’ impairment that should be investigated?
- ▶ Should the Police have powers to carry out ‘good cause to suspect’ testing of a commercial operator’s safety-sensitive staff to enforce maximum alcohol limits?
- ▶ Should it only be safety-sensitive staff who are tested if ‘good cause’ is found to exist and the results could be used for enforcement?
- ▶ What agency (or agencies) should carry out ‘good cause’ testing for enforcement and what powers would they need to carry out their task?
- ▶ What would the costs be and who should pay for implementing a regime to carry out ‘good cause’ testing for enforcement?

3.98 Under this option, the Police would have the right to enter any workplace (including an aircraft, vessel or rail vehicle) to test staff if they had ‘good cause to suspect’ that a person in a safety-sensitive role may be impaired by alcohol. As with option 4.1, testing could only occur for those defined as having safety-sensitive roles, as maximum blood alcohol limits would only apply to these roles.

3.99 As an example of what ‘good cause’ might be in the road transport sector, a police officer must have a ‘good reason to suspect’ a driver has consumed a drug or drugs before they can test for drug impairment. Swerving across lanes, erratic driving, or a driver’s personal demeanour might give them ‘good cause to suspect’ that a driver is impaired.

3.100 In the aviation, maritime and rail sectors, the above examples may be less relevant but ‘good cause’ could still include erratic behaviour of the person or of the aircraft, vessel or rail vehicle. It could also include a tip-off such as a public complaint, or where the Police can smell alcohol on a person’s breath. We recognise that it is unlikely the Police would actively

seek to detect such behaviour in safety-sensitive staff, especially if it was in an isolated place, or a restricted access location such as an airport. However, it would enable them to act if behaviour was observed, which they cannot do at present.

3.101 An occurrence is also likely to constitute 'good cause to suspect' impairment. This type of power would effectively enable post-occurrence testing.

3.102 Again, this type of testing would pose new costs for the Police and would require a range of new powers to enable testing to take place.