

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
helps New Zealand thrive



Contents

Acronyms	3
Foreword	4
How to make a submission.....	5
Section one – summary report	6
Section two – background to the issues	14
Section three – the commercial sector	28
Option 1: status quo.....	28
Option 2: drug and alcohol management plan.....	33
Option 3.1: drug and alcohol management plan with mandatory post- occurrence testing.....	38
Option 3.2: drug and alcohol management plan with mandatory third party post- occurrence testing.....	41
Option 4: enforce maximum legal limits for alcohol	43
Option 4.1: post-occurrence testing for enforcement.....	49
Option 4.2: ‘good cause’ testing for enforcement	51
Section four – the recreational sector.....	53
Option A: status quo	55
Option B: prescribed maximum limits for alcohol.....	57
Option B.1: post-occurrence testing	59
Option B.2: ‘good cause’ testing.....	60
Section five – post-occurrence testing for all	61
Option 5: post-occurrence testing for all involved in incident	61
Section six – supporting material	63
Appendix one: different types of random testing.....	63
Appendix two: summary of some of the complexities of setting limits and testing for different drugs.....	64
Appendix three: international standards and best practice	66
Appendix four: current court-imposed penalties for alcohol offences on the road.....	67
Appendix five: example of a definition of ‘safety-sensitive’ in other legislation.....	68
Appendix six: the Commission’s findings and safety recommendations related to impairment by drugs or alcohol	70
Appendix seven: list of questions to consider.....	75

Acronyms

BAC	Blood alcohol content
DAP	Drug and alcohol management plan
HSE Act	Health and Safety in Employment Act 1992
mg/ml	Milligrams per millilitres of blood
MOSS	Maritime Operator Safety System
MTOP	Maritime Transport Operator Plan
NRSS	National Rail System Standards
SMP	Safety Management Plan
SMS	Safety management systems
SOLAS	International Convention for the Safety of Life at Sea
SOP	Safe Operational Plan
STCW	International Convention on Standards of Training, Certification and Watchkeeping for Seafarers, 1995

Foreword

At the end of 2013, the Transport Accident Investigation Commission (the Commission) released its findings on the tragic hot-air balloon crash near Carterton. The crash cost the lives of 11 people. The Commission recommended the Secretary for Transport introduce laws to stop people from operating a commercial or recreational aircraft, boat or train if they are impaired by alcohol or drugs. I take these recommendations very seriously.

The previous Minister of Transport, the Hon Gerry Brownlee, asked the Ministry of Transport to produce this discussion paper. It is my privilege to take this work forward. This is the next step in addressing alcohol and drug impairment in the aviation, maritime and rail sectors. It is a complex issue. The three sectors are not the same, so may require different methods to manage risks around alcohol and/or drug impairment.

There is limited data on the extent of an alcohol and drug problem in these sectors. What we do know is that, when things go wrong, people often lose their lives. The Commission has said the presence of alcohol and drugs and their potential to cause accidents is a matter of real concern. Given the potential risks in these sectors, it is crucial that pilots, skippers and train drivers have clear heads.

Road users have been subject to laws governing drinking alcohol and driving for over 40 years. We are now seeing a cultural shift to where it is no longer socially acceptable to get behind the wheel after having a few drinks. We now need to start thinking about the effects of alcohol in the other transport modes.

I seek your feedback about what is the best way to reduce the incidence of impairment from alcohol and drugs. Each option presented in this discussion paper can be implemented on its own, or grouped as part of a package to make up a final proposal.

When we look at the options, we need to balance a person's safety and the safety of wider communities against possibly interfering with how people live their lives. We also need to consider the costs to our businesses, wider communities, and the Government.

I invite you to submit your thoughts, and I look forward to hearing your views.

Hon Craig Foss

Associate Minister of Transport

How to make a submission

The discussion paper has 21 questions and asks for relevant information and your general comments.

Your submissions must reach us by 5pm 24 April 2015. There are several ways you can make a submission:

Use our online submission form:

[Submission form](#) – Submit your views on preferred options and key points. This form also provides space for general comments.

Download [this form](#):

Either complete the form and email it to clear.heads@transport.govt.nz or print it out and deliver in hard copy to:

Clear Heads Consultation
Ministry of Transport
PO Box 3175
Wellington 6140

If you would prefer not to use the form, deliver a written submission by email or by post to the above addresses.

Please state on the form whether you give permission to the Ministry of Transport to contact you to discuss your submission.

Our privacy and security statement covers all information you provide in the submission form. Your contact details and/or identifying information will be kept confidential. We will only use that information if you have given us permission to contact you.

Your submission may be requested under the Official Information Act 1982, which could result in it being published. The Official Information Act will be used to decide whether any particular submissions are withheld. Further information about the Official Information Act is available at www.legislation.govt.nz.

If you feel any part of your submission should be withheld under the Official Information Act, you should indicate this clearly.

Please contact Emma MacDonald on (04) 439 9354 or email clear.heads@transport.govt.nz if you need more information to help you prepare your submission.

Section one – summary report

- 1.1 A number of recent and high-profile fatal and serious accidents have occurred in the aviation and maritime sectors where drug and alcohol impairment may have been a contributing cause. As a result, the Transport Accident Investigation Commission (the Commission) and coroners recommend legislation be developed to manage the risks of substance impairment.
- 1.2 Most recently, the Commission's report *Inquiry 12-001: Hot-air balloon collision with power lines and in-flight fire, near Carterton, 7 January 2012*, released in October 2013, contains specific recommendations including:

... the Secretary for Transport complete, as a matter of priority, all necessary work that will support the introduction of appropriate legislation or rules that will:

- ▶ *prescribe allowable maximum levels for alcohol*
- ▶ *prohibit persons from operating an aircraft, vessel or rail vehicle if they are impaired by drugs*
- ▶ *require operators to implement drug and alcohol detection and deterrence regimes, including random testing*
- ▶ *prescribe post-occurrence testing requirements for drugs and alcohol.*

This legislation or these rules should apply:

- ▶ *across the aviation, maritime and rail transport modes*
- ▶ *to persons operating an aircraft or a marine craft for recreational purposes.*

- 1.3 Although the Commission has requested that the Ministry of Transport consider both alcohol and drugs, the discussion paper proposes that any specific legal requirements around drug impairment in the aviation, maritime and rail sectors are considered at the same time as the review of drug-driving in the road transport sector. The drug-driving review is being undertaken as part of the *Safer Journeys Action Plan 2013–2015*. Because of this, the discussion paper covers the issue of drugs as part of an operator's alcohol and drug detection and management systems, but does not cover it in relation to legal enforcement.

Commercial sector

- 1.4 The commercial aviation, maritime and rail transport sectors in New Zealand currently manage alcohol and drug impairment through a combination of health and safety in employment legislation, transport Acts¹, and transport rules. The transport Acts governing the respective sectors set out the criteria for participating, and include basic safety obligations. The transport

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

rules, which sit under their respective Acts, contain detailed technical standards and procedures. The sectors each have their own approach to drug and alcohol management, which relates to the risk level of the sector.

1.5 All employers must comply with the Health and Safety in Employment Act 1992 (the HSE Act). The HSE Act² already requires that:

- ▶ employers take “all practicable steps” to ensure the safety of employees and other people at work
- ▶ employees take “all practicable steps” to ensure their own safety
- ▶ no action or inaction of the employee while at work causes harm to any other person.

1.6 In 2012, the government amended the Health and Safety in Employment (Adventure Activities) Regulations 2011. At the same time, aviation and maritime rules were changed (Civil Aviation Rule Part 115 and Maritime Rule Part 82). Maritime Rule Part 81 was enacted in 2011 and is included as one of the adventure tourism regulations. Adventure tourism operators must now describe in their safety plans how they will manage risks associated with alcohol or drug impairment.

1.7 In recent years, the government has introduced a number of changes to clarify and strengthen the requirements on commercial maritime vessels. A number of these changes explicitly outline the need for drug and alcohol management plans. This includes the introduction of Maritime Rule Part 19, which requires maritime transport operators covered by the rule to include a drug and alcohol policy in their safe operating policy.

All employers must follow a number of specific regulations in the aviation, maritime and rail sectors, as well as meeting general health and safety requirements.

1.8 We seek your feedback on the options in the discussion paper. The options fall into two categories – managing drug and alcohol impairment through:

- ▶ the HSE Act and specific legislative requirements (options 1–3)
- ▶ creating an offences regime with associated penalties (option 4).

1.9 We have developed a number of proposed options for the commercial sector. Several of the options could either be independently actioned or grouped together as part of a package in a final proposal. At this stage, the Ministry of Transport does not have a preferred option.

² The HSE Act will soon be replaced with the Health and Safety at Work Act. The Bill is currently before the House.

Option 1 – status quo

- 1.10 Option 1 would leave the current regime in place. There would be an increase in education on the risks associated with alcohol and drug impairment in the aviation, maritime and rail sectors.
- 1.11 It is clear from the road transport sector that it has taken almost a generation to achieve a change in attitudes and behaviour towards drink-driving. Education has been a significant part of the work to achieve this. A new or expanded advertising campaign directed at the aviation, maritime and rail sectors could increase the benefit of the already established road sector programmes.
- 1.12 An education campaign would be implemented for any of the other options discussed in this paper.
- 1.13 Education and increasing awareness can highlight the risks associated with alcohol or drug impairment and the responsibility of those in both the commercial and recreational sectors to manage these risks. Education campaigns that increase awareness may not be adequate to produce long-term changes. Education campaigns that are combined with enforcement measures have been found to have greater success in shifting attitudes and behaviour by alerting people to the increased risk of being caught.

Option 2 – drug and alcohol management plan

- 1.14 Option 2 would require commercial operators who are not already covered under other regulations³ to develop and implement specific alcohol and drug management plans, including appropriate testing requirements, as part of their safety management plans.
- 1.15 Many operators, especially larger ones, may already meet the proposed requirements to manage alcohol- and drug-related drug risks. For example, in rail, the National Rail System Standards⁴ (NRSS) and the overarching requirements set out that each organisation's Safety Case requires all rail personnel to follow a drug and alcohol policy.
- 1.16 Under option 2, the regulatory model introduced in 2012 for adventure aviation⁵ and maritime tourism operators⁶ would be expanded to apply to all commercial operators in the aviation,

³ Such as Civil Aviation Rule Part 115 or Maritime Rule Part 19.

⁴ NRSS 7 – Rail Operations Interoperability, Section 13.1 and NRSS 3 – Health Assessment of Rail Workers.

⁵ http://www.caa.govt.nz/rules/Part_115_Brief.htm.

⁶ <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>.

maritime and rail sectors. They would be required to prepare specific drug and alcohol management plans.

- 1.17 Each business would scale the plans to suit the size of the business and the amount of risk in their operations. The plans would need to include information on employment relations processes, such as education, discipline and rehabilitation as well as specific plans on testing. The plans will be signed off once the director of the overseeing agency is satisfied it meets the agency's requirements.
- 1.18 The amount of extra work a business needs to do to prepare and operate a drug and alcohol management plan would determine the costs for this option. Larger operators are unlikely to face high additional costs or significantly increased workloads, due to the extent of existing laws in the commercial sectors. Costs will vary and will be proportional to the size of the business.

Option 3 – drug and alcohol management plan with mandatory post-occurrence testing

- 1.19 Option 3 would require testing for impairment after an incident, but the tests would not include enforcement or penalties beyond what the sector already has in place. The term 'incident' would need to be defined for this purpose. This option would allow the Commission to gather more information on the extent to which alcohol and drug impairment contributed to the cause of an accident. The option does not have an enforcement or a prosecution focus.
- 1.20 The commercial operator, as part of its drug and alcohol management plan (option 3.1), or the Commission, through an approved third party (option 3.2), could test under this option.
- 1.21 The cost would vary depending on whether option 3.1 or 3.2 was implemented, how post-occurrence testing was defined and who would carry out testing.

Option 4 – maximum limits for alcohol, with testing for enforcement

- 1.22 Option 4 proposes setting a maximum legal limit for alcohol in the commercial aviation, maritime and rail sectors. This option would include specific alcohol-related offences and penalties.
- 1.23 The following are two sub-options that would enable Police to test for alcohol impairment when they consider it necessary:

- ▶ post-occurrence – following an incident or accident
- ▶ ‘good cause’ testing – where the Police have reason to suspect impairment.

1.24 We initially considered an option that allowed the Police to undertake random testing for enforcement purposes. However, given the level of intrusion and the cost associated with implementing a random testing regime, we have not included random testing by the Police in this discussion document. We have considered random testing in relation to workplace testing, where employers can require employees to be randomly tested. Further information on the difference between random testing for enforcement and random testing in the workplace can be found in Appendix One.

1.25 We will need to consider the following issues for any of the options that include testing for enforcement purposes.

What should the maximum alcohol level be?

1.26 The discussion paper suggests two options:

- ▶ The maximum limit would be the same across all transport sectors allowing for a simpler system.
- ▶ Each sector would be treated differently, reflecting the different risks in the different sectors.

Who can be tested?

1.27 A number of people can be responsible for the safe operation of an aircraft, vessel, or rail vehicle⁷. For this reason, most countries use a broader definition of those who are required not to be impaired than the equivalent of ‘driver’ in the road transport sector. We need to consider if all safety-sensitive⁸ roles should be tested, or if the ‘driver’ equivalent is adequate.

What penalties should be set for breaching these limits?

1.28 Setting a maximum blood alcohol level means offences and penalties need to be set in legislation. The easiest solution is to use the road transport scale of penalties. However, this may not be appropriate in the aviation, maritime and rail sectors as the sectors differ vastly, including the levels of participation, the licensing regime and the size of the vehicles. It would not be practical to confiscate large planes or vessels.

1.29 Any form of new testing will create significant extra costs for the Police. It will be vital that the Police can test in the legally prescribed manner and maintain the chain of custody to reduce the likelihood of results being challenged in court. Testing after an incident would require the lowest level of new powers and funding, as ‘good cause’ testing would cover a larger number of

⁷ Rail vehicles can include maintenance vehicles such as those operating alongside rail tracks.

⁸ Sometimes referred to as ‘safety critical’ or other similar terms.

incidents compared to a larger number of incidents where there is 'good cause to suspect' impairment.

- 1.30 Most workplaces are not public places. An enforcement officer may require powers to enter premises such as ports, airports and rail yards to test employees. The officer may create safety and security issues and risk significant harm if they are not familiar with the work environment. These issues need to be balanced against whether testing for enforcement purposes in the commercial sectors adds value.

Recreational sector

- 1.31 The government has very different approaches for managing alcohol and drug impairment in the recreational aviation and maritime sectors, as they have different associated risks. A body of research suggests there is widespread alcohol and drug use in society, and therefore this is likely to be the case also in the recreational maritime and aviation sectors. In the recreational sector⁹, the status quo would not address the concerns the Commission has raised, particularly in the maritime sector.
- 1.32 There are only two proposed options for the aviation and maritime recreational sectors: to keep the current regime in place, or to introduce maximum alcohol limits, combined with a penalty regime.

Option A – status quo

- 1.33 The recreational maritime sector has very few controls on unsafe activity, such as licensing and preventing the operation of a vessel while the person in charge is impaired. Section 65 of the Maritime Transport Act 1994 prohibits dangerous activity involving ships or maritime products, but this has not been widely used for enforcement in the recreational sector. Restrictions on recreation boat operators do exist regionally, with different regional councils making navigation bylaws to govern safe boating and water-based activities. Different regions have different bylaws on the use of alcohol and drugs in maritime activities.
- 1.34 In contrast, the recreational aviation sector already has requirements relating to impairment. Civil Aviation Rule Part 19.7 imposes on pilots a legal obligation not to fly if they are impaired. Civil Aviation Rule Part 1 defines 'impaired' as "affected by fatigue, injury, medical condition, or by the consumption of alcohol or other drugs such that the person may be a risk to the safety of himself or herself or of any other person". The Civil Aviation Authority guidance is that "there is no measurable level of blood alcohol that is safe for aviation".

⁹ In the recreational sectors we are only referring to aviation and maritime, as there is effectively no recreational rail sector.

1.35 Option A would include an education campaign, which may be a cost-effective option. Greater public awareness of the risks from impairment (including from drugs), and the existing obligations under section 65 of the Maritime Transport Act and the Civil Aviation Rules could be sufficient to increase safe behaviour in the recreational maritime sector.

Option B – enforce maximum legal limits for alcohol

1.36 The Commission has recommended the government prescribe maximum allowable levels of alcohol for recreational participants. At present, there are no legally prescribed limits for the presence of alcohol (or other substances) for recreational participants in sectors other than road transport.

1.37 It would be possible to introduce maximum legal limits for alcohol and prescribe specific alcohol-related offences and penalties. The Civil Aviation Act 1990 and the Maritime Transport Act 1994 would need to be amended. Setting maximum legal limits for alcohol for the recreational sector would allow monitoring and enforcement, and would align the aviation and maritime recreation sectors with the road transport sector.

1.38 Alcohol use by passengers appears to be partly responsible for fatalities in the recreational maritime sector. However, this discussion paper proposes that legislated maximum limits would apply just to the master or skipper. It would be difficult to enforce restrictions for passengers on certain vessels, particularly on larger recreation boats that have the capacity for overnight passengers.

1.39 In Option B we have identified two sub-options outlining what level of testing would be permitted:

B.1. **post-occurrence** – where an incident or accident occurs during an aviation or maritime activity

B.2. **‘good cause’** – where there is reason to believe a person is impaired by alcohol while undertaking an aviation or maritime activity.

All sectors

Option 5 – the Commission to have the power to test those involved in an occurrence

- 1.40 The Commission has asked for specific powers to test people for the presence of alcohol or drugs if they have been involved in an accident. The Commission's recommendation could only be fully implemented if the Transport Accident Investigation Commission Act 1990 was amended.
- 1.41 Option 5 would enable the Commission (or a suitably approved third party) to require samples from any person after a defined incident to determine if the presence of alcohol or drugs was a causal or contributing factor. This option is solely to assist the Commission to determine the causes and circumstances of an accident.
- 1.42 Option 5 would enable testing of any person involved in an incident, whether they were on the plane, boat or train or not. Further thought is needed on the scope of this testing, whether it would be for all defined incidents or only for the ones the Commission is investigating. The cost would depend on the level of testing the Commission requests.
- 1.43 This option is a stand-alone option that could be implemented with or without any of the other options.

Section two – background to the issues

- 2.1 A number of recent high-profile accidents have occurred in the aviation and maritime sectors. As a result, the Transport Accident Investigation Commission (the Commission) and coroners recommend legislation be developed to manage the risks of substance impairment in these sectors more effectively. In particular, the Commission's report *Inquiry 12-001: Hot-air balloon collision with power lines and in-flight fire, near Carterton, 7 January 2012*, released in October 2013, contains specific recommendations.
- 2.2 Laws about drinking alcohol and driving vehicles on roads have been in place for over 40 years, with laws on maximum levels of alcohol being introduced in the 1970s. These laws have become more stringent as research has shown that consuming alcohol adversely affects driver behaviour and driving performance. The government's road safety strategy 2010–2020, *Safer Journeys*, includes measures to prevent driving while impaired by alcohol, in order to reduce the number of deaths and injuries on New Zealand's roads. In contrast, there have been few explicit controls in the maritime, aviation or rail sectors on the use of alcohol or drugs.
- 2.3 The true extent of any problem with alcohol or drug impairment¹⁰ in the aviation, maritime or rail sectors is unknown. Unlike the road sector, the transport agencies¹¹, the Commission and Police¹² have few legal powers to collect data on impairment following an accident. A coroner can only order forensic toxicology testing of a deceased person involved in a non-road transport fatality. The post-mortem investigation tests levels of alcohol and types of drugs present in bodily fluids. The presence of alcohol or drugs does not necessarily imply impairment.
- 2.4 The Commission has investigated eight events over the last ten years where people have tested positive for performance-impairing substances. These people have either operated aircraft, vessels or rail vehicles or been performing functions that impact the safety of these vehicles. Forty-one people have died in these accidents.
- 2.5 Impairment and the potential for it to be a cause of fatalities or reduce the chances of survival is of real concern to the Commission. There are many more accidents, including fatalities, that do not reach the Commission's threshold for inquiry and are investigated by other agencies. The Commission has said it is seeing more occurrences where performance-impairing substances are involved, although it has not quantified this.
- 2.6 The experience in other countries suggests that alcohol and drug impairment is widespread across all types of transport, with an associated social and economic cost. International data on the number of fatalities linked to impairment from alcohol or drugs is reasonably consistent for

¹⁰ Impairment is defined as where a person's mental or physical ability to perform a task is degraded as a result of ingesting psycho-active or performance-impairing substances.

¹¹ Civil Aviation Authority, Maritime NZ and the NZ Transport Agency.

¹² Except in relation to international or large domestic vessels.

the recreational maritime sector. Studies have shown alcohol and/or drugs were a contributing factor in 16–28 percent of fatalities¹³.

- 2.7 Estimates of the impact on the number of fatalities are much lower in the highly regulated aviation sector. A 2006 Australian study estimated only 0.4 percent of all accidents were related to alcohol and drugs. Some other estimates are higher – for example, a US study in 2007 estimated ‘substance impairment’ was a factor in 8 percent of all aviation fatalities¹⁴.

¹³ O'Connor and O'Conner (2005), “Causes and prevention of boating fatalities” *Accident Analysis and Prevention*, US Department of Homeland Security et al (2012), *Recreational Boating Statistics 2011*. Report number COMTPUB P16754.25. Maritime NZ (2008), *Boating safety strategy: 2007 Review of the New Zealand Pleasure Boat Safety Strategy*.

¹⁴ New Zealand Institute of Economic Research (2014) *A cross-modal risk analysis of substance impairment*.

Table 1: Transport fatalities 2000–2011

Mode	Fatalities ¹⁵	Estimated % due to impairment ¹⁶	Estimated industry or passenger fatalities due to impairment ¹⁶	Social costs of impairment by degree of attribution of impairment as a contributing factor ¹⁶			
				Sole factor \$million	High 75% ¹⁷ \$million	Medium 50% ¹⁷ \$million	Low 25% ¹⁷ \$million
Rail¹⁸	150	<1	1	3.9	2.9	1.9	1.0
Maritime – Commercial	63	8	5	19.9	14.9	9.9	5.0
Maritime – Recreational	164	25	43	167.8	125.8	83.9	41.9
Maritime – Total	227	20	48	187.6	140.7	93.8	46.9
Airline operators	24	8	2	7.4	5.6	3.7	1.9
Commercial helicopter	13	8	1	4.0	3.0	2.0	1.0
Agriculture and other non-airline aviation	44	8	3	13.7	10.2	6.8	3.4
Aviation – Recreational	71	8	6	22.0	16.5	11.0	5.5
Aviation – Total	152	8	12	47.2	35.4	23.6	11.8
Total – Non-road fatalities over 10 years	529	12	61	238.7	179.0	119.3	59.7
Per annum total – Non-road fatalities			6	24.0	17.9	11.9	6.0
Road	3,929	34	1,336	5,181.8	3,886.4	2,590.9	1,295.5
Per annum total – Road fatalities			137	514.2	388.6	259.1	129.6
Total – All transport fatalities over 10 years	4,458	31%	1,398	5,420.5	4,065.4	2,712.9	1,355.2
Per annum total – All transport fatalities	446		140	\$542.1	\$406.5	\$271.3	\$135.5

¹⁵ From Ministry of Transport, *Transport safety and security: deaths and injuries* – <http://www.transport.govt.nz/ourwork/tmif/safetyandsecurity/ss004/>.

¹⁶ From NZIER *A cross-modal risk analysis of substance impairment*.

¹⁷ An accident can have multiple contributing factors; to reflect this we have used the NZIER's 'probable, possible, and plausible' framework. The percentages reflect the degree to which alcohol impairment was a contributing factor to the accident.

¹⁸ Many of these fatalities are at rail crossings, with road vehicles colliding with a rail vehicle, and may also be counted in the statistics for road crashes.

The Transport Accident Investigation Commission's recommendations

2.8 The Commission released its final report into the Carterton hot-air balloon accident in 2013, *Inquiry 12-001: Hot-air balloon collision with power lines and in-flight fire, near Carterton, 7 January 2012*. The Commission's report recommends that:

... the Secretary for Transport complete, as a matter of priority, all necessary work that will support the introduction of appropriate legislation or rules that will:

- ▶ *prescribe allowable maximum levels for alcohol*
- ▶ *prohibit persons from operating an aircraft, vessel or rail vehicle if they are impaired by drugs*
- ▶ *require operators to implement drug and alcohol detection and deterrence regimes, including random testing*
- ▶ *prescribe post-occurrence testing requirements for drugs and alcohol.*

This legislation or these rules should apply:

- ▶ *across the aviation, maritime and rail transport modes*
- ▶ *to persons operating an aircraft or a marine craft for recreational purposes.*

Options to implement the Commission's recommendations

2.9 The then Minister of Transport, Hon Gerry Brownlee, and the Secretary for Transport, Martin Matthews, read the report and commented that "there should be zero tolerance of operator impairment, where members of the public are being transported by sea, rail and air". The Minister asked the Ministry of Transport to provide him with options, including legislative options, in order to carry out the Commission's recommendations.

2.10 This discussion paper is a response to the Minister's request. It contains options to implement the Commission's recommendations. Several of the options could be independently actioned, or they could be grouped together as part of a package in a final proposal. All the options would require further work to develop the details before they could be successfully implemented.

2.11 We considered the following points when developing each option:

- ▶ Is it consistent with the Commission's recommendations?
- ▶ Would it improve safety outcomes?
- ▶ Is it likely to be cost effective?

- ▶ Is it consistent with practice in other jurisdictions and relevant international agreements?
- ▶ Does it minimise the risks of operator impairment when transporting members of the public?
- ▶ Is change achievable and consistent with the nature of the industry?
- ▶ Is legislative response proportional to risks?

2.12 Table 4 on page 27 presents a short summary of the options assessed against each of these points.

2.13 This paper does not present a preferred option but rather it is intended to stimulate discussion. It seeks your feedback about the best way to manage risks from alcohol and drug impairment in the aviation, maritime and rail sectors and the costs and benefits of doing so. The purpose of the paper is to ensure:

- ▶ the costs and benefits of taking action justify government intervention
- ▶ decisions are based on risk assessment and empirical enquiry
- ▶ non-regulatory measures are considered before looking at legal regulation
- ▶ the intrusiveness and restrictiveness of interventions are proportional
- ▶ the regulations are flexible enough to respond to changing circumstances within the sectors
- ▶ the regulations are consistent across all the sectors and other regulatory practices and policies.

2.14 The paper makes use of recent work and experiences in the adventure tourism sector. In 2011, the government agreed to amendments to the Health and Safety in Employment (Adventure Activities) Regulations 2011. The government also made equivalent changes to aviation and maritime rules¹⁹. These changes were made to improve safety in the adventure tourism sector.

2.15 The paper uses existing policy in the road transport sector, where appropriate. It is informed by legislative regimes in other comparable countries, especially Australia, the United Kingdom, Canada and the United States of America.

2.16 The Commission's recommendations require actions. There must be a balance between the legitimate need for the public to feel safe and the level of extra costs or restrictions on those in the aviation, maritime or rail sectors, especially when compared to other sectors of the wider economy.

¹⁹ Civil Aviation Rule Part 115, Adventure Aviation. Maritime Rule Part 81, Commercial Rafting Operations (introduced in 2010). Maritime Rules Part 82, Commercial Jet Boat Operations – River.

- 2.17 The options are set out by their increasing breadth of scope and stronger regulation requirements. The Commission's recommendations are in a different order from the options in this discussion paper. Commercial and recreational sectors are treated separately. The sectors have different current regulatory controls. There are different risks associated with impairment for each group. Some options consider impairment only from alcohol and not from drugs and this is discussed in the next section.
- 2.18 The Commission has asked for specific powers to test people for the presence of alcohol or drugs after they have been involved in an incident or accident. We have considered post-occurrence testing in the commercial options 3.1, 3.2 and 4.1 and the recreation options B.1 and B.2. We acknowledge that these options do not fully meet the Commission's proposed recommendation to prescribe post-occurrence testing requirements. A separate amendment to the Transport Accident Investigation Commission Act 1990 would be required to fully implement the Commission's recommendation. This is discussed as a stand-alone option at the end of this discussion paper.
- 2.19 There has been a great deal of discussion by interest groups on the need for mandatory random testing by the Police. We initially considered an option that allowed the Police to undertake random testing as they do in the road sector. However, given the level of intrusion and the cost to implement successfully, we have not included random testing by the Police in this discussion document. Instead, for enforcement purposes we propose either post-occurrence or 'good cause' testing options are trialled in the first instance to establish if these are sufficient. The commercial option 4 enables the Police to test as they see necessary, either after an incident (4.1) or when they have 'good cause to suspect' (4.2).

The options

- 2.20 The options discussed for the commercial sector are:
- Option 1. Retain the status quo. This option would also include non-legislative actions such as increased education.
 - Option 2. Require operators to develop and implement specific alcohol and drug management plans, including appropriate testing requirements, as part of their safety management systems.
 - Option 3. Require post-occurrence testing for impairment to enable the Commission to determine the causes and circumstances of the accident, but not for enforcement:

- 3.1. with testing carried out by the commercial operator as part of its drug and alcohol management plan
- 3.2. with testing carried out by an approved third party.

Option 4. Prescribe maximum legal limits for alcohol; prescribe specific alcohol-related offences and penalties; and provide for enforcing maximum legal limits by:

- 4.1. enabling the Police to test for alcohol impairment following an incident or accident (post-occurrence testing)
- 4.2. enabling the Police to test for alcohol impairment where they have 'good cause to suspect' impairment.

2.21 The options discussed for the recreational sector are:

Option A. Retain the status quo. This option would also include non-legislative actions such as increased public education.

Option B. Prescribe maximum legal limits for alcohol; prescribe specific alcohol-related offences and penalties; and enforce the maximum legal limits for recreational operators by:

- B.1. enabling the Police to test for alcohol impairment following an incident or accident (post-occurrence)
- B.2. enabling the Police to test for alcohol impairment where they have 'good cause to suspect' impairment.

2.22 The final option covers any person who is involved in an occurrence.

Option 5. The Commission to have the power to test those involved in an occurrence.

2.23 We will only consider impairment from drugs in relation to an organisation's alcohol and drug policy. We suggest any further consideration on drug impairment is run in parallel with the drug-driving review of the road transport sector scheduled for July 2015. This is discussed further in section 2 *Drug impairment – Deferring consideration of specific legal requirements*.

2.24 Some of the options will require changes to primary legislation. The Acts of Parliament being referred to are the:

- ▶ Civil Aviation Act 1990²⁰
- ▶ Maritime Transport Act 1994

²⁰ The Ministry of Transport is currently consulting on the Civil Aviation Act Review.

▶ Railways Act 2005.

2.25 These three Acts govern the respective transport sectors in New Zealand, and set out the criteria for participating in the sectors and include basic safety obligations. Enforcement measures, penalties or legal consequences would be included in the appropriate Act.


2.26 While the Acts stipulate broad principles of law, each Act also has rules that contain detailed technical standards and procedures. Rules form part of New Zealand law and compliance is required. The Minister of Transport can pass rule changes through a comprehensive process that includes Cabinet approval.


Summary of the options

2.27 The table below summarises the options considered in this paper.

Table 2: Summary of options

		Option 1	Option 2	Option 3.1	Option 3.2	Option 4.1	Option 4.2
Commercial operators	Level of scope and regulation required						
		Status quo	Drug and alcohol management plan (DAP)	DAP with mandatory post-occurrence testing	DAP with mandatory third party post-occurrence testing	Post-occurrence testing for enforcement	'Good cause' testing for enforcement
						Alcohol only	
Recreational	Level of scope and regulation required	Option A				Option B.1	Option B.2
		Status quo				Post-occurrence testing	'Good cause' testing
						Alcohol only	
All						Option 5	
						Post-occurrence testing for all involved in incident	

 No primary legislative change. Changes would be made to rules, regulations, or education campaigns

 Primary legislative (Acts) change

Drug impairment – deferring consideration of specific legal requirements

Point to consider

- ▶ Should the government consider any specific legal requirements around drug impairment at the same time as the planned review in the road transport sector?

- 2.28 The Commission specifically recommended the government consider introducing legislation to address risks associated with impairment from drugs. However, this is more complex than for alcohol impairment, where there is evidence of the effects of alcohol on crash involvement and crash risk²¹.
- 2.29 We do not propose to include specific laws to address impairment from drugs. Commercial operators should continue to address these issues in their alcohol and drug detection and management systems. This could be either under existing health and safety legislative requirements or as part of any changes arising from this discussion paper's recommendations regarding alcohol and drug management plans.
- 2.30 A legal framework for drugs is complex to develop because:
- ▶ there are a large number of drugs that can potentially cause impairment, including prescription drugs
 - ▶ it is difficult to establish clear thresholds for impairment for each substance.
- 2.31 At present, there is no low-cost and accurate test for impairment from drugs that is comparable to the roadside breath test for alcohol. Impairment cannot be inferred from the mere presence of a drug (or alcohol) in bodily tissues or fluids.
- 2.32 The Government's *Safer Journeys Action Plan 2013–2015* and other recent road safety strategies have started to look at impairment by drugs. This includes an action to review the drug-driving enforcement regime. The Ministry is due to report the results of this review to the Minister of Transport by the end of July 2015.
- 2.33 We propose the government consider any specific legal requirements around drug impairment in these sectors at the same time as the review of drug-driving in the road transport sector.

²¹ Further discussion on this issue can be found in Appendix Two.

The size of the sectors that may be affected

- 2.34 When we look at how to manage the effects of impairment in the transport sector, we need to accept there are differences between the aviation, maritime and rail sectors. Each sector has unique features that need to be considered to achieve the same or a similar level of regulation.
- 2.35 The commercial and recreational aviation sectors are highly regulated. Aviation organisations, pilots, and other personnel must hold licences or an aviation document. This is in contrast to rail organisations, which hold one licence for all employees, so their staff do not have to hold individual licences. The government has recently introduced new safety regulations for the commercial maritime sector. However, the recreational maritime sector has very little regulation and does not require boat registration or skipper licensing.
- 2.36 The size of the sectors also varies greatly, from 99 commercial rail operators to a possible 500,000 recreational boats and other small watercraft. When we consider how to manage the issue of impairment, and the cost associated with this, we must consider the size of the sectors that will potentially be affected and the different risk levels in each sector.

Aviation

Commercial

- 2.37 The aviation sector is made up of airlines operating large commercial aircraft and general aviation using smaller aircraft (usually below 5,700kg or nine passenger seats). The airline sector mostly provides international and domestic scheduled regular public transport operations. The general aviation sector has smaller passenger airlines providing scheduled and non-scheduled public transport operations, such as: sightseeing using fixed wing aircraft and helicopters; agricultural operations; adventure aviation (also covered under specific regulation); and sport and recreation activities. There is also a growing remotely-piloted aircraft systems sector.
- 2.38 This discussion paper proposes options that could affect more than 700 operators and 9,000 commercial licence holders. These include pilots, engineers and air traffic controllers.

Recreational

- 2.39 There are around 4,000 private pilot licence holders. Around 150 of these licences are Recreational Pilot Licences²².

²² A Recreational Pilot Licence applies to simple, non-high-performance, single-engine aeroplanes, with only one passenger. It includes microlights, gliders, paragliders or hang gliders.

Maritime

2.40 The maritime sector is diverse, ranging from very large ocean-going freighters to kayaks and other small watercraft.

Commercial

2.41 This discussion paper proposes options that could affect around 2,000 commercial operators, skippers of 4,000 vessels, and 10,000 employees. This is in addition to the 55 vessels that are currently subject to regulatory Standards of Training, Certification and Watchkeeping for Seafarers. Ninety commercial maritime adventure tourism operators are already covered under specific maritime rules for jet boating and rafting.

Recreational

2.42 There has been a large increase in recreational boating in the past 20 years, especially in smaller craft such as kayaks. There are no official figures for the number of boats in the recreational sector; estimates vary from 500,000 to 900,000 craft. These figures cover both powered and unpowered boats (including canoes and kayaks).

Rail

2.43 Two large operators dominate the rail sector: KiwiRail and Transdev Auckland (which operates the Auckland commuter trains). There are 98 smaller organisations; about half are industrial, generally operating on private rail sidings, and half are tourism and heritage. The smaller organisations mostly operate on their own networks, but there are a few which may use the main rail network. New Zealand does not have recreational railways. Small 'playground' train ride operations are classed as amusement devices and are outside the scope of these proposals.

International experience

2.44 Internationally, all three sectors have a range of regulations, testing policies and workplace programmes that involve education and training. Formal requirements for organisational drug and alcohol management plans are common across most comparable jurisdictions.

2.45 The table in Appendix Three summarises the current requirements in the United States of America, the United Kingdom, certain Australian states and relevant international agreements.

Summary of options

2.46 The following two tables summarise the paper's options and assess them against the criteria. Table 3 outlines the options in relation to the Commission's recommendations. No one option will address all of the recommendations. Table 4 outlines the options against the policy criteria set out on page 17.

Table 3: Summary of options in this paper and compatibility with the Commission's recommendations

Included in option Options	Targeted group	Explicit drug and alcohol policy	Post-occurrence testing allowed	Reasonable cause testing allowed	Random testing allowed	Maximum limits	Maximum penalties for breaching limits	Requirements for employees	Requirements for passengers	Requirements for recreation sector
1 – Status quo		No	As per DAP if applicable	As per DAP if applicable	As per DAP if applicable	No	No	No	No	No
2 – Drug and alcohol management plan (DAP)	All aviation, maritime, rail operators	Yes	As per DAP	As per DAP	As per DAP	No	Cancelled registration	Yes	Yes	No
3.1 – DAP with mandatory post-occurrence testing	All aviation, maritime, rail operators	Yes	Mandatory under DAP	As per DAP	As per DAP	No	Cancelled registration	Yes	Yes	No
3.2 – DAP with mandatory third party post-occurrence testing	All aviation, maritime, rail operators	Yes	Mandatory under DAP	As per DAP	As per DAP	No	Cancelled registration	Yes	Yes	No
4.1 – Post-occurrence testing for enforcement	All aviation, maritime, rail operators	Yes	Yes	As per DAP	As per DAP	Yes TBD*	Yes TBD	Yes	Yes	No
4.2 – 'Good cause' testing for enforcement	All aviation, maritime, rail operators	Yes	Yes	Yes	As per DAP	Yes TBD	Yes TBD	Yes	Yes	No
B.1 – Post-occurrence testing	All recreational aviation, maritime	No	Yes	No	No	Yes TBD	Yes TBD	No	No	Yes
B.2 – 'Good cause' testing	All recreational aviation, maritime	No	Yes	Yes	No	Yes TBD	Yes TBD	No	No	Yes
5 – Post-occurrence testing for all involved in incident	Any person involved in an incident	No	Yes	No	No	No	No	Yes	Yes (including third parties and spectators)	Yes

Table 4: Assessment of options against criteria

	Option 1	Option 2	Option 3.1	Option 3.2	Option 4.1	Option 4.2	Option A	Option B.1	Option B.2	Option 5
	Status quo	Drug and alcohol management plan (DAP)	DAP, mandatory post-occurrence testing	DAP, mandatory third party post-occurrence testing	Max alcohol limits, post-occurrence testing	'Good cause' testing	Status quo, increase education	Post-occurrence alcohol testing	'Good cause' alcohol testing	Commission tests people involved in occurrence
Is it consistent with the Commission's recommendations?	No	Partially for commercial operators. No max limits or mandated post-occurrence testing	Partially for commercial operators. No max limits	Partially for commercial operators. No max limits	Yes for commercial operators	Yes for commercial operators	No	Yes for recreational purposes	Yes for recreational purposes	Partially. It will allow the Commission to prescribe post-occurrence testing
Would it improve safety outcomes?	Neutral (maintains status quo)	Moderately. Difficult to quantify	Moderately. Testing will allow for quantification	Moderately. Testing will allow for quantification	Yes, but less than where enforcement is more direct	Yes, if actively enforced	Neutral (maintains status quo)	Yes, but less than where enforcement is more direct	Yes, if actively enforced	For data collection purposes. Testing will allow for quantification
Is it likely to be cost effective?	Yes	Yes. There would be cost for a small number of businesses if currently no DAP (\$400–\$2,500)	There would be cost for businesses of \$100 for each test beyond the DAP costs in option 2	Unknown. Dependent on costs of establishing third party post-occurrence testing	Unknown. Dependent on scale of incidence. No data exists to determine extent of costs	Yes. Depends on scale of enforcement effort	Yes	Unknown. Dependent on scale of incident. No data exists to determine extent of costs	Yes, although this depends on scale of enforcement effort	Depends on if it is all incidents or just accidents investigated by the Commission. If the latter, yes
Is it consistent with practice in other jurisdictions and relevant international agreements?	No	Some places require random testing as part of DAP	No	No	Yes	Yes	No	Yes	Yes	No
Does it minimise the risks from operator impairment, when transporting members of the public?	Neutral (maintains status quo)	Yes. As monitored by commercial operators	Yes. As monitored by commercial operators	Yes. As monitored by commercial operators	Yes, but less than where enforcement is more direct	Yes. Depends on scale of enforcement effort	N/A	N/A	N/A	No
Is change achievable and consistent with the nature of the industry?	Neutral (maintains status quo)	Yes	Yes. Testing may be impractical for some small business	Yes	Yes	Yes	Neutral (maintains status quo)	Yes	Yes, although this depends on scale of enforcement effort	N/A
Is legislative response proportional to risks?	Neutral (maintains status quo)	Yes	Yes, although may not be sufficient to fully change behaviour	Yes, although may not be sufficient to fully change behaviour	Yes, although may not be sufficient to change behaviour	Yes	Neutral (maintains status quo)	Yes, although may not be sufficient to change behaviour	Yes	Dependent on the level of testing undertaken and the reach of the intervention

Section three – the commercial sector

Option 1: status quo

Option 1	<ul style="list-style-type: none">▶ Some existing controls
Status quo	<ul style="list-style-type: none">▶ Some (usually large) aviation, maritime and rail organisations already have well-functioning drug and alcohol management plans▶ 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 Acts²³ and transport rules²⁴. 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.

²³ The Civil Aviation Act 1990, the Maritime Transport Act 1994 and the Railways Act 2005.

²⁴ 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 rules²⁵, 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 include²⁶. 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 limit²⁷ (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”²⁸. Although not widely used, this provision

²⁵ 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.

²⁶ See <https://www.caa.govt.nz/rules/ACs.htm>.

²⁷ Established by the 2010 amendments to the International Convention on Standards of Training, Certification and Watchkeeping (STCW) for Seafarers, 1995.

²⁸ For 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
Part 121 Air Operations – Large Aeroplanes	Certificated Operators	No ^o and Part 19 requirements	As per voluntary DAP ^ψ	As per voluntary DAP ^ψ	As per voluntary DAP ^ψ	No	As per voluntary DAP ^ψ	Yes, as per voluntary DAP	No	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 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 an drug and 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 NRSS²⁹ requires

²⁹ NRSS 7 – Rail Operations Interoperability, Section 13.1 and NRSS 3 – Health Assessment of Rail Workers.

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) Convention³⁰ 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 aviation³¹ and maritime operators³² 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.
- 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.

³⁰ The international convention for merchant shipping.

³¹ http://www.caa.govt.nz/rules/Part_115_Brief.htm.

³² <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>.

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 an 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 classes³³) can cost less than \$100 per individual³⁴. 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.

³³ Amphetamine, benzodiazepines, cocaine, cannabis, methamphetamine, opiates.

³⁴ 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	
Drug and alcohol management plan with mandatory post-occurrence testing	<ul style="list-style-type: none">▶ All aviation, maritime and rail organisations will be required to have a drug and alcohol management plan▶ 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 alcohol³⁵. 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:

³⁵ 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))³⁶. In New Zealand, recent amendments to the Maritime Transport Act implemented the internationally applicable alcohol limit³⁷ of 50mg/100ml of blood and breath alcohol level equivalent for commercial operators on all merchant ships (other than fishing vessel operators).

³⁶ Although this section only discusses blood alcohol levels, comparable equivalent breath alcohol limits used in road transport would also apply.

³⁷ 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/100ml³⁸). 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 roles³⁹. 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.

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-sensitive⁴⁰ 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.

³⁸ 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.

³⁹ See following section for further discussion of this term.

⁴⁰ Sometimes also referred to as 'safety critical' or other similar terms.

- 3.78 In the adventure tourism sector, recent guidance documents⁴¹ 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 generically⁴².
- 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.

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 proportionality⁴³.

⁴¹<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>.

⁴² See annex five for an example of other legislation.

⁴³ The punishment of an offender should fit the crime.

- 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.

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.

Section four – the recreational sector

- 4.1 The Transport Accident Investigation Commission's report *Inquiry 12-001: Hot-air balloon collision with power lines and in-flight fire, near Carterton, 7 January 2012*, released in October 2013, contains specific recommendations for anyone operating an aircraft or a marine craft for recreational purposes. The Commission's report recommends that the Secretary for Transport introduce appropriate legislation that:
- ▶ prescribes allowable maximum levels for alcohol
 - ▶ prohibits persons from operating an aircraft or vessel if they are impaired by drugs
 - ▶ prescribes post-occurrence testing requirements for drugs and alcohol⁴⁴.
- 4.2 A sufficient amount of research suggests there is widespread alcohol and drug use in society as a whole. This may suggest the presence of their use in the recreational maritime and aviation sectors⁴⁵. For example, in the *Boating Safety Strategy: 2007 Review of the New Zealand Pleasure Boat Safety Strategy*, Maritime New Zealand stated that "alcohol is indicated as a significant cause of accidents and fatalities, but the difficulty of collecting hard evidence means this is underreported as a causal factor⁴⁶".
- 4.3 Due to a lack of information on the extent of impairment in the aviation and maritime sectors, we have used the road sector as a proxy in a number of our assumptions. We would point out, however, that the risks from the aviation and maritime sectors vary significantly from the road sector. Drivers in the road sector cover all groups in society, from teenagers to the very old, tourists to professional drivers, cyclists to large trucks, all using the same roads. The numbers of people holding a driver's licence and with access to a vehicle are far greater than for aviation and maritime. The road sector has also had laws governing the use of alcohol for over 40 years. Comparing across the sectors must be done with caution.
- 4.4 The different risks associated with the aviation and maritime recreational sectors have led to very different approaches in how the government currently addresses the issues of alcohol and drug impairment in these sectors. The risks from being in a motorised vehicle travelling at 100 kilometres an hour on a road with other traffic or an airplane flying at 10,000 feet may seem intuitively more dangerous than being in a small row boat in a calm harbour. The different risk levels have led to licensing regimes for the land and aviation sectors that require both a demonstration of competence and limits on alcohol consumption.
- 4.5 However, that is not to say the risks in maritime are lower. The nature of the marine environment can mean alcohol is more hazardous on the water. The motion and exposure to

⁴⁴ We are using the term 'occurrence' to cover incidents and accidents (and any other equivalent defined term).

⁴⁵ There is effectively no recreational rail sector. All operators are already covered by requirements to develop a safety case that includes a drug and alcohol management plan.

⁴⁶ <http://www.maritimenz.govt.nz/Publications-and-forms/Recreational-boating/Boating-Safety-Strategy-2007-full-version.pdf>.

the elements can accelerate a drinker's impairment⁴⁷. Although the risk of speed may not be as great a factor for small marine vessels, impairment in less stable boats can increase the chances of falling overboard and drowning.

- 4.6 The recreational maritime sector, covering everything from super yachts to canoes and kayaks, does not require any mandatory licensing or display of skill level. Beyond a requirement under section 65 of the Maritime Transport Act to not cause "unnecessary danger or risk to any other person or to any property", there are no restrictions on impairment.
- 4.7 In the aviation sector, there are already some requirements around alcohol impairment; however, the status quo in either sectors would not address the concerns the Commission has raised in respect to allowable maximum limits, and post-occurrence testing for all accidents. Unlike the commercial sector, we also do not have the ability to address recreational aircraft and boat use by building on existing health and safety legislation and using tools such as alcohol and drug management plans to modify behaviour. The options we present reflect this.
- 4.8 Regulations for the recreational sector, especially for recreational boating, which is largely unregulated, focus on setting and then enforcing maximum alcohol limits. Any regulation for the recreational sector would require change to primary legislation (that is, an Act of Parliament).
- 4.9 We have not suggested an option where the Police would undertake random testing for enforcement purposes. It was considered early on in the development of the paper, but the scale of the effort that would be required from the Police, the cost associated with implementing a random testing regime and the level of intrusion into people's lives cannot be justified.
- 4.10 The enforcement options discussed for the recreational sector largely mirror those for the commercial sector. The current options include:
- ▶ post-occurrence testing (option B.1.), which would help establish data on the true extent of the problem while also providing a deterrent effect
 - ▶ 'good cause' testing (option B.2.), which would allow the Police to test when there is reason to believe a person is impaired by alcohol.
- 4.11 As with the commercial sector recommendations, the recreational sector recommendations only address impairment from alcohol. Any specific legal requirements around drug impairment would be considered in conjunction with the review in the road transport sector due in July 2015.

⁴⁷ http://www.uscgboating.org/safety/boating_under_the_influence_initiatives.aspx.

Option A: status quo

Retain the status quo. This option includes non-legislative responses such as increased public education

RECREATIONAL	
Option A	<ul style="list-style-type: none">▶ Different approaches for aviation and maritime▶ Few controls on the recreational maritime sector
Status quo	<ul style="list-style-type: none">▶ Fit and proper person test and the certificate of medical fitness for the aviation sector▶ Enhanced education campaigns

Points to consider

- ▶ Is the status quo sufficient to address the risks of impairment associated with alcohol in the recreational aviation and maritime sectors?
- ▶ Should different approaches be taken for the two sectors?

Recreational maritime sector

- 4.12 There are very few controls on the recreational maritime sector, either through licensing or by preventing someone from operating a vessel. Section 65 of the Maritime Transport Act 1994 does prohibit dangerous activity involving ships or maritime vessels, but this provision has not been widely used for enforcement in the recreational sector.
- 4.13 The *2007 Boating Safety Strategy*, which is currently being reviewed, reported that between 2000 and 2006 alcohol was consumed in an estimated 18 percent of incidents that resulted in boating fatalities. Both the legislative restraints on testing blood alcohol levels after a recreational boating incident and the underreporting that exists mean that this figure is likely to be higher. With a reported 173 fatalities in the recreational maritime sector from 2002 to 2011, if we conclude the presence of alcohol results in impairment of the skipper, this would equate to 31 deaths over a 10-year period. Based on international evidence, the NZIER estimates impairment would have been a contributing factor in up to 43 deaths over the 2000–2011 timeframe (see Table 1 on page 16).
- 4.14 Although a legislative response is possible and is discussed further below, in the first instance it may be more cost effective to increase public education and other non-regulatory responses to promote safer practices. Greater public awareness of the risks from impairment (including impairment from drugs) and the existing obligations on recreational boaties under section 65 of the Maritime Transport Act 1994 could be sufficient.

4.15 The Commission's recommendations would not be met by relying on a public education-based approach.

Recreational aviation sector

4.16 In contrast to the recreational maritime sector, requirements already exist regarding impairment in the recreational aviation sector. Civil Aviation Rule Part 19.7 imposes on pilots a legal obligation not to fly if they are impaired. Civil Aviation Rule Part 1 defines 'impaired' as "affected by fatigue, injury, medical condition, or by the consumption of alcohol or other drugs such that the person may be a risk to the safety of himself or herself or of any other person". The Civil Aviation Authority position is that "there is no measurable level of blood alcohol that is safe for aviation".

4.17 In addition, through the pilot licensing process, there are requirements for a 'fit and proper person test' and for a certificate of medical fitness. These requirements consider the applicant's alcohol and drug history and can include drink-driving convictions as a 'red flag' for the possibility of unsafe drinking habits.

4.18 The Ministry of Transport is currently undertaking a review of the Civil Aviation Act⁴⁸. This will examine what the Director of Civil Aviation considers should be clearly defined when determining if a person meets the fit and proper person test. This review will include consideration of any offence relating to controlled drugs (as defined in the Misuse of Drugs Act 1975) or relating to any prescription medicine (as defined in the Medicines Act 1981).

⁴⁸ <http://www.transport.govt.nz/legislation/acts/civilaviationactreviewqanda/>.

Option B: prescribed maximum limits for alcohol

Enforce maximum legal limits for alcohol and prescribe specific alcohol-related offences and penalties

- 4.19 The Commission has recommended the government prescribe maximum allowable levels for alcohol for recreational participants. At present, there are no legally prescribed limits for the presence of alcohol (or other substances) for recreational participants in sectors other than road transport.
- 4.20 Any new regulations would require amendments to the Civil Aviation Act and the Maritime Transport Act. Setting maximum legal limits for alcohol for the recreational sector would allow for monitoring and enforcement. It would also bring both the aviation and maritime recreation sectors in line with the road transport sector.
- 4.21 As with the options for enforcement discussed for the commercial sector (options 4.1 and 4.2), it is necessary to set maximum alcohol limits, determine who they would apply to and determine how enforcement would occur.

Setting maximum alcohol limits for the recreational sector

- 4.22 It may be appropriate to have consistency in the maximum allowable alcohol levels across all recreational transport sectors. This would give those directly affected greater certainty about the applicable limit, irrespective of whether they are on the road, in the air or on water. A limit of 50mg of alcohol per 100ml of blood would also allow the Police to be able to conduct any testing without having to recalibrate equipment for each situation.
- 4.23 Internationally, the commercial maritime sector's approach to managing impairment from alcohol is generally similar to our land transport regime, with a prescribed blood alcohol concentration limit of 50mg/100ml of blood.
- 4.24 However, it may be appropriate to consider a lower legislated limit for pilots. In the recreational aviation sector, a maximum blood alcohol concentration limit of 20mg/100ml of blood for the pilot is used in some jurisdictions. This equates to a zero tolerance of alcohol⁴⁹.

⁴⁹20mg/100ml of blood allows for residual and naturally occurring alcohol in the body.

Who should maximum limits apply to?

- 4.25 In the road sector, maximum blood alcohol limits apply only to the driver. We propose the recreational maritime or aviation limit would only apply to the equivalent of a driver (skipper, master or pilot). It would be difficult to justify applying limits to others in the recreational sector.
- 4.26 While it would be appropriate to consider maximum blood alcohol limits for the skipper of a recreational vessel, the safety issue in the recreational maritime sector is wider. Passenger impairment in the maritime sector is also a concern because of the risk of passengers falling out of the vessel or causing a small vessel to capsize. Regulations affecting just the skipper may not be fully effective in reducing fatalities. It is not clear how controls could be applied to others on a vessel, as it is proposed that legislated limits would apply only to the master or skipper.

How should legislated maximum alcohol limits be enforced?

- 4.27 Implementation would be easier for the Police if provisions for enforcement in the recreational sector are similar to those in the commercial sector.
- 4.28 It would also be appropriate, as far as possible, to model testing procedures on the well-established system in the road transport sector. For road, the testing regime takes the form of a screening test for breath alcohol to indicate if alcohol is present. If alcohol is present, the Police would have a mandate to detain a person for evidential testing, in the form of an evidential breath test followed by a blood sample, if the person gives their permission.
- 4.29 Within option B we have identified two sub-options outlining what level of testing would be permitted:
- B.1. **post-occurrence** – where an occurrence or accident occurs during an aviation or maritime activity
 - B.2. **‘good cause’** – where there is reason to believe a person is impaired by alcohol while undertaking an aviation or maritime activity.

Option B.1: post-occurrence testing

Enforcement of maximum alcohol limits with post-occurrence testing

RECREATIONAL		
Option B.1	<ul style="list-style-type: none"> ▶ Changes to the Civil Aviation and Maritime Transport Acts to reflect legal maximum levels for alcohol for skippers and pilots ▶ Penalty regime established ▶ The Police will be able to test the skipper or pilot for the presence of alcohol after a defined occurrence ▶ Enhanced education campaign 	Alcohol Only
Post-occurrence testing		

Points to consider

- ▶ Should the Police have powers to carry out post-occurrence testing of a recreational skipper or pilot to enforce maximum alcohol limits?
- ▶ What would constitute an occurrence that should be investigated?
- ▶ Who should be tested after an occurrence if the results could be used for enforcement?
- ▶ What agency (or agencies) should carry out post-occurrence testing for enforcement and what powers would they need to carry out their task?

4.30 Under this option, the Police would only have the right to enter a recreational aircraft or vessel, to test the operator for impairment, once an occurrence had occurred. The exact meaning of an 'occurrence' would need to be defined, but it is likely to include a fatality or serious accident.

4.31 Post-occurrence testing would be useful for the Commission to understand causes of any accidents. It would also be relatively cost effective to implement because of the limited number of people likely to be tested. However, it is unlikely it would have a deterrent effect if people felt there was negligible chance they would be caught.

4.32 It is vital for all the testing approaches that the Police have the powers to detain people and to undertake potentially intrusive sampling techniques, including collection of blood samples.

Option B.2: ‘good cause’ testing

Enforcement of maximum alcohol limits with ‘good cause’ testing

RECREATIONAL		
Option B.2	<ul style="list-style-type: none"> ▶ Changes to the Civil Aviation and Maritime Transport Acts to reflect legal maximum levels for alcohol for skippers and pilots 	Alcohol Only
‘Good cause’ testing	<ul style="list-style-type: none"> ▶ Penalty regime established ▶ The Police will be able to test skippers and pilots for the presence of alcohol if ‘good cause’ presents ▶ Enhanced education campaign 	

Points to consider

- ▶ Should the Police have powers to carry out ‘good cause to suspect’ testing of a skipper or pilot to enforce maximum alcohol limits?
- ▶ What would constitute ‘good cause to suspect’ impairment that should be investigated?
- ▶ Should it be just pilots or skippers who are tested on the basis of ‘good cause’ and if 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?

4.33 Under this option, the Police would have the right to enter any recreational aircraft or vessel to test the operator if they had ‘good cause to suspect’ the operator may be impaired by alcohol. This might include erratic behaviour or the operator’s personal demeanour.

4.34 A comprehensive testing and enforcement programme would need to be implemented to reduce accidents. Effective enforcement would potentially entail a significant new cost for the government as the Police are not equipped or funded to carry out this task. We have not estimated the likely costs of enforcement in this paper. The current Police budget for alcohol and drug enforcement for the road transport sector is over \$47 million per year.

Section five – post-occurrence testing for all

Option 5: post-occurrence testing for all involved in incident

The Commission to have the power to test those involved in an occurrence

Option 5	
Post-occurrence testing for all involved in incident	<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▶ Testing will be for any person involved in an occurrence▶ The Commission (or a suitably approved third party) will be able to test for the presence of alcohol or drugs after a defined occurrence▶ 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 Commission (or more likely a suitably approved third party) be given a new power to require samples from all those involved in an occurrence to determine the presence of alcohol and drugs?
- ▶ Are there any types of occurrence where the Commission should not be able to undertake post-occurrence testing for its own investigations?
- ▶ What organisation(s) should be able to carry out testing on behalf of the Commission?

5.1 The Commission has reported that it is currently unable to enforce mandatory alcohol and drug tests following an occurrence. This limits its ability to accurately fulfil its legislated purpose, which 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. In its recommendations, the Commission specifically asked the government to “prescribe post-occurrence testing requirements for drugs and alcohol”. This was discussed in more detail under option 3.1.

5.2 None of the options discussed above would give the Commission the power to test all parties involved in an accident. This is because all of the options refer only to a defined group, such as safety-sensitive staff, or a skipper in the recreational boating sector. In the case of the enforcement options, they only relate to the testing for the presence of alcohol.

5.3 A specific law change would be required to enable the Commission (or more likely a suitably approved third party) to obtain samples from people after a defined occurrence for the presence of alcohol or drugs. This would create powers similar to those discussed in option 3.2, but in this case they would apply to all those involved in an accident.

- 5.4 With this option, the testing would be solely to assist the Commission to determine the causes and circumstances of an incident or accident.
- 5.5 As with the other options that propose post-occurrence testing, new legislation would be needed 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. 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.
- 5.6 Further consideration of consistency with the Bill of Rights Act would also be required. If the Commission needed testing only for the small subset of accidents it actively investigates, this would be a relatively limited power.

Costs

- 5.7 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 need testing to be carried out to a high standard, but the number of tests would be expected to be smaller than for the enforcement-focused options discussed in section 4.
- 5.8 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.

Section six – supporting material

Appendix one: different types of random testing

In an alcohol or drug testing regime, a person can be required to undergo an approved test for alcohol and/or drugs.

Under a **random** testing regime, the person can be tested without any prior reason or ‘good cause to suspect’ they are impaired by alcohol or drugs. The absence of the ‘good cause to suspect’ requirement is the key difference between a random and non-random testing regime.

Because the testing process is scheduled unpredictably, in essence anytime, anywhere, anyone, people are unable to anticipate with any certainty when they will be required to undergo a test. If testing is scheduled in a more predictable way, people may get around the testing process. For example, a driver or employee may only refrain from using alcohol and drugs when they perceive there is a high chance of being tested.

There are two types of random testing regimes.

Random testing for enforcement

An example of random testing for enforcement is New Zealand’s alcohol testing regime for drivers. Under this regime, an enforcement officer may stop any driver who is driving a motor vehicle on a public road at any time. The enforcement officer can then require the driver to undergo a roadside breath alcohol screening test, which is used in place of the officer’s ‘good cause to suspect’ judgement. If a driver fails the test, the officer has the legal mandate to detain the driver for further evidential testing. Drivers who pass the test are allowed to go on their way without further delay or inconvenience.

The primary purpose of a random alcohol and drug testing regime is to increase deterrence. The regime does this by increasing perceptions of the risk of being caught if people use alcohol and or drugs. Ways of enhancing the deterrent impact of a random testing regime can include conducting the testing in a highly visible manner (for example, driver alcohol check-point operations), and publicly advertising the enforcement effort.

Random testing in the workplace

Under a random alcohol and drug testing regime in the workplace, employers can require employees to be tested. Workplace alcohol and drug testing is usually outlined in employment contracts. Which employee will be tested and at what time is randomly generated. Usually, an employer will aim to test a certain proportion of their employees in a given time period.

Employers may contract a health or testing professional to carry out the testing. Results of the testing will not lead to prosecution, and any discipline will occur in-house.

The primary purpose of a random alcohol and drug testing regime in the workplace is to create a safe workplace for everyone. Its goal is to maintain an alcohol- and drug-free workplace to prevent hazards arising from alcohol and drug impairment.

Workplace testing falls primarily under the Health and Safety in Employment Act 1992.

New Zealand Bill of Rights Act 1990

A random alcohol and drug testing regime may create inconsistencies with the New Zealand Bill of Rights Act 1990. These inconsistencies arise when enforcement officers are randomly detaining and testing people who are not yet suspected of having committed an offence.

Those involved in setting up a random testing regime can reduce the impacts of restricting people’s rights by using a very quick and relatively non-invasive preliminary screening test. The extent to which a random alcohol and drug testing regime may be inconsistent with the Bill of Rights needs to be considered in the context of the problem the regime is meant to address, and the overall benefit to society of the regime. For example, minimising the social harm caused by drink-drivers outweighs the inconvenience of being stopped to undertake a random test.

Appendix two: summary of some of the complexities of setting limits and testing for different drugs

1. The effects of alcohol in relation to driving have been well researched internationally for over 50 years. This means the relationship between alcohol and crash risk and levels of impairment is relatively well documented in the research literature. Research on drugs is more recent. The relationships between dosage and crash risk are less well understood for most drugs.
2. Alcohol is a relatively simple drug that behaves in predictable ways. When it is at its maximum concentration in the body, there is the maximum level of impairment. Some drugs do not behave in this manner – there is not a clear relationship between the detectable levels in the blood and the degree of impairment. Detectable levels of some drugs in blood (for example, cannabis) can persist for some time after their effects on behaviour have worn off. There may also be measurable impairment effects for some drugs when the drugs cannot be detected in the blood.
3. This makes it difficult to know where to set maximum limits based on impairment and safety risk.
4. The illicit nature of some drugs is often confused with their potential to impair behaviour. When applied to transport operators, drug testing regimes should relate to whether the operators are impaired, not whether they have used illicit substances. Yet a number of drug testing regimes make it an offence for a transport operator to have an illicit drug present in their bodily fluids. Impairment cannot be inferred from the mere presence of a drug in bodily tissues or fluids. This type of offence also ignores that legal drugs can impair behaviour and also pose a safety risk.
5. From a policy perspective, it may be difficult to justify setting a legal limit that is higher than zero for any drug that is illegal to possess, use, supply or cultivate.
6. Testing technologies for drugs are not as well developed as those available for alcohol testing. Unlike alcohol, drugs cannot be detected in breath specimens. While blood testing is the recognised ‘gold standard’ for evidential testing for both alcohol and drugs, the taking of a blood specimen is an invasive procedure that has to be administered by a suitably qualified health practitioner.
7. A less invasive test that has been developed and used by some jurisdictions (for example, Australian states) for random roadside drug testing of drivers involves testing oral fluids (including saliva). Oral fluid screening devices are improving but may still have issues as discussed below.
 - a. These devices can detect a limited number of drugs. The devices used in Australia detect only three drugs: cannabis, methamphetamine and MDMA (Ecstasy). They would miss a number of opiate-type drugs including methadone, a wide range of

narcotic analgesics (pain killers) and some amphetamine analogues. Sedative drugs (such as benzodiazepines) that are taken in tablet form do not easily come back out in saliva. An alternative impairment-based testing regime operates in parallel with the oral fluid testing regime to deal with impaired drivers who may have used drugs that are not detected by the oral fluid screening devices.

- b. Concerns have been raised in the past about the reliability of screening devices for detecting cannabis (that is, they were likely to miss around 50 percent of cases). Since then, there have been some improvements in the ability of screening devices to detect cannabis.
 - c. As a sample, saliva is open to contamination and dilution by food or drink in the mouth. Cross-reaction with non-drug compounds is possible. Cross-reactivity can lead to false positive results.
 - d. The performance of oral fluid screening devices can be susceptible to variations in environmental conditions (for example, temperature and humidity), which may lead to special testing and storage requirements.
 - e. Some screening devices have been found to rely on rigid adherence to a prescriptive and complex set of operating instructions in order to produce an accurate result. This may undermine their usefulness if they are used by Police officers who are not specialists in drug testing technology.
 - f. Oral fluid screening devices can only detect the presence of a drug in a sample. Unlike breath alcohol testing devices, they cannot be calibrated to provide a reading of the dosage or level of the drugs that are present.
 - g. They are slower at producing a result than breath alcohol screening tests. Improvements have been made over the last 2–3 years in relation to this aspect of their performance. The oral fluid devices used for the initial oral fluid screening test in Australia now take around 3 minutes to produce a result, compared to a few seconds for a passive breath alcohol test. In a random testing application, it would be necessary to consider whether it would be reasonable to detain a person for this time period without reasonable cause.
8. Drugs intended for recreational use are evolving all the time, often to circumvent drug control laws. This can make it difficult for forensic testing laboratories to keep up with the development of methodologies to test for designer drugs.
9. Testing specimens for drugs is likely to be considerably more expensive than testing for alcohol, because of the added complexity of enforcement regimes and the number of substances that specimens may need to be tested for.

Appendix three: international standards and best practice

	Rail	Aviation	Maritime
UK	<ul style="list-style-type: none"> ▶ Legislation ▶ Police testing for reasonable suspicion and post-incident ▶ Major rail operators have random drug and alcohol testing in safety critical positions ▶ Maximum blood alcohol content (BAC) of 0.08 ▶ Imprisonment not exceeding 6 months, or fine not exceeding £5,000, or both ▶ Failure to comply with breath testing is fine not exceeding £3,000 	<ul style="list-style-type: none"> ▶ Legislation ▶ Offence to carry out duties in alcohol- and drug-impaired state ▶ Maximum BAC of 0.02 ▶ Imprisonment not exceeding 2 years, or fine not exceeding £5,000, or both 	<ul style="list-style-type: none"> ▶ Legislation ▶ Offence to carry out duties in alcohol- and drug-impaired state ▶ Maximum BAC of 0.08 ▶ Imprisonment not exceeding 2 years, or fine not exceeding £5,000, or both ▶ Applies to seafarers and non-seafarers with the exception of pleasure vessels
US	<ul style="list-style-type: none"> ▶ Employers are responsible for implementing Department of Transportation testing policies ▶ The Omnibus Transportation Employee Testing Act of 1991 requires the testing of all safety-sensitive transportation employees across all transport modes but penalties are not centrally mandated for all sectors ▶ Random testing is required for a minimum percentage of employees in safety-sensitive roles ▶ Post-accident testing, for drug (urine) and alcohol (breath), is required for accidents that meet the testing threshold. The Coast Guard has mandatory alcohol testing up to 2 hours after a serious marine incident ▶ Workplace programmes involving education, training, and referral for evaluation and treatment when necessary ▶ Positive results mean removal from role pending rehabilitation programme, and follow-up testing without notice (minimum 6 times in first 12 months, then any number of times for up to 60 months following return) 	<ul style="list-style-type: none"> ▶ Maximum BAC of 0.04 ▶ Suspension and denial of application for certification (under administrative law) ▶ Penalties not centrally mandated 	<ul style="list-style-type: none"> ▶ Imprisonment not exceeding 1 year, or fine not exceeding US\$500, or both
Australia (specific states)	<ul style="list-style-type: none"> ▶ Regulated by the Office of the National Rail Safety Regulator ▶ Post-incident alcohol and drug testing of rail safety workers following a Category A incident ▶ Alcohol and drug testing of rail safety workers which includes intelligence-led risk-based testing and random testing ▶ In NSW random testing of not less than 25% of rail safety workers every year ▶ Formal drug and alcohol management programme ▶ Maximum penalty of AU\$10,000 for a rail safety worker who tests positive for the presence of alcohol or drugs, refusing a test or not following the direction of an authorised person 	<ul style="list-style-type: none"> ▶ Centrally mandated regime ▶ External random testing is permitted ▶ Organisations can test internally post-accident, on reasonable suspicion, initial employment, and return to work ▶ These prescribe a BAC of 0.02%, and testing for cannabis, cocaine, opioids and amphetamines ▶ Organisations must develop and implement a drug and alcohol management plan ▶ Required education programme ▶ Various offences exist around performing safety-sensitive aviation activities with a positive result ▶ Penalties for performing safety-sensitive functions while impaired are 50 penalty units (AU\$8,500 under federal law) 	<ul style="list-style-type: none"> ▶ Offence for any master or seaman to perform their duties while impaired by alcohol and drugs ▶ Testing based on reasonable cause is authorised ▶ Random testing is provided for recreational boating ▶ In various jurisdictions, recreational boating is subject to penalties/offences for exceeding prescribed BAC levels ▶ A BAC limit of 0.00 (0.02 in New South Wales) is prescribed for commercial vessel operators and operators under 21, or 0.05 for recreational boating ▶ Under federal law, alcohol and drug impairment is an offence of 60 penalty units (AU\$10,200)
International standards	<ul style="list-style-type: none"> ▶ The International Union of Railways provides recommended guidelines for the control of safety risks for alcohol, drugs and/or psycho-active medication ▶ These are non-prescriptive, and organisations are expected to select cut-off levels 	<ul style="list-style-type: none"> ▶ The International Civil Aviation Organization (ICAO) has guidelines for problematic alcohol and drug users, but these do not have Standards and Recommended Practice (SARP) status ▶ No prescribed limits for BAC. Suggests if a policy is to be implemented, it must be analysed by situation and be comprehensive ▶ Prefers a collaborative, education-based approach 	<ul style="list-style-type: none"> ▶ Mandatory limit of 0.05 BAC under STCW ▶ Suggests companies consider implementation of a drug and alcohol abuse prevention policy ▶ Sets out a compulsory requirement that seafarers in safety and pollution prevention roles undergo training in personal safety, including alcohol and drug safety

Appendix four: current court-imposed penalties for alcohol offences on the road

Offence	Amount of alcohol		Penalty		
	Blood	Breath	Prison	Fine	Disqualification or suspension of licence
You kill someone when driving after drinking too much	More than 80mg/100ml	More than 400mcg/litre	Up to 10 years	Up to \$20,000	First or second offence 1 year or more, third or subsequent offence more than 1 year
You injure someone when driving after drinking			Up to 5 years		
You drive, or try to drive, after drinking too much and you are aged 20 years or over	More than 50mg/100ml	More than 250mcg/litre	First and second offences		
			Up to 3 months	Up to \$4,500	Six months or more
			Third and subsequent offences		
			Up to 2 years	Up to \$6,000	More than 1 year
You are under 20 years of age and you drive, or try to drive, after drinking too much	More than 30mg/100ml	More than 150mcg/litre	Up to 3 months	Up to \$2,250	Three months or more
	Between 0 and 30mg/100ml	Between 0 and 150mcg/litre		\$200 infringement fee and 50 demerit points	
You refuse to give blood when asked by a police officer, doctor or approved person			First and second offence		
			Up to 3 months	Up to \$4,500	Six months or more
			Third and subsequent offences		
			Up to 2 years	Up to \$6,000	More than 1 year
You refuse to go with a police officer for an evidential breath test or blood test				Up to \$4,500	As decided by the court
You are in charge of a vehicle after drinking too much and you do not hand over the keys when asked by a police officer				Up to \$10,000	

Appendix five: example of a definition of ‘safety-sensitive’ in other legislation

The Railways and Other Guided Transport Systems (Safety) Regulations 2006 (UK)

‘**controller of safety critical work**’ means any person controlling the carrying out of safety critical work on a transport system or in relation to a vehicle used on a transport system;

‘**safety critical task**’ means:

- a) in relation to a vehicle used on a transport system:
 - i. driving, dispatching or any other activity which is capable of controlling or affecting the movement of that vehicle;
 - ii. signalling, and signalling operations, the operation of level crossing equipment, receiving and relaying of communications or any other activity which is capable of controlling or affecting the movement of that vehicle;
 - iii. coupling or uncoupling;
 - iv. installation of components, other than where the installation of those components is subject to supervision and checking by a safety critical worker or a controller of safety critical work;
 - v. maintenance, other than where the carrying out of that maintenance is subject to supervision and checking by a safety critical worker or a controller of safety critical work; or
 - vi. checking that that vehicle is working properly and, where carrying goods, is correctly loaded before being used;

- b) in relation to a transport system:
 - i. installation or maintenance of any part of it or of the telecommunications system relating to it or used in connection with it, or of the means of supplying electricity directly to that transport system or to any vehicles using it or to the telecommunications system other than where the carrying out of that task is subject to supervision and checking by a safety critical worker or a controller of safety critical work;
 - ii. (ii) controlling the supply of electricity directly to it or to any vehicles used on it;
 - iii. (iii) receiving and relaying of communications; or
 - iv. (iv) any person ensuring the safety of any persons working on or near to the track, whether or not the persons working on or near to the track are carrying out safety critical work;

- c) in relation to training, any practical training or the supervision of any such training in any of the tasks set out in sub-paragraphs a) to b)

'safety critical work' means any safety critical task carried out by any person in the course of their work or voluntary work on or in relation to a transport system and related expressions shall be construed accordingly; and which could significantly affect the health or safety of persons on a transport system.

Appendix six: the Commission's findings and safety recommendations related to impairment by drugs or alcohol

Inquiry 12-201: Fishing vessel *Easy Rider*, capsized and foundering, Foveaux Strait, 15 March 2012

The report of the inquiry into the capsizing and foundering of the fishing vessel *Easy Rider* discussed the survival aspects of the accident. It stated:

- 4.5.4. *Another factor that is detrimental to cold-water survival is alcohol consumption. Alcohol accelerates hypothermia through increased rates of heat loss due to increased blood flow through the skin. Therefore alcohol in the blood system reduces the chances of survival in cold water (Water Safety New Zealand, 2012). Of the 4 bodies recovered, one of the passengers had a blood-alcohol level of 125 milligrams per 100 millilitres of blood (1.5 times the legal limit for driving a car), which is consistent with impairment of decision-making and psychomotor co-ordination. It is possible that this level of alcohol reduced his survival time through swim failure and/or hypothermia.*
- 4.5.5. *One passenger and one of the crew members reported to be asleep down below in the cabin at the time of the accident had levels of THC in their blood that were consistent with a recent consumption of cannabis. Recent consumption may have been associated with mental impairment to the extent that it might have affected their ability to escape from the capsized vessel. A crew member has safety responsibilities to all on board.*

Inquiry 12-001: Hot-air balloon collision with power lines and in-flight fire, near Carterton, 7 January 2012

Findings related to impairment by drugs or alcohol

The report's findings included the following.

- 5.9. *The pilot had a post-mortem THC blood level of 2 micrograms per litre. This was likely the result of 2 factors: the pilot smoking cannabis shortly before the flight (considered highly likely), and residual THC from his having ingested cannabis over a longer term that redistributed into his blood after he died. It was not possible to determine if either factor contributed more or less to the toxicology result.*
- 5.10. *The accident was caused by errors of judgement by the pilot. The possibility that the pilot's performance was impaired as a result of ingesting cannabis cannot be excluded.*
- 5.11. *The long-term and recent ingestion of performance-impairing substances such as cannabis by crew of any transport vehicle is a serious safety issue that needs to be addressed as a matter of priority.*

Open recommendations related to impairment by drugs or alcohol

The Commission made the following recommendation in relation to impairment by drugs or alcohol.

- 7.5. *On 11 October 2013 the Commission made the following recommendation to the Secretary for Transport:*

The post-mortem toxicology results for the pilot in the Carterton hot air balloon showed that he had a positive result for tetrahydrocannabinol (a constituent of cannabis). It was likely that this was due to 2 factors: first, the pilot smoking cannabis shortly before the accident flight; and, second, residual tetrahydrocannabinol, from ingesting cannabis over a longer term, redistributing in the pilot's blood after his death.

The Commission found that the accident was caused by errors of judgement by the pilot. It also found that it could not exclude the possibility that the pilot's performance had been impaired as a result of ingesting cannabis.

This is not the first time that the Commission has inquired into occurrences where persons operating aircraft, vessels or rail vehicles, or where persons performing functions directly relevant to the operation of these, have tested positive for performance-impairing substances such as illicit drugs and alcohol. The Commission is increasingly seeing more occurrences where the use of performance-impairing substances is a feature.

Unless this safety issue is properly addressed, further occurrences where the use of performance-impairing substances is a contributing factor will occur. Legislative or regulatory reform in this area is necessary.

The Commission, therefore, recommends that the Secretary for Transport complete, as a matter of priority, all necessary work that will support the introduction of appropriate legislation or rules that will:

- ▶ prescribe allowable maximum levels for alcohol*
- ▶ prohibit persons from operating an aircraft, vessel or rail vehicle if they are impaired by drugs*
- ▶ require operators to implement drug and alcohol detection and deterrence regimes, including random testing*
- ▶ prescribe post-occurrence testing requirements for drugs and alcohol.*
- ▶ This legislation or these rules should apply:*
 - ▶ across the aviation, maritime and rail transport modes*
 - ▶ to persons operating an aircraft or a marine craft for recreational purposes. (012/13)*

Inquiry 11-103: Track workers nearly struck by passenger train near Paekakariki, North Island Main Trunk, 25 August 2011

Findings related to impairment by drugs or alcohol

5.14. *The protection person had been a regular user of cannabis, and subsequent testing confirmed that he had probably continued to use cannabis during the month following the incident. It is not possible to determine if the protection person was impaired by cannabis at the time of the incident. Nevertheless, the use of cannabis by staff performing safety-critical tasks is of concern, and was contrary to KiwiRail's drug and alcohol policy at the time of the incident.*

Note: The protection person is the member of a work group who is the liaison point with the person in charge of the protected work area to ensure that all personnel and equipment are clear of the track for rail movements.

Open recommendations related to impairment by drugs or alcohol

7.4. *The protection person was a user of cannabis. Although it could not be established scientifically that his performance was impaired by cannabis at the time of the incident, he did have a detectable level of THC-acid in his urine when he was tested after the incident. Under no circumstances should the performance of any rail worker performing any safety-critical task be affected by alcohol or drugs of any kind. The Commission recommends that the Chief Executive of the NZ Transport Agency work with the National Rail System Standard Executive in developing a National Rail System Standard that requires all rail participants to have drug and alcohol policies that: have zero tolerance of performance-impairing substances for workers engaged in safety-critical tasks; require post-incident and accident and random testing for drugs and alcohol; and require a system for rail workers to report discreetly co-workers suspected of using or being under the influence of drugs or alcohol in the workplace. (007/13)*

Inquiry 10-009: Walter Fletcher FU24, ZK-EUF, loss of control on take-off and impact with terrain, Fox Glacier aerodrome, South Westland, 4 September 2010

Findings related to impairment by drugs or alcohol

5.19. *An alcohol and drug testing regime needs to be initiated for persons performing activities critical to flight safety, to detect and deter the use of performance-impairing substances.*

Open recommendations related to impairment by drugs or alcohol

7.2.6. *On 22 March 2012 the Commission made the following recommendation to the Secretary for Transport:*

The use of performance impairing substances is known to have a detrimental effect on the ability of people to safely operate in critical transport environments. The Commission recommends that the Secretary for Transport promotes the introduction of a drug and alcohol detection and deterrence regime for persons employed in safety critical transport roles (011/12).

Inquiry 09-201: Collision: private jet-boat/private personal watercraft Kawarau River, Queenstown, 5 January 2009

Findings related to impairment by drugs or alcohol

- 5.17. *Although alcohol was not considered a factor in this accident, it was present on board the jet-boat and had been consumed in small quantities. Until legislation is made setting limits of alcohol and other performance-impairing substances for commercial and recreational boat drivers, the risk of substance-impairment-related accidents will be elevated.*

Open recommendations related to impairment by drugs or alcohol

- 6.6. *Until legislation is made setting limits for and testing of alcohol and other performance impairing substances for recreational and commercial boat drivers, the risk of alcohol-related accidents will be elevated.*

It is recommended that the Secretary for Transport address this safety issue by promoting appropriate legislation to set maximum allowable levels of alcohol and other performance impairing substances for persons in charge of recreational and commercial craft, and supporting legislation to allow testing for such levels in these cases. (005/11)

Inquiry 06-204: Fishing vessel, Kotuku, capsize and sinking, Foveaux Strait, 13 May 2006

Findings related to impairment by drugs or alcohol

- 3.16. *Consumption of alcohol is considered to have been a factor contributing to 2 of the 6 deaths through the accelerated onset of hypothermia and consequent near-drowning experiences. Consumption of alcohol by the survivors put them at an elevated risk of succumbing to the effects of hypothermia, but to what level of risk could not be determined due to the absence of legislation allowing post-accident and incident testing for performance-impairing substances.*
- 3.17. *Although it could not be established if the deckhand's ingestion of THC contributed to his death, it is of concern that a crew member ingested a performance-impairing substance while in the course of his duties, regardless of whether the Kotuku was operating as a commercial or pleasure vessel.*

Inquiry 05-003: Piper PA34-200T Seneca II, ZK-FMW, controlled flight into terrain, 8 km north-east of Taupo Aerodrome, 2 February 2005

Findings related to impairment by drugs or alcohol

- 3.20. *The pilot's mental function and flying performance may have been impaired as a result of prior cannabis use, but this could not be proved.*

Inquiry 04-212: Fishing vessel Iron Maiden, foundering, off Pandora Bank, Northland, 16 August 2004

Findings related to impairment by drugs or alcohol

- 3.9. *Once the Iron Maiden rounded Cape Reinga, the skipper would have been presented with the full fury of the gale ahead of him. Why he chose to continue cannot be known, however:*

- ▶ *he may have been anxious to return home, where his partner was expecting their first child*
- ▶ *he may have felt pressure to continue because he knew of the owner's financial difficulties and his own career prospects depended on the Iron Maiden starting set net fishing as soon as possible*
- ▶ *the role that cannabis ingestion had in the skipper's decision-making is uncertain, but the level of THC in his blood indicated that he was likely to have been impaired when making the decision to round Cape Reinga and continue with the voyage*
- ▶ *the deckhand was unlikely to challenge the skipper, as they were cousins and friends who had previously faced challenges together and had built up trust and confidence.*

Appendix seven – list of questions to consider

COMMERCIAL

YOUR ROLE

Q1. What is your interest in alcohol impairment in the aviation, maritime and rail sectors?

Are you:

- ▶ A private individual
- ▶ Part of the transport sector

if you are part of the sector, please describe your interest, including your role:

(you may tick more than one)

- ▶ Commercial Aviation
- ▶ Commercial Maritime
- ▶ Recreational Aviation
- ▶ Recreational Maritime
- ▶ Rail

Q2. Would you like us to email you with the results of the consultation process?

- ▶ Yes
- ▶ No

If you answered 'Yes', please enter your email address:

Please refer to the [Clear heads discussion paper](#) for information to support your submission.

REDUCING THE RISK OF IMPAIRMENT IN COMMERCIAL OPERATIONS

Q3. Should maximum blood alcohol limits be set in the aviation, maritime and rail commercial sectors and if so at what level?

MARITIME

- ▶ No legal maximum level
- ▶ 20mg/100ml of blood (zero tolerance)
- ▶ 50mg/100ml of blood (the same as the land transport)

AVIATION

- ▶ No legal maximum level
- ▶ 20mg/100ml of blood (zero tolerance)
- ▶ 50mg/100ml of blood (the same as the land transport)

RAIL

- ▶ No legal maximum level
- ▶ 20mg/100ml of blood (zero tolerance)

- ▶ 50mg/100ml of blood (the same as the land transport)

Q4. Who should the maximum blood alcohol limits apply to?

- ▶ Pilot/master/driver
- ▶ Anyone whose job can affect the safety of the journey (safety-sensitive role)

Q5. Who should be responsible for minimising the risks associated with alcohol impairment in the aviation, maritime and rail sectors?

- ▶ Government agencies (CAA, Maritime NZ, NZTA, WorkSafe NZ)
- ▶ Police
- ▶ Commercial operators

Q6. What type of alcohol testing is appropriate in the aviation, maritime and rail commercial sectors? (you may tick more than one)

- ▶ Employers testing employees if they suspect impairment
- ▶ Employers testing employees randomly
- ▶ Police testing key staff after an accident
- ▶ Police testing key staff if there is good cause to suspect impairment
- ▶ Police randomly testing key staff
- ▶ None, but an education campaign is necessary

Q7. What penalties are appropriate for breaching the maximum blood alcohol limit in the aviation, maritime and rail commercial sectors? (you may tick more than one)

- ▶ Loss of licence
- ▶ An instant fine for the employee (the equivalent of a speeding ticket)
- ▶ A court-mandated fine for the employee (the equivalent of a drink-driving conviction)
- ▶ An instant fine for the employer
- ▶ A court-mandated fine for the employer

Q8. What is your preferred option for alcohol management in the aviation, maritime and rail commercial sectors?

- ▶ Option 1 – status quo with an education campaign
- ▶ Option 2 – drug and alcohol management plan (DAP)
- ▶ Option 3.1 – DAP with mandatory post-occurrence testing
- ▶ Option 3.2 – DAP with mandatory third party post-occurrence testing
- ▶ Option 4.1 – post-occurrence testing for enforcement
- ▶ Option 4.2 – post-occurrence testing for enforcement

Q9. Should the Transport Accident Investigation Commission have the powers to test any person who is involved in an accident?

- ▶ Yes
- ▶ No

Q10. Are there any other comments you would like to make? We are particularly interested in hearing your experiences, including implementing a drug and alcohol policy, or comments that will help us build an evidence base for the benefits and costs of our proposed options. Please note if you would like to make a full written submission, you can email clearheads@transport.govt.nz at any time before 24 April 2015.

RECREATION

YOUR ROLE

Q11. What is your interest in alcohol impairment in the aviation, maritime and rail sectors?

Are you:

- ▶ A private individual
- ▶ Part of the transport sector

If you are part of the sector, please describe your interest, including your role:

(you may tick more than one)

- ▶ Commercial Aviation
- ▶ Commercial Maritime
- ▶ Recreational Aviation
- ▶ Recreational Maritime
- ▶ Rail

Q12. Would you like us to email you with the results of the consultation process?

- ▶ Yes
- ▶ No

If you answered 'Yes', please enter your email address:

Please refer to the [Clear heads discussion paper](#) for information to support your submission.

If you would like to submit on the recreational aviation sector, please go to Q13.

If you would like to submit on the recreational maritime sector only, please go to Q17.

REDUCING THE RISK OF IMPAIRMENT IN RECREATIONAL SECTOR – AVIATION

Q13. Should maximum limits be set for alcohol in recreational aviation and if so at what level should they be set?

- ▶ No legal maximum level
- ▶ 20mg/100ml of blood (zero tolerance)
- ▶ 50mg/100ml of blood (the same as the proposed land transport)

Q14. What type of alcohol testing is appropriate in the recreational aviation sector? (you may tick more than one)

- ▶ Police testing the pilot after an accident
- ▶ Police testing the pilot if there is good cause to suspect impairment
- ▶ Police randomly testing the pilot
- ▶ None, but an education campaign is necessary

Q15. What penalties are appropriate for breaching the maximum alcohol limits in recreational aviation? (you may tick more than one)

- ▶ Loss of licence
- ▶ An instant fine (the equivalent of a speeding ticket)
- ▶ A court-mandated fine (the equivalent of a drink-driving conviction)

Q16. What is your preferred option for alcohol management in the recreational aviation sector?

- ▶ Option A – Status quo with education campaign
- ▶ Option B.1 – Post-occurrence testing
- ▶ Option B.2 – ‘Good cause’ testing

If you are not completing the section on recreational maritime, please go to Q23.

REDUCING THE RISK OF IMPAIRMENT IN RECREATIONAL SECTOR – MARITIME

Q17. Should maximum limits be set for alcohol in recreational maritime and if so at what level should they be set?

- ▶ No legal maximum level
- ▶ 20mg/100ml of blood (zero tolerance)
- ▶ 50mg/100ml of blood (the same as the proposed land transport)

Q18. What type of alcohol testing is appropriate in the recreational maritime sector? (you may tick more than one)

- ▶ Police testing the skipper after an accident
- ▶ Police testing the skipper if there is good cause to suspect impairment
- ▶ Police randomly testing the skipper
- ▶ None, but an education campaign is necessary

Q19. What penalties are appropriate for breaching the maximum alcohol limits in recreational maritime? (you may tick more than one)

- ▶ An instant fine (the equivalent of a speeding ticket)
- ▶ A court-mandated fine (the equivalent of a drink-driving conviction)

Q20. What is your preferred option for alcohol management in the recreational aviation sector?

- ▶ Option A – status quo with education campaign
- ▶ Option B.1 – post-occurrence testing
- ▶ Option B.2 – ‘good cause’ testing

REDUCING THE RISK OF IMPAIRMENT FOR ALL RECREATIONAL SECTOR

Q21. Are there any other comments you would like to make? We are particularly interested in your experiences or comments that will help us build an evidence base for the benefits and costs of our proposed options. Please note if you would like to make a full written submission, you can email clearheads@transport.govt.nz at any time before 24 April 2015.